The Myanmar JOURNAL

Letter from the Editor-in-Chief

Myanmar and Korea have many similarities and are complementary relationship. Therefore, we believe that research exchange will expand mutual understanding between Myanmar and Korea, and will be the cornerstone for mutual development.

KOMYRA and YUE have co-published The Myanmar Journal since August 2014. So far, many scholars have published numerous papers through the journal, and We are sure that this journal has helped many people understand Myanmar and Korea more clearly and closely.

The Myanmar Journal covers various issues in Myanmar and Korea. It covers various topics that can promote bilateral development and mutual understanding, not limited to specific topics such as economy, industry, society, education, welfare, culture, energy, engineering, healthcare, and agriculture.

We hope that this journal will continue to promote understanding of the current status and potential capabilities of Myanmar and South Korea and promote in-depth international exchange and cooperation.

We would like to express our deepest gratitude to the editorial board and YUE and KOMYRA for their valuable support in The Myanmar Journal publication.

February 28, 2020

Youngjun Choi   *yj choi*

Editor-in-Chief of THE MYANMAR JOURNAL
Vice-President of KOMYRA
Email: yjchoi@khu.ac.kr
Office: +82-2-961-0485
Web address: komyra.com/doc/scope.php

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The Myanmar Journal

The Myanmar Journal (ISSN 2383-6563) is the official international journal co-published by Yangon University of Economics (YUE) and Korea Myanmar Research Institute (KOMYRA).

This journal aims to promote the mutual cooperation and development of Myanmar and Korea through intensive researches in the entire filed of society, economy, culture, and industry.

It will cover all general academic and industrial issues, and share ideas, problems and solution for development of Myanmar.

Articles for publication will be on-line released twice a year at the end of February and August every year on the Myanmar Journal webpage.

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Articles

Developing Knowledge: A Conceptual Paper on Knowledge Management Process

Win Moe Moe Kyaw

Yangon University of Economics

ABSTRACT : In today's knowledge-based society, many organizations have realized the value of knowledge management and placed an importance on effective management of knowledge to acquire and increase competitive advantages, meet many changes in the external environment, and survive in the long term. In this context, knowledge management is a tool that improves an organization's ability to govern knowledge assets and knowledge processes in order to ensure organization's success. In addition, knowledge management is the identification and analysis of need for knowledge so as to fulfil organizational objectives. Therefore, more and more organizations are concerned about how they acquire, retain, share, and leverage key knowledge assets across the organization in order to maintain organizational survival and thrive long term. this article has investigated how to create knowledge, build knowledge retention, and share knowledge through few literature reviews in order to promote the prime.

Key words : Knowledge Creation, Knowledge Retention, Knowledge Sharing, Knowledge-Management Process,

I. Introduction

It is true that knowledge has the role of power in success as it can help a person to andfamous. In the modern knowledge era, many organizations are viewing knowledge as their one of the most valuable and strategic resources (Choo & Bontis, 2002). As Fuchs's (2013) study, "knowledge is considered a central premise for successful economic decisions, strategies and practices" (p.1). Haggie and Kingston

(2003) point out that organizations cannot survive and thrive in a knowledge-based society unless they have a successful knowledge management strategy to create new knowledge and leverage their intellectual capital. Therefore, all organizations need to understand how knowledge is created and effectively harnessed to promote the prime goals.

According to Mau (2005), KM process is the foundation as it can have a more long-lasting effect on competition between organizations. In the last decades, organizations may not have paid any attention to knowledge management (KM) because it seems that knowledge can easily be managed internally and it is not difficult procedure and process. There are two reasons why KM is a critical step to organizations. First, it provides to deal with the issues related to the technical infrastructure development and maintenance that are necessary to disseminate knowledge, ensuring business continuity. Second, it boosts business performance in terms of maximizing the use of information to gain knowledge and maintaining its learning properties to offer innovation that leads to a competitive advantage (Mau, 2005). Hence, KM practices positively and meaningfully affect overall organization performance, enhancing sustainable competitive advantage. In this regard, as Alryalat and Alhawari (2008) point out, knowledge is critical for organizational success and organization performance. As a consequence, knowledge can be identified for making the decisions and taking the actions.

For practical purposes, KM is an imperative idea that people's knowledge is the most valuable assets of an organization. In terms of definition, as stated in Earl's (2001) study, knowledge management plays in a major role for both product and process innovation, for making executive decision, and for organizational modification and revitalization. Additionally, Kautz and Mahnke (2003) state that KM is a set of activities for designing and influencing knowledge processes that are methods for new organization practice. Furthermore, Goh (2005) defines KM as systematic organizing, distilling and presenting data, information, knowledge, and various forms of assets to improve organizational innovation that promotes growth in responsiveness, , and competitiveness by encouraging.

Today's organizations focus on the adoption of KM for their business processes in order to manage knowledge required for organization and add value to organization. In fact, knowledge is a major factor for all organizations to stay ahead of their , maintain the position in the strong competitive As a result, KM can enhance the innovative work behaviour of employees in terms of expanding the innovation process (Parikh, 2001). this article has investigated organizational knowledge creation, innovation, retention and sharing through few literature reviews.

II. Literature Review

Means for Knowledge Management?

