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Contents

Section (i) Statistics

Sr.No	Title	Pages
1	Sun Htoo Aung , *Education Effect on Labor Productivity in Myanmar: Evidence from Msme Survey	1
2	Hlaing Hlaing Mo , Factors Influencing Labor Force Participation Among People with Disabilities in Myanmar	11
3	Su Pan Hnin , Factors Affecting on Poverty of Households in Kyaukpadaung Township	23
4	Hla Hla Aye , Under -Five Mortality in Myanmar: Application of Zero-Inflated Poisson Regression Model	39
5	Win Naing Oo , Determinants of Voluntary Childlessness Among Women in Myanmar	53

Section (ii) Economics

Sr.No	Title	Pages
1	Moe Hnin Phyu , *Causal Relationship Between Labour Productivity and Export of Garment Firms in Yangon	69
2	Thida Htoo , Do Economic Growth, Renewable Energy Consumption, Internationalization, Urbanization and Value-Added Products from Industries Impact on Environmental Quality? A New Look at Myanmar's Economy	79
3	Chan Myae July , Analysing the Development Level of Tourism in Nyaung Shwe Township	93

Section (iii) Commerce

Sr.No	Title	Pages
1	Htun Min Aung , *The Effect of Credit Accessibility on Farm Performance of Farmers in Pauk Myine Village, Myittha Township	105
2	Htay Htay , The Current Status of Talent Management Practices in Myanmar: A Case Study in Private Banks	119
3	Khin Marlar Maung , Knowledge Management Capabilities and Employee Performance: Mediating Role of Organizational Learning	133

Sr. No	Title	Pages
4	Thiha Htun , Entrepreneurial Competencies and Performance of Small and Medium Enterprises	141
5	Nan Thida Win , Effects of Job Mobility on Working Life of Private Bank Managers	153
6	Ye Wint Aung , Store Atmosphere and Consumers Attitude Towards Single-Brand Apparel Retailers an Mandalay	167
7	Phu Pwint Nyo Win Aung , Leadership Styles of Township Educational officers and Organizational Performance In Myanmar	179
8	Banyar Aung , Effect of Consumer Attitude on Consumer Buying Behavior Towards 24 Karat Gold Ornaments	191

Section (iv) Management Studies

Sr. No	Title	Pages
1	Wai Phyto Aung , *The Effects of Job Characteristics on Salesperson's Engagement of Local Insurance Companies In Mandalay	201
2	Kyaw Zin Oo , The Effect of Project Manager's Skills and Experiences On Project Success	211
3	Naing Lin Tun , Perceived Level of Emotional Intelligence and Sport Performance of Yangon University of Economics Basketball Athletes	223
4	Chu Chu Shwe Sin , The Effect of Knowledge Management, Financial Literacy, and Technology Orientation on Innovation Capability and Performance of MSMEs in Myanmar	235
5	Sein Lwin , The Effect of Awareness and Needs on Behavior Towards Plastic Waste Management of Students at Department of Management Studies, Yangon University of Economics	247
6	Khin Mar Yee , Analyzing The Spatial and Diversification Patterns of cottage Industry in Myeik: Towards Future development and Sustainability	257

Section (v) Applied Economics

Sr.No	Title	Pages
1	Thet Mon Soe , *Effects of Foreign Direct Investment and Trade on Labor Productivity Growth in Myanmar	265
2	Khin Thu Thu Thein , Foreign Direct Investment and Co ₂ Emission: An Empirical Analysis – The Case of Myanmar	275

Section (vi) Tourism

Sr.No	Title	Pages
1	Shoon Lei Myint Mo, *Analysis of Pull Factors on to the Domestic Tourists' Destination Choices in Ngwe Saung, Myanmar	285
2	Su Pyae Thada Htet, Factors Influencing Domestic Tourists' Preferences for Bagan Destination	299
3	Aye Aye Mauk, Geographical Analysis of Tourist Attraction Sites in Kyaingtong Township	311

EDUCATION EFFECT ON LABOR PRODUCTIVITY IN MYANMAR: EVIDENCE FROM MSME SURVEY*

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Abstract

Education is a key determinant of labor productivity, but it seems to be downplayed in the society. This would be a great treat to increase the productivity of firms and thus to enhance the economic growth. This paper aims to quantify the causal effect of education on labor productivity in Myanmar. Using the Micro, Small, and Medium Enterprises (MSMEs) surveys of 2017 and 2019, the causal effect of education is identified by controlling the characteristics of employees, owners/managers, and firms. Estimation results show that education has positive causal effect on labour productivity after controlling important variables. This finding suggests that policy makers should ensure that every citizen attains an education level, which they are supported to have.

Key words: Education, labour productivity, MSME

Introduction

Economic growth and prosperity in Myanmar is largely driven by the growth of micro, small, and medium enterprises (MSMEs). Their contribution to the gross domestic product (GDP) of Myanmar is about 30 percent (Bala & Feng, 2019). The growth of MSMEs is, in turn, determined by three main productive factors: labor, capital, and technology (Nicholson & Snyder, 2016). To have an immediate growth, for which Myanmar is currently struggling, enhancing capital and technology is not feasible as it would take years. Improving labour productivity could be a viable policy option. Labour productivity of Myanmar is currently low compared to the countries in the region such as China, Thailand, and Vietnam (ASEAN Productivity Organization, 2021). Among the determinants of labour productivity, education is consistently found as the most important factor by theoretical and empirical studies (Fallon, 1987; Lanzi, 2007; Mincer & Polachek, 1978). Despite its vital role, education seems to be downplayed in the society. According to the recent labour force survey (Central Statistical Organization, 2015, p. 9), only 13 percent of working age population have high school and above education level. These figures are alarming given the free education system in Myanmar. This paper, therefore, aims to analyze the role of education in determining labour productivity. In particular, the main objective of this paper is to estimate the causal effect of education on the labour productivity of the MSMEs in Myanmar.

Literature review

Microeconomic theory explains that the output of a firm is mainly determined by three primary inputs: labor, capital, and technology. Given the level of capital and technology, improvement in labor productivity will increase firm's output. Among the factors that can explain labor productivity, education plays an essential role. Intuitively, only with a certain level of education, employees can acquire knowledge and skills and can adopt new technology. This directly improves their productivity.

On average, about ten years of our life have been spent for studying at schools. While studying and pursuing a degree help us gain knowledge and better employment opportunities, this does not come without cost. The major costs for attaining higher education level involve time, energy, tuition fees, and other opportunities. Thus, the eligible question to ask is what the return from education to the labor market outcome, such as wage, is. This question has been addressed for decades. Amongst, Mincer's (1958) seminal work is often cited in this research area. He derives the earning equation from human capital theory and his equation is known as Mincer's earning equation. In its original form, the dependent variable is log-wage and the independent variables are schooling, experience, and experience-squared. The coefficient of

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schooling measures the return to education. Since then, this equation has been used to study the effect of education on labor productivity in many countries, using cross-section, time-series, and panel data. At present, there are already many extended forms of Miner's earning equation, incorporating other control variables.

In studying the effect of one variable on another variable, most studies are correlational. Although these types of studies have their own right, finding a correlation between two variables does not necessarily mean one variable cause another. In the context of policy making, what is more important is causal evidence, which is often derived from an experiment.

A gold standard for an experiment is a randomized controlled trial (RCT) where treatment is randomly assigned into treatment and control groups. Although this approach is a main tool for social science such as medicine and physics, it was applied in economics by Fisher (1935). While he applied this method in agriculture, it is rare and not possible in social science, particularly where the unit of study is human beings. However, there are many methods, which can mimic the RCT design. Amongst, the multiple regression framework is a workhorse for empirical researchers and other methods are the extension of it. The main advantage of this framework is that unnecessary confounding factors can be explicitly controlled while using non-experimental data. The Frisch-Waugh-Lowell theorem guarantees that the population parameter of a multiple regression model is free from the confounding effect of the factors controlled in the model (Yamada, 2017).

There are many empirical studies on the effect of education on labour productivity. For Myanmar, Central Statistical Organization (2018; 2019) estimates the model of labor productivity of MSMEs with sets of covariates. It finds that education has positive effect on labor productivity. For other countries, this topic is analyzed at individual level (ElObeidy, 2016; Jajri & Ismail, 2010), and firm level (Asadullah & Rahman, 2009; Lebedinski & Vandenberghe, 2014). Regardless of the level of study, they consistently find that education improves labor productivity.

Methodology

Labor productivity can be measured in different ways such as output per unit of labor, and revenue per unit of labor. For a single firm, these measures are valid and precise. For multiple firms producing various kinds of products with different units of measurement, it is difficult to reconcile all distinct units into a single unit. A common solution to this problem is to use a theoretically consistent unit. According to the microeconomics theory, a firm chooses the optimal level of labor at which profit is maximized given the input and output prices. Under the assumption of the constant return to scale production function and the competitive market, firm's optimization problem is as follows:

$$\underset{\langle L, K \rangle}{\text{Max}} \Pi = pf(L, K) - wL - rK \quad (1)$$

$$\frac{\partial \Pi}{\partial L} = p \cdot f_L - w = 0 \Rightarrow f_L = \frac{w}{p} \quad (2)$$

$$\frac{\partial \Pi}{\partial K} = p \cdot f_K - r = 0 \Rightarrow f_K = \frac{r}{p} \quad (3)$$

where Π is a profit function; $f(L, K)$ is a production function; L is labor, K is capital; p is output price; w is wage rate; r is rental price of capital; f_L and f_K are marginal product of labor and capital, respectively. Equation (1) is the objective (profit) function of the firm for its optimization problem. Equations (2) and (3) are the optimal conditions for the demand for labor and capital inputs, respectively. Equation (2) indicates that at optimum, marginal product of labor, which measure the amount of output due to an extra unit of labor, is equal to the ratio of the nominal wage to output price (real wage). This clearly shows that real wage can be

legitimately used to measure the labour productivity. Therefore, real wage will be used as a measure for labor productivity in the following sections.

The causal effect of education on labour productivity is identified in the framework of regression model. This effect can be isolated if important variables, which are potential to correlate with both education and labor productivity, are controlled in the model. The population regression model of wage variable is

$$wage_i = E(wage_i | educ_i, \mathbf{X}) + \varepsilon_i = \beta educ_i + \theta \mathbf{X} + \varepsilon_i \quad (4)$$

where $wage_i$ is the monthly wage of employee i ; $educ_i$ is the education level of employee i ; $\mathbf{x}$ is a vector of control variables; ε_i is the random error term which consists of individual-specific factors; β and θ are the population parameters. In Equation (4), the first equality shows that the variation of wage can be decomposed into (i) a systematic part, which is represented by the condition mean of wage, and (ii) a random part. The second equality indicates that the conditional mean function is approximated by a linear function.

On the right hand side of the model, the key variable of interest or policy variable is education, and the parameter, β , is supposed to measure the causal effect of education. The role of control variables in the model is twofold: to reduce the bias on β and to reduce the standard error of the model. Three groups of control variables for employees, owner/managers, and firms are included in the model. Control variables for employees include experience, tenure, and gender. Experience represents general skills about the sector while tenure captures firm-specific skills. While both variables are expected to have positive effect, their effect should not be constant. While gender quantifies potential wage differential between male and female, its effect is an empirical question. Control variables for owner/manager include education level, experience, and gender. As more educated and more experienced owners are expected to manage their firms well, they can help improve their labor productivity. Whether male owner is more productive than female can be determined only with the empirical result. Control variables for firm include firm size and being located in the industry zone. Both variables are anticipated to enhance productivity. In addition to controlling observed characteristics, unobserved fixed effects of state/region and sector are also controlled by using dummy variables. For the functional relationship among variables, the left-hand side variable is a linear function of all right-hand side variables, except experience and tenure, for which a quadratic function is used. Since all parameters in the model are in linear, ordinary least squares (OLS) estimation method is used to estimate the parameters. The key identification assumption for Equation (4) is the conditional mean independent as shown below:

$$E(\varepsilon_i | educ_i, \mathbf{X}) = 0 \quad (5)$$

Equation (5) implies that in the presence of control variables, the random error term is independent of the policy variable, education level. Under this assumption, OLS estimators are consistent (Wooldridge, 2019). Consistency is a large sample property and is particularly important for policy research. Regarding this, Clive W. J. Granger, the Noble Price-winning econometricians, once noted that “If you can’t get it right as the sample size goes to infinity, you shouldn’t be in this business” as cited in (Wooldridge, 2019, p. 164).

Data source

The main data source is the 2017 and 2019 MSMEs surveys. These surveys are funded by the government of Denmark and jointly implemented by the Central Statistical Organization (CSO) and the foreign experts from United Nations University of World Institute for Development Economic Research (UNU-WIDER) and University of Copenhagen. They are nation-wide surveys, covering 35 townships across 14 states and regions and Nay Pyi Taw council. The target population is micro, small, and medium enterprises in the manufacturing sector. As about 30 percent of enterprises in the sampling frame are rice mills, the population is

divided into two strata: rice mills and other manufacturing firms. The sampling scheme is thus stratified into two-stage sampling. In the first stage, townships are selected with probability proportional to size method, using the number of enterprises in each township as a size variable. In the second stage, sample enterprises are randomly drawn from the chosen townships. In addition to formal/registered firms, non-formal/unregistered manufacturing firms, for which sampling frame is not available, are also surveyed using snow-ball sampling method. From each sampled enterprise, at most five production workers are interviewed. Data are collected by face-to-face method using three set of survey questionnaires. The first questionnaire consists of questions about owner/manager and firm characteristics. The second questionnaire mainly includes economic accounts of firms. The last questionnaire is only concerned with employee characteristics. Data from the same sample units were collected in both 2017 and 2019. About 10 percent of sample units in 2019, which were included in the 2017 survey, were run out of business or temporally closed. For these missing units, new sample units were collected using the updated sampling frame. The final sample consists of 2,946 enterprises and 6,722 employees in 2017 and 2,497 enterprises and 5,017 employees in 2019. The detailed information about sampling can be found in CSO (2018, 2020).

While this research is based on the above two surveys, it does not use the whole sample but has imposed three restrictions. The data used in this paper include only (i) registered/formal firms, (ii) only firms with at least one production worker, and (iii) only permanent, full-time workers because there could be differences in distribution and behavior between the units in restricted and unrestricted samples. Therefore, the final sample for this paper includes 1,646 firms and 4,423 employees in 2017 and 1,911 firms and 4,283 employees in 2019.

Summary statistics

Definition and construction of key variables in the model are reported in Table (1). They all are self-explanatory.

Table (1) Definition and construction of key variables

Variable	Definition/Construction	Measurement Level
lnwage	Natural logarithm of monthly wage (in kyat)	Continuous
noedu	1 if employee has no education; 0 otherwise	Binary
primary	1 if employee has completed primary school; 0 otherwise	Binary
middle	1 if employee has completed middle school; 0 otherwise	Binary
high	1 if employee has completed high school; 0 otherwise	Binary
higher	1 if employee has completed university; 0 otherwise	Binary
exp	Employee's experience in this sector (in year)	Continuous
tenure	Employee's experience in this firm (in year)	Continuous
male	1 if employee is male; 0 otherwise	Binary
o_noedu	1 if owner has no education; 0 otherwise	Binary
o_primary	1 if owner has completed primary school; 0 otherwise	Binary
o_middle	1 if owner has completed middle school; 0 otherwise	Binary
o_high	1 if owner has completed high school; 0 otherwise	Binary
o_higher	1 if owner has completed university; 0 otherwise	Binary
ownermale	1 if owner is male; 0 otherwise	Binary
ownerexp	Owner's experience in this sector (in year)	Binary
zone	1 if firm is located in industry zone; 0 otherwise	Binary
firmsize	Number of full-time employees	Continuous

By looking at the summary statistics shown in Table (2), it is confirmed that there is no mistake in variable construction as all data are in their possible range. Compared to 2017, there was an increase in wage in 2019. This may be due to pure inflation. The percentage of educated employees has slightly changed between the two years. Percentage of employees with primary education was larger whereas percentage of employees with other levels of education was smaller in 2019. Employee's experience and tenure increased in 2019. More than 66 percent of employees are male. Given the nature of enterprises, the majority of owners/mangers are not highly educated. About 70 percent of owners/mangers are male and nearly 30 percent of firms are located in industry zones. Average firm size is about 22 employees.

Table (2) Summary statistics of key variables

Variable	2017					2019				
	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max
Inwage	4423	11.77	0.42	9.2	13.6	4283	12.01	0.44	9.2	14.2
noedu	4423	0.07	0.26	0	1	4283	0.13	0.34	0	1
primary	4423	0.32	0.47	0	1	4283	0.43	0.50	0	1
middle	4423	0.31	0.46	0	1	4283	0.28	0.45	0	1
high	4423	0.21	0.41	0	1	4283	0.09	0.28	0	1
higher	4423	0.09	0.29	0	1	4283	0.07	0.26	0	1
exp	4423	2.94	4.97	0	39	4283	3.86	5.85	0	65
tenure	4423	5.62	5.97	0	50	4283	6.28	5.95	0	61
male	4423	0.66	0.47	0	1	4283	0.67	0.47	0	1
o_noedu	4423	0.01	0.08	0	1	4283	0.03	0.18	0	1
o_primary	4423	0.18	0.39	0	1	4283	0.17	0.37	0	1
o_middle	4423	0.21	0.41	0	1	4283	0.22	0.42	0	1
o_high	4423	0.17	0.38	0	1	4283	0.16	0.37	0	1
o_higher	4423	0.43	0.50	0	1	4283	0.42	0.49	0	1
ownermale	4423	0.70	0.46	0	1	4283	0.68	0.47	0	1
ownerexp	4423	12.56	9.25	0	58	4283	15.13	9.80	0	61
zone	4423	0.28	0.45	0	1	4283	0.27	0.44	0	1
firmsize	4423	19.45	50.35	1	510	4283	22.10	52.97	1	650

Source: Own calculation based on MSME 2017 and 2019 surveys.

Figure (1) shows the relationship between Inwage and education for 2017 and 2019. It indicates that average wage also increases as education level becomes higher. This means that education will have a positive effect on wage. The figure also suggests that the use of linear function is appropriate.

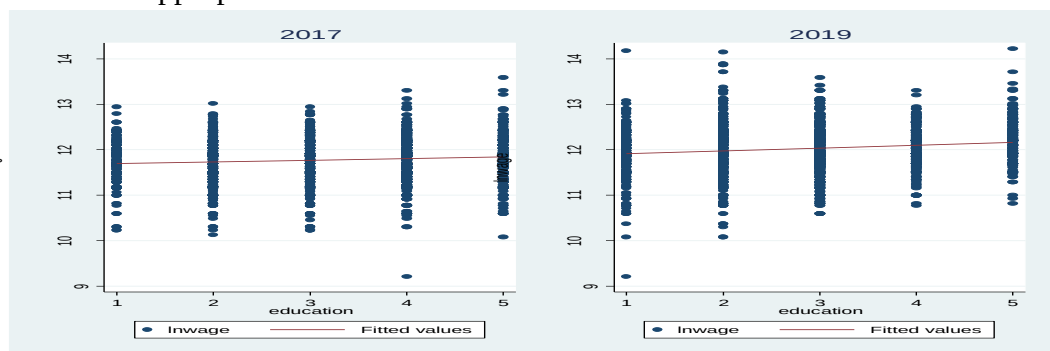


Figure (1) Relationship between Inwage and education

Distributions of lnwage by five education levels for 2017 and 2019 are shown in Figure (2). Among the five different levels of education, the distributions of the first four lower levels of education are not much different while the wage distribution of employees with university level education is far right to the other four. This suggests that the average wage of university-level employees could be significantly higher than those with the other four education levels. This feature is appeared in both 2017 and 2019.

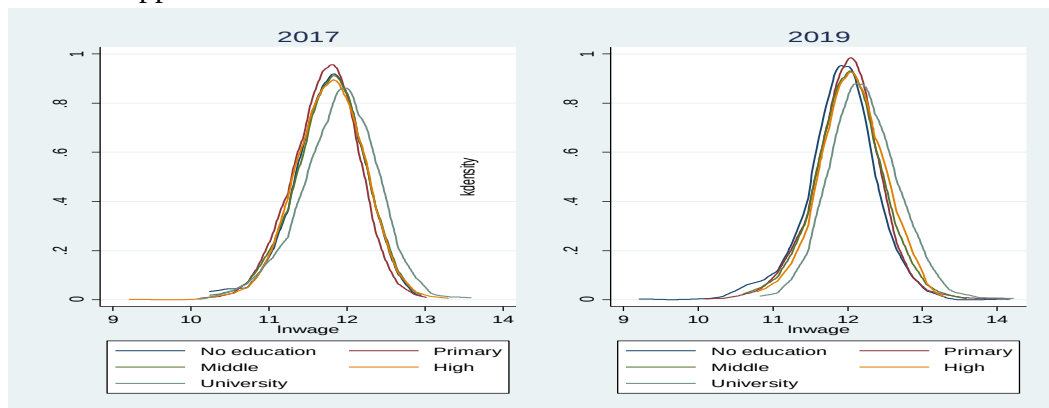


Figure (2) Wage distributions by education levels

Estimation results

Table (3) reports the OLS results from three models with different controls variables. Model (1) only includes key variables: education level, and experience and tenure. Model (2) adds the control of owner's education level, experience, and gender. Model (3) includes additional control of firm size and industry zone. In all three models, state/region fixed effect or/and sector fixed effect are also controlled. Since employees are randomly selected from each enterprise, it is likely that the random error term for each employee within an enterprise cannot be independent. This could invalid the use of ordinary standard errors of OLS estimates and result in misleading inference. To allow the possible dependence of the error terms of the employees in the same enterprises, cluster standard errors are used at firm level.

Among all the results, the primary interest of this paper is on the estimates of education levels of employees. As the base education group is employees without any education, the estimates of education levels should be interpreted with reference to the base group. In Model (1), the signs of the coefficients of all education levels are positive, as expected. This means that education has positive effect on wage. The sizes of these coefficients are also consistent. As education level becomes higher, wage differentials are also higher. While signs and sizes of the coefficients of education levels are correct, only the coefficient of university level education is statistically significant at 1 percent. This estimate shows that compared to the average salary of employees with no education, the average salary of employees with university level education is approximately 14 percent higher. The signs of experience and tenure estimates are also in line with empirical findings. The fact that the linear term is positive while the quadratic term is negative indicates that the relationship between lnwage and these two independent variables is inverted U-shape. This implies that as experience and tenure increase, lnwage also increases but the increment is diminishing over time. The estimate of male coefficient indicates that average salary of male is 23 percent higher than female. This wage differential between male and female is substantial.

In Model (2), the estimation results are not much different from Model (1). The estimates of education levels of owner/managers have positive signs and statistically significant. The coefficients of male owners and experience suggest that male owner are more likely to raise wage than female owners, and experienced owners tend to enhance more wage than inexperienced owners. These two effects are, however, statistically insignificant.

In Model (3), firm size and effect of being in industry zone are considered. The coefficient of the industry zone indicates that average wage of the firms inside the industry zone are 4 percent higher than those outside the industry zone. The positive coefficient of firm size shows that labor productivity in the larger firms is higher than the smaller firms. While this effect is statistically significant, it is not practically significant.

Table (3) Estimation results for 2017

Variables	Model (1) Standard	Model (2) With owner control	Model (3) With firm control
primary	0.00 (0.03)	0.01 (0.03)	0.00 (0.03)
middle	0.01 (0.03)	0.01 (0.03)	0.00 (0.03)
high	0.03 (0.03)	0.03 (0.03)	0.02 (0.03)
higher	0.14*** (0.04)	0.13*** (0.04)	0.11*** (0.04)
exp	0.02*** (0.00)	0.02*** (0.00)	0.02*** (0.00)
expsq	-0.00*** (0.00)	-0.00*** (0.00)	-0.00*** (0.00)
tenure	0.02*** (0.00)	0.02*** (0.00)	0.02*** (0.00)
tenuresq	-0.00*** (0.00)	-0.00*** (0.00)	-0.00*** (0.00)
male	0.23*** (0.02)	0.19*** (0.02)	0.19*** (0.02)
o_primary		0.30** (0.12)	0.30** (0.12)
o_middle		0.29** (0.12)	0.29** (0.12)
o_high		0.32** (0.12)	0.31** (0.12)
o_higher		0.38*** (0.12)	0.36*** (0.12)
ownermale		0.00 (0.02)	0.00 (0.02)
ownerexp		0.00 (0.00)	0.00 (0.00)
zone			0.04* (0.02)
firmsize			0.00*** (0.00)
Constant	11.43*** (0.05)	11.06*** (0.13)	11.06*** (0.13)

Variables	Model (1) Standard	Model (2) With owner control	Model (3) With firm control
Observations	4,423	4,423	4,423
R-squared	0.218	0.266	0.278
State/Region FE	Yes	Yes	Yes
Sector FE	No	Yes	Yes

Source: Own calculation based on MSME 2017 survey. Note: *, **, and *** represent 10%, 5%, and 1% significance level, respectively. The numbers in the parentheses are standard errors, which are clustered at firm level.

Table (4) presents the estimation result for 2019. Compared to the results in Table (3), the signs of coefficients do not change at all. However, the sizes of coefficients are larger and more coefficients become significant.

In Model (1), the coefficient of education levels should be interpreted as a wage differential to the base group (no education group). In line with intuition, wage differential becomes larger as education level higher. As before, experience and tenure have an inverted U-shape relationship with lnwage. Wage differential between male and female is approximately 24 percent.

In Model (2), all coefficients carry the same signs as before while their sizes become smaller due to the additional controls on owners/managers. The coefficients on education levels of employees are positive and the sizes are sequentially consistent. Experience and tenure has diminishing positive effect on lnwage. Wage differential between male and female is still significant and is about 19 percent. Control variables for owners' education, gender, and experience are all have positive effect.

In Model (3), the control variables for firm size and industry zone are incorporated. Compared to the results from the previous two models, only a few coefficients have become smaller. Compared to the average wage of firms outside the industry zone, those in the industry zone are about 7 percent higher. The effect of firm size has a significant positive effect although it is not practically significant.

Table (4) Estimation results for 2019

Variables	Model (1) Standard	Model (2) With owner control	Model (3) With firm control
primary	0.05* (0.02)	0.04 (0.02)	0.04 (0.02)
middle	0.07*** (0.03)	0.06** (0.03)	0.06** (0.03)
high	0.11*** (0.03)	0.10*** (0.03)	0.08*** (0.03)
higher	0.23*** (0.04)	0.21*** (0.04)	0.16*** (0.03)
exp	0.01*** (0.00)	0.01*** (0.00)	0.01*** (0.00)
expsq	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
tenure	0.02*** (0.00)	0.02*** (0.00)	0.02*** (0.00)
tenuresq	-0.00*** (0.00)	-0.00*** (0.00)	-0.00*** (0.00)
male	0.24*** (0.02)	0.19*** (0.02)	0.20*** (0.02)

Variables	Model (1) Standard	Model (2) With owner control	Model (3) With firm control
o_primary		0.10 (0.06)	0.10 (0.06)
o_middle		0.07 (0.06)	0.07 (0.06)
o_high		0.13** (0.06)	0.11* (0.06)
o_higher		0.17*** (0.06)	0.14** (0.06)
ownermale		0.04* (0.02)	0.03* (0.02)
ownerexp		0.00 (0.00)	0.00 (0.00)
zone			0.07*** (0.02)
firmsize			0.00*** (0.00)
Constant	11.65*** (0.04)	11.49*** (0.07)	11.50*** (0.07)
Observations	4,283	4,283	4,283
R-squared	0.190	0.237	0.259
State/Region FE	Yes	Yes	Yes
Sector FE	No	Yes	Yes

Source: Own calculation based on MSME 2019 survey. Note: *, **, and *** represent 10%, 5%, and 1% significance level, respectively. The numbers in the parentheses are standard errors, which are clustered at firm level.

Conclusion

After controlling for observed characteristics of employees, owners/mangers, and firms, and unobserved fixed effects of state/region and sector, it is found that education has positive causal effect on wage. This finding highlights the importance of education on labor productivity and thus economic growth. The policy makers should ensure that every citizen attain an education level, which they are supported to have. As in other research papers, this paper is also not flawless. In particular, individual fixed effect (ability) and time-varying factor (technology change) need to be controlled. This constraint will be considered in the future when panel data are available.

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FACTORS INFLUENCING LABOR FORCE PARTICIPATION AMONG PEOPLE WITH DISABILITIES IN MYANMAR

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Abstract

The involvement of people with disabilities in the economy is essential for promoting global economic growth. The purpose of this study is to examine the factors affecting the labor force participation of disabled individuals in Myanmar. The 2019 Inter-censal Survey (ICS) data are utilized. The study makes use of the descriptive statistics, Chi-square test, and probit regression model. In Myanmar, the employment rate for people with disabilities is around 24%. The probit regression model's findings indicate that the labor force participation of disabled people varies significantly depending on their age, sex, marital status, level of education, household size, annual household income, states and regions, as well as their difficulty with seeing, walking, remembering, taking care of themselves, and communicating. For disabled people who are married, better educated, and have larger household incomes, their probability of participation in labor force is higher. It was discovered that women with disabilities are less likely to work than men with disabilities. It is obvious that there are gender inequalities in Myanmar's labor force. However, disabled people who have bigger families and difficulty with seeing, walking, remembering, self-care, and communicating are less likely to participate in the labor force. Additionally, there are differences in the employment of disabled persons geographically. As a result, it would be beneficial to reduce discrimination among people with disabilities as they first enter labor market and to highlights the adaptations that allow them to seek jobs based on their disabilities. The government and policymakers should put plans into action to ensure the long-term prosperity of disabled people.

Key words: Labor Force Participation of Disabled People, Disability Factors, Gender Difference and Geographic Diversity

Introduction

There are many obstacles that people with disabilities must overcome in order to participate fully in society and the labor market. The extent and type of labor market engagement, in turn, have a variety of direct and indirect consequences for living standards and quality of life, making it an important topic for research and policy consideration. People with disabilities make up a diverse population because they can be either inherited from parents or acquired later in life. These disabilities can range in severity from mild to severe. Additionally, there are differences among disabled people in terms of age, ethnicity, sex, education, and place of residence. People with disabilities face significant challenges as a result of a variety of early-life hurdles, particularly when trying to find suitable employment. The absence of chances for education and training that are in line with the needs of the labor market, according to the World Health Organization, is one significant barrier. Unfortunately, compared to those without disabilities, people with disabilities have higher rates of unemployment and are more likely to work in low-paying positions. There are frequently insufficient training facilities for people who were impaired as children. Early disability training programmes frequently lack a vocational focus or teach skills that don't fulfil the needs of the labor market. Employing persons with disabilities is increasingly recognised as part of a bigger effort to diversify the workforce and to offer private enterprises genuine economic benefits. This includes improved problem-solving skills, higher innovation, stronger worker commitment, and a better reputation with clients, business partners, and society at large (Aires, 2018).

Across all four measured disability types, the labor force participation rate in Myanmar is lower for those with moderate or severe disabilities than for those with mild disabilities. People

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with moderate or severe disabilities, particularly those between the ages of 15 and 64, are less likely to work. The lowest participation rates were seen in those who had severe or moderate difficulties walking and remembering, at 23% and 26%, respectively. Due to disease, accident, or disability, about 8% of Myanmar's population was regarded as being unemployed in 2015 (MIMU, 2021).

Myanmar has ratified the United Nations Convention on the Rights of Persons with Disabilities, which recognizes the right of people with disabilities to employment and participation in society. Myanmar can fulfill its legal commitments and safeguard the human rights of people with disabilities by looking into the things that prevent them from participating in the labor force. Employment is crucial for achieving financial independence as well as for social inclusion, self-worth, and mental health. Myanmar can improve its citizens' social well-being, lessen stigma and prejudice towards people with disabilities, and increase their labor force participation. Economic growth and productivity can both increase with a larger labor force. By promoting the inclusion of disabled people in the labor market, Myanmar can access a talent and skill base that is underutilized yet has the potential to advance the nation. As a result, the study find out the demographic, socioeconomic, and disability characteristics of disabled people in Myanmar as well as their involvement in the labor force. In addition, this study investigates the demographic, socioeconomic, and disability factors that are associated with disabled people's labour force participation in Myanmar.

Literature Reviews

Since employment of people with disabilities affects their quality of life and financial well-being, labor force participation of people with disabilities has long been a crucial research topic. Using data from earlier research carried out in diverse contexts, the literature review analyses the factors that influence the labor force participation of people with disabilities.

Johannssmeier (2007) discussed a qualitative study that focused on the difficulties that South African people with disabilities confront in the areas of poverty, work, and education. This study explored how the disability grant (DG) affected people with disabilities and their households, emphasizing the need for greater research on the social and economic implications of this programme. It was discovered that the disability grant is mainly used for essential expenses like food and tuition, and that it is frequently used in households with little to no additional income, leaving them exposed to financial shocks and debt. Disability must be included in development plans that attempt to combat poverty and exclusion since high unemployment and poverty increase the dependency on the disability grant by people with disabilities and their households. Overall, it contributed significantly to our understanding of the difficulties of people with disabilities confront in South Africa and the necessity of a more inclusive and integrated approach to development.

Nolan and Gannon (2004) examined on the influence of disability on labor force participation in Ireland based on data from the Quarterly National Household Survey in Ireland. It was crucial to look into and address how much and how people with disabilities participate in the job market because this has a direct and indirect impact on their level of living and general quality of life. By utilizing a probit model, the study revealed that individuals who reported a severely limiting condition had a significantly lower likelihood of participating in the labor force compared to others, even after controlling for factors such as age, education, and marital status

Arlette (2012) used data from the Third Cameroonian Household Survey (ECAM3) to analyze the factors that contributed to the variations in labor force participation between people with and without disabilities using multinomial logistic regression model. Regardless of the gender or institutional sector taken into consideration, the results of this showed a significant employment disparity between those with disabilities and without disabilities. The breakdown of this disparity leads one to believe that discrimination may be the cause, rather than disparities in

human capital, demographics, or other traits that might be detected between disabled and non-disabled people.

Mala and Garcia (2019) focused on the effects of job quotas for the disabled in Brazil based on the Demographic Census in years 2000 and in 2010. According to the probit model, education and work experience were key factors in determining access to well-paying jobs and must be encouraged through skill development initiatives for those with disabilities. However, reducing pay disparities between disability groups will not be possible unless people with disabilities' educational, employment, and occupational attainment levels have been improved. According to this study, barriers to employment for persons with disabilities should be removed in the areas of education, health, transportation, and other public and private services.

Halimatussadiah et al. (2014) used the Population Census Data (2010) and Susenas Data (2012) to examine a number of topics regarding the prevalence and measurement of disabilities in Indonesia. The study made the recommendation that when measuring disability, it should take into account both physical and health-related impairment as well as the social component that further limits people with disabilities. The study highlighted higher disability prevalence rates in Sulawesi and Nusa Tenggara areas. The inability of people with disabilities to join in the labor market was largely prevented by their inadequate education and lack of access to public amenities like schools. Although there were laws in place to safeguard people with disabilities in the formal sector, their enforcement was poor. The report recommended enhancing abilities of people with disabilities to be effective and competitive in the labor market and encouraging their social and economic inclusion to solve these concerns.

Mavromaras (2007) used two important data sources—the ABS Survey of Disability, Ageing, and Careers and the Household, Income, and Labor Dynamics in Australia Survey to study the socioeconomic characteristics and labor market conditions of people with disabilities in Australia. The study discovered that people with disabilities earn less and participate in the work market at lower rates than people without disabilities. Additionally, the labor market did not value their less developed human capital as much. People with and without disabilities had significantly different rates of labor force participation. The likelihood of employment was lower for persons with disabilities, while better education and job experience were associated with higher rates of labor force involvement.

Hogan et al. (2012) analyzed the barriers to workforce participation for individuals with disabilities by utilizing data from the Australian Bureau of Statistics (ABS) 2003 Survey of Disability, Ageing and Careers. Results of logistic regression, it was discovered that several factors such as age, gender, educational level, and country of birth had an impact on the labor force participation of people with disabilities. Males and those from an English-speaking country were more likely to be in the labor force compared to females and those from a non-English speaking country. Additionally, individuals with a higher level of education were more likely to participate in the labor force compared to those who had not completed grade 12. As discussed above, various researches investigated that demographic, socioeconomic and disability factors is related to labor force participation of disabled people. This study explores that the determinants of labor force participation of disabled people in Myanmar. The conceptual framework of the study explains the relationships among labor force participation of people with disabilities and demographic, socioeconomic and disability factors.

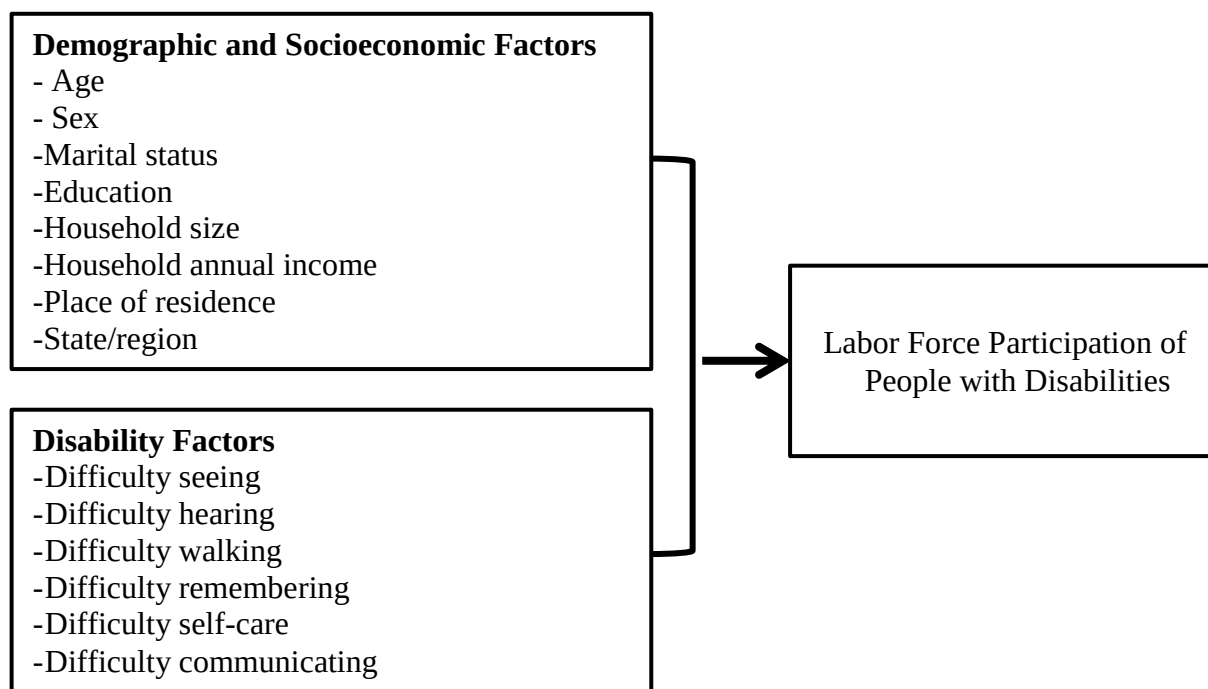


Figure 1: Conceptual framework

Data and Methods

Data

This study used dataset from the 2019 Inter-censal survey (ICS), Department of Population, Ministry of Labor, Immigration and Population. This study focuses on people with disabilities aged 15 to 64 years. While 548,553 people were obtained from ICS in 2019, this study focused on 44749 disabled individuals. This study used a sample size of 44749 disabled persons.

Key Variables and Measurements

The identification and measurement of dependent and independent variables for fitting model is shown in Appendix Table 1. The dependent variable is labor force participation among disabled people and independent variables are demographic, socioeconomic and disability factors. The demographic and socioeconomic characteristics are age, gender, marital status and education level, states/regions, household income and household size and place of residence and disability characteristics are difficulty seeing, difficulty hearing, difficulty walking, difficulty remembering, difficulty self-care and difficulty communicating.

Statistical Analysis

This study makes use of descriptive statistics, Pearson's Chi-square test, and the probit regression model. The relationship between demographic, socioeconomic, and disability factors and labor force participation among disabled persons is examined using the Chi-square test. When a response variable, like the labor force participation of disabled individuals (employed and unemployed disabled people), is binary, a probit regression model was applied to examine the demographic, socioeconomic, and disability factors associated with the participation of disabled people in the labor force.

Chi-squared Test

Pearson's Chi-squared test (χ^2) is a statistical test applied to test a null hypothesis stating that the frequency distribution of certain events observed in a sample is consistent with a particular theoretical distribution. The assumptions for Chi-square independence are: (i) the data

are obtained from a random sample and (ii) the expected value in each cell must be 5 or more. The Chi-square test used to determine whether the association between two qualitative variables is statistically significant. The chi-square statistic is computed with the following formula:

$$\chi^2 = \sum_{i=1}^n \frac{(f_i - f_e)^2}{f_e}$$

Where, f_i is the observed frequency in the cell
 f_e is the expected frequency in each cell

Probit Regression Model

Probit models are a form of a statistical model that is used to predict the probability of the occurrence of an event. Probit models are based on the probit function. In probit model, the cumulative standard normal distribution function is used to model the relationship between the predictors and the probability of the event occurring. The output of the probit model also ranges from 0 to 1, like that of the logit model. The probit model can be represented as follow.

$$\Pr(Y = 1|X) = \Phi(Z)$$

Where, $Z = b_0 + b_1X_1 + b_2X_2 + \dots + b_nX_n$

Y is the dependent variable and represents the probability that the event will occur ($Y = 1$) given the variables X .

Z is the linear combination of independent variables (X) with coefficients ($b_0, b_1, b_2, \dots, b_n$).

In the case of the probit model, cumulative distribution function of standard normal distribution (Φ) is used. The parameters ($b_0, b_1, b_2, \dots, b_n$) are estimated using maximum likelihood estimation technique.

If Z is a standard normal random variable, then its probability density function is:

$$\Phi(z) = \frac{1}{\sqrt{2\pi}} e^{-0.5z^2} \quad (1)$$

$$\text{The probit function is: } \Phi(z) = P[Z \leq z] = \int_{-\infty}^z \frac{1}{\sqrt{2\pi}} e^{-0.5z^2} dz \quad (2)$$

The function $\Phi(z)$ is the cumulative distribution function (CDF) to compute normal probabilities.

Findings

Descriptive Analysis

The demographic and socioeconomic factors (age, gender, marital status and education level, states/regions, household income and household size and place of residence) and disability factors (difficulty seeing, difficulty hearing, difficulty walking, difficulty remembering, difficulty self-care and difficulty communication of disabled people) have been shown in Appendix Table 2. It is found that 23.69% of disabled people were employed whereas 76.31% of disabled people were unemployed.

Regarding the demographic and socioeconomic characteristics, 53.37% of disabled people belonged to age group 50 to 64 years, and followed by 23.57% of disabled people belonged to age group 40 to 49 years, and nearly 12% of disabled people belonged to age group 30 to 39 years and 15 to 29 years. The disabled people (56.33%) were female whereas 43.67% were male. In relation to the marital status, 81.39% of disabled people were married whereas 18.61% were unmarried. Concerning the education level, most of the disabled people (48.58%) have achieved primary school and below, and followed by 18.08% have achieved high school, 17.53% have achieved secondary school and 15.81% have no education.

Dealing with the household size, the most of disabled people (72.94%) lived in household size with 1-5 members. Regarding the household annual income, 64.3% of disabled people had household annual income with 10-50 lakhs, 18% of disabled people had household annual

income with below 10 lakhs, and 17.69% of disabled people had household annual income with above 50 lakhs. According to states and regions, 15.29% of disabled people lived in Ayeyarwady Region, 9.93% lived in Mandalay Region, 10.73% lived in Yangon Region, 10.2% lived in Magway Region, 9.57% lived in Sagaing Region, 8.82% lived in Shan State, 7.91% lived in Bago Region, 5.55% lived in Kayin State, 4.15% lived in Mon State, 3.95% lived in Kachin State, 3.94% lived in Chin State, 3.7% lived in Tanintharyi Region, 2.41% lived in Rakhine State, 2.46% lived in Nay Pyi Taw and 1.39% lived in Kayah State. Most of disabled people (72.12%) lived in rural areas but 27.88% lived in urban areas.

Regarding the disability factors, 57.66% of disabled people had difficulty seeing, 13.96% had difficulty hearing, 36.81% had difficulty walking, 32.72% had difficulty remembering, 7.04% had difficulty caring for themselves, and 8.94% had difficulty communicating.

Bivariate Analysis

The bivariate analysis is performed using Chi-square test and the results are shown in Appendix Table (3). According to the results of Chi-square test, age, sex, marital status and education level of disabled people, household size, household annual income, place of residence, states and regions, disabled people had difficulty seeing, difficulty hearing, difficulty walking, difficulty remembering, difficulty self-care, and difficulty communicating are significantly related to labour force participation of disabled people at 1% significance level.

Multivariate Analysis

To analyze the determinants of labor force participation among disabled people, probit regression model is carried out. Appendix Table (4) shows that the model fitting information for labor force participation of disabled people. Regarding the model fitting information for labor force participation of disabled people, the Chi-square value is 2436.88, which is statistically significant at 1% level. This implies that one or more of the independent variables in the model is important for predicting the probability of labor force participation of disabled people in Myanmar. The Pseudo R Square shows that about 4.97% of the variation in the labor force participation of disabled people is explained by this probit model.

According to the results of probit model, age, sex, marital status and education level of disabled people, household size, household annual income, states and regions, disabled people had difficulty seeing, difficulty walking, difficulty remembering, difficulty self-care, and difficulty communicating influence on labor force participation of disabled people.

According to the findings, compared to disabled people's age group of 15-29 years, their age groups of 30-39 years and 40-49 years have 5.42% and 3.72% more chance of participating in the labor force, respectively. Compared to disabled people's age group of 15-29 years, their age groups of 50-64 years have 4.16% less chance of participating in the labor force. Compared to male disabled individuals, female disabled individuals have a 10.71% lower chance of participating in the labor force. Compared to single disabled people, married disabled people have a 2.82% higher chance of participating in the labor force.

When compared to disabled people who don't have an education, they who have completed primary school or less, middle school, and high school or above have about 1.49%, 1.06%, and 3.43% more chance of participating in the labor force, respectively. In comparison to disabled people with household sizes of 1-5 members, their household sizes of 6 members and above have approximately 3.06% less probability of participating in the labor force. In addition, disabled people have about 2.08% and 5.36% higher chance of participating in the labor force when their household annual income were between 10 and 50 lakhs and above 50 lakhs, respectively, compared with when their household annual income were below ten lakhs.

Moreover, disabled people who lived in Kayah, Mandalay and Nay Pyi Taw are about 4.56%, 3.07% and 6.14% more probability of participating in labour force compared to their residing in Ayeyarwady. Disabled people who lived in Kachin, Kayin, Chin, Sagaing, Bago,

Magway and Shan are about 12.24%, 5.17%, 8.4%, 9.31%, 3.86%, 2.96%, and 1.68% less chance of participating in labor force compared to their residing in Ayeyarwady.

In terms of disability factors, disabled people who experience difficulty seeing have a 1.06% lower chance of participating in the labor force than people without such difficulty. Disabled individuals who experience difficulty walking have a 6.26% lower chance of participating in the labor force than people without such difficulty. Disabled individuals who experience difficulty remembering have a 2.43% lower chance of participating in the labor force than people without such difficulty. Disabled people who experience difficulty caring themselves have a 9.43% lower probability of participating in the labor force than people without such difficulty. Disabled people who experience difficulty communicating have a 5.33% lower probability of participating in the labor force than people without such difficulty.

Discussions

The results of this research point out a significant disparity in workforce participation between people with disabilities and those without disabilities. Specifically, people with difficulty seeing are found to participate less in the labor force compared to those without difficulty. People without difficulty in walking, remembering, self-care, or communication are more likely to be employed. These findings align with previous study by Arlette (2012) who highlighted government and local planner carried out the greater efforts to remove barriers and create inclusive work environments by which everyone has equal access to employment opportunities.

The results of this study indicate that females with disabilities face greater challenges participating in the labor market than male disabilities. Indeed, female disabled persons are less likely to participate in labor force than male. This finding aligns with Hogan et al. (2012).

The study reveals that disabled individuals with primary, middle, and higher levels of education are more inclined to participate in the labor force. The finding that individuals without a good education can still participate in the labor force despite having disabilities is noteworthy. However, it is also significant that disabled individuals with higher education levels are highly participated in the workplace, indicating that education can significantly enhance employment opportunities for disabled individuals. This result is consistent with Halimatussadiah et al. (2014), Hogan et al. (2012) and Mala and Garcia (2019). They highlighted the significance of promoting education and employment opportunities for people with disabilities.

Disabled people with low annual income levels are less likely to participate in the labor force. This finding is analogous to the result of Mavromaras (2007). He pointed out the importance of addressing socioeconomic barriers that limit employment opportunities for disadvantaged groups.

Conclusion and Recommendations

According to this study, around 24% of disabled people are employed, compared to 76% who are not. It is found that nearly 58% of disabled persons have problems seeing, 14% have problems hearing, 37% have problems walking, 33% have problems remembering, 7% have problems taking care of themselves, and 9% have problems communicating.

The findings from the probit regression model indicate that almost all the selected variables in the study influence on labor force participation. The older disabled people, female disabled people, and having larger household size have less chance of participating in the labor force. Moreover, disabled people who experienced difficulty seeing, walking, remembering, self-care, and communication have less chance of participating in the labor force. In contract, disabled people who have married and received higher education have more chances of participating in the labor force. Moreover, disabled people with higher household income level have more chance of participating in the labor force.

Raising awareness about gender stereotypes and encouraging women with disabilities to pursue careers in non-traditional fields may contribute to achieve equality in job opportunities for disabled men and women. This can help to break down employment barriers and enhance their participation in the workforce. Furthermore, offering support services such as vocational training, counselling, and job placement services can help women with disabilities in overcoming work barriers and achieving economic independence.

To improve disabled people's employability and involvement in the labor force, the government should provide additional opportunities and accommodations for education and skill training. Employers ought to establish inclusive work environments where disabled employees can get reasonable accommodations and support. Policies such as affirmative action programmes, which aim to increase the hiring and retention of disabled people, can also be beneficial. Employers should actively seek to remove barriers to employment for persons with disabilities, such as assistive technologies, flexible work arrangements, and reasonable adaptations to the workplace environment. Finally, there is a need to improve disability awareness and understanding among employers, coworkers, and the general public. This can contribute to a healthier as well as welcoming workplace environment.

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Appendix

Appendix Table (1) Description and Classification for Dependent and Independent Variables

<i>Dependent Variable</i>	<i>Independent Variables</i>	
Y= Labor force participation of disabled people = 1 if employed = 0 if unemployed	Demographic and socioeconomic characteristics X ₁ = Gender = 1 if male = 2 if female X ₂ = Age = 1 if 15-29 years = 2 if 30-39 years = 3 if 40-49 years = 4 if 50-64 years X ₃ = Marital status = 1 if single = 2 if married X ₄ = Education = 1 if no education = 2 if primary school and below = 3 if middle school = 4 if high school and above X ₅ = Household size = 1 if 1-5 = 2 if 6 and above X ₆ = household income = 1 if below 10 lakhs = 2 if 10- 50 lakhs = 3 if above 50 lakhs X ₇ =Place of residence = 1 if urban = 2 if rural	X ₈ =States and Regions = 1 if Ayeyarwady = 2 if Kachin = 3 if Kayah = 4 if Kayin = 5 if Chin = 6 if Sagaing = 7 if Tanintharyi = 8 if Bago = 9 if Magway = 10 if Mandalay = 11 if Mon = 12 if Rakhine = 13 if Yangon = 14 if Shan = 15 if Nay Pyi Taw Disability Factors X ₉ = Difficulty seeing = 1 if no = 2 if yes X ₁₀ = Difficulty hearing = 1 if no = 2 if yes X ₁₁ = Difficulty walking = 1 if no = 2 if yes X ₁₂ = Difficulty remembering = 1 if no = 2 if yes X ₁₃ = Difficulty self-care = 1 if no = 2 if yes X ₁₄ = Difficulty communicating = 1 if no = 2 if yes

Appendix Table (2) Percent Distribution of Demographic, Socioeconomic and Disability Characteristics and Labor Force Participation of Disabled People in Myanmar

Independent variables	Classification	Number	Percent	Independent variables	Classification	Number	Percent
Labor force participation	Unemployed	34150	76.31	States/Regions	Ayeyarwaddy	6843	15.29
	Employed	10599	23.69		Kachin	1767	3.95
Age	15–29	5196	11.61		Kayah	624	1.39
	30–39	5123	11.45		Kayin	2484	5.55
	40–49	10546	23.57		Chin	1761	3.94
	50–64	23884	53.37		Sagaing	4284	9.57
Sex	Male	19544	43.67		Taninthayi	1657	3.70
	Female	25205	56.33		Bago	3540	7.91
Marital status	Single	8330	18.61		Magway	4565	10.20
	Married	36419	81.39		Mandalay	4443	9.93
Education	No education	7077	15.81		Mon	1855	4.15
	Primary school and below	21737	48.58		Rakhine	1078	2.41
	Middle school	7846	17.53		Yangon	4800	10.73
	High school and above	8089	18.08		Shan	3945	8.82
Household size	1–5	32655	72.94		Nay Pyi Taw	1103	2.46
	6 and above	12094	27.03	Difficulty seeing	No	18947	42.34
Household annual income	Below 10 lakh	8057	18.00		Yes	25802	57.66
	10-50 lakh	28774	64.30	Difficulty hearing	No	38503	86.04
	Above 50 lakh	7918	17.69		Yes	6246	13.96
Residence	Urban	12475	27.88	Difficulty walking	No	28275	63.19
	Rural	32274	72.12		Yes	16474	36.81
				Difficulty remembering	No	30105	67.28
					Yes	14644	32.72
				Difficulty self-care	No	41598	92.96
					Yes	3151	7.04
				Difficulty communicating	No	40748	91.06
					Yes	4001	8.94

Source: 2019 ICS, Department of Population, Ministry of Labor, Immigration and Population

Appendix Table (3) Results of the Relationship between Labor Force Participation and Demographic, Socioeconomic and Disability Characteristics in Myanmar

Independent variables	Classification	Chi-square	P-value	Independent variables	Classification	Chi-square	P-value
Age	15–29	446.98***	0.000	States/Regions	Ayeyarwaddy	513.19***	0.000
	30–39						
	40–49						
	50–64						
Sex	Male	719.98***	0.000		Chin		
	Female				Sagaing		
Marital status	Single	20.11***	0.000		Taninthayi		
	Married				Bago		
Education	No education	176.09***	0.000		Magway		
	Primary school and below				Mandalay		
	Middle school				Mon		
	High school and above				Rakhine		
Household size	1–5	32.74***	0.000		Yangon		
	6 and above				Shan		
Household annual income	Below 10 lakh	127.99***	0.000		Nay Pyi Taw		
	10-50 lakh			Difficulty seeing	No	28.13***	0.000
	Above 50 lakh			Yes			
Residence	Urban	27.44***	0.000	Difficulty hearing	No	20.29***	0.000
	Rural			Yes			
				Difficulty walking	No	337.55***	0.000
				Yes			
				Difficulty remembering	No	70.17***	0.000
				Yes			
				Difficulty self-care	No	227.85***	0.000
				Yes			
				Difficulty communicating	No	143.73***	0.000
				Yes			

Note: ***, **, * statistically significant at 1%, 5% and 10% level.

Source: Source: 2019 ICS, Department of Population, Ministry of Labor, Immigration and Population

Appendix Table (4) Parameter Estimates of Probit Regression Model for Labor Force Participation in Myanmar

Independent variables	Categorization	Coef.	Marginal effect	P-value	Independent variables	Categorization	Coef.	Marginal effect	P-value
Constant		-0.43		0.000	States / Regions	Ayeyarwaddy (ref)			
Age	15–29 (ref)					Kachin	-0.47***	-0.1224	0.000
	30–39	0.17***	0.0542	0.000		Kayah	0.14**	0.0456	0.012
	40–49	0.12***	0.0372	0.000		Kayin	-0.18***	-0.0517	0.000
	50–64	-0.15***	-0.0416	0.000		Chin	-0.3***	-0.0840	0.000
Sex	Male (ref)					Sagaing	-0.34***	-0.0931	0.000
	Female	-0.36***	-0.1071	0.000		Taninthayi	-0.02	-0.0047	0.690
Marital status	Single (ref)					Bago	-0.13***	-0.0386	0.000
	Married	0.1***	0.0282	0.000		Magway	-0.1***	-0.0296	0.000
Education level	No education (ref)					Mandalay	0.1***	0.0306	0.000
	Primary school and below	0.05**	0.0149	0.015		Mon	0.01	0.0037	0.745
	Middle school	0.04	0.0106	0.144		Rakhine	-0.07	-0.0219	0.119
	High school and above	0.12***	0.0343	0.000		Yangon	-0.03	-0.0103	0.235
Household size	1–5 (ref)					Shan	-0.06*	-0.0168	0.059
	6 and above	-0.11***	-0.0306	0.000		Nay Pyi Taw	0.19***	0.0614	0.000
Household annual income	Below 10 lakh (ref)				Difficulty seeing	No (ref)			
	10–50 lakh	0.07***	0.0208	0.000	Difficulty hearing	Yes	-0.04**	-0.0106	0.040
	Above 50 lakh	0.18***	0.0536	0.000		No (ref)			
Place of residence	Urban (ref)				Difficulty walking	Yes	0.02	0.0050	0.438
	Rural	-0.04**	-0.0113	0.024		No (ref)			
					Difficulty remembering	Yes	-0.21***	-0.0626	0.000
						No (ref)			
					Difficulty self-care	Yes	-0.08***	-0.0243	0.000
						No (ref)			
					Difficulty communicating	Yes	-0.32***	-0.0943	0.000
						No (ref)			
						Yes	-0.18***	-0.0533	0.000

Note: ***, **, * statistically significant at 1%, 5% and 10% level.

Source: Source: 2019 ICS, Department of Population, Ministry of Labor, Immigration and Population

FACTORS AFFECTING ON POVERTY OF HOUSEHOLDS IN KYAUKPADAUNG TOWNSHIP

Su Pan Hnin¹

Abstract

This study is concerned with factors affecting poverty of households in Kyaukpadaung Township. The objectives of the study are to study the socio-economic situations of household and to analyze the effect of socio-demographic and economic factors on poverty of households in Kyaukpadaung Township. A two-stage random sampling is used to conduct the survey. The first stage was randomly selected four wards from twelve wards of Kyaukpadaung township and at the second stage once data had been collected 300 households were chosen at random from four wards by using simple random sampling method, descriptive analysis, principal component analysis (PCA) and binary logistic regression were applied to analyze primary data. In this township, income level of most of the households is below 400000 Kyats. In Binary logistic regression, the coefficients of age, number of students, loans, occupation and family size were found to be statistically significant. Therefore, the government should focus and support job opportunities to increase the income level and uplift the socio-economic life of households in Kyaukpadaung Township.

Keywords: Poverty, Wealth index, Binary Logistic Regression

Introduction

Poverty is a condition of one who lacks financial resources and essentials for a certain standard of living. Poverty can have diverse economic, social and political causes and effects. It can be defined as insufficient resources to meet basic human needs which include access to shelter, clean water, education, food, health care and clothing. It can be multi-faceted, and it also can be decreased by increasing the income of the poor, or by reducing the expenses on goods and services. The poverty issue of a nation that has remained a big challenge since human civilization.

Wealth is the value of all natural, physical and financial assets owned by a household, reduced by liabilities. Wealth reflects intergenerational transitions as well as accumulation of income and savings. Asset ownership provides an explanation of the long-term financial status of a family, and however it has less impact on short-term economic changes in contrast with other wealth or poverty measures. The index (WI) estimates relative wealth and dissimilar to the poverty line, is not an absolute measure of poverty or wealth. The wealth of families based on the wealth index to rank from poorer to wealthier households can be estimated but this can't permit to make sense of who is extremely poor and wealthy. The wealth quintiles divide the entire

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population into five equally huge groups, based on their wealth rank. It permits researchers to distinguish the effect of wealth on poverty outcomes (Bottone et al., 2017).

The wealth index allows for the identification of poor, health care and particularly to the wealthy. It allows identifying how households' economic status affects health outcomes. It is a composite measure of the cumulative living standard of a household. It is calculated using data on a household's ownership of selected set of assets, such as televisions, bicycles, and cars, dwelling characteristics such as flooring material, type of drinking water source, and toilet and sanitation facilities. It considers characteristics that are related to wealth status, avoiding variables that do not represent an asset, or outcome variables. Each household asset is assigned a weight or factor score generated principal component analysis. The resulting asset scores are standardized in relation to a standard normal distribution with a mean of zero and a standard deviation of one.

Asset based wealth indices are widely used instruments for measuring the economic situation of households in developing countries. Component indicators used to construct wealth index include television, radio, telephone or refrigerator, and variables related to the dwelling, such as sanitation facilities, water supply, type of flooring, and number of people per sleeping room. Wealth index, estimated based on assets of the household, is a better reflector of living standard and poverty, compared to income and consumption.

Demographic variables such as age, dependency ratio, household size, and gender of household head can also exert significant effect on poverty at the household level. At the household level, household assets, education, health status, and income are strong determinants of household poverty. Demographic factors are essential to examine family poverty and these may likewise effect of the financial development of a nation. The nations having high fertility rates and low child mortality rate could cause a high youth dependency rate, which brings down the per-capita assets for contributions in human resources, infrastructure, and economic development. In these conditions, it is difficult for families to handle the issues emerging from poverty. Financial development and family hardship are affected by adult mortality rates. Because of extreme and lethal sickness, terrorism and armed conflicts, the working age populace the nation level by raising age dependency burdens and diminishing the potential for financial development (Buvinicet al., 2009).

Socio-economic conditions including economic shocks, food weakness, and environmental change compromise the benefits and may drive into poverty. It also involves education, income, overall financial security, occupation, living conditions, resources, and opportunities afforded to people within society. The lowest economic status is poverty, which is

heavily influenced by education and thus influences social and work status. A measure of the socio-economics status of families is a critical component in most economics and demographic analyses. This measure is useful tool in assessing poverty and disparity of a population. In addition, it can be utilized as a control variable in estimating the impact of other variables related to wealth (Filmer & Pritchett, 2001).

Myanmar has an expected population of 51.4 million, containing of various ethnic groups speaking over 100 languages and dialects. It is ranked 150 out of 187 nations on the Human Development Index. Economic development has averaged 5 percent in recent years with a per capita income of USD \$ 702. Poverty levels are estimated at 26 percent of the population. Poverty is twice as high in rural areas where 70 percent of the population lives. In Kyaukpadaung Township, the majority of the people in the Township live in rural areas with only (16.3%) living in urban areas. Labour force participation rate for the population aged 15-64 in Kyaukpadaung Township is 70.7 per cent. In Kyaukpadaung Township, 48.3 per cent of the employed persons aged 15-64 are skilled agricultural, forestry and fishery workers and is the highest proportion, followed by 14.6 per cent in elementary occupations. The majority of the households in Kyaukpadaung Township are living in bamboo houses (41.3%) followed by households in wooden house (39.4%). About 53.1 per cent of urban households live in bamboo houses and 43.4 per cent of rural households live in wooden houses. About 16.1 per cent of the households in the township have no toilet facilities. In the rural areas of Kyaukpadaung Township, 18.7 per cent of the households have no toilet facilities. About 36.2 per cent of the households use water from tube well, borehole and 18.5 per cent use water from pool/pond/lake. About 30.0 per cent of the households use water from unimproved sources. In rural areas, 32.4 per cent of the households use water from unimproved sources for drinking water. In Kyaukpadaung Township, households mainly use wood-related fuels for cooking with 86.0 per cent using firewood and 2.2 per cent using charcoal. About 11.6 per cent of households use electricity for cooking. About 95.7 per cent of households in rural areas use firewood and 0.5 per cent use charcoal. In Kyaukpadaung Township, 40.3 per cent of the households have motorcycle/moped as a means of transport. Analysis by urban/rural residence, the majority of the households mainly use motorcycle/moped as a means of transport in urban areas and cart (bullock) as a means of transport in rural areas. According to the above reasons, this study aims to analyze the effect of demographic and socioeconomic factors on poverty of households in Kyaukpadaung Township.

Literature Review

Ahmad (2015) studied economic wealth index: A tool to study the economic health of districts of selected states in India. The objectives are to create the economic wealth index using PCA, to classify Economic Wealth Index values into categories, to rank the districts of the selected States and to compare the Economic Wealth Index values of the districts of Maharashtra with Human Development Index. PCA is used to construct the Economic Wealth Index based on quality data, condition of houses and presence of various basic facilities like drinking water, electricity and toilet given by Census (2001). The results point out that correlation between composite economic wealth index and mean number of births is significant only in the pooled data, the State of Maharashtra and Jharkhand.

Chasekwa, et al., (2018) studied measuring wealth in rural communities: lessons from the sanitation, hygiene, infant nutrition efficacy (SHINE) trial by using principal component analysis. This paper developed and validated a household wealth index using baseline data for the sanitation, hygiene, infant nutrition efficacy trial conducted in rural Zimbabwe between 2012 and 2017. This study found that a “standard” approach (PCA) using a rich, but still relatively parsimonious set of variables is strongly associated with a wide range of indicators of wealth and is both internally and externally valid. In addition to providing evidence of the validity of the index, the paper provides a template for others constructing such indices, including a method for placing smaller regional samples into the broader context of a country when national survey data are available.

Dekker (2006) explored estimating wealth effects without expenditure data: evidence from rural Ethiopia by using both factor analysis and PCA. This study found that households with a higher economic status experience significantly fewer weeks of food insecurity compared to households with a lower economic status. Moreover, the results suggest the relation between household economic status and food security is measured at least as precisely when an assets based wealth index are compared to a wealth proxy defined as per capita consumption.

Mohanty (2009) explored alternative wealth index and health estimates in India at International Institute for Population Sciences by using PCA to construct a wealth index or to measure socio-economic status has been well established and validated. This study found that rural and urban areas should be debated and also theoretical and statistical significance in the construction of a wealth index should be examined. The results of study suggest the construction of a separate wealth index for rural and urban areas. Although the value of consumer durables varies considerably across countries it is useful to try and derive information about the quality

and market prices of consumer durables in constructing a more context-specific and robust wealth index.

Sanjay K. Mohanty (2009) presented alternative wealth indices and health estimates in India. The aim of this paper is to understand whether the estimates of reproductive and child health services of wealth groups in India significantly differ when two alternative wealth indices are used. The estimates of reproductive and child health services are compared with respect to wealth groups of two different wealth indices: (i) a single wealth index for the population at national level and (ii) two separate wealth indices for rural and urban areas. Multivariate techniques such as principal component analysis (PCA), factor analysis, as well as linear regression approaches and aggregation techniques are used in weighting indicators. The result points out for small and large-scale surveys lacking income or expenditure data and using wealth index, the inclusion of variables sensitive to rural and urban areas should be debated and their theoretical and statistical significance in the construction of a wealth index should be examined. The results of this study suggest the construction of a separate wealth index for rural and urban areas. Rutstein and Staveteig (2014) presented making the demographic and health surveys wealth index comparable. This paper aims to present inequality measures for a set of demographic and health indicators, to determine the contribution of relative and absolute measures of poverty to progress in the indicators and to describe a newly developed methodology for calculating wealth indexes comparable across country and time. There are several techniques to calculate the Comparative Wealth Index (CWI): comparison with a baseline, use poverty levels and other common items that are in each demographic and health surveys as anchoring points. The result shows that CWI produces in terms of ranking of countries and regions that generally comport with per capita income measures and may help to sort out the effects due to health programs focused on the poor versus the effects due to changes in economic status of the population.

Data and Methods

Data

To obtain the required data, a survey was conducted in Kyaukpadaung Township using two stage random sampling method. The first stage was randomly selected four wards from twelve wards of Kyaukpadaung Township and the second stage was randomly collected 300 households from four wards by using simple random sampling method. The primary data were collected by face-to-face interview using structural questionnaires. Descriptive analysis, principle component analysis and binary logistic regression model were used in this study.

Principal Component Analysis (PCA)

Principal Component Analysis is a statistical procedure concerned with elucidating the covariance structure of a set of variables. It is a method that projects a dataset to a new coordinate system by determining the eigenvectors and eigen values of a matrix. It involves a calculation of a covariance matrix of a dataset to minimize the redundancy and maximize the variance.

Although p components are required to reproduce the total system variability, often much of this variability can be accounted for by a small number k of the principal components. If so, there is as much information in the k components as there is in the original p variables. The k principal components can then replace the initial p variables, is reduced to a data set consisting of n measurement on k principal components.

An analysis of principal components often reveals relationships that were not previously suspected and thereby allows interpretations that would not ordinarily results. Algebraically, principal components are particular linear combinations of the p random variables $X_1, X_2, \dots, X_p$. Geometrically, this linear combination represents the selection of a new coordinate system obtained by rotating the original system with $X_1, X_2, \dots, X_p$ as the coordinate axes. The new axes represent the directions with maximum variability and provide a simpler and more parsimonious description of the covariance structure. Principal components depend solely on the covariance matrix Σ (or the correlation matrix P) of $X_1, X_2, \dots, X_p$. Their development does not require a multivariate normal assumption. On the other hand, principal components derived for multivariate normal populations have useful interpretations in terms of the constant density ellipsoids.

Let the random vector $X' [X_1, X_2, \dots, X_p]$ have the covariance matrix Σ with eigenvalues $\lambda_1 \geq \lambda_2 \geq \dots \geq \lambda_p \geq 0$.

Consider the linear combinations

$$Y_1 = a'_1 X = a_{11}X_1 + a_{12}X_2 + \dots + a_{1p}X_p$$

$$Y_2 = a'_2 X = a_{21}X_1 + a_{22}X_2 + \dots + a_{2p}X_p$$

$$Y_p = a'_p X = a_{p1}X_1 + a_{p2}X_2 + \dots + a_{pp}X_p \quad (3.1)$$

Then, it obtain

$$\text{Var}(Y_i) = a'_i \Sigma a_i \quad i = 1, 2, \dots, p \quad (3.2)$$

$$\text{Cov}(Y_i, Y_k) = a'_i \Sigma a_k \quad i, k = 1, 2, \dots, p \quad (3.3)$$

The principal components are those uncorrelated linear combinations $Y_1, Y_2, \dots, Y_p$ whose variances in (3.1) are as large as possible.

The first principal component is the linear combination with maximum variance. That is, it maximizes $\text{Var}(Y_i) = a_i' \Sigma a_i$. It is clear that $\text{Var}(Y_i) = a_i' \Sigma a_i$ can be increased by multiplying any a_i by some constant. To eliminate this indeterminacy, it is convenient to restrict attention to coefficient vector of unit length. It can define

First principal component = linear combination $a_1' X$ that maximizes

$$\text{Var}(a_1' X) \text{ subject to } a_1' a_1 = 1$$

Second principal component = linear combination $a_2' X$ that maximizes

$$\text{Var}(a_2' X) \text{ subject to } a_2' a_2 = 1 \text{ and}$$

$$\text{Cov}(a_1' X, a_2' X) = 0$$

At the i th step, i th principal component = linear combination $a_i' X$ that maximizes

$$\text{Var}(a_i' X) \text{ subject to } a_i' a_i = 1 \text{ and}$$

$$\text{Cov}(a_i' X, a_k' X) = 0 \text{ for } k < i$$

The Model of Binary Logistic Regression

The dependent variable in logistic regression is usually binary that is the dependent variable can take the value 1 with a probability of success P , or the value 1 with a probability of failure $1-P$. This type of variable is called a binary variable. Binary logistic regression modeling can be used in many situations to answer research questions and to predict the odds of being a case based on the values of the independent variables (predictors). This regression models is the relationship between a set of predictors and a binary response variable. A binary response has only two possible values, such as win and loses. Use a binary regression model to understand how changes in the predictor values are associated with changes in the probability of an event occurring.

The model can be written as:

$$\text{Logit}(p) = \ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 X_1 + \dots + \beta_k X_k + \varepsilon \quad (3.4)$$

Results

Demographic and Socio-economic characteristics of households in Kyaukpadaung township, properties of households, economic conditions of households and effects of factors on expenditures of households, wealth index of households and summary result for the binary logistic regression model of households in Kyaukpadaung township are included in this section.

Demographic and Socio-economic Characteristics of Households
in Kyaukpadaung Township

Demographic and socio-economic characteristics of households in Kyaukpadaung Township are shown in Appendix Table (1). There are 131 male's household heads and 169 females household heads in 300 respondents which is 43.7 percent and 56.3 percent respectively. The numbers of female are more than the number of male due to divorce, spouse death, disability of husband, and increased life expectancy among women, migration, or being abandoned by husband. In this study, the eldest head is 62 years and over. The youngest head is 20 years old. Most of the household heads are between 20 and 40 years and there are 156 persons which is 52.0 percent. It was found that the most of household heads are engaged contributed in labor force. Least of household heads are 62 and over which is 9.3 percent. Nearly 61 percent of household heads are random workers, 15.3 percent of household heads are dependent and 9.7 percent of household head's occupations are private owner and employee. There are 8.7 percent and 5.7 percent respectively of household head's occupation that are livestock worker and government employee. There are 161 households that have one to three family members and that percentage is 53.7 percent. One-hundred and twenty-nine households have four to six family members and that percentage is 43.0 percent. There are ten households that have seven and above family members and the percentage is 3.3 percent respectively. It can be seen that 184 households do not have a student which is 61.3 percent. Nine households have three and above students which is 3.1 percent. And 107 households have only one to two students which are 35.6 percent.

Properties of Households in Kyaukpadaung Township

Property could be defined as any item over which a business or a person has legal privileges. Property could be a tangible item, such as a car, furniture, industrial equipment, etc. or could be an intangible item stocks, patents, etc. The percentage distribution of the transportation facilities, entertainment facilities, loan condition, home ownership and housing type are described in Appendix Table (2). According to that table, most of the households have motorcycles and the percentage is 69.0 percent. Least of the households are horse carriage which is 1.3 percent. The owners of Mini Oway and Tricycle are 2.3 percent respectively. Sixty-nine percent of households have TV and 31.0 percent of households have radio. In the ownership of home appliances of the households, 98.3 percent of households have telephone, 70.3 percent of households have rice cooker, 37 percent of households have refrigerator and 3.3 percent of households have gas stove. The result shows that almost all of the households have own houses, 297, and the other 3 households are renter. Most of the houses are wooden and bamboo houses

and it is 33.3 percent respectively. The number of brick houses has been 26.7 percent and the other 6.7 percent are RC houses.

Economic Conditions of Households in Kyaukpadaung Township

Economic condition of Households in Kyaukpadaung township is shown in Appendix Table (3) with loan conditions of households, monthly income of household and monthly expenditure according to the survey data of this township.

Definition of loan can be described as a property, money, or other material goods that is given to another party in exchange for future repayment of the loan value plus interest and other finance charges. In finance, a loan is the transfer of money by one party to another with an agreement to pay it back. The recipient, or borrower, incurs a debt and is usually required to pay interest for the use of the money. The household who has loan on 76 households and it is 25.3 percent. Remaining 224 households do not have loan and it is 74.7 percent. The monthly income of 185 households is under 400000 Kyats. Only 11 households are between 700000 Kyats and 1000000 Kyats and 6 households are above 1000000 Kyats. The monthly expenditure of 279 households is below 150000 Kyats. The monthly expenditure of 18 households is between 150000 and 300000 Kyats and 3 households is between 300000 and 450000 Kyats. Almost 21.3 percent households are poorest and 19.7 percent of households are rich. The others poorer and middle are 20.0 percent respectively.

Binary logistic Regression Model of Households in Kyaukpadaung Township

Factors affecting on poverty of households are analyzed by using binary logistic regression model. The binary logistic regression model of socio-economic status can be described as follows.

$$\text{Logit}(p) = \ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 X_1 + \cdots + \beta_k X_k + \varepsilon \quad (4.1)$$

Poverty of households in Kyaukpadaung township usage is dependent variable and it was given 1 if the poor of the household and 0 if non-poor condition of household.

Y = Dependent variables

In this study, Y = 1, if household is poor

Y = 0, if household is non-poor

Age, number of students, loans, occupation, number of family members are used as independent variables. These variables are categorized as followed:

X_1 = Age

X_2 = Number of students

X_3 = Loans

X_4 = Occupation = 1 if household heads occupation is agriculture
= 0 if household heads occupation is other

X_5 = Number of family members

The summary result for the binary logistic regression model of households in Kyaukpadaung township is showed in Appendix Tables (4) and (5).

The statistic for the -2 log likelihood is 145.383. The computed values for Cox and Snell's R^2 and Nagelkerke's R^2 are 0.121 and 0.265, respectively. These values suggest that around 12.1% and 26.5% of the poverty can be explained by the linear combination of the risk factors. To assess the model fit, the Hosmer and Lemeshow test is employed evaluating the correspondence between actual and predicted values of the dependent variable. The computed Hosmer and Lemeshow test statistic produces a χ^2 value of 7.897, with an associated p-value of 0.648. This suggests that the test does not achieve statistical significance. Consequently, it can be inferred that the model demonstrates a favorable fit.

The coefficient of age has negative relation with poverty and statistically significant at 10% level. If there is more increasing in the age of household heads as 1 year, the poorer and poorest level of households is more decreasing in 0.004. The coefficient of number of student has negative relation with poverty and statistically significant at 10% level. If there is more increasing the number of students as 1 person, the poorer and poorest level of households is more decreasing in 0.047. The coefficient of loans has negative relation with poverty and statistically significant at 1% level. If there is more increasing in the borrowing as 1 MMK, the poorer and poorest level of households is more decreasing in 0.408 MMK. The coefficient of agriculture has positive relation with poverty and statistically significant at 10% level. The odds ratio of agriculture is 1.887. This means that the odds of a household heads which is agriculture are 1.887 times more likely to be poverty as compared to household heads occupation is other. The coefficient of family size has negative relation with poverty and statistically significant at 10% level. If there is more increasing the number of family size as 1 person, the poorer and poorest level of households is more decreasing in 0.192.

Conclusion and Discussion

The study aims to study the socio and economic situations of households and to analyze the effect of socio-demographic and economic factors on poverty of households in Kyaukpadaung township. This study was limited to all the 300 households of four wards in total twelve wards of Kyaukpadaung township. Principle component analysis (PCA) and binary

logistic regression were used in this study. According to the descriptive analysis, it can be found that there are more females than males due to divorce, spouse death, disability of husband, and increased life expectancy among women, migration, or being abandoned by husband.

The number of persons in working age group was larger than that of dependents in this township. One can also say that the volume of labour force was high in this township. The most households in Kyaukpadaung township own wood and bamboo houses and live by their own houses. Most of the households used motorcycle. Thus, the socio-economic positions of households in Kyaukpadaung township have fairly good condition.

The household income level in the study area, it was found that monthly households' income is below 400,000 Kyats. Thus, the economic condition of the sample households in the study area is fairly good. It was found that 62.0 percent of the sample households in the study area.

The result of Binary logistic regression model, it found that the relationship between wealth index and the independent variables. When the poverty level is considered as dependent variable, the poverty level can be found more than five categories such as poorest, poorer, middle, rich and richest. According to the binary logistic regression model, the coefficient of age, number of students and occupation are statistically significant at 10 percent level. The coefficient of loans and family size are statistically significant at 1 percent level. Age, number of students, loans and family size are negative sign. If there is more increasing age, number of students, borrowing loans and family size, the poorest situation of household is more decreasing. Therefore, having working age group, increasing number of student and family size, and borrowing more loans are effect to decrease the poorest situation on households.

Suggestion

To achieve all round good socio-economic position of households in Kyaukpadaung township, there should be special development schemes and implement the scheme efficiently for the overall benefits of Kyaukpadaung township. To resolve the poverty problem, the households in the four wards should reduce the gap between incomes and expenditures, whether by increasing incomes or reducing the cost of living, or by a proper mix of the two.

To increase income, the government should prepare new job opportunities (full times and part times) and should equal pay for men and women. The government also arrange short course for profession that support small own business by using loans. And this may help also to increase income. For development of socio-economic status, transportation should be better to facilitate.

If the more economic development in the region, poverty can be declined and urban and rural economic condition will develop.

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Appendix Table (1)

Demographic and Socio-economic Characteristics		No. of Respondents	Percent
Total Respondents		300	100.00
Gender	Male	131	43.7
	Female	169	56.3
Age	20-40	156	52.0
	41-61	116	38.7
	62 and over	28	9.3
Occupation	Agriculture and livestock	26	8.7
	Government employee	17	5.7
	Private owner & employee	29	9.7
	Random Worker	182	60.7
	Dependent	46	15.3
Family Size	1-3	161	53.7
	4-6	129	43.0
	7 and above	10	3.3
Number of Students	No students	184	61.3
	1-2	107	35.6
	3 and above	9	3.1

Source: Survey Data (2021)

Appendix Table (2)

Categories	Yes		No	
	Households	Percent	Households	Percent
Car	19	6.3	281	93.7
Motorcycle	207	69.0	92	30.7
Bicycle	57	19.0	243	81.0
Mini Oway	7	2.3	293	97.7
Tricycle	7	2.3	293	97.7
Tricar	18	6.0	282	94.0
Horse carriage	4	1.3	296	98.7
TV/ VCD	208	69.0	92	30.7
Radio	93	31.0	207	69.0
Sewing Machine	31	10.3	269	89.7
Refrigerator	111	37.0	189	63.0
Rice Cooker/ Iron	211	70.3	89	29.7
Mobile Phone	296	98.3	4	1.3
Gas Stove	10	3.3	290	96.7
Other	21	3.8	279	96.2
Properties of Households		No. of Respondents	Percent	
Total Respondents		300	100.00	
Home Ownership	Own	297	99	
	Rent	3	1	
Housing Type	RC	20	6.7	
	Brick	80	26.7	
	Wood	100	33.3	
	Bamboo	100	33.3	

Source: Survey Data (2021)

Appendix Table (3)

Economic Conditions of Households		No. of Respondents	Percent
Total Respondents		300	100.00
Loan Conditions of Households	Yes	76	25.3
	No	224	74.7
Income (Kyats)	Below 400000	185	62.0
	400000-700000	98	32.0
	700000-1000000	11	4.0
	Above 1000000	6	2.0
Expenditure (Kyats)	Below 150000	279	93.0
	150000- 300000	18	6.0
	300000- 450000	3	1.0
Wealth Index	Poorest	64	21.3
	Poorer	60	20.0
	Middle	60	20.0
	Rich	59	19.7
	Richest	57	19.0

Source: Survey Data (2021)

Appendix Table (4) Modeling Fitting Criteria**Model Summary**

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square	
145.383 ^a	0.121	0.265	
Hosmer and Lemeshow Test	Chi-square	df	sig
	7.897	6	0.648

Appendix Table (5) Summary Result for the Binary Logistic Regression Model of Households

	B	S.E	Wald	df	Sig	Exp(B)
Constant	0.679	0.500	1.844	1	0.065	0.507
Age	-0.004*	0.114	0.001	1	0.074	0.996
No. of Student	-0.047*	0.225	0.044	1	0.083	0.954
Loans	-0.408***	0.396	1.063	1	0.002	0.665
Occupation(1)	0.635*	0.470	1.823	1	0.077	1.887
Family size	-0.192***	0.128	2.273	1	0.032	0.825

Source: Survey data (2021)

Note: *** significant at 1 percent level, ** significant at 5 percent level, * significant at 10 percent level.

UNDER -FIVE MORTALITY IN MYANMAR: APPLICATION OF ZERO-INFLATED POISSON REGRESSION MODEL

Hla Hla Aye¹

Abstract

Despite the reduction in the global under-five child mortality rate, there has been a considerable rate in the death of many children before their fifth birthday in Myanmar. Therefore, the causes of under-five mortality need to be investigated because it is a critical issue for the development of a country like Myanmar. This study attempted to analyze under-five mortality in Myanmar with an application of the zero-inflated Poisson regression model. A sample of 3670 mothers with children aged 0-59 months was collected from the 2015-2016 Myanmar Demographic and Health Survey (MDHS) for the data analysis. The results revealed that mothers' education, household size, childbirth order, and type of fuel for cooking significantly affected the under-five mortality in Myanmar. Among those, childbirth order and mother's education level were the most significant effects on under-five mortality. Therefore, concerned efforts should be made to improve mother's access to education and birth control. Hence, the Myanmar government should plan the respective programs and promote infrastructures, health care services, well-being, and survival of a new generation of Myanmar children.

Keywords: *childbirth order, cooking fuel, household size, maternal education, under-five mortality, zero-inflated Poisson regression.*

Introduction

Children represent the future of every nation, playing a crucial role in determining the social and economic development of a country as their health and well-being serve as pivotal indicators. The under-five mortality rate, signifying the loss of a child within the initial five years of life, holds profound importance for socioeconomic, health, environmental, and national development, fostering enhanced health equity and access. Under-five mortality serves as a comprehensive indicator of a society's overall health and well-being, encapsulating socioeconomic, demographic, healthcare, and environmental factors. Furthermore, aligning with the Sustainable Development Goals (SDGs), a new target has been established to reduce the under-five mortality rate to 25 deaths per 1000 live births in all countries by 2030. To attain these goals, Myanmar must explore the major influencing factors of under-five mortality.

Myanmar is a country located in Southeast Asia, with a population of approximately 51.14 million people (Department of Population, 2020). Like many developing countries, Myanmar has struggled with high rates of under-five mortality. According to the ASEAN statistical yearbooks (2022), the under-five mortality rate in Myanmar was 43.0 in 2013, which

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increased to 66.5 in 2014. Therefore, the various risk factors that influence under-five mortality in Myanmar were explored in this study.

Socioeconomic factors play a significant role in reducing the under-five mortality rate. Poverty, lack of access to healthcare, and inadequate nutrition are major contributors to under-five mortality. The lack of access to healthcare facilities, particularly in rural areas also largely influenced the under-five mortality. Additionally, environmental factors also affect under-five mortality in Myanmar. Poor sanitation, inadequate water supply, and exposure to air pollution can all lead to disease and illness in young children. Many households in Myanmar lack access to clean water, which can lead to waterborne diseases such as diarrhea, which is a leading cause of under-five mortality (WHO, 2019). Therefore, this study intends to analyze the influencing factors of under-five mortality with an application to the zero-inflated Poisson regression model.

Literature review

Under-five mortality is defined as the occurrence of a child dying between birth and the fifth birthday. This mortality may represent a comprehensive indication of the socioeconomic, demographic, health care, and environmental status of the communities and countries.

Abera and Yohannis (2022) described determinants of under-five mortality in Tach-Armachiho District, North Gondar, Ethiopia. This study identified the determinants of under-five mortality among women in childbearing age group of Tach-Armachiho district using count regression models. So, the zero-inflated Poisson regression model was found to be the best fit for the collected data. Results of the zero-inflated Poisson regression model showed that education of husband, source of water, mother's occupation, Keblele of mother, prenatal care, place of delivery, place of residence, wealth of household, average birth interval, and average breast feeding were found to be statistically significant determinants of under-five mortality. In this study, it was found that the factors like average birth interval and average breast feeding were found to be statistically significant factors in both groups (not always zero category and always zero category) with under-five child death whereas education of husband, source of water, place of delivery, mother occupation and wealth index of the household have significant effect on under-five mortality under not always zero group. Place of residence, kebele of mother and prenatal care have a significant effect on under-five mortality in Tach-Armachiho district on inflated group.

Argawu and Mekebo (2022) attempted to identify the risk factors for under-five mortality in Ethiopia using the 2019 Ethiopian Mini Demographic and Health Survey data. The best model that fits the data well was selected using selection criterion like AIC, BIC. Zero-inflated Poisson

model was found to fit the data well. The study found that mother's age, marital status of mother, age of mother at first birth, place of delivery, place of residence, time to get drinking water, number of children at home, birth order, type of birth were statistically significant determinants for under-five mortality in Ethiopia.

Data and Methods

The secondary data including socio-economic, demographic, health care, environmental characteristics of mothers and under-five mortality data were collected from the 2015-2016 Myanmar Demographic and Health Survey (MDHS). In this study, a descriptive analysis was carried out to examine the under-five mortality situation based on mothers' socio-economic, demographic, health care, and environmental status. Then, the zero-inflated Poisson regression model was employed to analyze the influencing factors of under-five mortality in Myanmar.

Variables Used in this Study

In this study, descriptions, and coding of the dependent and independent variables related to under-five mortality are presented. The dependent variable (Y_i) is the number of deaths of children whose age is 0-59 months (under-five mortality) that each mother has experienced under the study period. Thus, (Y_i) takes on values 0, 1, 2, ... where 'i' denotes the individual mother. The socioeconomic variables such as the mother's education level, and wealth index, demographic variables such as state and region, place of residence, household size, marital status, mother's age at birth, and childbirth order, health care variables such as place of delivery and contraceptive use and environmental variables such as access to safe water, access to safe toilets, and types of fuel for cooking are presented in Appendix Table (1).

Zero-Inflated Poisson Regression Model (ZIP)

The zero-inflated Poisson regression model is used for modeling count data that show over-dispersion and zero counts (excess zeros). The ZIP model, introduced by (Lambert,1992), allows for covariates for both the binary and Poisson parts of the model and it has been commonly used to model count data with excess zeros (Hur et al., 2002). The zero-inflated Poisson regression studies the relationship between dependent and independent variables when there are many zeros value in the dependent variable, where the relationship is the mixture between Poisson model and Logistic model. Specifically, if Y_i is the number of under-five mortality per mothers are independent random variables having a zero-inflated Poisson distribution, the zeros are assumed to arise in two ways corresponding to distinct underlying sources.

The first source occurs with probability w_i and produces only zeros (mothers who are never born), while the second source occurs with probability $1 - w_i$ and leads to a standard Poisson count with mean λ and hence a chance of further zeros (mothers who may not be dead her child). In general, the zeros from the first source are called structural zeros (with true zeros) that distributed according to Poisson distribution. The Zero-inflated Poisson regression model is

$$P(Y_i = y_i) = \begin{cases} w_i + (1 - w_i)e^{-\lambda_i} & ; y_i = 0 \\ (1 - w_i)\frac{e^{-\lambda_i}\lambda_i^{y_i}}{y_i!} & ; y_i = 1, 2, \dots \end{cases} \quad (3.12)$$

where $Y_i \sim ZIP(\lambda_i, w_i)$ and $0 \leq w_i \leq 1$. The first part of the equation above is the zero parts of the model and the second part is the non-zero count's part of the model. The two components together constitute the zero-inflated model. The parameters λ_i and w_i can be obtained by using the link functions,

$$\ln(\lambda_i) = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \dots + \beta_p X_{ip} = \mathbf{X}_i' \boldsymbol{\beta} \text{ and}$$

$$\text{logit}(\pi_i) = \gamma_0 + \gamma_1 Z_{i1} + \gamma_2 Z_{i2} + \gamma_3 Z_{i3} + \dots + \gamma_q Z_{iq}$$

$$= \ln\left(\frac{w_i}{1-w_i}\right)$$

$$= \mathbf{Z}_i' \boldsymbol{\gamma} \quad ; i = 1, 2, \dots, n$$

where, $\mathbf{X}_i'$ and $\mathbf{Z}_i'$ are covariate matrices and $\boldsymbol{\beta}, \boldsymbol{\gamma}$ are the $(p+1) \times 1$ and $(q+1) \times 1$ unknown parameter vectors respectively.

The likelihood function of ZIP model is

$$\begin{aligned} L(\boldsymbol{\beta}, \boldsymbol{\gamma}) &= \prod_{i=1}^n P(Y_i = y_i) \\ &= \prod_{i=1}^n [w_i + (1 - w_i)e^{-\lambda_i}] \prod_{i=1}^n \left[(1 - w_i) \frac{e^{-\lambda_i} \lambda_i^{y_i}}{y_i!} \right] \end{aligned} \quad (3.13)$$

The log-likelihood function of ZIP model is

$$\begin{aligned} \ell(\boldsymbol{\beta}, \boldsymbol{\gamma}) &= \sum_{y_i=0}^n \ln[w_i + (1 - w_i)e^{-\lambda_i}] \sum_{y_i \neq 0}^n [\ln(1 - w_i) - \lambda_i + y_i \ln \lambda_i - \ln(y_i!)] \\ &= \sum_{y_i=0}^n \ln(\exp(\mathbf{Z}_i' \boldsymbol{\gamma}) + \exp(-\exp(\mathbf{X}_i' \boldsymbol{\beta}))) + \sum_{y_i \neq 0}^n [y_i \mathbf{X}_i' \boldsymbol{\beta} - \exp(\mathbf{X}_i' \boldsymbol{\beta}) \\ &\quad - \ln(y_i!)] - \sum_{y_i \neq 0}^n \ln(1 + \exp(\mathbf{Z}_i' \boldsymbol{\gamma})) \end{aligned} \quad (3.14)$$

The parameters of this model can be estimated using maximum likelihood estimation.

The mean and variance of ZIP are given by

$$E(Y_i) = (1 - w_i)\lambda_i$$

and

$$V(Y_i) = E(Y_i)(1 + w_i\lambda_i).$$

Indicating that the marginal distribution of y_i exhibits over-dispersion, if $w_i > 0$. It is clear that this reduces to the standard Poisson model when $w_i = 0$.

Data analysis

In order to examine the overall picture of the data, the distribution of the number of under-five mortality per mother and the cross tabulation by explanatory variables are displayed in this section. After that, there is also a test for association between under-five mortality and its related factors. Additionally, the fitted zero-inflated Poisson regression model for estimating under-five mortality has been presented.

Number of Mothers by Factor of Under-Five Mortality

Table (4.1) shows the distribution of under-five mortality per mother in Myanmar based on information from 3670 ever married women surveyed in the MDHS. It is observed that among the 3670 ever married women, a total of 187 (5.1%) experienced the under-five mortality (their children died at 0-59 months) whereas 3483 (94.9%) of women have never experienced under-five mortality of their children. It is also found that 102 (2.78%) of women experiencing under-five mortality lost only one child, 56 (1.53%) lost two children, 22 (0.6%) lost three children, 2 (0.05%) lost four children, 3 (0.08%) lost five children, 1 (0.03%) lost six children, no women lost seven children and there was only one woman (0.03%) who lost eight children which is the highest number of all.

Table (4.1) Distribution of Under-Five Mortality

Number of Under-five Deaths Per Mother	Mothers	
	Number	Percent
0	3483	94.9046
1	102	2.7794
2	56	1.5259
3	22	0.5995
4	2	0.0545
5	3	0.0817
6	1	0.0272
7	0	0.0000
8	1	0.0272
Total	3670	100

Source: Myanmar Demographic and Health Survey (2015-2016)

Further screening in Figure (4.1) shows that the distribution of the number of under-five mortality has a rapidly decreasing and highly skewed to the right. This is an indication that the data could be fitted better by count data models which take into account excess zeros.

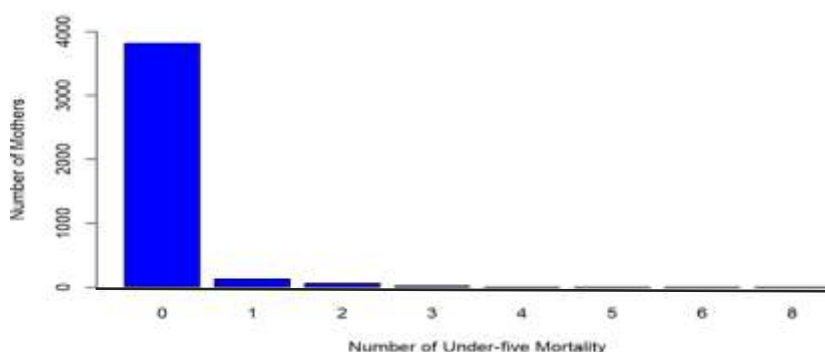


Figure (4.1) Bar Chart of the Number of Under-five Mortality

Source: Myanmar Demographic and Health Survey (2015-2016)

Summary statistics of the independent variables that directly influence the risk of under-five mortality were presented in Appendix Table (2). According to the Appendix Table (2) notable discrepancy was observed in under-five mortality between women with and without education. Women with some education showed a lower mean number of under-five mortality compared to those with no education. The mean number of under-five mortality per mother was 0.2133, 0.0779, 0.0439, and 0.0534 for no education, primary, secondary, and higher education levels, respectively. The maximum standard deviation, at 0.7224, was recorded for the no education category.

Among the women included in the study, it is revealed that the mean number of under-five mortality for women's living in households with poor and middle wealth index were (0.1233), and (0.0675), higher as compared with a women's living in rich household wealth index (0.0422). Because a women's living in household with rich and middle wealth index experienced to have less mean number of under-five mortality as compared with women is living in household with poor wealth index.

Tanintharyi Region, Chin State and Shan State had the highest mean number of under-five mortality per mother, and they were (0.2129), (0.1702), and (0.1673) respectively. Generally, the average number (0.0973) of under-five mortality occurred in rural areas with the standard deviation of (0.4674) while the average number (0.0525) of mortality happened in urban areas and the standard deviation is (0.3284). Of the total number of under-five mortality per women, a smaller number of under-five deaths occurred in urban areas compared to rural under-five mortality.

It is also observed that the mean number of under-five mortality was higher number of household size of 2 and 3 (0.1457) and the smallest mean number of under-five mortality occurred for household with more than 5 member (0.0761). Moreover, mother's age at birth was observed that young mothers (below 20 years) had the lowest mean number of under-five mortality (0.0518) and the mother's age at birth (30-45 years) had the highest mean number of under-five mortality (0.1293).

The results in Appendix Table (2) also show that married mothers have a higher mean number of under-five mortality (0.0869) as compared to other mothers such as widowed, divorced and separated (0.0765). Besides, the highest mean number of under-five mortality was observed for children of birth order of four and above (0.2747) while the lowest mean number of under-five mortality was observed of first birth order (0.0377). Among the women included in the study, the mean number of under-five deaths for children who were delivered at home (0.1140) is higher than that for those delivered at public and private hospitals (0.0490 and 0.0264 respectively). In the same way, the mean number of under-five deaths concerning contraceptive use was (0.1196), of which (0.1196) mothers did not use any type of contraceptive method, and the remaining (0.0646) used one of the contraceptive methods.

It is also found that the highest mean number of under-five mortality occurred with families who used unimproved water (0.1299) as compared with families who used improved water (0.0745). Similarly, the mean number of under-five mortality (0.1092) occurred in household unimproved toilet facility and the mean number of under-five mortality (0.1092) happened in improved toilet facility user households. With regards to type of fuels for cooking, the higher mean number of under-five mortality occurred, the mothers who used clean fuels (0.0731) and wood and coal (0.0892) and as compared to mothers who use others fuel such as straw/shrub/ grass, agricultural crops and animal dung (0.0936).

Association between Under-Five Mortality and Related Factors

Table (4.2) shows the association of selected variables with under-five mortality using Chi-square test.

Table (4.2) Association between Under-Five Mortality and Related Factors

Variables	Chi-square	P- value
Socioeconomic Factors		
Mother's Education Level	56.262***	0.000
Wealth Index	25.176***	0.000
Demographic Factors		
Place of Residence	11.678***	0.009

Variables	Chi-square	P- value
Household Size	8.277**	0.041
Mother's Age at Birth	18.467***	0.000
Childbirth Order	135.76***	0.000
Health Care Factors		
Place of Delivery	13.083***	0.004
Contraceptive Use	23.572***	0.000
Environmental Factors		
Access to Safe Water	15.077***	0.002
Access to Safe Toilet	15.173***	0.002
Type of Fuel for Cooking	10.022**	0.018

Source: Myanmar Demographic and Health Survey (2015-2016)

Note: ***, **, * Significant at 1 %, 5% and 10% level respectively

According to Table (4.2), it is found that association between under-five mortality and all socioeconomic factors are significant at 1% level. Likewise, the association between under-five mortality and all demographic factors are significant at 1% level. However, household size is significant at 5% level. Moreover, the association between under-five mortality and all health care factors are significant at 1% level. Furthermore, the association between under-five mortality and all environmental factors are significant at 1% level. However, association between under-five mortality and the type of fuel for cooking is significant at 5% level.

The results of the Chi-square test show that the association between under-five mortality and State and Region and the association between under-five mortality and marital status are not significant. Therefore, these two variables are not considered in modeling the zero-inflated Poisson regression model in this study.

Parameter Estimation of Zero-Inflated Poisson Regression Model

The parameter estimates along with their corresponding standard errors, are displayed in Table (4.3).

Table (4.3) Estimated Coefficient of Zero-Inflated Poisson Regression Model

Positive count	Estimate	Exp(b)	S. E	Z value	Pr (> z)
Intercept	-0.2484	0.7801	0.3840	-0.6470	0.5178
Household Size (2-5, Ref:) More than 5	-0.4169**	0.6591	0.1956	-2.1320	0.0330
Childbirth Order (1stBirth, Ref:) Second and Third Fourth and above	0.5985* 1.5037***	1.8193 4.4983	0.3616 0.3325	1.6550 1.5220	0.0979 0.0000

Positive count	Estimate	Exp(b)	S. E	Z value	Pr (> z)
Types of Fuel for Cooking (Clean Fuels, Ref:) Solid Fuels	-0.6494***	0.5224	0.1975	-3.2890	0.0010
Zero count	Estimate	Exp (b)	S. E	Z value	Pr (> z)
Intercept	1.3393***	3.8163	0.3802	3.5220	0.0000
Mother's Education Level (No Education, Ref:) Primary Secondary and above	0.7162*** 1.0500***	2.0466 2.8577	0.2005 0.2446	3.5720 4.2930	0.0004 0.0000
Household Size (2-5, Ref:) More than 5	0.6400***	1.8966	0.2279	2.8090	0.0050
Childbirth Order (1st Birth, Ref:) Second and Third Fourth and above	0.1843 -0.6393*	1.2024 0.5277	0.3746 0.3756	0.4920 -1.7020	0.6227 0.0887

Source: Myanmar Demographic and Health Survey (2015-2016)

Note: ***, **, * Significant at 1 %, 5% and 10% level respectively. Ref: Reference category of the variables

The fitted zero-inflated Poisson regression model as follows

$\ln(\lambda) = -0.7801 - 0.6591$ (household size = more than 5) + 1.8193 (childbirth order = second and third) + 4.4983 (child birth order = fourth and above) – 0.5224 (types of fuel for cooking = solid fuels)

$\text{logit}(w) = 3.8163 + 2.0466$ (mother's education level = primary) + 2.8577 (mother's education level = secondary and above) + 1.8966 (household size = more than 5) + 1.2024 (child birth order = second and third) + 0.5277 (child birth order = fourth and above)

The results in Table (4.3) shows that estimated zero-inflated Poisson regression model fits the results of incidence counts, and the coefficients can be interpreted as follow: for a one-unit change in the predictor variable, the log of the response variable is expected to change by the value of the regression. In zero-inflated Poisson regression model, for every one unit increase in a unit of the significant predictors, the log number of under-five mortality is expected to increase or decrease by approximately the corresponding coefficient in the column of coefficient.

In this study, household size and type of fuels for cooking are found to be negatively associated with under-five mortality in the positive counts. However, childbirth order is positively associated with under-five mortality. It is observed that household size is a significant influence on the number of under-five mortality. The expected under-five mortality for mothers with more than five people in the household is 0.66 times lower compared to those with a household size of two to five people. It is found that childbirth order is a significant variable on the number of under-five mortality. As birth order rises, the number of under-five deaths also

increases. The expected number of under-five mortality in second and third childbirth order is 1.82 times greater as compared to that for first birth childbirth order while holding all other variables in the model constant. Moreover, the expected number of under-five mortality in fourth and above childbirth order is 4.50 times greater as compared to that for first birth childbirth order.

The finding shows that the estimated coefficient of type of fuels for cooking is statistically significant for the number of under-five mortality. The expected number of under-five mortality for mothers who used type of fuels for cooking with solid fuels is 0.52 time less than mothers who were used clean fuels controlling for other variables in the model.

The second part of Table (4.3) provides estimated odd ratio for the factor change in the odds of being in zero count group (binomial with logit link) model (no under-five death). Mother's education level and household size are significantly associated with the probability of being in zero count group.

It can be seen that mother's education level has a significant impact on the probability of being in the zero count groups. The odds of no occurrence of under-five mortality for mothers with primary education is 2.05 times greater as compared to no education level controlling other variables. In addition, the odds of no occurrence of under-five mortality for mothers with secondary and above is 2.86 times greater than as compared to no education level.

It is also observed that household size has a significant effect on the probability of being an excess zero. In addition, the odds of no occurrence of under-five mortality are 1.90 times lower for more than five household members as compared to two to five household members. It can be seen that childbirth order has a significant impact on the probability of being in the zero count. The odds of no occurrence of under-five mortality are 1.20 times greater for mothers with two to three birth orders compared to the first child. Likewise, the odds of no occurrence of under-five mortality are 0.53 times greater for mothers with two to three birth orders compared to the first child.

Conclusion

This study intended to examine the socio-economic, demographic, health care, and environmental factors which have an influence on the under-five mortality in Myanmar based on the 2015-2016 MDHS data by applying the zero-inflated Poisson regression model.

Findings and Discussions

This study showed that (94.90%) of the ever-married women had never experienced under-five mortality and (5.10%) of them had experienced under-five mortality due to different factors. Hence, it was obvious that there was an excess zero and high variability in the non-zero values in this study. It was found that there was association between under-five mortality and all socioeconomic, demographic, health care, and environmental factors.

The findings of the study identified several significant factors influencing under-five mortality. These factors include mother's education level, household size, childbirth order, and types of fuels used for cooking, all of which had statistically significant effects on under-five mortality. It was also observed that there was a negative relationship between under-five mortality and size of household. It means that households with a large family member can reduce the number of deaths for under-five children compared with those with a small family member. This could be because a family with more members are able to look after and take care of their child. Perhaps mothers with more children are better experienced in childbearing and possess more knowledge of childbearing practices.

In addition, it was found that the childbirth order was one of another important determinant factors of under-five mortality in this study. The children with later birth order have more chance to die compared to those with earlier birth order. A possible reason might be that the later birth orders decrease the care given to the child by mother, that is, the reason of having more children. Furthermore, the intra-familial competition for foods and other limited resources essential for child's needs will increase. Some of these results are similar to those results by Abera and Yohannis (2022) and Argawu and Mekebo (2022).

Recommendations

Based on the findings of this study, some recommendations were made. The study underscores the imperative for targeted education programs on contraceptive use, the enhancement of maternal education levels, and the urgent need for comprehensive healthcare infrastructure improvements to effectively combat under-five mortality rates in Myanmar.

Needs for Further Research

Further research is essential to address the gaps in understanding under-five mortality in Myanmar, including exploring additional variables such as birth complications, diseases, cooking fuel types and locations, mother-related factors, and the impact of the post-COVID landscape, ultimately guiding the development of more effective public health policies to improve child health outcomes.

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APPENDIX**Table (1) Description and Coding of Socio-Economic, Demographic, Health Care and Environmental Factors**

No.	Description of Variables	Coding
1	Mother's Education Level	1 = No education 2 = Primary 3 = Secondary 4 = Higher
2	Wealth Index	1 = Poor 2 = Middle 3 = Rich
3	State and Region	1 = Kachin 9 = Mandalay 2 = Kayah 10 = Mon 3 = Kayin 11 = Rakhine 4 = Chin 12 = Yangon 5 = Sagaing 13 = Shan 6 = Taninthayi 14 = Ayeyarwaddy 7 = Bago 15 = Nay Pyi Taw 8 = Magway
4	Place of Residence	1 = Urban 2 = Rural
5	Marital Status	1 = Married 2 = Others (Widowed, Divorced, Separated/No Longer Living Together)
6	Mother's Age at Birth	1 = Below 20 2 = 20-29 3 = 30-45
7	Childbirth Order	1 = First birth 2 = Second and third 3 = Fourth and above
8	Place of Delivery	1 = Private institution 2 = Public institution
9	Contraceptive Use	1 = No 2 = Yes
10	Access to Improved Source of Water	1 = Improved 2 = Unimproved
11	Access to Improved Sanitation Facilities	1 = Improved 2 = Unimproved
12	Types of Cooking Fuels	1 = Clean Fuels 2 = Wood and Coal 3 = Others

Source: Myanmar Demographic and Health Survey (2015-2016)

Table (2) Summary Statistics of Some Important Variables Related to Under-five Mortality

Variables with Category		Number of Child Death								Total Death	Mean	Std.De
		0	1	2	3	4	5	6	8			
Mother's Education Level	No Education	513	19	26	10	0	3	1	0	59	0.2133	0.7224
	Primary	1560	52	23	6	1	0	0	1	83	0.0779	0.4040
	Secondary	1103	28	6	2	1	0	0	0	37	0.0439	0.2713
	Higher	307	3	1	4	0	0	0	0	8	0.0534	0.3661
Household Wealth Index	Poor	1676	62	41	15	1	3	1	1	124	0.1233	0.5400
	Middle	606	22	6	3	0	0	0	0	31	0.0675	0.3320
	Rich	1201	18	9	4	1	0	0	0	32	0.0422	0.2903
State and Region	Kayah	26	1	0	0	0	0	0	0	1	0.0370	0.1925
	Kachin	137	4	1	0	1	0	0	0	6	0.0699	0.4051
	Kayin	111	4	0	2	0	0	0	0	6	0.0855	0.4270
	Chin	41	4	2	0	0	0	0	0	6	0.1702	0.4809
	Sagaing	394	9	4	4	0	0	0	0	17	0.0706	0.3792
	Taninthayi	100	3	3	0	0	0	1	1	8	0.2129	1.0142
	Bago	307	8	6	0	0	0	0	0	14	0.0623	0.3100
	Magway	248	6	4	1	0	0	0	0	11	0.0656	0.3403
	Manday	368	11	5	5	0	0	0	0	21	0.0925	0.4327
	Mon	121	3	1	0	0	0	0	0	4	0.0400	0.2342
	Rakhine	244	6	2	2	0	0	0	0	10	0.0630	0.3499
	Yangon	388	6	6	0	0	0	0	0	12	0.0450	0.2705
	Shan	477	15	18	7	0	3	0	0	43	0.1673	0.6368
	Ayeyarwaddy	445	19	4	1	1	0	0	0	25	0.0723	0.3503
	Nay Pyi Taw	76	3	0	0	0	0	0	0	3	0.0379	0.1924
Place of Residence	Rural	2616	84	51	17	1	3	1	1	158	0.0973	0.4674
	Urban	867	18	5	5	1	0	0	0	29	0.0525	0.3284
Household Size	2-3	405	22	14	5	0	0	0	0	41	0.1457	0.2374
	4-5	1459	38	27	10	1	0	0	0	76	0.0821	0.3822
	More than 5	1585	42	15	7	1	3	1	1	70	0.0761	0.4576
Marital Status	Married	3325	91	55	22	2	3	1	1	175	0.0869	0.4439
	Others (W, D, S)	158	11	1	0	0	0	0	0	12	0.0765	0.2879
Mothers' age at Birth	Below 20	370	12	4	0	0	0	0	0	16	0.0518	0.2646
	20-29	1908	47	28	9	0	0	0	0	84	0.0653	0.4409
	30-45	1205	43	24	13	2	3	1	1	87	0.1293	0.5847
Childbirth Order	First	1439	38	6	2	0	0	0	0	46	0.0377	0.2291
	2-3	1530	42	23	4	0	0	0	0	69	0.0625	0.3201
	4 and above	514	22	27	16	2	3	1	1	72	0.2747	0.8641
Place of Delivery	Home	2057	77	43	17	2	3	1	1	144	0.1140	0.5136
	Public	1165	23	12	4	0	0	0	0	39	0.0490	0.2942
	Private	261	2	1	1	0	0	0	0	4	0.0264	0.2369
Contraceptive Use	No	1358	52	28	11	1	3	1	1	97	0.1196	0.5458
	Yes	2125	50	28	11	1	0	0	0	90	0.0646	0.3478
Access to Safe Water	Improved	2751	75	43	14	1	0	0	1	134	0.0745	0.3893
	Unimproved	731	27	13	8	1	3	1	0	53	0.1299	0.5811
Access to Safe Toilet	Improved	1826	55	21	8	1	0	0	0	85	0.0654	0.3385
	Unimproved	1657	47	35	14	1	3	1	1	102	0.1092	0.5242
Types of Fuels for Cooking	Clean Fuels	658	13	3	9	1	0	0	0	26	0.0731	0.2027
	Wood and Coals	2663	86	48	12	1	3	1	1	152	0.0892	0.8389
	Others	162	3	5	1	0	0	0	0	9	0.0936	0.1967
Total		3483	102	56	22	2	3	1	1	187	3670	

DETERMINANTS OF VOLUNTARY CHILDLESSNESS AMONG WOMEN IN MYANMAR

Win Naing Oo¹

Abstract

This study aims at investigating social, economic and demographic determinants of voluntary childlessness in Myanmar. The data used in this study were secondary data obtained from the Myanmar Demographic and Health Survey (MDHS, 2015-16). The weighted samples of currently married women were 7759 but only 283 voluntary childless women among them were included in this study. Firstly, descriptive statistics was used to point out social, economic and demographic characteristics for currently married women and voluntary childless women in Myanmar. Yangon Region and Rakhine State were showed as the highest percentage of voluntary childlessness. Then, the Pearson Chi-square test was applied to examine the association between social, economic and demographic characteristics and voluntary childlessness. Educational attainment of women and their husbands, woman's employment status, occupation of women and their husbands, wealth quintile, woman's age, husband's age, age at first marriage, marital duration and place of residence were independent variables. There were significantly related to voluntary childlessness. In addition, binary response model such as complementary log-log model was applied to investigate social, economic and demographic determinants of voluntary childlessness. Based on the findings, woman's educational attainment, husband's educational attainment, woman's employment status, woman's occupation such as skilled manual and unskilled manual, fourth and highest wealth quintiles, age at first marriage and place of residence were more likely and significant determinants to be voluntary childlessness. Woman's age, husbands at age groups except (35-39), marital duration for 5-9 years were significant determinants and less likely to be voluntary childlessness.

Keywords: Voluntary Childlessness, Pearson Chi-square, Complementary log-log model

Introduction

Childlessness is one of the main challenges of modern society. Childlessness has caused many psychological, physical, emotional and social problems such as broken family, depression and marital conflicts. Childlessness and infertility problem cause for decline in fertility rate and that are forgotten issues in reproductive health programs in many countries. The fertility of women in developing countries is higher on average than in developed countries, yet many women in developing countries remain childless (Baudin et al., 2017). Level of childlessness (both voluntary and involuntary) in the population influenced on the fertility levels of any population and it plays an important role in determining the levels and differentials of fertility (Jones, G.W. 2007). Childlessness is factors that result in low birth rates and population decline, which are associated with diminishing labor force and rising proportions in older ages.

Over the past decade, voluntary childlessness has emerged as subject of study by demographers, family sociologists, and psychologists. Although the increasing number of studies that have been done, nationally representative studies of voluntary childlessness are rare (Mosher and Bachrach, 1982). There is a survey of conducting on demographic and health characteristics of 12885 ever-married women in Myanmar and what is called Myanmar Demographic and Health Survey (MDHS, 2015-16). Especially, information on voluntary childlessness such as currently married women, birth order, contraceptive use, marital duration, age at first marriage can be obtained from this survey. There have been studies in detail on childlessness in Myanmar, especially from the psychological and epidemiological perceptive. There is no specific study concerning the voluntary childlessness in Myanmar. Therefore, this study intends to analyze the Socio-economic and demographic factors affected on voluntary childlessness among currently married in Myanmar based on data obtained from MDHS (2015-16).

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Literature Review

Rogers (1986) studied to review the empirical research literature on voluntary childlessness and to develop a model of the childless decision. These include lifestyle and demographic characteristics such as place of residence, education level, occupation, income, age at marriage and length of marriage. Social factors include social norms, sanctions, and the Women's Movement. Krishnan (1993) determined the influence of religious affiliation, religious homogamy, religiosity, and religious marriage on voluntary and temporary childlessness and to compare childlessness patterns among Canadian-born and foreign-born women. Multivariate analysis found that age, marriage age, education, and husband's income were statistically significantly related to voluntary childlessness. Chancey (2006) studied on voluntary childlessness since the waning of the baby boom provide cross-sectional estimates for a single time period. It was found that voluntary childlessness stayed relatively constant through the seventies and eighties, but showed a large increase from the mid-nineties to 2002. This study showed that voluntary childlessness increased in recent years because baby-boomers postponed childbearing until they no longer desired it, and younger women born in the seventies are now deciding to remain childless earlier. Tanturri (2006) pointed out determinants on childlessness in Italy by using logistic regression model. A weighted multinomial logit model is used to contrast "voluntary childless men (or women)" with other categories: the "un-voluntary childless" and fathers (or mothers). Results were found that voluntary childlessness is a common behavior among men and women, but its determinants partly differ, with particular regard to socio-economic status. The result indicated that voluntary childlessness among men associated with poor education, poor health and the unemployed. Conversely, women would have more chance to be voluntary childless when women possess a university degree and a managerial position. Soe (2008) investigated in a suburban Buddhist community in Yangon, Myanmar to find out cultural beliefs and gender norms which affects the life of childless women in contemporary Myanmar society. It was found that childless women in Myanmar society suffer from gender norms, cultural beliefs, economic problems and social problems throughout the life. It was also found that some women did not know modern fertility technologies and cannot access to these. All women were suffering from expectations from their society and families. Poston and Cruz (2010) analyzed childlessness among White, Black and Hispanic women in the U.S. The data from the 2006-08 National Survey of Family Growth to examine the degree of voluntary, involuntary, and temporary childlessness among the women were used. It was found that an important predictor of whether a woman was childless (in any of the three categories) versus having children was her level of education. The higher her level of education, the more likely she was to be in one of the childless categories, as opposed to being chided. Also, never married women are much more likely than currently married women to be childless (in any of the three categories) than to have children. Waren & Pals (2013) argued that childlessness among women has been well researched, but much of that data does not apply to men. It was found that traditional sex role belief decreases the probability of being voluntarily childless in both men and women. Avison and Furnham (2015) found the association between personality and childbearing motivation, with a focus on voluntary childlessness.

Descriptive analysis was carried out to identify the social, economic and demographic characteristics that have an influence on the voluntary childlessness and spatial variation of childlessness in Myanmar. Pearson's Chi-square test was used to describe the association of socio-economic and demographic characteristics with voluntary childlessness. Regression model utilizing the binary response variables, such as complementary log-log regression models was used to explore the influencing factors of voluntary childlessness among Currently Married Women (CMW) in this study.

Data and Methods

Data

The secondary data from Myanmar Demographic and Health Survey (2015-16) was used to study the childless women in Myanmar. Although data on 12885 ever married women were available from the MDHS (2015-16), this study limited to 7870 currently married women of them. To obtain nationally representative estimates, sampling weight was applied and the final weighted samples include 7759 CMW aged (15-49).

Description of Variables

To account for the influence of voluntary childless of women, the description of eleven independent variables is used in this analysis. The description and classification of a dependent variable and independent variables (social, economic and demographic factors) are presented in Appendix Tables (1).

Statistical Methods

In this section, statistical methods that were used in this study were shown in following sections.

Chi-Squared Association Test

The data can be displayed in a contingency table where each row represents a category for one variable and each column represents a category for the other variable. Pearson's chi-square statistic is used to test if there is a significant relationship between two nominal (categorical) variables. This statistic is very helpful for identifying the extent to which two categorical variables are associated (Beh & Lombardo, 2014). This test requires large sample sizes to be accurate. An often-quoted rule of thumb regarding sample size is that none of the expected cell values should be less than five. The null hypothesis for this test is that there is no relationship between two variables. The alternative hypothesis is that there is a relationship between the two variables. Pearson's chi-square test statistic follows an asymptotic chi-square distribution with $(R-1)(C-1)$ degrees of freedom when the row and column variables are independent. It is calculated as

$$\chi^2 = \sum_{i=1}^r \sum_{j=1}^c \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

O_{ij} = observed frequencies

$$E_{ij} = \text{expected frequencies} = \frac{\sum_{k=1}^c O_{ik} \sum_{k=1}^r O_{kj}}{N}$$

$$\sum_{k=1}^c O_{ik} = \text{Sum of the observed frequencies for } i^{\text{th}} \text{ column}$$

$$\sum_{k=1}^r O_{kj} = \text{sum of the observed frequencies for } k^{\text{th}} \text{ row}$$

N = total number of observations

The critical value for the chi-square statistic is determined by the level of significance (typically .05) and the degrees of freedom. If the observed chi-square test statistic is greater than the critical value, the null hypothesis can be rejected.

Complementary Log-Log (Clog-Log) Regression Model

Clog log regression is typically used when the dependent variable is binary response and the independent variables are either continuous or categorical. There are situations, however, where the response variable is qualitative.

After estimating the Clog log regression model parameters using the maximum likelihood estimator, there is a need to assess the significance of the variables with regards to predicting the response variable. There are a number of statistical methods that can be used to carry out the assessment which include Omnibus test, Hosmer-Lemeshow goodness of fit test, likelihood ratio test, Wald test. These test statistics are distributed as chi-square with degrees of freedom equal to the number of predictors.

Complementary Log-log Model and Transformation

Complementary log-log model says $\log\{-\log[1-\pi(x)]\} = X'_{p \times n} \beta_{p \times 1}$. The expression on the left-hand side is called the complementary log-log transformation.

Like the logit and the probit transformation, the complementary log-log transformation takes a response restricted to the (0, 1) interval and converts it into something in $(-\infty, +\infty)$ interval. The log of $1-\pi(x)$ is always a negative number. This is changed to a positive number before taking the log a second time. The model can be write down like,

$$\begin{aligned}\pi(x) &= 1 - \exp\left[-\exp\left(X'_{p \times n} \beta_{p \times 1}\right)\right] \\ \log\{-\log\{1 - \pi(x)\}\} &= \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_k x_k \\ -\log\{1 - \pi(x)\} &= \exp(\beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_k x_k)\end{aligned}\quad (3.1)$$

Omnibus Tests

Omnibus tests are a kind of statistical test. It is needed to test whether the explained variance in a set of data is significantly greater than the unexplained variance, overall. In addition, Omnibus test as a general name refers to an overall or a global test. Other names include F-test or Chi-Squared test. Omnibus test as a statistical test is implemented on an overall hypothesis that regarding coefficients $\beta_1 = \beta_2 = \dots = \beta_k = 0$ vs. at least one is not equal to zero in multiple linear regression or in logistic regression. Usually, it tests more than two parameters of the same type and its role is to find general significance of at least one of the parameters involved.

The Likelihood Ratio Test

Likelihood Ratio (LR) uses maximum likelihood estimation to compute the coefficients for the LR equation. The method of maximum likelihood estimation chooses values for parameter estimators (regression coefficients) which make the observed data —maximally likely. Standard errors are obtained as a by-product of the maximization process. The statistic is given by:

$$-2 \log \left[\frac{L_0}{L_1} \right] = -2 [\log(L_0) - \log(L_1)] = -2(l_0 - l_1) \quad (3.2)$$

where, l_0 is the maximum value for the likelihood function of a simple model and, l_1 is the maximum value for the likelihood function of a full model. (Hosmer and Lemeshow, 2013).

Akaike Information Criterion (AIC)

AIC is one of the model selection criteria, (Clayton et al., 1986). AIC is defined as:

$$AIC = -2 \ln(L) + 2p \quad (3.3)$$

where L: maximized value of the likelihood function for the estimated model.

p: number of parameters in the model.

When comparing competing models fitted by maximum likelihood to the same data, the smaller the AIC, the better the fit, (Lawal, 2003).

Bayesian Information Criterion (BIC)

The Bayesian information criterion (BIC), proposed by Schwarz and hence also referred to as the Schwarz information criterion and Schwarz Bayesian information criterion, is another model selection criterion based on information theory but set within a Bayesian context (Clayton et al., 1986). The BIC is computed as follows:

$$\text{BIC} = -2 \log L(\hat{\theta}) + k \log n \quad (3.4)$$

The best model is the one that provides the minimum BIC.

Wald Test

The Wald statistic can be used to assess the contribution of individual predictors or the significance of individual coefficients in a given model. The formula for computing the Wald statistic is

$$W = \frac{\hat{\beta}_i}{SE(\hat{\beta}_i)} \quad (3.5)$$

Where $\hat{\beta}_i$ is the estimate of the coefficient of the independent variable x_i and $SE(\hat{\beta}_i)$ is the standard error of $\hat{\beta}_i$. The Wald statistic is chi-square distributed with 1 degree of freedom. The null hypothesis is rejected if the p-value of the test is less than α significant level and it implies that the variable is important in the model.

Odds and Odds Ratio

The odds of success are the probability of success (p) divided by the probability of failure (1-p). In proportional odds model, the outcome variable is ordered with multiple levels, and the odds of being at or below a particular category ($Y \leq m$). The odds of being at or below a category in Ordinary likelihood Ratio (OLR) equals the probability of being at or below a category divided by the probability of being above that category:

$$\text{Odds}(Y \leq m) = \frac{\Pr(Y \leq m)}{\Pr(Y > m)} \quad (3.6)$$

Since the probability of being at or below a category and the probability of being above that category is complementary, $\Pr(Y \leq m) + \Pr(Y > m) = 1$. This equation (3.28) can be rewritten as:

$$\text{Odds}(Y \leq m) = \frac{\Pr(Y \leq m)}{1 - \Pr(Y \leq m)} \quad (3.7)$$

It can be remarked that the odds of being at or below a category m in OLR equals the probability of being at or below a category divided by its complementary probability, 1 minus the probability of being at or below that category. The probability of being at or below a category $\Pr(Y \leq m)$ is the cumulative probability since it equals the sum of the probabilities of all categories at or below that category:

$$\Pr(Y \leq m) = \Pr(Y = 1) + \Pr(Y = 2) + \dots + \Pr(Y = m) \quad (3.8)$$

when $m = 1, 2, \dots, M$.

The odds of being at or below a category in OLR are also called the cumulative odds. The cumulative odds in OLR are basically comparisons between two complementary probabilities (Xu and Long, 2005). The odds ratio in OLR is the change in the odds (i.e., the odds of being above a particular category versus being at or below that category) for a one-unit increase from any value of x to the value of $(x + 1)$, and it is an exponentiated logit coefficient, $\exp(\beta)$. In contrast, the odds of being at or below a particular category is the inverse of the odds of being above that category. It is the exponentiated logit coefficient with a negative sign before that (i.e., $\exp(-\beta)$).

Findings

Descriptive Statistics

There are a total of 7759 currently married women. The fact that there are 283 (3.6%) voluntary childless women but 7476 (96.4%) women are not voluntary childless women is , Appendix Table (2). The percentage of the currently married women who have completed primary educational level is 47.1%, followed by 29.5% for secondary educational level, 15.4% without any educational attainment and 8.0% in higher educational level. Similarly, the percentage of husbands who have attained primary educational level 41.3%, followed by 37.6% in secondary educational level, 14.8% without any educational attainment and 6.3% in higher educational level. There are 36.4% are unemployed women and 63.6% of CMW are employed women. Regarding women's occupation, the percentage of CMW who are not working is 29.3%, followed by 25.6% unskilled manual, 17.5% sales, 9.6% agricultural-self-employed, 5.9% skilled manual, 5.7% agricultural employee. The percentages of currently married women for the rest types of occupation are less than 5%. According to husband's occupation, it shows that minority of husbands (38%) are unskilled manual, followed by 19.5% skilled manual and 18.1% agricultural-self-employed. The percentages of husbands for the rest types of occupation are less than 10%. In relation to wealth quintile, 19.2%, 20.9%, 20.4%, 20.0% and 19.5% are the lowest, second, middle, fourth, and highest wealth quintiles, respectively. The percentages of currently married women with age groups 15-19, 20-24, 25-29, 30-34, 35-39 and 40 and above are 2.9%, 10.7%, 16.2%, 19.4%, 19.1% and 31.7%, respectively. Then, the percentage of husbands with age groups under 25, 25-29, 30-34, 35-39, 40-44 and 45 and above are 8.7%, 14.0%, 17.7%, 18.5%, 16.9% and 24.2% respectively. The percentages of women aged at first marriage are 46.9% at 15-19 years, 34.8% at 20-24 years, 12.2% at 25-29 years and 6.1% at 30 years and above. The percentage of women who got married under 5 years is 19.2% and it is the largest percentage. The percentage of those women by marital duration 5-9 years, 10-14 years, 15-19 years, 20 years and above are 18.5%, 17.9%, 17.3% and 27.1%. Regarding the place of residence, the percentage of currently married women who lived in rural area is 73.9% and that of women who live in urban is 26.1%. The descriptive statistics of social, economic and demographic characteristics and voluntary childlessness are shown in the following Appendix Table (2).

Bivariate Analysis

Pearson's Chi-square test was used to find the association of demographic and socioeconomic characteristics, and voluntary childless. The relationship between social, economic and demographic characteristics and voluntary childlessness is analyzed using the Chi-square test and the results are shown in the following Appendix Table (3). It has been found that all socio-economic and demographic variables are statistically significant at the 1% level. It can be said that there is association between voluntary childlessness and all socio-economic and demographic variables.

Analysis of Complementary Log-Log Regression Model

The overall model fitting information for the complementary log-log regression model is given in Appendix Table (4). Omnibus test of model coefficient shows that the inclusion of eleven independent variables yields a Chi-square value of 1009.10, with 38 degrees of freedom, P-value = 0.000. Therefore, the overall model is statistically significant, which means that adding the eleven explanatory variables to the model have significantly increased ability to predict whether the factors influenced on childlessness situation. The result of Cox and Snell R-square, 0.4194 indicates a reasonable fit of the model to the data. This shows that 41.94% of the variation in childless women or not can be explained by socio-economic and demographic characteristics. Since -2 log likelihood statistic is 711.1132, it can be said that the existence of a relationship

between the independent variables and the dependent variable is supported. The results of the AIC and BIC are 1500.226 and 1772.088, respectively.

The independent variables such as educational attainment of women and their husbands, woman's employment status, woman's occupation (skilled manual and unskilled manual), the fourth and the highest wealth quintiles, woman's age, husband's age group (25-29, 30-34, 35-39), age at first marriage, marital duration (5-9) years and place of residence are statistically significant characteristics on childlessness.

The coefficient of woman's educational attainment is positively related to childlessness. The odds ratio of primary educational attainment suggests that women who have attained primary educational level are 1.79 times more likely to be childlessness as compared to no educated women and it is statistically significant at 10% level. A 95% confidence interval suggests that magnitude of the effect can be increased from 0.91 times to 3.54 times. The odds ratios for secondary and higher educational attainments are 2.18 times and 2.28 times more likely to be childlessness compared to no educated women. The coefficients for secondary and higher educational attainment are statistically significant at 5 % level. The 95 % confidence intervals suggest that magnitude of the effect can be increased from 1.09 times to 4.35 times in secondary educational level and from 1.00 times to 5.14 times in higher educational level.

The coefficient of husband's educational attainment is positively related to childlessness. The odds ratio of primary educational attainment suggests that husbands who have attained primary educational level are 1.92 times more likely to be childlessness as compared to no educated husbands and it is statistically significant at 10% level. A 95 % confidence intervals suggest that magnitude of the effect can be increased from 0.93 times to 3.96 times. The odds ratios of secondary and higher educational attainments are 2.45 times and 2.95 times more likely to be childlessness compared to no educated husbands. The coefficients for secondary and higher educational attainment are statistically significant at 5% level. The 95 % confidence intervals suggest that magnitude of the effect can be increased from 1.19 times to 5.06 times in secondary educational level and from 1.24 times to 6.98 times in higher educational level.

The coefficient of woman's employment status has positive relation with childlessness and statistically significant at 5% level. The odds ratio of employed women is 1.50 times more likely to be childlessness as compared to unemployed women. A 95% confidence interval suggests that magnitude of the effect can be increased from 0.99 times to 2.27 times.

Regarding woman's occupation, the odds suggest that women who work in skilled manual are 1.65 times more likely to be chance for childlessness as compared to not working women and it is statistically significant at 10% level. A 95 % confidence interval for skilled manual suggests that magnitude of the effect can be increased from 0.95 times to 2.88 times. Women who are unskilled manual are 1.70 times more likely to have the chance for childlessness as compared to not working women and it is statistically significant at 5% level. A 95 % confidence interval for unskilled manual suggests that magnitude of the effect can be increased from 1.02 times to 2.84 times.

In wealth quintile, the coefficients of the fourth and highest quintiles are positively related to childlessness and statistically significant at 5% level and 10 % level. The odds ratio suggests that the fourth quintile women are 51% and the highest quintile women are 42% more likely to be chance for childlessness as compared to the lowest women. The 95 % confidence intervals for fourth and highest quintiles suggest that magnitude of the effect can be increased from 1.00 times to 2.28 times and from 0.97 times to 2.07 times.

Woman's age is statistically significant at 1% level and it is negatively related to childlessness. The odds ratio suggests that women age (20-24) is 76% less likely to be childlessness as compared to women age (15-19). A 95% confidence interval is recommended to reduce the efficiency level from 63% to 85%. The odds ratio suggests that women age (25-29) is 96% less likely to be childlessness compared with women age (15-19). A 95% confidence interval is

recommended to reduce the efficiency level from 92% to 98%. The odds ratio suggests that women age (30-34) are 99.4% less likely to be childlessness compared with women age (15-19). A 95% confidence interval is recommended to reduce the efficiency level from 98.11% to 99.81%. The odds ratio suggests that women age (35-39) is 99.47% less likely to be childlessness compared with women age (15-19). A 95% confidence interval is recommended to reduce the efficiency level from 97.82% to 99.87%. The odds ratio suggests that women's age 40 and above is 99.93% less likely to be childlessness compared with women age (15-19). A 95% confidence interval is recommended to reduce the efficiency level from 99.33% to 99.99%.

In husband's age, an odd ratio suggests that husbands aged (25-29) is 32% less likely to be childlessness as compared to husbands aged (under 25). It is negatively related to childlessness and statistically significant at 5% level. A 95% confidence interval is recommended to reduce the efficiency level from 7.8% to 49.55%. The odds ratio suggests that husbands aged (30-34) is 38% less likely to be childlessness compared with husbands aged (under 25). It is negatively related to childlessness and statistically significant at 5% level. A 95% confidence interval is recommended to reduce the efficiency level from 5.19% to 59.67%. The odds ratio suggests that husbands aged (35-39) is 69% less likely to be childlessness compared with husbands aged (under 25). It is negatively related to childlessness and statistically significant at 1% level. A 95% confidence interval is recommended to reduce the efficiency level from 32.29% to 85.59%.

Age at first marriage is statistically significant at 1% level and it is positively related to childlessness. The odds ratio suggests that women who got marriage at age groups (20-24, 25-29 and 30 and above) are 4.02, 17.35 and 45.53 times more likely to be childlessness compared to women who got marriage at age 15-19 respectively. A 95% confidence interval suggests that magnitude of the effect can be increased from 2.62 times to 6.20 times for age 20-24. A 95% confidence interval suggests that magnitude of the effect can be increased from 8.40 times to 35.82 times for age 25-29. A 95% confidence interval suggests that magnitude of the effect can be increased from 13.22 times to 156.84 times for age 30 and above.

The coefficient of 5-9 years' marital duration is statistically significant at 1% level and it is negatively related to childlessness. The odds ratio suggests that women who have 5-9 years' marital duration are 68% less likely to be childlessness compared to women who have under five years' marital duration. A 95% confidence interval suggests that magnitude of the effect can be anywhere from a 40.34% decrease to a 83.21% decrease.

The coefficient of urban place of residence is statistically significant at 1% level and it has positively related to childlessness. The odds ratio suggests that woman who live in urban areas are 1.53 times more likely to be childlessness compared with women who live in rural areas. A 95 % confidence interval proposes that magnitude of the effect can be increased from 1.11 times to 2.09 times.

Discussions

This study indicates prevalence of voluntary childlessness among currently married women in Myanmar. In this study, the higher educational attainment is significant effect on voluntary childlessness. Most of childless women tend to progress their life careers as first priority whereas they also believe in being higher the educational level which can support the better job opportunities to be got in their life. Many women who pursue an advanced education delay or postpone marriage and childbearing until their education is complete. If the occupation of the husband and/or wife becomes more important and satisfying than the prospects of having children, they may continue postponement of childbearing. Besides, their income is usually spent in promoting of their skills than in rearing their children. Although some educated women with job tend to be better in growing up their children, particularly their education and health, they cannot spend a lot of time on their children. These women can be found in working status such as skilled manual occupation. In this study, rich women who have fourth and highest wealth quintiles can be found as voluntary childless women. The older women have less chance to be

voluntary childlessness compared with the younger women because the latter may focus on their education, jobs and they cannot look after their children well. However, they may be willing to have child at the time they are ready for that. Therefore, this type of childlessness is known as temporarily childlessness. It is obvious that a woman who marries late has fewer fertile years of marriage. The older women at first marriage may take less responsibility on rearing their children and also, other effects of these women's physical and mental health are crucial to take into account for having children. Another factor of childlessness among women in this study is marital duration of couples. It can be noted that many couples mainly emphasize on standing their life without any help from other people and trying hard to promote their skills and wages to be having children above five years of marital duration. Urban communities may be more favorable to voluntary childlessness than rural areas because there are availability of better medical care, a higher standard of living and more chance to get contraceptive methods easily compared to rural areas. Moreover, women do not tend to have any children due to insufficient time and income to be spent on rearing their children and extra person who cares their children. As contrast, some of the reasons such as woman's age less than 25 year and marital duration less than 5 years towards to be voluntary childlessness may cover only for short term. It may lead to be temporarily childlessness among these women.

Recommendations and Suggestions

Childlessness and infertility are forgotten issues in reproductive health programs in Myanmar. The limitation of this study was the difficulty in reaching voluntarily childless women and voluntary childlessness which is only viewed from a women's perspective. It is also recommended that survey based on childlessness should be conducted to provide much more information and an assessment should be made on how the decision of childlessness is reflected in the relationship between spouses. One of the important factors for postponement childbearing and voluntary childlessness is to keep maintains achieving higher education. It is also important that young couple become aware of the relationship between age and fecundity and biological risks of postponing motherhood due to causing higher involuntary sterility as the result of the longer postponements. Understanding the factors and attitudes of childless people and couples in our society might encourage society to prepare for this growing population of childlessness which has many advantages and disadvantages for society as a whole. It is also recommended more research should be needed to study with other important measurable variables or factors in considering the rise in childlessness.

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Appendix Table (1) Description of Variables

Variables	Definition	Coding
Childlessness	Childlessness is defined as currently married woman with no living children and uses any contraceptive method.	0 = Not childless woman (Reference) 1 = Childless woman
Woman's educational attainment	Highest level of education for woman	1 = No education (Reference) 2 = Primary 3 = Secondary 4 = Higher
Husband's educational attainment	Highest level of education for husband	1 = No education (Reference) 2 = Primary 3 = Secondary 4 = Higher
Woman's employment status	Woman who were employed in the 7 days before the survey	1 = Unemployed (Reference) 2 = Employed
Woman's occupation	Occupation refers to types of job.	1 = Not working (Reference) 2 = Professional/technical/managerial 3 = Clerical/Sales/Services/Domestic service 4 = Agriculture 5 = Skilled manual 6 = Unskilled manual
Husband's occupation	Occupation refers to types of job.	1 = Professional/technical/managerial (Reference) 2 = Clerical/Sales/Services/Domestic service 3 = Agriculture 4 = Skilled manual 5 = Unskilled manual
Wealth quintile	Households are given scores based on the number and kinds of consumer goods they own, ranging from a television to a bicycle or car, plus housing characteristics such as source of drinking water, toilet facilities, and flooring materials. These scores are derived using principal component analysis.	1 = Lowest(Reference) 2 = Second 3 = Middle 4 = Fourth 5 = Highest
Woman's age (Years)	Completed years of woman's age	1 = 15-19(Reference) 2 = 20-24 3 = 25-29 4 = 30-34 5 = 35-39 6 = 40-49
Husband's age (Years)	Completed years of husband's age	1 = Under 25(Reference) 2 = 25-29 3 = 30-34 4 = 35-39 5 = 40-44 6 = 45 and above
Age at first marriage (Years)	Age of woman who has firstly got married	1 = 15-19 (Reference) 2 = 20-24 3 = 25-29 4 = 30 and above

Appendix Table (1) (Continued)

Variables	Definition	Coding
Marital duration (Years)	Age by duration of marriage	1 = Under 5(Reference) 2 = 5-9 3 = 10-14 4 = 15-19 5 = 20 and above
Place of Residence	Place where respondent stays permanently	1 = Rural (Reference) 2 = Urban
Woman's age (Years)	Completed years of woman's age	1 = 15-19(Reference) 2 = 20-24 3 = 25-29 4 = 30-34 5 = 35-39 6 = 40-49

Source: MDHS (2017)

Appendix Table (2) Descriptive Statistics of Voluntary Childlessness among Currently Married Women

Voluntary Childlessness	No. of Currently Married Women	Percent
Yes	283	3.6
No	7476	96.4
Woman's educational attainment		
No education	1193	15.4
Primary	3656	47.1
Secondary	2286	29.5
Higher	624	8.0
Husband's educational attainment		
No education	1149	14.8
Primary	3205	41.3
Secondary	2915	37.6
Higher	490	6.3
Employment Status		
Unemployed	2821	36.4
Employed	4938	63.6
Woman's Occupation		
Not working	2270	29.3
Professional/technical/managerial	351	4.5
Clerical	81	1.1
Sales	1356	17.5
Agricultural - self employed	748	9.6
Agricultural - employee	447	5.7
Domestic service	14	0.2
Services	46	0.6
Skilled manual	460	5.9
Unskilled manual	1986	25.6
Husband's Occupation		
Professional/technical/managerial	573	7.4
Clerical	88	1.1
Sales	546	7.0
Agricultural - self employed	1403	18.1
Agricultural - employee	577	7.4
Domestic service	22	0.3
Services	89	1.2
Skilled manual	1509	19.5
Unskilled manual	2952	38.0

Appendix Table (2) (Continued)

Voluntary Childlessness	No. of Currently Married Women	Percent
Wealth Quintile		
Lowest	1486	19.2
Second	1622	20.9
Middle	1586	20.4
Fourth	1556	20.0
Highest	1509	19.5
Woman's age		
15-19	228	2.9
20-24	834	10.7
25-29	1258	16.2
30-34	1505	19.4
35-39	1482	19.1
40-49	2452	31.7
Husband's age		
Under 25	673	8.7
25-29	1089	14.0
30-34	1375	17.7
35-39	1437	18.5
40-44	1313	16.9
45 and above	1872	24.2
Woman's age at first marriage		
15-19	3636	46.9
20 -24	2699	34.8
25-29	943	12.2
30 and above	481	6.1
Marital duration (Years)		
Under 5	1491	19.2
5-9	1436	18.5
10-14	1390	17.9
15-19	1340	17.3
20 and above	2102	27.1
Place of residence		
Rural	5737	73.9
Urban	2022	26.1
Total	7759	100.00

Source: MDHS (2017)

Appendix Table (3) Distribution and Association between Characteristics and Voluntary Childlessness

Variables	Childlessness (%)	Not Childlessness (%)	Chi-Square	P-value
Woman's Education				
No education	10(3.5)	1183(15.8)	109.916***	0.000
primary	85(30.1)	3571(47.8)		
secondary	151(53.3)	2135(28.5)		
higher	37(13.1)	587(7.9)		
Husband's Education				
No education	9(3.1)	1140(15.2)	87.163***	0.000
primary	76(26.9)	3129(41.9)		
secondary	170(60.1)	2745(36.7)		
higher	28(9.9)	462(6.2)		
Employment Status				
Unemployed	82(29.0)	2739(36.6)	6.903***	0.000
Employed	201(71.0)	4737(63.4)		

Appendix Table (3) (Continued)

Variables	Childlessness (%)	Not Childlessness (%)	Chi-Square	P-value
Woman's Occupation				
Not working	55(19.4)	2215(29.6)	39.186***	0.000
Professional/technical/managerial	18(6.4)	334(4.5)		
Clerical, sales, domestic service and services	61(21.5)	1436(19.2)		
Agriculture	37(13.1)	1158(15.5)		
Skilled Manual	37(13.1)	422(5.6)		
Unskilled Manual	75(26.5)	1911(25.6)		
Husband's Occupation				
Professional/technical/managerial	28(9.9)	545(7.3)	19.281***	0.001
Clerical, sales, domestic service and services	29(10.3)	716(9.6)		
Agriculture	64(22.3)	1916(25.6)		
Skilled Manual	78(27.7)	1431(19.1)		
Unskilled Manual	84(29.8)	2868(38.4)		
Wealth Quintile				
Lowest	61(21.8)	1425(19.1)	24.565***	0.000
Second	37(13.0)	1585(21.2)		
Middle	41(14.4)	1545(20.7)		
Fourth	71(25.0)	1484(19.9)		
Highest	73(25.8)	1437(19.1)		
Woman's age (Years)				
15-19	70(24.7)	158(2.1)	959.938***	0.000
20-24	129(45.6)	705(9.4)		
25-29	53(18.7)	1205(16.1)		
30-34	15(5.3)	1490(19.9)		
35-39	13(4.6)	1469(19.7)		
40-49	3(1.1)	2449(32.8)		
Husband's age (Years)				
Under 25	148(52.1)	525(7.0)	822.204***	0.000
25-29	80(28.2)	1009(13.5)		
30-34	34(12.0)	1340(17.9)		
35-39	9(3.2)	1429(19.1)		
40-44	8(2.8)	1305(17.5)		
45 and above	4(1.7)	1868(25.0)		
Woman's age at first marriage (Years)				
15-19	101(35.7)	3535(47.3)	17.368***	0.001
20-24	123(43.5)	2576(34.4)		
25-29	44(15.5)	899(12.1)		
30 and above	15(5.3)	466(6.2)		
Marital duration (Years)				
Under 5	256(90.5)	1235(16.5)	963.008***	0.000
5-9	14(4.9)	1422(19.0)		
10-14	10(3.5)	1380(18.5)		
15-19	1(0.4)	1339(17.9)		
20 and above	2(0.7)	2100(28.1)		
Place of residence				
Rural	179(63.3)	5558(74.3)	17.416***	0.000
Urban	104(33.7)	1918(25.7)		

Source: MDHS (2017)

Appendix Table (4) Overall Model Evaluation for Complementary Log-Log Regression Model

Specification	Value	df	P-Value
Likelihood Ratio χ^2 (Omnibus Test)	1009.10	38	0.000
Cox & Snell R- Square (Pseudo R-Square)	0.4194		
-2Log Likelihood	711.1132		
Akaaike I.C(AIC)	1500.226		
BIC	1772.088		

Source: MDHS (2017)

Appendix Table (5) Parameter Estimates of Clog-log Regression Model

Independent Variables	Coefficient	Std. Err.	Wald Statistic	P-Value	95% Confidence Interval		Odds
					Upper	Lower	
Constant	-3.05***	0.52	-5.86	0.000	0.02	0.13	0.05
Woman's educational attainment							
No education (Ref :)							
Primary	0.59*	0.35	1.69	0.091	0.91	3.54	1.79
Secondary	0.78**	0.35	2.21	0.027	1.09	4.35	2.18
Higher	0.82**	0.42	1.98	0.048	1.01	5.14	2.28
Husband's educational attainment							
No education (Ref :)							
Primary	0.65*	0.37	1.75	0.079	0.93	3.96	1.92
Secondary	0.90**	0.37	2.42	0.015	1.19	5.06	2.45
Higher	1.08**	0.44	2.46	0.014	1.24	6.98	2.95
Woman's employment status							
Unemployed (Ref :)							
Employed	0.41*	0.21	1.95	0.051	0.99	2.27	1.50
Woman's occupation							
Not working (Ref :)							
Professional/technical/managerial	0.20	0.37	0.55	0.584	0.59	2.52	1.22
Clerical, sales, domestic service and services	0.32	0.26	1.21	0.226	0.82	2.31	1.38
Agriculture	0.17	0.31	0.55	0.582	0.64	2.19	1.19
Skilled Manual	0.50*	0.28	1.76	0.078	0.95	2.88	1.65
Unskilled Manual	0.53**	0.26	2.04	0.041	1.02	2.84	1.70
Husband's Occupation							
Professional/technical/managerial (Ref :)							
Clerical, sales, domestic service and services	-0.04	0.28	-0.15	0.880	0.55	1.66	0.96
Agriculture	0.06	0.28	0.21	0.831	0.62	1.82	1.06
Skilled Manual	-0.19	0.25	-0.78	0.433	0.51	1.34	0.82
Unskilled Manual	-0.24	0.26	-0.93	0.354	0.48	1.30	0.79
Wealth quintile							
Lowest (Ref :)							
Second	0.20	0.27	0.74	0.461	0.72	2.05	1.22
Middle	0.38	0.25	1.54	0.124	0.90	2.38	1.46
Fourth	0.41**	0.21	1.97	0.048	1.00	2.28	1.51
Highest	0.35*	0.19	1.78	0.074	0.97	2.07	1.42

Appendix Table (5) (Continued)

Independent Variables	Coefficient	Std. Err.	Wald Statistic	P-Value	95% Confidence Interval		Odds
					Upper	Lower	
Woman's age							
15-19 (Ref :)							
20-24	-1.44***	0.23	-6.18	0.000	0.15	0.37	0.24
25-29	-3.30***	0.37	-9.02	0.000	0.02	0.08	0.04
30-34	-5.10***	0.58	-8.80	0.000	0.002	0.02	0.01
35-39	-5.24***	0.72	-7.28	0.000	0.001	0.02	0.01
40-49	-7.23***	1.14	-6.32	0.000	0.0001	0.01	0.001
Husband's age							
Under 25 (Ref :)							
25-29	-0.38**	0.15	-2.48	0.013	0.51	0.92	0.68
30-34	-0.48**	0.22	-2.20	0.028	0.40	0.95	0.62
35-39	-1.16***	0.39i	-2.95	0.003	0.14	0.68	0.31
40-44	-0.38	0.44	-0.86	0.392	0.29	1.62	0.69
45 and above	-0.73	0.56	-1.29	0.196	0.16	1.46	0.48
Woman's age at first marriage							
15-19 (Ref :)							
20-24	1.40***	0.22	6.35	0.000	2.62	6.20	4.03
25-29	2.85***	0.37	7.72	0.000	8.40	35.82	17.34
30 and above	3.82***	0.63	6.05	0.000	13.22	156.84	45.53
Marital duration							
Under 5 (Ref :)							
5-9	-1.15***	0.32	-3.56	0.000	0.17	0.60	0.32
10-14	0.06	0.51	0.11	0.910	0.39	2.88	1.06
15-19	-0.10	1.09	-0.91	0.362	0.04	3.13	0.37
20 and above	0.49	1.15	0.43	0.671	0.17	15.47	1.63
Place of residence							
Rural (Ref :)							
Urban	0.42***	0.16	2.60	0.009	1.11	2.10	1.53

Source: MDHS (2017)

CAUSAL RELATIONSHIP BETWEEN LABOUR PRODUCTIVITY AND EXPORT OF GARMENT FIRMS IN YANGON*

Moe Hnin Phyu¹

Abstract

The garment and apparel industry is one of the prioritized sectors in Myanmar and increasing its productivity is vital to Myanmar's economy. In order to ensure the growth of labour productivity and promote its export to the global apparel market, this study explores the causal relationship between labour productivity and exports of Myanmar garment firms. The major purpose of this study is to analyze the direction of causation between labour productivity and export of garment manufacturing firms, and to examine whether the relationship between labour productivity and export are long-run or short-run. The analysis is based on the Granger Causality Test by using the time-series data for 64 consecutive months during the period from January-2017 to April-2022. The results of causality test indicates that the relationship between labour productivity and export is concerned only short-run with the unidirectional causal relationship form labour productivity to export of garment firms which is occurred by three months lags. Therefore, based on this result, it can be concluded that an increase in labour productivity about three months ago can enhance current period's exports for Myanmar's garment industry.

Key words: Labour Productivity, Export, Garments, Causality.

Introduction

The garment industry has recognized to be a driver of economic and occupational growth in many Asian economies. Myanmar's garment and textile industry is one of the fastest growing industries in Southeast Asia since 1990s. Although agriculture is the backbone of Myanmar's economy as a land rich country with abundant natural resources. In addition, the most popular handicraft in Myanmar is traditional textile weaving and it is still possible to produce excellent clothes. Nowadays, garment and textile markets become wider and wider with increasing population and the global garment industry forms an important component of world trade flows. Particularly, some developing countries like Myanmar, where garment accounts for a large proportion of nation's total exports.

Myanmar's garment manufacturing industry is dominated by exported-oriented firms, which operating under the CMP (Cut - Make - Pack) system, where most of the raw materials have been imported. Myanmar experienced a remarkable development of its garment industry after 1990s. Since that time, garment sector has become a key contributor to GDP of Myanmar's economy along with agricultural products, fishery and natural gas. Accordingly, garment production is one of the largest manufacturing activities in Myanmar in terms of the number of firms involved, number of employees, and increasing number of exports. Therefore, in the case of Industry Sector, processing and manufacturing contributes the highest share of GDP, in which CMP garment and textile industry create a major portion of Myanmar's manufacturing sector and which covered about 75% of total manufactured products (ADB, 2019).

In the past few years, Myanmar's garment sector was the second largest export item after the natural gas. In recent years, the garment industry contributes the largest share of export among principal export commodities of Myanmar. According to the Central Statistical Organization's Statistical Year Book (2020), the contribution of export by garment industry has

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increased significantly, which was sharply increased from US\$ 272 thousand million in 2005-06 to US\$ 4,830 thousand million in 2018-19. Therefore, it was increased over ten-times during the period of 2005-06 to 2018-19 (CSO, 2020).

Now a day, garment export has taken the leading role of Myanmar's commodity export. In order to promote the export of garments to the global market, it needs to ensure the growth of labour productivity. Thus, the direction of causation between export and labour productivity has become the important implication for the way of industrial policy that can lead to stimulate the labour productivity growth. Therefore, this study requires to analyze the linkages between labour productivity and garment export of Myanmar.

Objectives of the Study

In order to observe the relationship between labour productivity growth and export growth, this study explores the two objectives:

- To examine the direction of causation between labour productivity and export of garment manufacturing firms , and
- To analyze whether there is a long-run or short-run relationship between labour productivity and export of garment manufacturing firms.

Literature Review

This part of study reviews the literature concerns with the labour productivity, export and their linkages.

Productivity Growth and Long-run Export Growth

Economic growth can occur when an economy's production at full employment level increases. It can push an outward shift of production possibility frontier (PPF). Many literatures found out the results that indicate the growth of productive capacity depends on the rate of growth of labour productivity and technological progress.

In the modern world, the role of exports in economic growth is obviously importance. Recent economic development models would also suggest an important positive role of exports in economic development due to an attenuation of the foreign resource gap (Robertson, 2012). Again, according to Porter (2003), productivity is the best measure of export competitiveness, and, there are some circumstances that would lead to a productivity growth.

Garment exports contributed significantly in obtaining foreign exchange for developing countries. Thus, various researchers explored the determinants of export growth and its impact on labour productivity of garment firms for many countries. When the countries liberalized in international trade, there is great competition among garment and textile industries. On the other hand, competition both in local and international market is hindered by manpower underdevelopment, and high cost of production.

However, there is no single factor to determine nations' competitiveness for export growth. There are also four major different ways to determine export competitiveness of garment exporting firms. The first is the relative export price, which are one country's export prices in relation to other countries, expressed as an index. The second is a country's terms of trade, which is an index of a country's export ratio to import prices. In addition, the third one is the labour productivity, which is usually expressed as GDP per worker, or GDP per hour of employment. Then, the last is the unit labour costs, which are the cost of labour per unit of output. (Khanna, 1993)

But labour costs are not the only comparative advantages for garment exporting countries but also to compete the global market of garment and textile industry. Quality products, labour skills and process of technology are also important factors that buyer firms need to care about for garment industry (Handfield, 1994).

Many industry level literatures described that low-cost labor is no longer the significant comparative advantage for garment industry in Asian countries, such as, China, Taiwan, South Korea and Japan, etc. These countries have experienced losing export competitiveness, due to increasing labor costs and it created negative impact on their textiles and garment export performance (Jin, 2004).

Sayre and Morris (2015) criticized the idea of reducing factor costs cannot be further suitable to promote productivity of any manufacturing firms. Then, Sayre and Morris (2015) also argued again that when an increase in the quality of the labour force, an increase in the amount of capital stock and natural resources, or as improvement in technology, which will increase the productivity and shifts the production possibilities curve to the right. It also equally increases the quality of exports in the long-run.

Therefore, manufacturing firms should contribute to improve efficiency in productive factors, such as provide workplace training for employees and other welfare facilities, that lead to an improvement in human capital. In some cases, firms have to utilize improved technology or emphasize on advanced technology and R&D. Furthermore, some firms try to modify their managerial practices for efficient utilization of their own resources like human resource, financial capital and natural resources (Sayre and Morris, 2015).

However, with the lack of physical capital and technology, developing countries should be depending on an improvement in human capital and upgrading the managerial practices to be an efficient utilization of owned resources to increase productivity and export growth in the long-run (Sayre and Morris, 2015).

Causality Approach: Relation between Labour Productivity and Exports

The most important factor affecting exports of an industry is evolution of labour productivity. It can be an important variable in productivity measurements. The international trade theory has suggested a potential source of productivity gains where an outward-oriented trade regime for production across exporting goods. Krugman (1985) stated that international trade theory saw the growth of exports as stimulating production across the economy through technological spillovers and other externalities. Thus, the rate of export growth can cause productivity gains in economy.

Moreover, Romer (1986) presented that new growth theories are characterized by the endogenization of technology. A justification of causality from productivity to exports that can be found in New Trade theories. It is argued that productivity leads to greater exports by motivating the technological factors to get more exports. In other words, international technological differences are important factors of international competitiveness and trade performance of developed countries (Romer, 1986).

Although the new trade theory reflects the link between productivity gains and exports, the effect of export on a greater productivity is primarily ambiguous and doubtful in model of imperfect competition and increasing return to scale. Exports are expected to increase technical efficiency to greater degree in smaller economies and those with fewer new firms can be entering the markets. Furthermore, productivity improvements are more likely to result from an increase in exports if incentives are created to invest in R&D (Dhiman & Sharma, 2019).

However, examining of causality for productivity and exports in industrialized countries shows that countries are successful in their export performance seem also to be successful in their productivity performance, and vice versa. A number of studies have found a positive relationship between exports and productivity growth (Dhiman & Sharma, 2019). At the macro-level, Marin (1992) found that there is unidirectional causality from exports of manufacturing goods to labour productivity undeveloped countries, such as Germany, Japan, the UK and, US. On the other hand, at the micro-level, firms with higher productivity are more expected to sell in the export market, especially in developing countries (Marin, 1992).

In practices, the relationship between exports and productivity is an interesting prospect. Exports may rise from the realization of economies of scale due to productivity gains, then, the rise in exports may further create cost reductions which may result in further productivity gains. Alternatively, export expansion leads to improved skills and technology. This increased efficiency creates a comparative advantage for a given country, which facilitates exports growth (Hatemi & Irandoust, 2001).

Methods of the Study

This study has used both primary and secondary data. The primary data are collected through interviewing firm owners with structured questionnaire. The data collection period is February to August, 2022. The secondary data is mainly collected from Myanmar Garment Manufacturers Association (MGMA), Directorate of Investment and Company Administration (DICA), and Statistical Year Book, as well as the international sources like WTO and UN Comtrade Database. In this study, the Granger Causality test is used to examine the direction of causation and analyze the relationship between two main variables: labour productivity and export, whether their relationship is long run or short run.

In the preparing the process of Granger causality test, Augmented Dickey-Fuller (ADF) unit root test is conducted in order to examine whether the variables are stationary or not, and then, Vector Autoregressive (VAR) model is applied for lag length selection. Subsequently, Vector Error Correction Model (VECM) and Johansen Co-integration test had used for long-run relationship between variables. Finally, Granger causality test is accomplished to examine the direction of causation between the selected variables in the short-run and long-run. This analysis can be based on time-series data (i.e., monthly data), in which labour productivity and export data are collected for 64 consecutive months (January, 2017 to April, 2022) through the survey data from sample garment manufacturing firms.

Data Analysis and Results

In an econometric analysis for some economic variables, it needs to know whether changes in one variable would have an impact on changes other variables, sometimes. When a study needs to find out this phenomenon more accurately, it should use a Granger Causality Test (Wooldridge, 2019).

In order to analyze the relationship between the labour productivity and export of the sample garment exporting firm, this study operates Granger Causality Test by using time-series data (i.e., monthly export, monthly production, and monthly numbers of workers) for 64 consecutive months during the period from January-2017 to April-2022. In order to analyze the relationship between labour productivity and export of sample garment firms, this study includes the following steps.

(i) Results of Unit Root Test (Testing for Stationary)

In order to examining the causality between the variables of labour productivity and export of garment firms, this study needs to perform the unit root test to analyze the variables are

stationary or non-stationary. In this case, the Augmented Dickey-Fuller (ADF) test is applied in this study. The test is undertaken for labour productivity per month (total output is divided by total labour inputs) and monthly export (total number of clothes exported per month). The results of ADF tests are presented in Table 1, as below.

Table 1: Results of Augmented Dickey-Fuller Test

Variables	With Trend		With Drift		Results
	t-statistics	p-value	t-statistics	p-value	
ADF of Labour Productivity	-5.420***	0.000	-2.166**	0.0172	Stationary
ADF of Export	-4.859**	0.004	-2.816**	0.0033	Stationary

Source: Own Survey Data (2022)

*** Significant at 1% level

** Significant at 5% level

In order to analyze the ADF unit root test for stationary, this study propose the hypothesis as follow:

H_0 : The series has a unit root (i.e., There is non-stationary between two variables)

H_1 : The series has not a unit root (i.e., There is stationary)

According to the table, the results of unit root test for both export and labour productivity described that it has a negative coefficient with significant p-value at 5% level. In this analysis, the negative coefficient means that the model is valid and the absolute value of Test Statistics for both Export and Labour Productivity are higher than its critical values at 5% level, which occurred both in terms of regress with trend and drift.

Therefore, the results of ADF test indicated that this study can reject the null hypothesis because the test statistics is significantly large and negative. Thus, the series is stationary, which means that the series have not a unit root. Since all variables are stationary, the rest parts of the causal analysis can be continued to test.

(ii) Optimal Lag Length Selection

In this section, the Vector Auto Regression (VAR) lag order selection method is utilized to determine the optimal lag length as presented in Table 2.

According to results of an analysis, the above table presents the optimal lag length by VAR model which determines the number of lagged for the cointegration test of this study. The optimal lag-length can be determined by using the test statistics of LR, FPE, AIC, SBIC and HQIC tests, where the selection criterion is based on the lowest value of those tests. According to AIC test, it is indicated to choose “three lags” which can be suitable for this model to determine both variables; export and labour productivity of garment exporting firms in this study, because Lag-3 of AIC has lowest value with significant p-value at 5% level.

Table 2: Determine the Optimal Lag Length by VAR

Lag	Log L	LR	FPE	AIC	HQIC	SBIC	P-value
0	- 1079.95		1.6e+13	36.0651	36.0924	36.1349	
1	- 961.493	236.92	3.5e+11	32.2498	32.3317	32.4592***	0.000
2	- 956.579	9.8295	3.4e+11	31.2193	32.3558	32.5683	0.043
3	- 948.043	17.071**	2.9e+11**	32.0681**	32.2593**	32.5568	0.002
4	- 944.199	7.6881	2.9e+11	32.0733	32.3191	32.7016	0.104

Source: Own Survey Data (2022)

Denote: ** Significant at 5% level

*** Significant at 1% level

(iii) Johansen Cointegration Test

The Johansen Cointegration test can be estimated whether there is a long-run relationship or not between the variables. Before performing this test, the variables have to be stationary. According to the ADF unit root test, variables are stationary, and, thus, the result allows to operate the cointegration test. The results of the Johansen Cointegration test are shown in Table3.

Table 3: Results of Johansen Test for Cointegration

Maximum Rank	Eigenvalue	Trace Statistic	5% Critical Value
0	-	35.2674	15.41
1	0.43492	1.0205**	3.76
2	0.01686	-	-
Maximum Rank	Eigenvalue	Max Statistic	5% Critical Value
0	-	34.2470	14.07
1	0.43492	1.0205**	3.76
2	0.01686	-	-

Source: Own Survey Data (2022)

** Denotes rejection of the hypothesis at the 0.05 level

In this test, the Null Hypothesis (H_0) stated that there is no cointegration between two variables, and the Alternative Hypothesis (H_1) stated that there is a cointegration between two variables. In the analysis of Johansen Cointegration test, the rule of interpretation is based on the value of trace statistics and max statistics (maximum-eigenvalue statistics) with its critical value at 5% confidence level.

According to the results of Johansen test in table, the test starts from the maximum rank zero, the trace statistics at Maximum-Rank=0 of 35.2674 exceeds its 5% critical value of 15.41,

which means that the trace statistics can reject the null hypothesis and accept the alternative hypothesis. Although the results of trace statistics accept the alternative hypothesis of H_1 : there is cointegration among the two variables, the zero-maximum rank in Johansen test presents that there is zero cointegrating equation (i.e., no cointegration) among the variables in this study.

Further, the trace statistics at Maximum-Rank=1 of 1.0205 is also less than its critical value of 3.76. Therefore, the null hypothesis cannot be rejected and accept the null hypothesis. It means that the two variables of this study are not cointegrated, which described that they are not moving together in the long-run. Thus, this study should be used the unrestricted VAR model instead of VECM because the two variables (i.e., labour productivity and export) are not cointegrating in the long-run and they have only short-run relationship among the variables in this study.

Similarly, the maximum-eigenvalue statistics (i.e., max-statistics) of Johansen Cointegration test also presents the similar results of trace statistics for the variables of this study.

(iv) Estimation of Short-Run Relationship by VAR Model

The analysis of causality test indicated that this study should run unrestricted VAR Model instead of VECM because the variables of this study are not cointegrated by applying the results of Johansen test. It means that the variables such as labour productivity and export of sample garment firms are not related over the log-run and their relationships are significantly occurred only in the short-run. Therefore, the short-run relationship between labour productivity and exports of garment firms are presented in the Table 4.

Table 4: Results of VAR Model for Short-Run Relationship

Variables	Coefficient	p-value
Labour Productivity		
Export L1.	-4.92e-09	0.865
L2.	-1.51e-08	0.637
L3.	1.26e-08	0.658
_Cons	.2407372**	0.033
Export		
Labour Productivity L1.	1317430	0.931
L2.	3783616	0.805
L3.	-8352481**	0.002
_Cons	6220249**	0.018

Source: Own Survey Data (2022)

***denotes highly significant at 1% level.

** denotes highly significant at 5% level.

The data for VAR analysis involves two variables: the labour productivity and exports of garments firms for sixty consecutive months between 2017 to 2022. According to the results of analysis by the VAR Model, all the lag values of export do not have significant effect on labour productivity because its p-values are not significant even at the 10% level. It means that there is no short-run causality from export to labour productivity of garment firms in this study (i.e., export does not cause labour productivity). However, the constant p-value ($p=0.033$) is significant at 5% level, which means that both of the variables can be jointly determined on labour productivity of garment firms in the short-run.

On the other hand, the export would be considered as the dependent variable, where the p-value of labour productivity (L_3) $p=0.002$ is significant at 1% level. It can be described that the export of garment firms is significantly influenced by its labour productivity during the three months periods of time to export. Therefore, the time lag between labour productivity to export is considered as 3 months for garment industry of Myanmar. In this study, a significant lag 3 value means that the relationship between variables (causation from labour productivity to export) are 3 months apart or firm's lead time to export is 3 months from its labour productivity growth. Therefore, it can be described that there is a causal relationship from labour productivity of garment firms to export, which is occurred in three months lags.

(v) Results of Granger Causality Test

In this section, Granger Causality Wald test is operated to analyze the short-run causation of variables for this study. The results of Granger Causality Test of paired variables of labour productivity of garment firms and its export are presented in the following Table 5.

Table 5: Results of Granger Causality Wald Test

Granger Cause	No. of Obs	Chi-sq	df	Prob > Chi-sq
Export → Labour Productivity	61	2.9467	3	0.400
Labour Productivity → Export**	61	9.3706	3	0.025

Source: Own Survey Data (2022)

**denotes highly significant at 5% level.

Table 5 presents the results from Granger Causality of short-run relationship between the variables. According the results of causality test, only the labour productivity of garment firms has “Granger Cause” to the exports of garment firms at 5% significant level. However, garment export does not “Granger Cause” the labour productivity of garment firms in this study. Therefore, there is unidirectional effect from labour productivity to export in the short-run for this study. It means that, Labour Productivity has causal effect on Export at 5% level, however export of firms has no causal effect on Labour Productivity of garment firms.

Then, in order to check whether the VAR Model is fit or not fit for the variables of this study, it operates the VAR Diagnostic Test, such as LM Test for Residual Autocorrelation Test is performed. The results of LM test are presented in Table 6.

According to the results of LM Test, the p-value of lags (L_1 and L_2) are not significant. It means that it cannot reject the null hypothesis and it has to accept the null hypothesis of there is no autocorrelation at lag order. Therefore, the model does not have any autocorrelation, which means that the model is desirable and fit for the variables of this study.