To begin with, knowledge creation is the ability of the knowledge management because knowledge management is relied on an understanding how knowledge is shaped and how can this knowledge be transferred within organizations (McInerney, 2002). In addition, knowledge management is the conversion of tacit knowledge to explicit knowledge in order to facilitate sharing, and application of knowledge more widely within the organization (Gupta, Iyer, & Aronson, 2000). Moreover, knowing the differences between tacit knowledge and explicit knowledge is perhaps the most fundamental concept of knowledge management when examining the knowledge creation (García-Muiña, Martín de Castro, & López Sáez, 2002).

Two types of knowledge

In general, there are two types of knowledge: namely and . Explicit knowledge is knowledge that can be expressed and recorded as words and numbers, and that is easy to communicate in the form of data, , and manuals so it can be readily shared with someone formally and systematically. In contrast, tacit knowledge is also knowledge, however, it is contrasted with explicit knowledge because this kind of knowledge refers to personal knowledge, judgement, emotions and experience so it is difficult to write down, formulate or share from one person to another (Nonaka & Konno, 1998).

Introduction of the SECI Model

In order to understand how knowledge is shared and created in the organization, and show clearly the nature of knowledge, developing a theoretical framework for knowledge creation is required (García-Muiña et al., 2002). Therefore, Nonaka and Takeuchi (1995) introduced the SECI model which is a well-known process of knowledge creation and transfer theory, and which is dependent on two kinds of : explicit knowledge and tacit knowledge(as cited in Gourlay, 2003) because "knowledge creation is a spiralling process of interactions between explicit and tacit knowledge" (Nonaka & Konno, 1998).

Nonaka's four modes of knowledge conversion

In the SECI process, there are four modes of knowledge conversion as organizational knowledge activities. They are: "(1) socialization (tacit to tacit); (2) externalization (tacit to explicit); (3) combination (explicit to explicit); and (4) internalization (explicit to tacit)".

Socialization (tacit to tacit), where the knowledge conversion begins, is the process

of . In fact, since tacit knowledge is difficult to definecommunicate, and transfer to another person, this type of knowledge can be acquired through shared : seeing something, observation or hearing and working and learning with others. In this process, social, cultural and historical contexts are essential because these contexts create the basis of the meaning.

Externalization (tacit to explicit) is the process of transforming tacit knowledge into comprehensible forms, in which   is knowledge is made explicit, allowing it The externalization process is also important conversion mechanism because it is the step of the process of knowledge generation in order to move from the invisible, tacit, to the visible, explicit. The success of the externalization is dependent on the use of , , narratives, meaning dialogues or reflections and visual aids.

Combination (explicit to explicit) is the process of organizing, integrating, and converting different explicit knowledge into systematic sets of explicit knowledge (e.g. documents), and then disseminating and sharing this systemization of knowledge among the organizational members. In this case, collecting externalized knowledge or explicit knowledge from inside or outside the organization is essential in order to combine, edit and process such data and then the new explicit knowledge is widely disseminated throughout the organization. To create systemic, explicit knowledge, the application of advanced computer networking technology plays a key role in facilitating the combination mode of knowledge conversion. Thus, the process of systematic combination refers to synthesizing explicit knowledge and information.
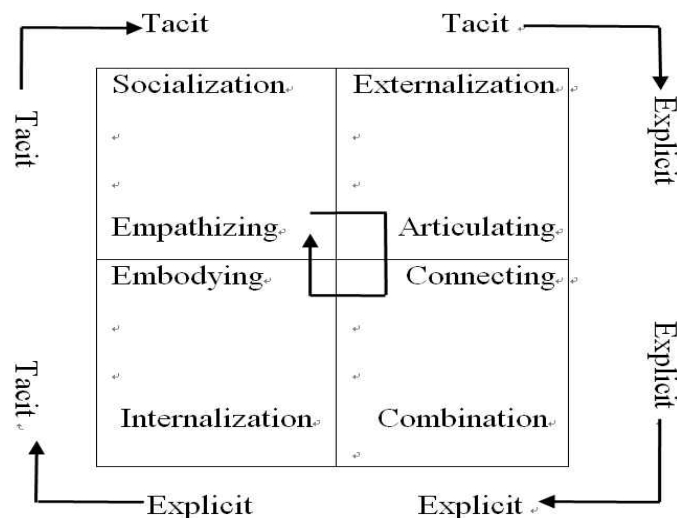
Figure 1. Nonaka's model of knowledge conversion (Nonaka et al., 2000)

Internalization (explicit to tacit) is a process whereby the conversion of explicit

knowledge into tacit knowledge. In the process of internalization, explicit knowledge learned and shared among the members of the organization is converted into tacit knowledge in order to learn and acquire new tacit knowledge, being applied and used in practical situations. In other words, internalization is closely related to `learning by doing' and it will include the form of shared mental modes and a broad range of -how (Nonaka, Toyama, & Konno, 2000, pp. 9-12).

Regarding to the Nonaka's model of knowledge dynamics, there are some shortcomings in Nonaka's approach because it is based on the context of Japanese culture rather than groups and it focuses on tacit knowledge. The result is to be inotherculture(Gourlay, 2004). However, as shown in figure, the SECI model is the dynamic process of interactions between tacit and explicit knowledge as well as a never-ending learning process that is continuously upgrading itself. In addition, since Nonaka's model of knowledge conversion can operate a new spiral of knowledge creation, it can be put into practice (Nonaka et al., 2000).