Table 6: Diagnostic Test of VAR

Diagnostic Test	Lag	Chi-sq	Prob.
LM Test for Residual Autocorrelation	L_1	5.7933	0.21512
	L_2	4.8999	0.29772

Source: Own Survey Data (2022)

H_0 : no auto correlation at lag order

Therefore, this study can be concluded that only 3 lag value of Labour Productivity variable has causality fit on Export at 5% level. Thus, there is unidirectional causal relationship

from Labour Productivity to Export for 3-month lag. This relationship occurs only in the short run and it may change over the long-run for this study. It can be described that increased labour productivity can cause the garment export growth that is prominent for three-month lag, which can be valid for only short-run.

Findings and Conclusion

The findings of Granger Causality Test presents the causation and relationship between the major two variables of this study like labour productivity and export. Under the analysis of the causality test, the Augmented Dickey-Fuller (ADF) unit root test found the series of variables are stationary. Then, according to the results of Vector Auto Regressive (VAR) model, the lag selection found to choose three months lags is occurred for relationship between labour productivity and export of garment manufacturing firms in this study. Then, Johansen Cointegration Test presented that labour productivity and export of garment firms are not cointegrating in the long-run which means that their relationships are occurred only in the short-run.

Therefore, the causation from the labour productivity to export is concerned only for short-run, which can be analyzed by restricted VAR Model. The results of VAR Model found that labour productivity of garment firms can cause the export of garment firms is significantly with three months lag. Finally, the Granger Causality Test found the unidirectional causal relationship from labour productivity to export of sample garment firms which is significant at 5% level in this study. Therefore, this study can be concluded that an increase in labour productivity in three months ago is related to the enhancement of current period's exports for Myanmar's garment industry. In this study, this kind of relationship occurs only in the short run and it may change over the long-run.

Based on the findings, the conclusion can be drawn is that the Myanmar Garment Industry needs to increase its labour productivity in order to achieve long run export growth. As an implication of this study, increasing labour productivity is only possible when the hypothesized variables of this study are strengthened, and through this, exports of Myanmar Garment Industry may be increased in the long-run.

Therefore, under the CMP nature of garment industry, increased labour productivity of garment firms can help to attract the buyers' order from global garment value chain process, which in turn can help to increase the garment exports of Myanmar. When the productive factors are strengthened or firms can efficiently use of their productive factors, Myanmar can access the long-run export growth of its garments in the global apparel market.

In addition, Myanmar garment industry should be promoting the "local brand garments" in order to access the global apparel market and increased export. Accordingly, the government and related stakeholders of garment industry of Myanmar should encourage the export promoting strategies for local textile and garment products, intensively.

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DO ECONOMIC GROWTH, RENEWABLE ENERGY CONSUMPTION, INTERNATIONALIZATION, URBANIZATION AND VALUE-ADDED PRODUCTS FROM INDUSTRIES IMPACT ON ENVIRONMENTAL QUALITY? A NEW LOOK AT MYANMAR'S ECONOMY

Thida Htoo¹

Abstract

Myanmar has the greatest potential for renewable energy generation while non-renewable energy still dominates the total energy mix in the country. The study examines the effect of economic growth, renewable energy consumption, internationalization, urbanization, and value-added industry on environmental quality of Myanmar over the period between 1990 and 2020 by applying multiple regression analysis. The result found that an increase in GDP per capita and an increase in renewable energy consumption improve the environmental quality of Myanmar due to reduction in CO₂ emission. Increasing value-added industry and net inflow of foreign direct investment worsen the environmental quality as a result of increasing CO₂ emission. The findings of this study revealed that renewable energy consumption significantly contributes to the improvement in environmental quality of Myanmar. The study recommended that it should encourage the consumption of clean energy sources in order to improve environmental quality in Myanmar and thereby leading to green growth and green economy and achieve SDGs.

Keywords: CO₂ emission, Economic growth, Internationalization, Renewable energy consumption, Value-added industry

Introduction

Myanmar has the greatest potential for renewable energy generation while non-renewable energy still dominates the total energy mix in the country. The renewable energy generation and consumption depends on the economic growth, net inflow of FDI, use of energy in the manufacturing sector due to structural change in attempting to achieve economic development, rapid growth of urban population which all are contributing factor to environmental quality. As long as country shifts from agriculture (low stage of development) to industry (intermediate stage of development) which could give emphasis to growth in manufacturing industries over a sustainable environment as well as inflow of FDI, it may worsen its environmental concerns. Most of the FDI in Myanmar are focused in extraction of natural resource sectors such as mining, oil and gas. This results in extensive adverse impact on environment (The Myanmar Centre for Responsible Businesses, 2015, as cited in Thiri Shwesin Aung & Behnaz Saboori & Ehsan Rasoulnezhad 2017).

According to the World Bank (2014), the total emissions of greenhouse gas in Myanmar were the second highest after Indonesia in the whole ASEAN countries in 2011. UNDP (2013) reported that Myanmar had overall carbon equivalent emissions which ranked as the 60th in the world. Due to structural change, country shifts to manufacture-based economies which raise CO₂ emission along with urban affluence. Myanmar however prioritizes the sustainability of environment; it, therefore, shifts towards a service-based economy because share of service sector contributed to (40.2%) of GDP in 2020-2021 (CSO 2022) which tends to alleviate

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environmental deterioration. The alleviation of worsening environment improves environmental quality and sustainability. If country has better environmental legislation, environmental quality will improve due to becoming affluent country (Hassan Radoine, Salwa Bajja, Jerome Chenal and Zahoor Ahmed 2022). To achieve level of zero-carbon by 2030 keeps one of the crucial SDGs. The renewable energy thus becomes important. This study intends to analyze how economic growth, renewable energy consumption, internationalization, urbanization and value-added products from industries impact on environmental quality of Myanmar.

The study is separated into different sections: objective and significance of the study, CO₂ emission in Myanmar, materials and methods, the result/findings and the discussion.

The Objective of the Study

The objective of the study is to analyze the impact of economic growth, renewable energy consumption, internationalization, urbanization and value added in industry on environmental quality in Myanmar.

Significance of the Study

According to the objective, the reason for selecting the above variables is due to the fact that these variables are main contributors to the environmental quality in terms of CO₂ emissions as well as playing a vital role in achieving SDGs: SDG 1 (no poverty), SDG 2 (zero hunger), SDG 7 (affordable and clean energy), SDG 8 (decent work and economic growth), SDG 9 (industry, innovation, and infrastructure) and SDG 10 (reduced inequalities), SDG 11 (sustainable cities and communities) and SDG 13 (climate action) (UNDP 2023).

CO₂ Emission per capita, GDP per capita, Renewable Energy Consumption, Net Inflow of FDI, Urban population and Value Added in Industry in Myanmar

Figure (1) shows CO₂ emission per capita, GDP per capita, renewable energy consumption, net inflow of FDI, urban population and value-added products from industries in Myanmar during the period between 1990-1991 and 2020-2021 respectively.

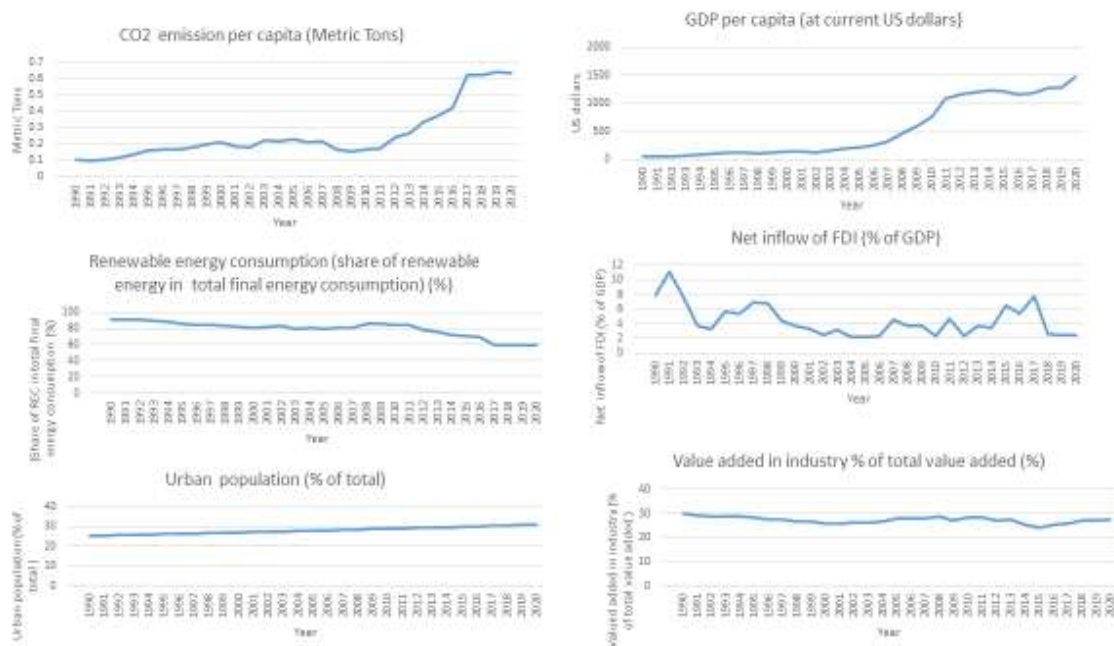


Figure (1) CO₂ emission per capita, GDP per capita, Renewable energy consumption, Net inflow of FDI, Urban population, Value added in industry in Myanmar

Source: World Bank, 2022.

Materials and Methods

Literature Review

The economic activities are measured as GDP variables, indicating that economic pollutions increase with an increase in scale of economic activity. During the period of structural change in an economy, industrial sector which uses greater amount of energy will grow while the share of agriculture decreases. In this period, coefficient of GDP is expected to have a positive sign because when economy moves to higher stage of development, the share of industry which concentrates pollution-intensive begins to decrease while the share of service which concentrates on non-pollution-intensive increases. On the other hand, people have environmental awareness and country has environmental regulations at the higher stage of development. It drives the economy towards reducing energy intensity and thus the coefficient of GDP is expected to have a negative sign (Soytas et al. 2007). According to the study of Grossman et al. (1991), the income levels and environmental pollution can be explained by two effects: scale composition effect and technical effect. According to the scale effects, it is likely to increase environmental pollution along with economic growth due to new market expansion. The composition effect occurs from the trade liberalization. Depending on whether a country has comparative advantage in pollution-intensive production or non-pollution intensive production, the compositional effect exists. According to the technical effects, if production techniques become improved, the quantity of pollution emission per value-added product from an industry will decrease. It can be said that production techniques strongly affect the relationship between income and pollution. EKC

hypothesis has been widely applied in the field of energy economics over the past three decades. According to the hypothesis, there is an inverse relationship between income and environmental degradation, indicating that environmental degradation begins to increase at first as income increases and then decreases after income goes above a certain threshold level (Emine Kılavuz and İbrahim Dogan.2020, p.478).

Apergis et al. (2010) analyzed the causal effects between the use of green energy, GDP, environmental degradation, and other variables in a sample of 19 economies by using a Granger test. The result found that renewable energy plays a vital role for achieving sustainable development. This is confirmed that renewable energy consumption improved the quality of environment through decreasing CO₂ emission while non-renewable energy consumption degraded the quality of environment through increasing CO₂ emission (Ali et al. 2017). Bilgili, et al. (2016) and Zoundi (2017) also confirmed these findings for a sample of African countries (cited in Urszula Gierałtowska, et al. 2022). De Souza et al (2018) looked into the effect of non-renewable energy consumption, renewable energy consumption, and income on CO₂ emission in five MERCOSUR countries. The result showed that the renewable energy significantly reduced the CO₂ emission. All these results are confirmed according to the outcome of Alola et al. (2019) who studied in the context of 16 EU-members during the period between 1997 and 2014 that the use of green energy improved the quality of environment but the consumption of non-renewable energy led to the degradation of environment. Urszula Gierałtowska et al. (2022) also confirmed that renewable energy is an essential tool for reducing CO₂ emissions globally (p.8). It pointed that renewable energy became critical to green growth and green economy and suggested that the energy intensity should be lowered, use of green energy should be increased, and regulations should be developed to mitigate the effect of climate change in line with local demands (Chen et al. (2021).

In studying the FDI-pollution nexus, there are two conflicting hypotheses such as halo effect hypothesis and pollution haven hypothesis. Cole (2004) analyzed trade, migration or displacement of dirty industries from the developed countries to developing countries on emission based on EKC inverted U relationship, using data on North-South flows of trade for the pollution-intensive products to assess pollution haven hypothesis. The result found that there is an evidence of pollution haven effects. The literature of analyzing the impact of FDI on the environment of host country is very rare in the case of ASEAN regions. Merican et al. (2007) examined the nexus between FDI and pollution in the ASEAN 5- by applying Autoregressive Distributive Lag estimation. The result found that FDI increases emission in Philippines, Malaysia and Thailand whereas an inverse relationship between FDI and pollution in Indonesia. Asghari (2013) assessed the validity of the halo pollution and pollution haven hypotheses on FDI by analyzing the correlation between FDI inflow and CO₂ emission during the period between 1980-2011 in selected MENA countries. The result found that inflow of FDI has a weak and negatively significant with CO₂ emission, suggesting that halo pollution hypothesis is found to exist as a weak support. According to the study of Atici (2012), the result found that FDI has a negative impact on CO₂ emissions, implying that FDI benefits the ASEAN countries through reducing overall pollution whereas FDI does not have any significant effect on CO₂ emissions in Malaysia, Philippines, Indonesia and Thailand.

According to particular studies, urbanization has a positive impact (Parikh and Shukla, 1995; Cole and Neumayer, 2004; Liddle and Lung, 2010; Poumanyvong and Kaneko, 2010; Ahmed et al. 2019) and beneficial impact (York et al. 2003) on CO₂ emission. Moreover, some studies found that there was a positive correlation between urbanization and CO₂ emission for 86 nations between 1975 and 1998 (Cole and Neumayer 2004). Liu et al. (2021) investigated whether renewable energy, urbanization and economic progress affect the environment eco-friendlier in selected Asian countries during the period between 1995 and 2014. The result showed that urbanization and consumption of energy increase CO₂ emission while economic growth decreases CO₂ emission. The result also confirmed for all income groups: low, middle, and high-income countries particularly for middle-income country group which indicated the strongest correlation (Poumanyvong and Kaneko 2010) cited in the study of Hassan Radoine, Salwa Bajja, Jerome Chenal and Zahoor Ahmed (2022). This result is confirmed with the outcome of Urszula Gierakowska et al. (2022) that urbanization is positively related with environmental degradation.

In the study of Harun et al. (2013), CO₂ emission was influenced by manufacturing sector, depending on the use of input materials, use of energy, design of product and use of resources. The reason is that manufacturing industry which used a large amount of energy and resources had a significant impact on economic growth and its expansion increased production and further increase in economic growth with CO₂ emission in an economy. In the industrialized economies, manufacturing contributes to some levels of pollution (Rauf et al., 2018); and energy consumption and industrial production have a positive and significant impact on carbon emission due to the reason that they largely relied on fossil fuel energy (Rahman and Kashem, 2018). Hassan et al (2022) confirmed and recommended that there should be innovation-driven sustainable industrialization in a country. Attempting to achieve higher economic growth, manufacturing requires higher consumption of energy, and highly relied on sources of non-renewable in the absence of renewable energy sources. The result confirms the study of Hocaoglu and Karanfil, (2011) that industrial production is the main force of CO₂ emission; Zafar et al. (2020) for 46 Asian countries; Banerjee and Rahman (2012); Canh et al., (2019); and Lin et al., (2014).

The main interest in these circumstances on the Myanmar economy leads to the study of examining how economic growth, renewable energy consumption, internationalization, urbanization and value-added product from an industry impact on environmental quality. Thiri Shwesin Aung & Behnaz Saboori & Ehsan Rasoulinezhad (2017) who examined analysis of economic growth and environmental pollution in Myanmar depending on environmental Kuznets curve in term of different emissions, GDP, trade intensity, urbanization, and financial openness in Myanmar but not examine the inflow of FDI, value added products from industries, and renewable energy consumption which contribute to environmental quality in terms of CO₂ emission. This study attempts, therefore, to fill the gap by analyzing how economic growth, renewable energy consumption, internationalization, urbanization and value-added products from industries impact on environmental quality in Myanmar.

Research Method

The data used in this study were time series data to analyze the environmental quality of Myanmar. The secondary data were collected from World Bank Indicators as an authentic source for data collection. The study used annual data during the period between 1990-1991 and 2020-2021. The data were analyzed by using Stata for generating results. Both descriptive and inferential statistics are used to analyze the data. The study used particular variables such as CO₂ emission per capita as explained variable measuring in terms of metric tons per capita as a measure for environmental quality. This is confirmed that the main greenhouse gas responsible for global warming is CO₂ emission (Huiming Zhu, Lijun Duan, Yawei Guo, Keming Yub (n.a); Emine Kılavuz1 and Ibrahim Dogan (2020). Fodha and Zaghdoud (2010) used CO₂ as environmental factor and economic factor (GDP). Economic growth, also known as per capita income, and increases production. The increase in production also increases the demand for energy (Emine Kılavuz1 and Ibrahim Dogan 2020, p.478). In this study, the economic growth as GDP per capita at current dollars, renewable energy consumption in terms of share of renewable energy in total final energy consumption, net inflow of foreign direct investment in terms of % of GDP, urbanization measured by urban population (in terms of % of total population) which captures both the impact of urbanization and that of rising population (Dung B.X. Le. 2018) and value-added products from industries (VAI) in terms of share of total value added are explanatory variables. These data facilitate to predict future consequences depending on the result.

As a research Model, the following function assesses the environmental quality of Myanmar in terms of CO₂ emissions per capita.

$$CO_2 = f(GDPP, REC, FDI, UBP, VAI) \quad (1)$$

In Equation.1, CO₂ stands for carbon dioxide emission per capita measured in metric tons. GDP is per capita GDP in term of current dollars, used as a proxy of economic growth. REC stands for renewable energy consumption in terms of share of renewable energy in total final energy consumption. FDI stands for net inflow of foreign direct investment measured in percentage of GDP. UBP is urban population as % of total population, and VAI is value-added in industry (% of total GDP). All the variables are transformed into first differencing form to avoid non-stationary in the data in this model prior to empirical analysis. The empirical model is as follow.

$$CO_{2t} = \beta_0 + \beta_{1t} GDPP + \beta_{2t} REC + \beta_{3t} FDI + \beta_{4t} UBP + \beta_{5t} VAI + \varepsilon_t \quad (2)$$

where

CO ₂	=	CO ₂ emission per capita
GDPP	=	GDP per capita at current dollars
REC	=	Renewable energy consumption
FDI	=	Net inflow of Foreign Direct Investment
UBP	=	Urban population
VAI	=	Value-added products from industries

In Equation. 2, 't' represents the quantity of time, and 'ε' is the error term. Further, β₁, β₂, β₃, β₄, and β₅, are the coefficients of economic growth, renewable energy consumption, net

inflow of foreign direct investment, urban population, and value-added products from industries respectively.

Findings and Discussion

Descriptive Statistics of Selected Variables

Table 1. explores the descriptive statistics of the data prior to examining the time series data to observe the distribution and variability of the variables. It summarized the time series data over the time frame of (1990-1991 to 2020-2021) for Myanmar. Myanmar has international connection with the rest of the world due to inflow of FDI, and industries related activities and other economic related sectors. It is obvious that CO₂ emission, GDP per capita, renewable energy consumption, net inflow of foreign direct investment, urban population, and value-added products from industries in Myanmar are on the average 0.2543419, 536.1142, 79.47774, 4.463448, 28.00352 and 27.27968 respectively. It can be observed that the maximum of 0.6409 MT of CO₂ emissions per capita is documented in Myanmar. GDP per capita ranges from \$50.7829 to \$1477.453 with a mean value of \$536.1142. Regarding renewable energy use, the maximum is 91.12% and the minimum is 59.75%. In the case of Net inflow of FDI, Myanmar recorded a maximum of 11.1388% and a minimum of 2.2185%. Furthermore, it can be seen that a maximum of 31.141 % urban population is observed and a maximum of 30.01% is observed in the case of value-added products from industries. The details about the variables in terms of descriptive statistics are provided in Table1.

Table 1. Descriptive Statistics of Selected Variables

	Observation	Mean	Std.Dev.	Minimum	Maximum
CO ₂ emission per capita	31	.2543419	.1635782	.0987	0.6409
GDP per capita	31	536.1142	513.2746	50.7829	1477.453
Renewable energy consumption	31	79.47774	9.348475	59.75	91.12
Net inflow of FDI (% of GDP)	31	4.463448	2.191451	2.2185	11.1388
Urban population (% of total)	31	28.00352	1.735442	25.243	31.141
value-added in industry (% of GDP)	31	27.27968	1.331559	24.02	30.01

Unit Root Test

Prior to performing the regression analysis, it is crucial to study the stationary level in the variables. The augmented Dickey-Fuller (ADF) test for unit roots was conducted for all the time series used for the study. Table 2 shows the result of Unit Root Test.

Table 2. Unit Root Test at Level

Variables	ADF test	Test Statistics	Critical Value 5%	Decision
CO ₂	Trend and intercept	-0.516	-3.58	At level, non-stationary
GDPP	Constant	-1.397	-3.58	At level, non-stationary
REC	Trend and intercept	-0.975	-3.58	At level, non-stationary
FDI	Trend and intercept	-3.133	-3.58	At level, non-stationary
UBP	Trend and intercept	16.389	-3.58	Stationary at level
VAI	Trend and intercept	-2.301	-3.58	At level, non-stationary

Note: According to Table (2) ADF unit-root test, there is stationary at the level and it is statistically significant at the 5% level.

Table (2) displays the outcome of unit root tests using the ADF Unit Root Test at the level. In Table (2), the outcome of the ADF test demonstrates that all the data series except UBP are nonstationary at this level.

Table 3. Results of ADF Unit Root Test at stationary I (1)

Variables	ADF test	Test Statistics	Critical Value 5% or 10%	Decision
CO ₂	Trend and intercept	-4.580	-3.58	Stationary at I (1)
GDPP	Constant	-2.614	-2.611	Stationary at I (1)
REC	Trend and intercept	-4.832	-3.58	Stationary at I (1)
FDI	Trend and intercept	-7.176	-3.58	Stationary at I (1)
UBP	Trend and intercept	16.389	-3.58	Stationary at level
VAI	Trend and intercept	-6.069	-3.58	Stationary at I (1)

Note: The null hypothesis of nonstationary is achieved at the 5%, and 10% significant level.

Table (3) denotes that all the data series are stationary at first differencing. The result of the ADF test on the first difference strongly supports that all data series are stationary after the first difference at the 5% and 10% significant levels. The ADF results show that all the variable series are integrated in order of first difference.

Results of Multiple Regression with First Difference

According to the empirical model, the regression results are as follows.

$$CO_{2t} = -.1038618 -.0000752 GDPP -.015429 REC + .0021448 FDI + .0039241 UBP + .0077716 VAI$$

The regression result is presented in Table (4) by using multiple regression with first differencing to examine the impacts of the economic growth in terms of GDP per capita, renewable energy consumption, net inflow of foreign direct investment, urban population, and value added in industry on environmental quality in terms of CO₂ emission per capita. The result confirmed that explanatory variables have a significant effect on CO₂ emission. The overall model is significant Prob. (F-statistics) 0.0000. The results of Adj R-squared reflect that CO₂ emission per capita are highly dependent on GDP per capita, renewable energy consumption, net inflow of FDI, urban population, and Value added in industry respectively. The high R² reveals the good explanatory power of the model. The interrelationship in the explanatory variable is called multicollinearity (Muhammad Suhrab et al., 2022). It occurred when two or more explanatory variables formed a dependency or relation. Its occurrence affects the significance/strength of a regression. The value of VIF in the study is less than 10 which validates that there is no multicollinearity. This is because there is a strong relationship between CO₂ emission per capita and GDP per capita, renewable energy consumption, net inflow of FDI, urban population, and Value added in industry.

Table 4. Results of Multiple Regression with First difference

CO ₂	Coef.	Std. Err	t	P> t	(95% Conf. Interval)		VIF
GDPP	-.0000752**	.0000341	-2.20	0.037	-.0001456	-4.78e-06	1.23
REC	-.015429***	.0010548	-14.63	0.000	-.0176061	-.013252	1.23
FDI	.0021448*	.0012234	1.75	0.092	-.0003802	.0046699	1.08
UBP	.0039241**	.0016183	2.42	0.023	.0005841	.0072642	1.33
VAI	.0077716**	.002936	2.65	0.014	.001712	.0138312	1.19
_cons	-.1038618**	.0446411	-2.33	0.029	-.1959965	-.0117271	
F (5, 24)							60.17
Prob > F							0.0000
R-squared							0.9261
Adj R-squared							0.9107

*** 1% significant level, ** 5% significant level, * 10% significant level

Discussion

It is found that GDP per capita, urban population and value added in industry (% of GDP) significantly affected on CO₂ emission at 5% level. The renewable energy consumption significantly affected on CO₂ emission at 1% level, and net inflow of foreign direct investment significantly affected on CO₂ emission at 10% level.

The GDP per capita is found to be negative and significantly affected on CO₂ emission per capita at 5% level, indicating that a one-unit increase in GDP per capita leads to a decrease in CO₂ emission per capita of 0.0000752 unit on average when other things are held constant. The result shows that an increase in GDP per capita improves the environmental quality in Myanmar as a result of decreasing CO₂ emission per capita. One possible reason is that Myanmar has begun structural change, indicating that the share of industry decreased while the share of service sector has already increased. It may be the fact that Myanmar shifts increasingly from pollution-intensive industry to non-pollution-intensive service sectors. Another possible reason is that an increase in environmental awareness and regulations drives the economy towards reducing energy intensity. This result also confirms the finding of Soytas et al. (2007); Emine Kılavuz and İbrahim Dogan. (2021); Dinda (2004) and Atici (2012). This result goes in line with the study of Emine Kılavuz and İbrahim Dogan (2021) who stated that income and environmental degradation are inversely related, implying that when income increases, environmental degradation begins to increase at first and then declines after incomes surpass a certain level according to environmental Kuznets curve hypothesis. This result also goes in line with the work by Dinda (2004) who found that in the early stages of economic growth, the quality of environment becomes worse. However, an increase in economic growth improves the quality of environment in the latter stages. It is in line with the finding of Atici (2012) that an increase in per capita income leads to a decrease in CO₂ emission. It can be said that economic growth in Myanmar plays a crucial role in improving the environmental quality through decreasing CO₂ emission per capita.

The renewable energy consumption is negatively significant with CO₂ emission at 1% level, suggesting that a one-unit increase in renewable energy consumption tends to a decrease in CO₂ emission per capita of 0.015429 unit on average when other things are held constant. This illustrates that an improvement in renewable energy consumption has a significant impact on the improvement of environmental quality in Myanmar due to a decrease in CO₂ emission per capita. This indicates that renewable energy consumption plays a critical role in reducing the CO₂ emission per capita in Myanmar. This result goes in line with the study of Kirikkaleli and Adebayo (2020) for the global context, Kirikkaleli and Adebayo (2021) for India, Orhan et al. (2021) for India, Samia Zahra, and Ramez Abubakr Badeeb (2022) for five OECD countries. In order to reduce the CO₂ emission per capita, renewable energy consumption becomes an important mechanism for Myanmar. It goes in line with the study of Hassan Radoine, Salwa Bajja, Jerome Chenal and Zahoor Ahmed. (2022), in which renewable energy consumption produces negligible amount of CO₂ emission and lower carbon footprint, for instance, solar energy produces only 0.2 pounds of CO₂ energy per kilowatt-hour (CO₂E/kWh) compared to coal (3.6 pounds of CO₂E/kWh) or the burning of natural gas (2 pounds of CO₂E/kWh). According to the result, increased renewable energy consumption improved the environmental quality in Myanmar.

The result also found that net inflow of foreign direct investment shows a positive and significant relationship with CO₂ emission per capita at 10% level, indicating that an increase in net inflow of FDI may worsen the environmental quality due to increase in CO₂ emission per capita. The empirical result shows that a one-unit increase in net inflow of FDI leads to an increase in CO₂ emissions per capita of 0.0021448 unit on average when other things are held constant, implying that most FDI might invest in polluting sectors in Myanmar. This confirms that most of the FDI in Myanmar are attentive in extraction of natural resource sectors such as mining, oil and gas. This results in extensive adverse impact on environment (The Myanmar Centre for Responsible Businesses 2015). This reminds Myanmar to prevent from becoming a pollution haven in the future. More attention needs to be paid on Multinational companies to use more advanced environmentally friendly technologies and can disseminate cleaner technology that will be less harmful to the environment. This study goes in line with the studies of (Huiming Zhu, Lijun Duan, Yawei Guo, Keming Yub (n.a) for ASEAN-5; Merican et al. (2007) for ASEAN-5; and Dung (2018) for 24 Asia-Pacific economies. They also found that FDI increases CO₂ emissions in Philippines, Thailand, and Malaysia, and inflow of FDI may also provide to develop innovation in the production technique which may be indirectly passed on to domestic firms through backwards or forward linkages. The study suggests that Myanmar needs to pay more attention on environmental problems to improve its environmental quality, and environmental regulations need to be restricted. In such a way that, an increase in net inflow of FDI may improve environmental quality of Myanmar by reducing CO₂ emission and prevent from becoming a pollution haven in the future.

The urban population is found to be positive and affected by CO₂ emission per capita at 5% level. According to the result, a one-unit increase in urban population tends to an increase in CO₂ emission per capita of 0.0039241 unit on average, indicating that an increase in urban population positively affects the CO₂ emission per capita. One possible reason is that an increase

in urban population leads to an increase in energy consumption which causes an increase in CO₂ emission per capita. This study goes in line with the finding of Cole and Neumayer 2004 and Urszula Gierałtowska et al. (2022).

The coefficient of value-added in industry is positive and statistically significant at 5% level. This suggests that a one-unit increase in value-added in industry tends to an increase in CO₂ emission per capita of 0.0077716 unit on average when other things being constant. This is very common since manufacturing industries contribute to CO₂ emission even around the globe. The positive effect of value-added in industry on CO₂ emission in Myanmar indicates that it contributes positively to CO₂ emission. Increased CO₂ emission in value-added products from industries may depend on the use of material inputs, product design, production technology and use of energy respectively. On the other hand, expansion in manufacturing industries requires large amount of energy consumption and material inputs and thus lead to increased production and contribute to economic growth along with an increase in CO₂ emission in an economy. This result confirms with findings of Hocaoglu and Karanfil, (2011), Harun et al. (2013), Rahman and Kashem (2018), Rauf et al., (2018), Khan et al. (2021a) for the United States, Khan et al. (2021b) for thirty-eight IEA countries, and Arvind Goswami et al. (2023).

Conclusion

The study examines the effect of economic growth, renewable energy consumption, net inflow of foreign direct investment, urbanization, and value added in industry on environmental quality in terms of CO₂ emission per capita in Myanmar. The result found that GDP per capita and renewable energy consumption had significant effect on improvement in environmental quality in Myanmar whereas net inflow of foreign direct investment, urbanization and value-added products from industries are significant effect on deterioration in environmental quality in Myanmar. It is found that an increase in consumption of renewable energy would improve the environmental quality in Myanmar. As a developing country, Myanmar needs to pay more attention to inflow of FDI that focuses on non-carbon intensive industries which tend to transform their industries towards green economy in the long run. This will be the best way to fight against the environmental deterioration arising from economic growth. Myanmar, therefore, needs to enhance the consumption of renewable energy to improve environmental quality without compromising economic growth and thereby leading to green growth, green economy and achieve SDGs: SDG 1 (no poverty), SDG 2 (zero hunger), SDG 7 (affordable and clean energy), SDG 8 (decent work and economic growth), SDG 9 (industry, innovation, and infrastructure), SDG 10 (reduced inequalities), SDG 11 (sustainable cities and communities) and SDG 13 (climate action).

The result offers policy implications to improve environmental quality through reduction in CO₂ emission per capita in Myanmar. Myanmar should pay more attention to attain green economy through transforming from carbon intensive industries to non-carbon intensive industries. In the manufacturing sector, product should be created in an environmentally sensible way and in the most energy efficient manner. It should apply command and control strategies such as setting rules and regulation for a use of inputs, product design, and technological design for manufacturing industries including local and FDI to mitigate CO₂ emission per capita; as well

as incentive-based strategy such as imposing taxation on polluted industries, and/or subsidies on non-carbon intensive industries as well as to introduce clean technologies. The focus should be on innovation-driven sustainable industrialization in Myanmar. To achieve sustainability, effective environmental and energy policies need to be focused to improve environmental quality through reduction in CO₂ emission without compromising economic growth and thereby leading towards green growth, green economy and achieve SDGs.

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ANALYSING THE DEVELOPMENT LEVEL OF TOURISM IN NYAUNG SHWE TOWNSHIP

Chan Myae July¹

Abstract

Tourism is not only playing a vital role in the national economies but also results can have both positive and negative impacts on tourists' destinations and local communities. Reducing the negative impacts of tourism depends on the development of well-planned strategies that facilitate informed decision-making for sustainable and responsible tourism. This study aims to analyze the level of tourism development in Nyaung Shwe Township using the Doxy Irritation Index. According to the Doxy Irritation Index, this study concludes that residents of Nyaung Shwe Township perceive tourism activities at the "Apathy" stage. Additionally, this study also found that age, educational background, length of residence, occupation, and educational backgrounds influence on residents' perceptions.

Keywords: Doxy Irritation Index, tourism impacts, tourism development, residents

Introduction

Tourism plays a vital role in national economies, primarily contributing to sustainable development. Its significance extends beyond economic contributions to both countries and local destinations. As a growing sector, tourism fosters a unique relationship and interaction among visitors, the industry, the environment, and local communities (UNEP, 2005).

It is widely acknowledged that tourism has both positive and negative impacts on social, cultural, economic, and environmental dimensions (UNWTO, 2004). Additionally, successful tourism development relies on maintaining positive relationships among tourists, residents, governments, and private business owners in the community (Sharply, 2014). From the locals' perspective, success depends on residents believing that the benefits of tourism outweigh the drawbacks (Sharpley, 2014).

Furthermore, ensuring the sustainability of tourism activities in destinations is crucial for the long-term preservation of current tourism resources and the sustained economic contributions of tourism in these areas (An, 2014). Reducing the negative impacts of tourism on tourists' destinations depended on the development of well-planned tourism initiatives.

Nyaung Shwe Township, one of the top four destinations of Myanmar, has become popular tourist destination among international travelers due to its abundant cultural and natural heritage, genuine hospitality, and spiritual values (MOHT, 2013). This study examines the tourism development stages of Nyaung Shwe Township in light of its growing significance as a tourist destination, the broader economic implications of tourism, and the necessity to foster sustainable development that respects the local community's values and concerns. Therefore, the study aims to determine the level of tourism development in Nyaung Shwe Township using the Doxy Irritation Index, facilitating informed decision-making for planned and sustainable tourism development.

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Literature Review

Perception of Tourism Development

In numerous studies, the measurement of tourism development involves quantitative data such as the number of hotels, restaurants, and recreational businesses, along with the community's tourism-related sales rates. Additionally, the impacts resulting from development can be gauged by assessing tourist satisfaction or examining the perceptions and attitudes of the local community towards tourism (Doxey, 1975). Literature commonly intertwines the evaluation of local people's perceptions and attitudes, considering both positive and negative impacts. It frequently addresses economic, social, and environmental issues concurrently with general attitudes and perceptions towards tourism (Brougham and Butler, 1981; Liu and Var, 1986). Some studies link these factors to the development stage, while others concentrate on assessing locals' perceptions of community life.

The perception of locals towards tourism is crucial for successful tourism development, as sustainable tourism is challenging to achieve without the cooperation, support, and participation of residents (Ugur and Odmis, 2018). According to An (2016), Doxey's Theory is utilized to determine the stages of destinations in tourism development. Doxey's Theory (1975) provides insight into local residents' attitude change toward tourists and tourism development. The different stages in Doxey's Theory are primarily the consequence of tourism development in terms of its varying social, economic, and environmental impacts on the destination. The irritation phase occurs when residents become concerned about tourism due to a significant growth in the number of tourists.

Impacts of Tourism

Tourism movements have significant economic, social, and environmental impacts on both tourist-generating and tourist-receiving countries. Despite recognizing the limitations and challenges associated with tourism, many of these issues are addressable. Overall, the positive factors of tourism outweigh the negative ones, as tourism provides a foundation for long-term development. Consequently, the impact of tourism has become a focal point in tourism research, categorized into three main aspects: environmental impact, economic impact, and socio-cultural impact (An, 2016).

The positive economic impact serves as a significant driver of tourism development, directly benefiting individuals and communities (Cooper et al., 2008). Economic benefits can be categorized into personal and regional benefits, encompassing both direct and indirect advantages. Research indicates that positive economic impacts include the creation of job opportunities, alleviation of employment pressures, increased foreign exchange earnings, stimulation of other industries, and a boost to the gross domestic product within the tourism district. Additionally, tourism contributes to enhancing residents' quality of life and the availability of commodities (Davis et al., 1988). Furthermore, the tourism business offers development advantages, characterized by low costs, quick effectiveness, and high profits.

Traditionally, the socio-cultural impacts are viewed as a combined impact because of the problem of distinguishing between sociological and cultural impacts (Cooper et al., 2008). Social and cultural impacts can be summarized as follows: a change in the residents' values, the influence on neighbor and family relationships, the transformation of local norms, the influence of community attachment, a change in religious beliefs, and the influence on the traditional culture and way of life. Some of these impacts are regarded as positive, while others could be deemed negative depending on different perspectives and levels of impact (Cooper et al., 2008).

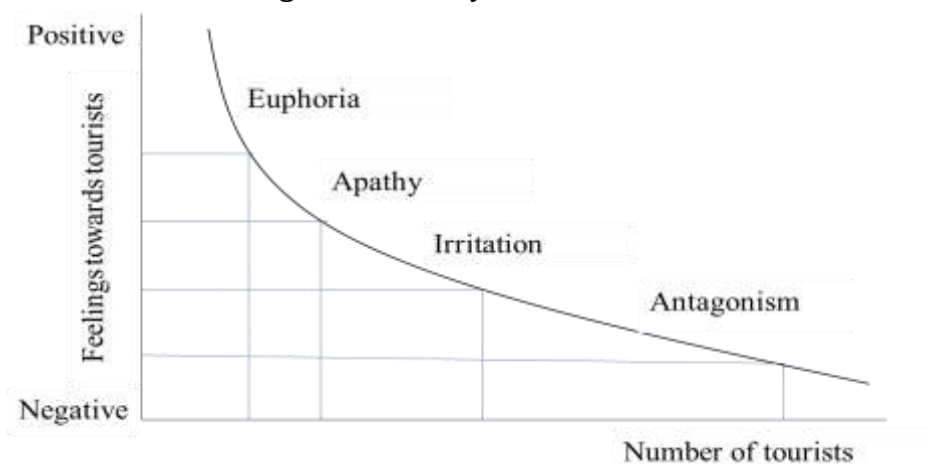
In the context of tourism growth, the landscape environment inevitably modified to meet visitors' requirements in a destination. Tourism development has been perceived positively as an opportunity to leverage development-induced change to advance community goals. Destination areas have witnessed benefits from infrastructural investments such as roads, water facilities, hospitals, and police protection (Var, Brayley, and Korzay, 1989). Initiatives such as designating more beaches as parks, developing attractions (Husbands, 1989), making more and better leisure facilities available (Rothman, 1978), and preserving and restoring works of historical architecture (Barker, 1982) have contributed to the positive transformation of these areas. Furthermore, tourism has stimulated conservation efforts, fostering an appreciation for natural beauty and historical monuments (Rothman, 1978).

Doxey's Theory

Doxey's (1975) Irridex examines the dynamic between tourists and locals, proposing that as the number of tourists increases, greater hostility from locals towards tourists would emerge over time. Doxey (1975) suggests that residents' attitudes change through interactions with visitors at different stages of tourism development.

Doxey (1975) assumed that residents' attitudes change as a result of interactions between hosts and visitors at different stages of tourism development. The author also considered that the growing number of visitors is proportional to locals' growing discontent with tourists. Figure 1 shows a relationship curve and illustrates the relationship between the number of tourists and residents' attitude change.

Figure 1: Doxey's Irridex Model



Source: (Doxey, 1975)

Doxey's Irridex theory follows four residential attitudes that range from euphoria to antagonism. Doxey Irritation Index is explained in detail in Table 1.

Table 1: The Stages of Doxey Irritation Index

Sr. No.	Stages	Features
1.	Stage I- Euphoria	The small-scale tourism movements provide that local people tend to accept tourism and tourists, experiencing extreme happiness. Local people exhibit a positive approach to tourism and tourists at this stage.
2.	Stage II- Apathy	Increasing tourism activities make marketing more important and effective. As a result, a commercial relationship between local people and tourists begins to develop. At this stage, the local people don't care about the increase in the number of tourists, because the relationship between local people and tourists is monetary sourced.
3.	Stage III- Irritation	With the increasing concentration of tourism, local people begin to feel uncomfortable and suspicious about the tourism sector.
4.	Stage IV- Antagonism	Local people begin to express their anger and perceive tourists as responsible for everything at this stage.

Source: Dogan & Unguren, 2010

The initial phase of tourism development, termed the "euphoria" stage, is characterized by a low number of tourists, a welcoming host community, and residents' curiosity about outsiders. As tourism progresses, the number of visitors increases, and the local community has more interactions with them. During this stage, locals' attitudes towards tourists become indifferent, neither liking nor disliking visitors and the interaction between hosts and visitors tends to be commercial, marking the "apathy" stage.

In the "irritation" stage, hosts' attitudes towards guests turn towards antipathy. At this point, the host community begins to feel that its daily life is disturbed by tourists, recognizing the negative effects of tourism. As tourism continues to develop, socio-cultural and environmental problems intensify. The landscape and socio-cultural atmosphere undergo significant changes, and the local community becomes increasingly hostile towards visitors, signifying the residents' shift into the final phase _ the "antagonism" stage. This model illustrates that residents' attitudes towards tourism undergo a series of changes.

Methods

Sample Size Determination

A two-stage sampling design is used in the survey. In Nyaung Shwe Township, the most popular tourist places are 12 wards and 7 village tracks. In the first stage, a sample of 2 wards and 4 village tracks is selected using simple random sampling method from the total of 12 wards

and 7 village tracks in Nyaung Shwe Township. In the second stage, sample households are proportionately chosen from the selected wards and village tracts in the first stage using a simple random sampling method. The total number of households selected from Nyaung Shwe Township is 373 households.

Data Analysis

The data were analyzed using descriptive statistics. Confirmatory Factor Analysis (CFA) was used to determine whether the observed variables accurately reflect the intended factors to be measured and Cronbach's Alpha model was employed to assess the reliability of the questionnaire. Subsequently, t-tests and One-Way Analysis of Variance (ANOVA) were used to determine percentage and frequency distribution, stages according to the Doxey Index, and the differences between participants and stages of the Doxey Irritation Index.

Findings

Factor Analysis and Reliability Test

Factor analysis results shows that all Kaiser-Meyr-Olkin (KMO) values for each dimension are greater than 0.7, and Bartlett's test of sphericity is statistically significant for all dimensions. In the principal component factor analysis, all factor loadings exceed 0.33, and they load on only one component for each dimension. This can be concluded that each dimension can be reliably measured by respective variables, and all of the variables are valid indicators.

The results of the reliability test indicate that Cronbach's alpha values for all factors, such as Euphoria, Apathy, Irritation and Antagonism are higher than 0.70. This implies that there is internal consistencies among these factors and that they are reliable.

Doxey Irritation Index

Table (2) shows the means of the responses of the participants according to the Doxey Irritation Index.

Table 2: Perception of Respondents on Doxey Irritation Index

Stages	Statements	Mean	Std. Dev
Stage I- Euphoria	We need to improve transportation for the development of tourism in Nyaung Shwe Township.	4.07	0.541
	We need to improve energy and power supplies for the development of tourism in Nyaung Shwe Township.	4.13	0.584
	We need to improve internet services for the development of tourism in Nyaung Shwe Township.	4.16	0.575
	We need to improve health care services for the development of tourism in Nyaung Shwe Township.	4.15	0.613
	I believe tourism industry should be actively encouraged in Nyaung Shwe Township.	4.08	0.530

Stages	Statements	Mean	Std. Dev
	I would like to increase the number of both domestic and foreign tourists in Nyaung Shwe Township.	4.09	0.571
	I think that tourism is important for the development of Nyaung Shwe Township.	3.98	0.624
	Overall Mean	4.09	
Stage II- Apathy	Tourism development enhances employment opportunities.	4.13	0.623
	Tourism development attracts more investments to your community.	4.04	0.634
	Incomes of the local residents significantly rise due to tourism development.	4.08	0.655
	Tourism is promising driving factor to other local industries.	3.97	0.665
	Tourism increases local business revenues for the host community.	4.04	0.646
	Tourism increases production of native handicrafts.	4.13	0.646
	Tourism development increases income and standard of living.	4.07	0.652
	Overall Mean	4.07	
Stage III- Irritation	Tourism development leads to the destruction of ancient buildings and historical sites (Such as overcrowding and graffiti on the historical sites).	2.80	1.077
	Local traditions and cultural are commercialized to the tastes of tourists.	2.85	1.070
	Tourism development leads to a decline in the quality and design of local handicrafts.	2.50	1.026
	Local people alter their behavior in attempt to copy the styles of tourists.	2.61	1.023
	Interacting with tourists leads to deteriorations of local languages.	2.42	0.976
	Tourism development increases the traffic congestion problems.	2.59	0.965
	Overall Mean	2.63	

Stages	Statements	Mean	Std. Dev
Stage IV- Antagonism	Tourism interrupts the peace and tranquility of the town.	2.69	1.002
	Tourism development brings about a rise in crime rates.	2.54	0.951
	The increasing number of tourists leads to friction between residents and visitors.	2.55	0.984
	Tourism constrains leisure activities of local residents.	2.45	0.956
	I would like to relocate from my community due to the tourism development.	2.27	1.051
	Overall Mean	2.5	

Source: Survey Data, 2022

The table shows the dimension of “Euphoria” with an average of 4.09 and the dimension of “Apathy” with an average of 4.07. Evaluating according to the Doxey Irritation Index, it can be concluded that thoughts of residents in Nyaung Shwe Township about tourism activities are the stage of “Apathy”. This means that residents still acknowledge the positive impacts on employment, investment, income, and local industries.

However, the dimensions “Irritation” (M=2.63) and “Antagonism” (M=2.5) shows that the residents in Nyaung Shwe Township express concerns about the potential negative impacts of tourism development.

Differences between Respondents’ Characteristics and Stages of the Doxey Irritation Index

Table (3) shows the t-test regarding the difference between the gender of respondents and stages of the Doxey Irritation Index.

Table 3: Results of the T-test for Gender

Stages	Gender	n	Mean	t	D.F	Sig. (2-tailed)
Euphoria	Man	183	4.1007	0.256	371	0.798
	Woman	190	4.0887			
Apathy	Man	183	4.0656	-0.068	371	0.946
	Woman	190	4.0692			
Irritation	Man	183	2.6220	-0.125	371	0.900
	Woman	190	2.6325			
Antagonism	Man	183	2.5213	0.568	371	0.571
	Woman	190	2.4758			

Source: Survey Data, 2022

The results show there is no significant difference between the gender of the respondents and their perception of tourism activities according to the Doxey Index. It can be concluded that residents' perspective on tourism activities does not change based on their gender, aligning with the Doxey Irritation Index.

Table (4) shows the results of the One-Way Analysis of Variance (ANOVA) performed to determine the difference between the age of the respondents and stages of the Doxey Irritation Index.

Table 4: One-Way Analysis of Variance (ANOVA) Results for the Age

		Sum of Squares	D.F.	Mean of Squares	F-value	Sig
Euphoria	Between group	2.108	3	0.703	3.532	0.015
	Within group	73.391	369	0.199		
	Total	75.499	372			
Apathy	Between group	2.886	3	0.962	3.789	0.011
	Within group	93.705	369	0.254		
	Total	96.591	372			
Irritation	Between group	7.059	3	2.353	3.755	0.011
	Within group	231.253	369	0.627		
	Total	238.312	372			
Antagonism	Between group	7.717	3	2.572	4.417	0.005
	Within group	214.892	369	0.582		
	Total	222.609	372			

Source: Survey Data, 2022

The results show there was a significant difference in Euphoria, Apathy, Irritation, and Antagonism scores among different age groups. This suggests that age is an importance factor influencing residents' perception of tourism activities according to the Doxey Index. The results of the bonferroni test show that there was a significant difference at the 0.05 level in the Euphoria stage between the age groups of 18-27 and 28-37. Comparing the averages, it shows that residents in the age group of 28-37 shows the highest participation in the Euphoria stage.

In the Apathy stage, there was a significant difference at the 5% significant level between the age groups of 18-28 and 28-37, and between 18-28 and 48 and above. Comparing the averages, it shows that residents in the age group of 28-37 and 48 and above shows the highest participation in the Apathy stage.

For the Irritation stage, there was a significant difference at the 5% significant level between age groups of 18-27 and 38-47. Comparing the averages, it shows that residents in the age group of 18-27 shows the highest participation in the Irritation stage.

In the Antagonism stage, there was a significant difference at the 5% significant level between age groups of 18-27 and 28-37, and between age groups of 18-27 and 38-47. Comparing the averages, it shows that residents in the age group of 18-27 shows the highest participation in the Antagonism stage.

Table (5) shows the results of ANOVA that are performed to determine the difference between educational background of the respondents and stages of the Doxey Irritation Index.

Table 5: One-Way Analysis of Variance (ANOVA) Results for Education

		Sum of Squares	df	Mean of Squares	F-value	Sig
Euphoria	Between group	1.642	2	0.821	4.114	0.017
	Within group	73.856	370	0.200		
	Total	75.499	372			
Apathy	Between group	1.819	2	0.910	3.551	0.030
	Within group	94.772	370	0.256		
	Total	96.591	372			
Irritation	Between group	1.747	2	0.873	1.366	0.356
	Within group	236.565	370	0.639		
	Total	238.312	372			
Antagonism	Between group	3.556	2	1.778	3.003	0.051
	Within group	219.053	370	0.592		
	Total	222.609	372			

Source: Survey Data, 2022

The results show there was a significant difference between the educational background and perception of respondent in the stage of Euphoria and Apathy at the 5% significant level, and in the stage of Antagonism at the 10% significant level. However, there was no significant difference between educational background of the respondents and stages of Irritation. Comparing the averages, it shows that residents with higher education level show the highest participation in the stage of Euphoria and Apathy. Additionally, residents with higher education levels also show the highest participation in the stage of Irritation and Antagonism. It is observed that they not only perceive the tourism benefit but also express concerns about the negative impacts of tourism.

Table (6) shows the results of ANOVA that are performed to determine the difference between length of residence and stages of the Doxey Irritation Index.

Table 6: One-Way Analysis of Variance (ANOVA) Results for Length of Residence

		Sum of Squares	df	Mean of Squares	F-value	Sig
Euphoria	Between group	15.200	55	0.276	1.453	0.027
	Within group	60.299	317	0.190		
	Total	75.499	372			
Apathy	Between group	17.304	55	0.315	1.258	0.118
	Within group	79.287	317	0.250		
	Total	96.591	372			
Irritation	Between group	45.524	55	0.828	1.361	0.056
	Within group	192.788	317	0.608		
	Total	238.312	372			
Antagonism	Between group	49.263	55	0.896	1.638	0.005
	Within group	173.345	317	0.547		
	Total	222.609	372			

Source: Survey Data, 2022

The results show there was no significant difference between length of residence and the perspective of tourism activities in stages of Apathy. However, there was a significant difference between length of residence and the perspective of tourism activities in stages of Apathy and Antagonism at the 5% significant level and Irritation at the 5% significant level. Comparing the average, it shows that residents residing in Nyaung Shwe Township for more than 6 years shows the highest participation in the stages of Euphoria, Irritation and Antagonism.

Table (7) shows the results of ANOVA that are performed to determine the difference between occupation and stages of the Doxey Irritation Index.

The results show there was no significant difference between occupation and the perspective of tourism activities in stages of Irritation. However, there was a significant difference between occupation and the perspective of tourism activities in stages of Euphoria at the 10% significant level, Apathy at the 5% significant level and Antagonism at the 10% significant level.

Table 7: One-Way Analysis of Variance (ANOVA) Results for Occupation

		Sum of Squares	df	Mean of Squares	F-value	Sig
Euphoria	Between group	0.715	1	0.715	3.548	0.060
	Within group	74.783	371	0.202		
	Total	75.499	372			
Apathy	Between group	2.396	1	2.396	9.439	0.002
	Within group	94.195	371	0.254		
	Total	96.591	372			
Irritation	Between group	0.785	1	0.785	1.225	0.269
	Within group	237.528	371	0.640		
	Total	238.312	372			
Antagonism	Between group	1.859	1	1.859	3.124	0.078
	Within group	220.750	371	0.595		
	Total	222.609	372			

Source: Survey Data, 2022

Comparing the average, it is evident that residents working in tourism-related jobs shows the highest participation in the stages of Euphoria and Apathy. On the other hand, residents employed in the agriculture sector, government staff, and others non-tourism-related jobs show the highest participation in the stages of Antagonism.

Conclusion

Residents in Nyaung Shwe Township appear to hold a mixed perception of tourism activities. While there is a general acknowledgment of positive impacts, particularly reflected in the "Apathy" stage, concerns and worries about negative consequences are evident in the lower scores for "Irritation" and "Antagonism." According to the Doxey Irritation Index, it can be concluded that the thoughts of residents in Nyaung Shwe Township about tourism activities are at the stage of "Apathy". This means that residents still acknowledge the positive impacts on employment, investment, income, and local industries.

Therefore, this study highlights the need for a balanced approach to tourism development that addresses both positive and negative aspects, taking into account the concerns and expectations of the local community. Further engagement and dialogue between residents and stakeholders could contribute to a more sustainable and community-friendly tourism development in the region.

The study provides insights into the factors influencing residents' perspectives on tourism activities. While gender does not seem to play a significant role, age, educational background, length of residence, and occupation influence residents' perceptions. These findings highlight the need for strategic approaches in community engagement and tourism planning, considering the diverse demographic factors that shape residents' perspectives.

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THE EFFECT OF CREDIT ACCESSIBILITY ON FARM PERFORMANCE OF FARMERS IN PAUK MYINE VILLAGE, MYITTHA TOWNSHIP*

Htun Min Aung¹

Abstract

The aim of the study is to analyze the determinants of the effect of credit accessibility on farm performance of farmers in Pauk Myine Village, Myittha Township. Simple Random sampling method was used to collect data from the farmers of Pauk Myiune Viilage. Primary data was collected from 223 farmers who borrowed from financial institutions. And the data were analyzed through descriptive statistics, reliability analysis and multiple regression analysis. The Trade-off Theory, Pecking Order Theory and Resource-Based Theory were used to obtain the objectives of the study. The result indicates that affordable interest rate, collateral requirement and availability of lending institutions have a significant positive effect on farm performance. Appropriate loan tenure and loan sufficiency have negative relationship on farm performance. The multiple regression analysis shows that affordable interest rate, collateral requirement and availability of lending institutions are significantly associated with farm performance. But Appropriate loan tenure and loan sufficiency are not significantly associated with farm performance. According to this study, if the Myanmar Agricultural Development Bank, Co-operative Banks and Microfinance Institutions in Myanmar should provide loans to farmers at a low interest rate, increase the loan repayment period. If they can lend adequate amount of money, the farming costs for farmers will be sufficient and the role of agriculture will be improved.

Key words: Credit accessibility, Appropriate loan tenure, Affordable interest rates, Collateral requirement, Availability of Lending Institutions

Introduction

Agriculture is seen as an economic activity, and finance is the fundamental component of all economic activities. This issue is highly serious, particularly in economies where agriculture serves as a means of subsistence. To assist people who cannot afford to fully employ the current technologies, the government offers loan. Any economy's financial system depends on its efficient operation, which is essential for both quick and equitable economic growth. A healthy financial system must effectively mediate between savers and borrowers, manage risks responsibly, offer a wide range of financial services to businesses, farms, and households, effectively mobilize savings, identify and lend for sound investments, be resilient in the face of shocks, and guarantee that everyone has access to finance. Financial institutions are crucial in establishing a connection between surplus and deficit households through the financial intermediation process. It is anticipated that financial institutions would effectively close the knowledge gap about the sources of surplus and deficit households. Financial services accessibility has been demonstrated to promote economies' economic growth. Economic growth has been observed to be stifled in economies where financial institutions restrict access to credit.

Credit has a significant impact on development. It provides farmers and business owners with funds to make new investments or embrace cutting-edge technology. By supplying working capital, it facilitates consumption and alleviates poverty. There are active formal and informal lenders. These are only a few of the appealing qualities of informal credit, along with lending without collateral, close proximity, prompt delivery, and flexibility in loan agreements.

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However, credit markets in developing countries, particularly those serving rural people, don't always operate in a competitive manner.

Rationale of the Study

Myanmar's economic condition depends upon "Agriculture" and on farmers as well. The farmers are also facing with environmental affect such as soil destruction, climate changes, etc. The success of famers is very important for the development of nation. Because majority of farmers are continuing the traditional system of farming, scientific system of farming needs huge investment of capital in Myanmar. Most of the farmers are poor with small landholdings and their economic resources are quite limited. For adopting scientific system of farming, it is necessary that disbursement of credit in rural areas should be made available in huge amount of money. Although, agricultural sector is deemed to get its due share of institutional credit for a long time.

Agricultural credit plays an important role in agricultural development. In fact, facilitating access to credit can increase the amount of productive investment. An important resource needed for agriculture is access to capital. Credits can be invested in a household's future prosperity by purchasing assets such as farm machinery and agricultural inputs such as fertilizer and farm improvements. Credit plays an important role in removing financial constraints for farmers wishing to invest in agricultural activities, increase productivity and improve technology. In general, access to credit is important for improving the quality and quantity of agricultural products in order to increase farmers' incomes and prevent rural migration. Once credit is allocated, some borrowers cannot get the amount of credit they want at the prevailing interest rate or get more credit by offering to pay a higher interest rate. Ghorbani (1997) found that due to high transaction costs and interest rates, the efficiency of formal credit payments to farmers is low.

Problem Statement of the Study

Rapid extension of financial institutions in developing countries around the world, financial institutions need to collect update information and analyze the obtained information by surveying data for credit financing. And, Most of the Pauk Myine Village's households are farmers in particular, who rely on credit accessibility as a means of agricultural framing. Most farmers require financial institution's loans thus financial institutions need to lend more loans to farmers. In the past, there were no thesis, research papers, or journals related to farmer's credit accessibility in Myittha Township. Once here has been lack of evidence in the past. Now, a paper has been compiled with the aim of finding out how the farmers' access to loans in Myitta Township's Pauk Myine Village has been studied.

Transaction costs for both lenders and borrowers can affect the equilibrium of credit markets. Since lenders are for-profit, they lend to the most creditworthy borrowers. More commonly, these borrowers can offer collateral or other substitutes acceptable to the lender, such as retained earnings or savings characteristics of the borrower households (Lapar, 1988; Nagarajan, 1992; Esguerra, 1993). On the other hand, the borrower also incurs transaction costs in the credit search process. If these costs become too high for them, they are more likely to stop borrowing (Abiad and Graham, 1988).

Objectives of the Study

The main objective of the study is to analyze the effect of credit accessibility on farm performance of farmers in Pauk Myine Village, Myittha Township.

The specific objectives are:

- (1) To examine the effect of appropriate loan tenure on farm performance,
- (2) To analyze the effect of affordable interest rates on farm performance,
- (3) To analyze the effect of collateral requirement on farm performance,
- (4) To examine the effect of loan sufficiency on farm performance and
- (5) To examine the effect of availability of lending institutions on farm performance.

Methods of Study

This study is based on both primary data and secondary data. The primary data are collected from households in Pauk Myine Village with structured questionnaire by using five-point Likert scale. A sample of 223 respondents is randomly selected from households to cover the population of 500 farmers in Pauk Myine Village, Myittha Township by using Yamane formula. Simple random sampling method is employed to collect the data. Thus; data obtained is analyzed with descriptive analysis, reliability test and the multiple regression analysis. The secondary data were collected from research journals, previous theses paper, and internet website and text books. The study submitted 190 by respondents.

Scope and Limitations of the Study

This study analyzed the effect of credit accessibility on farm performance of farmers. Target group is made up of farmers who live in Pauk Myine Village, Myittha Township which area was experiencing the need of agricultural financing. This village's mainly farm product is onion. Most of the people from this village are farmers. This study used primary data. The secondary data for this study international journals, books, and articles from online are used in this study.

Literature Review

Credit Accessibility

Credit can be defined as transferring a control of money to other person who promised to pay it in the future according to defined repayment terms (Ellis 1992). When the money is obtained through borrowing and the borrower has the power and ability to borrow and pay in the future; this is also defined as a credit (Beckman & Forster 1969). Credit is essential for empowering farms to acquire command required in utilizing the working capital, utilization of products as well as the fixed capital. Credit usually presumes a crucial part in increasing the profits gained from agricultural endeavors (Ibrahim, & Bauer, 2013). Rural development and farm productivity can be influenced by several factors; one is access to credit. Because credit-constrained farmers tend to employ less inputs in their production activities than credit-unconstrained ones, financial accessibility may have an impact on agricultural output (Feder et al., 1989; Petrick, 2004).

According to Freeman et al. (1998), farmers' access to credit is also very crucial in the sense that it can facilitate the levels of input use closer to their potential levels when capital is not a constraint, consequently leading to higher levels of output per farm and productivity, given fixed resources such as land. This implies that the marginal contribution of credit brings input levels closer to the optimal levels, thereby increasing output and productivity (Feder et al., 1990). Additionally, access to credit is also considered to be an important tool for smoothing consumption and promoting production especially for poor households (Swain et al., 2008; Conning & Udry, 2005; Armendariz & Morduch, 2005; Robinson, 2001; Zeller et al., 1997). This means that access to credit can significantly increase the ability of households with no or few

savings to meet their financial needs for agricultural inputs. especially those that are highly necessary for weed, pest, and disease.

Appropriate Loan Tenure

Credit terms refer to standards or negotiated terms (offered by a seller to a buyer) that control the monthly and total credit amount, maximum time allowed for repayment, discount for cash or early payment, and the amount or rate of late payment penalty (Kakuru, 2015). According to Okech et al. (2012), credit terms include factors such as interest rate, collateral and loan repayment periods. Collateral required by commercial banks in developing countries has been a contentious issue in SME financing. However, real-estate collateral provides an incentive and a justification to lend and repay, as well as a means to offset losses in case of default (Davydenko et al., 2017).

Affordable Interest Rate

Interest Rate can be said to mean the reward from the borrower to the creditor, due to the fact that the borrower stayed with creditors money for a certain time (Bosa, 2009). An investigation conducted by Ansari *et al.*, (2011) in Khorasan-Razavi Province of Iran found that advanced funds interest rate was an essential factor that influences agricultural credit reimbursements. The study likewise noted that cultivating experiences in business together with the aggregate application of cost happen to be important elements that affect the execution of credit. The investigative proposals illustrated that modalities meant to decrease the cost of financing and other connected credit expenses should be embraced so as to develop the agriculture credit demand. The researchers asserted that, value-based bank costs branded with insurance can be reduced through outsiders' externalization which applies in substitute guarantee. The research further suggested that loan repayments schedules which matched agribusiness cash flows could promote farm credit demand. Interest rates are high as it is an instrument used to curb inflation rates in different countries (World Bank, 2011). Many country studies show that rural women farming entrepreneurs are more likely to face higher interest rates, be required to collateralize a higher share of the loan, and have shorter-term loans (IFC, 2011).

Collateral Requirement

Farmers have faced many problems such as complicated procedures, undue delay in disbursement, illegal requests from officials, but the main problem is the collateral held by the tenants of the land and sharers were excluded from the lending programs. The security or collateral requirement for accessing credit restricts majority of the farmers from borrowing. Berger and Udell (1998) found out that lending by financial institutions is tied to the capacity to offer secured collateral. Other factors held constant, firms with tangible assets can access more loans compared to those with intangible assets. The lack of enough tangible assets that can be collateralized compared to larger firms constrain them their ability to access loans.

Loan Sufficiency

Capital is an important factor for the production of any commodity to increase production, for best agricultural production it is necessary to use of inputs on time as crops required, poor farmers mostly do not have capital to fulfill the crop inputs requirement on time, so the agricultural financing is very good source to help the farmers for fulfilling crop requirements on time, but many farmers do get help from that source, it is due to many problems in getting agricultural credit such as Documentation and lengthy process of Institutional sources of credit, high interest rate, not easy to access of finance. For sustainable agricultural and rural

development government and other organization should take steps for help of farmers such as easily access to agricultural financing with less interest rate. Agricultural financing helps farmers to enhance the agricultural productivity by timely use of inputs. Farmer's friendly agricultural credit services should be provided to improve agricultural and rural development (Khin Ma Ma Nyein, 2018).

Availability of Lending Institutions

Otieno, Muganda and Wekesa (2015) noted that financial institutions in many developing countries prefer to lend to governments rather than to private sector borrowers because of the lower associated risks and higher returns. Such indifference towards SMEs has left most private sector borrowers uninterested and increased the cost of capital for them (Eton et al., 2017). Access to bank credit and its availability is one of the important factors to consider during business development. Many Polish companies use bank loans as the main source of external funding. Affordability varies depending on many factors related to the company and operating bank. One of the characteristics that can be considered to distinguish the terms of access to credit is the size of the firm.

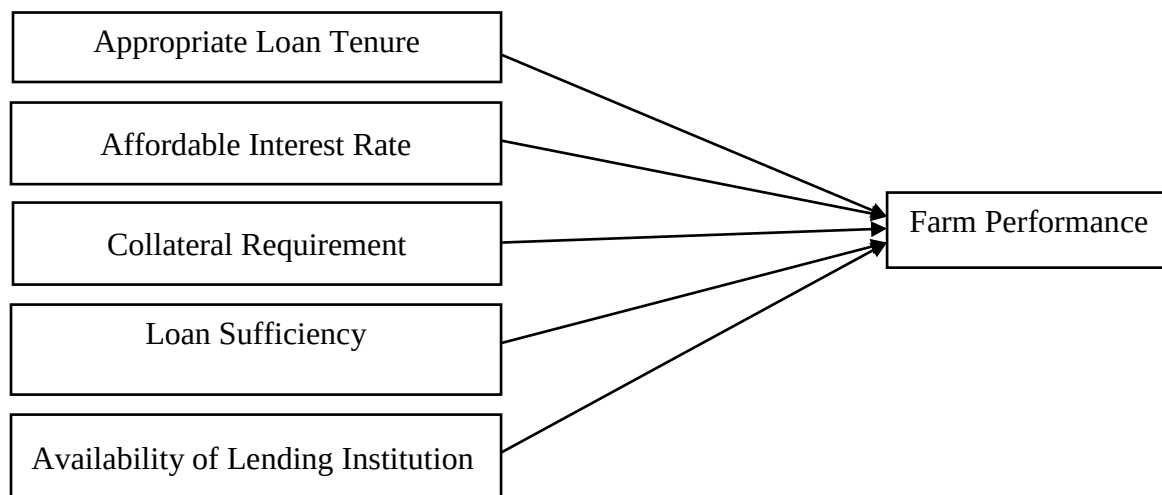
Farm Performance

Gay and Airasian (2003) noted that a causal research design is used to determine the cause-and-effect relationship between one variable and another.; in this case, the cause-and-effect relationship between agricultural loans and performance of small holder sugar cane farmers in Kakamega county, Kenya. Causal research design is consistent with the study's objective which is to determine the effect of agricultural loan accessibility, agricultural loan disbursement and interest on the performance of small holder sugar cane performance with respect to tonnage.

Performance is defined by Calice et al. (2012) as a function of an organization's capacity to achieve its goals and objectives by making efficient and effective use of the resources at hand. Financial ratios like profitability ratios, liquidity ratios, market ratios, and debt ratios are used in finance and accounting literature to evaluate SMEs' performance; however, these are merely the final performance indicators because they are actually influenced by how well firms perform in terms of their efficiency and productivity, as well as how inputs and product prices change (Amornkitvikai & Harvie, 2016).

Conceptual Framework of the Study

The main aim of the study is to analyze the effect of credit accessibility on farm performance of farmers in Pauk Myine Village, Myittha Township. The cause and impact relationship between credit accessibility and farm performance of farmers in Pauk Myine Village, Myittha Township is consistent with the study's objective which is to determine the impact of agricultural loan accessibility, agricultural loan disbursement, sufficient loan amount and agricultural loan interest on the performance of farmer. The conceptual framework of the study is described in figure 1.

Independent Variables Dependent Variable**Credit Accessibility****Figure (1)** Conceptual Framework of the Study**Findings****Demographic Factors of Respondents**

The profiles of selected 190 farmers of Pauk Myine Village are presented in this section. Regarding demographic profile; respondents' gender, age, marital status, education, agricultural land acres and income from farming of farmers are presented in the following sub-sections.

Table (1) Demographic Factors of Respondents

Gender	Frequency	Percentage (%)
Male	139	73.2
Female	51	26.8
Total	190	100.0
Age	Frequency	Percentage (%)
20-29 years	3	2
30-39 years	28	15
40-49 years	61	32
50-59 years	52	27
Above 60 years	46	24
Total	190	100
Marital Status	Frequency	Percentage (%)
Married	152	80.0
Single	38	20.0
Total	190	100.0
Education Level	Frequency	Percentage (%)
Primary Level	130	68.4

Gender	Frequency	Percentage (%)
Middle Level	42	22.1
High School	11	5.8
Graduate Level	6	3.2
Only reading and writing	0.1	0.5
Total	190	100.0
Family Member	Frequency	Percentage (%)
Below 3 people	15	7.9
Between 3-5 people	139	73.2
Between 6-8 people	35	18.4
Above 8 people	1	0.5
Total	190	100.0
Income from Framing	Frequency	Percentage (%)
Under 2,00,000 kyats	1	0.5
Between 2,00,000-5,00,000 kyats	1	0.5
Between 5,00,000-8,00,000 kyats	1	0.5
8,00,000 kyats and above	187	98.5
Total	190	100.0

Source: Survey Data, 2023

The gender of respondents is divided into two categories. There are 500 farmers in Pauk Myine Village in the survey. As shown in Table (1), most of the respondents are male and it represents 73.2% of the total respondents. The rest are female respondents which represents 26.8% of all respondents. Therefore, the number of male respondents is more than that of female respondents in this study. Respondents' age is divided into 5 ranges: 20-29 years, 30-39 years, 40-49 years, 50-59 years and above 60 years. Age of Respondents are presented in Table (1). The study shows that majority of the respondents fall into the age group of 40-49 years (32%), followed by the age group of 50-59 years (27%), above 60 years (24%) and 30-39 years (15%). Meanwhile, there is only 2% of the respondents fall into the age group of 20-29 years old. As a result, out of 190 respondents, the age range of the middle level.

The marital status of respondents was divided into two ranges, range 1 (married) and range 2 (single). As shown in the above Table (1), out of 190 respondents, married respondents (80%) are more than single respondents (20%). According to the result, married respondents get more credit access than single respondent in this sample. Education level of respondents is divided into five groups: primary level, middle level, high school level, and graduate level and literature only reading and writing level. Respondents' educational level is shown in the following Table (1), the responded farmers with the primary level of education is (68.4%). In table, the responded farmers with primary level of education are more interested in farming and agriculture. Only reading and writing level is the least (0.5%). Number of family members of respondents was divided into four ranges, range 1 (below 3 people), range 2 (between 3-5 people), range 3 (between 6-8) and range 4 (above 8 people). As a result, out of 190 respondents, 73.2% respondents have the family members of between 3-5 people in Pauk Myine Village, follows 6-8 people (18.4%), below 3 people (7.9 %), above 8 people (0.5%) respectively.

Income from farming is divided into four group: under 2,00,000 kyats, between 2,00,000 kyats and 5,00,000 kyats, between 5,00,000 kyats and 8,00,000 kyats and 8,00,000 kyats and above. As a result of Table (1), 98.5 % of respondents got income level 8,00,000 kyats and above is the most, second most 0.5% of respondent's income from their farm is between 5,00,000-8,00,000 kyats, 0.5% of respondents got income from their farm between 2,00,000-5,00,000 kyats. And then, 0.5% were under 2,00,000 kyats.

Reliability of the Effect of Credit Accessibility on Farm Performance of Farmers in Pauk Myine Village, Myittha Township

Cronbach's alpha measures are carried out to test the reliability of questionnaires' items. After conducting the survey, reliability test for the factors of appropriate loan tenure, affordable interest rates, collateral requirement, loan sufficiency, availability of lending institutions and farm performance of farmers in Pauk Myine Village, Myittah Township. In this study, Cronbach's Alpha reliability test method is used to measure the internal consistency of variables and an accurate representation of the data.

Table (2) Reliability of Variables

No.	Factors	No. of Items	Cronbach's Alpha	Mean	Standard Deviation
1.	Appropriate loan tenor	5	0.627	3.73	0.592
2.	Affordable interest rate	5	0.625	4.20	0.414
3.	Collateral requirement	5	0.607	3.96	0.453
4.	Loan sufficiency	7	0.745	4.03	0.433
5.	Availability of lending institution	6	0.699	3.96	0.354
6.	Farm improvement	8	0.731	3.98	0.411

Source: Survey Data, 2023

Table (2) summarizes the results of reliability test for questionnaire items of appropriate loan tenure, affordable interest rate, collateral requirement, loan sufficiency, availability of lending institutions and farm improvement. The result indicates the consistency and reliability of variables in the analysis. According to Table (2), the reliability statistic for loan sufficiency is 0.745. The reliability range has between 0.70 and 0.80. Therefore, reliability is good reliability. The reliability statistic for farm improvement is 0.731. The reliability range has between 0.70 and 0.80. Therefore, reliability is good reliability. The reliability statistic for availability of lending institutions, appropriate loan tenure, affordable interest rate and collateral requirement is 0.699, 0.627, 0.625, 0.607 respectively. The reliability ranges have between 0.6 and 0.7. So, the reliability is fair reliability. These statistics tell that all variables are having reliability and consistency.

Analysis of Effect of Credit Accessibility on Farm Performance

This section presents the results of effect of credit accessibility on farm performance in Table (3). In multiple linear regression models, appropriate loan tenure, affordable interest rates, collateral requirement, loan sufficiency and availability of lending institutions are used as independent variables and farm performance is used as dependent variable. R Square, F value,

Unstandardized Beta Coefficients, t - value, and the significance value were measured and presented in the Tables in brief.

Table (3) The Effect of Credit Accessibility on Farm Performance

Independent Variables	Unstandardized Coefficients		Standardize Coefficient	t	Sig.	VIF
	B	Std. Error	Beta			
(Constant)	0.754	0.339		2.221	0.028	
Appropriate Loan Tenure	-0.035	0.046	-0.050	-0.759	0.449	1.313
Affordable Interest Rate	0.153**	0.064	0.154**	2.400	0.017	1.224
Collateral Requirement	0.399***	0.063	0.441***	6.341	0.000	1.434
Loan Sufficiency	0.077	0.066	0.081	1.159	0.248	1.443
Availability of Lending Institutions	0.209***	0.079	0.180***	2.651	0.009	1.368
R	0.616					
R ²	0.380					
Adjusted R-squared	0.363					
F	22.529***					

Source: SPSS Outputs

Statistical significance indicate*** at 1% level, ** at 5% level

According to the Table (3), regression analysis is conducted with farm performance and credit accessibility such as appropriate loan tenure, affordable interest rate, collateral requirement, loan sufficiency and availability of lending Institutions as the independent variables. The adjusted R-squared value was 0.363, meaning that the predictors (independent variables) exhibited a change of 36.3%. Results show that F value is 22.529 that the predictors or independent variables namely appropriate loan tenure, affordable interest rate, collateral requirement, loan sufficiency and availability of lending institutions combine together to predict farm performance in Pauk Myine Village, Myittha Township. The value of significant is 0.000 $p < 0.001$, showing that all predictor variables combine to predict farm performance very well. The relationship between the independent variables and the dependent variable is significant at the 1% and 5% levels. The value of regression coefficient between appropriate loan tenure and farm performance is -0.050 ($t = -0.759$, $p = 0.449$). This shows there is negative relationship between appropriate loan tenure and farm performance but it is not significant. It could be explained that if appropriate loan tenure decrease by one unit, farm performance will decrease by -0.050 units. The value of regression coefficient between affordable interest rate and farm performance is 0.154 ($t = 2.400$, $p = 0.017$). This shows there is positive relationship between affordable interest rate and farm performance at 5% level significant. It could be explained that if affordable interest rate increase by one unit, farm performance will increase by 0.154 units.

The value of regression coefficient between collateral requirement and farm performance is 0.441 ($t = 6.341$, $p = 0.000$). This shows there is positive relationship between collateral requirement and farm performance at 1% level significant. It could be explained that if collateral requirement increases by one unit, farm performance will increase by 0.441 units. The value of regression coefficient between loan sufficiency and farm performance is 0.081 ($t = 1.159$, $p = 0.248$). This shows there is positive relationship between loan sufficiency and farm performance but it is not significant. The value of regression coefficient between availability of lending institutions and farm performance is 0.180 ($t = 2.651$, $p = 0.009$). This shows there is positive relationship between availability of lending institutions and farm performance at 1% level significant. It could be explained that if lending institutions increases by one unit, farm performance will increase by 0.180 units. Besides that, collateral requirement considers as the main predictor that has the strongest influence on the farm performance where the standardized beta is equal to 0.441, follow by availability of lending institutions (0.180), and affordable interest rates (0.154).

Discussion

The study has examined the effect of credit accessibility on farm performance of farmers in Pauk Myine Village, Myittha Township. The main objective of the study is to analyze the relationship between independent variables which are appropriate loan tenure, affordable interest rate, collateral requirement, loan sufficiency, availability of lending institutions and dependent variable which is farm improvement of farmers and to examine the influencing factors of farmer's credit accessibility in Pauk Myine Village. In this study, the data is collected from 190 farmers in Pauk Myine Village. According to the results, multiple regression is used to the credit accessibility on farm performance and five independent variables. The adjusted R square of the independent variables states that 36.3% of the total variance in farm performance is explained by independent variables. Result shows that F value is 22.529 that is significant at $p = 0.000$ (<0.01). According to the results, affordable interest rates, availability of lending institutions and collateral requirement are positively associated with farm performance. Also result, affordable interest rates, availability of lending institutions and collateral requirement among independent variables are the most influential independent variables on farm performance.

Collateral requirement is the most influencing factor among loan sufficiency, affordable interest rates, appropriate loan tenure and availability of lending institutions on farm performance. The sources of finance are needed to collateral but farmers are able to pay it. The collateral required by the financial institutions is affordable hence it is easy to acquire credit. So, collateral requirements are also important in obtaining loans and contribute to the development of the role of agriculture. Now, microfinance institutions look at the borrower's home assets, take pictures and get evidence as a collateral requirement.

The second influence factor is the availability of lending institutions. Presenting many financial institutions can improve farming sector and many financial institutions have tailor made product that suit farmer needs. All financial institutions are effective to farmers and then the farmers have good relationship with financial institutions. The fact that there are many organizations that provide loans to farmers in Pauk Myine Village, Myittha Township, can give farmers a lot of satisfaction. In addition, since many loan organizations lend loans, the farming role of farmers can be greatly developed.

Loan sufficiency does not influence on farm performance. The reason that the availability of sufficient credit does not affect farm activities is due to the amount of loans provided by the government and private institutions is not available to farmers in terms of the amount of credit they want. According to the studies, the farmers are not satisfied with the lending rate of only 1,50,000 kyats per acre depending on the land ownership of the farmer.

Interest rates do influence farm performance. According to these results, interest rate fluctuations may affect the role of agricultural development, because even if interest rates are low, if farmers can get enough credit and spend enough money on agricultural inputs, farmers can get good crop yield and good prices, get more profit, and improve the life of the farmer.

Appropriate loan tenure does not influence farm performance. For most farmers, the loan origination and loan repayment times are short. The times when financial institutions provide loans may or may not coincide with the times when farmers need farm capital. Farmers are more willing to borrow from loan services with a longer loan period. It is a habit of farmers to wait for the time after harvesting the crops to repay the loan, and due to the destruction of the weather and the destruction of pathogens, the yield decreases, there are many losses and little profit, and they are also faced with not being able to repay the loan.

Conclusion

The study analyzed the effect of credit accessibility on farm performance of farmers in Pauk Myine Village, Myittha Township. The multiple regression analysis shows that collateral requirement, availability of lending institutions and affordable interest rate are significantly associated with the credit accessibility on farm performance. But loan sufficiency and appropriate loan tenure are not significantly associated with the credit accessibility on farm performance. This means that loan sufficiency and appropriate loan tenure need further investigation. According to these studies, if the Myanmar Agricultural Development Bank, Co-operative Banks and Microfinance Institutions in Myanmar provide loans to farmers at a low interest rate, increase the loan repayment period, and if they can lend a large amount of money, the farming costs for the farmers will be sufficient and the role of agriculture will be improved.

Managerial Implications

According to the answers from the questionnaires of this research paper and the researcher's observation, this study analyzes five factors (appropriate loan tenure, affordable interest rates, collateral requirement, loan sufficiency and availability of lending institutions). The multiple regression analysis results show that collateral requirement, availability of lending institutions and affordable interest rates have a significant positive impact on farm performance, so that they can be thought as the key influencing factors of credit accessibility on farm performance.

Myanmar government-owned credit service organizations and private small credit organizations should encourage rural farmers to improve the role of Myanmar's agriculture by personally visiting and giving lectures on ways to obtain loans and loan repayment procedures. In addition, through media such as television and radio, broadcasting informational lectures to understand how to distribute loans will also help to improve Myanmar's agriculture. At present, MADB, Co-operative Bank and Microfinance Finance Institutions only provide short-term loans to farmers, so farmers continue to take loans by accepting short loan repayment terms because they need the farmers' expenses. Most farmers take loans from MADB because MDB's interest rates are lower than other institutions. Although MADB has a short-term loan and low interest

rate, it lends only once a year and lends seasonally according to the type of investment. Generally, loans are given only once a year for rainfed rice. Knowing that this is not enough for farmers, MADB should extend the term of the loan. The result information from the paper provide to credit service organization.

Literature Implications

In this research study, based on the findings regarding farmers' access to credit, will continue to strengthen appropriate strategies to improve the weaknesses. The research papers on getting these loans are like a road map for researchers. In relation to farmers' access to credit, previous researchers have studied how access to credit is related to agricultural activities. Therefore, this research focused on these prevailing research gaps in this field. And others researches can apply this research study as a reference for the further research on farm performance of farmers of credit accessibility. In this paper, a comparative analysis was made based on the observational literature of previous researchers, including consideration the data corresponding to the countries and ethnic groups. In preparation of this research, there were limitation of time and some of difficulties. Therefore, the scope of data is limited for collecting the farmers in Pauk Myine Village, Myittha Township. Selecting sample is very important and selected samples can represent the whole population in reality. This study only focused on credit accessibility and effect of farm performance in Pauk Myine Village. Thus, the result for the study may not reflect the overall situation in Myanmar. It is needed to analyze affordable interest rates and appropriate loan tenure for further investigation to know different results with this study. Different research methods may produce the various results in the research study. Financial institutions should inform farmers in advance that collateral is a condition included in the loan agreement.

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THE CURRENT STATUS OF TALENT MANAGEMENT PRACTICES IN MYANMAR: A CASE STUDY IN PRIVATE BANKS

Dr. Htay Htay¹

Abstract

The objectives of this study are to explore the current status of TM practices in HR strategy at private banks in Myanmar and identify the relationship that currently exists between talent management, job satisfaction, and employee retention. With data from primary and secondary sources, the study used a quantitative, explanatory research approach. From the ten private banks that were examined, 394 employees who are working at operational, supervisory, and management levels and 10 HR managers provided primary data for this study. To select the respondents for the study, a simple random sampling method was applied. Talent attraction, talent development, retaining talent, and career management were the main focuses of this study on talent management practices. Analysis of the gathered data was done using correlation analysis and descriptive statistics. The results of the study show that the surveyed private banks are implementing talent management (TM) practices to a moderate degree. The current status of talent management practices could not strongly guarantee to attract, develop, and retain their employees in the long term. Employee retention and satisfaction levels are currently not being met by the talent management practices offered by banks. They should find out how to integrate TM procedures into their current HRM practices in order to update and modify them. In the current business environment, they should be proactive in managing their workforce through talent management. To ensure that talented individuals are hired, developed, and retained, it is recommended that the surveyed banks should implement policies that support talent management strategies.

Key Words: Talent management, job satisfaction, and employee retention

Introduction

The digital revolution and the emergence of the knowledge economy have put pressure on all organizations to outperform their previous states. It is largely dependent on their efficient talent and human resource management that they surpass their rivals in terms of benefits and profitability. Given that human capital is now more important to businesses competing in this century than land, capital, and other tangible assets for adaptation to global competition and to maximize the benefits of the current technological boom, talent management is one of the key management tools for 21st century human assets management (Cappelli, 2008). Several resources, such as cash, labor, and machinery, can be employed to boost a business's efficacy. As per Kehinde (2011), the people are the most crucial resource among all of them. According to Gardner (2002), as a result, companies are vying with one another for the talent that they can't afford to lose once they start operating and expanding.

According to the findings of numerous research, management now ranks talent management as a top priority. These dynamic global, demographic, economic, social, cultural, and corporate trends—whose extent and speed are producing a large skill gap—are largely comparable, which is why they are so important. The increasing disparity makes it more challenging for businesses to find and develop the talent they need to succeed using conventional HRM techniques (Areiqat et al., 2010). Since human resource management is essential to creating and preserving competitive advantage, modern organizations must adopt a new strategy for handling these responsibilities. According to Kazarzyna (2016), the strategic goal of human resource management is now to acquire and retain competent employment.

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In this competitive age, modern organizations are far more concerned with the talents that drive corporate success. Talent management is a priority for organizations as they seek out, nurture, and keep exceptional individuals. Organizational human resources initiatives have made talent and talent management a top priority. Although it falls under the umbrella of human resource management (HRM), talent management is a separate function of HRM. Employers are attracted, chosen, trained, and evaluated by human resource management (HRM). Hiring the proper people and managing them well through deliberate rules and processes is the goal of human resource management (HRM). The goal of talent management is to engage individuals who possess exceptional talent, specialization, or skill in the company with the ultimate goal of long-term retention. Thus, a subset of human resource development is talent management. When it becomes essential for HR departments to lower turnover rates, retain employees, and motivate them to reach greater objectives, talent management teams come into play for HR departments.

As a result, talent management is now seen as a tool to improve performance and foster individual growth inside an organization. As such, it faces significant difficulties in attracting and retaining skilled workers (Iles et al., 2010). Employers are starting to recognize the worth of the individuals that comprise their workforce, which makes employee retention a serious concern in today's competitive business climate (Kibui et al., 2014). According to Porter & Michael (2001) organizations are fighting more and more to attract the greatest talent. Michael & Handfield-Jones (2011) emphasize that the significance of having skilled personnel cannot be overstated, since the top software developer is able to produce ten times as many useful lines of code as the typical developer. Additionally, when new employees quit after a short time, the cost of hiring new employees and labor turnover per employee increase significantly (CIPD, 2007).

For management to keep people in the company, Asrar et al., (2018) explained that they need to consider how to improve HRM procedures while maintaining the highest standards of quality. Incentives, professional growth possibilities, a positive work environment, and job-specific training are a few more benefits that the company can consider offering to enhance employee retention. Talented workers are essential to an organization's ability to grow and maintain operations over the long term. This necessitates the creation of talent management initiatives to aid in the hiring and retention of skilled employees. According to Schneider et al. (2009), talent management refers to human capital systems that use talent to maximize both individual and group employee capabilities.

Previous research indicated that there will soon be a talent shortage. Regardless of the current economic crisis, it will arrive in years, not decades. The workforce of the future will need to be adaptable in embracing new ideas and technology, as well as open to the idea that automation and digitalization are inevitable. Strategies for reskilling and up-skilling employees are crucial for businesses to improve their talent (Farley, 2005). Therefore, the future of talent management will rely heavily on predicted shifts in the workforce and affordable methods of obtaining talent. In order to maintain HR engagement, organizations will need to rethink and innovate their approaches to talent management. Talent management is the only approach, according to Haji Karimi, & Soltani (2011), to prepare for the future.

Organizations need more than only to recruit and hire skilled employees if they are to redesign successfully. Improving job satisfaction and employee retention also requires

developing and keeping those employees, as well as setting up career planning and development initiatives. When talent management is necessary in an organization, these situations arise. Mudoï (2008) supposed that the process of implementing integrated strategies to improve workplace efficiency through the development of improved approaches for attracting, developing, keeping, and employing individuals to meet the demands of the business both now and in the future is known as talent management. Thus, every organization needs to have a solid talent management strategy in place in order to attract and retain outstanding employees. The primary challenges that businesses currently face, however, are how to effectively apply talent management techniques that are connected to the expectations, attitudes, and values of both young and old employees in the workplace today and in the future, as well as how to incorporate proper talent management into the HRM strategy. This study's goal is to look into relevant data that backs the creation of improved talent management strategies. While all companies, including those in manufacturing, servicing, trading, and government, are affected by talent management, the current study was carried out in the service industry, specifically in the private banking sector.

Materials and Methodology

This study concentrated on talent management practices in the service sector, particularly in the private banking business, one of the biggest service-oriented sectors in Myanmar. Private banks are introducing innovative services, new products, and new technology to better serve their customers and please them. Even if software and hardware can be bought, qualified employees are still necessary in an IT knowledge-based workplace. According to Roy (2018), managers see bank employees as the foundation of delivering authentic, dependable, and superior customer service (Roy, 2018). Consequently, private banks make a great effort to develop their workforce, prevent competing banks from headhunting them, and train and retain their current employees. These banks focus on talent management initiatives as part of their HRM strategy. For the above listed reasons, the researcher chose to conduct this study's investigation in private banks.

In Myanmar, 18 out of the 27 private banks operating in 2021 will have ten years or more of business experience. Ten (56%) of these eighteen private banks were selected for this investigation using the simple random sampling method. Ten private banks in Yangon hosted the researchers' study locations. Ten HR managers participated as HR manager respondents in order to collect data regarding the usage of TM practices. Through this study, which comprised 394 bank employees in operational, supervisory, and management roles, employee perceptions were also acquired. Using a simple random sampling technique, the study chose employee respondents to deliver survey questionnaires to. The surveys, which focused on talent attraction, development, retaining talent, career management, job satisfaction, and employee retention, were divided into sections and employed a five-point Likert scale as their foundation. Using quantitative and explanatory research methods, the study employed both primary and secondary data sources. The period of data collection was June 2021–January 2022. Secondary data were obtained from web sources, bank publications, annual reports, journal articles, textbooks, and past research. Descriptive statistics and correlation analysis were used to examine the data that had been gathered.

The results of this investigation will enhance our comprehension of talent management and its correlation with employee retention. The results of this study will provide guidelines banks' HR managers and policymakers to manage talented people more effectively. This study will also help to make and promote awareness about significance of talent management. Furthermore, organizations can use the findings from investigating relevant evidence to make proactive decisions about talent management. In addition, companies, government organizations, and banks that have not yet implemented talent management strategies are required to develop new ways that will benefit organizations and their workers by improving job satisfaction and retention.

The study aims to explore the current status of TM practices in HR strategy at private banks in Myanmar and identify the relationship that currently exists between talent management, job satisfaction, and employee retention.

Four talent management practices—talent attraction, talent development, retaining talent, and career management—were used in the study's conceptual framework. Many studies that build on past research exist regarding talent management and staff retention. Based on this, we proposed a conceptual framework for the current study. These studies suggested orientations to talent management methods were from the work of Mukweyi (2016) on talent development, Budu (2016) on talent attraction and career management, and Zhang (2014) on retaining talent.

Talent attraction (employer branding, recruitment, selection, work-life balance, and working environment); talent development (coaching, training, learning, and development); talent retention (compensation, rewards, and employee engagement); and career management (career planning, career development, performance appraisal, and succession planning) were used to determine measures of four essential talent management practices.

Analyzing and Findings

(1) Analysis of the Current Status of Talent Management Practices in Private Banks

This study displays a table that correlates with the analysis findings of the present situation for each talent management approach. In light of the degree of agreement, the average score—which is the mean score for every item—has been interpreted. Five tiers are established based on the mean value. Based on Kefale's (2019) research, a mean value of 1.00–1.80 indicates a very low level, 1.8–2.60 a low level, 2.6–3.40 a moderate level, 3.41–4.20 a high level, and 4.21–5.00 a very high level.

(a) Analysis on Current Status of Talent Attraction Practices in Private Banks

Based on the replies from HR respondents, it determined the mean value for each indicator of talent attraction practices. HR respondents answered back, with a high level, indicating that their bank performed well in terms of talent attraction practices, as indicated in Table (1).

Table (1) Current Status of Talent Attraction Practices in Private Banks

Sr.No.	Title of Practice	Mean Vale	Level	Rank
1	Employer Branding	3.50	High	1
2	Recruitment	3.41	High	4
3	Selection	3.40	Moderate	5
4	Work-life balance	3.47	High	2
5	Working Environment	3.43	High	3
	Overall Means Value	3.44	High	

Source: Survey Data, 2022

The surveyed private banks are heavily utilizing these practices. According to the findings, there was either a high or moderate degree of agreement among HR respondents' answers for all talent attractiveness metrics. The private banks that were surveyed showed great ability in work-life balance, employer branding, recruitment, and working environment; the least used strategy to draw in talent was selection practice. They put a lot of effort into using a variety of employer branding strategies to entice bright candidates.

Employer branding strategies were widely used to manage the bank's reputation as a reputable employer, provide a friendly, social, and joyful work environment, guarantee job security for staff, plan for career growth, and enhance the workplace experience. The selection procedures used by the banks surveyed are currently insufficient.

The HR respondents then responded, stating that their banks had taken some steps to implement work-life balance policies. The banks have moderately implemented flexible work schedules for employees to attend both internal and external training, treated all workers equally when they asked for help with work or family-related issues, and had open discussions about work-life balance practices with their supervisors. The banks are managing their many objectives to give their employees possibilities for a work-life balance. The bank had great success encouraging work-life balance. It was discovered that the private banks that were studied make a major effort to draw in both new hires and current staff from younger generations. The talent attraction strategies stated above are commonly used by the private banks assessed, with the exception of the selection procedures.

(b) Analysis of the Current Status of Talent Development Practices in Private Banks

The average value measured for each activity is shown in Table 2 based on an examination of the replies supplied by HR respondents. The responses of HR respondents on talent development practices (Coaching, Training, and program of learning and development) are summarized in Table 2.

Table (2) Current Status of Talent Development Practices in Private Banks

Sr. No.	Title of Practice	Mean	Level	Rank
1	Coaching	2.79	Moderate	3
2	Training	3.30	Moderate	1
3	Learning and Development	3.16	Moderate	2
	Overall Mean Value	3.08	Moderate	

Source: Survey Data, 2021, 2022

It revealed that the performance of talent development practices was moderate level. Nonetheless, they endeavored to draw in and hold on to their present workforce by providing coaching, instruction, and learning and growth opportunities. Training activities is the highest of the three talent development metrics. Activities related to learning and development had the second-highest. Coaching activities are the least used to draw in talent.

All things considered, the results indicated that banks only somewhat distributed their talent development strategies. The bank that took part in the study has started implementing talent development in programme.

(c) Analysis on Current Status of Retaining Talent Practices in Private Banks

The study looked at compensation, rewards, and employee engagement activities as ways to retain talent. Table 3 displays the analysis's findings based on a review of the responses provided by HR respondents.

Table (3) Current Status of Retaining Talent Practices in Private Banks

Sr. No.	Title of Practice	Mean	Level	Rank
1	Compensation	3.29	Moderate	2
2	Rewards	2.45	Low	3
3	Employee Engagement	3.30	Moderate	1
Overall Mean Value		3.01	Moderate	

Source: Survey Data, 2021, 2022

Table (3) presents the findings revealed that HR respondents' responses to retaining talent practices were either moderate or low in agreement. The HR respondents showed that the most frequently applied activity for retaining talent was employee engagement practice. The second most frequently applied activity was compensation practice. The least used activity for retaining employees was the reward program. In terms of retaining practices, conducting employee engagement practices like supporting a good relationship among co-workers and with their leaders in the workplace, providing involvement in decision-making within the operation of the bank, and allowing supervisors to discuss employee work groups' concerns patiently were moderately utilized in the surveyed private banks. The bank considerably implemented employee engagement activities more than other retention practices like compensation and rewards. However, reward programs were rarely utilized to enhance job satisfaction and retain employees for an extended duration. HR respondents assumed in a survey that their bank's performance has improved in a moderate way to retaining talent.

(d) Analysis on Current Status of Career Management Practices in Private Banks

Based on an examination of the replies from HR respondents, it was calculated the mean value for each career management activity metric. This is seen in Table (4).

The summary statistics and degree of agreement for each measure activity of career management practices at a moderate or low level are displayed in Table 4. The findings showed that performance appraisals were the most often utilized activity in career management practices, with career planning and succession planning coming in second and third. Career development

was the career management practice activity with the lowest ranking. According to the results, career management strategies are thus applied in their bank to a moderate degree.

Table (4) Current Status of Career Management Practices in Private Banks

Sr. No.	Title of Practice	Mean	Level	Rank
1	Career planning	2.88	Moderate	3
2	Career development	2.58	Low	4
3	Performance Appraisal	3.33	Moderate	1
4	Succession Planning	2.99	Moderate	2
Overall Mean Value		2.95	Moderate	

Source: Survey Data, 2021, 2022

(e) Summary Results of Current Status of TM Practices in Private Banks

The goal of the study is to evaluate the current status of talent management (TM) implementation today, covering strategies for talent attraction, development, and retaining as well as career management. Based on an analysis of replies from HR respondents, Table 5 displays the level and mean value measured for each TM practice.

Table (5) Summary of Current Status of Talent Management Practices

Sr. No.	Title of Practice	Overall Mean	Level	Rank
1	Talent Attraction	3.44	High	1
2	Talent Development	3.08	Moderate	2
3	Retaining Talent	3.01	Moderate	3
4	Career Management	2.95	Moderate	4
		3.12	Moderate	

Source: Survey Data, 2021, 2022

The results showed that among the private banks assessed, the mean values of four talent management methods varied from moderate to high level. They found that attracting talent had the high level, followed by developing and keeping talent. Career management was the least activity, but a strong focus on talent attraction helped draw in both current and prospective employees. However, the remaining talent management practices, such as developing and retaining talent were moderately applied at this time.

HR respondents indicated that they have somewhat adopted talent management (TM) processes. Consequently, in the long run, the private banks were unable to provide a solid guarantee on their ability to draw in, nurture, and keep talent using the existing state of talent management methods. The surveyed private banks are using the four talent management practices—talent recruitment, talent development, retaining talent, and career management—to a limited level at present.

(2) Analysis of Employee Perception on TM Practices, JS, and ER

Evaluating how employees feel about their employer can assist a company in identifying policies that either positively or negatively impact employee retention, as well as behaviors that influence employees' decisions to join, stay with, or quit their bank. The banks can also make adjustments depending on the results of employee perception surveys by monitoring the job satisfaction levels of their employees. Positive or negative employee views are valuable to organizations because they offer insights that can be leveraged to address issues with existing talent management strategies and increase employee happiness and retention. Table (6) shows the summary results of studied talent management practices, job satisfaction and employee retention.

According to the results, four talent management practices, and employee retention have a moderate level. Among these conditions, job satisfaction is at a high level. The study found that employee retention has closed to high-moderate level. It is derived by the fact that bank image as a good employer branding, creating a good, pleasant, social working environment, building work life balance employment condition and providing coaching program at workplace.

Table (6) Analysis of Employee Perception on Talent Management Practices, JS, and ER

Sr. No.	Title of Practice	Mean value	Level	Rank
1	Attracting Talent	3.55	High	1
2	Developing Talent	3.39	Moderate	2
3	Retaining Talent	3.05	Moderate	4
4	Career Management	3.09	Moderate	3
Overall of TM Practices		3.27	Moderate	-
Overall of Job Satisfaction (JS)		3.41	High	-
Overall of Employee Retention (ER)		3.30	Moderate	-

Source: Survey Data, 2021, 2022

The study also discovered that job satisfaction positively affects private banks' capacity to keep workers. The fact that the bank's brand image is generally associated with working in a safe and comfortable environment, fostering a culture of cooperation and respect at work, maintaining open lines of communication and positive working relationships with managers and supervisors, and providing various workspace amenities and equipment to support productive work are all indicators of this. Thus, in an effort to raise employee job satisfaction, the banks are strengthening and improving the aforementioned initiatives.

(3) Comparison between Current TM Practices Implemented and Employee Perception

The survey examined how employees felt about TM practices as they were currently being used and their current position. Table 7 displays the study's findings.

Table (7) Comparison between Current TM Practices Implemented and Employee Perception

Sr No.	Title of Practice	Bank's TM practices (Mean value)	Level	Employee Attitude (Mean value)	Level
1	Attracting Talent	3.44	High	3.55	High
2	Developing Talent	3.08	Moderate	3.39	Moderate
3	Retaining Talent	3.01	Moderate	3.05	Moderate
4	Career Management	2.95	Moderate	3.09	Moderate
		3.12	Moderate	3.27	Moderate

Source: Survey Data, 2021, 2022

Tale (7) indicates a moderate implementation of talent management (TM) standards. Employees' perceptions of the four talent management practices under study are at a moderate level. It was discovered that private bank employees who participated in the study are probably neither satisfied nor unsatisfied with the talent management procedures already in place. The extent of talent management procedures used today to draw in and keep employees is at normal level. This study found that some present talent management practices, such as talent attraction, should be maintained and even strengthened. Next, they should attempt to advance, enhance, or adjust the remaining practices—talent development, talent retention, and career management—while maintaining consistency in the expectations and values of the workforce.

(4) Analysis on the Relationship between Talent Management, Job Satisfaction, and Employee Retention

The study additionally aimed to ascertain the degree of correlation between talent attraction, development, retaining, career management, and job satisfaction and employee retention. To do this, the study is determined the correlation between the previously given factors. The range of the result under Pearson correlation is +1 to -1. There is no association between the variables if the value is 0. (Hinkle, Wiersma, & Jurs, 2003). Positive associations are shown by values over zero while negative associations are indicated by values below zero.

In this study, it used the coefficient of correlation (rho) to determine how strong the link was. Each item's association coefficients were interpreted and their size was calculated using a broad guideline. The correlation coefficient value has five levels. Correlation levels are indicated by the correlation coefficient values, which range from 0.00 to 0.30 for little to no correlation, 0.30 to 0.50 for moderate correlation, 0.70 to 0.90 for high correlation, and 0.90 to 1.00 for extremely high correlation (Hinkle, et al., 2003). The correlations between the variables that are being studied are shown in Table 8.

Table (8) Correlation Results of TM practices, Job satisfaction and Employee Retention

Sr. No.	Items	Correlation Coefficient	Sig.	Level
1	Talent Attraction	0.633**	0.000	Moderate
2	Talent Development	0.658**	0.000	Moderate
3	Retaining Talent	0.752**	0.000	High
4	Career Management	0.726**	0.000	High
5	Job Satisfaction	0.783**	0.000	High

** . Correlation is significant at the 0.01 level (2-tailed).

Dependent variable: Employee Retention

The study's findings indicate that the four talent management techniques and employee retention were shown to be strongly correlated in the study. In comparison to talent management practices, a rise in retaining talent practices had a higher effect on employee retention. Career management methods were ranked as the second most important factor for employee retention. Employee retention was more impacted by career management and retaining talent practices than by talent development and attraction practices.

The study's findings also demonstrated a significant positive correlation between work satisfaction and employee retention. The relationship between job satisfaction and employee retention was the one with the highest correlation coefficient among the factors examined. It is assumed that a bank's employee retention rate will increase with employee job satisfaction in

talent management (TM) procedures. Therefore, talent management strategies that increase employee satisfaction at work have a significant impact on staff retention.

Discussion and Suggestions

Based on the comprehensive study results, the surveyed private banks are recommended to implement the following measures to get a competitive advantage over their competitors and to draw and retain skilled employees: It is advised that banks create policies that assist talent management in order to assure survival, success, and a competitive advantage. All organization should put the same priority on talent development as they give to business strategy, risk, and compliance. An organization's top management team and human resources head should meet regularly to upgrade, and implement the bank's talent plan.

These banks should determine sufficient scope for contributing to capabilities development and invest in formal internal training programs. Some larger companies are already contributing. For instance, Yoma Bank has a dedicated People Development Centre and a learning channel team that integrates talent development with business operations (Silke-Susann, 2018). The organizations including private banks launched the Apprenticeships Incentives Program, which provides incentives both companies, and employees to provide and participate in training and certification programs.

The surveyed private banks are actively developing talent but they need to make more effort to nurture and develop for establishing appropriate rewards and recognition, and inspiring the organization generally. Furthermore, these organizations' talent management practices should be continuously evaluated in light of the requirements, values, and expectations of both present and future employees. Employee retention will increase if talent management is implemented in a way that aligns with the values, interests, expectations, and requirements of today's workforce. Private banks including all different companies' human resource departments will need to anticipate the organization's shifting talent needs and prepare a plan to address for adopting new digital technologies. In order to identify, develop, and hold onto talented individuals both now and in the future, private banks have to carry out a skills evaluation in order to ascertain the talents that are already present in the various departments of the banks, the skills that the banks will need, and whether the current workforce are well-matched with the company's goals both short and long term. The banks should therefore make more effort to modify or adjust the appropriate talent management techniques in their HRM strategy.

The current study's findings demonstrated a strong correlation between improved job satisfaction by talent management strategies and higher employee retention rates. Additionally, the findings demonstrated that the majority of respondents felt that their level of job satisfaction and willingness to put in the effort necessary to remain loyal to the bank over the long term were not influenced by the talent management practices in place at the bank. As a result, banks should alter their HR practices to encourage job satisfaction among their workforce. Therefore, banks must to make a concerted attempt to change employees' neutral or unfavorable opinions regarding staff retention as well as reinforce and enhance the use of their talent management initiatives.

Talent development, retaining talent, and career management are the three main talent management practices that are now used less frequently than talent attraction practices. The idea

is that banks should recognize the importance of their current talent attraction strategies and stick to them while simultaneously developing new, more successful strategies that they should find and apply, especially in work-life policies and selection practices. When creating talent policies, banks should take the needs and skills of their employees into account. They should also strive to create an atmosphere where employees may develop their talents and meet their needs.

In terms of learning and development procedures, learning and development has developed into a significant talent management project in a lot of businesses, including private banks. Banks should invest in training staff members to adapt and change their knowledge and abilities. The banks will experience increased employee retention and satisfaction as a result. Senior management and the human resources department should guarantee e-learning course provision, as well as appropriately plan and implement the entire learning process. Employees need to cooperate with one another in an effort. Conversely, private banks must balance organizational requirements with those for the advancement and development of their workforce.

A higher percentage of employee respondents felt that the compensation packages provided by the private banks that were examined were inadequate for their talent retention efforts. Banks are moderately involved in compensation systems in relation to their performance. In the meanwhile, they employ very few incentive programs to draw in and retain staff. Consequently, the study advises these banks to thoroughly examine their current pay plans to ensure that they are competitive with those of their competitors. Retaining talent can also be achieved by banks through performance-based bonuses and other benefits.

The results of the career management study suggest that these banks will not be able to demonstrate effective leadership in the areas of succession planning, career development, and career planning going forward. These methods, which are seldom used in career development, don't improve worker satisfaction or retention. Additionally, banks should allocate resources towards initiatives like performance reviews, career planning, growth, and succession planning. To increase opportunities for career advancement, these banks must implement a number of programs. It's critical to remember that providing opportunities for professional growth can increase the possibility that banks will be able to retain the employees they hire, especially among today's younger workforce.

Conclusion

In the modern world, private banks like every other business have to deal with a number of challenges, including the knowledge age's expectations, the development of information technologies, and shifts in the labor force's composition. Because of these forces of change, any banks and their management have ever faced, they present new challenges. The traditional financial services offered by banks are under threat from rising costs and new competitors. Younger workers also seek out environments at work that support growth, self-improvement, continuous learning, and acknowledgment. An employee is always prepared to move to a new job if he/she is unhappy for any reason with ones current one. Rival banks and other enterprises have attracted some of the brightest and most skilled personnel from banks and other organizations. Because of this, retaining current staff is crucial to solving the issues private banks have been having. Both difficult problems and good opportunities are brought about by these needs. Individuals and organizations, however, believe that these changes are necessary for

further advancement. For their banks to survive and prosper, they must so prepare for and embrace change.

Talented people are essential for any bank that wants to succeed and stay ahead of the competition. Although finding and keeping skilled and talented workforces can be challenging, private banks in Myanmar are working hard to find and hire such workers. However, the mentioned issues indicate that private banks are insufficient to simply draw in and employ talented workers. In order to improve job satisfaction and employee retention in private banks, it is equally vital to develop and retain those individuals and set up career planning and development programs. These situations arise when an organization needs to manage its talent. Talent management is the only way to prepare for the future. The process of putting integrated strategies into effect to improve hiring, retaining, and attraction practices in order to meet current and future organizational demands is known as talent management. As a result, all companies, including private banks, should have a strong talent management plan in place in order to attract and retain outstanding employees.

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KNOWLEDGE MANAGEMENT CAPABILITIES AND EMPLOYEE PERFORMANCE: MEDIATING ROLE OF ORGANIZATIONAL LEARNING

Khin Marlar Maung¹

Abstract

The objectives of the study are to analyze the effect of knowledge management (KM) capabilities on employee performance and to examine the mediating effect of organizational learning in the relationship between knowledge management capabilities and employee performance. The respondents are 174 managers and supervisors from the private banks in Myanmar. Structured questionnaire with five-point Likert scale is used to collect primary data. Descriptive statistics, reliability analysis, correlation analysis and multiple linear regression analysis are applied. According to the results, the respondents accepted that they can acquire and apply their knowledge at the banks with the provision of knowledge management capabilities of the bank. Correlation results show that knowledge acquisition and knowledge application have moderate correlation and knowledge sharing has strong correlation with organizational learning. Knowledge acquisition, knowledge sharing and knowledge application have moderate correlation with organizational learning; and organizational learning has strong correlation with employee performance. According to multiple regression analysis results, organizational learning is a perfect or full mediator of the relationship between knowledge acquisition, knowledge sharing and employee performance; and is a partial mediator of the relationship between knowledge application and employee performance. Knowledge management capabilities and organizational learning are essential for employees of private banks to achieve a high level of employee performance.

Keywords: Knowledge management capabilities, Organizational learning, employee performance, Private banks, Myanmar

Introduction

In the knowledge-based era, knowledge is accepted as the fundamental asset of the organizations and it can create success. Knowledge is created in social interactions amongst individuals and organizations (Nonaka et al., 2000). Knowledge is a valuable resource for organizations and is one of the most significant issues that managers face in very dynamic environment (El-Chaarani & El-Abiad, 2020). In the 21st century, organizations have paid more significant attention to knowledge management (Heisig et al., 2016). The knowledge management capabilities are becoming progressively more crucial in the present knowledge-based economy (Agbim et al., 2013). In the study of Kiessling et al. (2009), knowledge management capabilities in organizations have positive impact on performance. Thus, organizations find the most possible way to create and apply knowledge among employees based on knowledge management capabilities.

In Myanmar, banking industry faces strong competition among banks. The knowledge is a tool to overcome the competitors and creates competitive advantage. The presence of knowledge management capabilities and their role in banking industry is the area to be focused. In this study, 174 managerial and supervisory level employees from private banks located in Nay Pyi Taw and Mandalay in Myanmar were selected as the respondents of the study. The results provided the knowledge related to the important role of knowledge management capabilities to create employee performance with the help of organizational learning.

The objectives of the study are to analyze the effect of knowledge management capabilities on employee performance and to examine the mediating effect of organizational learning in the relationship between knowledge management capabilities and employee performance.

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Literature Review

Knowledge is the most important source to acquire competitive advantage for any organization. By infusing new organizational knowledge, firms can improve and innovate, thus obtaining competitive advantage in the market (Teece, 1998). Askarian and Abdollahi (2016) referred knowledge management (KM) as “timely giving correct knowledge to members in needs to help the members adopt correct actions to enhance the continuity of organizational performance”. In this study, knowledge management (KM) capabilities, organizational learning and employee performance were selected to prove the important role of knowledge management capabilities in enhancing employee performance with organizational learning as the mediating variable.

Knowledge Management Capabilities

Gaining competitive advantage is one of the serious challenges for organizations. Knowledge-intensive organizations gain knowledge through performing several business activities. As knowledge management capabilities, knowledge acquisition, knowledge sharing and knowledge application are focused to have specific effect on employee performance through the mediating effect of organizational learning.

Knowledge Acquisition

Knowledge acquisition is defined as the process of critically managing knowledge to meet existing needs, to identify and exploit existing and acquired knowledge assets and to develop new opportunities (Quinstas et al., 1997). Knowledge can be acquired from different sources of both inside and outside of an organization. Knowledge acquisition either from outside marketplace or from inside employees provides opportunities for firms to recombine current knowledge and create new knowledge to effectively apply at the job (Yli-Renko et al., 2001).

H1a: Knowledge acquisition has positive and significant effect on organizational learning.

H1b: Knowledge acquisition has positive and significant effect on employee performance.

Knowledge Sharing

Knowledge sharing is the process of exchanging knowledge and information between individuals or groups in order to promote learning, collaboration, and innovation. It involves making knowledge available to others who may benefit from it, as well as seeking out and learning from the knowledge of others (Nonaka et al., 2000). Effective knowledge sharing requires a strong culture that values knowledge and encourages collaboration among people. It also requires the use of appropriate tools and technologies, such as knowledge management systems, social media, and other types of communication and collaboration tools (Zheng, 2017). Sharing information refers to the process of conveying knowledge from one person to another within the organization (Cantú et al., 2009).

H2a: Knowledge sharing has positive and significant effect on organizational learning.

H2b: Knowledge sharing has positive and significant effect on employee performance.

Knowledge Application

Knowledge application is the process of using acquired knowledge to solve issues, make decisions, and improve performance. It involves taking knowledge that has been acquired and converted into a usable form and applying it in a specific context or situation. Knowledge application relates to responding to different types of knowledge by an individual within an organization (Gold et al., 2001). It involves selecting and adapting the most appropriate knowledge to the particular problem or decision at hand, and then using that knowledge to develop and implement solutions.

H3a: Knowledge application has positive and significant effect on organizational learning.

H3b: Knowledge application has positive and significant effect on employee performance.

Organizational Learning

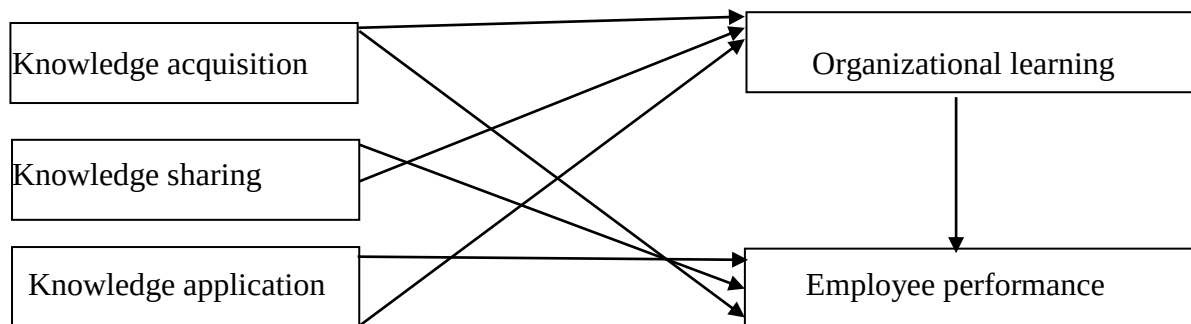
According to Andrews and Delahaye (2000), KM capabilities are being used to create learning environments in modern organizations. Moreover, effective use of KM capabilities has been increasingly associated with organizational learning (Easterby-Smith & Lyles, 2011). Goh et al. (2012) explained that organizational learning is one of the basic pillars of high performance in the current era of globalization and intense competition. Organizational learning establishes right context and structure for application of KM capabilities effectively (Brandi & Iannone, 2015). Organizational learning also means available knowledge throughout the organization and results in effective individual and organizational performance (Nghah et al., 2016). Organizational learning forces people to learn and to move an organization in the direction of continuous learning and change (Egan et al., 2004).

H4: Organizational learning mediates the relationship between knowledge management capabilities and employee performance.

Employee Performance

Campbell (2013) defined employee performance as an individual level tasks, a worker performs successfully according to the predetermined standard of organization. According to Delaney and Huselid (1996), the performance of employees depends on the means that managers used to support their employees. Performance reflects the behavior and ability of individual employee to contribute to the achievement of the organization. The achievement of any business organization mainly depends on employee performance in which employee performs his or her task effectively or not (Aroosiya & Ali, 2013). Iqbal et al. (2015) revealed that employee performance includes executing duties, meeting deadlines, employee competency, and effectiveness and efficiency in doing their assigned tasks. Based on theories and empirical studies, the proposed conceptual model is shown in the following figure.

Proposed Conceptual Model



Source: Own compilation based on previous studies

Methodology

Research Instrument and Key Respondents

The study analyzes the effect of knowledge management capabilities on organizational learning and employee performance of private banks located in Nay Pyi Taw and Mandalay in Myanmar. There are 622 managers and supervisors. The required sample size was 241 and distributed questionnaire to the respondents. They were selected by using simple random sampling method. 174 managers and supervisors were included as the respondents. Structured questionnaire with five-point Likert scale was used to collect primary data. The data collection period was in December, 2023. Before the main analysis, descriptive statistics, reliability test and correlation analysis were carried out. Multiple linear regression analysis was used as the main

analytical tool to test the proposed hypotheses of the study and to explore the importance of knowledge management capabilities to upgrade employee performance through the mediation effect of organizational learning.

Results

Descriptive Statistics, Reliability Test and Correlation Analysis

Among 174 respondents, 54 respondents are male and 120 respondents are female. Nearly 50 percent of respondents age lies between 31 and 40 years. 129 respondents (74.1 percent) have more than 8 years of working experiences. They have attended several training programs and seminars. According to Best (1977), the mean values of knowledge management (KM) capabilities, organizational learning and employee performance gained the agreed level. They accepted that they can acquire, share and apply their knowledge which can lead to more learning and can improve performance. Among the three KM capabilities, knowledge sharing gained the maximum mean value and it can be concluded that knowledge sharing is essential for them to gain the new knowledge. According to the reliability test, the alpha values of all variables are more than 0.70 which are under the acceptable reliability level (Cronbach, 1951). The reliability and correlation results are shown in Table (1).

Table (1) Means, reliability and correlation analysis of variables

	Mean	KA	KS	KAP	OL	EP	Alpha	Items
KA	3.83	-					.833	7
KS	3.95	.679**	-				.782	6
KAP	3.82	.529**	.723**	-			.878	7
OL	3.96	.637**	.803**	.730**	-		.852	7
EP	4.11	.585**	.707**	.732**	.780**	-	.908	9

** . Correlation is significant at the 0.01 level (2-tailed)

KA = Knowledge acquisition, KS = Knowledge sharing, KAP = Knowledge application, OL = Organizational learning, EP = Employee performance

According to Table (1), the correlation analysis results showed that KM capabilities have positive relationship with organizational learning and employee performance and also, organizational learning has positive relationship with employee performance. The more the KM capabilities are created, the more the organizational learning and employee performance can be expected by the banks. KM capabilities are the area to be emphasized by the banks if the banks want to promote organizational learning and to improve employee performance. Additionally, the positive relationship between organizational learning and employee performance was also explored. Because of organizational learning, the banks gain the higher level of employee performance. The next step is to analyze the mediating effect of organizational learning between KM capabilities and employee performance.

Before the moderating effect is analyzed, according to the results of multiple regression analysis, knowledge acquisition, knowledge sharing and knowledge application have positive and significant effects on both organizational learning and employee performance. Thus, Hypotheses H1a, H1b, H2a, H2b, H3a and H3b are accepted. Among these three variables, according to the standardized coefficient (beta) values, knowledge sharing has the most significant and positive effect on organizational learning followed by knowledge application and knowledge acquisition. The results also revealed that knowledge application has the most significant effect on employee performance followed by knowledge sharing and knowledge acquisition. Thus, knowledge

management capabilities are essential to achieve organizational learning and the expected employee performance by the banks.

Another objective of the study is to analyze the mediating effect of organizational learning on the relationship between KM capabilities and employee performance. According to Baron and Kenny (1986), by entering organizational learning in the model, knowledge acquisition and knowledge sharing have no significant effect on employee performance ($\beta = 0.098$, $t = 1.597$, $p > 0.05$) and ($\beta = 0.060$, $t = 0.725$, $p > 0.05$) but knowledge application has significant and positive effect on employee performance ($\beta = 0.316$, $t = 4.631$, $p < 0.01$). According to the results, organizational learning perfectly mediated the relationship between knowledge acquisition and knowledge sharing and employee performance; and partially mediated the relationship between knowledge application and employee performance. Hypothesis 4 is partially accepted in this study.

It can be concluded that organizational learning plays an essential role in upgrading employee performance. Only knowledge acquisition and knowledge sharing are not enough to upgrade employee performance without building organizational learning by the banks. However, knowledge application is partially important to achieve employee performance with or without organizational learning. The banks need to find the means to build the strong organizational learning. According to the results, if the respondents have no chance to acquire, share or apply the new knowledge in the workplace, they will have no more desire to learn and direct towards the mission and goals of the banks. The results of mediation analysis are shown in Table (2).

Table (2) Results of mediation analysis

Variables	Dependent variables			Interpretation
	Step 1 OL	Step 2 EP	Step 3 EP	
Knowledge acquisition	$\beta = 0.149$	$\beta = 0.163$	ns	Perfect mediation
Knowledge sharing	$\beta = 0.483$	$\beta = 0.272$	ns	Perfect mediation
Knowledge application	$\beta = 0.302$	$\beta = 0.449$	$\beta = 0.173$	Partial mediation
Mediator OL			$\beta = 0.439$	Significance essential for mediation

Note: OL = Organizational learning; EP = Employee performance; ns = not significant

Dependent Variable: Employee performance

Source: Survey data (December, 2023)

Discussion

Knowledge management capabilities, organizational learning and employee performance of private banks in Myanmar are the main area of the study. The objectives are to analyze the effects of knowledge management capabilities on organizational learning and employee performance and to examine the mediating effect of organizational learning on the relationship between knowledge management capabilities and employee performance. 174 managers and supervisors were the respondents of the study. Their perception on variables showed the agreed level. Knowledge sharing gained the maximum overall mean value with agree level. Among the statements of knowledge sharing, the respondents completely agreed that the banks create the interactive work environment to exchange knowledge, experiences and ideas widely among staff. Based on the results of knowledge acquisition, the banks offer different sources with the help of advanced technology to acquire update information related to their job. Additionally, the respondents accepted that they can quickly respond to the changing condition with their knowledge learned. The banks should retain the present perception of staff on knowledge management capabilities.

According to the correlation analysis results, KM capabilities have positive relationship with both organizational learning and employee performance. The more the KM capabilities are provided by the bank, the more the organizational learning and performance improvement of staff can be expected. The results also proved that organizational learning has positive relationship with employee performance. Without building the strong organizational learning, the staff have no desire to use the acquired knowledge to improve their performance. It is suggested that the banks should emphasize more on knowledge management capabilities especially promoting the means to acquire, share and apply the knowledge by staff in their workplace.

The multiple regression analysis results proved that KM capabilities have significant effects on organizational learning and employee performance. Among the KM capabilities, knowledge sharing has the most significant effect on organizational learning. The banks should reinforce the staff to share their knowledge. If the staff have a chance to share their knowledge, they will build an open mindset and will engage in achieving the mission and goals of the organization. Knowledge application has the most significant effect on employee performance. The actual application of knowledge by staff can promote employee performance. If the staff have no desire to apply their knowledge at work, the knowledge acquired through learning from different sources will be a wasteful result for the bank.

The mediation effect of organizational learning between KM capabilities and employee performance, organizational learning perfectly mediated the relationship between knowledge acquisition, knowledge sharing and employee performance. If the banks expect employee performance, the banks should motivate the staff to acquire and share their knowledge by promoting organizational learning. Without having organizational learning, knowledge acquisition and knowledge sharing are not enough to meet the expected employee performance. Building organizational learning is the area to be emphasized by the banks. Additionally, organizational learning has the partial mediating effect between KM capabilities and employee performance. These finding highlights the critical roles of KM capabilities for performance improvement of staff. The practical implication of the results is that managers and the responsible persons of the banks need to actively manage the performance of staff through the variety of KM capabilities such as knowledge acquisition, knowledge sharing, and knowledge application and organizational learning. It has been observed that KM capabilities are a very deep root and bring about the excellent employee performance by providing organizational learning at the banks.

Conclusion

The study mainly focuses on knowledge management capabilities, organizational learning and employee performance of private banks in Myanmar. Knowledge management capabilities are essential for the banks to create organizational learning and employee performance. More specifically, employee performance is created by knowledge acquisition and knowledge sharing with the help of organizational learning as a perfect mediator. Without organizational learning, employee performance cannot be expected to acquire and share knowledge among staff. However, knowledge application can directly or indirectly influence employee performance with the partial mediating effect of organizational learning. Thus, knowledge management capabilities and organizational learning play an important role in improving employee performance. As recommendations for further research, the study focused on private banks in Myanmar. Government and semi-government banks were not focused. The managers and supervisors were selected as the respondents. Other positions were not included in this study. It is better for further research to analyze other variables such as knowledge infrastructure capabilities, building trust, organizational performance, etc., in other service organizations with different ranks of respondents.

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ENTREPRENEURIAL COMPETENCIES AND PERFORMANCE OF SMALL AND MEDIUM ENTERPRISES

Dr. Thiha Htun¹

Abstract

Entrepreneurial competencies play the critical role for sustaining, maintaining, and improving the performance of small and medium enterprises in an intensely competitive market as local small and medium enterprises offer job opportunities. The most prevalent kinds of entrepreneurial competencies comprise communication competencies, determination competencies, basic business competencies, strategic competencies, resource competencies, and industry specific knowledge. This study attempts to identify entrepreneurial competencies of small and medium enterprises, and to analyze the effects of entrepreneurial competencies on performance of small and medium enterprises. This study utilizes primary data from 40 owners of small and medium enterprises in 2023. Descriptive statistics, correlation analysis, and multiple regression analysis are applied in this study. It is found that determination and basic business competencies are weakly correlated, however, communication competencies, strategic competencies, resource competencies, and industry specific knowledge are moderately correlated with performance. According to the findings, resource competencies and industry specific knowledge have significant and positive effects on performance of small and medium enterprises. Other kinds of entrepreneurial competencies do not have significant effect on the performance of SMEs. Among six entrepreneurial competencies included in this study, it is found that the resource competency has the most significant effect on performance of small and medium enterprises.

Keywords: entrepreneurial competencies, performance, small and medium enterprises

Introduction

Small and medium-sized enterprises (SMEs) play important role to sustain and develop the economy, particularly in developing countries, and emerging economies for regional development, poverty alleviation, and job creation. Myanmar is a developing country which is moving from an agricultural country towards the industrialization or it is the one where in the industry is in its infancy lacking advanced technology. At this time, the entrepreneurs play a vital role because they are the business leaders look for new ideas and put them into effect in fostering economic growth and development.

Local trading business is one of the mainstreams to set up an own business for entrepreneurs. Currently, starting a new business is the fastest and simple way to start and is gradually increasing in Myanmar. In addition, some people who are attending schools or unemployed want to earn income in their free time. Starting a new business for an owner determines their own destiny as they have freedom to control the operations as much as possible as they can. Therefore, the entrepreneurs do businesses by selling grocery items, and shopping goods for employment and a stable stream of income.

An entrepreneur requires much more than just big ideas. A true entrepreneur is a rare breed and who possesses a unique skills and competencies to achieve their goals. In addition, a successful entrepreneur possesses a combination of the competencies. Therefore, this study emphasizes the entrepreneurial competencies of business owners. At present, SMEs has contributed and played an important role in stimulating the economy, and considered as the

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backbone of the economy. These competencies include set of management skills, business knowledge, human behavior, personal characteristics and integrity to attain organizational goals within constraints in the changing environment.

Entrepreneurial competencies enable the entrepreneurs to do what is expected of them and succeed in business. It is the combination of the competencies that is required to enable anyone to perform effectively as an entrepreneur. Entrepreneurial competencies being numerous, a successful entrepreneur possesses a combination of traits that show both innovation and leadership qualities and make a good entrepreneur. All the entrepreneurial personality types include hard work, but there are other specific types of business related expertise called competencies that appear repeatedly in successful entrepreneurs. Therefore, the main themes of this study are to identify the entrepreneurial competencies of SMEs and to analyze the effects of entrepreneurial competencies on performance of SMEs.

Objectives of the Study

The overall objective of the study is to examine entrepreneurial competencies and SME's performance in Myanmar. The specific objectives of this study are:

- (1) to identify entrepreneurial competencies of small and medium enterprises and
- (2) to analyze the effects of entrepreneurial competencies on the performance of small and medium enterprises in Myanmar.

Scope and Methods of the Study

The required data is collected by conducting personal interview with managers in Myanmar by using structured questionnaires. This study focuses on 40 owners to analyze the effects of entrepreneurial competencies on performance of SMEs in Myanmar. Surveyed respondents of the study include the owners mainly from Yangon, Mandalay and Naypyitaw regions. In order to comprehend the entrepreneurial competencies of SMEs, this study uses five-point Likert scale. Descriptive statistics was utilized to calculate the mean values of variables, correlation analysis was used to analyze the relationship among variables, and multiple regression analysis was applied to analyze the effects of entrepreneurial competencies on SMEs performance. SPSS Statistics Program for Windows, version 26 is the main analytical tool used in this research. This analytical tool provides comprehensive information such as the coefficient of each independent variable, intercept, R^2 and Adjusted R^2 to interpret the findings.

Literature Review

Entrepreneurship is the process of doing something new and different to create wealth and to add value to society (Kao, 1995). According to Ketchen (2003), entrepreneurship plays the critical role for the main reason of invention, developing new products, fulfilling market needs with creative design and also enables the entrepreneurs to act as engines of growth in the economy. Entrepreneurship is linked with entrepreneurial opportunities; the compelling forces enable entrepreneurs to introduce or develop new products or services.

Personality traits and inner motives to realize new ideas and their managerial capability become the main source of entrepreneurial competencies (Mitchelmore & Rowley, 2010). The

development of human capital can be seen as the main causes for the successful launching of new venture firms leading SME to success and long-run survival. Man (2001) pointed that education level and training has positive significant impact to create and nurture entrepreneurial competencies (Man, 2001); education, training and experience become the critical role for developing the entrepreneurial competencies of local business in Nordic countries (Markowska, 2011).

According to Bird (1995), entrepreneurial competencies can be defined as “underlying characteristics such as generic and specific knowledge, motive, traits, self-image, social roles, and skills which result in venture birth, survival, and/or growth”, may be the key to improving a firm’s performance. Although the performance measurements for SME represent financial data to analyze business performance and growth in many cases, Matsoso and Benedict (2014) pointed non-financial performance measures in small and medium enterprises.

Entrepreneurship is the process through which individuals and/or teams create value by bringing together unique packages of resource inputs to exploit opportunities in the environment (Morris, 2001). Dutta and Crossan (2015) defined entrepreneurial opportunities emerged from the conditions of environmental nature that promote creativity and innovation for market needs that occur profitable opportunities for the current and future potential for business organizations. The findings of previous empirical research highlighted that that entrepreneurial orientations, including their individual and personal characteristics as well as psychological and demographic features, are commonly inferred to as the most influential and key features for achieving higher performance of private SMEs in different sectors of the economy (Sakib, 2022).

Shane et al. (2013) posited that the distinctive nature of competencies come from the many kinds of input factors that can determine future potential (antecedent of competence), different processes for business engineering (task or behavior that lead to competence), or the outcome (achieving a standard of competence in the field of functional). Entrepreneurial competencies to cover both cognitive and non-cognitive skills required in the different phases of an entrepreneurial venture. A number of constructs are used to capture these skills: creativity, planning, financial literacy, marshaling of resources, managing ambiguity and teamwork.

Many empirical researches highlighted the entrepreneurial competencies (Mitchelmore & Rowley, 2013) although some findings show the critical role of managers’ entrepreneurial competencies (Man & Lau, 2000; Li, 2009). The significant nature of entrepreneurial competencies of firm owners determine business success (Ahmad, 2007). According to this study, different types of entrepreneurial competencies can be categorized into strategy, commitment, conceptual, opportunity, organizing and leading, relationship, learning, personal, technical, ethical, social responsibility, and familism; and the findings showed that the importance of entrepreneurial competencies for business success. Successful entrepreneurs are viewed as the fundamental cause to grow their enterprises and sustain outperformed business in respective industries (Mitchelmore & Rowley, 2010).

The nature of entrepreneurial competencies is indicated as an important concept for improving entrepreneurship. Entrepreneurial competencies alone are not enough to ensure the survival and success of businesses. Sustainable business function highly depends on many other factors such as supplier’s capabilities as well as customer’s integration. The key personal skills,

expertise and features of an entrepreneur may lead to sustainable advantage for a venture firm because entrepreneurial competencies are commonly very hard to find for a competing firm and impossible to exactly copy in most business sector. Man and Lau (2000) observed different kinds of entrepreneurial competencies and examined the effect of entrepreneurial competencies on firm performance, and growth of firms (Mejri & Zouauai, 2020).

SME performance is measured with nonfinancial measures for customer satisfaction, employee engagement, innovation, quality, or social responsibility (Al-Mamary et al., 2020, Anwar & Shah, 2020). Non-financial performance measurements provide a holistic view of a business' operations and dynamic information (Taticchi et al., 2010) and expose the significant situations of operational weaknesses and opportunities for improving performance (Mjongwana & Kamala, 2018).

The competencies of entrepreneur influence the success of a business in today's competitive environment. Phelan and Sharpley (2012) found that the necessity of entrepreneurial competencies and managerial skills to improve revenue growth in the industry. The success of an enterprise new or old depends upon the qualities or competency of an entrepreneur. In order to be successful, an entrepreneur must possess certain qualities which are unique of its kind. Entrepreneurial competencies have classified into five major areas: basic business competencies, industry specific knowledge, resource competencies, determination competencies, and opportunity competencies (Katz & Green, 2011).

Analytical Framework

The analytical framework is developed to analyze the relationship between entrepreneurial competencies and SME performance. The proposed analytical framework of this study is shown in Figure (1). The following framework describes six independent variables and dependent variable as shown below.

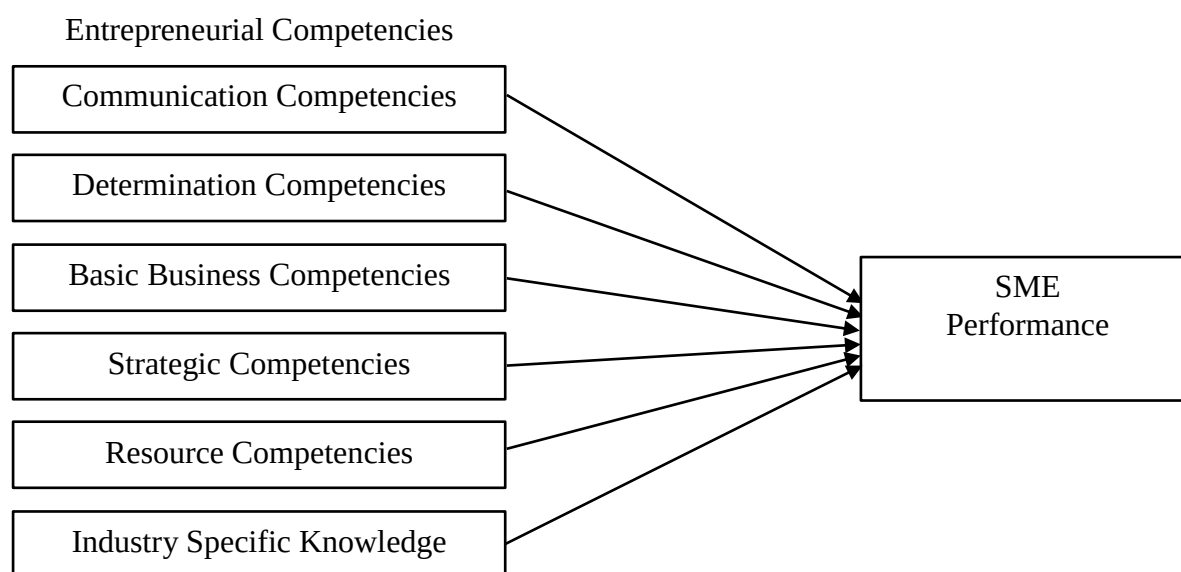


Figure (1) Analytical Framework

Source: Own Compilation Based on Previous Studies

The independent variables are communication competencies, determination competencies, basic business competencies, strategic competencies, resource competencies, and industry

specific knowledge. Then, the dependent variable of SME performance is measured with nonfinancial measures for customer satisfaction, employee engagement, innovation, quality, or social responsibility in this study.

Findings

The background information of small and medium enterprises is extracted in Table (1) which includes gender, age, marital status, education level, and time spent in managing business with the calculation of frequency and percentage.

Table (1) Profile of Firm Owners

Description	Frequency	Percentage
Gender		
Male	18	45.00
Female	22	55.00
Age		
≤ 30	1	2.50
31-40	14	35.00
41-50	17	42.50
51-60	7	17.50
≥ 61	1	2.50
Marital Status		
Single	6	15.00
Married	34	85.00
Education Level		
High School	3	7.50
Diploma	5	12.50
Bachelor	26	65.00
Post Graduate	6	15.00
Time (hours per week) Spent at Managing Business		
≤ 20	26	65.00
21-40	11	27.50
41-60	1	2.50
≥ 61	2	5.00

Source: Survey Data (November 2023)

As shown in Table (1), it is found that most of entrepreneurs in this study are female entrepreneurs operating own business. Concerning with the age of entrepreneurs, it is described that majority of the firm owners in the study are within the age of 41 to 50 years old. After that, married person occupies the largest portion in answering the survey questionnaire, and graduate owner has the largest portion of education level which is also increasingly obvious in this study. Most of entrepreneurs spent about 20 hours a week in managing their own business. In this empirical study, different sizes of private enterprises and varying sectoral specialization are shown in Table (2). The above table shows a statistical view of the surveyed respondents, and understanding the demographics of target entrepreneurs is critical for the success of businesses

which can create a steady stream of income. In fact, the demographic characteristics of entrepreneurs have a positive and significant impact on achieving superior performance of small and medium enterprises.

Table(2) Profile of SMEs

Description	Frequency	Percentage
Age of Firm (Years)		
≤ 10	20	50.00
11-20	15	37.50
21-30	3	7.50
≥ 31	2	5.00
Kind of Business		
Manufacturing	17	42.50
Service	9	22.50
Trading	12	30.00
Other	2	5.00
Number of Employees		
≤ 10	31	77.50
11-20	4	10.00
21-30	2	5.00
≥ 31	3	7.50

Source: Survey Data (November 2023)

It is found that majority of firms started new business less than 10 years in their specialized area of business. Manufacturing firms contribute the largest portion in this study. Most of firms employ 10 people in doing small business.

Table (3) Entrepreneurial Competencies

Sr. No.	Variables	Mean	SD	No. of Items	Alpha
1	Communication Competencies	4.00	0.475	5	0.808
2	Determination Competencies	4.16	0.509	5	0.871
3	Basic Business Competencies	4.14	0.414	5	0.807
4	Strategic competencies	3.93	0.487	5	0.814
5	Resource competencies	3.96	0.556	4	0.829
6	Industry Specific Knowledge	3.88	0.449	4	0.746
7	SME Performance	3.81	0.538	5	0.787

Source: Survey Data (November 2023)

To identify entrepreneurial competencies of small and medium enterprises, the mean values of each competence is initially revealed with standard deviation. The mean values describe the average perception of business owners, the standard deviation explains how much deviates from the mean values, and the alpha values depict the internal consistency among variables. As shown in Table (3), the alpha values are above 0.70, the minimum acceptance level.

The standard deviation for each variable is below one which explains that it does not deviate from the mean value.

According to Table (3), entrepreneurial competencies are at the adequate level and thus it can be inferred that the owners of SME have high competencies. Among six entrepreneurial competencies comprised in this study, determination competencies show the maximum mean value explaining the entrepreneurs initiated the new venture with decisive manner in managing own business. On the other hand, industry specific knowledge shows the minimum mean value explaining the business owners comprehend the conditions of industry. Thus, it can be stated that the entrepreneurs know the nature of business environment to search for new opportunity for sustaining business growth.

The independent variables (communication competencies, determination competencies, basic business competencies, strategic competencies, resource competencies, industry specific knowledge) were tested to show their correlation with dependent variable (SME performance). Correlation is the statistical technique that can show whether and how strongly pairs of variables are related. The results of the correlations of the measured variables are shown in Table (4).

Table (4) Correlation Analysis of Entrepreneurial Competencies and SME Performance

Variables	1	2	3	4	5	6	7
1.Communication Competencies	1						
2.Determination Competencies	.615**	1					
3.Basic Business Competencies	.444**	.631**	1				
4.Strategic Competencies	.426**	.630**	.629**	1			
5.Resource Competencies	.640**	.606**	.686**	.686**	1		
6.Industry Specific Knowledge	.685**	.499**	.507**	.404**	.641**	1	
7.SME Performance	.506**	.418**	.395*	.508**	.704**	.653**	1

** . Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

Source: Survey Data (November 2023)

According to Table (4), entrepreneurial competencies (communication competencies, determination competencies, strategic competencies, resource competencies, and industry specific knowledge) have the positively and significantly correlated with SME performance at the 0.01 level. Weak correlation of determination competencies, basic business competencies, and SME performance is observed. Moderate correlation of communication competencies, strategic competencies, resource competencies, industry specific knowledge and SME performance is found in this study. The correlation results show that the entrepreneurial competencies are the primary means to enhance firm performance.

Entrepreneurial competencies and the SME performance is measured on a continuous scale and multiple regression analysis is used in this study. The effects of entrepreneurial competencies on performance of SMEs are analyzed as described in Table (5).

According to analytical results of this study, the adjusted R^2 is 0.532 and the predictors have explained 53.2% of the variance in the dependent variable of firm performance. The value of F-test, the overall significance of the model, shows that the model as a whole is statistically significant at 1 percent level. According to the multiple regression results, firm performance is

0.852 if private business owners have no entrepreneurial competence. It is then found that resource competencies have positive and significant effects on firm performance at 1 percent level. Thus, the higher resource competencies of small and medium enterprises are, the higher their firm performances are. It is also found that resource competence reveals the most significant effects on firm performance. Similarly, industry specific knowledge has positive and significant effects on firm performance at 5 percent level and thus it can be inferred the higher small and medium enterprises' industry specific knowledge, the higher their firm performance. Although strategic competencies show positive effects on firm performance, it is not significant. In addition, communication competencies, determination competencies, and basic business competencies show negative effects on firm performance but their effects are not significant as well.

Table (5) Multiple Regression Analysis of Entrepreneurial Competencies and SME Performance

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	0.852	0.696		1.224	0.230
Communication Competencies	-0.103	0.198	-0.091	-0.519	0.608
Determination Competencies	-0.024	0.181	-0.023	-0.135	0.893
Basic Business Competencies	-0.335	0.219	-0.258	-1.533	0.135
Strategic Competencies	0.177	0.186	0.160	0.954	0.347
Resource Competencies	0.550**	0.193	0.569	2.857	0.007
Industry Specific Knowledge	0.511*	0.196	0.427	2.612	0.013
R ²	0.604				
Adjusted R ²	0.532				
F	8.381**				

Source: Survey Data (November 2023)

Note: ** and * show statistically significant at 1% and 5% levels respectively.

Dependent Variable: SME Performance

Discussion

This study found that most of entrepreneurs are female entrepreneurs and the age of 41 to 50 years old. Married person occupies the largest portion in this study, and having the education level of graduated. Most of entrepreneurs spent about 20 hours a week in managing their own business. After that, the firm age represents young for most firms especially infant industry in Myanmar, most are manufacturing firms, and most of them employ 10 people in doing family-based business. It is found that the feature of entrepreneurial orientation among local businessmen

largely depends on self-reliance and traditional establishment of family business with a pattern of informal linkages with other business partners.

This empirical study found that resource competencies and industry specific knowledge show positive and significant effects on the performance of small and medium enterprises. However, the effects of communication, determination, basic business, and strategic competencies on firm performance show insignificant. The current situation and nature of business sector specialization play the critical role to determine firm performance as most entrepreneurs take the figurehead position for the establishment of business enterprises. Those entrepreneurs need the requirements for managing business operations, appraising business financing, responding the orders from customers, and deploying organizational resources effectively and efficiently. The business owners need to take homework for managing key resources before and after starting business operations, and their resource management determine business success. Thus, resource competencies show positive and significant effect on firm performance.

Business owners also need to understand the dynamic business environment and are skillful to comprehend the competitive nature of specific industry as a whole. If they understand the nature of industry, they can manage limited organizational resources in order to hedge risk and accomplish challenging assignment accordingly. As the socioeconomic development and competitive industry shape the destiny of an organization, there is a must be requirement to scan business environment to realize opportunities and challenges. Thus, industry specific knowledge describes positive and significant effects on the performance of SMEs.

Effective management skills for administering the key business process play the vital role for every business executive, and the business owners enable to setup the road map to steer the direction of value-added activities and ultimately towards business success. Effective management skills can build strong morale, increase labor productivity, accelerate the speed and pace, avoid ethical pitfalls, utilize organizational resources, establish the foundation for good governance, and sustain business growth. Common competencies for local small business owners create the sound financial plan to develop business model to offer creative thinking and innovative offerings as a clue of expertise and specialization. Also, the owners of small and medium enterprises need to comprehend the specific knowledge and contextual factors, and help the employees learn internally and externally to improve financial and nonfinancial performance.

In this study, certain kinds of entrepreneurial competencies contribute to performance of firms, this means that the entrepreneurial training and development program, institutional support and inter-frim linkages and sharing information can improve the growth of small and medium enterprises in Myanmar. Some kinds of competencies are subject to changes depending on the prevailing situations and leads to slow down the performance of firms in many sectors. For the entrepreneurs, innovative culture remains critical for the improvement of business operations that promote the conducive business environment which can create opportunities not only for existing business enterprises but also for new entrants.

In order to enhance the performance of small and medium enterprises, it is essential to create a culture of internal and external learning that can utilize different kinds of organizational resources by monitoring the system of industrial organization and changing nature of the business environment. After that, business owners should attempt to achieve first mover advantage in the

market, occupy entrepreneurial spirit, and manage and develop skilled labor to meet the opportunities for all firms regardless of their sectoral socialization in the industry. Personal competencies are essential to be creative and choose among alternative courses, balancing emotional condition and managing daily conditions successfully. Although not significant effect on performance of SMEs, interpersonal competencies remain prevalent for negotiating with business partners by delegating business transitions to achieve business vision with the effective management of organizational resources.

Conclusion

In this empirical survey, entrepreneurial competencies of small and medium enterprises are at the agreement level. Therefore, it can be concluded that business owners have high essential competencies of communication, determination, basic business knowledge, strategic, resource, and industrial specific competencies. The analytical results show that resource competencies, and industrial specific knowledge positively contribute to SME performance. Thus, local businesses need to manage their key resource and sustain distinctive competencies that require effective management of organizational dynamism for the attainment of challenging goals at the current changing situations. Also, the manufacturers should learn industry specific technical knowledge for the requirements of organic system that require the creation of value added products and services which ultimately leads to fulfilling market demands for satisfied customers.

Limitations and Needs for Further Research

Although the study mainly presents the effects of entrepreneurial competencies on firm performance, other competencies revealing dramatic effect might cause the determinant reason due to the nature and pattern of industrial development. Next, development stage for market acceptance and different sectoral specialization determine the critical reason for SME performance that can become paramount. SME performance is measured with owner perception, financial and non-financial measures can support the relationship more fruitful and supportive. Entrepreneurial orientation for specific business sector might offer useful guidance for new entrants in the competitive market. This study focuses only on some kinds of business sector and hence new empirical studies can attempt to key sectors in different areas of the country.

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EFFECTS OF JOB MOBILITY ON WORKING LIFE OF PRIVATE BANK MANAGERS

Nan Thida Win¹

Abstract

This study aims to analyze the effect of job mobility on the working life of private bank managers and to examine the effects of occupational mobility on the working life of private bank managers. Job-to-job mobility and occupational mobility are used to measure the effects of job mobility of private bank managers in Myanmar. Primary data were collected from 321 managers of private banks in Myanmar which have at least ten years of working experience in the selected private banks by using a structured questionnaire. For job-to-job mobility, the study found that most of the bank managers' job tenure is less than 6 years and the average job duration is between 1 to 6 years. The analysis revealed that job tenure has a significant positive effect on working life. The longer the job tenure, the better the working conditions of the surrounding environment. Concerning the effect of occupational mobility on working life, the results demonstrate that job level change has a positive effect on working life. However, the results show that organizational changes have a significant negative effect on working life. The private banks need to increase the job tenure of private bank managers and reduce organizational changes by taking necessary measures.

Keywords: Job mobility, Private banks, working life.

Introduction

Every aspect of organizations is changing in response to changes in the external environment. Likewise, patterns of almost every kind of job are changing over time due to changes in technology, the socio-economic situation of people and growing competition. These changes often affect the working life of people in the businesses that, in turn, leads to the shift in attitude of people towards their organizations. Attitude of people towards their organization changes from job security to employability reflecting the changing value of people. The changes affect employees' loyalty and attitude towards their organizations and careers. Accordingly, the changes in values and attitudes are impacting on the job mobility of managers and employees (Reineholm, Gustavsson, Liljegren, & Ekberg, 2012).

Due to the pressures from the external and internal environments, job mobility of Myanmar managers is increasingly gaining momentum and now becoming common in all kinds of business sectors, particularly in the banking sector. To survive and prosper in the tightly competitive banking industry, private banks require skilled managers who are able and willing to provide customer values with reliable services to be competitive in the robust market. Thus, there are intense competitions among banks to attract skilled managers that make bank managers move from one bank to another and thereby increases external job mobility.

Job mobility provides benefits not only to companies but also to employees. Employee mobility has many advantages for companies. It creates an opportunity to recruit rare talent. New talent can arrive with new knowledge and skills that benefit the company. These new starters also help meet the need for interculturality and diversity of the teams. Internal mobility issues may encourage talent to change company. Therefore, job mobility poses two challenges for companies: attracting and retaining new talent.

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Increasing job mobility may tend to reduce capability and have negative impact on working environment of employees. Thus, it is imperative for an employee to understand what types of job mobility would lead to positive or negative impacts on their working life. Therefore, this study aims to analyze the effects of job mobility of managers from private banks in Myanmar.

The objectives of the study are set up as follows:

- (1) To analyze the effects of job-to-to mobility on the working life of private bank managers.
- (2) To examine the effects of occupational mobility on the working life of private bank managers.

Literature Review

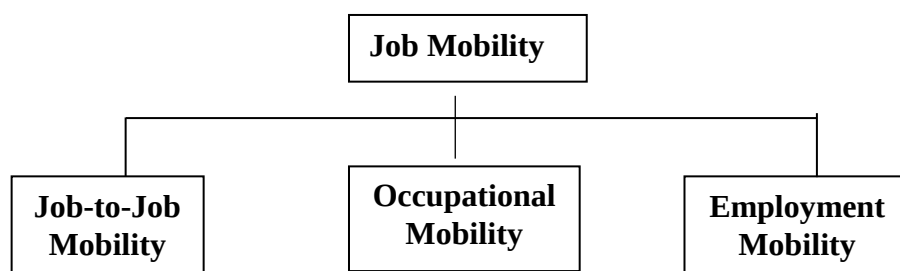
Job mobility is a rather complex concept and has multiple terms but most are overlapping in meaning. It may also be distinguished as patterns of intra- and inter-organizational transitions over the course of a person's work life (Sullivan, 1999). Intra-organization job mobility is referred to as internal job mobility and inter-organizational job mobility is referred to as external job mobility (Ng, Sorensen, Eby, & Feldman, 2007).

Job mobility is generally defined as "the ability of an individual to change his/her position or rank within a profession or to change occupation". It refers to patterns of intra- and inter-organizational transitions throughout a person's work life (Hall, 1996). Job mobility can also be defined as the movement of a worker in and out of jobs throughout his career as measured through specific instances of job separation (Huffman, 2012).

Types of Job Mobility

Andersen et al., (2008) stated a report namely "Job mobility in the European Union: Optimizing its social and economic benefits". This report revealed that there are three types of job mobility. They are:

- (1) Job-to-job mobility, which is defined as a change of employer.
- (2) Occupational mobility, which is defined as a change of occupational status e.g. change of job profile and job content.
- (3) Employment mobility, which is defined as transitions between different labor market statuses, especially the case in which it is possible to move between employment status (employment, unemployment, self-employment, and inactivity) and between different contract types). Three types of job mobility are presented in Figure (1).



Source: Andersen et al., (2008)

Figure 1: Types of Job Mobility

Job-to-Job Mobility

Job-to-job mobility denotes an individual's move from one employer to another (Andersen et al., 2008). From this simple starting point, however, many different perspectives and indicators of job-to-job mobility are applied in the literature.

As described above, job-to-job mobility is a complex phenomenon, which can be viewed from different perspectives. The following indicators are used to analyze job-to-job mobility (Andersen et al., 2008):

- (1) Job tenure, which refers to the average job length people have been employed with their current employer;
- (2) Average job duration, which is calculated as the average of individual job durations, i.e. the duration of the labour market career of an individual divided by the number of jobs held by that person.

Occupational Mobility

Occupational mobility refers to individuals' change of occupational status e.g. change of job profile and job content (Andersen et al., 2008). The definition of occupational mobility includes internal mobility, which designates movements within the workplace. It is also denoted as job level changes and external occupational mobility, which designates movements between occupations and employers. It is also called organization changes. Consequently, occupational mobility and job-to-job mobility are not mutually exclusive. Different definitions and perspectives of occupational mobility can be found in the literature.

Generally, the following indicators are used to analyze occupational mobility (Andersen et al., 2008).

- (1) Occupational mobility, measured as shifts in required skills.
- (2) Work life occupational category mobility, which refers to the path leading from labor market entry to a current occupational class position.

Employment Mobility

Employment mobility is defined as the rate of transition from one employment status to another. This aspect covers movements in and out of the labour market as well as between different types of employment contracts (i.e. permanent or temporary employment and part-time/full-time employment) (Andersen et al., 2008).

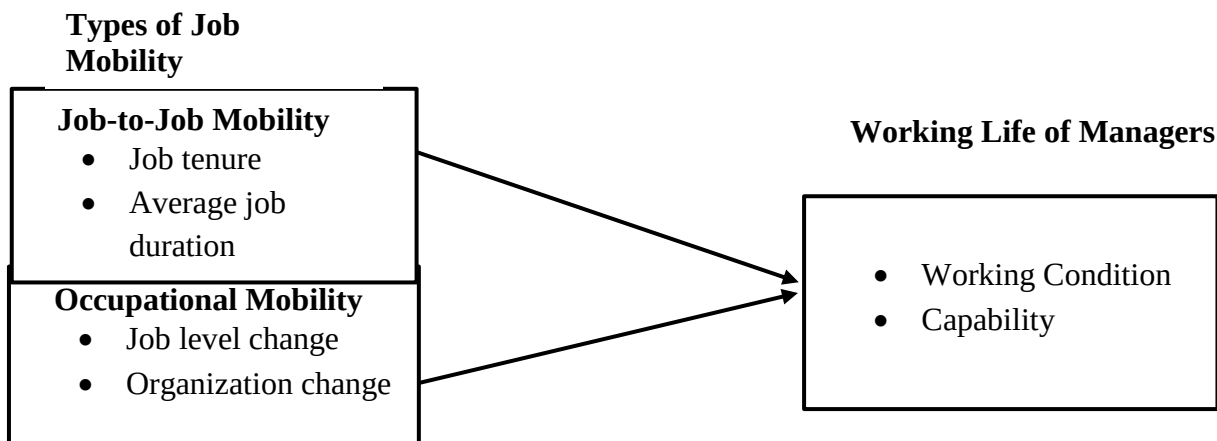
Conceptual Framework of the Study

The proposed conceptual framework of the study is presented in Figure 1. The conceptual framework of the study is developed based on the theory and literature from various sources.

In the conceptual framework, types of job mobility of bank managers are identified based on three types of job mobility developed by (Andersen et al., 2008). They are job to job mobility, occupational mobility, and employment mobility. Among them, employment mobility is excluded from this research due to the labour market condition of Myanmar, it is very difficult to trace. Therefore, job-to-job mobility and occupational mobility are examined to explore motives for job mobility and influencing factors on the job mobility of managers in private banks in Myanmar and its effect on the working life of private bank managers. The working definitions of the types of job mobility for this study are as follows:

- (1) Job-to-job mobility, which is defined as a change of employer.

- (2) Occupational mobility, which is defined as a change of occupational status e.g. change of job profile and job content.



Source: Own Compilation Based on Literature Review

Figure 1 Conceptual Framework of the Research

The measurement of the effects of job mobility was based directly on the questions developed by Goldthorpe et al. (1968). The key terminologies and working definitions for the effects of job mobility are as follows:

- (1) Working conditions: Working conditions involve aspects of work and its environment including physical environment, job security, work control, working hours, career prospects, and job satisfaction.
- (2) Capability: Capability involves the knowledge, skills, and abilities of the people employed in an organization that can be utilized to improve their performance and potential in the organization.

This conceptual framework consists of two parts which are independent variables and dependent variables. Independent variables include job-to-job mobility and occupational mobility. Working life is a dependent variable. To measure the working life of private bank managers, the following factors are used.

- (1) Working Condition, and
- (2) Capability

This study assesses if there is any effect of types of job mobility on the working life of managers. This research is expected to offer a better understanding of the effects of job mobility and its effects.

Methods

This research applies quantitative methods using both primary and secondary data. Primary data were collected from 321 managers of private banks in Myanmar who have at least ten years of working experience in the selected private banks through a structured questionnaire. Secondary data were obtained from previous research and published in such fields as journals, articles, research papers, internet websites, books, and other sources.

This research mainly focuses on analyzing the effects of job mobility on the working life of bank managers in the private banking sector. Currently, there are four state-owned banks and

24 private banks in Myanmar (CBM, 2017). Only banks operating in the private sector are focused on this study. Among a total of 24 private banks, 50 percent of the total, 12 banks were chosen as a sample with a simple random sampling method. After selecting 12 private banks to analyze the job mobility of managers, the sample size is determined based on the formula (Yamane, 1973). Among bank managers who have at least ten years of working experience in these sampled banks, 321 managers were selected using simple random sampling method. The data collection period was August 2018. Data were processed using the Statistical Package for Social Sciences (SPSS).

This research primarily focuses on analyzing the effects of job mobility on the working life of bank managers in the private banking sector. Currently, there are four state-owned banks and 24 private banks in Myanmar (CBM, 2017). Only banks operating in the private sector are included in this study. Among the 24 private banks, 50 percent, or 12 banks, were chosen as a sample using a simple random sampling method. After selecting 12 private banks to analyze the job mobility of managers, the sample size was determined based on the formula by Yamane (1973). Among bank managers with at least ten years of working experience in these sampled banks, 321 managers were selected using a simple random sampling method. The data collection period was August 2018. Data were processed using the Statistical Package for Social Sciences (SPSS).

Empirical Analysis

Reliability test for working life of private bank managers is presented in the following table. In this research, Cronbach's Alpha reliability test is used to measure the internal consistency of variables and an accurate representation of the data.

Cronbach's Alphas Reliability Test

Table 1 shows the mean and Cronbach's Alpha of the variables used in the following conceptual framework.

Table 1 Overall Mean and Reliability Test

Sr. No.	Factors	Overall Mean	Cronbach's Alpha
1	Working Condition	3.78	0.725
2	Capability	3.78	0.746

Source: Survey Data (2018)

As shown in Table 1, since the reliability coefficient is above the recommended value of 0.6, the instruments can be considered sufficiently reliable. As presented in Table 1, the perception on working condition and capability can be seen as fairly high since the overall mean value is 3.78, which indicates a good agreement level regarding working condition and capability (Sekaran & Bougie, 2016).

Types of Job Mobility

This section presents the two types of job mobility that can be found in the mobility of private bank managers in Myanmar: job-to-job mobility and occupational mobility.

Job-to-Job Mobility

In this study, Job-to-job mobility is measured by job tenure and average job duration. Job tenure refers to the average job length people have been employed with their current employer. Average job duration is calculated as the average of individual job durations, i.e. the duration of

the career life of an individual is divided by the number of jobs held by that person. The job-to-job mobility of private bank managers is shown in Table 2.

Table 2 Job-to-Job Mobility

Sr. No.	Job Tenure			Average Job Duration		
	Year of Job Tenure	No. of Respondents	Percent	Year of Average Job Duration	No. of Respondents	Percent
1	1-6	137	42.7	1-6	250	77.9
2	7-12	98	30.5	7-12	57	17.8
3	13-18	44	13.7	13-18	8	2.5
4	19-24	36	11.2	19-24	3	0.9
5	25-30	6	1.9	25-30	2	0.6
6	31-36	-		31-36	1	0.3
	Total	321	100.0		321	100.0

Source: Survey Data (2018)

The table shows that most of the bank managers' job tenure is less than 6 years. Longer job tenure means that the more familiar the managers are with the organization's culture and system, the greater and deeper the social network which leads to a low level of job-to-job mobility.

The average job duration of managers is also shown in Table 2. In this study, the average job duration is calculated by dividing the length of the total career life of an individual by the number of positions he/she has been working. The higher average job duration means the longer time manager working for a job and it leads to lower job mobility between organizations. As shown in Table 2, the majority of bank managers have an average job duration of between 1 to 6 years.

Occupational Mobility

Occupational mobility is measured by job level change and organization change. The job level change of managers is shown in Table (3).

Table 3 Occupational Mobility

Statements	Total Respondent	Managers Who Change Organization		Managers Who Do Not Change Organization	
		No. of Respondents	Percent	No. of Respondents	Percent
		240	100	81	100
Entry to present	Upward	211	87.9	81	100
	Same/Lateral	29	12.1	-	-
	Downward	-	-	-	-
Previous position to current position	Upward	168	70	76	93.8
	Same/Lateral	72	30	5	6.2
	Downward	-	-	-	-

Statements	Total Respondent	Managers Who Change Organization		Managers Who Do Not Change Organization	
		No. of Respondents	Percent	No. of Respondents	Percent
		240	100	81	100
Previous organization to current organization	Upward	173	72.1	-	-
	Same/Lateral	64	26.7	-	-
	Downward	3	1.2	-	-

Source: Survey Data (2018)

Table 3 presents three types of job level changes of bank managers – (1) from entry to present position in the organization, (2) from the previous position to current position and (3) from previous organization to current organization.

As shown in the table, it is found that 75% of selected bank managers changed the organization and 25% of total bank managers work in the bank in which they worked as the first position. Among the managers who changed the organization, about 88% of bank managers got promotions from their entry to present positions while all of the managers who did not change the organization are getting upward promotions from their entry to present positions in their respective organizations.

When analyzing the managers' previous positions to the current positions, 70% of bank managers who changed organization got upward promotions while almost 94% of managers who did not change the organization were promoted. In comparison, it can be inferred that the banks offer better promotion opportunities for those managers who do not change organization.

When examining the bank managers who changed from the previous organization to the current organization, the majority of bank managers got the upward promotion. Only 27% of the managers reported that they are working in the same position. Therefore, it implies that upward promotion opportunity is a driving force for the managers to change among banks.

Table 4 shows the number of job position changes along with the working life of the bank managers.

Table 4 Position Change

Sr. No.	No. of Position Change	No. of Respondents	Percent
1	1	18	5.6
2	2	38	11.8
3	3	51	15.9
4	4	64	19.9
5	5	63	19.6
6	6	45	14.0
7	7	27	8.4
8	8	6	1.9
9	9	3	0.9
10	10	4	1.2

Sr. No.	No. of Position Change	No. of Respondents	Percent
11	12	2	0.6
Total		321	100.0

Source: Survey Data (2018)

As shown in Table 4, it indicates that most of the bank managers have been increasing their job positions between 4 times to 5 times in their career life. The change in the number of job levels is also associated with their working experience. Generally, the higher the working experience, the greater the job positions change in the form of promotion.

Table 5 shows the number of organizations that bank managers have changed throughout their careers. As shown in Table 5, it indicates that the majority of the bank managers changed two organizations. It is also found that 25% of bank managers do not change the organization in their working life.

Table 5 Organization Change

Sr. No.	Organization Change	No. of Respondents	Percent
1	No Change Organization	81	25.2
2	1	15	4.7
3	2	106	33.0
4	3	70	21.8
5	4	24	7.5
6	5	17	5.3
7	6	3	0.9
8	7	3	0.9
9	8	1	0.3
10	9	1	0.3
Total		321	100.00

Source: Survey Data (2018)

Table 6 shows the industry working by the bank managers before they joined the banking industry.

Table 6 The Industry of Last Job before Working in Banking Industry

Sr. No.	Sector	No. of Respondents	Percent
1	Tourism	11	3.4
2	Agriculture	2	0.6
3	Mining	1	0.3
4	Manufacturing	14	4.4
5	Energy	1	0.3
6	Construction	15	4.7
7	Trade	17	5.3
8	Transport	1	0.3
9	Education	12	3.7
10	Health and social	3	0.9

Sr. No.	Sector	No. of Respondents	Percent
11	Textile and garment	1	0.3
12	Banking and finance	76	23.7
13	Others sector	86	26.8
14	No change	81	25.2
Total		321	100.0

Source: Survey Data (2018)

According to the result shown in Table 6, 25% of bank managers do not change organizations during their working life whereas most of the bank managers who changed the organization are those who started their work in banking and finance before. It can be inferred that people in the banking and financial sector are transferred to the private banks.

The Effects of Job-to-Job Mobility on Working Life

To explore the effects of job-to-job mobility on working life, working life is regressed with job-to-job mobility including job tenure and average job duration. In multiple regression models, these variables are used as independent variable and working life is used as dependent variable. The study adopted the following model in estimating the duration of job tenure.

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon_i$$

Where:

Y_i = Working life

β_0 = Constant

β_i = Regression coefficient

X_1 = Job Tenure

X_2 = Average Job Duration

ε_i = independent identically distributed normal error

The results of the analysis on the effects of job- to- job mobility on working life are shown in Table 7.

Table 7 Effects of Job-to-Job Mobility on Working Life

Dependent Variable: Working Life	Unstandardized Coefficients		t	Sig.	VIF
	B	SE			
(Constant)	3.664	.055	66.422	.000	
Job Tenure	0.018***	.004	4.770	.000	1.008
Average Job Duration	-0.009	.006	-1.369	.172	1.008
R ²	.076				
Adjusted R ²	.070				
F-Value	13.008***				

***, **, * Statistical significance at 1%, 5% and 10% level.

Source: Survey Data (2018)

As shown in Table 7, the value of F test, overall significance of the model, is highly significant at 1% level. The specified models explain that the variation of working life is

predicted by two independent variables as the value of R^2 is 8 %. The finding in Table 7 shows that job tenure has a significant positive effect on the working life of bank managers at a 1% level.

Job tenure which is year of service in the current employer has a significant positive effect on working life. It means the longer the job tenure, the better the working condition of the surrounding job. The result also shows that as the managers work in the current job for a long time, their empowerment, and their return from work such as skills, competencies, and capabilities are likely to increase. It means that if a bank manager works for a longer period in the current organization, it makes more improvement in the capability of bank managers for the firm.

The Effects of Occupational Mobility on Working Life

To explore the effects of occupational mobility on working life, working life is regressed with occupational mobility including job level change and organization change. In multiple regression models, these variables are used as independent variable and working life is used as dependent variable. The study has developed the following model.

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon_i$$

Where:

Y_i = Working life

β_0 = Constant

β_i = Regression coefficient

X_1 = Job Level Change

X_2 = Organization Change

ε_i = independent identically distributed normal error

The results of multiple linear regressions analysis are shown in Table 8.

Table 8 Effects of Occupational Mobility on Working Life

Dependent Variable: Working Life	Unstandardized Coefficients		t	Sig.	VIF
	B	SE			
(Constant)	3.835	.079	48.467	.000	
Job Level Change	0.025*	.013	1.953	.052	1.020
Organization Change	-0.220***	.057	-3.832	.000	1.020
R^2	.062				
Adjusted R^2	.056				
F-Value	10.515***				

***, **, * Statistical significance at 1%, 5% and 10% level.

Source: Survey Data (2018)

As presented in Table 8, the value of F test, overall significance of the model, is highly significant at 1% level. The specified models explain that the variation of working life is predicted by two independent variables as the value of R^2 is 6 %.