Knowledge Creation, Knowledge Retention, Knowledge Sharing

In terms of knowledge acquisition/creation, it is an important activity for an organization's operations that strive to drive the organization to achieve its goals through spreading knowledge creation and innovation across the organization (Allard, 2004). In addition, McInerney (2002) has acknowledged that knowledge creation is an essence of knowledge management as knowledge management has emerged by creating, capturing, and sharing knowledge within organizations. That is why creating knowledge among employees in the department or the organization is imperative to develop relevant skills, knowledge and their abilities. Regarding knowledge creation, Nonaka and Takeuchi (1995) developed a dynamic model or the SECI model of knowledge conversion that is the process of interactions between explicit and tacit knowledge (as cited in Nonaka & Konno, 1998). The main purpose is to understand where, what, and how knowledge is created and generated and utilize knowledge effectively and efficiently. In this model, four modes of knowledge conversion are socialization (tacit to tacit), externalization (tacit to explicit), combination (explicit to explicit) and internalization (explicit to tacit) (Nonaka, Toyama, & Konno, 2000).

Socialization and externalization focus on the creation of knowledge. Socialization is a process that dailysocialinteraction.Externalizationreferstotheprocessofknowledge articulation that involves the conversion of tacit knowledge into explicit and more generic knowledge, aiming to become the basis of new knowledge and allowing it to share with amongst organizational members.

Combination and internalization are processes that focus the utilization of knowledge. Combination focuses on the process of connecting and collecting knowledge from inside and outside of the organization to be more systematic explicit

knowledge and disseminate or share this knowledge throughout the organization. The process of internalization focuses on the embodying explicit knowledge shared among organizational members into tacit knowledge to gain new tacit knowledge for applying in practical situations (Nonaka, Toyama, & Konno, 2000, pp. 9-12).

Ⅲ.　Putting the SECI model in practice

The SECI model can be seen as a framework for effective teacher professional development (TPD) to ensure the success of the educational reform. The TPD framework can be based on four knowledge management process; namely knowledge creation, knowledge internalization, knowledge sharing, and knowledge evaluation.

Knowledge creation: In this process, knowledge creation is concerned with - interaction and , the sharing of practices, discussion about knowledge, and choosing the the movement for for TPD is co-created by sharing socialization.

Knowledge internalization: To achieve gains in learning for all learners, first, the self-paced learning is practiced through using including journal , using - for competencies practices, newspapers, and comments. These activities help learners learn by giving and receiving feedback on their work. Moreover, the learners are able to do reflective assignment from their own learning, resulting in a constructivist approach to learning.

Knowledge sharing: In the professional learning community, knowledge is constructed from sharing knowledge and teaching experiences. In addition, both face-to-face (F2F) and online forum session offer opportunities for the learners to discuss and exchange their ideas related to their assignments, and to present the assignments for receiving peer feedback or facilitators in a . This method reflects the combination mode of knowledge conversion.

Knowledge evaluation: This process refers to the use of assessment and feedback to assist to ensure what they have been learned. Moreover, the learner's performance is evaluated by using the result - and - reflection question throughout the courses. By this way, the learner's tacit knowledge is transformed into explicit knowledge that would be the useful information for professional in the future (Ho, Nakamori, & Ho, 2014, pp. 7 ,8).

IV. The importance of SECI process for TPD

In education, knowledge management have increasingly (Kutay & Aurum, 2005)Firstly, identifying tacit knowledge may help teachers understand how students learn and rethink what teaching strategiestacit knowledge. Secondly, making individual's tacit knowledge explicit is also important to support individual professional development. Thus, externalization occurs through sharing the articulation of knowledge from the individual level to group levelThirdly, combination is necessary to flow knowledge from the group level to the organization level. In education, moving knowledge to all the organizational members can be seen by writing an article for publication (for example, to sharing the author's views on teaching methods, outside experts' support and advice, and the throughouttheorganization. Lastly, to achieve and internalize new ideas of teaching, teachers who experienced combination are better able to participate in the process of knowledge internalization by guiding teachers' minds and everyday and learning practice. Thus, internalization is substantial for providing operational knowledge for individual level

V. Conclusion

It is obvious that knowledge is the most valuable resource for all organizations, especially in education, in order to remain competitive. In addition, it is useful information, a mental representation, and a social construct. On the other hand, an effective knowledge management plays a vital role in knowledge creation, innovation, retention and sharing to build intellectual capital as it is a fascinating way to provide the process of creating, , and managing of knowledge Thus, knowledge and knowledge management are key factors of organizations. All in all, in a knowledge-based society, every organization needs to focus on knowledge creation and an effective knowledge management in order to and progress effectively.

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The Effect of Rural-to-Urban Migration on the Status of Women in Myanmar

Maw Maw Khin(Ph.D)* and Sanda Thein**

Yangon University of Economics

ABSTRACT: The study focuses on the effects of rural to urban migration on the status of women in Myanmar. The secondary data from MDHS 2015/16 was used. The results from descriptive statistics showed that 32.7 percent of all women in conventional households have migrated from an urban to an urban area is highest and the second highest is an urban to a rural area. The results from linear regression analysis point out that rural to urban migration has negative effect on status of women and rural to rural migrations have positively effect on women's lives increasing their scores on status of women. Migrant women seem to be better off than their rural counterparts. Besides, for de jure regions of residence, women who live in Kachin, Kayin, Tainthayi, Magway and Mandalay regions are negatively effects on the status of women. Moreover, for the origin region women who live in Tainthayi region have negative effects and Magway, Ayeyarwaddy and Naypyitaw regions have positive effects on the status of women. Apart from these result, the different origin region of the migrant women does not affect the status of women significantly. It is observed that rural to urban migration of women does not only shape new socio-economic conditions of women in their new destinations, but it also a significant factor affecting fertility behavior of these migrant women.