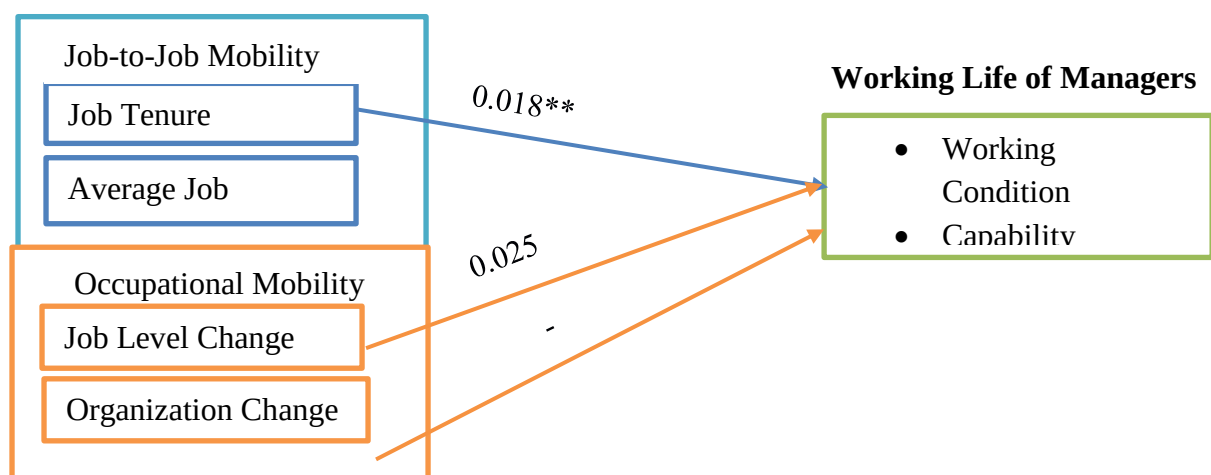
As shown in Table (8), the results demonstrate that job level change of bank managers has a significant positive effect on the working life of bank managers at the 10% level. It means the longer the job level changes, the better the working life.

However, it shows that organization change has a significant negative effect on the working life of bank managers at the 1% level. This means that changing organization has reverse effect on their perception on working condition of the surrounding job. This also implies that the greater the number of organizations changes, the lower the capability of bank managers.

Discussion

This section presents the discussion of the findings from the analysis of the effects of job mobility on the working life of private bank managers. Figure 2 shows the summary of the results that are derived from the analysis.

Types of Job



Source: Survey Data (2018)

Figure 2 Summary of the Results

This study found that among 321 respondents, 75% of total bank managers changed organizations in their working life. Regarding job-to-job mobility, the study found that most of the bank managers' job tenure is less than 6 years. It highlights that the bank manager changes frequently in their working life. The longer the job tenure, the more familiar the manager with the organization. Therefore, longer job tenure leads managers to familiarize themselves with the organization's culture, system and the greater and deeper the social network. Concerning average job duration, the study found that the majority of bank managers have average job duration between 1 to 6 years. The study focuses on bank managers who have 10 years minimum working experience; therefore, their average job duration is also said to be not too high. The higher average job duration means the longer time the manager working for an organization and it leads to lower job mobility.

For occupational mobility, there are two aspects to be considered job level change and organizations change. With regard to the job level changes, among the managers who changed the organization, the majority of bank managers get promotions from their entry to present positions while all of the managers who do not change the organization are also getting upward promotion from their entry to present positions in their respective organizations. When analyzing

the managers' previous positions to the current positions, the majority of bank managers who changed organization got the upward promotion while almost all managers who do not change the organization were also promoted. Relatively, it can be said that the banks offer better promotion opportunities for those managers who do not change organization. When examining the bank managers who changed from previous organization to the current organization, the majority of the bank manager got upward promotion. Regarding the number of organization changes, the results show that the number of organizations most of the bank managers changed is two. Concerning the industry of the last job before working in the banking industry, most of the bank managers who changed the organization are those who started their work in banking and finance before.

To analyze the effects of job mobility on working life of private bank managers, working life of managers is regressed with job-to-job mobility and occupational mobility. The analysis revealed that job tenure has significant positive effect on working life. The longer the job tenure, the better the working condition of surrounding job. As they stay in the current job for longer time, they become favored in their working environment, job satisfaction and feel secured in their jobs. As the manager work in the current job for a long time, their empowerment, their return from work such as skills, competencies, capabilities will also increase. It can improve the capability of bank managers for the firm.

To examine the effects of occupational mobility on the working life of private bank manager, working life of managers is regressed with job level change and organizational change. The results demonstrate that job level change has positive effect on the working life of private bank manager. As the manager promoted to higher level, every working condition such as working environment, income, career prospects, etc. also become better.

However, the results show that organization changes have a significant negative effect on working life. If the individual change to other organization, at the start, the working condition will not be as good as the old company, as they try to adapt in new environment and organization culture. In addition, changing organizations frequently declines the compatibility of job requirement and education, poor opportunity to apply skill and competencies in the job, low level of empowerment, and that lead to lower return from investment in education, skills and experienced.

Based on findings of this study, suggestions and recommendations to bank managers in private bank are provided. The findings show that there is a positive effect of job tenure on working life of the bank managers. It implies that bank managers need to stay long tenure with their current employers for the sake of improving working conditions and capability. It also implies that the bank should encourage to improve job tenure of managers in the current organization because it provides benefits to bank managers in terms of improvement in working condition as well as improving capability of bank manager. The banks need to constantly monitor their bank manager turnover rate and attempt to minimize turnover rate through reward and development opportunities.

The effects of organization changes are significant and negative effect on working condition and capability of bank managers. It suggests that they are discouraged to frequent changes in the organization. This finding highlight that the bank managers should be careful to

change the organization because it tends to reduce the quality of their working condition and capability.

The results-show that job level change has a significant positive effect on the working life of private bank managers. Banks need to provide career advancement programme for the existing bank manager in order to enhance their working condition and capability. By doing so, their commitment to the organization will be increased.

Finally, based on the main findings in the effects of job mobility on bank managers, this study would like to make important suggestions to the bank managers. The first suggestion is that bank managers need to attempt to stay with the current bank as long as possible because increasing job tenure significantly leads to increase their working condition and capability. The second suggestion for bank managers is that they should not change the organizations frequently because it leads to a decline in social life, working environment and capability of bank managers. At the same time, the private banks should try to increase job tenure of private bank managers by giving flexible working arrangements, offering the right benefit, offering training and advancement opportunities, providing ongoing education and clear paths to career growth and recognition.

Conclusion

The findings of this study show the positive effect of job tenure on working life of private bank managers. There is also the positive effect of occupational changes on their working life. However, it is found that the negative effect of organizational changes on working life. Increased job tenure is positively associated with bank managers' organizational commitment and their knowledges on organization's personnel, process and more importantly on organizational value which are important assets for the organization. In addition, the occupational changes particularly with promotion can motivate performance and organizational commitment of bank managers. However, organizational change is negatively associated with work life because it can reduce organizational commitment, knowledges and organizational value of the managers.

Needs for Further Research

This study analyzes the effects of job mobility of managers from private banks in Myanmar. It does not cover the effects of job mobility in other service organizations. In addition, this study only focuses on private banks and excludes public banks. An extension to the study may cover the above-mentioned areas. It would give a better picture of the services industry, a vital element of the economy. Further, the analysis could be applied in other industries such as manufacturing, construction, and financial services for planning and formulating strategies for improving the performance of the firms in these industries.

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STORE ATMOSPHERE AND CONSUMERS ATTITUDE TOWARDS SINGLE-BRAND APPAREL RETAILERS IN MANDALAY

Ye Wint Aung¹, Daw Sie Sar Oo²

Abstract

In this study, consumers' attitude towards single-brand apparel retailers was emphasized by using the Stimulus-Organism-Response (SOR) model and the study was conducted as the stimuli (the traditional store atmospheric cues such as social cues, design cues, and ambience cues) within the single-brand apparel retailers in Mandalay. This study explores the effect of stimulus on consumers' response (approach-avoidance behaviors) through the internal evaluation states (cognitive and affective evaluation). Systematic simple random sampling method was employed to collect data from the 36 single-brand apparel retail stores of 13 brand types and responses of 720 consumers were used for the data analyses. The data were analyzed by using multiple regression analysis. This study found that store atmospheric cues (social cues, design cues, and ambience cues) have an influence on the internal evaluations and ultimately reach to the approach behavior towards single-brand apparel retailers in Mandalay

Key words: store atmosphere, affective evaluation, cognitive evaluation, and consumer response (approach or avoidance behavior)

Introduction

With the abundance of retailers selling similar products, consumers expect a unique shopping experience and a unique product from each retailer. If a consumer wants to purchase a jean, he/she has the option to purchase it from apparel retail stores, such as Tri, Unique, and Victor, just to name a few stores. Every individual is consumer. Consumer behavior is the study of the processes when individual or groups select, purchase, use, or dispose of the product, service, ideas or experiences to satisfy needs and desires (Solomon, 2009). When the consumers want to get the shopping experience and/or products specifications, each of the above retailers have differentiated branded products to offer (Kumar & Kim, 2014). It helps them to yield information about how the consumers think, feel and choose their branded products.

Branded products were typically developed by manufacturers who were responsible for producing and marketing the products while retailers merely distributed manufacturer's brands. With the increasing autonomy, retailers have developed their own private brands (single brand) to compete with manufacturer's brands (Kumar & Steenkamp, 2007).

In such a competitive situation, the retail store must define what is distinctive and special about its offering products to be better competed with other stores (Floor, 2007). In the case of single-brand apparel retailers, one of the core branding components is carrying the single-brand of merchandise that cannot be purchased anywhere else (Koo & Kim, 2013). Retailers selling multiple brands have a limited control on the branding activities of the merchandise that they sell, whereas single brand apparel retailers have complete control on their merchandise brand. The retailers take efforts not only to brand their products but to brand their physical stores to meet branding the store concept. This study will be confined to single-brand apparel retailers who

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strive to create a unique image through their private brands and marketing efforts. In order to understand consumer attitude towards single-brand apparel retailers, this study will employ the Stimulus-Organism-Response (SOR) model (Mehrabian & Russell, 1974).

Rationale of the Study

These days, there are a lot of single-brand apparel retailers in Myanmar and the number of these stores increasing over time. This study aims to identify the consumers' attitude towards single-brand apparel retailers in Mandalay. Single-brand apparel market is booming at present because the numbers of such retailers are increasing year by year. Although there were few single-brand apparel retailers in the mid-1990, nowadays its numbers have increased to 36 shops.

Even though retail branding is one of the most main current developments in the retail industry, few studies have been focused on retail branding in the apparel sector. This study seeks to be one of the first in exploring consumer behavior towards single-brand apparel stores. To achieve this, this study aims to understand consumer perceptions of the store atmosphere (social cues, design cues and ambiances cues) delivered by the single-brand apparel retailer.

Objectives of the Study

To analyze the relationship among the stimulus organism and response, the specific objectives of this study are developed. Accordingly, the objectives of the study are:

1. To investigate whether store atmosphere cues (i.e., social, design and ambiance) have an effect on consumers' affective evaluations towards the single-brand apparel retailers in Mandalay.
2. To determine the effect of affective evaluations towards the store on cognitive evaluations towards the store.
3. To analyze the effect of cognitive evaluations towards the store on consumers' response (approach or avoidance behavior) towards the single-brand apparel retailers in Mandalay.

Method of the Study

In this study, both primary and secondary data are used. The required data for this study had been collected from the consumers who shopped at single-brand apparel retailers in Mandalay by using 1 in 10 systematic simple random sampling methods. Structured questionnaires are used to collect both qualitative and quantitative primary data. The study aims to obtain 720 respondents from the 36 single brand apparel retailers in Mandalay. The questionnaires are composed of six sections: 1. social cues; 2. Design cues, 3. Ambiance cues, 4. cognitive evaluations towards store, 5. affective evaluations towards store, 6. approach-avoidance behavior; All the statements were measured by a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The research model was analyzed by applying multiple regression analysis.

Scope and Limitations of the Study

This study utilized the stimulus organism and response (SOR) framework. First limitation would be that the study analyzed only in the context of single-brand apparel retailers in Mandalay. Second, the proposed model was tested only in the context of single-brand apparel retailers. Attention must be exercised when generalizing these findings to single-brand apparel retailers. The stimuli within the single-brand apparel retailers catering to a particular customer segment might be perceived differently from stimuli within other apparel retailer catering to a

different customer segment. Fourth, this study did not measure any specific cognitive evaluation (e.g., perceived quality, perceived price) and affective evaluation (e.g., pleasure, arousal). Moreover, it develops only store atmosphere cues rather than merchandise cues.

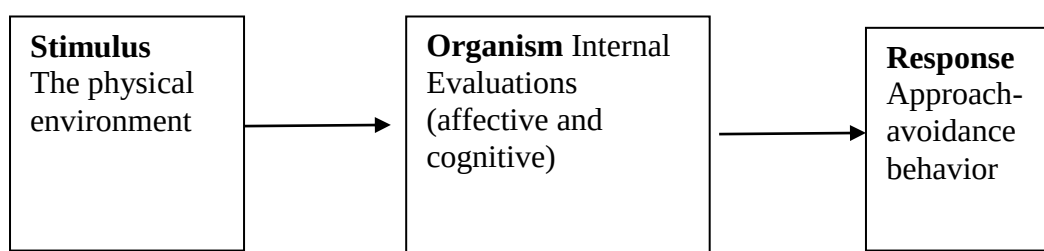
Literature Review

Many retailers have transformed from selling just manufacturer brands to selling their own brands conjunction with manufacturer brands, to becoming brands by themselves. This transformation is concerned with the rise of the retailer as a brand as one of the major trends in the retail sector (Grewal et al., 2009). Retail brands such as Arrow, Bossini, Tri and Victor are considered strong brands themselves. The difference between Arrow, Bossini, Tri and Victor is that Arrow brand is manufacturer's brand and it sells usually in the multi-brand retailer whereas Bossini, Tri and Victor are only its own brand and sell usually in the single-brand retailers. Irrespective of whether the retailer is a multi-brand retailer or a single-brand retailer, it can be considered as retailer as a brand, if the product, store and the corporate brand work together to keep the brand image consistent (Dawson, 2000). Multi-brand retailers carry, in addition to their own brands, other established national brands, which may aid in consumer pull to the store. On the other hand, single-brand retailers carry only their own brands and generate customer pull based on the image of their store name and brand name. This section provides the growth and development of private brands in the apparel sector, followed by a discussion of the theoretical foundation in relation with consumer attitude based on Mehrabian-Russell environmental psychological model on which this study is based.

Stimulus-Organism-Response Model (SOR) Model

Mehrabian and Russell's environmental psychology model is based on the Stimulus-Organism-Response (SOR) model. The model makes two assumptions. First, people's emotions eventually determine what they do and how they do it. Second, people respond with different sets of emotions to different environments (Tai & Fung, 1997). The SOR model relates stimulating features of an environment (S) to approach-avoidance behaviors (R) through emotions generated within the consumer (O). In this model, emotional state acts as a mediating variable in determining the approach-avoidance behavior. As such, Mehrabian and Russell's (1974) Stimulus-Organism-Response model demonstrated the link between physical environment and its effect on an individual's behavior (Figure 1). That is, a physical environment influences an individual's internal states, which lead the individual to either approach or avoid the environment (Mehrabian & Russell, 1974).

Figure 1 Stimulus-Organism-Response (SOR) Model



Source; Mehrabian & Russell (1974)

The SOR framework has been adopted in the context of retail environment, with several studies supporting the relationship between store environment and consumer purchase behavior (Baker et al., 1992; Donovan & Rossiter, 1982). Retail store designs that shape a retail space create or alter consumers' mood and impact consumers' behavioral response.

The Stimulus

Stimulus has been conceptualized as something that rouses or incites action (Bagozzi, 1986). When the SOR model is applied in the retail context, stimuli are the store atmospheric cues that affect the internal states of the consumer. Baker (1987) classified environmental components into social factors, design factors, and ambient factors. This study emphasizes about the store atmosphere (social factors, design factors, and ambient factors) in relation with store stimuli and these cues are as follows.

(a) Social Cues

Store employees and other customers in the store are recognized as social factors in the retail store setting (Baker, 1987). The social variables include employee appearance, number of employees, gender of employees, and dress or physical appearance of other customers. Floor (2009) stated that the personality of retail brand and its employee appearance and behavior go hand in hand. The presence of very few customers and crowding customers could have a negative impact and positive impact on shoppers' store evaluation and satisfaction (Machleit, Eroglu, & Mantel, 2000).

(b) Design Cues

Design elements such as layout, merchandise organization, and comfort are part of functional store elements, while design elements such as architecture, décor, and color are part of aesthetic store elements. It has been found that these design elements influence an individual's evaluations within the environment (Baker et al., 1994). More specifically, store design cues positively impact consumer judgment about merchandise quality sold in the store. Similarly, consumers would be willing to pay a higher price for merchandise sold in an upscale store even before they know the actual price (Baker et al., 2002). The design cues, such as color, layout, and in-store display, offered by the single-brand apparel retailer could help consumers form an opinion or develop a belief about the store.

(c) Ambience Cues

Ambient factors refer to the non-visual elements of a space (e.g., temperature, music, and lighting). Several studies on store atmosphere have identified different types of ambient cues: visual cues such as color and lighting (Bellizzi, Crowley, & Hasty, 1983), acoustic cues such as music and noise (Mattila & Wirtz, 2001), and smell and scent. Smell can influence respondents in regard to elaborative image, affective and evaluative responses, purchase intention, and behaviors (Bone and Ellen, 1999). Shoppers perceived higher prices for wine when classical music was played than when hip-hop music was played in the background. Similarly, store lighting was found to influence store image, examination and handling of merchandise (Areni & Kim, 1994).

Organism

Organism refers to the —internal processes and structures intervening between stimuli external to the person and the final actions, reactions, or responses emitted (Bagozzi, 1986). Bagozzi (1986) stated that the intervening processes and structures consist of perceptual, physiological, feeling, and thinking activities. Researchers have identified two types of individuals' internal evaluation states that are induced by the physical environment: cognitive and affective (Mehrabian & Russell, 1974; Zeithaml, 1988).

(a) Cognitive Evaluation

Cognitive evaluation is associated with consumer perception process, which originates from information-processing and inference theories (Bettman, 1979). Atmospheric cues provide some important informational cues, based on which consumers can conclude about price, product, or service quality in that store (Baker, et al, 2002).

(b) Affective Evaluation

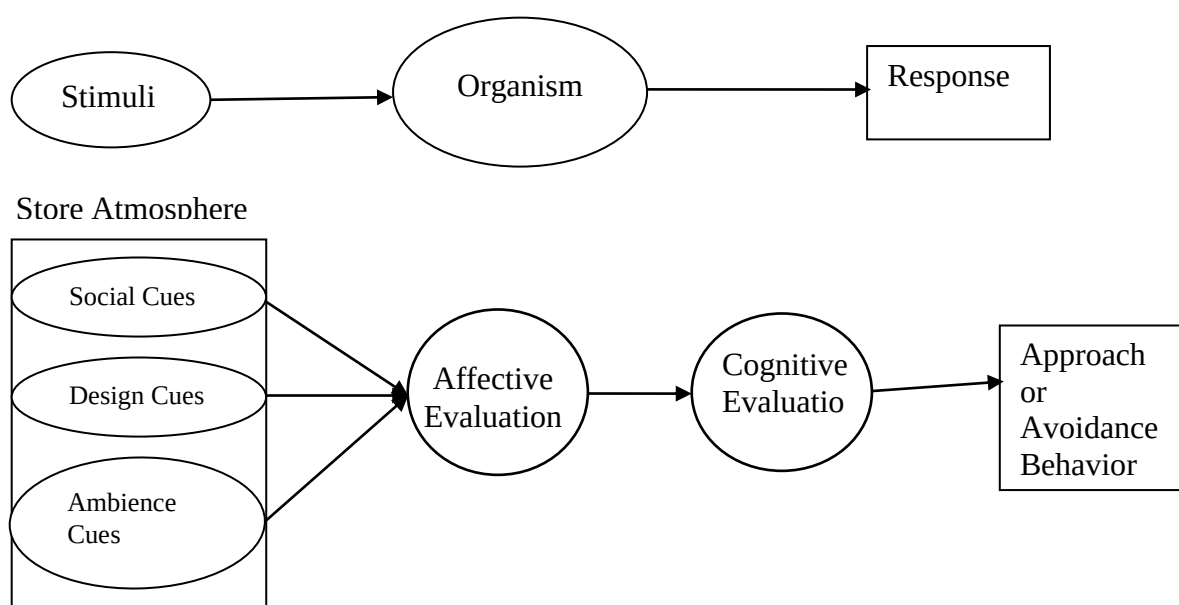
Emotional state or affective evaluation is a judgment whether an object is pleasant, attractive, valuable, likable, or preferable (Russell & Snodgrass, 1987). Mehrabian & Russell (1974) hypothesized that any environment is capable of inducing and producing different emotional states in an individual. Mehrabian & Russell (1974) suggested three dimensions for the emotional states that are developed in an individual's mind - pleasure, arousal and dominance, also called the PAD framework.

The Response to the Store Stimuli

Response is associated with the psychological reactions such as attitudes and behavioral reactions of consumers (Bagozzi, 1986). The retail atmosphere has been found to influence customers' behavioral intention, which is composed of different dimensions such as number of items purchased, amount of money spent in the store, and whether the shopper liked the store environment or not (Sherman & Smith, 1986). In the retailing context, response to store stimuli is often termed as approach or avoidance behavior. Approach is the desire to remain in the store, continue shopping and willingness to stay for relatively long periods. In contrast, avoidance behaviors are associated with negative reactions including a desire to leave the store and not return (Mehrabian & Russell, 1974).

Conceptual Framework of the Study

In this section, proposed research model was developed in connection with the store atmosphere, consumers' internal evaluation and consumers' response. Figure 2 shows the proposed research model of the study.



Source: Own Compilation

Figure 2 Conceptual Framework

In the conceptual model of the study, the independent variables are store atmospheric cues (social cues, design cues and ambience cues) dependent variable are approach or avoidance behavior in which it have to test whether stimuli (store atmospheric and merchandise) have the impacts on intervening mental evaluation states (affective and cognitive evaluation towards store), which in turn, it need to analyze the effects of the mental evaluation states on consumers response (approach or avoidance behavior).

Empirical Analysis of Store Atmosphere and Consumers Attitude towards Single-Brand Apparel Retailers

In this section, stimuli can be categorized into three categories: store atmosphere (social cue, design cue, ambience cue). These stimuli are considered as independent variables and affective evaluation towards store are considered as dependent variables. When estimating regression coefficients concerned with the effect of store atmosphere on affective evaluation of the store and merchandise. Regression coefficients, standard error and significant 'p' values had presented in Table 1.

Table 1 Effect of Stimuli (Social Cue, Design Cue and Ambiance Cue) on Affective Evaluation

Stimuli (Store Atmosphere)	Unstandardized Coefficient		T value	Sig
	B	Std Error		
(Constant)	-2.136	.295	-7.236	.000
Social Cue	.469	.035	13.594	.000
Design Cue	.615	.038	16.278	.000
Ambiance Cue	.418	.037	11.194	.000
R	.636			
Adjusted R ²	.405			
F Value	169.127			

Source: survey data (2020)

Dependent Variable: Affective Evaluation towards store

Notes: ** indicates that 't' is significant at 5% level and

***indicate that 't' is significant at 1% level.

According to Table 1, store atmosphere cues (social cue, design cue, ambiance cue) have the direct positive impact on affective evaluation towards store. The three store atmosphere cues (social cue, design cue, ambiance cue) have the values of .469, .615 and .418 respectively. These variables are significant at 1% significant level.

Table 2 Effect of Affective Evaluation on Cognitive Evaluation

Organism (Cognitive Evaluation)	Unstandardized Coefficient		t value	Sig
	B	Std Error		
(Constant)	2.148	.084	25.513	.000
Affective Evaluation	.533	.020	26.978	.000
R	.702			
R ²	.493			
F Value	727.832			

Source: survey data, 2020

Dependent Variable: Cognitive Evaluation towards Merchandise

Notes: ** indicates that 't' is significant at 5% level and

***indicate that 't' is significant at 1% level.

According to Table 2, the effect of affective evaluation on cognitive evaluation is the direct positive impact on cognitive evaluation at 1% significant level since regression result in concern with the effect of affective evaluation on cognitive evaluation is the value of .533. Because the positive linear relationship between these two variables, the retailers have to create a pleasant feeling about the store atmosphere.

Table 3 Effect of Cognitive Evaluation towards on Consumers' Response

(Affective Evaluation)	Unstandardized Coefficient		t value	Sig
	B	Std Error		
(Constant)	1.251	.104	12.017	.000
Cognitive Evaluation	.699	.024	29.675	.000
R	.735			
R ²	.541			
F Value	880.605			

Source: survey data, 2020

Dependent Variable: Consumer Response

Notes: ** indicates that 't' is significant at 5% level and

***indicate that 't' is significant at 1% level

According to Table 3, the effect of cognitive evaluation on consumers response is the direct positive impact at 1% significant level since regression result in concern with the effect of cognitive on consumers response is the value of 0.699. As this result, the retailers need to consider consumers characteristics to appeal customers with the exiting, interesting and arousing shopping experience and valuable information to provide consumers for inference and make decision that whether the product is suitable or not.

Conclusion

The research model developed for this study aims to understand consumers attitude towards single-brand apparel retailers in concerned with store atmosphere cues as the stimuli and consumers' approach or avoidance behavior through the organism (affective and cognitive evaluation). This section presents the findings and discussions, suggestions and recommendation and needs for future study.

Findings and Discussion

This study offers several contributions that can help single-brand apparel retailers which want to appeal to more customers and increase store patronage. The following sections are presented the findings that command discussion for contributions to retailers.

As expected, social cues, design cues and ambience cues had significant positive effects on the affective evaluations toward the store. As described above section, affective evaluations toward store had significant influence on cognitive evaluations towards store. In the current study on approach-avoidance behavior towards single-brand apparel retailers, it can conclude that store atmospheric cues have the positive effect approach-avoidance behavior through the cognition-affect sequence. This means that approach behavior is due to affective and cognitive evaluations because of reasonable information-inference from the preference or positive emotional feeling and then the consumers have the approach behavior which would appear repurchase intention towards these stores.

Suggestions and Recommendation

In term of single-brand apparel retailers in Mandalay, consumers will receive preference emotional feeling and good opinion towards the store atmosphere cues if the retailers can provide these cues to be arousal and exciting. In order for consumers to determine a favorable feeling and opinion towards the store, single-brand retailers need to focus on social cues in term of training employees to be friendly, knowledgeable, and helpful. Single-brand apparel retailers need to ensure that there are enough employees to assist the consumers' needs and wants.

In concerned with the design cues, the retailers need to create attractive store design to be influence of consumers' emotional feeling because the design cues have an influence on consumers' perceptions towards quality and price of the merchandise and the evaluation of the service offered by the retailers. Hence, single-brand apparel retailers need to support the design cues employed in their store such that they will have a preference evaluation towards the store. Single-brand apparel retailers need to ensure that design factors, such as color scheme of the store, physical facilities, and in-store displays, appeal to their customer segment and compare with their store image.

Similarly, if a consumer perceives that the music played in the store does not fit the store image, then the consumer could form negative feeling about the store. Further, lighting plays an important role in creating appealing emotional feeling towards the single-brand apparel store. Single-brand apparel retailers need to ensure that the lighting is not only enjoyable, but also articulates the products displayed in the store. Lighting should also harmony with the image that the single-brand retailer is trying to achieve. Therefore, single-brand apparel retailers need to

understand that consumer emotional feeling towards the store can be manipulated by upgrading the social cues, design cues and ambient cues.

Since such retailers have to depend on only one brand of merchandise as a customer pull, marketers need to pay close attention to the way that they market their overall brand image. Branding the store concept has an important implication for single-brand apparel retailers. Thus, a single-brand apparel retailer can maximize brand equity by coordinating and offering consistent store image through social cues, design cues and ambiance cues. It is also essential for single-brand apparel retailers to build a strong personality and provide a shopping experience, in terms of both store atmosphere cues, which match their personality. Similarly, even if the merchandise meets the customer's expectations, but if the customer perceives the store to be unsatisfactory, then there will be a dissonance which may lead to an avoidance behavior. Once there is a continuous integration between the single-brand apparel retailer's philosophy and implementation of store atmosphere cues (store environment), consumers will not be able to differentiate between the various aspects of the retailer's branding the store strategy.

The conceptual framework or research model developed for this study aims to understand consumer attitude towards single-brand apparel retailers. The model explained the relationships among the three store atmospheric cues (social, design, and ambient), cognitive evaluations toward store, affective evaluations toward store and approach-avoidance behavior. The research model also enhanced the SOR model by evaluating the concept of branding the store. This study was to evaluate the concept of branding the store in the form of statistical holistic relationship in the context of single-brand apparel retailers.

Needs for Further Study

This section attempts to explain the requirement for further study. Firstly, this study only focuses on consumers' attitude towards the single brand apparel retailers in Mandalay. As the further study, consumers' attitude towards not only the multi-brand apparel retailers and national brand apparel retailers but other product types in Myanmar should be analyzed.

Adding on to the first, the one limitation of the study would be that this study did not consider individual elements of the store environment (e.g., lighting or employees); but attempted to capture the overall effect of the three widely used store atmospheric cues (social cues, design cues and ambient cues). Future studies could consider only one aspect of store atmospheric cues and its effect on behavior. For example, the effect of music on consumer behavior towards single-brand apparel retailers or the effect of employees on consumer behavior towards single-brand apparel retailers.

This study did not measure any specific cognitive evaluation (e.g., perceived quality, perceived price) and affective evaluation (e.g., pleasure, arousal). Instead, this study considered a broad definition of cognition and affect. Such specific evaluation measures could be employed in the future to understand different elements of cognition and affect.

Furthermore, this study only covers the consumers' attitude towards the single brand apparel retailers in Mandalay. Therefore, further study will need to study the whole country of Myanmar. This study examined the impact of the stimuli on organism towards response. Consequently, the study describes the consumers' attitude towards the single brand apparel

retailers. The study only focuses on the effect of the stimuli (store atmospheric cues) on response (consumer response; approach or avoidance behavior) through the organism (cognitive evaluation and affective evaluation). Thus, conducting this kind of empirical study in other regions of Myanmar can be useful to compare and distinction the SOR model of the retailers. Further studies should include the other measurement of performance such as profitability, sales growth, customer satisfaction and market share.

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LEADERSHIP STYLES OF TOWNSHIP EDUCATIONAL OFFICERS AND ORGANIZATIONAL PERFORMANCE IN MYANMAR

Phu Pwint Nyo Win Aung ¹

Abstract

In the basic educational system of Myanmar, where Township Education Officers play a crucial role in administration of basic schools performance, their leadership styles may shape the organizational performance within districts. The study aimed to investigate Township Educational Officers' Leadership Styles and Organization Performance in Myanmar. A sample size of 323 TEOs were selected and relevant data were collected with questionnaire survey. The findings suggest a significant positive correlation between Bureaucratic Leadership Style and Organizational Performance, highlighting relationship between adherence to established rules and organizational performance. In contrast, Humanistic Leadership Style demonstrates no statistically significant correlation with Organizational Performance. The outcomes of this study inform policies and practices to enhance for the quality of education by emphasizing effective Bureaucratic Leadership Style of Township Education Officers and promoting organization performance, ultimately contributing to improved educational outcomes of Myanmar.

Keywords: Bureaucratic Leadership, Humanistic Leadership, Organization Performance

Introduction

In the dynamic landscape of education, effective leadership plays a pivotal role in shaping the learning environment and influencing the success of both educators and students. Leadership styles, defined by the manner in which leaders interact with their teams and make decisions, are particularly crucial in educational settings due to their profound impact on organizational culture, teacher morale, and student outcomes. The multifaceted nature of education demands leaders who can navigate diverse challenges, inspire innovation, and foster a collaborative atmosphere that empowers both educators and learners. As such, understanding and implementing various leadership styles become instrumental for educational leaders, allowing them to adapt to the evolving needs of educational institutions and create a positive and enriching environment for all stakeholders involved.

The significance of leadership styles in education extends beyond mere administrative functions; it directly influences teaching methodologies, curriculum development, and the overall ethos of a school or educational institution. A leader's approach, whether it be authoritative, transformational, democratic, or a combination of styles, shapes the organizational climate, impacting the motivation, engagement, and professional development of teachers. Moreover, effective leadership can inspire a shared vision among faculty, fostering a sense of purpose and commitment that transcends individual roles and contributes to a collective pursuit of educational excellence. Recognizing the nuanced interplay between leadership styles and educational outcomes underscores the imperative for educational leaders to cultivate a strategic and adaptive leadership approach that aligns with the ever-evolving demands of the educational landscape.

Organizational performance in this context is a multidimensional concept that reflects the ability of educational institutions to meet their goals, deliver quality education, and contribute to the overall development of students and the education system in Myanmar. Assessing organizational performance is crucial for understanding the strengths and weaknesses of the educational system, identifying areas for improvement, and implementing strategic initiatives to enhance the overall quality of education in the country. Exploring the impact of leadership styles of Township Educational Officers (TEOs) on organizational performance in Myanmar is a crucial undertaking to understand the dynamics within the educational system. Bureaucratic leadership, characterized by a focus on rules, procedures, and hierarchy, stands in contrast to humanistic leadership, which emphasizes empathy, collaboration, and the well-being of

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individuals. Both styles can have distinct effects on the performance of township education offices of respective districts.

Research in this area can provide valuable insights into the nuanced relationship between bureaucratic and humanistic leadership styles of TEOs and organizational performance in the Myanmar context. By examining these dynamics, educational stakeholders can formulate strategies that enhance the quality of leadership within the education system, ultimately contributing to a positive and supportive environment for teachers and fostering performance that positively impacts student outcomes.

Problem Statement

All basic education schools are under the supervision of the Ministry of Education. The administration and management of basic education is undertaken by the three Departments of Basic Education and the Department of Educational Planning and Training in accordance with the directives of the statutory bodies and organizations: Basic Education Council, Basic Education Curriculum, Syllabus and Textbook Committee, and Teacher Education Supervisory Committee. For management of basic education, the structure is constructed State/ Division of Education Offices, District Education Offices and Township Education Offices under the Department of Basic Education as hierarchy level. Township Educational Officers (TEOs) play a pivotal role in overseeing and managing schools at the township level, serving as central figures in the administration and governance of educational institutions.

Effective leadership, a favorable workplace atmosphere, and fair remuneration have the potential to inspire employees to excel, leading to various behaviors such as organizational citizenship behavior, entrepreneurial spirit and innovative behavior, work engagement (Abun et al., 2021), and job performance (Iqbal et al., 2015). Leadership positively correlates to service quality as a measure of organization performance (Naceur and Aisha, 2005). Ojukuku et al (2012) also stated that bureaucratic leadership has a negative impact on the organizational performance. The bureaucratic leadership style, characterized by a focus on rules, procedures, and formal structures, may bring about a sense of order and clarity in administrative processes. However, it could potentially create an environment of rigidity, stifling autonomy and hindering the emotional and professional investment of teachers. Conversely, the humanistic leadership style, grounded in empathy, collaboration, and a genuine concern for the well-being of individuals, may foster a positive work atmosphere. It has the potential to empower teachers, encouraging organization performance through a sense of purpose and personal growth. The performance in an organization is determined by the leadership style. Managers may transmit their performance and likewise make staff committed by some metrics by adopting a suitable leadership style (Brown, T.J., Churchill, and Peter, 1993).

In the context of Myanmar's education system, where TEOs play a pivotal role in educational governance at the township level, the leadership styles they adopt may shape the organizational culture within schools. The leadership styles adopted by Township Educational Officers (TEOs) in Myanmar play a pivotal role in shaping the organizational performance of educational institutions in a district. Bureaucratic and humanistic leadership approaches offer distinct frameworks for TEOs to navigate the complex landscape of educational administration. Bureaucratic leadership, characterized by adherence to rules and established procedures, provides a structured environment conducive to efficiency and accountability (Bass, 1990). This approach can contribute to the consistent implementation of educational tasks and foster a sense of order within the institution. On the other hand, humanistic leadership, which emphasizes empathy and support for individuals, has the potential to create a positive organizational culture, promoting teacher and staff well-being and engagement (Greenleaf, 1977). TEOs who balance both styles may achieve optimal results, combining the benefits of clear structures with the advantages of a supportive and collaborative environment. However, the effectiveness of these leadership styles is contingent on contextual factors such as cultural norms and educational policies (Northouse,

2018). Continuous improvement and adaptation to emerging challenges are essential for TEOs to enhance organizational performance in the dynamic field of education.

Despite the critical role of TEOs and the potential impact of their leadership styles on organizational performance, a noticeable gap exists in the empirical understanding of this dynamic within the Myanmar education system. The unique sociocultural and institutional context of Myanmar necessitates an in-depth exploration of how TEOs' leadership styles shape the commitment levels of teachers. Bridging this gap is imperative for informed decision-making by educational policymakers and administrators seeking to cultivate a robust and resilient education system that promotes teacher satisfaction, enhances student outcomes, and contributes positively to the nation's socio-educational development.

This study aims to address this gap in the literature by undertaking a comprehensive investigation into the leadership styles of TEOs and their implications for teachers' organizational commitment in Myanmar. By examining the leadership styles of Township Educational Officers, the research sheds light on their impact on teachers' commitment to their organizations. This insight is crucial for fostering a positive and effective learning environment. Conducted in Myanmar, the study's contextual relevance ensures that its findings are directly applicable to the unique challenges faced by the education sector in the country. The outcomes of this research can inform policies and practices to enhance the quality of education by emphasizing effective leadership and promoting teacher commitment, ultimately contributing to improved educational outcomes.

Objectives of Study

The general objective of this study is to investigate Township Educational Officers' Leadership Styles and Organization Performance in Myanmar. Specific Objectives are

- (i) To explore the leadership styles of Township Educational Officers' that contributes to Organizational Performance in Myanmar
- (ii) To analyze the effect of bureaucratic and humanistic leadership styles on organization performance in Myanmar

Literature Review

The study's conceptual framework is rooted in the Social Exchange Theory (SET). Blau (1964) and Emerson (1976) defined SET as an action-reaction system of exchange based on reward mechanisms for value exchange. According to Cropanzano et al. (2017), SET encompasses social, psychological, and sociological characteristics that depict stability and social shifts in negotiating exchanges among parties. This theory posits that human relationships are derived from the analysis of subjective behavioral cost-benefit and the comparison of alternatives during interactions. SET predicts that reciprocal relationships can forecast various organizational outcomes, such as organizational citizenship behavior, job performance, or turnover intentions (Cropanzano & Mitchell, 2005). It further suggests that the relationship between leadership style and the attitudes and behaviors of followers is mediated by the nature of the leader-follower relationship (Saqib, 2014). Ngodo (2008) perceives leadership as a reciprocal process of social influence, wherein leaders and subordinates influence each other to achieve organizational goals. The study emphasizes that organizations fostering a social exchange relationship, through care for employees and the provision of resources, can enhance performance.

Leadership is defined as the process by which a person exerts influence over people to inspire, motivate, and direct their activities to help achieve group or organizational goals (Jones & George, 2004). Leadership, according to Cole (2005), is essentially a process in which individuals influence the efforts of others towards goal achievement in given circumstances. Michael (2011) emphasizes the cause-and-effect relationship between leadership and organizational success. Adair (2002) defines leadership as the capacity to impact a group of employees' decision, behavior, recognition of the goal, and work with confidence and zeal. Adair

(2002) further states that leaders are required to develop a future vision, motivate organizational members, and achieve visions to improve performance.

Weber (1947) outlined the bureaucratic leadership style as a prioritization of organizational levels, characterized by rigid work procedures for employees. This leadership approach relies on established rules, procedures, and a hierarchical structure to exert influence over followers. It is a managerial style that permeates across multiple departments or individuals, emphasizing strict adherence to rules. Bureaucratic leadership, a classic and frequently utilized style, focuses on implementing rules and procedures to oversee teams and projects, often found in organizations resistant to innovation and change. In this style, employees are bound by the strictest of rules, operating within a formal atmosphere where duties and responsibilities are carried out based on predefined descriptions, rules, and procedures provided by the organization (cited in Weiss, 1983). This formal structure creates relationships based on organizational structures, functions, and rules, as noted by Aron (1994), Giddens (1997), and cited by Serpa and Ferreira (2019). Employees are expected to make decisions grounded in facts and rules rather than emotions. The basic education management structure in Myanmar is considered bureaucratic due to its formal application of structure, rules, and regulations, defining the lives of teachers, students, and administrators in the Ministry of Education. This structure is characterized by a command and control approach, where the supervision of operational processes adheres to conservative management practices..

According to Yang et al. (2020), humanistic leadership is defined as a collaborative and mutually reinforcing approach, where individuals work together rather than independently. An organization that values its staff, prioritizes its mission, and is dedicated to both work and social engagement is considered to embody humane qualities. Humanistic leadership places a strong emphasis on treating each person with respect as an individual, fostering their personal and professional growth, and establishing a sense of community that includes a diverse range of stakeholders, as highlighted by Mele (2013). In the context of humanistic leadership theory, as stated by Bolman and Deal (1995), a humanistic leader is tasked with providing individuals the freedom they require to realize their full potential and achieve personal fulfillment. In educational settings, such as that of a school principal, humanistic leadership involves supporting relationships and dialogues between leaders and followers in various dimensions of humanity. This includes enabling followers to find meaning and vision in the workplace, employing persuasive communication, encouraging participation and autonomy, ensuring fair treatment, providing constructive responses, and supporting personal growth, thereby serving as role models (Peus & Frey, 2009; Colbert, Nicholson, & Kurucz, 2018).

Dursun and Bilgivar (2022) conducted a survey to explore the relationship between leadership styles exhibited by school principals and their impact on teacher performance and organizational happiness. The study, which surveyed 346 participants in public schools in Istanbul, Silivri, and Büyükçekmece, revealed a high effect of the transformational leadership style on teacher performance. Moreover, a moderate and positive relationship was identified between leadership styles influencing teacher performance and organizational happiness. The research concluded that instructional leadership behaviors, positively affecting teacher performance, significantly predict organizational happiness. Additionally, the study highlighted that the transformational, instructional, and visionary leadership behaviors of school principals are strong factors predicting teachers' happiness and performance.

Sarwar, Tariq, and Yong (2022) investigated the influence of principals' leadership styles on the performance of college-level teachers. Using a random sampling approach, the study collected data from 300 college teachers. The findings indicated that a majority of college principals adopted a democratic leadership style at a higher level, followed by a moderate level of Laissez-faire and a low level of autocratic leadership in their colleges. The study revealed that an increased use of a democratic leadership style by principals correlated with improved teacher

performance. The results demonstrated a strong statistically positive relationship between the leadership style of college principals and the performance of teachers.

In another study, Abun, La Gente, Francis, and Encarnacion (2022) explored the impact of bureaucratic and humanistic leadership styles on the innovative work behavior of employees. The study focused on the employees of the Divine Word College of Laoag, collecting data through research questionnaires. The findings indicated a high prevalence of bureaucratic leadership style and a moderate presence of humanistic leadership style, suggesting that bureaucratic leadership was more dominant. Furthermore, the study identified a significant correlation between both leadership styles and innovative work behavior among employees.

Conceptual Framework

The conceptual framework indicates effect of bureaucratic and humanistic leadership styles on organization performance in Myanmar.. The conceptual model of the study is the following that is adapted by social exchange theory and the previous studies modified it to make suitable for the study.

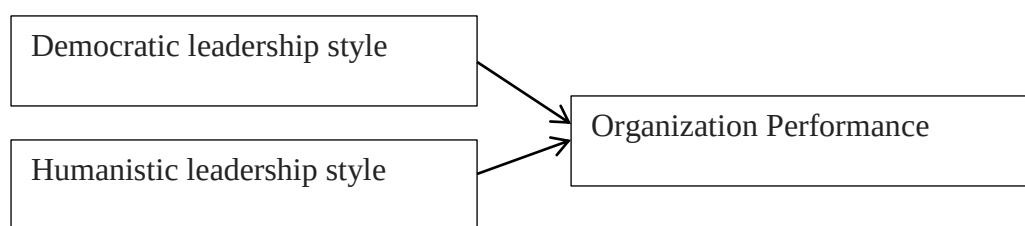


Figure (1) Conceptual Framework of the Study

Scope and Method of the Study

The study aims to investigate how the leadership styles adopted by Township Educational Officers impact the organizational commitment of head masters. The study collected data from Township Educational Officers who are working for Ministry of Education, Myanmar A sample size of 323 will be selected for comprehensive analysis. The questionnaire survey is conducted at Educational Governance Training for Township Educational Officers during August –November 2023. The study employed descriptive statistics to provide a detailed summary of the leadership styles exhibited by the officers. Additionally, Pearson correlation analysis is utilized to examine the strength and direction of the relationship between leadership styles and organization performance. By employing these analytical tools, the study seeks to contribute valuable insights into the dynamics of educational leadership in Myanmar and its influence on organizations performance. This study is expected to provide actionable recommendations for enhancing educational leadership practices and fostering a positive organizational culture among teachers in Myanmar's educational system.

Analysis of the Study

The study utilized measures of mean scores to describe the central tendencies and distribution of scores for each leadership style dimension and conducted Pearson correlation analysis to explore the linear relationships between different dimensions of leadership styles and various organizational performance indicators. This analysis provide insights into the strength and direction of the associations. The demographic profile of the respondents has been described using descriptive analysis. The respondent's gender, age, educational background, occupation, and family type are mentioned in Table (1).

Table (1) Demographic Profile of Respondents

	No. of Respondents	Percentage (%)
Gender		
Male	196	60.7
Female	127	39.3
Age		
50-55 years old	34	10.5
56-60 years old	195	60.4
Above 60 years old	94	29.1
Education		
B.Ed	301	93.8
BA/ BSc	4	1.2
Master degree	14	4.3
PhD	2	.6
Experience		
21-25 years	5	1.5
26-30 years	6	1.9
31-35 years	72	22.3
36-40 years	181	56.0
Above 40 years	58	18.0
Under 15 years	1	.3
Family Type		
parent and sibling	86	26.6
Single	41	12.7
Spouse	48	14.9
Spouse and Sons/Daughters	148	45.8
Total	323	

Source: Survey Data (2022)

The demographic characteristics of the study participants were comprehensively examined, encompassing variables such as gender, age, education, experience, and family type. In terms of gender distribution, the majority of respondents were male, constituting 60.7%, while females comprised 39.3% of the sample. Regarding age distribution, a significant percentage fell within the age bracket of 56-60 years old (60.4%), followed by those above 60 years old (29.1%), and individuals aged 50-55 years old (10.5%). In terms of educational qualifications, a

substantial proportion held a Bachelor of Education (B.Ed) degree (93.8%), with smaller percentages possessing BA/BSc (1.2%), Master's degrees (4.3%), and Ph.D. qualifications (0.6%). In the context of professional experience, the majority of respondents had between 36-40 years of experience (56.0%), followed by those with 31-35 years (22.3%), and over 40 years of experience (18.0%). Family type diversity was observed, with the most prevalent category being "Spouse and Sons/Daughters" (45.8%), followed by "parent and sibling" (26.6%), "Single" (12.7%), and "Spouse" (14.9%). The data encompassed a total of 323 respondents, providing a comprehensive overview of the diverse demographic characteristics within the study sample.

This section presents the results of the analysis of leadership styles. The two main types of leadership style were assessed democratic leadership style and humanistic leadership style. Descriptive statistics were used to assess the level. Table 1 and 2 presents results of leadership styles. The mean and standard deviation (S.D.) of the dimensions of leadership styles were calculated, to establish the respondents, assessment of the extent to which their practices treat to subordinates (head master). The scale used in the statements was 1- strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree. According to Best (1977), the descriptive statistics of the findings are interpreted scores falling within the range of 4.21-5.00, categorized as "Very High," 3.41-4.20 as "High," 2.61-3.40 as "Moderate," 1.81-2.60 as "Low," and 1.00-1.80 as "Very Low."

Table (2) Bureaucratic Leadership Style of TEO of the Institution

	Indicators	Mean	Standard Deviation
1	Performing routine tasks over and over.	4.17	.425
2	Understand certain standards or	4.08	.386
3	Prefer rigid rules and regulations to flexibility.	3.22	1.020
4	Required to follow specific rules formulated by the authority/institution.	2.84	1.043
5	Even small matters have to be referred to someone higher up for the final answer.	3.57	.921
6	Working under the close monitoring of their supervisor	3.42	1.007
7	Employees are afraid of violating the rules because it means punishment	2.81	1.057
8	Communications, decisions, and proceedings are put in writing for future reference	3.69	.835
9	Leaders follow the rule of the book to keep the team in the right direction.	4.06	.492
	Average Mean	3.539	

Source: Survey Data Output (2023)

The exploration of Bureaucratic Leadership Style among Township Educational Officers (TEOs) in the institution reveals distinct patterns across various indicators, as indicated by mean scores and standard deviations. Notably, TEOs demonstrate a strong inclination towards performing routine tasks (Mean = 4.17, SD = 0.425) and understanding specified standards (Mean = 4.08, SD = 0.386), emphasizing a commitment to procedural regularity and adherence to established norms. The highest mean value highlights a notable commitment to leaders following established rules to guide the team (Mean = 4.06, SD = 0.492), emphasizing a rule-based leadership approach. However, requirement to follow specific rules formulated by authority (Mean = 2.84, SD = 1.043), suggesting a structured leadership approach with variations in the level of adherence to predefined regulations. The lowest mean value pertains to employees' fear of violating rules and potential punishment (Mean = 2.81, SD = 1.057), indicating varying levels

of concern among employees regarding rule violations. In synthesizing the findings of the study on Township Educational Officers' (TEOs) leadership styles, the overall mean values provide a comprehensive overview of the prevailing Bureaucratic and Humanistic Leadership Styles within the institution. The Bureaucratic Leadership Style, as indicated by an overall mean of 3.539, reflects a strong adherence to established rules, routines, and hierarchical structures. TEOs within the institution exhibit a propensity for repetitive task performance, stringent rule adherence, and a preference for written documentation. This suggests a leadership approach characterized by organizational order and formalized procedures, emphasizing stability and compliance.

Table (2) Humanistic Leadership Style of TEO of the Institution

	Indicators	Mean	Standard Deviation
1	Supporting role instead of a directive one.	3.72	.742
2	Support the strengths of employees by Shaping and designing the work environment.	3.83	.633
3	Respecting and appreciating the individual needs wants, wishes, and situations.	2.02	.707
4	Allowing Employees to follow self-set goals and are not motivated by the promise of promotion.	4.04	.408
5	Aiming at offering employees a working environment with creative leeway.	3.51	.930
6	Fostered the communal spirit actively	3.58	.875
7	Feeling secure as they are accepted as they are.	3.48	.934
8	If employees do not feel well in a system the leader would initiate a change toward a system that is better for the employee.	4.18	.511
9	Fostering individual passions	3.98	.543
	Average Mean	3.59	

Source: Survey Data Output (2023)

The investigation into the Humanistic Leadership Style of Township Educational Officers (TEOs) in the institution discerns notable variations across indicators, characterized by distinct mean scores and standard deviations. The highest mean value is attributed to the indicator stating that if employees do not feel well in a system, the leader would initiate a change toward a system that is better for the employee (Mean = 4.18, SD = 0.511). This finding underscores a robust commitment among TEOs to proactively adapt and improve organizational systems for the well-being and satisfaction of employees, reflecting a commendable aspect of humanistic leadership. Conversely, the lowest mean value pertains to the indicator of respecting and appreciating individual needs, wants, wishes, and situations (Mean = 2.02, SD = 0.707). This suggests a potential area for improvement, indicating that TEOs may need to enhance their efforts in recognizing and valuing the diverse individual needs and circumstances of employees within the institution. The Humanistic Leadership Style, with an overall mean of 3.59, portrays TEOs' commitment to a more people-centric and supportive leadership approach. TEOs demonstrate a willingness to adopt a supportive role, actively shape the work environment to leverage employees' strengths, and foster a creative and communal working atmosphere. The emphasis on individual autonomy, acceptance, and a proactive stance toward system change for employee well-being indicates a leadership style that values the holistic development and satisfaction of individuals within the organization.

To examine the relationship between leadership styles and specific organizational performance, Pearson correlation analyses are conducted. Correlation, serving as an indicator of the association between two variables, utilizes a statistical value ranging from -1 to 1, as

provided by the correlation coefficient. This coefficient measures both the direction and strength of the linear relationship between the two variables under consideration.

Table (3) Correlation between TEO Leadership Styles and Organization Performance of the Headmaster

		Organization Performance
Bureaucratic Leadership Style	Pearson Correlation	.165**
	Sig. (2-tailed)	.003
	N	323
Humanistic Leadership Style	Pearson Correlation	.065
	Sig. (2-tailed)	.247
	N	323
*. Correlation is significant at the 0.05 level (2-tailed).		
**. Correlation is significant at the 0.01 level (2-tailed).		

Source: Survey Data Output (2023)

The findings indicate a statistically significant positive correlation between Bureaucratic Leadership Style and Organizational Performance, as reflected in the Pearson Correlation coefficient of .165 at 0.01 level of confidence interval ($p = .003$). The correlation signifies that as Bureaucratic Leadership Style increases, there is a corresponding positive association with organizational performance. This relationship is considered statistically significant at significant at 1% level (2-tailed), underscoring the robustness of the observed correlation. On the other hand, Humanistic Leadership Style demonstrates a Pearson Correlation of .065 with Organization Performance, which is not statistically significant at the 0.05 level (2-tailed) ($p = .247$). These results suggest that, within the studied context, Bureaucratic Leadership Style appears to have a more noteworthy association with organizational performance compared to Humanistic Leadership Style.

Discussion and Recommendation

According to findings , the positive correlation suggests that organizations with higher levels of Bureaucratic Leadership tend to experience better organizational performance in Township Education offices of Myanmar. Given the positive correlation with Bureaucratic Leadership, Department of Basic Education and Ministry of Education may consider providing training and development programs to enhance leadership skills with an emphasis on effective bureaucratic management practices. This could involve training sessions, workshops, and professional development opportunities for educational leaders to enhance their skills in organizational structuring, process optimization, and efficient resource management. The Township Educational Officers (TEOs) should be offered coaching and feedback program to help them understand and refine their Bureaucratic Leadership practices. This proactive approach can contribute to continuous improvement in organizational performance. The finding implies that educational institutions characterized by a greater emphasis on structured procedures and clear organizational hierarchies tend to exhibit superior performance outcomes. Ministry of Education provide guidelines and frameworks that encourage educational leaders to adopt structured procedures and clear organizational hierarchies in line with best practices for improved

performance outcomes. Township Educational Officers (TEOs) should be encourage collaborative governance practices that align with the principles of Bureaucratic Leadership. TEOs should foster communication and cooperation among educational leaders, administrators, and teachers to enhance decision-making processes and ensure effective implementation of policies. They should practice establishing robust monitoring and evaluation systems to assess key performance indicators, conduct organizational assessments, and adapt strategies based on the evolving needs of educational institutions. TEOs should ensure that educational institutions receive adequate resources and support to facilitate the implementation of structured procedures and organizational efficiency.

In a study of Daley (1986), humanistic leadership-management practice moderately affects organizational success in his study for public employees. In the context of educational institutions, Effendi et. al (2019) suggested the effect of a humanistic approach to the principal's leadership on the strengthening of character education. In light of the findings indicating a lack of significant association between Humanistic Leadership Style and improved organizational performance in Township Education offices of Myanmar, the Ministry of Education and the Department of Basic Education. The Ministry should provide educational leaders with the knowledge and skills necessary to incorporate humanistic elements into their leadership practices. The study encourages the need for further research to deepen understanding of the effectiveness of Humanistic Leadership within the specific educational context of Myanmar, And also, further studies should examine the cultural, social, and organizational factors that influence humanistic leadership styles and their impact on performance as moderate factors.

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EFFECT OF CONSUMER ATTITUDE ON CONSUMER BUYING BEHAVIOR TOWARDS 24 KARAT GOLD ORNAMENTS

Banyar Aung¹

Abstract

This study attempts to analyze the effect of consumer attitude on buying behavior towards 24 karat gold ornaments. Both primary and secondary data are used in this study. The respondents are selected by using two-stage random sampling method. Targeted respondents are customers who bought gold ornaments from retail stores in Junction City Shopping Mall at Yangon. The sample size is 120 which is selected from five gold ornament shops among ten shops in Junction City. Structured questionnaires are used to collect data by using face to face interview method. By Tri component attitude model, three at level which cognitive, affective and conative attitude components are applied in this study. According to the descriptive analysis, customers have high cognitive and affective attitude level towards 24 K gold ornament whereas conative attitude have moderate level. Regression analysis indicates that affective attitude has positively significant effect on consumer buying behavior towards 24K gold ornaments. Based on the result of the findings, 24 K gold ornament retail stores should make reasonable installment plan, update design, sense of luxury in order to generate affective attitude.

Key words: Consumer Attitude, Buying Behavior

Rationale of the Study

Gold, a precious metal people all over the world value not only used for the jewelry purpose but also for investment as well. Gold provides the opportunity for the investors as it was an asset that had high liquidity so investors can sell it whenever they want and they do not have to monitor. Aside from the cash, gold had the highest liquidity as it can be exchanged for cash immediately. As in other Asian countries, gold is a very popular investment and store of value for local people alike. Country with a complex banking system, most people in our country see gold as safe investment assets.

In Myanmar, people buy golden jewelry for ornamental purpose and for saving. People like to wear gold ornaments and buy it for beauty and hedging against inflation. For thousands of years, the golden ornaments business has been contributed to serve a variety of functions. The valuation of gold is based on the facts that it can be used as an object of beauty, symbol, status and commodity. According to Myanmar tradition, Myanmar people usually buy golden jewelry if they have extra money, hence the saying "Golden jewelry means food when you haven't money and ornaments when you have plenty of money". So, golden jewelry is not only for ornaments but also food. Among many types of gold shop in Yangon, 24K gold shops are the most popular because consumers attitude tend to 24K gold shop increasingly as they come to realize good quality and variety of design provided by them. Consumers prefer to buy gold from 24K gold shop for ornamental purpose. On the supply side, 24K gold shop offers a wide variety of innovative and elegant design and modernized ornaments. Nowadays, 24K gold ornament plays an important role in the gold market.

24K gold is the highest purity of gold available for commercial use. Gold purity is measured in karats, with each karat representing 1/24th part of pure gold in an alloy. Therefore, 24K gold is considered 100% pure gold. Pure gold is a soft and malleable metal and is naturally

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yellow in color. It is highly valued for its beauty and rarity. However, because of its softness, it is not suitable for most jewelry and other applications that require durability. Therefore, gold is often alloyed with other metals to enhance its strength and durability. Lower karat ages such as 22K, 18K, 14K, and 10K are commonly used in jewelry production. These alloys contain a proportion of gold mixed with other metals such as silver, copper, nickel, or zinc. In the past, it's worth noting that 24K gold is relatively soft and can be easily scratched or dented, making it less practical for everyday jewelry. However, modern gold shops use a technique that involves pouring 24K gold into the mould in order to get the ideal design for ornamental purpose for consumer.

Consumer attitude of 24 K gold play part of the consumer buying behavior which is the actions and decision-making processes of consumer who buy 24K gold ornaments for personal use. Consumer buying behavior depends upon how customers use their valuable time, money and effort make decisions for buying materials. That involves what consumer purchases, why consumer purchases it, where consumer purchase, how after consumer spend and use it, how they evaluate it after consumer purchased and the impact of such evaluations on next purchases and how consumer dispose of this. Sellers of gold shop focus on trying to know the consumers and their buying behavior.

Nowadays, consumer attitude and buying behavior towards gold ornament has changed dramatically in Yangon. Whether in towns, cities or rural areas, there has sociocultural changes which have altered the attitude and buying behavior of consumers with regard to gold ornaments. Gold shops in Yangon is becoming complex because increasing many competitors, changes in macroeconomic factors and due to perfect competition market. Thus, gold shop owners need to build positive attitude of consumer and then need to attract and maintain as loyal customers. It became a need to know what attitudes are behind the rise in buying behavior. Understanding consumer attitude and buying behavior is one of the elements that help to be successful in gold market especially in competitive environment. For effective marketing strategies, the study can help in determining consumer attitude on 24K gold ornaments and buying behavior for gold ornament shops in Junction City Shopping Mall.

Objectives of the Study

1. To describe consumer attitude and buying behavior towards 24K gold ornaments in Junction City Shopping Mall.
2. To analyze the effect of consumer attitude on buying behavior towards 24K gold ornaments in Junction City Shopping Mall.

Scope and Method of the Study

Primary data are collected customers who bought 24 K gold ornaments from Junction City Shopping Mall. Two-stage random sampling method are used in this research. In the first stage, five gold shops such as Shwe San Eain, Shwe Nann Taw, Sein Nann Taw, Treasure Sea and Diamond Sea are selected among ten gold shops in this shopping mall by using simple random sampling method. Total population is unknown and sample size is determined 120 respondents by using Cochran (1977) unknown population formula. In the second stage, 120

respondents are selected for randomness, every five customers who are coming out from 24 K gold ornament shops by using systematic random sampling. Self-administered questionnaires designed are based on Tri-component model of attitude and buying behavior of the study. Questionnaires survey is conducted in Junction City shopping at Yangon during the period of 1st Sep to 31st Oct, 2023 at every weekend. Friends participated as data collectors. Secondary data are gathered from previous paper, library and textbook.

Literature Review

Consumer Attitude

According to Kotler (2000) “an attitude is a person’s enduring favorable or unfavorable evaluations, emotional feelings, and action tendencies toward some object or idea”. Consumer attitude is defined as human beings’ learned predisposition for consistent response in a favourable and unfavorable manner to a given object.

According to Binninger (2008), attitudes serve as the foundation for many models of consumer behaviour. They are also frequently utilised for market segmentation, predicting product adoption, and creating marketing campaigns. Attitude is made up of cognitive, emotional, and behavioural components that impact the fulfilment of four main functions: utility function, ego-defensive function, value-expressing function, and expertise function. General private label attitude is an important factor in the evaluation of individual private label attitudes as well as with regard to consumers intentions to purchase private label. Attitudes towards private labels are formed on the basis of certain perceived benefits that consumers expect, such as competitive pricing, efficiency, or a favourable price to quality ratio.

Tri Component Model

Solomon and Rabolt (2008) redefine as ABC model of attitude, which includes affect, behavior and cognition. Underlying assumption on both theories are same, although there are other variables included on ABC model such as personality traits, previous knowledge, family circle, media and marketing activities; also, the effect on attitude formation contribute by that components are on the manner how people convey their attitude (Sheth & Mittal, 2004). This includes three different belief as normative belief focus on ethical judgment, evaluative belief creates individual level of perception about liking or disliking some object and descriptive belief help to evaluation of object based on quality or outcome (Sheth & Mittal, 2004).

The cognitive component refers to the beliefs and thoughts that a receiver has toward the object. This component can also consist of an individual's opinion, perception and knowledge about an issue or item. Individual opinions may not be based on an objective assessment or be true, but still play a vital role in how the person perceives reality and furthermore the attitude of an object. The cognitive component is likely to be more conscious than the other elements of attitudes, and is more vulnerable than others to logicbased persuasive techniques (Solomon et al., 2014).

The affective element or feeling consist of emotional aspect of attitude. In marketing, affect is consumer’s feelings on different product service or on various marketing activities relating to the overall attribute. Evaluation of the consumer’s feeling are depending on their favorableness that create reaction towards particular product ultimately that effect on consumer buying intention and decision process (Arora & Sahney, 2018).

Intention or certain action that persons take towards particular object is describe by behavioural or conative element. However, Solomon & Rabolt (2008) noted that consumers actual behavior is not always resulted by their intention. Above mentioned components affect and cognition cannot express the particular attitude.

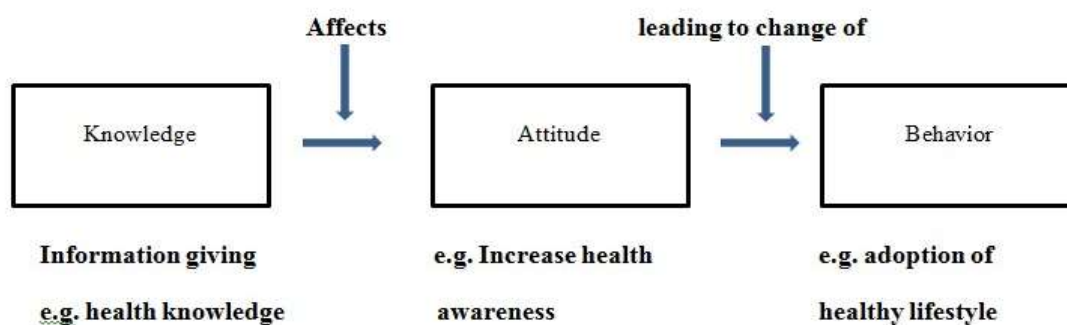
Consumer Buying Behavior

According to (Kotler, 2001), consumer behavior refers to the study of how individuals are selected, buying or use and disposal of products, services, and how different experiences or ideas that meet consumer needs and wants. (Solomon et al., 2014) Indicate, that customer satisfaction is the total measurement of customers' experience after purchasing products or utilizing services.

Babu et al., (2010) described buying process in three steps which is pre-purchase, purchase and post-purchase. In Pre-purchase step when customers realize their needs, they search for information about a product or service provided by a company, it is therefore important that the company provides its customers with easy access to product information, where the consumers can use online media or word of mouth for obtaining information., in addition the Internet offers customers great opportunities to evaluate alternatives and compare product information. At the step of purchase after collecting all the necessary information and comparing the product alternatives, the customer decides whether to buy. The last stage is post-purchase, all the activities and experiences that follow pre- purchase and purchase are included in the post purchase behavior. Typically, it affects the information search and alternative evaluation stage. It depends on the customer satisfaction or dissatisfaction after making a purchase, it is common for customers to distribute their positive or negative feedback about the product or service. This might be through social media networks or word of mouth.

Previous Studies

According to the Figures (1), the previous study is the relationships between the elements of attitude. This research is conducted by (Engel et al., 1995). The study is health care sectors of consumer attitude and behavior. Attitude and behavior are not synonyms of each other, attitude may result from behavior. Attitude has a motivational quality, which means a consumer towards a particular behavior. The knowledge-attitude-behavior model considers that knowledge is especially important for effecting changes in behavior and that individual can obtain knowledge and skills through learning.

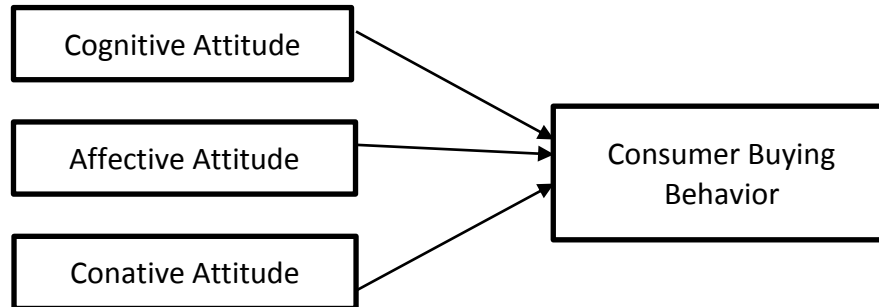


Source: James E Engel, Roger D Blackwell & Paul W Miniard (1995)

Figure (1) Knowledge – Attitude – Behavior (KAB) Model

Conceptual Framework of the Study

The conceptual framework of this study is based on the literature review on the previous studies. In this model, the independent variables are cognitive attitude, affective attitude and conative attitude. The dependent variable is consumer buying behavior.



Source: Own Complication (2023)

Figure (2) Conceptual Framework of the study

Analysis and Findings

Profile of the Respondents

The personal profile of the respondents is shown in Table (1). This Table illustrates the profile of respondents including gender, age, occupation, marital status and monthly income.

Table (1) Profile of the Respondents

No	Particular	Respondents	Percentage
	Total	120	100.00
1.	Gender: Male	36	30
	Female	84	70
2.	Age: 20 – 30	38	31.67
	31 – 40	32	26.67
	41 – 50	23	19.16
	51 – 60	21	17.5
	61 and above	6	5
3.	Occupation		
	Business Owner	43	35.83
	Employee	38	31.67
	Government Staff	39	32.5
4.	Marital Status: Marriage	42	35
	Single	78	65
5.	Monthly Income: KS 200,000 – 300,000	27	22.5
	KS 300,001 – 400,000	41	34.17
	KS 400,001 – 500,000	32	26.66
	More than 600,000KS	20	16.67

Source: Survey data, 2023

According to Table (1), among 120 respondents, the majority of the respondents are female. This is because gold is often associated with social status and wealth and they would like to wear 24K gold ornaments, which is a symbol of prestige. Most respondents are between 20 and 30 years old followed by age between 31 and 40 years old. The reason is that younger individuals may see purchasing gold jewelry as a way to invest in a tangible asset. It is found out that most of the respondents are business owners because they may view gold as a reliable long-term investments and therefore they may buy gold ornaments as part of their investment portfolio. Regarding marital status, most respondents are single. Gold ornaments can be a means of self-expression so singles may buy them to express their individuality and tastes. The majority of respondents get monthly income between KS 300,001 and 400,00. The reason is that they may have disposable income to invest, and gold is often seen as a stable and valuable long-term investment.

Descriptive analysis of Cognitive Attitude, Affective Attitude, Conative Attitude and Consumer Buying Behavior Towards 24K Gold Ornaments

In this study, the effect of consumer attitudes on buying behavior towards 24K gold ornaments. Consumer attitudes such as cognitive attitude, affective attitude, conative attitude and consumer buying behavior questionnaires are described with the range from one to five (1- strongly disagree, 2- disagree, 3-neutral, 4- agree, 5- strongly agree).

Descriptive analysis of Cognitive Attitude

Table (2) Cognitive Attitude

Sr.No	Cognitive Attitude	Mean Score
1.	Having experience with using 24K gold ornaments.	3.69
2.	Using to watch 24K new gold ornaments advertisement.	3.68
3.	Evaluating 24K gold ornament quality.	3.67
4.	Product quality equal value for money.	3.61
5.	24K gold ornament promotion is attractive and reliable.	3.73
6.	Wearing 24K gold ornaments bring fortune and positive energy.	3.68
	Overall Mean	3.68

Source: Survey Data, 2023

According to the table (2), the survey result represents that the highest mean is 3.73 and its statement “24K gold ornament promotion is attractive and reliable.” It means that the promotion of 24K gold ornaments, likely offered by a business or organization, is perceived as highly appealing and trustworthy. The statement of “Product quality equal value for money.” is the lowest mean score of 3.61. It shows that the product might have met their expectations in terms of quality, but the respondents expected even more given the price they paid. The overall mean is 3.68 and it indicates that customers agree on cognitive attitude towards 24K gold ornaments.

Descriptive analysis of Affective Attitude

Table (3) Affective Attitude

Sr.No	Affective Attitude	Mean Score
1.	24K gold ornament shop's installment plan concerned with buying 24K ornaments that I like	3.68
2.	Proud of wearing 24K gold ornaments.	3.68
3.	Searching the update design of 24K gold ornaments.	3.68
4.	Wearing 24K gold ornaments is a modernized lifestyle.	3.64
5.	Wearing 24K gold ornament is unique than other 18, 20K gold ornament.	3.69
6.	Wearing 24K gold ornaments make me a sense of luxury and opulence.	3.55
	Overall Mean	3.65

Source: Survey Data, 2023

According to the table (3), the survey result represents that the highest mean is 3.69 and its statement "Wearing 24K gold ornament is unique than other 18K, 20K gold ornament." It means that 24K gold is the purest form of gold, consisting of 99.9% gold content and its rarity and exceptional purity make it unique and highly valued. The statement of "Wearing 24K gold ornaments make me a sense of luxury and opulence." is the lowest mean score of 3.55. It indicates that gold is often associated with a certain social status and prestige, which can make individuals feel opulent when wearing it. The overall mean is 3.65 which shows that respondents agree on affective attitude towards 24K gold ornaments.

Descriptive analysis of Conative Attitude

Table (4) Conative Attitude

Sr.No	Conative Attitude	Mean Score
1.	24K gold ornaments to be a good investment for the future.	3.44
2.	The new innovative product design of 24K gold ornament shops make consumer incline to purchase it.	3.45
3.	Gold ornaments enhance my appearance.	3.45
4.	Thinking about to purchase 24K new gold ornaments.	3.47
5.	Willing to pay a premium price for high quality 24K gold ornaments.	3.45
6.	Information from 24K gold ornament shops website and social media makes me incline to buy it.	3.31
	Overall Mean	3.43

Source: Survey Data, 2023

In table (4.4), the survey result represents that the highest mean is 3.47 and its statement "Thinking about to purchase 24K new gold ornaments." It means that the recognition of gold's intrinsic value, especially in its purest form (24K), often leads individuals to consider it as a wise investment or a valuable addition to their assets. The statement of "Information from 24K gold ornament shops website and social media makes me incline to buy it." is the lowest mean score of 3.31, which indicates that gold is a valuable and high-investment product, and some

respondents may prefer to see or touch the items in person before making a decision. The overall mean is 3.43 and it indicates that respondents have moderate level related with conative attitude towards 24K gold ornaments.

Descriptive Analysis of Consumer Buying Behavior

Table (5) Consumer Buying Behavior

Sr.No	Consumer Buying Behavior	Mean Score
1.	Repurchase intention.	3.78
2.	Most likely to wear 24K gold ornaments next time.	3.78
3.	Irrelevant with price.	3.76
4.	Recommend to others.	3.77
5.	Share experience and opinions to friends and family members.	3.73
6.	Prefer to purchase 24K ornaments from trusted jewelry store.	3.68
7.	Consider resale value of 24K gold ornaments before making a purchase.	3.71
8.	Latest fashion 24K gold ornaments design influence my buying behavior.	3.76
9.	Brand reputation of 24K gold ornaments influence my buying behavior.	3.71
10.	I often buy 24K gold ornaments as gifts for special occasions.	3.67
	Overall Mean	3.73

Source: Survey Data, 2023

According to the table (5), the survey result represents that the highest mean is 3.78 and its statement “Repurchase intention and most likely to wear 24K gold ornaments next time.” It means that respondents may have had a highly satisfying experience with their pervious 24K gold ornament purchases, which motivates them to consider buying more in the future. The statement of “I often buy 24K gold ornaments as gifts for special occasions.” is the lowest mean score of 3.68, which indicates that respondents choose 24K gold ornaments as their preferred gift for significant events, such as birthdays, weddings, anniversaries, graduations, and other special moments in their lives. The overall mean is 3.73 and it indicates that customers express agreement or positive sentiment regarding purchasing actions and decisions.

Analyzing the Effect of Consumer Attitudes on Buying Behavior Towards 24K Gold Ornaments

Table (6) Analysis on the Effect of Consumer Attitudes on Buying Behavior Towards 24K Gold Ornaments

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig,	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.880	.138		6.377	.000		
Cognitive Attitude	-.001	.088	-.002	-.016	.987	.159	6.290
Affective Attitude	.776(***)	.096	.887	8.060	.000	.145	6.900

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig,	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Conative Attitude	.008	.028	.013	.269	.789	.753	1.328
R Square	.796						
Adjusted R Square	.791						
F value	151.047						

Source: Survey Data, 2023

*** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level

According to the Table (6), the value of F test, overall significance of the model is significant at 1 percent level. This model explains the variation of buying behavior predicted by three independent variables as R^2 value is 79.6 percent. VIF also checked, indicating that are no variables exceeding rule of thumb 10 for VIF. It is found that affective attitude has a positively significant effect on consumer buying behavior. The result explains a unit increase in affective attitude will lead to 0.776 unit increase in consumer buying behavior.

Suggestions and Recommendations

Regarding cognitive attitude, 24K gold ornaments shop owners should provide customers with detailed information about 24K gold, its purity, and characteristics because educated customers are more likely to make informed decisions. Moreover, the shop owners should ensure that the quality of 24K gold ornaments meets or exceeds the expectations set by prices.

Concerning with affective attitude, 24K gold ornaments shop owners should offer personalized assistance and consultations to make customer feel valued and specials. They also need to emphasize the exclusivity and uniqueness of 24K gold ornaments and highlight that not everyone can afford or own such items, which adds to the sense of luxury.

In concern with conative attitude, 24K gold ornaments shop owners should implement interactive features like 360-degree product views, zoom options, and visual try-on on their website to enhance the online shopping experience. In addition, they should provide comparisons between investing in gold ornaments and other investment options, highlighting the stability and long-term value of gold.

For consumer buying behavior, 24K gold ornaments shop owners should provide elegant and luxurious gift packaging to enhance the presentation and perceived value of the gift. Personal assistants should be assigned in the gold shop to help customers choose the perfect gift based on the occasion and recipient. They should also display certifications that confirm the quality and purity of gold ornaments to build trust with customers.

According to the multiple regression analysis, affective attitude has positively significant on consumer buying behavior. This means that having strong affective attitude can lead to the buying behavior towards 24K gold ornaments. Therefore, 24K gold ornaments shop owners should craft marketing campaigns that evoke customers emotions related to love, family, tradition, and special occasions, highlighting the sentimental value of gold ornaments. Gold

shops also should run promotions and discounts during special occasions, emphasizing the emotional aspect of gifting and celebrating with gold ornaments.

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THE EFFECTS OF JOB CHARACTERISTICS ON SALESPERSON'S ENGAGEMENT OF LOCAL INSURANCE COMPANIES IN MANDALAY*

Wai Phyo Aung¹

Abstract

This study aims to examine the effects of job characteristics on salesperson's engagement at local insurance companies in Mandalay. This study uses both primary and secondary data. There are 8 local insurance companies in Mandalay. Among them, 5 local insurance companies were selected, and 67 salespersons were chosen as samples by using the multi-stage simple random sampling method. The structured questionnaire is used to collect primary data. Descriptive statistics, correlation analysis, and multiple regression analysis are applied to analyze the collected data. This study found that the three job characteristics - task identity, task significance, and autonomy - have an effect on salesperson's engagement in terms of vigor, dedication, and absorption. It is indicated that the job characteristics of an insurance salesperson may directly increase salesperson's engagement. Therefore, local insurance companies need to ensure that job roles are well-defined, providing clear task identity and significance. They should enable salespersons to understand the importance of their roles in contributing to the overall success of the organization and to feel a sense of purpose in their work. Companies should grant salespersons a certain level of autonomy to make decisions in their sales processes.

Keywords: Job characteristics, Task identity, Task Significance, Autonomy, Salesperson Engagement, Local insurance companies

Introduction

Today, many organizations are facing with challenges, especially with the constant changes in technology, economic, social, political and legal conditions and internal process. Where competition is fierce and customer expectations are constantly evolving, it is imperative for organizations to focus on maximizing employee engagement to maintain a competitive edge. The concept of employee engagement is rapidly gaining popularity and is used in the workplace to retain qualified employees. Employee engagement is an employee's level of commitment and involvement within their organization. Engaged employees are typically aware of their responsibilities toward their business goals and work to motivate their colleagues to achieve organizational objectives (Anitha, 2014).

Engagement is expected when employees are dedicated toward organization goals, finding their job exciting in addition to identifying the values of their organization (Armstrong & Taylor, 2014). Various factors play a key role in improving the level of employee engagement in organizations. Kinicki and Fugate (2016) discussed the drivers of employee engagement, such as environmental factors like job characteristics, personal factors, and organizational factors. When employees are engaged, they are more likely to invest in their work, which leads to a high quality of work produced.

Engaged organizations have doubled the rate of success compared to less engaged organizations (Baldoni, 2013). Engaging the right employees in the right behaviors remains a critical ingredient in how companies can improve their competitiveness and business performance. Despite employee engagement being viewed as positive company-wide, the

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majority of employees are disengaged at work. Only 33% of employees reported being engaged at work (Brook, 2019). It is clear that company leaders need to start viewing employee engagement as a strategic business objective because engaged employees lead to long-term employee retention, higher levels of productivity, and improved quality of work.

Employee engagement is important in all industries, including the service industry, especially insurance. With the entry of new players in the market, local insurance companies need to differentiate themselves from their competitors by offering unique and innovative products and services, providing an excellent customer experience, leveraging technology, and building a highly skilled workforce. To overcome these challenges, it is crucial for companies to prioritize employee engagement. The engagement of employees varies based on their job characteristics. Employees are motivated by a variety of tasks, autonomous work, and feedback. When employees take control over their work and get the efficacy of their results, they will get job engagement.

A critical element for employees to stay in the company for many years is their engagement with their job. Therefore, the five core job characteristics—skill variety, task identity, task significance, autonomy, and feedback—are relatively important for organizations to provide their employees with opportunities to enhance their job engagement. The insurance industry is customer-service-driven, which means insurance salespersons are brand ambassadors, and keeping them in a favorable condition is a key to an upstanding reputation. An insurance salesperson can build customer trust, nurture long-term relationships, create added value for customers, and provide market information to management. In these circumstances, salespeople are one of the most important assets in insurance companies, and the performance of insurance companies ultimately depends on the performance of their salespeople.

Problem Statement of the Study

In recent years, Myanmar's insurance sector has liberalized by giving foreign insurance companies a chance to enter the market. At the same time, the country's financial sector governance has been strengthened, while the insurance companies are increasing and developing in Myanmar, and they are competing to expand their businesses to become market leaders.

After the liberalization of the insurance industry, local insurance companies in Myanmar have strongly focused on customers by heavily committing to employee improvement activities. Employees are an important asset for insurance companies because they are the interface between the insurance industry and the public. They are the first-line operators in the insurance sector, and they play a very critical role in the distribution and uptake of insurance products.

However, many companies in Myanmar suffered many threats and experienced the negative effects of the spread of COVID-19 disease problem in 2020. According to the current situation in Myanmar, many organizations face various challenges and dynamic changes. At that time, insurance companies also faced many challenges in competing in the marketplace. Especially, local insurance companies try to compete with other joint ventures and foreign insurance companies by overcoming various challenges and problems.

To remain competitive, local insurance companies need to emphasize the achievement of a competitive advantage in human resources. Companies need to differentiate themselves from

their competitors by offering better products, services, and customer experiences. Insurance salesperson's play a critical role in creating and sustaining a competitive advantage for local insurance companies.

A salesperson who has a direct relationship with customers plays a crucial role in achieving a competitive advantage. They interact directly with customers, providing them with information about policies, handling claims, and helping them select insurance products that meet their needs. All sales and marketing employees give an initial impression of their company to customers. An engaged salesforce is crucial for a company to achieve competitive advantage and overall success. Insurance companies need to prioritize salesperson engagement and create a work environment that fosters salesperson's motivation. Therefore, this research aims to study the effects of job characteristics on salesperson's engagement at insurance companies in Mandalay.

Objectives of the Study

The objective of the study is to analyze the effects of job characteristics on salesperson engagement of local insurance companies in Mandalay.

Scope and Methods of Study

This research focuses on the effects of job characteristics of salesperson engagement at local insurance companies in Mandalay. Two-stage simple random sampling method was used in choosing the sample size. According to the survey data (2022), there are eight local insurance companies in Mandalay. Among them, five local insurance companies are selected by using a simple random sampling method as the first stage. And then, as the second stage, a sample of 67 insurance salespersons is selected from the population of 80 insurance salespersons in five selected local insurance companies. Primary data are collected by using a structured questionnaire. Secondary data are gathered from relevant text books, journals, and previous research papers. Descriptive statistics, correlation analysis, and multiple regression analysis are used to analyze the effects of job characteristics on salesperson engagement at local insurance companies in Mandalay.

Literature Review

In today's business environment, successful organizations design an effective work environment that engages employees to be successful in their work. Creating effective job characteristics is a crucial element in designing a work environment that engages and enables employees to succeed.

Job Characteristics

Job characteristics, or the design of a job, can have a significant impact on an employee's motivation, satisfaction, and performance. It identifies five core job characteristics that can be manipulated to increase an employee's motivation and satisfaction: skill variety, task identity, task significance, autonomy, and feedback (Hackman & Oldham, 1980).

Skill Variety: It is the degree to which the job requires a variety of activities and involves many different skills and talents (Hackman & Oldham, 1980). Skill variety is the extent to which a job requires a variety of employee competencies to carry out the work (Hellriegel & Slocum, 2011).

It also defines the degree to which the job has many different activities using several skills, abilities, and talents of a person (Champoux, 2011).