Key words : Status Women Index, Migration, Factor Analysis,
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*   Professor and Head of Department of Statistics, Yangon University of Economics, Myanmar. Postal address of Kamayut Township (11041), Email: mawm555@gmail.com,   Phone no: +959 5191509
** Lecturer of Department of Statistics, Yangon University of Economics, Myanmar.
    Email: sandaaungthein@gmail.com,Phoneno:+9595416839

I. Introduction

Migration is one of the three components of ovulation change, has become an increasing focus of research and policy development in many developing countries. Internal and international movements exert varying degrees of influence on specific countries or regions depending on a mix of political, social, economic, and environmental factors.

Migration is considered one of the defining global issues of the early twenty-first century, as more and more people are on the move today than at any other point in human history. There are now about 244 million people living outside their place of birth, which is about three percent of the world's population (UNDESA, 2015). Furthermore, there are 763 million internal migrants in 2015. Together, 1 in 7 persons in the world is a migrant. While the world population increased by 22% in the past 15 years, the international migration stock increased by 41% during the same period. Migration is the world's oldest poverty reduction strategy: an indispensable engine for human development, a driver of economic growth; and a source of dynamic and innovative cultures. There is growing recognition that migration is an essential and an inevitable component of the economic and social life of every country.

In Myanmar, migration and urbanization report presents information on three processes: (i) movement within the country (internal migration); (ii) movement across the borders of Myanmar (international migration); and (iii) the distribution of the population in urban and rural areas (urbanization). According to the 2014 Myanmar Population and Housing Census, approximately 4 percent of the population, or 2.02 million persons, of Myanmar were reported to be residing abroad. According to the 2014 Myanmar Census (GMS Triangle Project, 2015), neighboring Thailand hosts almost 70 percent of Myanmar's international migrants. The second most significant country of destination for international migrants from Myanmar is Malaysia, hosting an estimated half a million Myanmar nationals (representing 15% of Myanmar migrants abroad). Other main destination countries include China (4.6%), Singapore (3.8%), United States (2%) and India (1%). Japan, Republic of Korea and other destinations also host notable numbers of migrants from Myanmar.

Out of the total enumerated population of Myanmar, 70 percent were residing in rural areas and 30 percent of the population were residing in urban areas. Myanmar remains as predominately rural country which is also reflected in the high percentage of the agricultural labour force. Internal migration in Myanmar is of two types; across states/regions, representing 51% of all internal migration in the country, and within a state/region, making up the additional 49% (Department of Population 2013). When considering only labour migration, inter-state/regional migration increased up to 62%

while intra-state/ regional migration constituted the remaining 38% (ILO 2015). Migration within a state/region is mainly rural-rural or urban-urban, whereas rural-urban migration is more common in migration across states/regions.

Female migrants outnumber male migrants in recent migration, with almost 53 percent of migrants being female. Female migrants who moved between stages/regions, compared to those who moved within states/regions, were more likely to be unmarried, with over 50 percent unmarried. The 2014 Myanmar Population and Housing Census recorded data on the main reason for movement from the place of previous usual residence. Around 41% of the migrant population (9 million) followed family, 34.3% moved for employment or in search of employment, 15.7% due to marriage, 2.2% for education, 0.7% due to conflict, and 5.9% for other reasons. There is no research paper has done the status of women by using DHS data in Myanmar. For this reason, the purpose of this study is to find out the effects of rural to urban migration on the status of women in Myanmar.

II. Materials & Methods

The data were obtained from MDHS (2015/16) and the analysis presented in this study is based on 12885 women age 15 to 49 year. In order to meet the objectives, the descriptive statistics was applied to analyse the percent distribution of population according to internal migration flows. In Multivariate analysis, Factor Analysis was used to find out the status of women index (SWI) and multiple linear regression analysis was applied to study the effects of rural to urban migration on the status of women.

III. Factor Analysis and Multiple Linear Regression Analysis

In this study factor analysis was used to reduce a large number of variables to smaller number of factors and Principle Components (PC) method is preferred for parameter estimation. In Factor Analysis, twelve variables concerning women's basic demographic and socio-economic characteristics and respondents' attitudes for decision-making process within the household were used. They are: age of the respondent, educational attainment of the respondent in single years, wealth index of the household, respondent's employment status, total children ever born of the respondent, sex of household head, respondent earns more than husband and attitude variables on right for beating justified if wife goes out without telling husband, beating justified if wife neglects the children, beating justified if wife argues with husband,

beating justified if wife refuses to have sex with husband, and beating justified if wife burns the food.

IV. Results & Discussion

Migration flow variables was created in which type of previous place of residence, type of de jure place of residence and years lived in actual place of residence variables were used at the same time. The distribution of all women by each migration type (according to direction of migration flows) was shown in Table (1).