Task Identity: It is the extent to which a job requires an employee to complete a whole and identifiable piece of work, that is, doing a task from beginning to end with a visible outcome (Hellriegel & Slocum, 2011). It is also the degree to which the job lets a person do a whole piece of work from start to finish (Champoux, 2011). Task identity is the extent to which the job requires an individual to perform a whole or completely identifiable piece of work. In other words, task identity is high when a person works on a product or project from beginning to end and sees a tangible result (Kinicki & Fugate, 2016).

Task Significance: It refers to the degree to which the person doing the job perceives it as important to others in the organization or clients of the organization (Champoux, 2011). Luthan (2011) states that task significance involves the importance of the task. It involves both internal significance—how important the task is to the organization—and external significance—how proud employees are to tell relatives, friends, and neighbors what they do and where they work.

Autonomy: It is the extent to which the job provides empowerment and discretion to an employee in scheduling tasks and in determining procedures to be used in carrying out those tasks (Hellriegel & Slocum, 2011). It is also defined as the degree of a person's discretion in deciding how and when to do the job (Champoux, 2011). Autonomy is the extent to which the job enables an individual to experience freedom, independence, and discretion in both scheduling and determining the procedures used in completing the job (Kinicki & Fugate, 2016).

Feedback: refers to the extent to which the job activities provide the worker with direct and clear information about performance (Hackman & Oldham, 1980). Feedback is provided after carrying out job-related tasks by giving direct and clear information about the effectiveness of an employee's performance (Hellriegel & Slocum, 2011). It is also defining the degree to which a person learns about the quality of his or her job performance while doing the task. Feedback comes from clients directly served by the job, but not from a supervisor or coworkers (Champoux, 2011).

Employee Engagement

Schaufeli et al. (2002) suggested that engaged employees possess high energy and are stimulated to invest effort and time for their job without fatigue; engaged employees feel enthusiasm and significance by involving themselves in their work and feel satisfied and inspired; and engaged employees who are completely concentrated in their work and feel pleasant.

Vigor: It refers to a state of high energy, resilience, and a willingness to invest effort and time into one's job. In other words, it is characterized by factors such as having high energy levels and mental resilience when working, a willingness to invest effort in one's work, and being full of determination even when faced with difficulties. Therefore, an employee who is working with great vigor is highly motivated by their job and is likely to remain very positive when faced with work-related problems or hassles (Mauno et al., 2006).

Dedication: It is characterized by deep involvement in work, accompanied by enthusiasm, satisfaction, and inspiration. It involves a profound psychological connection and commitment to

the tasks and responsibilities associated with one's job (Mauno et al., 2006). When individuals are dedicated to their work, they demonstrate a strong sense of purpose, motivation, and pride in what they do.

Absorption: It occurs when employees are fully concentrated and deeply engaged in their work, to the point where time seems to pass quickly and it becomes challenging to detach from the job. Absorption is regarded as having high levels of concentration and focus at work (Schaufeli et al., 2002). People are engaged so deeply in an activity that nothing else seems to matter; the experience itself is so pleasant that people do it at a great cost just for the sake of doing it (Mauno et al., 2006).

An engaged employee is aware of the business context and works with colleagues to improve performance within the job for the benefit of the organization. The organization has to work to develop and nurture engagement, which requires a two-way relationship between employer and employee (Robinson et al., 2004).

Wang et al. (2015) suggested that skill variety, task significance, and feedback had a positive and significant effect on employee engagement among insurance sales representatives in China. However, task identity and autonomy did not show a significant effect on employee engagement. Task significance, autonomy, and social support were positively associated with employee engagement levels in the insurance sector of Pakistan. However, skill variety and feedback did not show a significant effect on employee engagement (Raziq & Maulabakhsh, 2015).

Lee and Kim (2020) found that autonomy, skill variety, and feedback had a positive impact on employee engagement among insurance employees in South Korea. Task significance and social support did not show a significant effect on employee engagement. It is suggested that future research could examine the effect of job characteristics on employee engagement in other industries and countries to generalize the findings. Based on the literature reviews, the conceptual framework of the study is developed and shown in Figure (2.1).

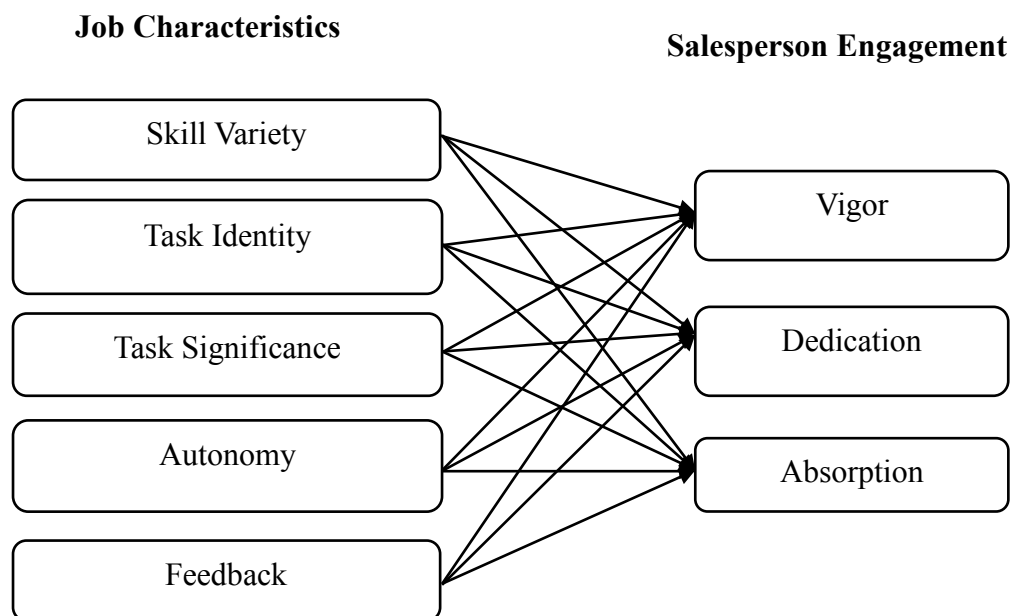


Figure (2.1) Conceptual Framework of the Study

Own Compilation Based on Previous Studies, 2023

As shown in the Figure (2.1), this study explores the effect of job characteristics on salesperson engagement. Job characteristics of salesperson are independent variables that include

skill variety, task identity, task significance, autonomy and feedback. Salesperson engagement: vigor, dedication and absorption are dependent variables.

Findings and Discussions

In order to meet the objectives of the study, the perceptions of job characteristics and engagement of 67 insurance salespersons were analyzed. Table 1 illustrates the demographic profiles of the 67 insurance salespersons, which include gender, age, marital status, educational qualification, salary, and working experience of the respondents.

As shown in Table (1), it can be found that out of 67 salespersons from 5 local insurance companies in Mandalay, 32.8% are males and the rest, 67.2%, are females. It revealed that female salespersons are greater than males at the local insurance company, Mandalay. Concerning the age of salespersons in local insurance companies in Mandalay, 31.3% of the respondents fall into the age category of 18–27 years, 64.2% belong to the age group 28–37, and the rest, 4.5%, are at the age of 38 years and above. Concerning the marital status, 64.2% are single, and the rest, 35.8%, are married salespersons at local insurance companies in Mandalay.

Table (1) Demographic Profile of the Respondents

I	Particular	No. of Respondents	Percentage (%)
	Gender		
	Male	22	32.80
	Female	45	67.20
	Total	67	100.00
II	Age		
	18 – 27 years	21	31.30
	28 – 37 years	43	64.20
	38 years and above	3	4.50
	Total	67	100.00
III	Marital Status		
	Single	43	64.20
	Married	24	35.80
	Total	67	100.00
IV	Education		
	Bachelor Degree	64	95.50
	Master Degree	3	4.50
	Total	67	100.00
V	Working Experience		
	Under 2 years	7	10.40
	2 – 4 years	42	62.70
	5 – 7 years	8	11.90
	8 years and more	10	14.90
	Total	67	100.00

Sources: Survey Data (2022)

In addition, as far as the educational background of the employees of local insurance companies in Mandalay is concerned, 95.5% are bachelor degree holders, and the rest, 4.5%, are

master degree holders. Concerning the working experience of the employees, 10.4% of salespersons have under 2 years, 62.7% of salespersons have between 2 and 4 years of working experience, 11.9% of salespersons have between 5 and 7 years of working experience, and the remaining 14.9% of salespersons have 8 years and above of working experience.

The Cronbach alpha value and mean value of each variable is described in Table (2). Both job characteristics and salesperson engagement are considered reliable as the value of Cronbach's alpha have been found to be more than 0.70 criterion.

Table (2) Descriptive Statistics

Sr. No.	Variables	Cronbach's Alpha	Mean
1	Skill Variety	0.814	4.27
2	Task Identity	0.828	4.00
3	Task Significance	0.777	4.16
4	Autonomy	0.758	3.55
5	Feedback	0.740	3.69
6	Vigor	0.760	4.10
7	Dedication	0.862	4.22
8	Absorption	0.821	4.03

Source: Survey Data (2022)

As presented in Table (2), the mean scores of all dimensions of job characteristics are high. Skill variety has the largest mean value (4.27), followed by task significance, task identity, feedback and autonomy, with the implication that in the perception of insurance salespersons. It can be concluded that the nature of insurance sales inherently involves a combination of diverse skills, end-to-end task involvement, a sense of contributing to a significant purpose, autonomy in decision-making, and insurance salespersons often receive regular feedback on their performance, whether it's in the form of sales metrics, customer feedback, or performance reviews.

The means for salesperson engagement show that dedication has the highest value (4.22), followed by vigor and absorption dimensions. The high mean value of dedication suggests that salespeople in local insurance companies are dedicated to their work through motivated acts such as working hard and giving the best that one can at work. According to the nature of their work, they experience a sense of significance, enthusiasm, inspiration, and challenge. The relatively high mean value in the vigor dimension highlights the characteristics of salespersons in local insurance companies as high levels of energy, mental resilience while working, and persistence even in the face of difficulties. The high mean value in the absorption dimension indicates that salespeople have high levels of absorption and deeply immerse themselves in their work, integrating their professional life with their personal life.

To examine the effects of job characteristics on salesperson engagement, the mean value of each engagement dimension is regressed by five job characteristics. The results of the multiple regression analysis are presented in Table (3).

Table (3) The Effects of Job Characteristics on Salesperson Engagement

	Vigor			Dedication			Absorption		
	B	SE	β	B	SE	β	B	SE	β
Skill Variety	-.089	.102	-.098	-.011	.131	-.011	-.047	.140	-.045
Task Identity	.385***	.096	.528	.164	.123	.199	.234**	.131	.277
Task Significance	.093	.092	.114	.332***	.118	.361	.276**	.126	.291
Autonomy	.200**	.098	.292	.031	.126	.040	.152	.134	.191
Feedback	-.073	.104	-.097	.128	.133	.151	-.050	.142	-.057
R ²	.518			.379			.331		
Adjusted R ²	.478			.328			.276		
F value	13.089***			7.439***			6.024***		

Source: Survey Data (2022)

, *: Indicate statistical significance at the 5% level, and 1% level.

The results of the regression analysis highlight the fact that job characteristics have an effect on all dimensions of salesperson engagement at a 1 percent significant level and a 5 percent significant level, respectively. Task identity has a positive and significant effect on vigor and absorption. It reveals that when salespeople have a strong sense of task identity, they may also be more likely to develop a sense of pride and purpose in their work. In addition, having a clear task identity can help a salesperson better manage their workload and priorities. When they know exactly what is expected of them, they can prioritize their tasks more effectively and manage their time more efficiently.

Task significance has a positive effect on the dedication and absorption of salespersons. It indicates that when salespeople perceive their work as significant, they are more likely to be dedicated and committed to their jobs. This is because they are able to see the positive impact that their work has on the lives of others, which can be a powerful motivator. In addition, feeling that their work is significant can also increase a salesperson's sense of pride and accomplishment. For example, they may feel proud of the fact that they are helping individuals and families protect themselves from financial risks and providing them with peace of mind, which can further enhance their dedication.

Autonomy has a positive effect on the vigor of insurance salespersons. For example, when salespeople have a say in how they carry out their work, they are more likely to feel invested in the outcomes and put in greater effort to achieve their goals. Moreover, when salespersons have the freedom to make decisions about how they approach their work, they can choose to focus on tasks that they are skilled at and find enjoyable. They are more likely to feel

accountable for their results. This can increase their sense of responsibility, drive them to perform at a higher level, and also lead to a greater sense of job satisfaction, which can in turn increase their vigor.

Conclusion

This section discussed the implications for the literature and management of local insurance companies in Mandalay. Several studies show that job characteristics have significant effects on salesperson engagement. Consistent with the literature, this study found that the three job characteristics—task identity, task significance, and autonomy—have an effect on salesperson engagement in terms of vigor, dedication, and absorption. Task identity and task significance have a positive effect on the vigor of the salesperson. It supports the previous studies of Raziq and Maulabakhsh (2015) and Wang et al. (2015). Skill variety and feedback have no significant effects on any dimension of salesperson engagement at local insurance companies in Mandalay. This finding supports the previous finding of Lee and Kim (2020) and contradicts the finding of Wang et al. (2015).

According to the findings, it is indicated that salesperson engagement, especially their vigor, is influenced by two job characteristic variables: task identity and autonomy. Moreover, the dedication of a salesperson is influenced by task identity. Furthermore, the absorption of salespeople is found to be influenced by task identity and task significance. The findings of this study indicate that the job characteristics of insurance salespersons may directly increase salesperson engagement in local insurance companies in Mandalay.

To be an effective salesperson, local insurance companies need to ensure that job roles are well-defined and provide clear task identity and significance. They should allow salespersons to understand the importance of their roles in contributing to the overall success of the organization and feel a sense of purpose in their work. Companies should grant salespersons a certain level of autonomy to make decisions in their sales processes. Empowering salespersons to make choices related to their work can increase their engagement and foster a sense of ownership. Companies should offer training programs that focus on enhancing task-related skills and competencies. Salespersons who receive relevant training are likely to feel more engaged and capable in their roles.

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THE EFFECT OF PROJECT MANAGER'S SKILLS AND EXPERIENCES ON PROJECT SUCCESS

Kyaw Zin Oo¹, Kyaw Kyaw²

Abstract

This paper aims to analyse the effect of project manager's skills and experiences on project success, focusing on the Royal AMT construction company limited. The specific objectives are to examine the effect of project manager's skills (conceptual skills, human skills, political skills and technical skills) and experience on project success measured by cost, measured by schedule and measured by quality. Among 50 project managers, 44 are randomly selected as sample (by calculating with Yamane (1967) formula. Primary data are collected from superiors of these 44 selected project managers. The superiors (directors and senior managers) filled the structured questionnaires: one superior for one project manager separately. From descriptive analysis, most of the project managers have high level of conceptual, human, political and technical skills. They have at least 10 years in construction service. From regression analysis, their political skills and technical skills can generate good cost management. Their political skills support to completion of project within identified time frame, and their technical skills improve the quality of project. However, their human skills will disturb effective cost management.

Keywords: Conceptual Skills, Human Skills, Political Skills, Technical Skills, Project Success

Introduction

In Myanmar, infrastructure development and standard of living by housing in cities largely depends on quality of construction projects including residential projects. The success of such projects will be representative to the image and beauty of cities in the country. The sustainability and success of construction industry depends on the country's development, and the construction companies have the immense power to design the buildings and infrastructure of a country. Moreover, the development of construction industry is a major contribution to the country's economic development: this industry can create job opportunities for citizens, can also support to survival of local suppliers who are marketing construction materials, and eventually to then would supply construction materials government by paying tax.

The success of construction projects will be influenced by various factors such as technology, developer's commitment, compliance to quality standards, and project management maturity of project managers. Among these factors, the most crucial one is the project management of maturity of project managers. In Yangon, recently, many construction companies are struggling from ups and downs in its business environment. Within this turbulent environment, some construction companies can overcome the threats of the environment, even they can cope with the positive changes of environment. It seems that they can develop successful projects due to management skills and experiences of project managers.

Among successful construction companies, Royal AMT has become popular with its growth by number of projects, and its image by completion of undertaken projects within desired

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time frame. Although it is still young – Royal AMT was established in 2020 – it has employed 120 permanent staff, and it has already finished 70 projects successfully. It has 25 ongoing projects, and most of the projects are residential projects. It is now developing the regional project near to Chaung Thar hotel area.

This study examines the effect of project managers' skills and experience on project success by focusing on the case of Royal AMT construction company limited.

Rationale of The Study

Construction companies rely on managing projects in establishing houses, apartments, condominiums, villas, schools, hospitals, bridges, airport, malls, and roads. In handling a project, construction companies need to assign a project manager with relevant skills to ensure project success. Research findings are expected to Point out the significant role of project managers' skills in achieving project success (Hwang & Ng, 2013; Sunindijo, 2015).

Researchers and professionals believe that the project manager is a very essential element to the success of the construction project and have an impact at every stage of the construction project (Ali & Chileshe, 2009). In today's competitive market, the recognition and growth of project manager's skills have become increasingly important (Omidvar, Samad, & Alias, 2012).

No one construction professional can be best suited for project manager's role in construction companies. Only a professional who has a large experience of technical, human and conceptual skills can be relevant for a project manager's post. Project managers must have the experience in finance, communication skills, decision-making skills, quality control, contract procedures, resource control, and so on. They need to act as both specialists and generalists. In some cases, they have to apply their expertise to solve some functionally specific problems. However, for many cases, they have to oversee many areas, with generalized skills.

Project success is typically measure with three criteria: time, cost, and quality. To complete a project within the identified scope (within time and budget, and with desired quality specifications), project manager may face special demands: project manager may need to be scramble and wheedle for acquiring adequate budget, for acquiring the right members, to be able to motivate members to do what project manager wants to do, to be able to deal with unexpected risks, to be able to make proper trade-offs between company and client, and must have the high communication skills to deal with top management, client, and other stakeholders.

Project managers must be capable to take facilitator role: project managers are responsible simultaneously for top management, for team members, and for the success of project. Thus, skills and experience of project managers are crucial for success of the project. This paper analyses the effect of project managers' technical skills, human skills, conceptual skills, political skills and experience (by years of service in construction industry) on success of the projects measured with schedule, cost and quality by focusing on the projects of Royal AMT company limited.

Objectives of The Study

(1) To analyse the effect of project managers' skills and experience on success of the project by cost at Royal AMT company limited.

(2) To analyse the effect of project managers' skills and experience on success of the project by schedule at Royal AMT company limited.

(3) To analyse the effect of project managers' skills and experience on success of the project by quality at Royal AMT company limited.

Scope and Method of The Study

This study mainly focuses on the skills and experience of project managers, and success of the projects undertaken by Royal AMT construction company limited. There are 50 top level managers who are taking responsibility as project managers in this company. By using (Yamane, 1967) formula, the sample size is 44, with 5% margin of error. Simple random sampling method is applied to select the sample from population (44 from 50). To collect the primary data, supervisor's rating method is applied to fill in the structured questionnaires. For each and every sampled managers, their respective top management executives (BOD and MD) rated their level of skills and their experiences, and the success of respective projects they have completed. For data analysis, both descriptive and regression methods are applied. Secondary data are collected from main source of Royal AMT's staff records and its website.

Theoretical Background

Although some management authors presented various skills of managers, the necessary skills of managers including project managers are technical skills, human skills, and conceptual skills (Daft, 2022). Technical skills consist of expertise in methods and techniques in specific areas such as engineering, architecture, or finance; also include competencies to use equipment and tools, analytical ability to solve the problems within discipline, and specialized knowledge in the specific field, human skills are the abilities of managers to work with and through people and to effectively participate in the team, human skills are necessary when managers build relationships with team members (to motivate, to facilitate, to coordinate, to lead, to communicate with them), also it is important when solving conflicts among team members, and conceptual skills are the ability to see the company as a whole and to understand the links between its parts or sections, and the ability to take a broad, long-term view (Daft, 2022).

Construction project managers have to combine technical knowledge and expertise with skills that can assure effective coordination and communication of many different stakeholders (Dainty, Cheng, & Moore, 2003). The skill of motivation (human skills) is an ability to enable a person to achieve their goals. However, motivation is a skill that a project manager can apply to ensure that the project team achieves the project's goals in time and on budget (Schmid & Adams, 2008). In the early phase of a construction project, a project manager needs to motivate the project team in order to achieve goals. However, the lack of such motivation often leads to conflict, strikes, low productivity, stress, and the failure of the project (Zulch, 2014). The conceptual skills are related to overall planning of the project. Planning and goal setting skills involve an ability to plan a process and to achieve the desired goals (Glavinish, 2008).

In addition to the three typical skills {technical, human, and conceptual}, the political skills are also important for project managers to manage the project effectively. To achieve the perfect teamwork, the project manager has to understand his team's mind and how to deal with team, also to understand everyone he deals with to get to a point which leads the project to

success. Mainiero (1994) suggested that well-developed political skill is an important contributor that distinguishes superior performers. Sunindijo & Zou (2012) also found that political skill can be used to develop safety climate in construction projects.

By using the three skills mentioned above, managers including project managers are playing at the ten roles in daily basis: informational role (as the monitor, disseminator, and spokesperson), interpersonal role (as the figurehead, leader, and liaison), and decisional role as the entrepreneur, disturbance handler, resource allocator, and negotiator (Mintzberg, 1973).

Project managers play at the monitor role to seek and receive information, assess periodicals and reports, and retain personal contacts; as the disseminator role, project managers forward information to other organization members, send memos and reports and make phone calls; as the spokesperson, project managers will transmit information to outsiders through speeches, reports, and memos.

Project managers play at the figurehead role to perform ceremonial and symbolic duties such as greeting visitors and signing legal documents; as the leader, project managers direct and motivate members, train, counsel and communicate with them; as the liaison, project managers maintain information links both inside and outside organization, use emails, phone calls and meetings.

Sometimes, project managers have to be entrepreneurs to initiate improvement projects, identify new ideas, delegate responsibility to others; project managers also act as disturbance handlers to take corrective action during conflicts or crises, resolve disputes among team members; project managers are sometimes resource allocators to decide who should receive resources, set the schedule, budget and set priorities; project managers are also negotiators to represent team or department's interests, to represent the team during negotiation of budgets.

In the construction industry, to complete the projects successfully, project managers' management skills are very important. To complete the project within the time frame, to be compliance with all specifications, not to be budget overrun, project managers must have various skills to play at various roles. Moreover, their experience (years of service) is very supportive to the project success.

Empirical Study

The closely related previous paper is based to develop the conceptual framework for the study. The conceptual model of this previous paper is shown in Figure (1).

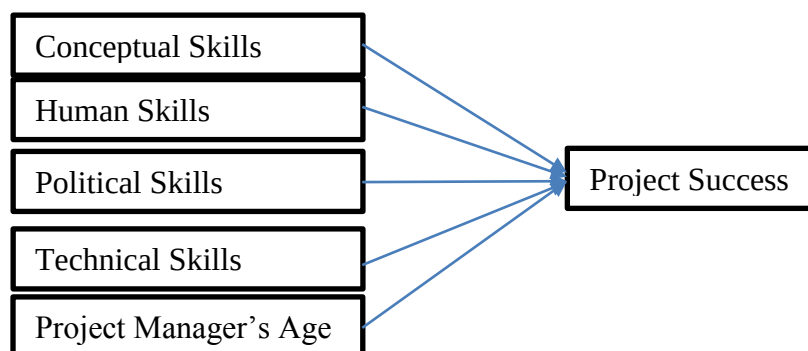


Figure (1) Previous Conceptual Model

Source: Elmezain, Baduruzzaman & Khoiry (2021)

The previous research was conducted by collecting data from 400 project managers who are working at five well-known construction companies in Cairo, Egypt. According to researchers (Elmezain, Baduruzzaman, & Khoiry, 2021), project manager's conceptual skills, human skills, political skills and technical skills have significant positive effect on success of projects in Egypt. However, the project manager's age has no association with project success.

Conceptual Framework of The Study

By considering the previous researcher's model and findings, the conceptual framework (as shown in Figure 2) is developed.

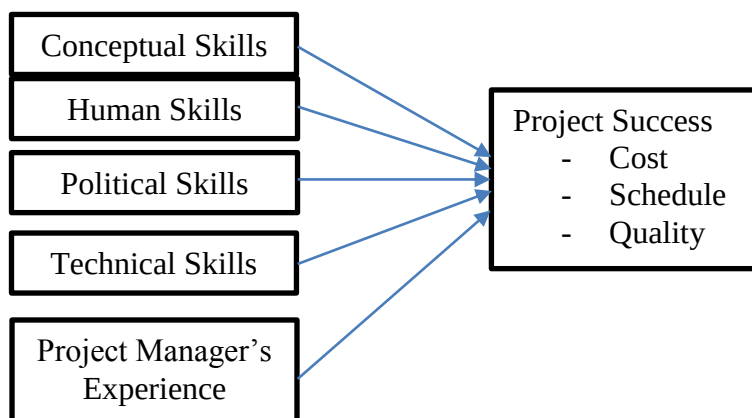


Figure (2) Conceptual Framework

Source: Developed for this Study by Adapting to Model of Elmezain, Baduruzzaman & Khoiry (2021)

In this study, the factors influencing the project success are assumed as technical skills, conceptual skills, political skills, conceptual skills, and the project manager's experience. Although the previous researchers assumed that the project manager's age as a factor, in this study, the project manager's age is replaced with project manager's experience. Moreover, in analysis, instead of measuring the project success by combining all criteria, in this study, the project success is measured with three criteria (cost, schedule and quality) specifically and separately.

Questionnaire Development

The structured questionnaire is developed with close type questions (with five Likert scales). To measure the conceptual skills, 3 items; for human skills, 3 items; for political skills, 4 items, and for technical skills, 6 items are developed. The question items for project manager's skills are based on the items developed by Sunindijo (2015). The project success is measured with three variables (cost, schedule and quality). The cost is measured with 5 items, the schedule

is measured with 5 items and the quality is measured with 4 items. The question items for project success are based on the items developed by (Khan et al. 2013).

Reliability Test

Primary data are collected from all sampled managers (44 respondents). The data reliability for all the variables are tested and the results are shown in Table (1).

Table (1) Reliability Results

Sr. No.	Variables	Number of Question Items	Cronobach Alpha
1	Conceptual Skills	3	
2	Human Skills	3	
3	Political Skills	4	
4	Technical Skills	6	
5	Cost (Measure of Project Success)	5	
6	Schedule (Measure of Project Success)	5	
7	Quality (Measure of Project Success)	4	

Source: Survey Data, 2023

According to the reliability test results, the Cronobach alpha scales are above 0.7. According to (Cronbach, 1951), coefficient alpha values of 0.7 and above are entitled to represent acceptable reliability, those above 0.80 represent good reliability, and those above 0.90 represent excellent reliability. Therefore, the employed question items maintain good reliability.

The primary data are analysed with descriptive analysis by calculating the mean values for each of the variables, and their respective question items. The descriptive analysis results for project manager's skills are shown in Table (2).

Table (2) Project Managers' Skills

Sr. No.	Items (Conceptual Skills)	Mean
1	Determine and coordinate project elements and resources	3.79
2	Identify exactly what needs to be involved in a project	3.91
3	Maintain a Grandview of a project and its relationships to company, environment, community and industry.	4.00
General Mean		4.03
Sr. No.	Items (Human Skills)	Mean

1	Motivates and inspires subordinates to effectively perform their tasks	3.98
2	Effectively communicate with a variety of people	3.86
3	Recognize the feelings of his/her own and subordinates' feelings to maintain self-motivation and managing others' emotions	4.14
General Mean		4.04
Sr. No.	Items (Political Skills)	Mean
1	Advocate high levels of integrity, sincerity and authenticity, to inspire confidence and trust in others	3.68
2	Create and employ various social networks to achieve organizational and personal goals	3.89
3	Permit followers to adapt their behavior to diverse situations to stimulate the desired responses	3.93
4	Recognize interpersonal interactions and social situations that occur in social settings	3.91
General Mean		3.93
Sr. No.	Items (Technical Skills)	Mean
1	Identify resources (human and financial) required to implement project activities such as setting and controlling project budget	4.14
2	Understand construction contracts' standard procedures and take responsibility of document management system	4.00
3	Determine quality standards, methods to meet the standards, monitor compliance and eliminate inadequate performance	4.07
4	Decide on which tasks need to be performed, which tasks are due and which activities drive other activities	3.93
5	Effectively manage processes related to achieving goals, services and results required from external parties	4.02
6	Conduct risk management such as identify, analyze and mitigate risks	4.07
General Mean		4.02

Source: Survey Data, 2023

As shown in Table (2), most of the project managers at Royal AMT construction company limited have high level of conceptual skills, human skills, political skills and technical skills. They also have the reliable experience in construction field (all managers have at least 10-year experience in construction industry).

The descriptive analysis results for project success with three criteria are shown in Table (3).

Table (3) Project Success

Sr. No.	Items (Cost)	Mean
1	Net profit targets were met	3.98
2	Overall project cost performance was met based on baseline goals, targets, or expectations.	4.14

3	Budget contingencies were well managed.	4.02
4	Rework costs were well managed.	4.05
5	Market competition was well understood.	4.14
General Mean		4.13
Sr. No.	Items (Schedule)	Mean
1	Labor availability was well managed.	4.11
2	Overall project schedule performance was met based on baseline goals, targets, or expectations.	4.05
3	Equipment availability was well managed.	3.95
4	Schedule float management was optimized	3.86
5	Material availability was well managed.	4.00
General Mean		3.99
Sr. No.	Items (Quality)	Mean
1	Customer satisfaction was evidenced by direct feedback.	4.11
2	Overall project quality objectives were met based on baseline goals, targets, or expectations.	4.14
3	Customer satisfaction was evidenced by the opportunity for follow-on work.	4.00
4	The customer's true goals and expectations were properly reflected in contract performance incentives.	4.14
General Mean		4.11

Source: Survey Data, 2023

According to the survey results, Royal AMT construction company limited accomplished most of the projects within the time frame, within the desired budget and met the quality standard.

Findings From Regression Analysis

To reach the research objectives, the effect of project manager's skills and experience on project success by cost, the effect of project manager's skills and experience on project success by schedule, and the effect of project manager's skills and experience on project success by quality are analysed with multiple linear regression analysis. The regression results for the objective (1): the effect of project manager's skills and experience on project cost are shown in Table (4).

Table (4) Effect of Project Manager's Skills and Experience on Project Cost

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig	VIF

	B	Std.Error	Beta			
Constant	1.619	0.849		1.907	.069	
Conceptual Skills	0.046	0.123	0.058	0.370	.713	1.360
Human Skills	-0.288*	0.150	-0.338	-1.923	.062	1.684
Political Skills	0.427***	0.154	0.452	2.780	.008	1.448
Technical Skills	0.292*	0.166	0.276	1.757	.087	1.349
Experiences (Years)	0.059	0.066	0.139	0.894	.377	1.314
R						0.552
R Square						0.305
Adjusted R Square						0.213
F Value						3.328**

Source: Survey Data, 2023

* Significant at 10%, ** Significant at 5%, *** Significant at 1%

According to the regression analysis results, project manager's conceptual skills have no effect on project cost. Project manager's human skills have negative effect on project cost: their social skills will be adversely affecting on cost management because of the nature of construction work for which most of the site employees and sub-contractors will take advantage over project manager's kindness, friendliness, social dealings and mindfulness. Their political skills (understanding about team members' strengths and weaknesses) and technical skills (expertise in specific field and skillful in using tool and methods and technology) have positive effect on project cost (effective cost management).

The regression results for the objective (2): the effect of project manager's skills and experience on project schedule are shown in Table (5).

Table (5) Effect of Project Manager's Skills and Experience on Project Schedule

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig	VIF
	B	Std.Error	Beta			
Constant	0.453	1.091		0.415	.680	
Conceptual Skills	0.187	0.158	0.182	1.179	0.246	1.360

Human Skills	0.003	0.193	0.002	0.013	0.990	1.684
Political Skills	0.442**	0.197	0.357	2.238	0.031	1.448
Technical Skills	0.291	0.213	0.210	1.363	0.181	1.349
Experiences (Years)	-0.012	0.085	-.021	-0.139	0.890	1.314
R						0.577
R Square						0.332
Adjusted R Square						0.245
F Value						3.784***

Source: Survey Data, 2023 * Significant at 10%, ** Significant at 5%, *** Significant at 1%

It is found that the political skills of project managers can support to time management: the political skills of project managers will be necessary to complete the projects without delay.

The regression results for the objective (3): the effect of project manager's skills and experience on project quality are shown in Table (6).

Table (6) Effect of Project Manager's Skills and Experience on Project Quality

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig	VIF
	B	Std. Error	Beta			
Constant	3.844	1.080		3.560	0.001	
Conceptual Skills	0.003	0.157	0.004	0.021	0.984	1.360
Human Skills	-0.051	0.191	-0.052	-0.267	0.791	1.684
Political Skills	-0.091	0.195	-0.083	-0.464	0.645	1.448
Technical Skills	0.477**	0.211	0.390	2.258	0.030	1.349
Experiences (Years)	-0.101	0.084	-0.205	-1.204	0.236	1.314
R						0.398
R Square						0.158
Adjusted R Square						0.048
F Value						1.429*

Source: Survey Data, 2023 * Significant at 10%, ** Significant at 5%, *** Significant at 1%

The project managers' technical skills will increase the project quality. To meet the specifications and quality standards, project managers must have specialized skills in respective areas.

Conclusion

Royal AMT construction company limited was founded by four young entrepreneurs, About 10 years ago, it has accomplished 70 projects. It has been receiving good reputation in the market with success of its projects. The hidden factors of this success are partially the project managers' skills, particularly technical and political skills. For long term success, they should try

to improve their technical skills continuously to keep abreast of the continuously changing technology and project methods. Moreover, they also need to retain their integrity, sincerity and authenticity, and need to inspire confidence and trust in others. They also have to emphasize on building social networks, and to value the diverse views of people from various backgrounds.

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PERCEIVED LEVEL OF EMOTIONAL INTELLIGENCE AND SPORT PERFORMANCE OF YANGON UNIVERSITY OF ECONOMICS BASKETBALL ATHLETES

Naing Lin Tun¹, Myat Khing Swe², Aye Nyein Khet³, Yar Zar Kyaw⁴, Cho Cho Lwin⁵, Ei Phyu Sin⁶, Mu Mu Aye⁷, Tun Nan Da⁸

Abstract

This study examined the Emotional Intelligence (EI) and Sport Performance (SP) of athletes from the **Yangon University of Economics**. A total of 34 basketball players were involved in the cross-sectional survey representing the open-skill athletes. The perceived levels of EI and SP of the athletes were assessed through self-rating, using a structured questionnaire with Likert scale items. In general, open-skill athletes often exhibited high EI levels only in relationship management. It was found that most of the athletes had EI scores within the effective functioning or enhanced skills level. The possible relationship between the athletes' level of EI and SP was examined via Spearman's correlation. Results revealed that the SP of basketball players (open-skill athletes) was significantly correlated ($P < 0.05$) to relationship management ($r = 0.903$) but not significantly correlated ($P > 0.1$) to their self-awareness ($r = 0.736$), self-management ($r = 0.874$) and social awareness ($r = 0.929$). In general, it can be deduced that the SP level of the open-skill athletes appeared to improve with increasing EI level. Implementation of motivational programs aimed at enhancing the EI levels among open-skilled athletes are recommended to boost their SP during the game.

Keywords: Athlete, Basketball, Emotional Intelligence, Sports

Introduction

The Yangon University of Economics is a State University which is under the Department of Higher Education (Yangon Region, Myanmar), Ministry of Education. Sports events at YU Eco also play a crucial role in building team spirit and fostering a sense of camaraderie among students. Whether on the basketball court, volleyball court, badminton court, or football field, these events provide opportunities for students to work together as a team. Basketball Club, Volleyball Club, Badminton Club, Football Club, and Boat Club Rowing exemplify YU Eco's commitment to nurturing talent and fostering a sense of community within these sports. YU Eco continues to thrive, these sports initiatives remain integral to the university's culture, nurturing talent and contributing to a vibrant sports scene that enriches the lives of its students and the legacy of Yangon University of Economics.

The application of various psychological strategies in sports, including relaxation, goal setting, mental rehearsal, visualization, and self-talk have been associated with athletes' game performance (Clough et al., 2012). It has been suggested that emotions influence an individual's

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behavior, and as such, it is considered as one of the major factors that determine an athlete's competence in sports.

Previous research elucidating the possible relationship between various personality variables and sport performance (SP) were focused on examining significant associations between psychological skills (e.g., self-motivation, self-confidence, arousal and active concentration, attention control, stress regulation, and coping with adversities) and effective (Bal et al., 2011). This has led to arguments concerning the validity of using various psychological inventories in the selection of athletes based on certain predictor variables for success in sports. In this regard, the development of inventories designed specifically for athletes have been advocated by eminent sport psychologists such as Anshel (2003), allowing for an objective measure of potential factors that support peak performance during sports events (Bal et al., 2011). In general, sports may be categorized into two types: open-skill or closed-skill sports (Wang, et al., 2013)

Open-skill sports such as football, badminton, and basketball involve the execution of sport skills in a constantly changing and unpredictable way (Di Russo et al., 2010). Thus, athletes are required to have skills that will allow them to adapt instability of the environment, which is deemed to be perceptual and externally paced (Zaugg, 2007).

There are four basketball teams each containing ten members. This study focuses only on forty male and female basketball players in YU Eco during the Academic Year 2022-23. This study aimed to determine the perceived level of EI and SP of University players in YU Eco during the Academic Year 2022-23. Specifically, the study investigated the level of EI of the open-skill (basketball) athletes, with respect to four EI domains: self-awareness, self-management, social awareness, and relationship management. The athletes' self-rated SP score was also determined. The possible relationship between the athletes' EI level on four domains and self-rated SP scores was tested for significance. Results of this study will serve as basis in the formulation of effective intervention programs aimed at enhancing the game performance of the athletes, particularly those involved in basketball.

Objectives of the Study

1. To analyze the effect of Emotional Intelligence on Sports Performance of basketball Athletes in Yangon University of Economics.

Scope and Method of the Study

Among the 4 Graduate Degree Programmes during Academic Year 2022-2023, two majors are selected randomly. This study focuses on basketball students from Bachelor of Economics (BEcon /Eco) and Bachelor of Business Administration (BBA). The sample size is thirty-four according to the Census Sampling Method. Data have been collected from BEcon/Eco and BBA basketball players by using personal interview methods using a structured questionnaire and google form. Secondary data are collected from previous studies, university records and related textbooks.

This descriptive survey is based on the cross-sectional study design, which is generally employed to describe the attributes of a certain group in terms of behavior, attitude, or perception (Mathers et al., 2009). This survey research was conducted to examine the perceived level of EI

and SP among university basketball players in YU Eco during the Academic Year 2022-23. Involvement in the study was purely voluntary, and participants were allowed to withdraw at any stage.

Literature Review

Theories and Concepts

Emotional intelligence (EI) or emotional quotient (EQ) is the ability to perceive, interpret, demonstrate, control, evaluate, and use emotions to communicate with and relate to others effectively and constructively. This ability to express and control emotions is essential, and at the same time its ability is to understand, interpret, and respond to the emotions of others. (Cherry, 2023). According to Goleman (1998) emotional intelligence comprises a group of five skills, which are Self-awareness, Self-regulation, Motivation, Empathy and Social Skill.

Self-awareness is the first component of emotional intelligence—which makes sense when one considers that the Delphic oracle gave the advice to “know thyself” thousands of years ago. Self-awareness means having a deep understanding of one’s emotions, strengths, weaknesses, needs, and drives. People with strong self-awareness are neither overly critical nor unrealistically hopeful. Rather, they are honest— with themselves and with others. (Goleman, 1998)

Social Awareness is the ability to take the perspective of and empathize with others, including those from diverse backgrounds and cultures. The ability to understand social and ethical norms for behavior and to recognize family, school, and community resources and supports.

Self-regulation, which is also referred to as “self-control” or “self-management” is the ability to control or redirect disruptive impulses and moods and the propensity to suspend judgment – to think before acting (Goleman, 1998). It involves maintaining control over one's own actions and reactions, even in challenging or emotionally charged situations. Self-management is critical for personal development and success. Key aspects of self-management include Emotional regulation, Impulse control, Stress management, Time management, Goal setting and achievement, Adaptability and Self-discipline. Self-management enables individuals to make better decisions, handle stress more effectively, maintain healthy relationships, and work towards long-term success. It can be developed through self-awareness, practice, and the implementation of various self-regulation techniques and strategies.

Relationship management, often referred to as interpersonal or social relationship management, is our ability to communicate clearly, maintain good relationships with others, connect with those from other cultures, work well in teams, and manage conflict. Relationship management relies on your ability to use the other three areas of EQ to manage relationships effectively (Radtke, 2023). Effective relationship management helps foster trust, mutual understanding, and cooperation. Key elements of relationship management include Communication, Empathy, Conflict resolution, Collaboration, Networking, Influence and persuasion, Trust-building, and Boundary setting.

Sport performance refers to the ability of an athlete or a team to excel in their chosen sport. (What is Sport Performance? Definition and How to Improve, 2023). Sport performance in basketball refers to an athlete's ability to perform effectively and efficiently in the sport of

basketball. It encompasses various physical, technical, tactical, and mental aspects that contribute to success on the basketball court. Key elements that contribute to sport performance in basketball: Physical Fitness, Technical Skills including shooting, dribbling, passing, rebounding, and defending, Tactical Understanding including knowledge of offensive plays, defensive formations, fast breaks, pick-and-roll plays, and zone defenses, Teamwork, Court Awareness, Mental Toughness, Game Strategy, Conditioning, Injury Prevention, Adaptability and Goal Setting. Successful basketball players and teams combine these elements to compete at their best and achieve their goals on the court.

Conceptual Framework

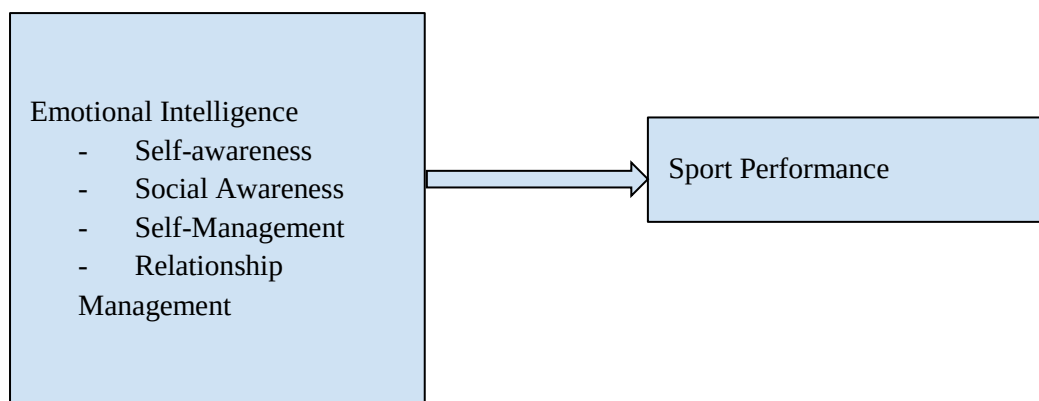


Figure. 1 Conceptual Framework of the study

Source: Own Compilation (adopted from Dandan et al., 2019)

Data Analysis

All survey data were organized in Microsoft® Excel and separate cross-checking was subsequently done by two different individuals. Population mean (μ), and standard deviation (SD) were used to describe the athletes' EI and SP scores. The athletes' EI effectiveness based on their EI total score in the four domains was summarized using actual counts and percentages. The Spearman's correlation in IBM® SPSS® Statistics was also employed to examine the possible relationships between the athletes' SP and EI at 95% level of confidence. Reliability of the measured variables is examined by using Cronbach's Alpha and are shown in Table (1).

Table (1) Self-Reported EI Levels and Results of Reliability Test.

STATEMENT INDICATORS	OPEN-SKILL ATHLETE	Cronbach Alpha
Self-Awareness	3.06 ± 0.70	.736
Self-Management	3.66 ± 0.77	.874
Social Awareness	4.18 ± 1.07	.929
Relationship Management	3.69 ± 0.78	.903
Sport Performance	3.34 ± 0.50	.582

Findings of Emotional Intelligence of Basketball Athletes

For Self-Awareness domain, the Mean score of Yangon University of Economics basketball players is 3.06 indicating average Self-Awareness and high SD of 0.70 indicating high variation among players. The lowest score questions have a mean score of 2.74 and their moods are hardly aware of the impact of their co-players around them. They cannot readily tell others (e.g., teammates) of their true feelings. They find it not easy to describe their feelings. The highest score question that they are aware of is what is happening to them, even when they are upset as a mean score of 3.65 and SD of 1.37. For the Self-Management domain, the Mean score of basketball players is 3.66 indicating that they have average Self-Management and high SD of 0.77 indicating high variation among players. It is noteworthy that the players have a high willingness to take responsibility for their reactions. The Mean Score for the Question is 4.26 with SD of 1.14. For the Social Awareness domain, the Mean score of basketball players is 4.18 indicating that they have high Social Awareness and high SD of 1.07 indicating high variation among players. It is noteworthy that the players have a high willingness to understand their co-players/teammates when there is a change of plan. The Mean Score for the Question is 4.03 with SD of 1.11. For the Relationship Management domain, the Mean score of Yangon University of Economics basketball players is 3.69 indicating that they have average Relationship Management and high SD of 0.78 indicating high variation among players. It is noteworthy that the players have a high willingness to help their co-players/teammates when they need them. The mean Score for the Question is 4.09 with SD of 1.06.

Analysis on Emotional Intelligence of Basketball Athletes

The EI scores of basketball players with reference to the four EI domains were determined based on their personal perceptions. In general, the results show that basketball athletes had relatively high scores (composite $\mu > 4$) in the one EI domain (Social Awareness) and average scores in three EI domains (Self-Awareness, Self-Management and Relationship Management). These findings suggest that Yangon University of Economics basketball players showed high levels of Social Awareness while having average Self-Awareness, Self-Management and Relationship Management. It is interesting that all four EI domains had high SD (more than 0.70) indicating a wide range of Emotional Intelligence among players.

The open athletes were classified according to their EI effectiveness (Table-6). Most of the basketball players were found to have effective functioning in three EI domains: self-awareness (52.9%) self-management (61.8%), social awareness (58.8%), and relationship management (47.1%). Some of the basketball players, albeit less than the majority, also exhibited enhanced skills for self-awareness (2.9%), self-management (17.6%), social awareness (26.5%), and relationship management (32.4%).

Some basketball players showed lower scores in the four EI domains exhibited areas for enrichment for self-awareness (44.1%), self-management (20.6%), social awareness (14.7%), and relationship management (20.6%).

In general, the result indicates that most athletes involved in open-skill sport had EI scores that fall within the effective functioning or enhanced skill levels. But there are many athletes who were found to exhibit areas for enhancement with respect to the four EI domains. The most important EI domain for improvement is Self-Awareness.

Table (2) Frequency Distribution of Basketball Athletes Based on EI Effectiveness.

EI DOMAIN	AREA FOR ENRICHMENT	EFFECTIVE FUNCTIONING	ENHANCED SKILLS
Self-Awareness	15 (44.1%)	18 (52.9%)	1 (2.9%)
Self-Management	7 (20.6%)	21 (61.8%)	6 (17.6%)
Social Awareness	5 (14.7%)	20 (58.8%)	9 (26.5%)
Relationship Management	7 (20.6%)	16 (47.1%)	11 (32.4%)

Analysis on Sports Performance of Basketball Athletes

The perceived performance level of the athletes in open-skill sports was determined based on self- and coach-rating. Table-7 shows that basketball players scored slightly higher in most of the game indicators based on their self-rating. ($\mu = 3.34$ with $SD = \pm 0.50$).

Table (3) Perceived Mean ($M \pm SD$) Level of Sports Performance of Basketball Athletes.

STATEMENT INDICATORS		SELF ASSESSMENT
1.	Ability to beat the defender regularly with both hands.	$3.05 \pm .98$
2.	Ability to go either direction on the dribble.	3.41 ± 1.15
3.	Ability to choose the best type of pass (e.g., bounce, chest, overhead).	$3.50 \pm .90$
4.	Ability to complete a no look or quick pass to an open teammate.	2.94 ± 1.10
5.	Aggressively move while in the court.	3.50 ± 1.18
6.	Beats the defender and moves easily towards the goal.	3.29 ± 1.00
7.	Exhibits full knowledge of the game, including mastery of violations.	3.47 ± 1.11
8.	Exhibits excellence in shooting form and makes shots from all ranges.	3.26 ± 1.08
9.	Displays exemplary shooting skill while being closely guarded.	3.21 ± 1.12
10.	Ability to interrupt the opponent's shots offensively or defensively.	3.76 ± 1.16
	General Mean	3.34 ± 0.50

Adjectival Interpretations: [1.0] – Never; [2.0±0.99] – Rarely; [3.0±0.99] – Occasionally; [4.0±0.99] – Frequently; [5.0] – Always

Analysis on Effect of Emotional Intelligence on Sports Performance of Basketball Athletes**Table (4) Effect of Emotional Intelligence on Sport Performance Assessment by Players.**

Variable	Unstandardized Coefficients		Beta	t	Sig	VIF
	B	Std. Error				
Constant	2.208	.459		4.413	.034	
Self-Awareness	.037	.123	.052	.299	.767	1.248
Self-Management	.125	.139	.195	.900	.375	1.936
Social Awareness	-.145	.113	-.315	-1.287	.208	2.457
Relationship Management	.365**	.143	.578	2.56	.016	2.096
R			.542			
R Square			.293			
Adjusted R Square			.196			
F Value			3.012**			
Durbin Watson			2.203			

*** Significant at 1%. ** Significant at 5%, and *Significant at 10% (Dependent Variable: Sport Performance)

The relationship between the Basketball athletes' EI and SP was examined in Spearman's correlation (Table-4). The R squared value is 0.293, indicating that approximately 29.3% of the variance in the dependent variable is explained by the independent variables in the model. The adjusted R square is 0.196, suggesting that some of the predictors may not be contributing much to the model. The F-value is 3.012, which is used to test the overall significance of the model. In this case, the F-value suggests that the model is statistically significant. The constant term (intercept) is 2.208. This is the value of the dependent variable when all independent variables are zero. The unstandardized coefficient (B) is 0.037, and the standardized coefficient (Beta) is 0.052. The t-value is 0.299, and the p-value (Sig) is 0.767, indicating that self-awareness is not a statistically significant predictor of the dependent variable. Additionally, the VIF is 1.248, suggesting low multicollinearity with other independent variables. The unstandardized coefficient (B) is 0.125, and the standardized coefficient (Beta) is 0.195. The t-value is 0.900, and the p-value (Sig) is 0.375, indicating that self-management is not a statistically significant predictor of the dependent variable. The VIF is 1.936, which shows low multicollinearity. The unstandardized coefficient (B) is -0.145, and the standardized coefficient (Beta) is -0.315. The t-value is -1.287, and the p-value (Sig) is 0.208, indicating that social awareness is not a statistically significant predictor of the dependent variable. The VIF is 2.457, which is relatively high and suggests some multicollinearity with other independent variables. The unstandardized coefficient (B) is 0.365, and the standardized coefficient (Beta) is 0.578. The t-value is 2.560, and the p-value (Sig) is 0.016, indicating that relationship management is a statistically significant predictor of the dependent variable at a significance level of 0.05. The VIF is 2.096, which is moderate. The Durbin-Watson statistic is used to test for autocorrelation in the residuals

(errors) of the regression model. A value close to 2 (such as 2.203) indicates that there is no significant autocorrelation.

In summary, it appears that "Relationship Management" is the only variable in our model that is a statistically significant predictor of the dependent variable, as indicated by its low p-value (Sig). The other variables do not appear to have a statistically significant impact on the dependent variable in this analysis. Additionally, the relatively high VIF for "Social Awareness," suggests multicollinearity with other independent variables in the model.

Findings and Discussions

Emotional intelligence (EI) refers to an individual's ability to handle and to accurately identify and understand his own and others' emotions (Kulkarni et al., 2009). Moreover, one's EI is a measure of one's ability to regulate one's own emotions, towards making good decisions and to act effectively in each situation (Salovey & Mayer, 1990). Bar-On (1997) defined EI as the person's adaptive mechanisms to effectively cope with the immediate surroundings and become successful in dealing with the changing environmental demands, by understanding oneself and that of others. In evaluating the EI skills of the person, (Goleman D. , 1998) has provided the basic elements which include self-awareness, self-regulation, motivation, empathy, and social skills. Thus, the EI an individual constitutes one's competencies, skills, and abilities that are essentially linked to his behavior and subsequent actions (Faltas, 2017). To date, several studies have been conducted to evaluate the potential role of EI to the individual's performance in various types of organizations including corporate workplaces, healthcare systems, and academic settings. In sports psychology, EI is considered a significant factor that influences sport performance (Kopp & Jekauc, The influence of emotional intelligence on performance in competitive sports: a metal analytical investigation, 2018). The present study examined the perceived EI level of athletes in **Yangon University of Economics**, involved in open-skill (basketball) sport. The athletes' EI levels were measured in terms of four EI domains: self-awareness, self-management, social awareness, and relationship management. In general, results indicate that the EI level of open-skill athletes, based on their personal rating, did not vary much with respect to the four EI domains. It appeared that both open-skill (basketball players) athletes often perceived themselves as having high EI levels. Most of the athletes also exhibited effective functioning or enhanced skill level in all four EI domains. This result is like the findings of (Mohzan et al. 2013), showing that college students enrolled in a University in Malaysia, had high levels of EI in terms of appraisal, understanding, and regulation of their own as well as of the others' emotions. Similar findings have been reported as well among semi-professional Spanish athletes in different modalities, indicating that the respondents generally exhibited high levels of EI with respect to emotional perception, management, and utilization (Castro-Sánchez, et al., 15-16 March 2018). It has been postulated that individuals with high EI level are more likely to accept and handle both pleasant and unpleasant feelings (Mohzan et al., 2013), allowing them to cope with pressures, occasional failures, and disturbing experiences (Pfeiffer, 2001). In this regard, responsive motivational programs aimed at improving the EI levels of individuals are warranted in such cases, to improve their well-being. Indeed, optimal performance of athletes in

their sports has been found to be significantly associated with their superior emotional experiences as a function of high EI (Lane, et al., 2010).

Significant correlations were found between the average SP scores of the open-skill athletes (basketball players) and their EI levels in all four EI domains. This result indicates that as the EI level of basketball players increases, their SP level also improves. Several studies have also examined the relationship of EI and SP among athletes and reported conflicting results. Consistent in only with the Relationship Management domain, the findings of the present study, Crombie et al. (2009) also demonstrated that the EI level of a cricket team was positively associated with the SP level. It was found that EI significantly predicts the team's SP, suggesting that in general, EI level contributes to the success of teams involved in complex sports such as cricket. Similarly, the study of Zizzi et al. (2003) showed that EI level was positively correlated with the SP among collegiate baseball teams, suggesting that EI is a significant SP indicator. However, in contrast to results of the present study, whereby significant association was not established between the other three EI levels and SP score of the open-skill athletes (basketball), the study of (Petrides et al. 2006) demonstrated a positive relationship between trait EI and ballet dancing ability ratings. The aforesaid reports support the idea in sport psychology that any competitive sport is an emotion-laden environment (Kopp & Jekauc, 2018), which continuously subjects the athletes to various types of stress and emotional challenges (Meyer & Fletcher, 2007).

Therefore, the athletes' SP in each sport is significantly influenced by relationships and interactions, both as direct functions of emotions (Friesen et al., 2012; McCarthy, 2011). This idea is supported by the study of Saadati et al. (2014), whereby a negative correlation was revealed between the athletes' EI level and burnout experience. Indeed, Sadri and Janani (2015) supposed that higher EI level results in better self-regulation among athletes.

Meanwhile, the findings of Laborde et al. (2014) indicated that trait EI levels of tennis players are unrelated to their serve performance. Another report also indicated no significant relationship between the EI and SP of ice hockey athletes (Perlini & Halverson, 2006). These contradictory findings warrant additional research work, to establish further the apparent connection between EI and SP.

Conclusion

In conclusion, the open-skill (basketball players)) YU Eco athletes often exhibit high EI levels in relationship management EI domains: self-awareness, self-management, social awareness, and relationship management. Most of the athletes exhibited EI scores within the effective functioning or enhanced skill level. Many athletes fall in the area for enrichment, especially in Self-Awareness.

Significant positive relationships between the SP scores of basketball players and their EI (Relationship Management) levels were revealed. Hence, it can be deduced that higher Relationship Management level was significantly associated with improved SP among athletes involved in closed-skill sports like basketball. Various motivational programs for the open-skill athletes may be executed to enhance their EI level, to promote prime performance in their chosen sports.

YU Eco athletes should be trained for improved team spirit, especially for basketball. Events and activities to promote Teamwork and Cooperation should be encouraged for more Relationship Management improvement.

Limitations and Needs for Further Research

When conducting a study on the relationship between perceived emotional intelligence and sport performance among Yangon University of Economics basketball athletes, it is important to acknowledge and address potential limitations. These limitations can affect the validity and generalizability of the study's findings. Here are some potential limitations to consider:

If the sample size was small and not representative of the broader population of basketball athletes, the study's results may lack generalizability. A larger and more diverse sample would improve the study's external validity.

Perceived emotional intelligence was often measured through self-report questionnaires or assessments. Participants may not always provide accurate or honest responses, which could introduce response bias.

This study used a cross-sectional design, it could only capture a snapshot of the relationship between perceived emotional intelligence and sport performance at a specific point in time. Longitudinal studies would provide a more comprehensive understanding of how these variables evolve over time.

While the study may establish a correlation between perceived emotional intelligence and sport performance, it may not definitively prove causation. Other factors, such as physical fitness or coaching, could also influence performance.

External factors like personal life stressors, academic pressures, or team dynamics could impact both perceived emotional intelligence and sport performance.

By acknowledging and addressing these limitations to the best of our ability, we can enhance the rigor and reliability of our study's findings and contribute to a more nuanced understanding of the relationship between perceived emotional intelligence and sport performance among Yangon University of Economics basketball athletes.

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The Effect of Knowledge Management, Financial Literacy, and Technology Orientation on Innovation Capability and Performance of MSMEs in Myanmar

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Abstract

This paper aims to analyze the direct and indirect effects of knowledge management, financial literacy, and technology orientation on innovation capabilities and MSMEs performance in Myanmar. This paper aims to analyze the effect of psychological feelings of fear of missing out and anxiety on the delegation of people who are playing at the managerial level. In this study, a business that has at least five employees can be identified as MSMEs. There are 44,017 MSMEs in Myanmar and 8,221 MSMEs in the Yangon Region. The population is resized by the owners who registered at the Yangon Region Youth Entrepreneurs Association. There are 40 executive members registered with the Yangon Region Youth Entrepreneurs Association (2023). Then, a clustered sampling method is applied. From descriptive analysis, it is found that most of the respondents have better knowledge about management at their businesses, understand how to manage financing and they are willing to integrate new technologies. Therefore, the overall mean value of each variable has been found to be above the average level. From multiple linear regression analysis, knowledge management, financial literacy, and technology orientation are positively related to the MSMEs performance. It is found that knowledge management, financial literacy, and technology orientation are positively related to innovation capability and MSMEs performance. Moreover, innovation capability has a positive influence on the MSMEs performance.

Keywords: Knowledge Management, Financial Literacy, Technology Orientation, MSMEs Performance

Introduction

According to the Ministry of Industry, and the Department of Micro, Small, and Medium Enterprises Development, there are 44,017 MSMEs in Myanmar. There are 8,221 MSMEs in Yangon Region. However, there are 40 executive members registered with the Yangon Region Youth Entrepreneurs Association (YRYEA) based on their official website. The role of Micro Small Medium Enterprises is important in county development. Small and medium-sized enterprises (SMEs) play an important part in any economy, but in developing countries, they have a vital role in providing livelihoods and improving the well-being of citizens. The Myanmar Micro, Small, and Medium Enterprise Survey 2017 shows that there is a need for comprehensive and immediate change in industrial, financial, and educational policies in Myanmar to support structural change and increase economic growth.

Generally, knowledge management, financial literacy, and technology orientation are applied to adapt the effective MSMEs performance within a changing environment. To achieve these objectives, it is essential to explore the factors that influence MSMEs innovation capability and overall performance. However, MSMEs in Myanmar face numerous challenges in their

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pursuit of innovation and sustainable performance. Limited access to financial resources, lack of proper understanding of financial principles, inadequate technology adoption, and insufficient knowledge management practices often hinder their ability to innovate effectively. The objective of this study is to enlighten the importance of knowledge management, financial literacy, and technology orientation in improving the performance of MSMEs in Myanmar.

The Rationale of the Study

Myanmar, like many other developing countries, has witnessed rapid economic and social changes in recent years. The government supports the growth of MSMEs in Myanmar in all aspects. The performance of MSMEs is a key outcome variable in this study. Since Micro Small Medium Enterprises are small size, the adaption of new technology, creation, and innovation are easier than the large enterprises. Performance can be measured using different indicators, such as financial performance, market share, and growth rate. It is important to examine the impact of innovation capability on performance to assess the effectiveness of innovation efforts within MSMEs.

Technology-based businesses use technologies such as information sources and are intensely focused on research and development processes for performance improvement and improving the firms' innovativeness. All of this is managed by allocating a large budget to collect and store innovative information that significantly aids in enhancing strategic performance. Financial Literacy is a critical factor that affects innovation. By improving the financial Literacy of MSMEs owners, the owners can run their businesses more effectively and successfully through the innovation they build. Knowledge management practices like knowledge creation, sharing, implementation, and storage are crucial for achieving effective business performance. Overall, this study aims to contribute to knowledge management, financial literacy, technology orientation effect on innovation capability, and performance of MSMEs in Myanmar.

Objectives of the Study

The objectives of the study are

1. To analyze the direct effect of knowledge management on the MSMEs performance
2. To analyze the indirect effect of knowledge management through innovation capability on the MSMEs performance
3. To analyze the direct effect of financial literacy on the MSMEs performance
4. To analyze the indirect effect of financial literacy through innovation capability on the MSMEs performance
5. To analyze the direct effect of technology orientation on MSMEs performance
6. To analyze the indirect effect of technology orientation through innovation capability on the MSMEs performance

Scope and Method of the Research

This study only focuses on Micro, Small, and Medium Enterprises. The target group is the owners or the top managers of MSMEs in Myanmar. By using a simple random sampling method, the target group is selected from the Yangon region. Therefore, the population is MSME owners who are registered in the Yangon Region Youth Entrepreneurs Association. YRYEA has four types of membership which are youth membership, associate membership, executive membership, corporate membership, gold membership, and foreign membership. MSME owners are only participants in youth membership, associate membership, and executive memberships. However, members can participate in more than one membership at the same time. Therefore, this study only focuses on executive members who were well-trained in their youth membership period and associate membership period. There are 40 executive members registered with the Yangon Region Youth Entrepreneurs Association (2023). Then, a clustered sampling method is applied. In this study, descriptive research is conducted by using structured questionnaires.

Research Instrument

The research instrument used for data collection is a questionnaire. In this paper, innovation capability is measured with three dimensions: product innovation, process innovation, and marketing innovation whereas MSMEs performance is measured with three dimensions: financial performance, product performance, and marketing performance. Furthermore, primary data from respondents were collected directly for this study through questionnaires using the Likert-type five-point scale to measure the research variables. The questionnaire consists of five parts: knowledge management, financial literacy, technology orientation, innovation capability, and the MSMEs performance. Question items are organized by adapting to the question items used by previous researchers. The questionnaire consists of 5 items for the knowledge management variable, 5 items for financial literacy, 5 items for the technology orientation variable, 11 items for the innovation capability variable, and 12 items for the MSMEs performance variable (See Appendix).

Literature Review

Knowledge Management

Processing data or information effectively and efficiently to accomplish a shared objective is known as knowledge management (Aliyu, 2015). Knowledge management, according to Darroch (2005), is the process of determining and evaluating the knowledge that is needed and available to achieve corporate objectives. According to Samir (2020), knowledge management may foster an organizational culture that is more intelligent, inventive, flexible, and sustainable. Using intangible assets to generate value is another way that knowledge management is perceived (Salojärvi et al., 2005). According to Massaro et al. (2016), knowledge management in the SME sector is becoming a more prominent field of study in many different nations. For MSMEs to effectively utilize and commercialize science, technology, and R&D, knowledge management is essential (Li et al., 2020).

Financial Literacy

Financial Literacy is a crucial component for the success of MSMEs as it contributes to understanding and evaluating the required data in making decisions that have a financial impact on the business's daily operations (Eniola & Entebang, 2017). Financially literate MSMEs owners may leverage their knowledge of money to make informed choices (Esiebugie et al., 2018). Make the case that can implement financial literacy correctly will help with resource allocation, financial planning, and service demands to optimize profits to pay financial responsibilities (Babajide et al., 2021). According to research by Liu et al. (2021), financial literacy has a significant impact on creativity. Through innovation, MSME owners may operate their businesses more successfully and effectively by increasing their financial literacy (Ali et al., 2020).

Technology Orientation

Technology orientation is the organization and effort to apply the latest technology to introduce new products and improve existing products and services by encouraging and supporting innovative ideas (Yousaf & Tariq, 2020). The logic of technological orientation emphasizes that a technology-oriented company is always proactive in research and development, acquiring the latest technology and applying the latest technology in the production of new products and services. Some researchers (Kocak et al., 2017) suggest that organizational and long-term success depends on the orientation of technologies that provide opportunities for the production of new technological products, procedures, and services that affect performance improvement.

Innovation Capability

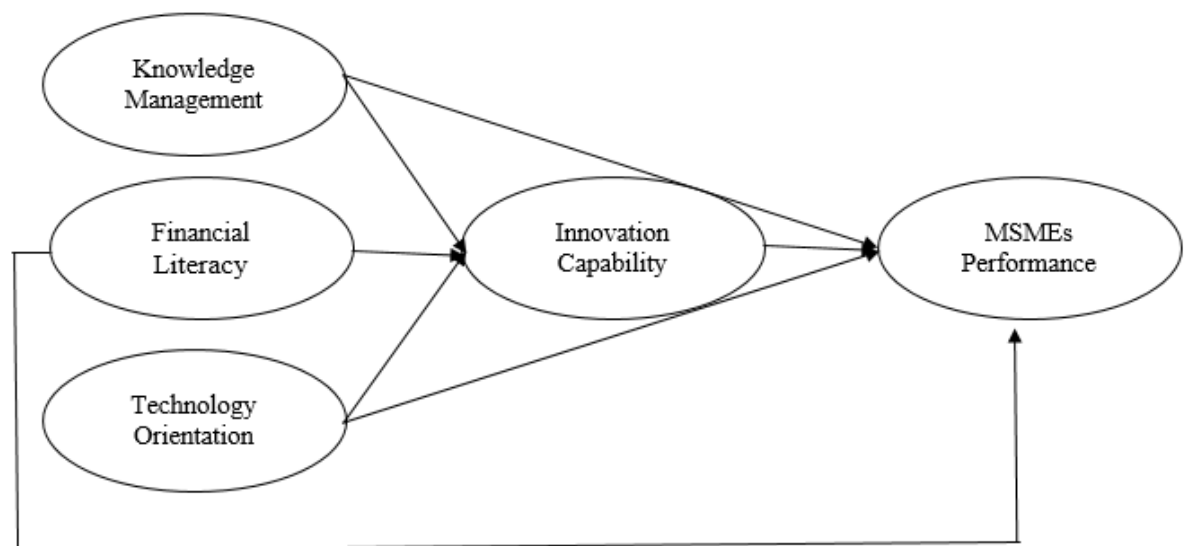
Innovation means the development of ideas and the creation of inventions, from products and methods of operation to customer service. Innovation continuously transforms knowledge and ideas into new products, processes, and systems for the benefit of the company and its stakeholders (Migdadi, 2020). An innovation can be a new product or service, a new production process technology, a new structure or management system, or a new plan or program for organizational members. Innovation is crucial for large companies and SMEs (Delener et al., 2017).

MSME Performance

Micro Small and Medium Enterprises (MSMEs) are important business expansion bases for financiers and entrepreneurs to address long-term economic development, job creation, and unemployment (Eniola & Entebang, 2017). SMEs run their business with a constant focus on achieving their goals. Quantified financial indicators obtained by organizations are called objective performance indicators. However, in a tough competitive environment, traditional financial initiatives cannot give an organization an advantage (Hudson et al., 2001). According to Samir (2020), the three performance dimensions of small and medium-sized enterprises are financial performance, operational performance, and product quality.

Conceptual Framework of the Study

The conceptual framework of the study is shown in Figure (1) below.



Source: Own Compilation (adopted from Soetjipto et al., 2023)

Figure 1. Conceptual Framework of the Study

Data Analysis

The analyses are conducted by using SPSS 22.0 software including reliability analysis and descriptive statistics for the direct and indirect effect of knowledge management, financial literacy, and technology orientation on innovation capability and MSMEs performance. Multiple regression analysis and mediating analysis are also applied to achieve the result. The reliability of the measured variables is examined by using Cronbach's Alpha and is shown in Table (1).

Table (1) Results of the Reliability Test

No.	Variable	No. of Questions	Cronbach's Alpha
1	Knowledge Management	5	0.898
2	Financial Literacy	5	0.832
3	Technology Orientation	5	0.917
4	Innovation Capability	11	0.945
5	MSMEs Performance	12	0.959

Source: SPSS Output

As shown in Table (1), the Cronbach's alpha values of variables are above 0.7. Therefore, the question items used to measure variables and the respondents' responses are reliable for further analyses (George & Mallery, 2003).

Findings from Analysis

Descriptive analysis has been conducted to present the average knowledge management, financial literacy, technology orientation, innovation capability, and MSMEs performance of respondents. The results are shown in Table (2).

Table (2) Knowledge Management, Financial Literacy, Technology Orientation, Innovation Capability and MSMEs Performance of Respondents

Sr. No.	Description	Mean Value
1	Knowledge Management	3.0125
2	Financial Literacy	3.1850
3	Technology Orientation	3.3950
4	Innovation Capability	3.1091
5	MSMEs Performance	3.0125

Source: Survey Data, 2023

As shown in Table (2), most of the respondents have better knowledge management, higher financial literacy, and technology orientation. The innovation capability of the respondents is at the above-average level. It can also indicate that their business performance is progressing effectively and efficiently.

Analysis of the Effect of Knowledge Management, Financial Literacy, and Technology Orientation on MSMEs Performance

To reach the objectives of this study, multiple linear regression analysis is conducted to present the effect of knowledge management, financial literacy, and technology orientation on the performance of MSMEs. The results from multiple linear regression analysis are shown in Table (3).

Table (3) Analysis of the Effect of Knowledge Management, Financial Literacy, and Technology Orientation on MSME's Performance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	VIF
	B	Std. Error	Beta			
(Constant)	0.310	0.321		0.966	0.341	
Knowledge Management	0.614***	0.105	0.638	0.000	0.000	1.495
Financial Literacy	0.162*	0.218	0.059	0.782	0.082	5.627
Technology Orientation	0.349**	0.184	0.378	0.067	0.047	5.060
R	0.846					
R Square	0.715					

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	VIF
	B	Std. Error	Beta			
Adjusted R Square	0.692					
F	30.153***					
Durbin-Watson	2.145					

Source: SPSS Output

Notes: *** Significant at 1% Level, ** Significant at 5% Level, * Significant at 10% Level

Dependent Variable: MSME performance

As shown in Table (3), it is found that knowledge management, financial literacy, and technology orientation are influencing MSMEs' performance and positive relationships. The correlation coefficient (R) stands for the multiple linear relationship between independent and dependent variables. The value of R is 0.846 and it underlies between 0 and 1. It seems that most respondents have better knowledge and management skills to achieve effective performance in their businesses. The result shows some respondents also understand financial literacy to manage their finances well to gain effective performance in their businesses. Also, some respondents are willing to challenge high-tech tools in their businesses, as they are integrating new technologies in their operation and production process.

Analysis of the Effect of Knowledge Management, Financial Literacy, and Technology Orientation on Innovation Capability

The multiple linear regression analysis is conducted to analyze the effect of knowledge management, financial literacy, and technology orientation on the innovation capability of the respondents. The results from multiple linear regression analysis are shown in Table (4).

Table (4) Analysis of the Effect of Knowledge Management, Financial Literacy, and Technology Orientation on Innovation Capability

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	VIF
	B	Std. Error	Beta			
(Constant)	0.560	0.325		1.724	0.930	
Knowledge Management	0.525***	0.106	0.577	4.972	0.000	1.495
Financial Literacy	0.138*	0.220	0.039	0.172	0.064	5.627
Technology Orientation	0.282**	0.186	0.324	1.517	0.038	5.060
R	0.822					
R Square	0.676					
Adjusted R Square	0.649					
F	25.034***					

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	VIF
	B	Std. Error	Beta			
Durbin-Watson	2.213					

Source: SPSS Output

Notes: *** Significant at 1% Level, ** Significant at 5% Level, * Significant at 10% Level

Dependent Variable: Innovation Capability

As shown in Table (4), it is indicated that knowledge management, financial literacy, and technology orientation are all influencing innovation capability and this is a positive relationship. The correlation coefficient (R) stands for the multiple linear relationship between independent and dependent variables. The value of R is 0.822 and underlies between 0 and 1. As a result, most respondents have better knowledge management skills and understand financial literacy to achieve effective performance of their businesses. Also, some respondents are integrating new technologies in their operation and production process. Therefore, respondents can build up the innovation capability in their new product production, their production and operation process, and their marketing process.

Analysis of the Effect of Innovation Capability on MSME's Performance

The multiple linear regression analysis is used to analyze the effect of innovation capability on the performance of MSMEs of the respondents. The results from the analysis are shown in Table (5).

Table (5) Analysis of the Effect of Innovation Capability on MSMEs Performance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	VIF
	B	Std. Error	Beta			
(Constant)	0.126	0.162		0.776	0.442	
Innovation Capability	0.854***	0.050	0.956	20.132	0.000	1.000
R	0.956					
R Square	0.914					
Adjusted R Square	0.912					
F	405.285***					
Durbin- Watson	1.810					

Source: SPSS Output

Notes: *** Significant at 1% Level, ** Significant at 5% Level, * Significant at 10% Level

Dependent Variable: MSME performance

As shown in Table (5), it is indicated that innovation capability is influencing MSME's performance and this relationship is positive. The correlation coefficient (R) stands for the linear relationship between independent and dependent variables. The value of R is 0.956 and it underlies between 0 and 1. It seems that most respondents have the innovation capability to achieve the better performance of their MSMEs. Also, some respondents are integrating new technologies in their operation and production process which could leads them to marketing.

Mediating Effects of Innovation Capability on MSMEs Performance

To determine whether there is a mediating effect of innovation capability between independent variables (knowledge management, financial literacy, and technology orientation) and dependent variable (MSMEs performance), the path analysis is conducted with multiple linear regression analysis.

Table (6) Mediating Effects of Innovation Capability on MSMEs Performance

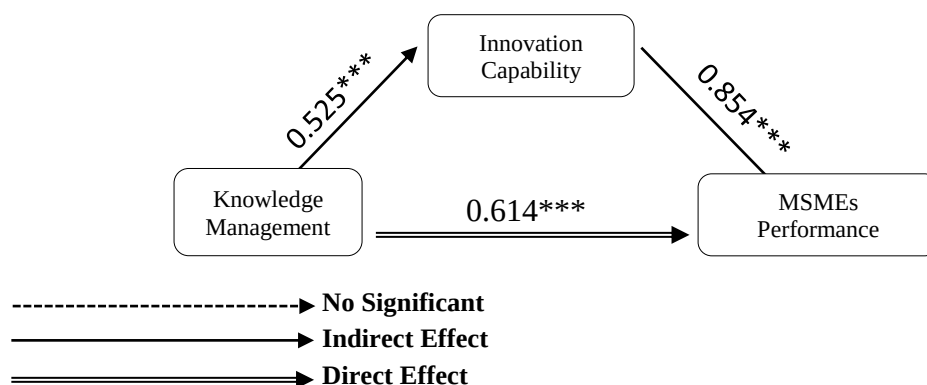
Information System	Innovation Capability			Remark (Indirect Calculation)
	Direct	Indirect	Total (Direct +Indirect)	
Knowledge Management	0.614***	0.448	1.062	(0.525x0.854=0.448)
Financial Literacy	0.162*	0.118	0.280	(0.138x 0.854=0.118)
Technology Orientation	0.349**	0.240	0.589	(0.282x 0.854=0.240)

Source: Survey data (2023)

As shown in Table (6), the total effect of knowledge management on MSMEs' performance through innovation capability is greater than the direct effect of knowledge management on MSME performance. Similarly, the total effect of financial literacy and technology orientation on MSMEs' performance through innovation capability is greater than the direct effect of financial literacy and technology orientation on MSMEs' performance.

The result of the path analysis for testing all variables is presented in the following figures: Figures (2), (3), and (4).

Figure (2) Path Analysis for MSMEs Performance on Knowledge Management



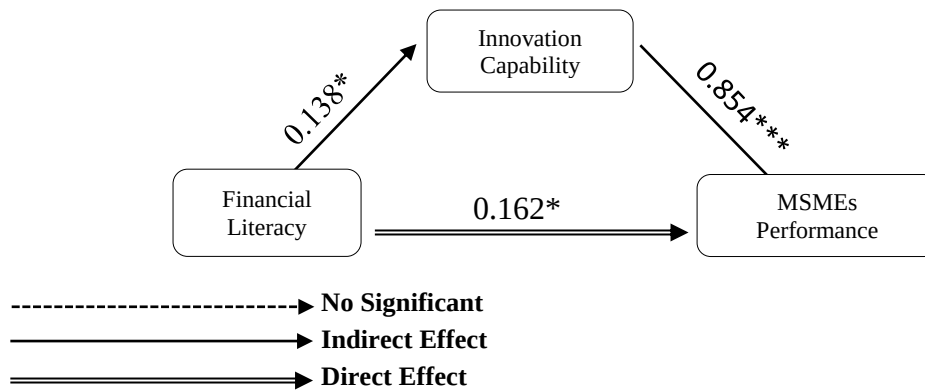
Source: Survey Data (2023)

Notes: ***, ** and * are statically significant at 1%, 5% and 10% levels respectively

As shown in Figure (2), the partial mediation effect of innovation capability occurs on the linkage between knowledge management and MSMEs performance. Knowledge management has a positive direct effect on MSME's performance. In addition, the coefficient of knowledge management has an indirect effect on innovation capability and innovation capability has an indirect effect on MSME's performance. The analysis shows that respondents have better

knowledge regarding management to achieve more innovation in their product production and marketing processes which can leads to better performance of their businesses in the future.

Figure (3) Path Analysis for MSMEs Performance on Financial Literacy

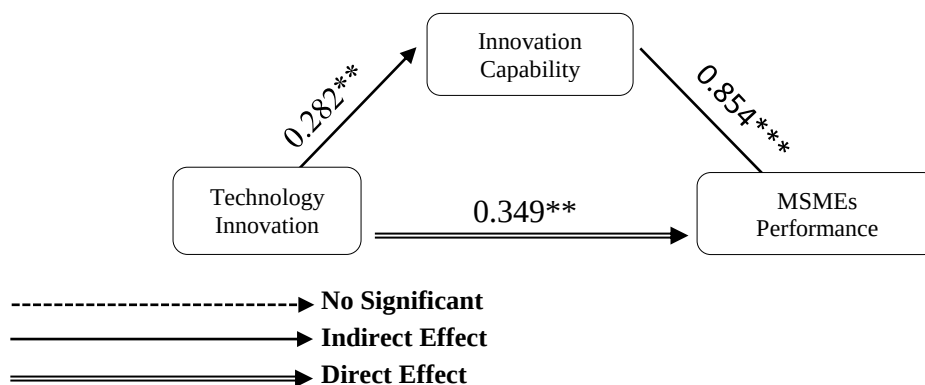


Source: Survey Data (2023)

Notes: ***, ** and * are statically significant at 1%, 5% and 10% levels respectively

As shown in Figure (3), the partial mediation effect of innovation capability occurs on the linkage between financial literacy and MSMEs performance. Financial literacy has a positive direct effect on MSME's performance. In addition, the coefficient of financial literacy has an indirect effect on innovation capability and innovation capability has an indirect effect on MSME's performance. The analysis shows that respondents know about financial literacy which can manage the equity financing and debt financing of the business well. This will support their product production and marketing processes which lead the better performance for their businesses in the future.

Figure (4) Path Analysis for MSMEs Performance on Technology Orientation



Source: Survey Data (2023)

Notes: ***, ** and * are statically significant at 1%, 5% and 10% levels respectively

As shown in Figure (4), the partial mediation effect of innovation capability occurs on the linkage between technology orientation and MSMEs performance. Technology orientation has a positive direct effect on MSME's performance. In addition, the coefficient of technology orientation has an indirect effect on innovation capability and innovation capability has an indirect effect on MSME's performance. The analysis shows that respondents are integrating new

technologies which could support production and marketing processes which could lead to better performance of their businesses in the future.

Limitations of Research

This study focuses on and emphasizes only three influencing factors on MSME's performance, it is suggested to focus on the other factors affecting MSME's performance such as customer relationship management, credit institutions, labor qualifications, Human Resource competence, quality control, risk management, and so forth. This study has its limitations, and it investigated the information systems of only executive members registered with the Yangon Region Youth Entrepreneurs Association (YRYEA). Therefore, further study can also examine other regional MSME owners.

Conclusion

The study is conducted to analyze the direct and indirect effect of knowledge management, financial literacy, and technology orientation on the innovation capability and MSME performance of MSME owners in the Yangon Region. As the result of this research, knowledge management, financial literacy, and technology orientation could have positive affect innovation capability and MSMEs performance. Also, innovation capability has a positive effect on the performance of MSMEs. The paper proves that there is a mediation effect between the independent variables (knowledge management, financial literacy, and technology orientation) and the dependent variable of MSME's performance, while innovation capability is a mediator in the relationship between them.

Acknowledgment

We are respectfully grateful to Prof. Dr Tin Tin Htwe, Rector of Yangon University of Economics for her kind permission to conduct this research. We are deeply beholden to our department head, Prof. Dr. Myint Myint Kyi, Department of Management Studies, Yangon University of Economics, for encouraging us to submit this paper. I would like to express my heartfelt indebtedness to all responsible persons and respondents for their sincere support, cooperation, and participation in accomplishing this research.

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The Effect of Awareness and Needs on Behavior towards Plastic Waste Management of Students at Department of Management Studies, Yangon University of Economics

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Myo Win Yee⁵, Mya Myo Chel⁶

Abstract

The main objective of this study is to analyze the effect of awareness and needs on behavior towards plastic waste management of students at Department of Management Studies, Yangon University of Economics. A sample of 282 respondents out of 598 students from all programs of Department of Management Studies are selected by simple random sampling method. This study applied both descriptive statistics and regression analysis as methods to analyze the data. The results indicated that all respondents have demonstrated high level of awareness needs and behavior towards plastic waste management. According to multiple regression, students' awareness is statistically significant on behavior of plastic waste management. Hence, students' awareness has positive effect on students' behavior of plastic waste management. In addition, students' awareness has no effect on their needs. Based on the findings students' awareness obtained the highest value so that they are involved in plastic waste management. Furthermore, students have knowledge about plastic waste management and know how to preserve the environment. However, having such knowledge and knowing the requirements does not end there, but must be implemented as a behavior to become an action plan.

Keywords: Plastic Waste Management Awareness Need, Behavior.

Introduction

The intensification of the global discourse on environmental sustainability in recent years has led to an increased scrutiny of individual behaviors and choices, particularly within the domain of plastic waste management. This thesis is dedicated to exploring the nuanced dynamics of plastic usage among management students at Yangon University of Economics, acknowledging their diverse behaviors shaped by situational contexts. Despite possessing adequate knowledge about biodegradable plastics, the cohort's responses indicate a complex interplay between awareness and behavioral patterns, especially in adhering to established rules for plastic waste selection.

A distinct aspect emerges within the cohort, with management students assuming a pivotal role characterized by an intricate scrutiny of details related to plastic use. Notably, their preference for bioplastics, even when faced with higher costs, underscores a heightened commitment to sustainable choices. However, a prevalent challenge persists among management students—they grapple with significantly reducing the usage of conventionally prevalent plastics.

Recognizing the gravity of this challenge, the thesis advocates for the formulation and enforcement of specific legislative measures by the state. The imperative lies in augmenting individual efforts toward sustainable plastic waste management. Moreover, the thesis highlights the paramount need for the development of a sustainable plastic waste management system. This system, beyond being effectively organized, should incorporate robust educational initiatives aimed at management students. The objective is to foster a deeper understanding of the

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importance of sustainable practices, not only for individual well-being but also for broader societal and environmental health.