Table (1) shows the number of internal migrants was calculated by using only type of previous place of residence and type of de jure place of residence variables. It can be seen that 32.7 percent of all women in conventional households had migrated from an urban to an urban area, while 15.3 percent, 4.2 percent and 12.1 percent migrated from urban to rural, rural to rural and rural to urban areas respectively.

The results of communalities by using the PC method were shown in table (2). It shows the squared multiple correlation of variables with factors. These results have proved that respondent's current age, wealth index combined and sex of household head are the variables that have the strongest correlation relationships within the common factors, where respondent currently working and beating justified if wife burns the food have the lowest correlation. Table (3) shows the total variance explained by the components produced by the PC method.

These results have confirmed that twelve factors were used to be measured the status of women index (SWI). However, only first five factors have eigenvalues larger than 1. The cumulative percent of the variance explained by the first five factors is 62.212 %. Among these five factors, first factor has the largest eigenvalue (2.329) and it can contribute to the largest amount of the cumulative variance (19.407%).

The factor loadings of these twelve variables were shown in Table (4). It can be seen that the factor loadings of each variable in each five factor are not similar, which affects the total variance explained by each of those five separate factors. The PC method has produced twelve factors, where the first five of them have the eigenvalues larger than 1 and therefore, they are statistically significant amounts of explained variance for the data set used in the regression analysis. Based on these criteria, the first factor is the most appropriate factor for regression analysis.

Table (5) presents the mean, median, maximum, minimum value and range of first factor scores. From these results, it can be seen that the first factor scores follow the normal distribution and range of first factor's scores is 5.133. The median score of women is 0.023, which is very close to mean (0). There are 12877 cases, because, the

PC method excludes any case that has a missing value in any variable input in the factor analysis. Therefore, 8 out of 12885 women are not included in computing of SWI. As presented in Table (6), adjusted R2 of the model is 0.635, which means that the independent variables explain 63.5 percent of the variation in dependent variable and the model is statistically significant. Among the migrant women, the most negative effect is observed for rural to-urban migrants (standardized β coefficient is -0.072). However, a similar effect is valid for urban-to-rural migrants (-0.070). Furthermore, the effect of de jure region of residence women (Kachin, Kayin, Tainthayi, Magway, and Mandalay regions) seems to be differentiated and these results have proved that the significantly negative effects on status of women.

According to the table, being a rural-to-rural migrant has more negative effect on status of women (-0.072) when compared to urban to urban migrants. The same result is found in urban to rural migrants. But, the rural to rural migrants women have the positive impact on status of women (0.101). Besides, women who live in Kachin and Kayin have the same effects on the status of women. Those women who live in Mandalay and Ayeyarweddy region have also same effects on the status of women. Model also shows that the different origin region of the migrant women (except Tainthayi, Magway, Ayeyarwaddy and Naypyitaw regions) does not affect the status of women significantly. Moreover, women who marital status have window (-0.101) are the least advantageous groups.

V. Discussion

The results of this study are significant in terms of a better interpretation of socioeconomic, cultural processes within the Myanmar society and other social events, which influence on structure of demographic processes (i.e. fertility, mortality and migration) individually or in relation with each other. In fact, none of these socioeconomic, cultural and demographic characteristics are capable of changing themselves alone, but they are all linked to and intervening into each other's conditions.

According to the descriptive and multivariate analyses results, it can be said that there are significant negative relationship between the rural-to-urban migration and status of women in Myanmar. It was found out that rural-to-rural migrations have positively effect on women's lives increasing their scores on status of women. Migrant women seem to be better off than their rural counterparts.

Based on these results, being widow women affects the status of women more negatively than being ever married. Rural-to-urban migrant women gets very close

standardized coefficients with urban-to-rural migrant women.

The most important limitation in interpreting and examining the SWI scores for the migrant and non-migrant women by MDHS 2015/16 is the cross-sectional nature of the survey. In other words, it is impossible to make retrospective assumptions about the status of rural-to urban migrant women with this data set. The reason is that, fertility information, educational level, employment status are the information that belonged to the interview day. The educational level of the migrant respondent, children born before migration and knowledge of employment and social security and the income level of the household before migration are unknown. In fact, status of women in rural-to-urban migrant women and other women populations according to their migration status is the description of interview day's conditions for women rather than showing the changes in status of women before and after migration. In this respect, data used in the study is limited to improve a time-dimension or lifecycle approach for status of women according to rural-to-urban migration in Myanmar.

VI. Recommendation

On the basis of the findings and analyses of this study, the following suggestion need to consider for next survey to get better information on both migration and status of women in DHS.

First of all, it is necessary to catch possible multiple migration moves of the sample population to analyze the step migration. Moreover, reciprocal information of women about their fertility, education, income employment status and like prior to migration should be collected in order to see the changes in the demographic and socio-economic characteristics of the migrants in the post-migration period.

In addition, some additional questions can be asked that investigate the attitudes and intrahousehold relations among men and women for a deeper and more qualitative analyses of status of women.

Furthermore, this study aimed to increase the awareness for gender related issues in demographic studies, which would enable the demographers to see the qualitative aspects of changes in demographic processes rather than gender-blind and highly quantitative calculations of indicators.