It concludes with key definitions crucial for understanding the study, including bioplastic, biodegradable plastic, plastic waste, and plastic waste management. The concepts of awareness, needs, and behavior are outlined, emphasizing their pivotal roles in shaping individuals' responses to plastic waste management challenges. This sets the stage for the subsequent exploration of management students' dynamics within the overarching discourse on sustainable practices within academic communities.

Bioplastic are plastic produced from renewable biomass sources, such as vegetable facts and oils, maize starch, straw, wood chips, sawdust, recycled food waste, etc.

Biodegradable Plastic Plastic material that can undergo physical, biological decomposition so that it ultimately decomposes into carbondioxide (CO₂), biomass and water, and is, in accordance with European packaging standards, recoverable through composting and anaerobic digestion.

Plastic material consisting of a polymer, to which additives or other substances may have been added, and which may function as the main structural component of final products, except for natural polymers which have not been chemically modified.

Plastic waste refers to discarded, non-biodegradable materials made from polymers like polyethylene, etc., often causing environmental pollution when improperly disposed.

Plastic Waste Management involves various approaches like recycling, reduction, and proper disposal to mitigate its environmental impact.

Awareness refers to having a conscious understanding or knowledge about particular topic, issue or situation. It involves being mindful, informed, and cognizant of various aspects, allowing individuals to make informed decisions or take appropriate actions based on the information or understanding they possess.

Needs encompass the essential or fundamental requirements essential for an individual's survival, well-being, or fulfillment. These can range from basic necessities like food, shelter, and clothing to more complex needs such as emotional support, security, belonging, and self-fulfillment. Needs are the core elements necessary for a person's physical, psychological, and emotional welfare.

Behavior refers to the actions, reactions, or conduct exhibited by individuals, organisms, or systems in response to internal or external stimuli. It encompasses a wide range of actions, from physical movements to psychological responses, reflecting an individual's thoughts, emotions, or interactions within a given environment. Behavior can be influenced by various factors such as genetics, environment, past experiences, or societal norms.

Rationale of the Study

The rationale for this study lies in the transformative role of plastic in society's evolution, revolutionizing daily lives and contributing to practicality, convenience, and safety across various sectors. Plastic's historical trajectory, as seen in old films, reflects a marked shift in population habits and materials. In the past, devices were heavier and more robust, crafted from materials like glass, wood, or metals, with a lifespan spanning generations. However, the literature underscores a significant increase in the use of plastics, leading to a shift in societal habits.

As society rapidly embraced plastic applications, a disparity emerged between the speed of habit changes and the durability of plastics. This disjunction gave rise to serious issues,

particularly the accumulation of plastic waste. In response, global public policies aimed at controlling this problem were instituted, varying in engagement levels and encompassing initiatives to raise awareness about the consumption and disposal of post-used plastics. Ineffectual disposal of these residues exacerbates environmental problems, posing socio-environmental challenges and adversely impacting public health.

The intensification of the global discourse on environmental sustainability underscores the imperative to scrutinize individual behaviors and choices, particularly in the domain of plastic waste management. This thesis responds to this imperative by delving into the intricate dynamics guiding the choices made by management students at Yangon University of Economics during the 2022-2023 academic year. The study focuses on understanding how these management students navigate and respond to the environmental impact of plastic in their daily lives. This exploration is grounded in the broader context of heightened global awareness and concern regarding the environmental consequences of plastic use, making it a timely and relevant area of investigation.

Objectives of the Study

1. To analyze the effect of awareness and needs on behavior towards plastic waste management of students at Department of Management Studies, Yangon University of Economics.

Scope and Method of the Study

This study is limited to the students at Department of Management Studies, Yangon University of Economics. The focus is specifically on their awareness, behaviors and challenges concerning plastic waste management. The research employs a quantitative approach, utilizing surveys to gather in depth insights into awareness, needs, and behaviors of management students. The sample size is 315 of 598 students by using Raosoft sample size calculator, and simple random sampling method with 5% margin of error, 99% confidence interval, and response distribution (50%). However, complete data are collected from only 282 students. The response rate is $282/315 \times 100 = 89.5\%$. Data collection methods use online survey and questionnaire survey. The study also delves into existing literature, providing a comprehensive foundation for the exploration of plastic waste management dynamics. Through this approach, the research aims to derive valuable insights contributing to the ongoing discourse on sustainable practices within academic communities.

Theoretical Background

Theories and Concepts

The exploration of theories and concepts related to plastic waste management reveals a global scholarly focus on understanding the complexities of this issue. Researchers worldwide are actively contributing insights into knowledge, needs, attitudes, behavior, and awareness to enhance students' environmental education.

Environmental science students demonstrate superior knowledge and behavior compared to social science students, possibly due to more comprehensive curricula coverage. Studies, such as that by Situmorang et al., emphasize the positive impact of environmental education at the undergraduate level in increasing students' awareness of plastic waste problems. This suggests that enhancing students' awareness through educational initiatives is a potential solution to addressing plastic waste issues.

Research by Harman and Yenikalayci highlights students' awareness of the effects of educational activities on plastic recovery, reuse, recycling, and zero-waste practices. Uehara et

al.'s findings indicate that learning the rules of plastic waste separation leads to improved separation behavior among campus students. Bennett et al. argue for the importance of educating students about plastic recycling to equip them with the knowledge and skills for future consumer roles and professional implementation of recycling systems.

Studies on students' plastic waste sorting intentions, such as Aikowe and Mazancova's, underscore the influence of factors like environmental awareness, volunteering, and study programs in shaping these intentions. The global nature of the plastic waste problem is evident as students worldwide grapple with similar challenges. Owojori et al. identify weaknesses in students' knowledge of waste management in South Africa, suggesting a need for motivation, potentially through economic incentives, to enhance participation in recycling projects.

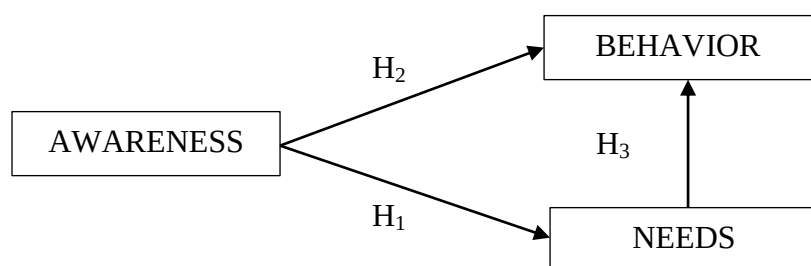
Surveys conducted by Kaushik Dowarahey et al. in India and Qu et al. at the Henan Institute in China assess students' awareness, attitudes, behaviors, and opinions regarding plastic and microplastic pollution and waste separation, respectively. These studies emphasize the role of knowledge in influencing students' behavior. Ilic-Zivojinovic et al. delve into medical students' behavior and attitudes concerning waste, contributing to the broader understanding of waste management education.

Education emerges as a pivotal factor in shaping consumer behavior and attitudes toward plastic waste, as noted by Singh Chachan and Punia. Sandu et al. advocate for educating society about plastic waste, emphasizing the importance of awareness and appropriate actions to motivate environmental responsibility. The intersection of environmental sustainability and plastic waste management is recognized as a critical concern for academics and students, positioning universities as key players in fostering a sustainable society, as highlighted by Dagiliute and Liobikiene and Fissi et al., who explore the concept of a "green university." This comprehensive literature review sets the stage for understanding the multifaceted dimensions of plastic waste management and the role of education in addressing this global challenge.

Empirical Study

The conceptual framework of previous paper is shown in Figure (1).

Figure (1) Conceptual Framework of the Previous Study

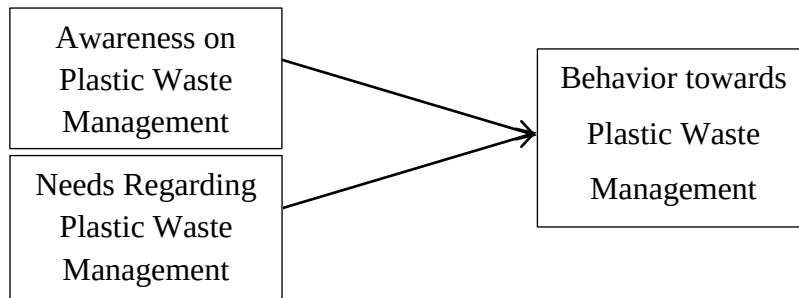


Source: Boca and Sinan Saracli, 2023

In the previous study, researchers determine the dimensions of students' behavior and identified students' needs and awareness about plastic waste and bioplastic in Romania.

Conceptual Framework of the Study

The conceptual framework of the study is shown in Figure (2).



Source: Own Compilation Adapted to the Model of Boca and Sinan Saracli, 2023

Figure (2) Conceptual Framework of the Study

Sustainability Values of Yangon University of Economics

Yangon University of Economics often emphasize sustainability through various means like incorporating eco-friendly practices into campus operations, offering sustainability focused courses, conducting research on environmental issues, promoting green initiatives, reducing carbon footprint, and fostering a culture of environmental responsibility among students and staff.

In practically, planting grass inside the Padamyar campus, systematic planting or Thapyae Buta trees, collecting and disposing of waste plastic in a systematic manner, collecting leaves and twigs as manure without fire, opening programs that will benefit the environment in the long term, such as MSES, conduct research, plans are being made to continuously encourage students and teachers and staff to become people who care about the environment.

Plastic Waste Management Attitude of Students from Yangon University of Economics

According to research findings, most students tend to participate in environmental and sustainable activities. It is understood that plastic items take a very long time to biodegrade. Students understand that bioplastics should be replaced as a suitable for single-use plastics in the future. The desire of most students is to buy and use bioplastic products even if there are expensive. Students see that the use of traditional plastic products causes pollution. Therefore, students often attend conferences related to nature conservation.

Mean Score Interpretation

Mean Score Interpretation developed by Landell (1997) & Najib (1994) is used in examining the respondent perception towards students' awareness, needs and behavior, which is shown in Table (1).

Table (1) Mean Score Interpretation

Total Mean Score	Level
1.00 – 2.33	Low
2.34 – 3.67	Moderate
3.68 – 5.00	High

Source: Landell (1997) & Najib (1994)

Analysis on Awareness of Students towards Plastic Waste Management

Table (2) Students' Awareness Regarding Plastic Waste Management

Sr. No.	Item for Awareness	Mean Value	Standard Deviation
1	Preferring products that are less harmful to nature.	4.17	.990
2	Using low-damage objects such as paper and glass.	3.87	.805
3	Recognizing the recycling logos ♻️ on the products.	4.06	.866
4	Preferring the products obtained from the bioplastics industry because they are renewable.	3.93	.809
5	Preferring to avoid products that increase global warming.	4.20	.790
6	Preferring bioplastic products because they do not harm nature when they decompose.	4.01	.798
7	Preferring bioplastic products as they do not harm human health when degraded.	3.95	.825
8	Preferring bioplastic products because they degrade earlier in nature.	3.93	.758
Overall Mean Value		4.02	0.62

Source: Survey data (2023)

Table (2) shows the students' perception of awareness regarding plastic waste management. In terms of students' awareness, since the students are realizing themselves having good qualities and feeling satisfied with their awareness, it is observed that the students have the same awareness about plastic waste management. The highest mean score is 4.02 for the statement that "I prefer to avoid products that increase global warming." because plastic waste takes a long time to decompose and damages the environment. Consequently, it is found that students' perception is high awareness about plastic waste management.

Analysis on Needs of Students towards Plastic Waste Management

Table (3) Students' Needs Regarding Plastic Waste Management

Sr.No.	Item for Need	Mean Value	Standard Deviation
1	Being like to get new information about the use of bioplastic (i.e. bio-based plastic produced from renewable biomass sources) products.	3.98	.850
2	Bioplastics should replace conventional (single used) plastic in the future.	4.09	.830
3	Thinking that studies on the pollution of traditional plastic products should be increased.	3.85	.976
4	Thinking that bioplastics should be used in mass social events, involving large numbers of people.	3.84	.994
5	Thinking that bioplastics should be used in takeaway/disposable products.	3.87	.957
Overall Mean Value		3.93	0.73

Source: Survey data (2023)

Table (3) shows students' perception or needs regarding plastic waste management. According to results, in terms of individual attitude, the students have the knowledge about conventional plastic in the future so that they would like to replace with plastics in the future.

Analysis on Behavior of Students towards Plastic Waste Management

Table (4) Students' Behaviour Regarding Plastic Waste Management

Sr. No.	Item for Behavior	Mean Value	Standard Deviation
1	Buying bioplastic products, even if they are more expensive.	3.49	.806
2	When seeing plastic being burned, thinking it will cause air pollution.	3.78	.847
3	Using recycled bags for my grocery shopping.	3.79	.867
4	Making an effort to use a small number of bags in my daily life.	3.96	.804
5	Not throwing plastic products into nature.	3.96	.872
6	Throwing the recycling products into the relevant boxes.	3.82	.833
7	Using mesh/cloth/paper bags instead of using disposable bags while shopping.	3.73	.848
8	Informing the people around me about the use of bioplastic products.	3.66	.794
9	When seeing plastic in the green area, will clean it from there.	3.92	.783
Overall Mean Value		3.79	0.59

Source: Survey data (2023)

As shown in Table (4), the overall mean of students' behavior regarding plastic waste management is 3.79. It shows that the most students not only try to reduce the use of plastic bags as much as possible in their daily lives, but also do not throw away plastic products easily. Students' behavior is only 3.79, so many actions are needed to encourage plastic waste management. It is clearly seen that not only education but also implementation is needed.

Analysis on Effect of Awareness and Needs on Behavior of Students towards Plastic Waste Management

Table (5) Effect of Students' Awareness and Needs on Behaviour

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.361	.185	-	7.351	.000
Awareness	.642***	.057	.668	11.285	.000
Needs	-.039	.048	-.048	-.808	.420
R	.639 ^a				
R Square	.409				
F - value	96.366***				

a. Dependent Variable: Behaviour

*** = significant at 1% level

Source: Survey data (2023)

According to Table (4.7), this model explains, that the dependent variable, behavior changes depending on the independent variable awareness and needs. Therefore, it was found that only awareness has a significant effect on behavior. It can be seen from the research that awareness is statistically significant at the 1% level, indicating effect on behavior. It means that as awareness on plastic waste management tend to increase, behavior towards plastic waste management increases. Because as soon as the students have the awareness and the knowledge, skills and respective requirements about plastic waste management, students will have a better and unique awareness for that thing.

Conclusion

Findings and Discussions

The main purposes of this study are to analyze on the effect of awareness and needs on behavior of students towards plastic waste management at Department of Management Studies, Yangon University of Economics.

The results obtained after filling and the questionnaire led to the creation of the new model and identifying common elements of students' awareness and students' needs regarding plastic waste for other studies, students' awareness obtained the highest value so they are involved in waste plastic waste management.

Students also verified the influence of the opinion questions, in this case most students think themselves as environmentalists. Then 219 students take part in environmental and sustainable activities organized within the program. After that, 275 students know that petroleum product (plastic) takes a long time to biodegrade. In practically, depending on a results of Mean value, students perception of awareness to more valuable than need and behavior.

According to the result, if the students have awareness of plastic waste management, students will change their behavior. Therefore, those who will support needs, the people who will lead for the needs are still assigned to the teams. It will be implemented until there are needs.

Suggestions

From the result of the study, students have knowledge about plastic waste management and know how to preserve the environment. However, having such knowledge and knowing the requirements does not end there, but must be implemented as a behavior to become an action plan.

According to the study, awareness on plastic waste management has a significant effect on behavior towards plastic waste management. Consequently, educational programs related to plastic waste management to raise awareness, giving workshops from experts, and distribution of pamphlets should be done continuously to keep students informed. In order to reduce the use of plastic in the societies around students, and provide examples of recycling plastic substitutes, it should be done more continuously.

Limitations and Needs for Further Research

In this study it was found that only two variables such as awareness and needs influencing behavior were used. If there are other variables that influence behavior, the research should be extended. In addition, this data had collection been only collected from management students, data collection should be inclusive of all students across Yangon University of Economics. In addition, business organizations should be surveyed to gain awareness about plastic waste management. Company employees should be distributed questionnaires and gained more awareness about plastic waste management.

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Analyzing the Spatial and Diversification Patterns of Cottage Industry in Myeik: Towards Future Development and Sustainability

Khin Mar Yee¹, Aye Aye Mauk²

Abstract

This paper, titled "Analyzing the Spatial and Diversification Patterns of Cottage Industry in Myeik," aims to explore avenues for the future development of cottage industries in Myeik. The objectives include studying the significance of cottage industries within the study area, examining the diverse types of cottage industries, analyzing the correlation between cottage industries and supporting factors, investigating the spatial distribution patterns of cottage industries in Myeik, and assessing the socio-economic conditions of the study area. Primary data for this research is gathered through questionnaire surveys, and open interviews during field observations, and secondary data is obtained from relevant administrative offices, providing population data, household information, and details on the types of cottage industries. The application of geographical information systems (GIS) is employed for data analysis, including statistical methods applied to tables and figures. The findings reveal that within Myeik proper, 12 wards exhibit high diversification of groups, with a predominant concentration of cottage industries. This prevalence is attributed to the increased convenience of transportation and the rapid progression of imported goods. Zaydan Ward stands out with the highest diversification index of + 0.78, owing to its strategic proximity to Seiknge Bazaar and the port, making it an advantageous location for distributing cottage industry products. Yaybone Ward follows with the second-highest diversification index of +0.77, as it is situated near Myeik University. Kangyi Ward demonstrates a medium diversification index of + 0.46, while Talaisu Ward registers a low diversification index. This research contributes valuable insights that can be applied to address local needs and foster future sustainable development within the study area.

Keywords: cottage industry, diversification index, distribution patterns of cottage industry

Introduction

In developed countries, small businesses and cottage industries contribute almost 80% to economic activities (Aslam, 2013), and SMEs globally contribute between 60% and 90% (Abe et al., 2012). Given these statistics, it is evident that cottage industries and small businesses significantly impact the economic development of any country. Cottage industries also confer a comparative advantage, as witnessed in the cases of India, China, and Bangladesh. The integration of cottage industries fosters self-employment and generates employment opportunities, creating a multiplier effect on overall economic growth. Cottage industries and small businesses act as catalysts for economic activities, adding tangible value to a country's resources. This value creation leads to income generation, ultimately resulting in savings and expenditures, which stimulate investments, initiating a cyclical economic process. Thus, it is accurate to assert that small businesses and cottage industries play a vital role in a country's economic development. Scholars like Ghalib, Malki, and Imai (2011) underscore the pivotal role of entrepreneurial activities, particularly at the micro level, in fostering economic development. They contend that such activities are crucial for developing economies, serving as a means of self-achievement in terms of income generation and contributing to the country's economy (D' Este et al., 2012). Cottage industries, characterized by small-scale production using family or a limited number of labours, primarily local raw materials, and modest capital, offer advantages such as time and cost savings in transportation. They provide opportunities for local labor employment, access to domestic raw materials, and affordable commodities, contributing to regional income through exports. Myeik, situated in the Tanintharyi region of southern Myanmar, is a significant seaport city on the delta of the Tanintharyi River. With 12 wards and a

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population of 107,405 in 2019, the town heavily relies on waterways for transportation. Over the past few decades, the authorities' emphasis on road development has influenced both cottage industries and urban development in Myeik. The economic policy shift to an open-market orientation in 1988 by the state government further propelled commercial, regional, and urban development, fostering socio-economic progress in Myeik. As of 2019, Myeik boasts 596 cottage industries encompassing 39 industrial types, including food-stuff, textiles, construction, household, personal goods, machinery, repairing, and other industries.

Study Area

The research site, Myeik, functions as the administrative hub of Myeik Township in the Tanintharyi Region. Geographically, it is situated between the north latitudes of 12° 25' 25"N and 12° 28' 27"N and the east longitudes of 98° 35' 30"E and 98° 37' 05"E, covering an area of 9.02 square kilometers (equivalent to 2228.9 acres). The town comprises 12 wards and has a population of 107,405 individuals as of the year 2019. (Figure 1).

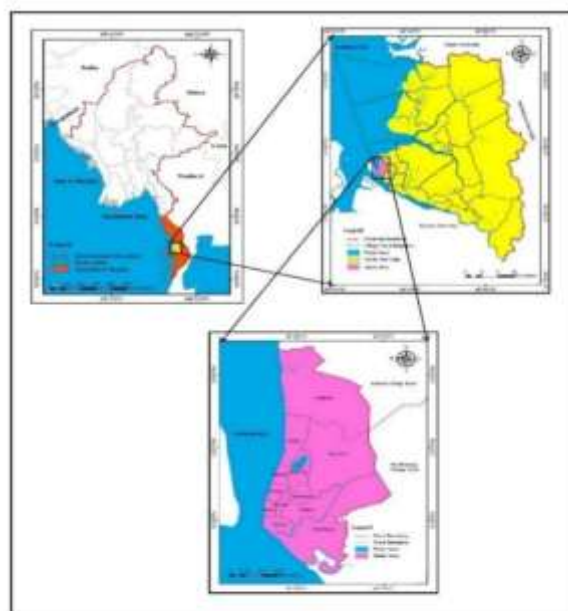


Figure 1. Location of Myeik

Aim and Objectives

The primary objective of this study is to study the spatial distribution of cottage industry in Myeik. The specific objectives are outlined as follows:

- To observe the existing cottage industry in Myeik
- To investigate the spatial distribution pattern of cottage industry
- To assess the degree of diversification levels of the cottage industry in Myeik

Data and Methods

This research incorporates both primary data acquired through field surveys and personal interviews (by taking photos), along with secondary data sourced from relevant offices, books, and papers. The collected data undergo thorough examination and assessment utilizing computer-based techniques, GIS mapping, and pertinent statistical methods. To analyze the spatial distribution of cottage industries in Myeik, GIS techniques are applied for the creation of maps and graphs, alongside calculations for the levels of diversification index.

Discussion and Results

Types of Cottage Industries in Myeik

Cottage industries usually refer to industrial works that operate with little capital family or part-time labour and not highly cost machines. In Myeik works such as Thatch work, Coconut fiber rope, Wood Tray, Dynamo work, and Crab Network are found in a fair number. Other major industrial works are related to food processing and the remaining industrial works are

concerned with personal and household goods, construction materials, paper and presses, machinery, and other works. There is the total of 596 cottage industrial works in various wards of Myeik and they are classed into the following industrial main types, sub-types, and numbers of cottage industry in Myeik, (Tables 1, 2 &3, and Figure 2).

Table 1. Types of Cottage Industrial Types in Myeik

No.	Main Type	Sub-type of cottage industry
1	Food-Stuff	Snack and Bakeries, Betel Nut Work, Purified Water and Ice Factory, Ice-cream Work, Grinder, Dried Fish Work, Rice Noodle Work, Spices Work, Cheroot Work, Bean Sauce, Cashew Nut Work, Betel Lime Work
2	Textiles	Tailor, Dying and Printing Work, Cushion
3	Construction and Households	Aluminium Work, Steel and Iron Scrolling, Concrete Work, Thatch Work
4	Personal Goods Industries	Furniture, Coconut Fiber Rope, Religions Material Work, Plastic Board Work, Sweeper, Candle, Wood Tray, Thanakkhar
5	Machinery and Repairing	Cycle Repairing, Workshop, Car and Cycle Washing, Dynamo Work, Lathe Machine, Blacksmith, Casting and Smelting, Fuse and nozzle Work
6	Others	Goldsmith, Crab Net Work, Invitation Card Work, Tin Work

Source: Field Survey

Based on the available data, Myeik hosts a total of 596 establishments encompassing 39 distinct types of cottage industries. For ease of classification, these industries are aggregated into six main categories: food-stuff industries, textiles industries, construction and household industries, personal goods industries, machinery and repairing industries, and other miscellaneous industries.

Tables 2. Number of Cottage Industries in Wards of Myeik

No.	Types wards	Food Stuff Industries	Textiles Industries	Construction and Households Industries	Personal goods Industries	Machinery and Repairing Industries	Other Cottage Industries	Total
1	Myeiktaung	29	55	13	32	98	14	241
2	Alekyun	7	14	16	1	28	2	68
3	Kanphyar	16	11	12	2	31	1	73
4	Yaybone	10	15	7	10	24	1	67
5	Kangyi	3	-	1	1	15	1	21
6	Myitnge	5	5	1	2	11	4	28
7	Naukle	4	8	4	6	23	-	45
8	Talaisu	-	-	-	-	-	1	1

No.	Types wards	Food Stuff Industries	Textiles Industries	Construction and Households Industries	Personal goods Industries	Machinery and Repairing Industries	Other Cottage Industries	Total
9	Zaydan	4	4	1	1	3	1	14
10	Kankhaung	8	5	1	2	2	1	19
11	Seiknge	2	1	3	1	1	-	8
12	Dawaisu	4	3	1	-	2	1	11
	Total	92	121	60	58	238	27	596

Source; Based on Field Survey Data (January to February 2020)

Table 3. Number of the Main Types of Cottage Industry

No.	Types	Number	Percentage
1	Machinery and repairing	238	40
2	Textiles	121	20
3	Food-Stuff	92	15
4	Construction and Households	60	10
5	Personal Goods	58	10
6	Others	27	5
Total		596	100

Source: Based on Field Survey Data (January to February 2020)

Figure 3 illustrates the spatial distribution patterns of the cottage industry in Myeik. Cottage industry products are primarily acquired by local consumers, prompting the strategic placement of these industries in areas with convenient access to their customer base. Additionally, due to their reliance on local raw materials, these industries are situated in areas where such resources are readily available in abundance. The observed distribution patterns can serve as valuable insights for the establishment and effective management of cottage industries, contributing to their overall development.

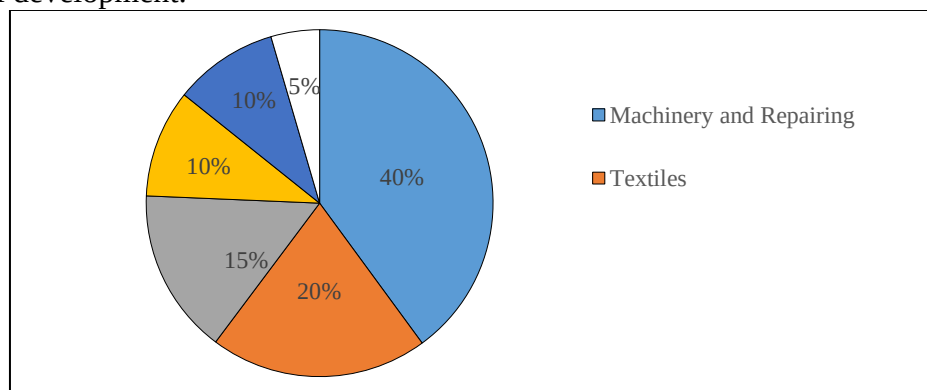


Figure 2. Percentage Distribution of Cottage Industries in Myeik (2020)

Source: Based on Table 3

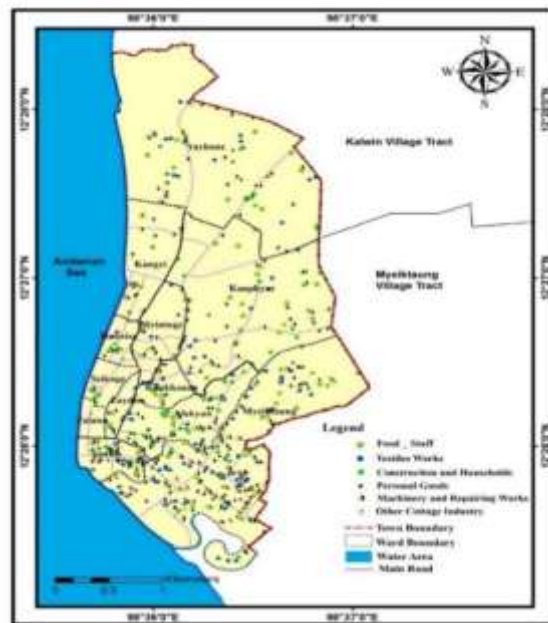


Figure 3. Spatial Distribution of Cottage Industries in Myeik

Source: Table 3

Analysis of Diversification Patterns of Cottage Industries

The spatial distributions of cottage industries in Myeik exhibit variability based on their respective locations. Additionally, there is a discernible growth in both the types and quantity of cottage industries, aligning with the expanding population of Myeik. To further assess the significance of the spatial distribution of cottage industries, it is crucial to examine how these industrial works are situated throughout Myeik whether they are concentrated in specific areas or distributed diversely across the entire town. Analyzing diversification in cropping patterns draws inspiration from Bhatia's (1965) Index of Crop Diversification, while the Gibbs-Martin Index of Diversification (1962) is another valuable method for assessing diversification in cropping patterns within a given area. These methods, traditionally applied to analyze diversification indices in agricultural contexts, are employed in this paper to ascertain the intensity of the distribution pattern of cottage industries. The Gibbs-Martin index of diversification is computed using the following formula.

$$\text{Index of Diversification} = 1 - \frac{\sum x^2}{(\sum x)^2}$$

When denoted as X, it represents the percentage of the total number of cottage industries occupied by each specific cottage industry. If an entire region's total area is exclusively dedicated to a single type of cottage industry, the index value is zero. Conversely, if the distribution is uniform among all cottage industries, the index value approaches 0.9. Hence, the diversification index ranges from 0.0 to 0.9. The calculation of the cottage industry diversification index for Myeik is determined as follows.

$$\begin{aligned} \text{Diversification Index} &= 1 - \frac{\sum x^2}{(\sum x)^2} \\ &= 1 - \frac{76516}{(596)^2} \\ &= 1 - 0.215 \\ &= + 0.78 \end{aligned}$$

As a result, the diversification index for cottage industries in Myeik is notably high. The calculation of the cottage industry diversification index was performed for each ward in Myeik proper, as outlined in Table 4. The resulting index values are detailed in Table 4. The mean value

of the cottage industry diversification index is computed as 0.65, with a corresponding standard deviation of 0.2.

According to Table 5, in Myeik proper, there are 12 wards situated in areas characterized by high diversification of groups, where the majority of cottage industries operate. This concentration is attributed to the increased convenience of transportation and the rapid progress in imported affairs. Zaydan Ward stands out with the highest diversification index of 0.78, positioned in proximity to Seiknge Bazaar and the port, rendering it conducive for distributing cottage industry products. Following closely is Yaybone Ward with the second-highest diversification index of 0.77, strategically located near Myeik University. Kangyi Ward exhibits a moderate diversification index of 0.46. In contrast, Talaisu registers a low diversification index.

The largest number of cottage industries is observed in machinery and repairing works, totaling 238 establishments, followed by 121 works in textiles industries and 92 works in food-stuff industries. Conversely, other types of industries have the lowest count, with only 27 establishments, trailed by 60 in construction and household industries and 58 in personal goods industries. Cycle repairing works dominate among various works, boasting 117 establishments and being widespread across all wards. Tailoring works, the second-largest category in Myeik, are predominantly concentrated in Myeiktaung Ward. Cottage industries offer significant advantages to the local population due to their low capital requirements, utilization of local and readily available raw materials, and easy access to local markets, resulting in cost savings on transportation.

Table 4. The levels of diversification index

Degree of Diversification	Index of Diversification
High Diversification	>0.7
Medium Diversification	between 0.3 and 0.6
Low Diversification	<0.2

Table 5. Spatial Distribution and Diversification of Cottage Industries in Myeik (2020)

No.	Types wards	Food Stuff Industries	Textiles Industries	Construction and Households Industries	Personal goods Industries	Machinery and Repairing Industries	Other Cottage Industries	Total ΣX	Total2 (ΣX) ²	Diversification index	Index value
1	Myeiktau	29	55	13	32	98	14	241	58081	0.74	H
2	Alekyun	7	14	16	1	28	2	68	4624	0.72	H
3	Kanphya	16	11	12	2	31	1	73	5329	0.72	H
4	Yaybone	10	15	7	10	24	1	67	4489	0.77	H
5	Kangyi	3	-	1	1	15	1	21	441	0.46	M
6	Myitnge	5	5	1	2	11	4	28	784	0.76	H
7	Naukle	4	8	4	6	23	-	45	2025	0.67	H
8	Talaisu	-	-	-	-	-	1	1	1	0.00	L
9	Zaydan	4	4	1	1	3	1	14	196	0.78	H
10	Kankhau	8	5	1	2	2	1	19	361	0.73	H
11	Seiknge	2	1	3	1	1	-	8	64	0.75	H
12	Daweisu	4	3	1	-	2	1	11	121	0.74	H
	Total	92	121	60	58	238	27	596	76516		

Source: Field Survey

The development of cottage industries in Myeik is notably influenced by shifts in state policy, transitioning from a centrally planned economy to an open-market-oriented system, coupled with the implementation of regional and urban development planning. Consequently, the populace engages in economic activities relying on local raw materials and markets, facilitating the export of cottage industry products to other regions and neighboring areas. Despite the socio-economic and regional development facilitated by cottage industries, it is observed that the incomes derived from these works are generally modest. In reality, cottage industries primarily provide opportunities for family-based employment and incomes, with annual earnings not significantly surpassing those of daily wage laborers. The collaborative efforts of the people and the state government contribute to the socio-economic and regional development fostered by these cottage industries.

Conclusion

The data reveals a total of 596 cottage industries in Myeik, distributed across 92 food-stuff industries, 121 textiles industries, 60 construction and household industries, 58 personal goods industries, 238 machinery and repairing industries, and 27 other industries. When examining the number of industrial works in each ward, Myeiktaung leads with 241, followed by Kanphyar with 73, Alekyun with 68, and Yaybone with 67 industries. The lowest numbers of industrial works are found in Talaisu, Seiknge, Daweisu, Zaydan, with 1, 8, 11, and 14 industries, respectively.

The spatial distribution of cottage industries, assessed through the Gibbs and Martin diversification index, indicates high diversity across all industries and wards. The even distribution of industrial works throughout various parts of the town contributes to the observed high diversification indices. Diverse types of cottage industries operate across various wards to directly benefit the populace. Out of the 596 cottage industries, a significant number of establishments are engaged in machinery and repairing, as well as textiles industries, both of which play crucial roles in Myeik. Machinery and repairing services are integral to the community, while textile works cater directly to consumers, resulting in their equitable distribution across all wards of Myeik. Concerning the remaining industries, food processing works are strategically located in easily accessible wards to facilitate the distribution of products to consumers in different parts of Myeik and its adjacent areas.

To enhance the socio-economic conditions of the populace and provide additional income from other regions, it is imperative to create job opportunities. Consequently, industries such as food processing, textiles, and personal goods should receive essential financial and technological support, along with access to new market information. The diversification index of cottage industries underscores the necessity for individuals to engage in various types of industries for their daily sustenance. The limited consumptive power of the local population precludes specialization in one or a few types of industrial works. Modifying this situation has the potential to advance the socio-economic conditions in Myeik.

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EFFECTS OF FOREIGN DIRECT INVESTMENT AND TRADE ON LABOR PRODUCTIVITY GROWTH IN MYANMAR*

Thet Mon Soe¹

Abstract

This study investigates the effect of inward foreign direct investment, and trade on economic growth in Myanmar over the period 1996-2022 including the covid-19 pandemic period. The study applied both long- and short-run effects of inward FDI and trade on labor productivity using Autoregressive Distributed Lag (ARDL) bound test and Error Correction (EC) model. To account for other labor productivity determinants, economic freedom index, inflation, and covid-19 dummy variables have been used. The empirical results imply that foreign direct investment impact is ambiguous in the short run, but it is beneficial in the long run. Capital goods import has a positive and statistically significant short run and long run impact on labor productivity in Myanmar. As expected, covid-19 pandemic negatively impacted the labor productivity in Myanmar. In this intuition, the GoM should emphasize more and attract skill intensive inward FDI and capital goods import which improve the labor productivity.

Keywords: ARDL, FDI, Labor Productivity, Trade, Economic Freedom, Internet, Inflation

Introduction

Due to globalization and digitalization of economies, some of developing countries in Asia now having a chance to participate more in global value chain. Through the process of inward FDI and promoting trade, labor productivity has been improved in some countries in ASEAN, but others are still under uncertain circumstances. The driving forces affecting different levels of labor productivity of ASEAN Member States has been changing depending on the types of inward FDI, and trade status of the host country. (ASEAN secretariat, 2021), labor productivity in ASEAN grew by 2.96 percent average annually over 1971-2018 and the overall per-worker labor productivity in ASEAN for 2018 is 24.27 (thousands of USD). Among ASEAN nations, Myanmar labor productivity is positioned with the second lowest rank with 8.07 thousand of USD (ASEAN secretariat, 2021).

Since 2011, tremendous legal, economic, and social reforms have been taken place in Myanmar. The new FDI law has been enacted in 2012 and it has been merged with citizen investment law in 2016 to boost business environment. Furthermore, to promote export-led growth, National Export Strategy (NES) has been applied for the year 2015-2019. Meanwhile, Labor Organization Law, Social Security Law, Minimum Wage Law, and Employment, and Skill Development Law and have been serially enacted in 2011, 2012 and 2013, respectively (Min Zar Ni Lin, 2020). As a result of the reforms, FDI has been redirected from natural resource-based sector to resource-based sector: big drop in oil and gas share in FDI from 50.8% in 2010/2011 to 6.38% in 2019/2020; significant higher manufacturing share in FDI from 0.33% in 2010/2011 to 20% in 2019/2020. Garment export became prominent sector in export composition whereas lower capital import share rather than the intermediate goods import (CSO, 2022). In the labor perspective, Myanmar experienced significant per-worker labor productivity growth from 2.61 in 1991-2000 to 4.77 in 2011-2018 (ASEAN secretariat, 2021). It

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*Honour Award winning Paper in Applied Economics, (2024)

is observed that workers in informal have lower productivity than the formal sector such as export-oriented firms (Worldbank,2016).

The above discussed notion that FDI, trade and labor productivity are correlated, and this leads the motivation of this study. This paper aims to examine the effects of FDI and trade on labor productivity of Myanmar analyzing the data over 1996-2022 both in the short run and long run periods. The rest of the paper is structured as follows: literature reviews related to FDI, trade, inflation, and economic freedom on labor productivity, empirical materials, and methods, followed by the results of the analysis. The final section contributes the discussion and conclusion.

THEORETICAL FRAMEWORK AND PREVIOUS LITERATURE PERSPECTIVES

FDI and Labor Productivity

The FDI-trade-labor productivity nexus has been a considerable subject among the economic researchers and the resulting relationship vary depending on the development status of the host country. In the literature of the AK growth model of Frankel (1962) and Romer (1986), attracting inward FDI leads not only the host country's capital stock enhancement but also the productivity growth through the transfer of technology, transfer of knowledge, expertise, job creation and management skills advancement. The productivity model of Romer (1990) proposed that FDI in open economies induces economic and productivity growth having positive technological spillovers: capital deepening. On the other hand, FDI also leads negative impact in labor's wage inequality and skill differences of the host country (Alam et.al,2013).

Against this theoretical backdrop, there are few studies focused on the relationship between FDI and labor productivity. Boghean and State (2015) analyzed the relationship between FDI and labor productivity in the E.U. countries over the period of 1980-2009 and found a strong connection between them. Karentina (2019) also affirmed that FDI contributes positive spillover effects on Indonesian domestic firms' labor productivity over the period 2010 and 2014 and approved the positive long run impact but negative in the short-term period. On the contrary, Thuy (2007) found insignificant positive effect of FDI on labor productivity in Vietnam with the larger market stealing effect for 2000-2002 period.

Trade and Labor Productivity

In trade literature, trade per se do not affect the labor productivity but capital import embodied with technology leads narrowing the technological gap or skill gap between developing and developed countries. In other words, skill-capital complementary import increases the "stock of knowledge capital" which is likely to vary positively with the extent of contact between local economy and international counterparts (Grossman and Heplman,1990).

Roy (2009) analyzed the capital goods import impact on total factor productivity (TFP) using the sample of 77 countries for 1975-1995 period and provided the positive significant capital goods effect having the advantages of technological backwardness. Nyantakyi and Munemo (2015) also examined the effect of capital goods import on domestic firms' productivity in Ghana, Tanzania, and Kenya from 1991 to 2003. They found the same contribution to Roy (2009).

FDI, Trade and Labor Productivity

To examine the FDI-Trade-Labor Productivity nexus, Le, Duy and ngoc (2019) analyzed the effects of foreign direct investment on labor productivity over the period of 1986 to 2014 using

ARDL and the results affirmed that FDI has a positive long-run impact on labor productivity in the long-term. Asada (2020) also examined the impact of FDI and trade on labor productivity of Vietnam over the period of 1990-2017 using ARDL model. He found out the same contribution that FDI and trade impact is ambiguous in the short run, but it has significant positive contribution to labor productivity growth in the long run. At the same time, Vinh (2019) and Yasar, M., (2013) found out the positive effect of FDI on labor productivity both in the short run and long run. Hoang N., Quoc V.L., & Hoang N.B (2019) also provide strong FDI positive impact on labor productivity using ARDL model from 1986-2014 in the long run. The preceding literature shows varying effect of labor productivity in Vietnam.

In addition to the above influencing labor productivity factors, other researchers contribute economic freedom and inflation impact on labor productivity. Henri and Mveng (2023) analyzed economic freedom including legal structure, labor freedom and trade freedom has positive effect on productivity of African countries. Nissan and Niroomand (2008) found out that economic liberalization induces labor productivity growth. Eryilmaz and Bakir (2018), Clark (1982) and Dritsaki (2016) analyzed the relationship between inflation and labor productivity. Accordingly, they found out the negative relationship between inflation and labor productivity.

Based on the above previous theoretical and empirical literature, there are limited contribution to FDI, trade and labor productivity nexus in Myanmar. Therefore, the paper applied the variables of FDI, trade, economic freedom, and inflation as driving factors for labor productivity growth in Myanmar using the ARDL model approach.

Emprirical Methodology

Data Sources

In the analysis, the study applied the annual time series data for the period 1996-2022. The data have been collected and transformed from three main sources: ILO, Heritage Foundation and UNCTAD. The research variables and their definitions are reported in Table 1 below.

Table 1 Variable Definitions and Sources

Variables	Definition	Source	Expected sign
LP	Output per worker	ILOstat	+/-
FDI	Inward FDI per capita	UNCTAD	+/-
EX	Export of Goods and Services	UNCTAD	+
KIM	Capital Import	UNCTAD	+
INF	Inflation rate as an annual change of consumer price index	UNCTAD	+/-
EF	Economic Freedom Index	HF	+/-

Source: Author's Estimation

Model Specification and Methodology

Traditional cointegration methods, including residual-based Engle and Granger (1987) test and the maximum-likelihood-based Johansen (1991; 1995) tests, are some limitations, because these tests require the selected variables integrated in a same order. ARDL bound test approach (Pesaran et al., 2001; Pesaran & Shin, 1999) for cointegration is flexible for using a set of variables that are integrated in a mixed order. Moreover, the linear transformation of the ARDL model allows us to derive error correction model and analyze short-run dynamics between

variables. The study applies ARDL model due to its advantages. First, ARDL model can be used in small sample. Second, this approach is working when variables are in a mixed integration order. Third, the serial correlation and endogeneity problems are corrected by choosing appropriate lags. Finally, the ARDL model estimates short- and long-run relations at the same time.

The labor productivity annual value added per worker, calculated by real gross domestic product (GDP) by the number of workers. The purpose of the paper is to examine the effects of FDI and trade on labor productivity growth of Myanmar. Following the methodology of preceding literature related to this issue (Asada 2020; Eryilmaz and Bakir 2018; Clark, 1982; Dritsaki, 2016; numilaakso, 2009; Najarzadeh et al, 2014; Larionova and Varlamova, 2020), the generalized ARDL model for examining the effect of financial innovation on economic growth of Mongolia is as following equation (1):

In equation (1), Where Δ indicates first difference of variables, v_t is the error term, α_i ($i = 1, 2, 3, 4, 5$) are long-run coefficients, and h, l, m, n, o , and p are lags of ARDL model. The ARDL bound test for examining the cointegrated relation between variables conducted using F test with the null hypothesis of $\alpha_0 = \alpha_1 = \alpha_2 = \alpha_3 = \alpha_4 = \alpha_5 = 0$. The F test have two critical values: $I(0)$ and $I(1)$, which are obtained from Pesaran et al., 2001. The null hypothesis of this F test means there is no cointegration among variables in equation (1). If the F test value is less than the critical value corresponding to $I(0)$, the variables are not cointegrated. If the F test value is greater than the critical value corresponding to $I(1)$, there is a cointegrated association between variables. If the F test value falls within the region between $I(0)$ and $I(1)$, we could not make any inference about cointegration. Dummy variable is included in the estimation to account Covid – 19 pandemics. The dummy variable takes 1 in 2020, 2021 and 2022, and it takes zero over the other years.

$$\begin{aligned} \Delta LP_t = & \beta_0 + \sum_{k=1}^h \phi^k \Delta LP_{t-k} + \sum_{k=1}^l \beta_1^k \Delta FDI_{t-k} + \sum_{k=1}^m \beta_2^k \Delta EX_{t-k} + \sum_{k=1}^n \beta_3^k \Delta KIM_{t-k} \\ & + \sum_{k=1}^o \beta_4^k \Delta INF_{t-k} \\ & + \sum_{k=1}^p \beta_5^k \Delta EF_{t-k} + \alpha_0 LP_{t-1} + \alpha_1 FDI_{t-1} + \alpha_2 EX_{t-1} + \alpha_3 KIM_{t-1} + \alpha_4 INF_{t-1} \\ & + \alpha_5 EF_{t-1} + v_t. \end{aligned} \quad (1)$$

Based on the equation (1), we can specify error correction model as follows:

$$\begin{aligned} \Delta LP_t = & \beta_0 + \sum_{k=1}^h \phi^k \Delta LP_{t-k} + \sum_{k=1}^l \beta_1^k \Delta FDI_{t-k} + \sum_{k=1}^m \beta_2^k \Delta EX_{t-k} + \sum_{k=1}^n \beta_3^k \Delta KIM_{t-k} \\ & + \sum_{k=1}^o \beta_4^k \Delta INF_{t-k} + \sum_{k=1}^p \beta_5^k \Delta EF_{t-k} + \lambda ECT_{t-1} + u_t. \end{aligned} \quad (2)$$

Where error correction term, ECT_t , is expressed as follow:

$$ECT_t = LP_t - (\alpha'_1 FDI_t + \alpha'_2 EX_t + \alpha'_3 KIM_t + \alpha'_4 INF_t + \alpha'_5 EF_t). \quad (3)$$

It is expected the coefficient of ECT to be negative, statistically significant, and less than unit to explain the speed of adjustment towards the long-run equilibrium. To ascertain validity of the ARDL model, the diagnostic tests and stability tests were conducted.

EMPIRICAL RESULTS AND FINDINGS

Unit Root Test

To test for stationary of the data, the paper examined the integration order of the selected variables and reported the Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) test results in Table 2. The variables are $I(1)$, integration order of one, except government expenditure as percent of GDP and inflation, which are $I(0)$ or stationary variables. It is ensured that the selected variables have an integration order less than two. The data features allow ARDL model is more appropriate than vector error correction model, because the explaining variables have mixed integration orders, $I(1)$ or $I(0)$, and there is not a variable with a integration order of two, $I(2)$.

Table 2 Unit Root Test

Variables	ADF Test Statistic		P-P Test Statistics	
	Level	First Difference	Level	First Difference
<i>LP</i>	-4.992***	-2.828	-0.157	-3.410*
<i>lnFDI</i>	-1.965	-4.489***	-1.983	-4.489***
<i>lnEX</i>	-3.731**	-1.624	-4.897***	-4.172***
<i>KIM</i>	-1.695	-1.420	-1.383	-5.4589**

Note: ***, **, and * denotes significance level at 1% and 5% respectively.

Lag Order

Lag order is initially set at three at maximum under the limited number of observations. An unrestricted vector autoregression model was estimated, and the optimal lag order is selected at two by Akaike Information Criterion (AIC), Hannan–Quinn information criterion (HQ) and other criteria as presented in Table 3 as follows.

Table3 Lag Order Selection Criteria

Lag	AIC	SC	HQ
0	11.88246	12.17499	11.96359
1	2.295201	4.342913	2.863150
2	-0.019722*	3.783171*	1.035039*

Source: Author's Estimation

The cointegrated relation between the research variables by estimating equation (1) on annual data over the period 1996-2022 has been tested. Before conducting ARDL bound test, the paper chooses appropriate ARDL model for selected data based on information criteria. Table 4 shows typical three information criteria result with their best five models. Akaike Information Criteria (AIC), Bayesian Information Criteria (BIC) and Hannan-Quinn Information Criteria (HQ) are choosing ARDL (2,2,0,1,2,2) model.

Table 4 Lag Order Specification of the ARDL Model

Specification	AIC	BIC	HQ
(2,2,0,1,2,2)	-4.699221	-3.919141	-4.482860
(2,1,1,1,2,2)	-4.680452	-3.900372	-4.464091
(2,2,1,1,2,2)	-4.671019	-3.842183	-4.441135
(2,2,0,2,2,2)	-4.670832	-3.841997	-4.440948
(2,1,0,1,2,2)	-4.637209	-3.905883	-4.434370

Source: Authors' estimation

Bounds Test

Based on ARDL (2,2,0,1,2,2) model, the table 5 below reports ARDL bound test and report the result. Since the F statistic is greater than small sample critical value of I (1), there is a significant cointegrated relation between the selected variables. It is needed to further build long-run equilibrium model for these variables as the cointegrated relation is approved.

Table 5 ARDL Bounds Test Result

F Bounds Test Statistics	Significance Level	Bound Critical Values	
		I (0)	I (1)
F-Statistics:4.076021	10%	2.26	3.35
k: 5	5%	2.62	3.79
	1%	3.41	4.68

Source: Author's Estimation

Long Run and Short Run Relationship

In the long run, FDI, export, capital import and inflation have positive significant effect on labor productivity of Myanmar while economic freedom has negative significant impact. The long-run equation estimation result is exhibited in Table 6 below.

Table 6 Long-run Relationship

Variables	Long-Run Coefficients	P-Value
lnFDI	0.3909**	0.0282
lnEX	0.5125***	0.0000
lnIM	0.3362***	0.0039
lnINF	0.0786***	0.0126
EFS	-0.0162**	0.0375
C	-3.4897***	0.0020

Note: *, ** and *** indicate significance level at 10%, 5% and 1% respectively.

The error correction model is estimated and exhibited in Table 7. The deviation from the long-run equilibrium is estimated from the result in Table 6. Alternatively, it can be specified as $ECT_t = \ln LP_t - (0.3909 \cdot \ln FDI_t + 0.5124 \cdot \ln EX_t + 0.3362 \cdot \ln KIM_t + 0.0786 \cdot \ln INFL_t - 0.0162 \cdot EF_t)$. The short-run impact of FDI is ambiguous as in Asada (2020) while capital import has positive significant effect on labor productivity with the same contribution in Nyantakyi and Munemo (2015) and Roy (2009). Economic freedom in Myanmar has significant negative effect on labor productivity. Nevertheless, inflation impact on labor productivity is ambiguous. Furthermore, covid 19-pandemics have significant negative impact on labor productivity. ECT indicates that 41 percent of the deviation from long-run equilibrium in last year is corrected in this year.

Table 7 Error Correction Model

Variable	Coefficient	P-value
$\Delta \ln LP(-1)$	0.283264**	0.0252
$\Delta \ln FDI$	0.061119**	0.0194
$\Delta \ln FDI(-1)$	-0.043996*	0.0303
$\Delta \ln KIM$	0.085148***	0.0011
$\Delta \ln INF(-1)$	0.001760	0.3862
$\Delta \ln INF(-1)$	-0.016549***	0.0005
ΔEF	-0.011617***	0.0003
$\Delta EF(-1)$	-0.015699***	0.0001
DUMMY	-0.057740***	0.0029
ECT_t	-0.411118***	0.0002

Source: Author's estimation. Dependent variable is labor productivity LP.

Diagnostic Tests

To check the reliability of the estimation result, a series of diagnostic tests were conducted, and their results are reported in Table 8. The results of diagnostic tests confirmed the acceptance of the null hypothesis of no autocorrelation, normally distributed residuals and homoskedasticity.

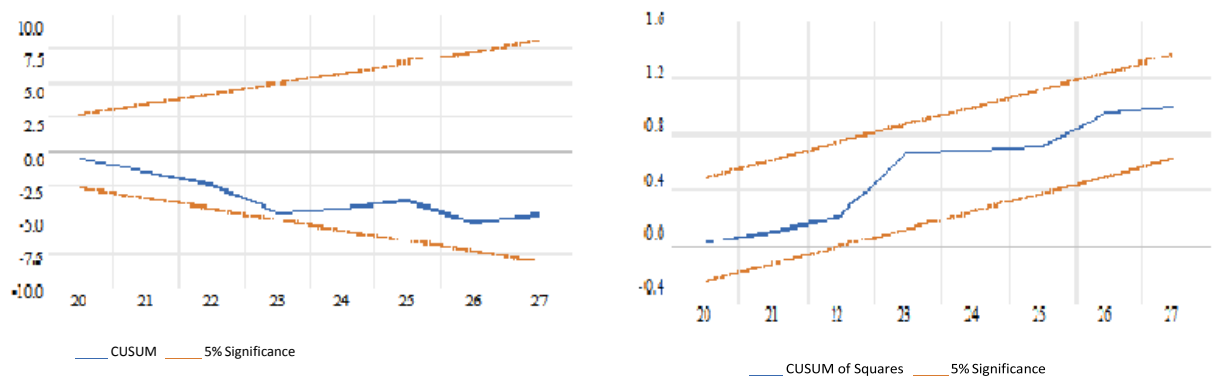
Table 8 Results of Diagnostic Tests

Type of Test	Result
Adjusted R-squared	0.9997
Breusch–Godfrey serial correlation LM test	Obs*R-squared 5.818844(Prob = 0.0645)
Residual normality test	Jarque–Bera test: 1.059314(Prob = 0.5888)
Residual heteroskedasticity test	Obs* R-squared 10.95432(Prob = 0.9069)

Source: Author's Estimation

Stability Test

The stability of the estimation is accessed by the cumulative sum (CUSUM) of the recursive residuals test and the CUSUM of squares of the recursive residuals test. The results of these two tests are displayed in Figure 1. Since test statistics of the CUSUM and the CUSUM of squares are within the range of 5% significance level, it is concluded that the estimated output of the ARDL model is stable.

**Figure 1 Results of Stability Test**

Discussion

The empirical result of the previous section indicates varying results depending on the short-term and long-term period. In the long term, FDI is beneficial for Myanmar labor productivity but short-term impact of FDI on labor productivity is ambiguous. Capital import leads positive improvement in labor productivity both in the short-term and long term. Economic freedom index has limited impact on labor productivity. Based on the results, to absorb FDI spillovers not only in the short term but also in the long term, the GoM should attract more in FDI in skill-intensive sectors. To further support the labor productivity, the capital goods should be imported R&D intensive goods to Myanmar which can reduce the costs of production and boost the labor productivity.

Summary and Conclusion

Based on the solid theoretical and empirical foundations, the paper analyzed the impact of FDI, and Trade on labor productivity using ARDL model approach from 1996-2022 including the covid-19 pandemic period. The empirical results indicate FDI lead positive spillover effects only in the long-term period but not in the short-term. Import capital embodied with technology create positive significant impact on labor productivity in the short-term and long-term. These findings are compatible with the preceding literature (Asada,2020; Nyantakyi and Munemo ,2015; Roy,2009). Covid-19 pandemic have negative significant impact on labor productivity and economic freedom lead limited labor productivity.

The intuition behind why FDI have varying results on labor productivity depends on the type of FDI coming to Myanmar. Although FDI in Myanmar has been shifted from oil and gas sector to manufacturing sector, FDI share in manufacturing sector is still low in comparison with the power sector. Furthermore, FDI in manufacturing sector is mostly in garment sector which is not the skill intensive sector: garment export is rising from 4.27% in 2010-2011 to 26% in 2018-2019. It is also observed that employed person in manufacturing sector is still under 10%. The larger share of informal employment in Myanmar is still a challenging issue in Myanmar with 82.5% in 2017(Inter-Censal Survey,2019). During the covid-19 pandemics, labor in Myanmar has been experiencing with socio-economic and job crisis which further devastated the working conditions and economic system. The covid-19 economic impacted highest in manufacturing sector with 2.4 million workers with economic disruption (ILO,2020).

As for the policy implications, the GoM should attract skill intensive FDI and increase the capital goods import share rather than intermediated goods import. Due to the limitations in data availability, the study will contribute human capital, and R&D capital import effect on the labor productivity.

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FOREIGN DIRECT INVESTMENT AND CO₂ EMISSION: AN EMPIRICAL ANALYSIS – THE CASE OF MYANMAR

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Abstract

There are two main patterns of the liberalization process in Myanmar. The first one, acted in September 1988, concerns with the marketization and removal of restrictions in the agriculture sector. The second one is the Foreign Investment Law. This allows foreign capitals in a company from joint venture participation with a minimum of 35% of foreign holdings to a full detention with 100% of foreign equity. This study will assess the effect of foreign direct investment (FDI) on CO₂ emissions of Myanmar in the short-run and long-run impact by using an auto-regression distributed lag (ARDL) model. The data set for this study is from the time series data set of Myanmar (1990-2020). The sources of secondary data are World Bank, DICA, and Konema. This study makes a significant contribution by examining the impact of FDI and trade liberalization on Myanmar's CO₂ emissions. The results of this study provide evidence of the possibility to keep and rehabilitate the environment along with Myanmar's industrialization and urbanization through trade liberalization. As the developing and emerging Myanmar economies are on a transition path towards development, guaranteeing environmental sustainability. Myanmar government should be encouraging the types of FDI which ensure tech know-how and building a clean environment.

Keyword: Foreign Direct Investment, CO₂ emission, ARDL model, Pollution Heaven Hypothesis (PHH), Myanma

Introduction

Together with trade liberalization, this foreign investment aided nations in achieving respectable economic growth and actively taking part in globalization. As a result, foreign investment that generates employment opportunities and has a ripple effect on developing social-economic systems would assist nations in improving their living standards and becoming more globally competitive. Environmental quality was impacted when trade, economic growth, investment flows, and urbanization experienced significant increases in emerging and developing economies (EDEs). Environmental concerns have caught economists' attention, and scholars' focus on global trade and environmental challenges has expanded (Weidman and Lenzen, 2018; Khan et al., 2020).

When the economic structure transitions from rural to urban in industrial countries, environmental degradation increases, but it is reversed when the structural shift occurs from energy-intensive industries to technologically and knowledge-based services. The old paradigm of international commerce is clearly challenged by the advent of environmental issues. Sub-regional trade is a significant economic activity that closely relates to the environment (Bilgen, 2014). The EKC hypothesis, which asserts inverted U-shaped connections between income and environmental pollution, is widely accepted. In order to build its economy, a developing nation may decide to sacrifice the environment (i.e., increase carbon emissions).

With a geographic area of 676,578 square kilometers, Myanmar is the second-largest country in Southeast Asia. With a population of 53 million as of 2019, it will likely reach 54.7 million by 2024, making it the fifth-largest country in the region. With the progressive easing of restrictions on foreign investment in Myanmar, there has been an increase in foreign companies and robust manufacturing-led economic growth, which is predominantly supported by foreign direct investment (FDI). As one of the remaining accessible frontier markets in the world, Myanmar is developing at a faster rate than its Asian counterparts, such as Thailand and Vietnam, which are also going through rapid economic changes.

The government has been reforming and liberalizing various fields such as agriculture, the SEEs, finance and trade based on the objectives of development of agriculture as the base and

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all round development of other sectors of the economy as well, proper evolution of the market oriented economic system, development of the economy inviting participation in terms of technical know-how and investments from sources inside the country and abroad and the initiative to shape the national economy must be kept in the hands of the State and national peoples. Myanmar military government has approved \$3.8 billion in foreign investment since a coup a year ago. The projects approved included \$ 2.5 billion in liquefied natural gas power plant. That figure accounted for two-thirds of overall amount cited. In the 2019-2020 and 2020-2021 fiscal years, Myanmar's foreign investment fell from \$4.9 billion to \$3.8 billion (DICA).

The number of enterprises permitted in 2019, was 282 enterprise and highest in manufacturing (79%) of total investment in terms of monetary as \$ 4158.47 million. Within the first two years of their investment, foreign investors are required to hire at least 25% of their skilled workers from the local labor pool. For the third and fourth years, the local job ratio rises to 50%, and for the fifth and sixth years, it rises to 75% for the fifth and sixth years

Foreign investors are not compelled to purchase products or technology with domestic content. Information technology (IT) and data protection laws, rules, and regulations are currently being developed in Myanmar, however there are no current obligations for international IT providers to turn over source code or grant access to surveillance. Data localization rules do not exist in Burma.

To investigate the impact of foreign direct investment on CO₂ emission, the author uses the ARDL model to analyze the relationship between environmental attributes, foreign direct investment, gross domestic product, and urbanization. And then evaluates the effectiveness of current policy initiatives in addressing the causes of environmental degradation and offers policy suggestions.

Literature Review

The main goal of FDI syndicates is to make it easier for highly skilled workers, cutting-edge technologies, and financial resources to relocate from their home nations to other countries where they are going (Lasbrey et al., 2018). Industrialization and trade are fueled by direct foreign investment. FDI and economic development are positively correlated, according to an analysis of a heterogeneous panel covering the years 1983 to 2008 (Gaur et al., 2018). Most governments have been more selective in the source and type of FDI entering into their country as a result of being aware of the possible environmental harm that FDI may cause (Demena and Afesorgbor, 2020).

Large-scale FDI has the potential to hasten environmental deterioration in host nations, but it also has the potential to help safeguard the environment, particularly if it is accompanied with more eco-friendly technologies and sustainable management techniques (Demena and Afesorgbor, 2020). Research on the factors influencing business environmental performance has looked at the motivations for Previous research concerned with the FDI-environment relationship has mostly focused on the impacts of domestic regulation on aggregate FDI flows and the effects of FDI on the local environment, mainly relating it to the environmental Kuznets curve and the pollution haven hypothesis (Aung et al., 2017; Bruvoll and Fæhn, 2006; Rezza, 2013).

Some studies look at how well domestic companies function environmentally (Liu and Ye, 2012). The motivations for businesses to adopt environmentally responsible activities have been addressed in research on the factors influencing corporate environmental performance (Nikolaou et al., 2018).

Research Question And Objective

In order to protect the environment throughout Myanmar's economic expansion after 1988, this study aims to access the environmental effects of trade liberalization. The finding of the study helps to answer the following research question

- What and how of the long run and short run relationships between FDI and CO₂ emissions of Myanmar?

The objective of the study is

- To investigate the impact of foreign direct investment on CO₂ emission.

Theoretical Analysis And Methodology

Pollution Haven Hypothesis

According to the pollution haven hypothesis (PHH), under free trade, multinational corporations will move the manufacturing of their products that produce a lot of pollution to poorer nations, where there is less environmental oversight. In less developed countries, foreign investment is expected to close the internal resource and savings gap, improve managerial capabilities, lessen the currency shortage, and improve the country's overall balance of payments. The free movement of finance and trade has also grown in importance as environmental issues. Some contend that environmental quality is an ordinary benefit and that economic progress brought about by free trade will result in a cleaner environment.

There are three main explanations for why underdeveloped nations set lower standards. First off, developing nations generally have higher costs associated with monitoring and enforcing pollution standards. Second, wealthy developed nations create a greater demand for clean water and air. Third, economic development in emerging nations means a switch from agricultural to manufacturing, which prompts a quick urbanization process and significant investments in urban infrastructure, increasing pollution levels. Yet, growth in wealthy nations indicates a move from production to services, which results in a reduction of pollution sensitivity.

Environmental Kuznets curve

In the early stages of economic growth, pollution emissions increase and environmental quality declines, but beyond some level of per capita income (which will vary for different indicators) the trend reverses, so that at high income levels, economic growth leads to environmental improvement. This implies that environmental impacts or emissions per capita are an inverted U-shaped function of per capita income. The EKC is named after Simon Kuznets who proposed that income inequality first rises and then falls as economic development proceeds. The EKC is mostly an empirical phenomenon, yet the majority of EKC model estimates are not statistically reliable. The impact of growth outweighs these other factors in middle-income nations that are experiencing rapid growth. In developed nations, development is slower and the growth effect can be offset by measures to reduce pollution. Evidence that developing economies are actually addressing environmental issues lends support to these econometric findings. (Stern, 2020).

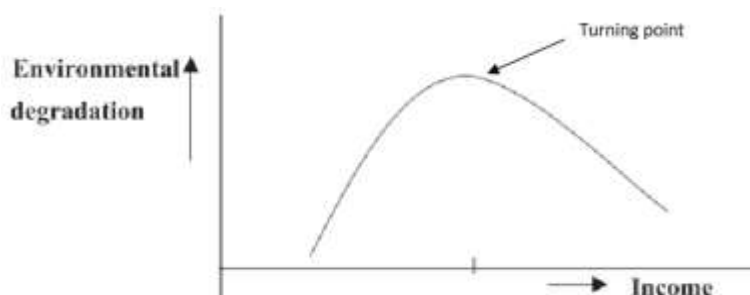


Figure 1- Environmental Kuznets Curve Source: Dinda ,2004

Methodology: Data collection and analysis methods

An ARDL model is used to analyze the environmental effects of trade liberalization. This study access the quantitative analysis of the impact of foreign direct investment on environmental quality of Myanmar. The autoregressive distributed lag model is used in this study to determine whether there is a long-term link between the time series variables. The ARDL technique's ability to be used regardless of whether the variable is I(0), I(1), or fractionally co-integrated is one of its key benefits (Pesaran & Pesaran, 1997). The ARDL model has enough lags to account for the dynamical implications of all dependent and independent variables, as well as those of the error term. Moreover, the error correction model (ECM) is created by deriving ARDL from a straightforward linear transformation. Without sacrificing long-run data, ECM combines short-run changes with long-run equilibrium.

This study uses current data that was gathered from publications or surveys produced by the government, including those from the Central Statistics Organization (CSO), the Directorate of Investment and Business Association (DICA), the World Bank Dataset, and Konema. The data set for this study is from the time series data set of Myanmar (1990-2020). The following table 1 - summarizes the detailed specifications on the variables.

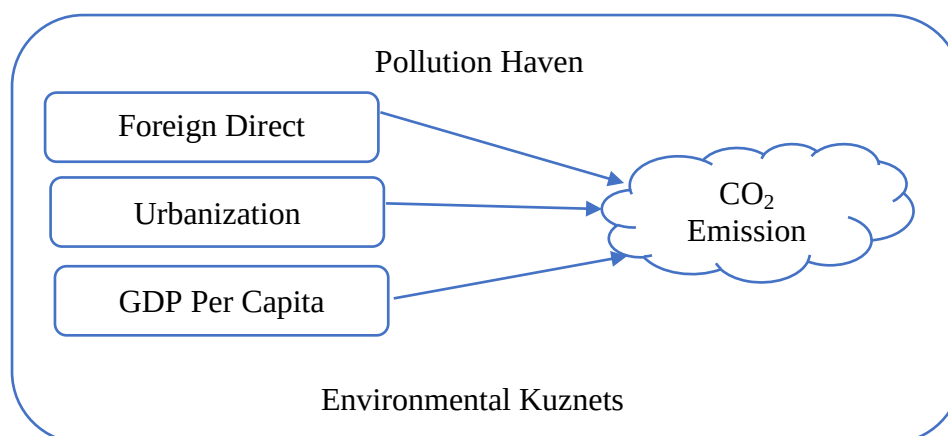
Table 1- The description of the Data

Types	Code	Meaning	Measurement	Expected Sign
Dependent variables	C	CO ₂ emissions	Per capita CO ₂ emissions(tons)	
	FDI	Foreign Direct Investment	% of total GDP	+
Explanatory variables	GDP	GDP per capita	current \$	+
	Ur	Urbanization	% of total Population	+

Source: Author's own consideration

Conceptual Framework

In recent years, many researchers have focused on the impacts of FDI inflows on carbon emissions, but they have not concluded a consistent insight. Moreover, little research has investigated the influence channels of the impacts of FDI inflows on carbon emissions. Therefore, this study will examine the moderating effects of FDI, urbanization and GDP per capita in carbon emissions, which may provide a new explanation for the differential impact of FDI inflows on carbon emissions. Figure 2 presents the conceptual framework of this study.



Source: Author's own consideration

Discussion

Empirical Result

Empirically, the relationship between economic development and CO₂ emissions has been widely studied. It is plausible to establish the long-run relationship between CO₂ emissions, energy use, economic growth, and per capita income in a linear quadratic form (Stern, 2003). FDI inflows have also been considered as an additional determinant of environmental quality because of their potential effects on pollution. This study specified a log linear quadratic equation to test the long-run relationship among CO₂ emissions, economic growth, foreign direct investment and urbanization of Myanmar. The regression model is given as follows:

$$\text{Ln}C_t = \alpha_0 + \alpha_1 \text{Ln}FDI_t + \alpha_2 \text{Ln}GDP_t + \alpha_3 \text{Ln}UR_t + \varepsilon \quad (1)$$

Where,

$\text{Ln}C_t$ = Natural logarithm of CO₂ emission

$\text{Ln}FDI_t$ = Natural logarithm of foreign direct investment

$\text{Ln}GDP_t$ = Natural logarithm of GDP per capita

$\text{Ln}UR_t$ = Natural logarithm of urbanization

GDP_t = Gross Domestic Per Capita

ε = The regression error terms.

All variables in equation (1) are in their natural logarithmic form.

Hypothesis

Researchers have studied how FDI affects the climate. Kaya et al. (2017) used a spatial agglomeration model to analyze the relationship between FDI and pollutant effects. They hypothesized that FDI inflows influenced a variety of environmental pollution and concluded that location has no bearing on the concentration of pollutants.

H₀ : A positive relationship exists between FDI and CO₂ emissions for Myanmar.

Unit Root test

A unit root test determines whether a time series variable is non-stationary.). This study used three different unit root test specifically i) Augment Dickey- Fuller test ii) ADF- GLS test iii) Phillip-Perron test for the equation (1).

Table 2- The results of the unit root test

t- statistics		$\text{Ln}C_t$	$\text{Ln}FDI_t$	$\text{Ln}UR_t$	$\text{Ln}GDP_t$
ADF	level	-1.89	-3.301	-1.013	-0.870
	1 st Difference	-8.154***	-4.058***	-5.32***	-2.90***
Dickey Fuller GLS	level	0.153	2.915***	0.188	-0.591
	1 st Difference	-8.326***	na	-6.069***	-2.997***
PPS	level	1.612	-3.128***	-1.053	-0.79
	1 st Difference	-12.345***	na	-9.749***	-9.749***

Source: Eview -12 output

Note: *** denotes the significant at all 5%, 10% and 1%.

No one of the variables is I(2) which is qualified for the ARDL estimation technique and the Bounds Integration .According to the table 2, the results of the ADF, for unit root and stationary all variables are stationary at the first difference.

Table 3 - The Correlation Matrix for ARDL (3,4,4,4)

Correlation Probability	$\text{Ln}C$	$\text{Ln}FDI$	$\text{Ln}Ur$	$\text{Ln}GDP$
$\text{Ln}C$	1.000			
$\text{Ln}FDI$	-0.129	1.000		
$\text{Ln}Ur$	0.767	-0.232	1.000	
$\text{Ln}GDP$	0.738	-0.15	0.925	1.000

Source: Eview -12 output

According to the table 3 – LnGDP and LnUr has correlation (0.925), there exists no correlation among other independent variables. This means that there has no multi-collinearity in the regression model. If variables have multi-collinear each other's, their coefficients may become unstable and difficult to interpret.

Selection of Lags Optimal and Test of Johansen Co-integration

The variables (Ur_t , GDP_t , FDI_t and C_t) are integrated at I(1) and I (0) have a long-run relationship, thus the study can progress to develop the ARDL model. The software Eview 12 is used in this study to estimate the chosen ARDL model. With the use of this software, a user can choose a specific lag level or have it automatically chosen one between the maximum lags of dependent and independent variables.

Table 4 - Lag Optimal Selection

Lag	Log L	LR	FPE	AIC	SC	HQ
0	5.3	NA	1.05	-0.113	0.083	-0.064
1	71.645	103.83	1.36	-4.49	-3.5	-4.242
2	79.723	9.833	3.13	-3.802	-2.024	-3.355
3	120.81	35.73	5.41*	-5.983	-3.416	-5.33
4	207.59	45.275*	3.36	-12.138*	-8.878*	-11.294*

Source: Eview -12 output

*Indicates la g order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

For the sample period of 1995–2021, attention has been paid to five VAR (p), p= 0, 1, 2, 3, and 4 models. The order is inferred by at least four criteria.

Table 5: Johansen Cointegration test results

H_0	H_1	Trace Statistic	5% Critical Value	Prob	H_0	H_1	Max- Eigen Statistics	5% Critical Value	Prob
$r=0^*$	$r>1$	66.320	63.876	0.030	$r=0^*$	$r>1$	34.439	32.118	0.025
$r<1^*$	$r=1$	31.881	42.915	0.394	$r<1^*$	$r=1$	19.233	25.823	0.289
$r<2$	$r=2$	12.647	25.872	0.765	$r<2$	$r=2$	10.114	19.387	0.606
$r<3$	$r=3$	2.532	12.517	0.926	$r<3$	$r=3$	2.517	12.517	0.926

Source: Eview -12 output

Trace statistic and Max-Eigen statistic are both significant at the 5% level for the null hypothesis $r=0$ (see Table 5). Both trace statistic and max-eigen statistics show that the p-value of the null hypothesis that the number of co integration equations is, $r=0$ which is lower than 0.05. This indicates that the null hypothesis $r=0$ is not rejected at the 5% significance level. Therefore, we can conclude that there is co-integration all variables in the long-run.

The Bounds Tests for Co-integration of ARDL Models

The long-term association between the variables was examined in conjunction with the F-test. The empirical formulation of the ARDL framework for bound testing can be written as follows:

$$\Delta \text{Ln}C_t = \beta_0 + \sum_{i=1}^p \delta_i \Delta \text{Ln}C_{t-i} + \sum_{i=1}^p \phi_i \Delta \text{Ln}FDI_{t-i} + \sum_{i=1}^p \omega_i \Delta \text{Ln}GDP_{t-i} + \sum_{i=1}^p \gamma_i \Delta \text{Ln}UR_{t-i} + \sigma_1 \text{Ln}C_{t-1} + \sigma_2 \text{Ln}FDI_{t-1} + \sigma_3 \text{Ln}GDP_{t-1} + \sigma_4 \text{Ln}UR_{t-1} + U_t \quad (2)$$

Table 6 : The Bounds Tests for Co-integration

<i>F –Bound Test</i>	<i>Value</i>	<i>Signif</i>	<i>I (0)</i> <i>Lower Bound</i>	<i>I(1)</i> <i>Upper Bound</i>
<i>F – statistic</i>	6.366	10%	2.72	3.77
		5%	3.23	4.35
		1%	4.29	5.61

Source: Eview -12 output

Note: H_0 : No level relationship

The computed F-statistics for order of lag four turned out to be 6.366 when the dependent variable is Ct. Pesaren et. al. (2001) provided the critical value , upper bound I(1) (3.77, 4.35, 5.61) and I (0) lower bound (3.72,3.23,4.29) at 10%, 5 % and 1% level of significant respectively. Thus the study rejects the null of no level relationship among variables. So it provides enough sign that there is a strong long-run relationship among the variables of the model.

Error Correction Estimation and ARDL long-run Estimate

After ARDL cointegration methodology Eq. (2) has been predictable to get the long run estimates. The estimation results are shown in table 7.

Table 7: Estimation Results for ARDL (3,4,4,4,)

<i>ARDL Error Correction Regression</i>			<i>ARDL Long-run</i>		
<i>Regressor</i>	<i>Coefficient</i>	<i>P- value</i>	<i>Regressor</i>	<i>Coefficient</i>	<i>P- value</i>
<i>Coint Eq(-1)</i>	-2.676	0.0026***	<i>LnFDI_t</i>	-1.367	0.0005***
<i>C</i>	-73.59	0.0027***	<i>LnGDP_t</i>	0.257	0.057
<i>LnFDI_t</i>	-0.966	0.034***	<i>LnUr_t</i>	9.173	0.008***
<i>LnGDP_t</i>	0.868	0.139	<i>C</i>	-73.590	0.031***
<i>LnUr_t</i>	-14.679	0.0079***			

R-Square =0.99 , P(F- statistics) =0.00001, Durbin Watson test= 2.125

Source: Eview -12 output

Note: *** represent 5% level of significance.

The Error Correction Model

$$EC = \text{Ln } C - (-1.3678 * \text{LnFDI} + 0.2574 * \text{LnGDP} + 9.1735 * \text{LnUr}) \quad (3)$$

According to the equation 3, foreign direct investment impact on the carbon emission (CO_2) is negative relationship but statistically significant. This means that the flow of FDI rise 1% leads to reduce 1.367% decrease in CO_2 emission of Myanmar. This is an interesting finding, as previous scholars have commented on the possible environmental benefits of FDI. Even some recent discoveries in Latin America suggest that FDI could benefit the environment, as demonstrated by Polloni-Silva et al. and Xu et al. Part of the literature defends the idea that FDI brings innovation, green technologies, and higher productivity levels to emerging economies (Bakhsh et al, Zafar et al and Ferraz et al).

From the co-integrated equation in Table 3 can be explained that, in the long-term, when urbanization increases by one percent, then it will increase degradation of environmental quality by 9.17%. However, statistically LnGDP are not significant or accept the null hypothesis, no significant effect on LnC in the long term or rejects the null hypothesis.

The R-squared is 0.99, meaning that approximately 99% of the variability of the carbon emissions (CO₂) from Gas Fuels considering the change of urbanization, foreign direct investment and GDP per capita is accounted for by the variables in the model.

According to the empirical results show that the FDI and CO₂ emission are inversely related if FDI increase 1% lead to 0.96% reduce CO₂ emission in short-run and 1.357% reduce in the long-run.

The Granger Causality Test

Under the null hypothesis of no causation, the F-statistic and Granger causality probability (see table 8) are used to establish the direction of the link. Granger causality is not present between variables, according to the null hypothesis. Reject the null hypothesis if p 0.05 and use the Granger Causality test instead.

Table 8: Pair Wise Granger Causality Test.

	<i>F- Statistics</i>	<i>P value</i>
<i>LnGDP does not Granger Cause Lnc</i>	3.553	0.033
<i>LnC does not Granger Cause LnUr</i>	3.963	0.023

Source: Eview -12 output

The results of Granger Causality test presented in Table-8. The results proved that there is the one-way causal relationship between GDP and CO₂ emission and GDP does Granger cause U_r through one-way causality runs.

Tests for Heteroscedasticity

Therefore, we further checked for the existence of heteroscedasticity using the Breusch-pagan-Godfrey test. The Breusch-Pagan Godfrey test regresses the squared residuals, which are obtained from equation (3), on the independent variables $\ln C_{t-3}$, $\ln Ur_{t-4}$, $\ln FDI_{t-4}$ and $\ln FDP_{t-4}$ and the intercept. The result of the test is presented in Table 9.

Table 9 : Breuch-Pagan –Godfrey Hetroscedasticity Test

<i>F-statistic</i>	0.606	<i>Prob.F (3,23)</i>	0.617
<i>Obs* R -squared</i>	1.979	<i>Prob. Chi- Square (3)</i>	0.576
<i>Scaled explained SS</i>	5.007	<i>Prob. Chi- Square (3)</i>	0.171

Note: Ho: There is no heteroscedasticity.

The author does not reject the homoscedasticity null since the Breusch-Pagan -Godfrey test demonstrates that the p-value of the F-statistic test is unimportant. As a result, our model is not heteroscedastic.

Conclusion

For the goal of this study, CO₂ emissions in Myanmar and foreign direct investment (FDI) are inversely connected. The degree of permission granted by Myanmar's government legislation and regulations is a major factor in this circumstance. The market-oriented reforms improve the climate for FDI influx by making it more hospitable and favorable. The telecommunications industry and labor-intensive manufacturing sectors are where most of the foreign investment is looking to invest. Agriculture is Myanmar's main export, so modernizing the packaging method and enhancing technology are required to increase the value of exports. Due to political unrest, foreign direct investment has drastically decreased in Myanmar now. Majority of foreign investing in Myanmar are manufacturing such as garment and food wearing, second is construction.

Urbanization and CO₂ emissions had a favorable relationship in this study. According to Cohen's (2006) prediction, the majority of population growth in the developing countries will

occur in cities over the course of the next 30 years. Due to the economic shift that fundamentally altered how their economies, communities, and environments functioned, developing nations with transitional economies in Southeast Asia, including Myanmar, have seen increasing urbanization over the past few decades.

The FIL restriction has reduced FDI's involvement in Myanmar's heavy sectors, which are major contributors to CO₂ emissions. Then, according to government statistics, foreign investment in Myanmar has decreased to an eight-year low, first hurt by the COVID-19 outbreak and then by the political turmoil that escalated following the military takeover in February. The empirical findings imply that Myanmar is not a "pollution Heaven Hypothesis" and "Environmental Kuznets Curve" contrary to popular belief.

Policy Implication

In Myanmar, a negative significant association between FDI and CO₂ had been discovered. The findings imply that primary commodities like agricultural, wood, marine, and mining items, including natural gas, make up most Myanmar's exports, while the majority of foreign investment is concentrated in the telecommunications and real estate sectors. The evidence thus showed that FDI had no negative effects on Myanmar's environmental quality. Nonetheless, the increased urbanization and energy consumption of Ur and Tr have a favorable effect on the environment. Regarding the Granger causality findings, GDP and CO₂, GDP and TR, and C to TR all have a unidirectional link. This demonstrates that if one of the variables increases, the other will also increase. To maintain sustainable economic growth without severe consequences for the ecosystem, the skillful, efficient, and all-inclusive natural resource and environmental governance is necessary in Myanmar. Myanmar government with the limited institutional capacities and flexible environmental management, it enforces to reduce investments in high emission industries with effective laws and regulations on the local and foreign investors. Moreover, there are adequate systematically measure and document regarding with the environmental health and social costs of natural resource extraction.

Myanmar government requires to target on "green FDI" which focus on the adverse environmental externalities and sustainable economic growth of Myanmar.

Acknowledgment

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ANALYSIS OF PULL FACTORS ONTO THE DOMESTIC TOURISTS' DESTINATION CHOICES IN NGWE SAUNG, MYANMAR*

Shoon Lei Myint Mo¹, Lei Yee Hnin Oo²

Abstract

This study investigates the pull factors influencing domestic tourists' choice of Ngwe Saung, Myanmar's coastal gem, as their destination. Employing a case study approach and quantitative methods, the research explores the interplay between various pull factors, including general services, landscape, visiting price, safety, local people's attitude, accessibility, and word-of-mouth, and their influence on destination choice. By analyzing the data from 100 domestic tourists, the study aims to identify the pull factors that motivate domestic tourists to visit Ngwe Saung and to determine which pull factors have the strongest influence on destination choice. This study contributes to the broader understanding of tourist destination choices within the evolving tourism landscape of Myanmar.

Keywords: pull factors, destination choice, domestic tourists

Introduction

Tourism plays a pivotal role in shaping the global landscape, acting as a catalyst for economic development, cultural exchange, and cross-border understanding. In recent years, Myanmar has emerged as a burgeoning destination, drawing the attention of travelers seeking diverse experiences within its rich tapestry of history, culture, and natural beauty. The allure of Myanmar as a tourist destination is underscored by a myriad of factors, collectively termed as "pull factors," which wield a significant influence on the choices made by travelers when selecting their destinations.

Myanmar's strategic geographical location, coupled with its cultural heritage and scenic landscapes, has positioned it as an increasingly attractive destination in the Southeast Asian region. The tourism sector in Myanmar has witnessed a steady growth, contributing substantially to the country's economic development and fostering global connections. As the nation opens its doors to the world, understanding the intricate dynamics of tourist destination choices becomes imperative.

This study delves into the fascinating interplay of pull factors that shape the choices of tourists, with a specific focus on Ngwe Saung, a coastal gem nestled in the southwestern part of Myanmar. Ngwe Saung, with its pristine beaches, vibrant local culture, and unspoiled landscapes, encapsulates the essence of Myanmar's tourism potential. Ngwe Saung, often referred to as the "Silver Beach," stands as one of Myanmar's hidden treasures, located approximately 48 kilometers west of Patheingyi in the Ayeyarwady Division. This coastal paradise stretches over 15 kilometers along the Bay of Bengal, boasting pristine white sands, crystal-clear waters, and a serene atmosphere that beckons travelers seeking a tranquil escape.

Ngwe Saung's primary allure lies in its unspoiled natural beauty. The beach, with its powdery sands and gentle waves, offers a peaceful retreat for sun-seekers and nature enthusiasts. The sunsets over the Bay of Bengal are particularly renowned, casting a warm glow on the horizon that enhances the romantic ambiance of the location. Unlike some heavily commercialized tourist destinations, Ngwe Saung has managed to maintain its natural charm. The surroundings are dotted with coconut palms, fishing villages, and undisturbed landscapes, providing visitors with a sense of authenticity and a chance to experience the local way of life.

*Special Award (2023)

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The Bay of Bengal's calm waters make Ngwe Saung an ideal destination for various water activities. Snorkeling, diving, and boat trips to explore nearby islands are popular among tourists looking to immerse themselves in the marine wonders that the region has to offer. Ngwe Saung provides a unique opportunity for visitors to experience the local culture of the Ayeyarwady Division. Traditional fishing villages and local markets showcase the authenticity of Myanmar's coastal life. Moreover, the beachfront is dotted with seafood restaurants offering a delectable array of freshly caught seafood, providing a culinary adventure for tourists.

Improved infrastructure and transportation links have contributed to Ngwe Saung's growing popularity. While maintaining its secluded charm, the destination has become more accessible, making it an attractive option for both domestic and international travelers. Ngwe Saung has seen a commitment to sustainable tourism practices, with efforts to preserve its natural environment and promote responsible tourism. This approach not only ensures the long-term viability of the destination but also aligns with global trends favoring eco-friendly travel experiences. Ngwe Saung's tourism appeal lies in its harmonious blend of natural beauty, cultural authenticity, and a commitment to sustainable tourism. As Myanmar continues to open its doors to the world, Ngwe Saung stands as a testament to the diverse offerings within the country, attracting travelers seeking a tranquil retreat amidst the captivating landscapes of the Bay of Bengal. Analyzing the pull factors influencing tourists to choose Ngwe Saung as their destination not only provides insights into the broader context of tourism in Myanmar but also contributes to the development of sustainable tourism practices.

In this exploration, this study aims to unravel the multifaceted dimensions of pull factors, ranging from cultural attractions and natural beauty to infrastructure and accessibility, that contribute to Ngwe Saung's appeal. By undertaking a case study approach, this study seeks offer a nuanced understanding of the interplay between pull factors and destination choices in the context of Myanmar's evolving tourism landscape. As navigate through the various facets of Ngwe Saung's allure, this study aims to contribute valuable knowledge that can inform stakeholders, policymakers, and industry players about the factors driving tourist preferences in this unique and enchanting destination.

Objectives of the Study

1. To identify the pull factors of domestic tourist to visit Ngwe Saung.
2. To assess the overall satisfaction levels of domestic tourists based on the identified pull factors.

Scope and Method of the Study

This study was restricted to the domestic tourism with respect to Ngwe Saung. Respondents of this study were the domestic tourists who have been visited to Ngwe Saung at least one time. Quantitative Research Method was employed in this study to meet the objectives. Two types of data (primary and secondary) were applied in this study. Primary data was collected from 100 respondents by using structures questionnaire with a five-point Likert scale items. Descriptive analysis was employed in this research to demonstrate the nature of the data. Applicable journals, previous research papers and websites are referenced for secondary data.

Literature Review

The global tourism industry has witnessed remarkable growth in recent years, with an increasing number of domestic tourists exploring diverse destinations within their own countries. Understanding the factors influencing domestic tourists' destination choices is imperative for destination management and marketing. This literature review explores key concepts related to travel motivation, pull factors, and destination choices, drawing insights from various authors to provide a comprehensive understanding of the dynamics shaping domestic tourism.

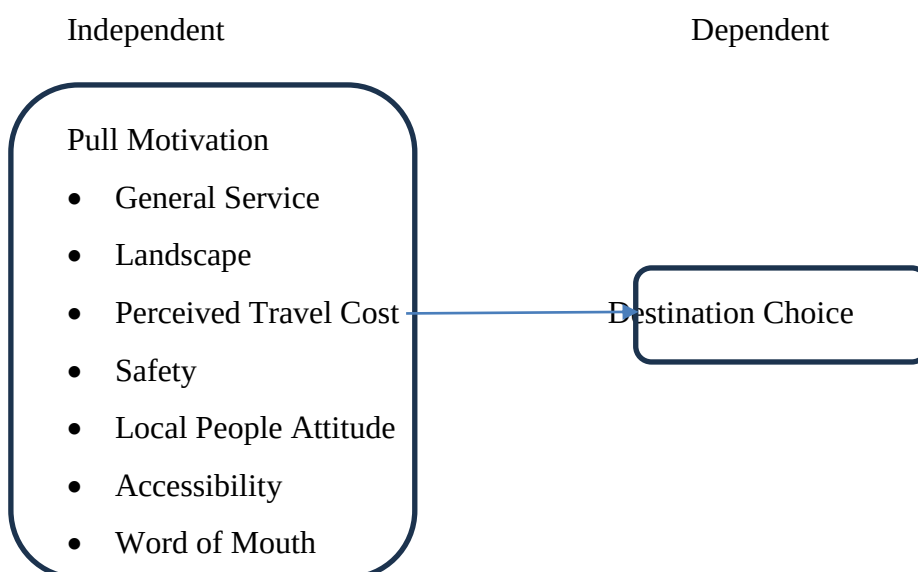
Travel Motivation

Motivation plays a vital role in motivating people to take action. The push-pull framework is an essential model for tourism studies with a view to explaining tourist motivation. This model suggests that tourist behavior is driven by internal psychological pushes as well as external destination pulls. The question of “why tourists are travelling” has been addressed by the psychological force factors. The desire to travel and the decision to make it happen are driven by such inherent motivation. Meanwhile, the destination pulls factors focus on “where do tourists travel?” which relates more to the attractiveness of potential destinations. The factors affecting tourist selection of destinations compatible with their own internal motivation are influenced by pushing and pulling forces, as Dann (1981) points out. Push and pull motivations represent individual decisions, but they are interconnected. Tourists are driven by internal reasons to travel, with the purpose of evaluating destinations based on their ability to satisfy these purposes. The relationship between motivation and satisfaction in tourism has not been fully explored in previous studies, although some work on hot springs tourism has provided an initial insight. In the area of synergy between motivation and satisfaction, there are two perspectives. Some argue that motivation directly determines satisfaction, while others propose that additional factors mediate this relationship. There is insufficient direct evidence for this effect, as Fluker & Turner 2000 note. The approach, on the other hand, is more in line with that view and demonstrates a direct link to hot springs tourism. Due to their importance for marketing, destination pull factors have been given significant attention in the research. Destinations can appeal to tourists by showcasing attributes that speak to their push motivations. As people can have multiple motivations for travel, they may consider multiple pull factors as long as these map to internal drives. Ultimately, pull factors shape where tourists choose to visit. The availability of recreational, services and facilities, beaches and cultural experiences, anticipated benefits, destination image and newness are all factors that contribute to the pull factor. In addition to these general characteristics, research has shown that satisfaction is significantly influenced by the quality of accommodation, accessibility, natural surroundings, climate and cleanliness.

Pull Motivation Factor on Destination Choice

Pull motives are related to extrinsic, conditional, or cognitive features. The motivation factor is also referred to as the destination's characteristics, such as scenery, culture, price, service, and climate, which tourists take into account when deciding where to go (Dann, 1977). Therefore, destination attributes are considerable one for a destination in successfully attracting more travelers. In the various destinations there are a lot of different characteristics or features. In choosing a destination, all the attraction of that destination is irrelevant but some can have an impact. Cultural tourism is becoming an important market for the tourist industry as people's interest in such aspects as art, religion and historical sites of a given destination increases. As tourism becomes more and more attractive, such cultural traits as attractiveness to travel become one of the factors in people's motivation for travelling, Miller 1997, Richards 1996, Smith 2003. The general service of the destination includes transport services, accommodation services, shopping and meals etc., is another factor which serves as a reason for motivation in this survey. Services are evaluated by its quality which impact on the visitors' satisfaction and recommendation on that destination to other people (Chadee & Mattsson, 1996). Therefore, general services could be considered in this study as an important feature of the destination. In fact, according to Formica in 2000, tourism has also been described as a landscape industry which offers natural attraction and beautiful scenery. Sometimes people want to have an excellent vacation with a view of nature as well as interesting parts of the destination. According to Hu and Ritchie (1993), natural attractiveness is a considerable motive as pull motivation factor in the measuring of destination attractions. Therefore, a significant factor for travelers is the

landscape of destination. The price factor, which affects the traveler's choice of destination based on a preference for budget trips over all others, is an important feature of this study. Tourism has two types of prices; the total travel cost that takes into account destination and ground costs, which take into account commodity prices in a destination (Dwyer & Kim, 2003). Passenger decisions on destination and purchases of travel products are influenced by both categories. Safety of destination is a fifth factor to be measured in the study. The safety and security of the destination is the absence of terrorism, criminal cases, a record of transport safety and political instability in the area (Dwyer & Kim, 2003). Safety is a crucial concept for the destination, given that most people are traveling to rest their minds. Therefore, the willingness of travelers to travel may be influenced by safety and security. The competitiveness of a destination depends also on its participation by residents in the region. Local people's hospitality towards tourists is of major importance for the long-term success of a destination since the main services are provided by local residents. Some people travel to fulfill social needs, and local residents' attitudes play a key role as a major social factor for these visitors (Dwyer & Kim, 2003). More visitors are likely to choose a destination when treated well by the local people. As a result, local residents' attitudes are considered an important characteristic of a destination in tourism literature. Accessibility is another critical factor influencing destination choice. Accessibility involves the availability of information about the destination, such as airline regulations, entry visas, route connections, or environmental considerations. Studies have shown that relaxation is a primary reason for travel, and people often select destinations that are more comfortable for their visits. For instance, a study on Hong Kong visitor motivation from Mainland China by Zhang and Lam (1999) identified accessibility as one of the most significant influences on enthusiasm for Hong Kong. Environmental safety is another important pull factor in destination choice. According to Beerli and Martín (2004), word-of-mouth communication is a valuable source of belief and trust, influencing the cognitive image of a destination. Due to the intangible nature of tourism products, travelers often prefer credible information from word of mouth. Litvin et al. (2008) observed that word of mouth is a form of information tourists seek from people with similar experiences when planning their travels.



Source: Own Compilation (2023)

Figure 1 Conceptual Framework of the Study

Figure was structured based on the concept of destination choice. In the motivation factors pull factors, such as general services, landscape, visiting price, safety, local people

attitude, accessibility and word of mouth was the main things to study. Therefore, destination of Ngwe Saung was made by pull factors. Based upon the literature review, regarding the tourism papers, the working definitions in this study are disclosed as follows:

Methodology

This study is conducted with the objective of examining the influence of the pull factors on destination choice of domestic tourists to visit Ngwe Saung. Target population of the study is local tourists who visited to Ngwe Saung. Since, the target population is unknown, Cochran (1977) formula is used to determine the sample size. After calculated the sample size by substituting the numbers into the Cochran formula, the numbers of sample are 96.04 persons. The sample size has increased to 100 persons by using convenience sampling method in order to obtain reliable of data. Questions are presented in easy and simple meanings to understand all level of respondents. This quantitative information is measured by using five-point Likert scale (from one to five such strongly disagree=1, disagree=2, neutral=3, agree=4, strongly agree=5) and applied by descriptive analysis. Applicable journals, previous research papers and websites are referenced for secondary data.

Cochran's Sample Size Formula

$$n_0 = \frac{z^2 pq}{e^2}$$

$$= \frac{1.96^2 0.5 0.5}{0.1^2}$$

$$= 96.04 (100)$$

Where:

n = required respondents

e = margin of error

p = estimated proportion of the population

q = 1-p

Z = 95% confidence level

Analysis and Results

Demographic Profile of Respondents

The demographic characteristics of 100 respondents in Ngwe Saung are analyzed in this survey to identify the how pull factors choice on destination. This section includes profiles of the respondents such as gender, age, marital status, education, occupation and monthly income. The profile of respondents is shown in following Table (1).

Table (1) Demographic Characteristics of Respondents

Sr. No.	Particular	No. of Respondents	%
1	Gender: Male	46	46
	Female	54	54
2	Age (Year): Under 20	17	17
	20 – 29	49	49
	30 – 39	20	20
	40 – 49	7	7
	50 – 59	7	7
3	Marital Status: Single	81	81
	Married	19	19
4	Education: Lower than Bachelor's degree	20	20
	Bachelor's degree	50	50
	Master's degree	26	26
	Ph.D.	4	4
5.	Occupation: Student	49	49
	Unemployed	46	46
	Employed	4	4
	Retired	1	1
6	Income (MMK): Under 200,000	32	32
	200,000 – 400,000	30	30
	400,001 - 600,000	14	14
	600,001 – 800,000	10	10
	800,001 – 1,000,000	6	6
	Over 1,000,000	8	8
Total		100	100

Source: Survey data (2023)

Table (1) shows the profile of respondents of the study. In selected respondents, Females included (54%), and males included (46%). It is showing that the female respondents are more dominant than males. The age of the highest respondents in selected respondents is 20-29 years, 49% included. This indicates clearly most of the respondents are young people. The number of respondents by marital status is shown in table. It found out that the majority 81% of respondents

were single. It is because all the respondents are students and therefore most of them are single. Table (4.1) reveals the number of respondents by education level as well. This indicates that 20% of respondents are lower than bachelor's degree, 50% of respondents are bachelor's degree holders, 26% of respondents are master's degree holders and 4% are PhD degree holders. Most of the respondent highest monthly earn is under 200,000 Ks a month and has 32%.

Pull Motivation Factors of Domestic Tourists

In this study, the pull motivation factors of domestic tourists are general services, landscape, visiting price, safety, local people attitude, accessibility and word of mouth. The first pull motivation factor is general services. The survey results for general services of Ngwe Saung are shown in Table 2.

Table (2) Respondents Perception on General Services at Ngwe Saung

Sr.No.	General Services	Mean	Standard Deviation
1	Ngwe Saung is a good place for souvenir shopping.	3.17	1.08
2	Transportation service in Ngwe Saung is very convenience.	3.52	0.94
3	Quality of accommodations are acceptable.	3.9	0.79
4	Local foods in Ngwe Saung are various and delicious.	3.89	0.85
5	Service facility of restaurants in Ngwe Saung are good.	3.77	0.94
6	Overall service quality of Ngwe Saung is good.	3.91	0.74
Overall Mean Value		3.69	

Source: Survey data (2023)

As shown in the Table 2, the overall mean value of general services is moderately high with 3.69 and thus domestic tourists are moderately motivated to use the general services of Ngwe Saung during the trip. The highest mean value of services are quality of accommodations and local foods of Ngwe Saung with 3.9 and 3.89 respectively. The lowest mean value of factor is a good place for souvenir shopping with 3.17. As a result, domestic tourists are motivated to visit Ngwe Saung to taste the quality of accommodation and the delicious of various local foods. Transportation services and restaurant facilities have the mean value with 3.52 and 3.77 respectively. Thus, the mean score 3.91 indicates a high overall satisfaction with the general services in Ngwe Saung. The second pull motivation factor is landscape. The survey results for landscape of Ngwe Saung are shown in Table 3.

Table (3) Respondents Perception on Landscape at Ngwe Saung

Sr.No.	Landscape	Mean	Standard Deviation
1	Ngwe Saung has beautiful islands for visiting.	4.29	0.86
2	Ngwe Saung has many breathtaking sceneries.	4.07	0.74
3	The colorful coral and species of Ngwe Saung are attractive.	4.01	0.84
4	Ngwe Saung has cleanliness natural environment.	3.71	0.93
5	Overall, the natural beauty of Ngwe Saung is appealing to me.	4.09	0.78
Overall Mean Value		4.03	

Source: Survey data (2023)

As shown in Table 3, the overall questions related landscape factors are high in mean value with 4.03. The highest mean value of landscape factor is beautiful islands for visiting with 4.29. Cleanliness of natural environment of Ngwe Saung is the lowest mean value with 3.71. Breathtaking sceneries and the colorful coral and species of Ngwe Saung have the mean value

with 4.07 and 4.01 respectively. The moderately mean value 4.09 indicates overall the natural beauty of Ngwe Saung is appealing to domestic tourists. Therefore, visitors are strongly motivated to visit Ngwe Saung due to the landscape. The third pull motivation factor is visiting price. The survey results for visiting price of Ngwe Saung are shown in Table 4.

Table (4) Respondents Perception on Perceived Travel Cost at Ngwe Saung

Sr. No.	Visiting Price	Mean	Standard Deviation
1	Traveling price for Ngwe Saung is reasonable.	3.68	0.93
2	Accommodation prices are flexible for visitors.	3.61	0.89
3	Transportation cost within traveling is favorable.	3.69	0.84
4	Price of local food is affordable.	3.61	0.88
5	Price of souvenirs are fair.	3.49	0.90
6	Overall price is favorable for travelers.	3.72	0.88
Overall Mean		3.63	

Source: Survey data (2023)

As shown in Table 4, overall price is favorable for travelers of visiting price is highest with 3.72. In visiting price factors, traveling price of Ngwe Saung and transportation cost within traveling have the highest mean value with 3.68 and 3.69. The price of souvenirs has the lowest mean value with 3.49. As a result, overall price of visiting Ngwe Saung has the mean value with 3.63. The fourth pull motivation factor is safety. The survey results for safety of Ngwe Saung are shown in Table 4.

Table (5) Respondents Perception on Safety at Ngwe Saung

Sr. No.	Safety	Mean	Standard Deviation
1	Ngwe Saung is safe to visit.	3.76	0.896
2	Transportations in Ngwe Saung are safe.	3.84	0.809
3	Accommodations are secure.	3.84	0.771
4	Ngwe Saung is a peaceful beach.	4.13	0.856
5	Ngwe Saung has good public security.	3.66	0.886
6.	Overall, Ngwe Saung is safe and secure to visit.	3.84	0.821
Overall Mean Value		3.845	

Source: Survey data (2023)

As shown in the Table 5, the highest mean value of safety factor is peaceful beach with 4.13. Moving on to transportation and accommodations, both mean values of 3.84 indicate a consistent and relatively high perception of safety in these key aspects. This overall mean value of 3.845 consolidates the positive safety outlook across various dimensions, reaffirming Ngwe Saung as a safe and secure destination. The fifth pull motivation factor is local people attitude. The survey results for attitude of local people in Ngwe Saung are shown in Table 6.

Table (6) Respondents Perception on Attitude towards local people at Ngwe Saung

Sr. No.	Local People Attitude	Mean	Standard Deviation
1	Local people are very honest.	3.65	0.899
2	Local people are hospitable.	3.84	0.796
3	Local people are believable for travelers.	3.76	0.789
4	Local people are polite and courtesy.	3.74	0.82
5	Local people are warm and friendly.	3.86	0.788
6.	Overall, the local people in Ngwe Saung are friendly and welcoming.	3.85	0.817
Overall Mean Value		3.78	

Source: Survey data (2023)

As shown in the Table 6, the friendliness of local people is the highest mean value with 3.86 and the honest of local residents is the lowest mean value with 3.65. But the overall mean of 3.78 emphasizes the community's friendliness, aligning with Ngwe Saung's reputation as a safe and welcoming destination. So, the attitude of local people is also influenced to visit Ngwe Saung. The sixth pull motivation factor is accessibility. The survey results for accessibility of Ngwe Saung factors are shown in Table 7.

Table (7) Respondents Perception on Accessibility at Ngwe Saung

Sr. No.	Accessibility	Mean	Standard Deviation
1	Travel agencies are available for travelling information to Ngwe Saung.	3.83	0.884
2	Ngwe Saung is easily reached.	3.8	1
3	Local information about Ngwe Saung is accessible.	3.78	0.923
4	Ngwe Saung is a convenient place to visit.	3.95	0.792
5	Local guides are always being ready for travelers.	3.75	0.817
6.	Overall information is accessible.	3.88	0.84
Overall Mean Value		3.83	

Source: Survey data (2023)

As shown in the Table 7, the overall mean value of accessibility is high with 3.83 and visitors are highly motivated to visit Ngwe Saung because of a convenient place to visit. Thus, accessibility of Ngwe Saung is one the pull motivation factors of local visitors. The highest mean value of accessibility is the convenience with 3.95 and the lowest mean value of accessibility is the number of local guides with 3.75. As most of the people travel to rest and relax and, they choose easy and convenient place as priority. The seventh pull motivation factor is word of mouth. The survey results for word of mouth of Ngwe Saung factors are shown in Table 8.

Table (8) Word of Mouth of Ngwe Saung

Sr. No.	Word of Mouth	Mean	Standard Deviation
1	I visited travel agencies or tourist information center before going this place.	3.3	1.17
2	I searched through brochures, newspapers before going to Ngwe Saung.	3.53	1.024

Sr. No.	Word of Mouth	Mean	Standard Deviation
3	When I was choosing this place, I considered recommendation from friends and colleagues.	3.96	0.894
4	I search on the internet, Facebook, social media and read the review before choose this place.	4.16	0.967
5	I choose this place due to positive reviews of other travelers about nature attractions and lifestyle.	4.14	0.849
6.	Overall, I would recommend Ngwe Saung as a destination to my friends and family.	4.06	0.904
Overall Mean Value		3.86	

Source: Survey data (2023)

As shown in Table 8, the overall mean value of word of mouth is high with 3.86. In word-of-mouth factors, a strong reliance on online platforms has the highest mean value with 4.16 and the number of respondents visited travel agencies or tourist information centers before going to Ngwe Saung has the lowest mean value with 3.3. As a result, the pivotal role of online reviews and personal recommendations in shaping perceptions of Ngwe Saung as a desirable travel destination. For the other factors, including general service, landscape, visiting price, safety, accessibility, and word of mouth, there were no statistically significant differences between the groups.

Table (9) Output of Anova Analysis for Pull Motivation Factors of Domestic Tourists

	<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
General Service	Between Groups	1.0471	1	1.0471	2.09493	0.151	3.93811
	Within Groups	48.9829	98	0.49983			
	Total	50.03	99				
	<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Landscape	Between Groups	0.01354	1	0.01354	0.02812	0.8672	3.93811
	Within Groups	47.1965	98	0.4816			
	Total	47.21	99				
	<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Perceived Travel Cost	Between Groups	1.57962	1	1.57962	3.24705	0.0746	3.93811
	Within Groups	47.6748	98	0.48648			
	Total	49.2544	99				
	<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Safety	Between Groups	1.90779	1	1.90779	3.73325	0.0562	3.93811
	Within Groups	50.0806	98	0.51103			
	Total	51.9884	99				
	<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Local People Attitude	Between Groups	2.19261	1	2.19261	4.46937	0.037	3.93811
	Within Groups	48.0774	98	0.49059			
	Total	50.27	99				
	<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Accessibility	Between Groups	0.07756	1	0.07756	0.15301	0.6965	3.93811

	Source of Variation	SS	df	MS	F	P-value	F crit
	Within Groups	49.674	98	0.50688			
	Total	49.7516	99				
Word of Mouth	Source of Variation	SS	df	MS	F	P-value	F crit
	Between Groups	1.24989	1	1.24989	2.06218	0.1542	3.93811
	Within Groups	59.3977	98	0.6061			
	Total	60.6476	99				

Source: Survey data (2023)

The p-value for general service is 0.15098, which is greater than the significance level of 0.05. This means that there is no statistically significant difference between the groups for the general service factor. In other words, the groups do not differ significantly in their perceptions of the general services provided at Ngwe Saung. The p-value for the landscape factor is 0.867172, which is much greater than the significance level of 0.05. This indicates that there is no statistically significant difference between the groups in terms of their perceptions of the landscape at Ngwe Saung. The p-value for the visiting price factor is 0.074627, which is slightly greater than the significance level of 0.05. This suggests that there is no statistically significant difference between the groups in their perceptions of the visiting prices at Ngwe Saung. The p-value for the safety factor is 0.056227, which is close to but slightly greater than the significance level of 0.05. This implies that there is no statistically significant difference between the groups in their perceptions of safety at Ngwe Saung. The p-value for the local people factor is 0.037046, which is less than the significance level of 0.05. This indicates that there is a statistically significant difference between the groups in their perceptions of the attitudes and behaviors of local people at Ngwe Saung. The p-value for the accessibility factor is 0.696523, which is much greater than the significance level of 0.05. This means that there is no statistically significant difference between the groups in their perceptions of the accessibility of Ngwe Saung. The p-value for the word-of-mouth factor is 0.154178, which is greater than the significance level of 0.05. This suggests that there is no statistically significant difference between the groups in their perceptions of word-of-mouth recommendations or online reviews about Ngwe Saung. Therefore, the ANOVA analysis revealed that the groups differed significantly only in their perceptions of the local people attitude behavior. For the other factors, including general service, landscape, visiting price, safety, accessibility, and word of mouth, there were no statistically significant differences between the groups.

Discussion

This study revealed that Ngwe Saung's natural landscape is the primary pull factor attracting domestic tourists, with its breathtaking scenery, coral formations, and pristine environment. Tourists also appreciate the quality accommodations and diverse local cuisine, making it an appealing destination for relaxation and culinary experiences. While factors like shopping and transportation are less influential, Ngwe Saung's balance between affordability and value makes it attractive for budget-conscious travelers.

The pervasive sense of security, from tranquil beaches to reliable travel and comfortable stays, solidifies Ngwe Saung's reputation as a secure vacation spot. The local community's genuine warmth and hospitality foster a welcoming ambiance, despite slightly lower perceptions of honesty. This positive community spirit significantly influences tourists' choice of Ngwe Saung.

The ANOVA analysis revealed a statistically significant difference between groups in their perceptions of the local community's attitudes and behaviors, suggesting diverse expectations and experiences based on demographics. However, no significant differences were found for factors like services, landscape, prices, safety, accessibility, and word-of-mouth recommendations, indicating generally shared satisfaction levels across groups. While Ngwe Saung excels in attracting domestic tourists, maintaining a consistent welcoming experience for diverse visitors is crucial. Implementing cultural awareness and sensitivity training, continuous monitoring of tourist feedback, and tailored marketing strategies can address potential concerns and cater to evolving preferences, solidifying Ngwe Saung's position as a premier coastal destination in Myanmar.

Recommendations

Ngwe Saung has established itself as an appealing tourist destination, drawing visitors with its natural beauty, cultural charm, and reputation for safety. However, a few areas could be improved to enhance tourists' experiences even further. The following are the suggestions and recommendations of the study to improve the tourism industry. Based on the findings mentioned above, it is recommended to develop more opportunities for shopping and souvenirs. By cultivating local handicrafts and introducing culturally authentic memorabilia, Ngwe Saung can increase the appeal of shopping. Partnerships with small business owners and artisans can make a destination more competitive in the industry.

In addition, it would be useful to invest in transport infrastructure. Improving roads, expanding public transit options, and improving access from major transit hubs could make Ngwe Saung more convenient to reach for both domestic and international tourists. Easier connections allow travelers more flexibility and independence as they explore all that the destination has to offer. Finally, an increased emphasis on sustainability is advised. As a natural paradise, Ngwe Saung must preserve its ecological integrity through responsible tourism practices. Activities may include implementing environmental policies, educating visitors and collaborating with local communities in conservation efforts. This approach is in line with global trends while maintaining the pure beauty that makes Ngwe Saung so attractive.

Encouraging local participation and showcasing community life can add authenticity. Homestays, culinary experiences, cultural performances and demonstrations of traditional crafts can help visitors interact with residents and discover the area and its heritage. It also brings socio-economic benefits to local residents. Improving the quality and availability of services such as public washrooms, tourist information centers, health services, leisure areas and waste management can directly impact traveler convenience and satisfaction. Maintaining world-class tourism infrastructure demonstrates a commitment to excellence. By enhancing the shopping scene, transportation links, and sustainability focus, Ngwe Saung can build upon its strengths to become an even more captivating destination for global travelers. Investing in these key areas will help secure Ngwe Saung's long-term viability as a world-class beach resort full of natural wonder and cultural richness.

Suggestions for Future Studies

The limitations of this study are scope and boundaries of the research, and limited analysis on time, data and budget. The study is only focusing on the pull factors onto the domestic tourist's destination choices. There are variety of factors that can influence on destination choices. And there are many destinations in Myanmar to study about pull factor and destination choices. Therefore, future researchers should explore different geographic locations or international tourists instead of local visitors so that comparison studies can be conducted. The survey results may come out differently according to limited geographic location and types of visitors.

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FACTORS INFLUENCING DOMESTIC TOURISTS' PREFERENCES FOR BAGAN DESTINATION

Su Pyae Thada Htet¹

Abstract

This study was conducted with the objective of identifying the determinants that shape domestic tourists' preferences for Bagan, Myanmar. The research focused on delving into the varying degrees of importance that domestic tourists attributed to the physical and cultural aspects of the destination, as well as the interpersonal, status and prestige motivators, and the influence of word of mouth and group dynamics within their social circles. A total of 212 representative data was collected through questionnaire surveys from a sample of domestic tourists who had visited to Bagan during the period of 2021 to 2023. Due to the outbreak, visitor preferences and behaviors have completely changed, making an in-depth investigation of the dynamic factors impacting domestic tourism in Bagan region is required. Moreover, the absence of significant and up-to-date research associated to this particular setting highlights the necessity of thorough investigation. The finding from this research show that psychological factors such as physical motivators of a destination show significant influences in preferences for Bagan destination but some factors like word of mouth, group influences show a slightly difference gender of domestic travelers.

Key words: preferences, domestic tourists, Bagan

Introduction

Domestic travel has become increasingly important over the post pandemic period, acting as a lifeline for numerous locations and a driving force behind the travel's industry's revival and sustainability. There has also been a noticeable drop in the number of foreign visitors visiting Bagan, which is one of the most popular tourist destinations, with its great historical heritage and civilizational importance. To recover and thrive for Bagan destination in the long run following the epidemic, it is essential to comprehend the elements that drive domestic travelers' inclination toward the place. It is necessary for tourism professionals and policy makers to understand factors that affect domestic tourist's preferences of a Bagan destination, so that they can develop an efficient marketing strategy and provide tailor made experiences. In this study, a number of psychological and social factors are examined to determine the preferences of domestic tourists along with the relation of gender are measured. Personal factors have long been considered as influential factors in shaping individuals' travel preferences and decision-making. This may include considering of many essential dimensions such as gender, age, occupation, income, and education level.

Gender may play a role in having distinct travel motivations and preferences. For example, women travelers may prioritize cultural immersion and activities, while men may seek relaxation and leisure experiences. Physical motivators, such as the desire for outdoor activities like hiking, biking, or exploring temples and pagodas, can influence the choices of adventure-seeking tourists. Cultural motivators, encompassing the interest in experiencing local customs, traditions, and historical significance, often attract tourists seeking a deeper engagement with the destination. Interpersonal motivators, including the eagerness to interact with the local community and participate in local activities, can further shape tourists' preferences. Additionally, status and prestige motivators, where tourists seek to visit popular or exclusive destinations to enhance their social status or gain recognition, can also impact preferences for the Bagan destination. Social factors such as word-of-mouth recommendations and group influence have a significant impact on tourists' preference for Bagan destinations. Through word of mouth,

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positive recommendations from friends, family, or online influencers can increase the interest and trust among potential tourists, which may influence their decision to visit Bagan. Likewise, group influences, including the preferences and interests of family and friends, can shape tourists' decisions through shared experiences and collective decision-making.

Understanding and investigating these factors that influence domestic tourists' preferences in Bagan destination can provide various tourism stakeholders with valuable insights to carry out effective destination marketing and development strategies. By identifying the key drivers that influence tourist preferences, policymakers can create tailored products that meet tourists' diverse needs and maximize tourist satisfaction. The study will collect comprehensive data through surveys questionnaires that focus on personal, psychological and social factors that influence domestic tourists' preference for the captivating Bagan destination. By illuminating these variables, this study hopes to provide a significant perspectives to pertinent parties, decision-makers, and travel agencies in order to develop strategies and policies that will significantly revitalize Bagan's tourism industry and provide domestic tourists with a memorable experience in the post-pandemic period.

Review of Literature

As one of the most popular tourist destinations in Myanmar, the Bagan region attracts a considerable number of domestic tourists every year. For the improvement of the tourism sector in Bagan, it is vital to understand tourist behaviour which helps to identify tourist destination selection, evaluation, and future tourist behaviour intentions. Travel behaviour refers to a traveler's complex decision-making process during a trip, including travel mode selection, route selection, departure time selection, destination selection, and so on (MengLi et. al, 2019). Motivation is a driving force that stimulates consumers' behaviour (Fodness, 1994). Consumers are unique people with a wide range of behaviours that are influenced by both internal and external forces. Tourist behaviour is the combination of interactions between internal factors (motivation, attitudes, beliefs, etc.) and external factors (economic environment, security, socio-cultural environment, etc.) (Andrades, Dimanche, & Ilkevich, 2015). Factors influencing domestic tourists' preferences for the Bagan destination are varied and encompass personal, psychological, and social aspects. There are theoretical models using demographic or personal factor categories aim to discover the influences on consumer behavior (Kotler, P, & Keller, K.L 2012). Even though marketers have little to no control over these factors, they nonetheless have a significant impact on consumer behavior and should be considered when anticipating how consumers will make decisions (Kotler, P, & Keller, K.L 2012). The model presents four types of characteristics: psychological, social, cultural, and personal. Gender, as a personal factor, has been found to influence the travel motivations and preferences of domestic tourists (Kim. K, 2008). The presence of hot balloon riding, biking routes, and opportunities to explore the ancient temples on foot can attract adventure enthusiasts seeking active leisure experiences. Cultural motivators are also significant in shaping tourists' preferences for domestic tourist (Andrea.Ha 2007). The rich cultural heritage of Bagan makes it an attractive destination for tourists seeking authentic cultural experiences. Interpersonal motivators, such as the desire to build connections with others, can also influence tourists' preferences (Camilleri, M.A.2018). The opportunity to engage with the local community, participate in local activities, and establish connections with fellow travelers can enhance the overall experience in Bagan. Additionally, status and prestige motivators play a role in tourists' preferences, particularly for those seeking exclusive or unique experiences (Camilleri, M.A. 2018). By visiting iconic or world-renowned destinations like Bagan, tourists can enhance social status and gain recognition. Social factors which include word-of-mouth recommendations and group influences, significantly shape domestic tourists' preferences for the Bagan destination. Word-of-mouth recommendations from friends, family,

and online influencers have a strong impact on tourists' preferences (Kotler, P, & Keller, K.L 2012). Positive recommendation and personal experiences which are shared through word-of-mouth communication will have a significant impact upon visitors' perceived trust and credibility, positively influencing their decision to visit Bagan. Furthermore, group influences, including family and friends, play a significant role in shaping tourists' preferences (Kotler, P, & Keller, K.L 2012). The experiences and preferences of family members or friends often influence decision-making processes, as shared experiences and collective decision-making influence the choice of destination. By reviving previous literature, it can be known that numerous social and psychological, affect the preferences of domestic tourists in Bagan. The preferences of domestic visitors are also influenced by psychological elements, such as status and prestige motivators, cultural motivators, physical motivators, and interpersonal motivators. Social elements are equally important as these include group effects and word-of-mouth recommendations. Recognizing these variables is essential for Bagan's tourism various stakeholders to develop concentrated approaches to meet the heterogeneous requirements and preferences of local travelers, concluding in increased guest satisfaction and persistent growth in tourism.

Research Objective

The objectives of this study are as follow

1. To examine the factors affecting domestic travelers' preferences of Bagan destination.
2. To provide insights into the psychological motivation and social influences of domestic travelers in relation with gender.

Conceptual Framework

Based on the previous research and literature, the following framework is developed to fulfilled the objectives of this study.

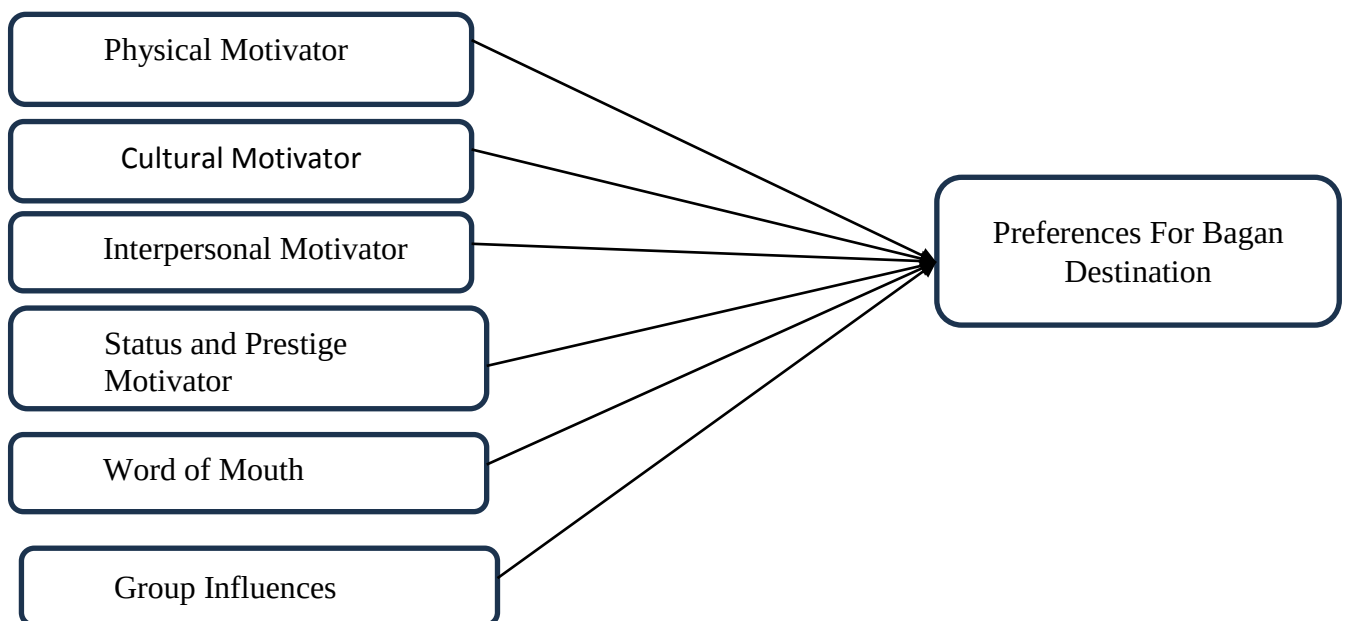


Figure 1. Conceptual Framework of the Study

Physical Motivator: Physical motivator in this study refers to the factors that directly relate to the tangible and visible aspects of a person's environment or surroundings, such as the quality of accommodation, accessibility of transportation, and availability of recreational facilities.

Cultural Motivator: Cultural motivator in this study refers to factors that are influenced by a person's cultural background, values, beliefs, and traditions that drive their behaviors or preferences when selecting a travel destinations.

Interpersonal Motivator: Interpersonal motivator in this study refers to aspects of a person's relationships and interactions with others that influence their behaviors and motivations in choosing a travel destination. This may include seeking social connections, shared experiences, or group travel opportunities.

Status and Prestige Motivator: Status and prestige motivators in this study refer to the desire for recognition, respect, and admiration in society, which can influence individuals' travel destination choices based on perceived social standing.

Word of Mouth: Word of mouth in this study refers to the act of people sharing information, recommendations, or opinions about a destination through verbal communication, influencing the travel decisions of others based on personal experiences and social interactions.

Group Influencers: Group influences in this study refer to the impact that social groups have on individuals' attitudes, beliefs, behaviors, and decision-making processes when selecting a travel destination. This may include peer recommendations, family preferences, or group travel dynamics that shape individual choices.

Method of the Study

This study employed quantitative research methods to examine the objectives of understanding domestic tourists' preferences for the Bagan destination. Descriptive statistics and cross tabulation were applied to analyze the collected data. In this study, about gender and domestic tourist preferences for Bagan, crosstab analysis is used to check the connection between gender and other factors. It helps researchers compare, understand correlation and learn how gender affects what tourists like and choose when visiting Bagan. By using crosstab, the study wants to see how gender influences tourist preferences to help create better marketing strategies and experiences for different genders at Bagan. The target population for this study consisted of individuals who visited Bagan within the years 2021 to 2023, which is considered as the post-pandemic period. Due to the lack of available statistical data on the specific domestic tourist population, the total population size was assumed to be unknown. The sample size is 323, a result from the Cochran's sample size formula, were distributed online, out of which 220 questionnaires were returned. Eight incomplete or inappropriate responses were eliminated from the analysis. Therefore, a final sample size of 212 respondents, representing 65.5% of the targeted sample size, was used for the analysis. Convenience random sampling technique was employed to select the respondents for this study. This method was chosen as it allows researchers to collect data from a conveniently available pool of respondents. As a non-probability sampling method, the probability of each case being selected from the population is not known. The survey was conducted through online platforms, and respondents were selected based on their availability and willingness to participate. The data collection period for this study was from October 28 to November 10, 2023. The most obvious limitation for this research is small sample size due to cost and time limitation. A structured questionnaire was used to collect

primary data, which consisted of demographic factors, psychological factors, and social factors. The questionnaire included multiple-choice questions and a five-point Likert scale ranging from 1=Strongly Disagree to 5=Strongly Agree. The questions include respondent's gender, age and highest education completed. For Section B, the questions based on dependent variable and independent variables are formed. The independent variables are physical motivator, cultural motivator, interpersonal motivator, status and prestige motivator, word of mouth and group influences.

Table 1: Measurement of Variable

Variables	Categories	Measurement	Measure
Physical Motivators	Independent Variable	Attraction and Activities of the Bagan Destination	-3 items with 5 points Likert scale
Cultural Motivators	Independent Variable	Festival and Cultural Spirit of Bagan Destination	-3 items with 5 points Likert scale
Interpersonal Motivators	Independent Variable	Traveler's value toward the Bagan destination	-3 items with 5 points Likert scale
Status and Prestige Motivator	Independent Variable	Traveler's choice of luxury service in Bagan Destination	-3 items with 5 points Likert scale
Word of Mouth	Independent Variable	Influence of social media and Past experience Recommendations in Traveler's Preferences of Bagan Destination	-3 items with 5 points Likert scale
Group Influences	Independent Variable	Influence of friend, family and their references group in Traveler's Preferences of Bagan Destination	-3 items with 5 points Likert scale
Preferences For Bagan Destination	Dependent Variable	Willing to choose Bagan Destination as a End Destination	-3 items with 5 points Likert scale

Source: Conceptual Framework

Analysis and Finding

The demographic characteristics of respondents in accordance with, the gender, age and educational level are studied and are shown as follows.

Table 2: Socio Demographic Character of Respondents

Socio-Demographic Characteristics		Number of Respondents	Percent
Gender	Male	104	49%
	Female	108	51%
Age	Under 16	4	2%
	16-25	60	28%
	26-35	80	38%
	36-45	30	14%
	46-55	26	12%
	Over 55	12	6%
Education Level	High School or Below	28	13%
	Bachelor Degree	118	56%
	Master Degree	47	22%
	Doctorate (Ph D)	19	9%

Source: Survey Data (2023)

Among the 212 respondents surveyed, 108 identified themselves as female while the remaining 104 identified as male. This distribution results in females comprising 51% of the total sample, while males make up the remaining 49%. The respondents' ages were classified into six categories: under 16 years old, 16-25 years old, 26-35 years old, 36-45 years old, 46-55 years old, and over 55 years old. The largest proportion of respondents, representing 38% (80 individuals), fell within the 26-35 age range. The next highest age group was 16-25 years old, accounting for 28% (60 individuals) of the total sample. Other age groups had smaller percentages, with 14% (30 individuals) in the 36-45 age range, 12% (26 individuals) in the 46-55 age range, and approximately 6% (12 individuals) over the age of 55. The smallest age group represented in the sample was individuals under 16 years old, comprising only 2% (4 individuals). The educational qualifications of the respondents varied, with the majority holding bachelor's degrees, making up 56% (118 individuals) of the total sample. Those with master's degrees accounted for 22% (47 individuals), while 13% (28 individuals) had completed high school or below. The remaining 9% (19 individuals) of respondents possessed a Ph.D. degree. Therefore, the majority of respondents had graduated, with bachelor's degrees being the most prevalent qualification.

Table 3: Mean and Standard Deviation for Independent Variables

Items	Mean	Standard Deviation
Physical Motivators		
Seeing the sunrise or sunset over the Bagan temples is an important motivation for visiting.	4.01	0.96
Having motivation to explore the temples and pagodas on foot or by bicycle.	3.77	0.85

Items	Mean	Standard Deviation
Engaging in adventurous activities like hot air balloon rides in Bagan appeals to me.	3.73	0.86
Cultural Motivators		
Experiencing the local customs and traditions in Bagan is an important aspect of my visit.	3.93	0.82
Visiting the historical sites and learning about their significance is a priority for me.	3.88	0.86
Having interested in attending cultural events and festivals in Bagan.	3.70	0.97
Interpersonal Motivator		
Being want to go to Bagan with friends and/or family.	4.08	0.97
Interacting with the local community and engaging in local activities is important to me.	3.56	0.85
Sharing my Bagan travel experiences with others enhances my enjoyment of the trip.	3.66	0.89
Status and Prestige Motivator		
Traveling to high-end and exclusive accommodations in Bagan is important to me.	2.87	1.08
Showcasing my social status through my travel experiences in Bagan is a priority.	2.81	1.05
Participating in unique and expense events or tours in Bagan is highly appealing to me.	3.08	1.03
Word of Mouth		
Getting recommendations from friends, family, or online influencers greatly influence my preferences Bagan Destination.	3.83	0.96
Having positive experiences shared by others encourage me to choose Bagan as my destination.	3.82	0.84
Relying on word of mouth to help me select Bagan as my travel destination.	3.72	0.92
Group Influences		
Having preferences and interests of my family play a significant role in choosing Bagan as our destination.	3.81	0.96
Getting the opinions and recommendations of my friends influence my decision to visit Bagan.	3.75	0.92
Being important when selecting Bagan as a destination for group travel.	3.84	0.83

Source: Survey Data (2023)

In the statistical analysis of motivators for visiting Bagan, the physical motivators category received an average score of 4.01 (SD = 0.96). This indicates that seeing the sunrise or sunset over the Bagan temples is deemed an important motivation for visitors. Additionally,

exploring the temples and pagodas on foot or by bicycle received an average score of 3.77 (SD = 0.85), suggesting a moderate level of motivation in this aspect. Engaging in adventurous activities, such as hot air balloon rides, also appealed to visitors with an average score of 3.73 (SD = 0.86). Moving on to cultural motivators, experiencing the local customs and traditions in Bagan was considered important by respondents, as indicated by an average score of 3.93 (SD = 0.82).

Similarly, visiting the historical sites and learning about their significance was also prioritized, with an average score of 3.88 (SD = 0.86). Attending cultural events and festivals in Bagan, however, received a slightly lower average score of 3.70 (SD = 0.97), indicating a moderate level of interest in this aspect. In terms of interpersonal motivators, traveling to Bagan with friends and/or family was enjoyed by respondents, as evidenced by an average score of 4.08 (SD = 0.97). Additionally, interacting with the local community and engaging in local activities was considered important, receiving an average score of 3.56 (SD = 0.85). Sharing Bagan travel experiences with others also contributed to the enjoyment of the trip, with an average score of 3.66 (SD = 0.89).

Lastly, the category of status and prestige motivators demonstrated lower levels of motivation. Traveling to high-end and exclusive accommodations in Bagan was deemed important by respondents, but received a relatively low average score of 2.87 (SD = 1.08). Showcasing social status through travel experiences in Bagan was also considered a priority, but received a similarly low average score of 2.81 (SD = 1.05). This statistical analysis suggests that physical motivators, cultural motivators, and interpersonal motivators play important roles in motivating visitors to travel to Bagan, while status and prestige motivators have lower significance.

The data from word-of-mouth categories reveals that recommendations from friends, family, and influencers hold significant influence over individuals' preferences for Bagan as a post-COVID-19 destination, with a high average score of 3.83. Positive shared experiences act as strong motivators, scoring 3.82, indicating the influence of social proof on decision-making. Trust in word of mouth is evident with a score of 3.72, emphasizing the importance of social trust in travel decision-making. In terms of group influences, familial preferences (3.81) and friends' recommendations (3.75) hold weight in choosing Bagan, highlighting the impact of social networks. Group dynamics and consensus (3.84) are vital for selecting Bagan for group travel. Overall, recognizing and leveraging these social influences can shape effective destination marketing strategies for Bagan, catering to travelers' preferences.

To fulfill the second objective of the research, cross-tabulation was performed to examine the gender differences in relation to various motivator factors for visiting Bagan. The tabulations below provide the results for each motivator factor and its connection with gender.

Table 4.1 Gender in relation with Physical Motivator Factor

Physical Motivator Factor	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Row Labels	1	2	3	4	5	Grand Total
Female	0.47%	2.14%	3.56%	28.47%	14.83%	49.47%
Male	0.24%	0.47%	2.85%	30.37%	16.61%	50.53%
Grand Total	0.71%	2.61%	6.41%	58.84%	31.44%	100.00%

Source: Survey Data (2023)

Table 4.1 displays the relationship between gender and the physical motivator factor. Both female and male respondents showed agreement in their preference to travel to Bagan due to its physical attributes. Among female respondents, 28.47% agreed along with this factor while among male respondents, 30.37 % did the same.

Table 4.2 Gender in relation with Cultural Motivator Factor

Cultural Motivator Factor	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Row Labels	1	2	3	4	5	Grand Total
Female	0.23%	1.17%	5.96%	29.47%	12.28%	49.12%
Male	0.35%	0.23%	26.20%	2.46%	21.64%	50.88%
Grand Total	0.58%	1.40%	32.16%	31.93%	33.92%	100.00%

Source: Survey Data (2023)

Table 4.2 examines the gender differences regarding the cultural motivator factor. A higher percentage of male respondents 26.20% stay in neutral and they still don't know exactly that they preferred to visit Bagan because of its cultural attributes. In comparison, 29.47% of female respondents shared that cultural attribute is the mainly reason that they prefer Bagan with agree level.

Table 4.3 Gender in relation with Interpersonal Motivator Factor

Interpersonal Motivator Factor	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Row Labels	1	2	3	4	5	Grand Total
Female	0.62%	1.73%	7.05%	29.21%	11.14%	49.75%
Male	0.25%	0.74%	8.91%	24.26%	16.09%	50.25%
Grand Total	0.87%	2.48%	15.97%	53.47%	27.23%	100.00%

Source: Survey Data (2023)

Table 4.3 presents the relationship between gender and the interpersonal motivator factor. Results indicate that 29.21% of female respondents and 24.26 % of male respondents agreed that they preferred to travel to Bagan to improve their interpersonal attributes.

Table 4.4 Gender in relation with Status and Prestige Motivator Factor

Status and Prestige Motivator Factor	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Row Labels	1	2	3	4	5	Grand Total
Female	1.73%	5.02%	20.09%	20.25%	4.71%	51.81%
Male	1.73%	6.28%	21.19%	11.93%	7.06%	48.19%
Grand Total	3.45%	11.30%	41.28%	32.18%	11.77%	100.00%

Source: Survey Data (2023)

Table 4.4, presents the impact of gender on the status and prestige motivator factor. Among female respondents of 20.25 % agreed that they preferred to travel to Bagan to show their status and prestige while male respondents, 21.19 % still share in neutral situation.

Table 4.5 Gender in relation with Word-of-Mouth Factors

Word-of-Mouth Factors	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Row Labels	1	2	3	4	5	Grand Total
Female	0.63%	2.01%	7.53%	9.41%	30.11%	49.69%
Male	0.38%	1.25%	3.76%	36.14%	8.78%	50.31%
Grand Total	1.00%	3.26%	11.29%	45.55%	38.89%	100.00%

Source: Survey Data (2023)

Table 4.5 investigates the influence of gender on the word-of-mouth factor. The data reveals that most of the female 30.11% think that they strongly prefer word of mouth factor of others while and male 36.14% agreed that their preferences regarding the Bagan destination had a significant impact on the word-of-mouth factor form others.

Table 4.6 Gender in relation with Influences of Group Factor

Group Influences	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Row Labels	1	2	3	4	5	Grand Total
Female	0.37%	1.23%	9.20%	28.96%	9.82%	49.57%
Male	0.37%	0.98%	3.68%	31.90%	13.50%	50.43%
Grand Total	0.74%	2.21%	12.88%	60.86%	23.31%	100.00 %

Source: Survey Data (2023)

Lastly, table 4.6 explores the influence of gender on the group influences factor. Results show that both female 28.96% and male 31.90% respondents agreed that their preferences for the Bagan destination had a significant impact on group influences like from their family and friend group.

Discussions

Understanding the factors that influence domestic tourist preferences for the Bagan destination is crucial for the development and success of the tourism industry. Through the research, it can be seen that psychological factors have a most significant impact on the appeal of Bagan as a tourist destination with total. Physical motivators, such as beautiful landscapes and recreational activities, emerge as the most significant drivers, indicating the intrinsic allure of the destination. Cultural motivators, centered around experiencing local customs and traditions, notably shape preferences, particularly for men.

Interpersonal motivators highlight the importance of family and friends in domestic tourists' choice to visit Bagan, underscoring the role of shared experiences. Status and prestige, contrary to initial assumptions, hold limited sway among travelers, with a preference for authenticity over luxury. Word of mouth emerges as a powerful influencer, with recommendations from friends, family, and online influencers significantly impacting destination preferences, particularly among women. Group influences play a pivotal role, emphasizing the importance of consensus and dynamics in choosing Bagan as a destination.

The results further highlight the significance of cultural activities in influencing preferences, especially in the case of men. It is necessary to expand these activities to include traditional hand painting and incorporate technological aspects. These improvements not only suit the tastes of men, but they also make the destination much more appealing overall.

Suggestions

Based on these factors, it is recommended that stakeholders in the Bagan tourism industry consider incorporating them into their marketing strategies. By highlighting physical motivators, cultural motivators, interpersonal motivators, status and prestige motivators, and leveraging positive word of mouth and group influences, they can create compelling and tailored experiences for domestic tourists.

In addition, most of the travelers prioritize leisure travel above luxury one when come visiting to Bagan destination, it is advised to launch targeted marketing initiatives. Emphasizing 3–4-star hotels and mid-range tour packages should develop in line with the majority of visitors who want to have a well-rounded experience while in Bagan. Moreover, the study acknowledges the significant impact of word of mouth, especially on women's preferences. To use this influence as a competitive advantage, strategic initiatives aimed at encouraging positive recommendations should be explored, recognizing the positive factors that shape women's choices in travel destinations.

Finally, as many tourists choose to visit Bagan in groups, it is critical to customize tour packages to suit the needs of the group and the traveler's budget. Budget-conscious customers' preferences are well-suited to the idea of giving dominating room types over luxury lodging, which makes for a more welcoming and inclusive travel experience. These are the recommendation, which were found after a thorough this research, to provide insightful advice for Bagan's sustainable growth as a top tourist destination in Myanmar by understanding and catering to the identified psychological and social factors that influence domestic tourist preferences for the Bagan destination, tourism stakeholders can create a unique and attractive experience. This will contribute to the overall growth and success of the Bagan tourism industry, making it a preferred choice for domestic tourists seeking an unforgettable travel experience.

Needs for Further Studies

Based on the research results and findings discussed on "Factors Influencing Domestic Tourists' preferences for Bagan destination," several avenues for further academic inquiry become apparent. Firstly, it would be more beneficial to conduct a more in-depth qualitative study to explore the underlying motivations and emotions that drive domestic travelers' preferences. This could involve interviews or focus groups to uncover the intricacies of travelers' thought processes and how they align with the identified factors. Secondly, a comparative study between different regions within Myanmar could shed light on regional variations in travelers' preferences and perceptions. This could contribute to a more understanding of destination-specific influences on decision-making. Lastly, a longitudinal study tracking changes in preferences over time could reveal evolving trends and patterns in domestic travelers' decision-making, considering external factors like economic shifts, global events, or changes in tourism policies.

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GEOGRAPHICAL ANALYSIS OF TOURIST ATTRACTION SITES IN KYAINGTONG TOWNSHIP

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Abstract

The topic chosen and presentation in “Geographical Analysis of Tourist Attraction Sites in Kyaingtong Township”. Kyaingtong township is located in the eastern Shan State and it also the place where the capital city of Triangle Region is situated. It is an ancient town established since the days of Myanmar Kings and governed by 45 Shan Sawbwas (Chiefs). Accordingly historic buildings, city wall, moat and entrance doors can be seen even today. It occupies the southern part of Kyaingtong valley encircled by mountains, Paryan mountain ridge, Mt.Wamnaung, Mt.Lwemwe and Mt.Pankwe. The township is inhabited by Shan, Larhu, Wa, Palaung, Arn and Arkae tribes with different customs and cultures which can attract domestic and foreign visitors. By unfolding the physical and cultural attributes of the area, it can help develop the tourism industry and increase the income of local inhabitants. This paper includes physical factors, the history of development, historic places, the customs of national tribes, attractive tourist destinations and arrival with geographical distribution of their places.

Keywords: Tourist, Attraction Sites, Shans, Cultural Diversity, Geographical Distribution.

Introduction

Tourism Industry is the third largest economic activity next to petroleum and automobile industries. It enhances the development of employment sector and generates jobs to the local population. It is thus labelled as “Smokeless Industry”. Nowadays most countries take effort to develop tourism industry in full Suring.

Kyaingtong area is situated in the southern part of Kyaingtong valley and Kyaingtong is the capital city of Triangle area which occupies the area where China, Lao, and Thailand meet.

It is one of the most beautiful cities due to its scenic and diverse mountain views. The climate is moderate and rarely extreme. The city existed since the days of Myanmar Kings and was the royal capital ruled by 45 Sawbwas. It still has ancient moat, city wall, entrances doors and historic evidences. At present, 33 national ethnic groups inhabiting in the area and the visitors or tourists can study and enjoy their traditions and cuisines. Therefore, Kyaingtong area is an attractive sites, especially for Ecotourism, Cultural Tourism and Recreational Tourism.

Aim and Objectives

The main aim of this research work is to analyze the tourist attractive sites in Kyaingtong Township from geographical point of view.

The objectives are:

- (1) To examine the physical factors of the area,
- (2) To identify the socio-economic situation of Kyaingtong Township
- (3) To several the attractive sites of natural beauty and historical buildings, and
- (4) To analyze the potential of attractive places for further development of tourism.

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Study Area

The study area of this paper is Kyaingtong area located in the eastern Shan State an the Taunggyi-Tarchileik union main road which connects with China, Lao and Thailand. It is also eastern exist of Myanmar.

Source of Data and Methodology

In composing this paper both primary data and secondary data are employed. The secondary data are acquired from governmental offices and primary data from field observation and open talk with several local inhabitants. The presentation is illustrated by diagrams, and GIS method is used for drawing maps.

Geographical Background of the Study Area

Location, Size and Shape

Kyaing Tong township is located in the eastern Shan State and it is also the capital city of the area concerned. It lies between north latitude $21^{\circ}05'$ and $21^{\circ}35'$ and between east longitude $99^{\circ}15'$ and $101^{\circ}15'$. North latitude $21^{\circ}17'$ and east longitude $99^{\circ}38'$ run across the central point of the township. It is also bordered with Monglar on the east, Mongphat and Mongsat township on the south, Mongpyin township on the west and Mongkhat Township on the north..The area of the township is 1460.90 square miles comprising 5 wards in the urban area and 31 village tracts and 718 villages in the rural area.(Table1, Fig 1)

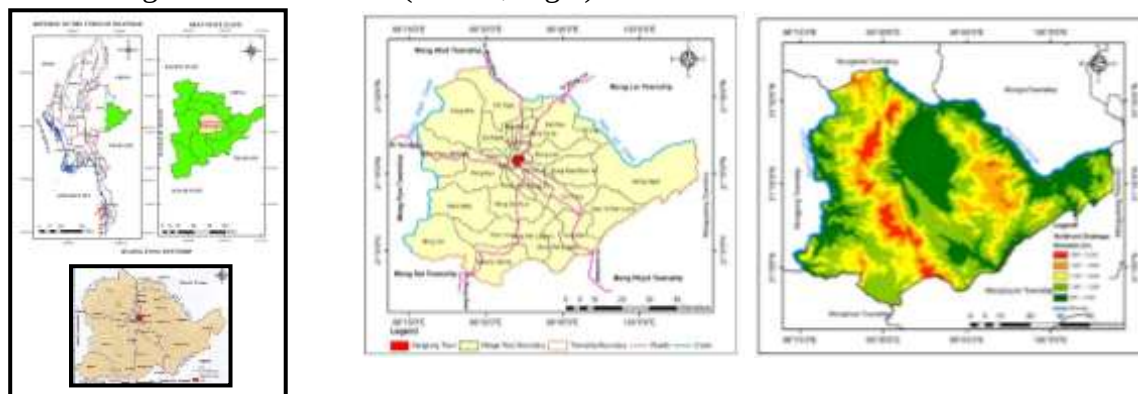


Figure1.Location and Composition of Kyaingtong Tsp **Figure.2.**Topography of Kyaingtong Township

Source: Based on UTM

Source:UTM

Relief and Drainage As the township is included in the Eastern Highland of Myanmar, it emerged first from the sea since million years ago. Being located in the Kyaingtong valley, it is the main exist to China, Laos and Thailand. The general elevation of the township is 2700 feet (822.96 m). It is surrounded by lofty mountain ranges, of which Mt. Loimway is the highest , with a height of 7500 feet. Relatively the southern part is highest and its slopes toward the north and east. The lower part is generally plain, but the land surface is undulating with low hills. Excepting Somsak, Sommon and Somtong hills the other parts are valley plain with fertile soils. (Fig.2)

Kyaingtong township has several streams and lakes. The main streams are Nangkhinnwe (Nangkhone), Nantwote and Nanglat creeks. In the past, Kyaingtong township had 10 lakes, namely Naungton, Naugyang, Naungkae, Naungdong, Naungyae, Naunglenth, Naungkite,

Naungtajang and Naungbong lakes, but now it has only two lakes, Naungton and Naungyang lakes. The other lake areas have become football ground, offices and residential land.

Climate The climate of Kyaing Tong is namely influenced by its location and physiography. In terms of latitude, although it falls within the tropics, it receives moist subtropical climate (Cwa,Cwb).

Socioeconomic Conditions of Kyaingtong Township

History of Kyaingtong According to legend, the area was heavily flooded and it turned into a great lake called Dhamilap Lake during the region of King Gawpala and Kassapa Buddha. Buddha said “ Sandatheikkhe Tonka, one of the four hermit that came from the north made the lake dry with power and thus it was later called Naungton lake”. After the lake became dry, Chinese, Lwa, Yun and Gonshan moved to the area and established the town. When the whole town was completed it was named Kyaingtong until today Kyaingtong is the Chinese language and Kyaing means “town” and Tong refers to Tongka permit who built the town.

According to the evidences available Kyaingtong area was inhabited by Wa tribe in AD 1229 and the area was occupied by Kyaing Mangrai, the head of Kyinraitribe in AD 1262. Tai Hkum, Tailu, Tailum, Tai Neu and Tai Yam, Tai Lao and Tai Htai tribes migrated from Thailand and Laos and settled in Kyaingtong area. In 1269 King Mangrai conferred his royal power to his son Sao Nan Tun was the first beginner of Shan chief. The town was administered by 45 Sawbwas from 1234 to 1962 and the last one was Sao Sai lon. The unique characteristics of Kyaingtong Town are that it has 5 name, 3 mountain peaks, 7 kyaings (town/village), 12 entrance doors and 9 lakes. The three mountain peak, that surround the town are (1) Som Sak, (2) Som Mon and (3) Som Tong. As Kyaing means town &village, it was built based on the 7 villages including: (1) Zaing Ing (depending village), (2) Zeing Zan (White Sandawood on Monday village), (3)Zeing Ngam (beautiful village), (4) Zeing Lamn (village where earypha palm groups, (5) Zeing Zam (village with champak tree), (6) Zeing yaem (village with standing Buddha image) and (7) Zeing Khan (water-logged village).

Social Structure

(1) Population Although population is an important factor for the development of tourism, the traditions and customs of the different tribes are more significant for the study area. In 2011 Kyaingtong Township had a population of 117351 persons and it increased to 204710 with an average growth rate of 1 percent per annum. The population density of the township was 17404 persons per square mile.

(2) Races Kyaingtong Township is inhabited by several tribes which enhances the development of tourism. Generally, most domestic visitors and foreign tourists are interested in different lifestyles and customs. The tribes with relatively more people are Shan, Lahu, Akhar, Wa (or) Lwa, Palaung, Ann and Arkhe.

1. Shan and their Life Style

In 2017, the number of Shan population represented 41.5 percent of the total township population. The Shan have their own cultural and language. The male Shans wear turban and loose overcoat and Shan short underwear.

Gon Shans hold the playing of royal drum during the period of water festival in order to witness good weather conditions, to get mire paddy to be free from danger and to become rich.(Plat. 1)

2. Lahu and their Life Style

Lahu is the second largest tribe in the number of population in Kyaingtong Township which accounted for 24.3 percent of the total township population. They are the descent of Tibeto-Burman group. The Lahu earn their living by cultivation of “Le” and taungya crops and raising. Some of them depend on hunting. Most of them live on the mountain and they have their own language.

The male Lahu wear black jacket and Shan pant (trouser) and also turban with fringe on both sides in different colours. Every year when the paddies are mature, they hold the traditional ceremony of eating the first crop and new year festival.

3. Akhar and their Life Style

Akhar tribe ranked third in the number of population in Kyaingtong area with 17.3 percent of the township total population. They are “Lolopho” group in Tibeto-Burma race. Agriculture is their main livelihood and they make chopper, axe, sickle, hoe and silver. They make their clothing by themselves. They wear black-colour clothings. The male Akhars wear jacket with stiff color, long pang and turban. The female Akhar wear short and long skirt, pang, long and short jacket. Silverwares, beads and multi-coloured cock tails are used by the head of their tribes. Female Akhars wear different headware with silver jewelries.(Plat. 2)

Beside new year festival, Akhtar hold Suring riding festival and red chicken egg festival which are unique that can attract the visitors.

4. Palaung and their Life Style

Palaung are minority in population within Kyaingtong area, representing only 2.18 percent of the total population. They are included in Mon-Khamar group and Yinnet, Yinkyar, Lwela Thainglwe and Ann are the same tribe. The ward “Palaung” is Myanmar language, mentioned as “Pauklaung” in store scripture. They call Tahan by themselves. Now they live on mountain range.

The male Palaung area the same clothing, but female Palaung wear different clothes. The majority are Buddhists and there are a few animists and Christians. Their main economic activity is agriculture and also produce crafts of blacksmithing. (Plat. 3)

5. Lwa (Wa) and their Life style

Was are the fourth most populated tribe in Kyaingtong area with 4.24 percent of the total population. Wa tribe is included in Mon_Khamar group. Their writing began in 1957. Shans call them Lwehla. Lwe means mountain and Wa means mountain and thus they are people who live on the Mountain. They live in the Southern part of Kyaingtong. They were black, blue, cutch and deep red colour clothings. The majority are animists and a few are members of yun sect and Christians. Most was depend on agriculture for their livelihood.

6. Ann Tribes and their Life Style

Ann, a sub-tribe of Wa, is included in Mon-Khama group. Wa or Lwa tribes first governed Kyaingtong area. If they were called Wa, they might be executed and so they named their tribe as Ann. Some called them Namgwoe (The defender of city wall or brave person). They live on the mountain area. Ann tribes wear turban, jacket, red skirt, jacket with flap in front. They tie hair knot at the middle of the head and wear turban. They wear silver jewellerys. Now they wear bangles and large ear ring made of colourful beads. Some also wear flower. (Plat.4) Both male and female Anns chew betel nut. Their teeth are black due to chewing betel leaves with dark called Larmaing mixed with linu. Some put a certain bark in the rock cup or leather cup and produce fume oil and smear on their teeth to get black colour. Most Anns are animists. A few were buddhist, Christians. They have no own language and the Buddhists use Gonshan language and Christians use Wa language. They built their homes on the high mountain slopes away from the urban area.



Plat 1.Shan, Akhar, and Lahu races **Plate 2:** Lifestyles of Ahkar **Plate 3:** Palaung Race **Plat 4:** Ann Race
 Source: Geography Department Source: Jurina's Photo Source: Internet Source: internet

Economic Activities of Kyaingtong Township

Agriculture is the main economic activity of Kyaingtong Township. It has 66817 acres of net sown area on which paddy, maize and groundnut are mostly grown. Such perennial crops as rubber, tea, coffee, plantain (banana) and fruit trees are also grown. Besides marketable crops like potato, lime, damson, pineapple and mango are also important crops of the study area. In Kyaingtong township, cattle buffalo, pig, sheep, goat, chicken, duck and fish are raised. As of industry, there are 26 private-owned factories and 90 industries. The wellknown ones are earthen pot industry in Yankon village, bamboo split item industry in Yankyin village, lacquerware industry in Sonmon ward which can somehow attract the tourist.

Tourism of Kyaingtong Township

Kyaingtong is one of the entrances through border gate for tourists. Tourists take interest in Kyaingtong area because of its ancient historic buildings, different customs and cultures of the living national ethnic groups and mountainous natural scenic views. Therefore, tourists from neighbouring and other countries want to visit Kyaingtong, but the number of tourist arrival has been decreasing due to different reasons.

Tourist Arrival in Kyaingtong Township

As Kyaingtong is surrounded by lofty mountains it is a good place for hiking, for studying ecotourism and the cultures of different national tribes.

In 2015, the number of foreign tourists that visited the study area was 23127 which accounted for 39.87 percent of the total visitors. In the same year the number of domestic visitors was 34883 representing 60.13 percent of the total. The number of total visitors gradually

increased from 2016 to 2019 as shown in Table 4. In 2019, the numbers of domestic and foreign tourists were 43021 (70.86%) and 17689 (29.14%) respectively.

Tourist Arrival by Nationality to Kyaingtong

In the past only a few foreign tourists visited the Kyaingtong area. After Visit Myanmar Year (1996), the number of foreign tourists increased gradually. The numbers of tourist arrival by nationality from different countries are presented in Table 5. It was 16276 in 2017, 17153 in 2018, and 17689 in 2019. One half of the tourists that visited the study area were Asians. Among the Asian Countries, Thailand stood first in the number of tourists that visited Kyaingtong area, representing 88.9% percent of the total number of Asias. The tourists from West Europe ranked second in number with 2405 in 2017 but dropped to 1411 in 2019. Generally the number of tourists that came to Kyaingtong area was high in 2017 and low in 2019. Other tourists that came to study area were from North America, other Americas, Middle East and Oceania. The numbers of tourists from Asia, Thailand and Europe had been increasing from 2017 to 2019 due to entry from the border gates. (Fig:2)

Transportation, Accommodation and Services

1. Transportation Easy access to a certain destination is one of the important factors of the attraction of the site concerned. From Kyaingtong one can go to Yangon, Mandalay, Tarchileik and other few towns with MAI, Yangon Airway, Mandalay Airway, Air Bagan and Air Kanbawza airlines. The main roads used by the visitors are as follows.

(1)Kyaingtong – Taunggyi Road (2)Kyaingtong – Mongkhat Road

(3)Roads that connect Kyaingtong with border towns

- (i) Kyaingtong – Monglar Road
- (ii) Kyaingtong – Kyainglat Road
- (iii) Kyaingtong – Tarchileik Road

(4). Intraurban Transportation Within Kyaing Tong, the travelers use car, motorcycle and three-wheel vehicle (Sanlot) .Most tourists use car and motorcycle.

2. Accommodation

The numbers of hotels and rooms are presented in Table 6. Kyaing Tong has 16 hotels and 615 rooms. Hotel, motel guesthouse and inn are places of lodging for the visitors. In Kyaing-tong Town, the first private hotel was opened in 1993, Paradise Hotel in 1994 and Amazing Kyaing Tong Resort, San Ywet (2) Guest House, Herry Trekking House and Parame Guest House in 1996 Visit Myanmar Year. And then Princess Hotel was opened in 1997, Sheng Tip Hotel, Swan Ywet (1) Guest House in 1998, Law Yee Cham Hotel in 2000, Naung Tony hotel in 2011, Golden Star Hotel in 2012, Golden World Hotel in 2013, Hotel Khema Ratha in 2014, Phu Lai Motel in 2017 and Amitta Hotel in 2018.

There are several restaurants that sell Chinese foods and Thai foods. The main restaurents are Lohtinlu, Golden Banyan, Pan Kabar, Parthaung Kayoh and Aaung Naing foodstall. With the development of tourism, cafes are also emerged and these are Café 21, Jin Café and Glory 21 Café. There is Nyein Chan Ye hotpot shop on Zaytangyi road. Mountain View Café is famous for its good food and scenic view. Shukhinthit shop with lake and tent and Sai Yee roast chicken bone shop are also attractive. There is a well known food shop named Seik Taing Kya on

Kyaingtong – Monglar road. Par Swot roast meat shop located on the road leading to airport is usually festive with people in the evening. There are traditional food shops around Naungdong Lake. The role of snack shop is open in 10 a.m and it is a ten minute walk from the town.

Tourist Attraction Sites in Kyaingtong Township

There are a number of tourist attraction sites and they are differentiated as follows.

Religious Sites

(1) Kabaraye Pagoda (Htetsunlwe)

This pagoda is located 7 miles to the northeast of Kyaingtong Town. It has Shan village green and attractive views, terrace crop fields, and lofty mountain ranges in the surrounding area. It is believed that the pagoda was built 500 years ago. (Appendix.1)

(2) Swan Taung (or) Swan Khan Pagoda

Swan Taung pagoda is located on top of Swan Taung mountain. It is also a historic religious building which can attract the visitors. In 1259 Myanmar era, and it was destroyed by earthquake in 1266. At present the height of the pagoda is 226 feet due to renovation in the subsequent periods.(Appendix.2)

(3) Mahamyutmuni Pagoda

In Myanmar area 1269 (AD 1908), Soa Kun Kyauk In Ha Yaing, Sawbwa of Kyaing tong intended to build a Buddha image like Mahamyatmuni. Festival is held every year on the full moon day of Tasaungmone. It is one of the tourist attraction site of the study area.(Appendix.3)

(4). Kemerat Preordainment Standing Buddha

During the region of Sawbwa, there were 318- foot high pagodas and 3 Lesu pagodas on Rapa Aungmyain mountain. In June and July, 1995, the service personnel of the Department of Climatology and Hydrology, while digging the soil at Swansatkone, they found ancient Buddha images and enshrine relics. (Appendix.4)

The donors constructed a standing Baddha image, having a height of 76 feet and 6 inches on 30th April 1988. It can be seen from any places of the town because of its height.

(5). Koyinlay (Little/Yaung Novice) Monastery

A Koyinlay monastery on a barge having the appearance of certain mythical bird (Karawait). There is a large Buddha image is sitting position inside the monastery and one can pay respect to Koyinlay. There are a number of small pagodas on the wall of the monastery. If one looks at the surrounding area one will see green fields and scenic mountain views. (Appendix.5)Others tourist attraction sites are Wat Inn Monastery, Yan Kone Monastery, Key Min Monstry, R.C.M Church.

Recreation Sites

The recreation sites in Kyaing Tong Township are: (a) Mt. Thittapin (Single Tree Mountain), (b) Naung Tong Lake, (c) Loi Mwe Town, (d) Buddha Garden, (e) Waterfalls and (f) hot springs.

1. Thittapin Taung

In 115 Myanmar era, during the time of king Alaungphayar (AD 1753), a white Kanyin tree was planted. By referring to the large tree, the mount was called Thittapintaung. It is a very large tree with a height of 218 feet, a girth of 36 feet and 8 inches at human height and a girth of 39 feet and 10 inches at the lower part near the ground. There are two pagodas on Mt. Thittapin, one rope bridge, moat and ancient city wall. Lacquarwares of Swan Mon Kone are very famous. (Apendex.6)

2. Naungtong Lake

Naung Tong lake is one of the prominent land marks of Kyaing Tong. At present it has drain system for filling water and putting out water. It is fenced with iron grille. On one sides of the road, there are food stalls, other shops and residential buildings. In the early morning and evening the place is festive with people walking, making physical exercises or eating. (Apendix.7)

3. Loimway Town

Loimway town is located 26 miles to the southeast of Kyaingtong Town at an elevation of 5342 feet above sea-level and it is a hill station town. Having rows of cherry trees and cool climate more visitors come to the place in December and January when cherry blooms. The town has Clonal Rubel, chief of border area, old post office, Loi Mway Lake, old church end Saturahthumngalar pagoda which attracts the visitors. The house was built in 1918 and repaired in 2007. (Apendix.8)

4. Buddha Garden

Buddha Garden is situated 15 miles to the east of Kyaingtong Town over Mt.Pankwe. Along the Kyaingtong- Tarchileik road leading to the garden, the visitors can see green field and mountain ranges. In the garden a large lake, rose garden and valuable rare plants. At the foot hill of Mt. Pankwe there are a number of shops selling different foods and local products. (Apendix.9)

6. Hot Spring

There are two hot springs. Myashweyee hot spring is located at Taunggyi Kyaingtong Toll gate and others are located at Kyaingtone Terchilate toll gate.(Apendix.10) Another attractive waterfall is Pintauk waterfall which remains naturally.

1.Pintauk Village Tract

If one goes along Kyaingtong – Mongyan road for 12 miles (19 Kilometres) and then turns to the west and proceeds for 5 miles one will reach Pintauk Village. The village tract is inhabited by Akar, Larhu, Wa, Palaung and Ann, Akar in Poppin Village, Palaung in Holeik, Pantaung, Lwesheng, Monkhote Villages, Ann in Wannaung, Tirhtu, Nautlinkoung, Nantlinmai, Parkyawt and Panlay villages. Tourists usually study the traditional life style, culture, dress, food and handieraft of these tribes. Usually more tourists visit Panlay. Wanthinmai and Parkawt Villages where Ann tribe is living. The place has Pintauk waterfall and scenic views and thus it can attract more tourists.

In addition to the above mentioned village there are several large villages which can attract tourists. There are Wan Pauk Village, Wan Sai Village, Holan, Naungmwe Village, Ho

Kyin Village, Naung Ngin Village, Hparyannwet Village ,Wan Nyet an Wan Sheng Villages ,Wan Sai.

Architecture Site in Kyaing Tong

Being an area under the rule of Shan Sawbwas, Kyaing Tong area has haw, moat and gates. To prevent from the attack of enemy, 4 miles and 6 furlongs city wall was built with 12 gates. It was completed in AD 1933. (Plate 20,21,22)

Spatial Analysis of Tourist Attraction in Site Kyaingtong Township

Kyaingtong Township constitutes 5 wards in the urban area and 31 village tracts in the rural area . Of which Kyaingtong Town, Yaunglaw, Naungkone and Monglat village tracts are 5 miles from the centre of the study area and except Monglat Village Tract the others have tourist destination. There are 6 village tracts between 5 miles and 10 miles from the centre of which 4 village tracts have tourist destination. Between the 10 miles and 15 miles from the center are 5 village tracts, and 4 village tracts have tourist destination. Generally there are tourism sites only within 20 miles from the centre.

As shown in Figure 3 &4, religion site, recreation site, ethnic tourism site and architectural site are located within 20- mile radius from the centre. There are more religious sites within 1 to 5 miles, and Kabaraye site and Koyinlay monastery between 5 miles and 10 miles. Most recreation sites are located within 5 miles from the centre, but Buddha Garden and Loimwe are situated between 10 miles and 15 miles. Such architecture sites as moat, city wall, Hawnan and Cemetry of Sawbwas, and entrance gateways are located near the central point.



Figure.3:Trekking Map of Kyaingtong Township
Source:UTM



Figure 4 : Buffer of Kyaingtong
Source:UTM

Conclusion

Kyaingtong Township have over 40 tourist Sites including religious structures, recreation places, villages of ethnic tribes with unique Customs and Culture and fine architectural buildings. Out of 5 wards and 31 village tracts, 15 village tracts are important for the development of tourism.

Kyaingtong Township is located in the Eastern Shan State and it is the eastern gateway to connect with China, Laos and Thailand. As the township has several mountains with an elevation of over 5000 feet, there is a high chance of development for ecotourism. The township has moist subtropical climate favorable for travelling. Being inhabited by different national ethnic groups, having ancient moat, city wall and gateways, availulsility of different fresh foods of the ethnic groups, the township can attract domestic and foreign tourists. Although there is no regular bus line, intraurban and interurban transportation is served by cars, trucks, three-wheel vehicle and

motorcycle. Foreign tourists can use air service from Yangon and Mandalay airports. There are several high-class hotels for foreign tourists and 11 lodging houses for domestic visitors. Tourism in the Kyaingtong Township is natural-based and it has resources for the development of ecotourism. The tourists can enjoy trekking, hiking, cycling, searching and studying the rare wild lives as well as rare tree species and flowers and visiting the villages of different national tribes.

It is necessary to earn more income from tourism. Most foreign tourists are interested in trekking and visiting the places with cultural heritages. Tour packages are more popular these days and thus the existing natural beauties need to be well protected and conserved. However, the destruction of forest by wildfire, overcutting of the existing trees to make charcoal are not uncommon, destroying the natural resources. In conserving the historic buildings great care should be taken not to change the original form. As the township had been the administrative Centre of Sawbwas, there are ancient moat, city wall, entranceways and pagodas and Buddha images. All these ancient heritages should be well maintained and each should have its documented history.

Most foreign tourists come to the area through border gates and 50 more systematic procedures should be practiced at the entry gates. At the same time the natural beauties of the area should be well preserved. By doing so, it will enhance the development momentum of the tourism industry in the study.

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ကျမ်းကိုးစာရင်း

-ကျိုင်းတုံမြို့နယ် ဒေသဆိုင်ရာအချက်အလက်များအထွေထွေအုပ်ချုပ်ရေးဦးစီးဌာန(2016)

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Table1.1 Composition of Kyaingtong Township

Sr. No.	Town/ Village Tracts	Area	
		Acres	Square mile
1	Yan Loc	100050	15.7
2	Pan Kyu	28106	43.91
3	Maing Pan Le	46356	72.49
4	Pan Mauk	71566	111.82
5	Loi Lon	10880	17
6	Maing Khor	22622	35.34
7	Naung Tavng	45060	70.41
8	Nam Khet	54649	85.38
9	Nam Inn	22625	35.35
10	Nar Paw	29152	45.55
11	Maing Inn	55513	86.73
12	Maing Zin	21676	33.86
13	Hiwa Kwai	14050	21.95
14	Maing Pat Upper	24506	38.29
15	Maing Pat Lower	30749	48.04
16	Yan Kha	32506	50.79
17	Maing Kyaing	30988	48.41
18	Maing Ngun	5279	8.24
19	Maing Latt	6691	10.45
20	Maing Naw/ Pa Pa	33466	52.29
21	Loi Mwe	32969	51.51
22	Maing Kyaing	79909	124.5
23	Maing Ngun	48186	75.29
24	Nam Ni / Nam Lon	33466	52.29
25	Ward 1		1.15
26	Ward 2		0.37
27	Ward 3		0.42
28	Ward 4		0.88
29	Ward 5		0.84
30	Naung Kung	1547	2.41
31	Ket Pha	36409	56.88
32	Yang Kyain	8539	13.34

Sr. No.	Town/ Village Tracts	Area	
		Acres	Square mile
33	Ket Taung	17348	27.1
34	Wap Saung	4779	7.47
35	Ket Htaik	20480	32
36	Pin Taung	61551	96.17
	Total	1031673	1474.97

Source: :Land Records Department of Kyaingtong Township

Table 2 . Visitor Arrivals in Kyaingtong by Nationality

Country /Region	2017	2018	2019
North America	549	336	316
U.S.A.	451	237	230
Canada	98	99	86
Other Americas	18	35	14
West Europe	2405	1654	1411
France	532	303	246
U.K.	376	250	301
Germany	268	181	246
Italy	361	326	149
Switzerland	174	121	122
Netherlands	74	45	75
Belgium	142	93	56
Australia	26	48	26
Spain	184	81	75
Others	268	206	115
East Europe	66	78	100
Russia	41	49	47
Others	25	29	53
Africa	1	15	6
Middle East	225	96	79
Asia	12828	14828	15631
China	362	665	882
Thailand	11407	12828	12826
Korea	231	366	451
Japan	147	173	223
Singapore	92	136	205
Vietnam	31	42	69
India	46	59	61
Malasia	155	189	300
Taiwan	75	91	133
Phillipine	35	44	28
Others	247	235	453
Oceania	184	111	132
Australia	163	94	112
Newzealand	21	17	20
Others	0	111	132
Total	16276	17153	17689

Source: :Ministry of Hotel and Tourism (Kyaingtong)