Acknowledgements

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Table 1. Percent Distribution of Women According to Internal Migration Flows by Years Lived in Actual Place of Residence, Type of De Jure Place of Residence and Type of Previous Place of Residence

Internal Migration Flows	Percent
rural to urban	12.1
rural to rural	4.2
urban to rural	15.3
urban to urban	32.7
urban immobile	6.9
rural immobile	8.9
Total	100
Number	12885

Data Source: Myanmar Demographic and Health Survey (2015-16)

Table 2. Community of Variables within Principle Component Method

	Initial	Extraction
Respondent's current age	1.000	0.829
Education in single years	1.000	0.721
Wealth index combined	1.000	0.807
Respondent currently working	1.000	0.425
Total children ever born	1.000	0.754
Sex of household head	1.000	0.877
Respondent earns more than husband/partner	1.000	0.712
Beating justified if wife goes out without telling husband	1.000	0.499
Beating justified if wife neglects the children	1.000	0.481
Beating justified if wife argues with husband	1.000	0.473
Beating justified if wife refuses to have sex with husband	1.000	0.467
Beating justified if wife burns the food	1.000	0.420

Data Source: Based on calculation (Myanmar Demographic and Health Survey (2015-16))

Table 3. The Results of Factor Analysis

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Respondent's current age	2.329	19.407	19.407	2.329	19.407	19.407
Education in single years	1.955	16.293	35.700	1.955	16.293	35.700
Wealth index combined	1.162	9.682	45.382	1.162	9.682	45.382
Respondent currently working	1.013	8.442	53.824	1.013	8.442	53.824
Total children ever born	1.007	8.388	62.212	1.007	8.388	62.212
Sex of household head	0.975	8.124	70.336			
Respondent earns more than husband/partner	0.894	7.447	77.783			
Beating justified if wife goes out without telling husband	0.704	5.867	83.650			
Beating justified if wife neglects the children	0.615	5.129	88.779			
Beating justified if wife	0.557	4.644	93.423			

argues with husband						
Beating justified if wife refuses to have sex with husband	0.446	3.720	97.143			
Beating justified if wife burns the food	0.343	2.857	100.000			

Data Source: Based on calculation (Myanmar Demographic and Health Survey (2015-16))

Table 4. Factor Loadings of the PC Method

	Component				
	1	2	3	4	5
Respondent's current age	-0.078	0.338	0.499	0.074	-0.126
Education in single years	0.223	-0.302	0.255	0.101	-0.068
Wealth index combined	0.163	-0.208	0.588	0.115	-0.131
Respondent currently working	0.006	0.039	0.364	-0.304	0.379
Total children ever born	-0.135	0.392	0.160	0.117	-0.134
Sex of household head	0.004	0.002	-0.064	0.864	0.322
Respondent earns more than husband/partner	0.002	0.035	0.083	-0.108	0.823
Beating justified if wife goes out without telling husband	0.273	0.114	-0.111	-0.154	0.050
Beating justified if wife neglects the children	0.245	0.166	-0.101	-0.174	0.078
Beating justified if wife argues with husband	0.264	0.142	-0.062	0.113	-0.026
Beating justified if wife refuses to have sex with husband	0.238	0.185	-0.017	0.162	-0.023
Beating justified if wife burns the food	0.260	0.104	-0.072	-0.018	-0.065

Data Source: Based on calculation (Myanmar Demographic and Health Survey (2015-16))

Table 5. Summary Results of First Factor

No of Valid Missing	128778
Mean	0.000
Median	0.023
Std. Deviation	1.000
Variance	1.000
Range	5.133
Minimum	-3.566

Maximum	1.566

Table 6. Linear Regression Results for Internal Migrant Women

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	0.278	0.263		1.056	0.292		
Migration Flows							
RU	-0.670	0.629	-0.072	-1.065	0.088	0.764	1.309
RR	1.621	1.206	0.101	1.344	0.080	0.618	1.618
UR	-0.651	0.591	-0.070	-1.100	0.272	0.863	1.158
De Jure Regions of Residence							
Kachin	-0.930	0.472	-0.152	-1.970	0.050	0.590	1.694
Kayah	-0.200	0.330	-0.047	-0.605	0.546	0.580	1.724
Kayin	-0.721	0.336	-0.159	-2.145	0.033	0.639	1.564
Chin	-0.133	0.298	-0.035	-0.445	0.656	0.571	1.750
Tainthayi	-0.013	0.301	-0.003	-0.044	0.065	0.587	1.705
Bago	-0.468	0.296	-0.129	-1.580	0.115	0.527	1.898
Magway	-0.903	0.305	-0.238	-2.960	0.003	0.545	1.836
Mandalay	-0.502	0.297	-0.138	-1.692	0.092	0.525	1.906
Mon	-0.460	0.323	-0.108	-1.425	0.155	0.607	1.648
Rakhine	-0.413	0.310	-0.103	-1.334	0.184	0.586	1.706
Yangon	-0.120	0.282	-0.040	-0.425	0.671	0.399	2.508
Shan	-0.058	0.309	-0.015	-0.188	0.851	0.531	1.885
Ayeyarweddy	-0.481	0.296	-0.133	-1.624	0.106	0.527	1.897
Naypyitaw	-0.191	0.329	-0.045	-0.579	0.563	0.583	1.716
Marital Status							
Never_married	-0.041	0.140	-0.019	-0.292	0.050	0.841	1.190

Window	-0.578	0.376	-0.101	-1.536	0.006	0.814	1.228
Divored	-0.323	0.267	-0.076	-1.210	0.127	0.885	1.130
Region of Previous Residence							
Kachin	0.117	0.351	0.023	0.333	0.739	0.755	1.325
Kyah	-0.077	0.269	-0.023	-0.286	0.775	0.546	1.831
Kayin	-0.182	0.612	-0.023	-0.298	0.766	0.606	1.649
Chin	0.456	0.414	0.080	1.103	0.271	0.674	1.483
Tainthayi	-0.254	0.311	-0.058	-0.818	0.014	0.698	1.434
Bago	0.080	0.289	0.021	0.277	0.782	0.636	1.571
Magway	0.043	0.225	0.016	0.192	0.048	0.505	1.978
Mandalay	0.245	0.287	0.063	0.855	0.393	0.649	1.542
Mon	-0.279	0.367	-0.051	-0.760	0.448	0.765	1.307
Rakhine	-0.098	0.386	-0.018	-0.253	0.800	0.691	1.448
Yangon	-0.189	0.242	-0.066	-0.783	0.435	0.500	1.999
Shan	0.242	0.255	0.071	0.951	0.343	0.631	1.585
Ayeyarweddy	0.681	0.292	0.170	2.329	0.021	0.658	1.521
Naypyitaw	0.672	0.388	0.117	1.731	0.085	0.766	1.306
R Square = 0.635, Adjusted R Square= 0.635, Std. Error of the Estimate = 0.647, F value = 3.285, Sig F= 0.0422							

Data Source: Based on calculation (Myanmar Demographic and Health Survey (2015-16))

Can India's Space Diplomacy Help Greater Regional Cooperation in South Asia?

Vikash Kumar

Jawaharlal Nehru University

ABSTRACT : The paper examines the need and possibility of space diplomacy as a means to achieve regional cooperation and greater integration in the South Asian region. This objective can be understood in terms of India's global power ambitions. As part of India's neighbourhood first foreign policy agenda, Indian government has prioritized its interests and relations in South Asia. Presently, a key objective of India's foreign policy in the region is to overcome obstacles to regional integration and to broaden the scope for cooperation without appearing hegemonic. In this regard, India's launch of the 'South Asia Satellite' in May 2017 sends a positive signal to the neighbourhood. By launching the GSAT-9 'South Asia Satellite' India has reaffirmed the Indian Space Research Organisation's scientific prowess, but the messaging is perhaps more geopolitical in this region. This project arguably is the first opportunity for India to harness its activities in outer space for distinct foreign policy goals. The South Asia Satellite is meant to facilitate regional cooperation by supplementing existing mechanisms, such as the SAARC. India's decision to make the satellite's technological services widely accessible to its neighbours is expected to not only generate diplomatic goodwill toward India in the region but also to help spur economic growth. The South Asia Satellite aims to enhance bilateral and multilateral engagement and cooperation. It would, however, be nothing short of hyperbole to assert that the satellite will automatically usher in amity between India and its South Asian neighbours in the near future. Presently, other South Asian states sometimes perceive India to be an overbearing power. On the other hand, China's One Belt and One Road Initiative is an infrastructure network that every SAARC nation other than India has signed on to. Further, Pakistan and Sri Lanka have launched satellite with assistance from China. Given this back group and developments, the paper will assess India's potential and limitation in space diplomacy.

Key words : Regional Cooperation, SAARC, South Asia Satellite, Space Diplomacy, Global Power, Regional Integration, Power Ambition

I. Introduction

South Asia Comprise Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. Afghanistan has joined the regional block SAARC in 2005. Most countries of the South Asia are sharing common heritage, history and cultural practices. South Asia is known for security issues, inter-state disputes, state sponsored terrorism and poverty rather than regional integration. The Challenges faced by South Asia are based on deep rooted social and religious conflict and historic differences. In post-Second World War period South Asia is involved in multiple intra region and intra state conflicts due to boundary issues, ethnicity and religions issues.

The hostility between India and Pakistan, river dispute between India and Bangladesh, ethnic conflict in Sri Lanka, historical dispute between Bangladesh and Pakistan, political instability in Nepal and Maldives are major problems in South Asia. These conflicts have affected the relations among South Asian Countries. The constant conflicts have never provided the appropriate environment for supporting the efforts towards greater regional integration. Consequently, political issues and conflicts are dominant on regional economic and strategic interests.

There are various types of diversities, conflicts and problems in West Africa, South-East Asia, Sub-Saharan Africa, East Africa, Latin Africa. Despite these diversities and problems, since the Second World War almost all regions of the world have been united through various mechanism such as regional economic and political organizations. Associations of South-East Asian Nations (ASEAN), European Union (EU) and African Union (AU) have played important role in greater regional integration through various mechanism.

South Asia is one of the least integrated region of the world. The formation of the South Asian Association for Regional Cooperation (SAARC) in 1985 was a major initiative for greater regional cooperation in South Asia. Although it has been decades since the creation of SAARC, greater regional integration in South Asia is sill outside from priority for South Asian Countries. But SAARC has no mechanism to resolve conflict and unite South Asian Countries.

The changes in global and regional power balance, global economic order and recent developments in South Asia make it pertinent to look at the possibility of integration in South Asia. India is rising with economic development, robust military capacity, and space technology. India's space technology has emerged as global standard and attracted global power. Through space technology India can help South Asian countries in the field of navigation, remote sensing, agriculture, weather forecasting, Tele medicine, Tele-education and early warning mechanism in case of natural disaster. In this regard, India has launched South Asia Satellite in 2017 for use

by countries of the South Asian Association for regional cooperation (SAARC). The satellite was announced by prime minister of India during the 2014 SAARC summit in Nepal and all countries have since joined it except Pakistan. This is strategic initiative of India to fulfil its promise of considering India's "Neighbourhood First". Through the South Asia Satellite India has gained goodwill across the subcontinent through the gesture.

Figure 1: SAARC Nations

Source: SAARC Secretariat (2018), [Online: Web], URL: http://saarc-sec.org/about-saarc

II. Challenges to Regional Integration in South Asia

South Asia is one of the most dynamic regions in the world comprises of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka and Afghanistan. There is 1.67 billion people and economic growth of 7.1 percent in the 21st century. India is growing with steady economic growth, military capacity and remarkable progress in Science and technology, Bangladesh is leading in textile manufacturing and strong mechanism of micro finance, Bhutan is major hydro power producer, Pakistan is major producer of cement, Nepal is rising with hydro power, Sri Lanka is leading in tea production and Afghanistan is achieving post-Taliban government reconstruction

(Ahmed, Kalegama and Ghani 2014, p. 123). Despite recent economic and political development, historical tensions, trust deficit, cross border terrorism and conflicts and river dispute contribute least regional integration. At present South Asia is one of the least integrated regions of the world.

At the economic cooperation level, intra regional trade accounts for only 6 percent of South Asia's total trade, compared to 26 percent in ASEAN. intra regional investment is smaller than one percent of overall investment. Due to limited transport connectivity, onerous logistics and regulatory impediments, and lack of trust, it costs more to trade within South Asia than between South Asia and world's other regions (World Bank Report, 2017, p.1). There are several factors restraining regional integration such as historical political tension, mistrust, cross border conflicts, state sponsored terrorism, security concerns, misinformation, lack of initiative for regional cooperation, limited transport connectivity, logistics and regulatory impediments, high trade cost and investment restrictions and relative asymmetry in size among the South Asian countries (Gonsalves 2006, p. 15)

Political instability and historical political tension is core of all the conflicts in South Asia. For instance, despite a comparatively friendly relationship, India and Nepal have also had disputes. The treaty of peace and friendship of 1950 obligated to both countries to consult each other in various issues. It also required the two governments to inform each other of any serious friction with any neighbouring country that make be likely to adversely affect the ties between India and Nepal (Kher 2012, p. 5). This provision was misinterpreted by political parties and leaders in Nepal, since it restricted Nepal's autonomy. Nepal also used its proximity with China as a strategy to increase pressure on India. There is political instability in Nepal since the end of monarchy and this instability has posed threat to India strategic interests. The Communist Party of Nepal led by Pushpa Kamal Dahal Prachanda is close proximity with Chinese government and it has used this close proximity as a strategy to move away from India.

There are many other matters pending between Nepal and India, much of it due to neglect by the Kathmandu intelligentsia, such as regarding the impact of demonetisation and the application of Goods and Services Tax on Nepal's economy and citizenry. Similarly, Kathmandu prefers not to discuss the fact that the Nepali rupee is pegged to the Indian rupee and what it means for the long run. The rights of migrant Indian labour in Nepal and Nepali labour in India is a topic that rarely comes up. There are border disputes pending between the two countries-at Susta, Kalapani and the 'tri-junction' of Lipulekh. Nepal has since long planned to sell electricity to India once it has a hydropower surplus, and the completion of the much-delayed Dhalkebar-Muzaffarpur transmission line was supposed to facilitate that. But along comes an Indian government directive that it will not allow import of electricity other

than from power companies with more than 51 percent Indian equity.

From the Kathmandu perspective, politically micromanaging Nepal could not have but backfired. Take the Great Blockade, which forced the Kathmandu political leadership to reach out to Beijing and sign a slew of trade, transit and infrastructural agreements with it. Few know that Nepal is today better connected by air to Chinese cities than to India. The arbitrary blockages and go-slow at Indian Customs at border points, the selective use of quarantine for the export of Nepali agricultural produce, the increasing high-handedness of the Sashastra Seema Bal in dealing with Nepalis crossing over-these are only some of the other challenges on the bilateral relations (Sridharan and Raghavan 2007, p. 102). Meanwhile, unrest and agitations gripped the Terai region of Nepal.

The government, headed by the then Prime Minister K.P.S. Oli, made little effort to engage in a dialogue with the agitating groups. Instead, it blamed India for imposing an economic 'blockade' to pressure the government to accede to Madhesi demands. Eventually, after harsh rhetoric, both sides pulled back but the damage was done. An anti-Indian sentiment had been fanned. Mr. Oli's coalition collapsed, and he finally resigned in July, once again blaming India for his ouster.

Historically, relations between India and Sri Lanka have been fraught with controversies and even high tension at times. There has always been an atavistic fear in Sri Lanka of being dominated by India, the Big Brother just 30 nautical miles away from the island's northern tip. The fear became acute with the brazen Indian political and military intervention to settle the Tamil question in the island nation in the 1980s (Dash 2008, p. 67). But now, due to the evolution of new thinking in the corridors of power in New Delhi and the change of regime in Colombo brought about by the Presidential and parliamentary elections of 2015, the two countries appear to have broken away from the past and are moving towards mutual understanding.

India and Bangladesh share 54 trans-boundary rivers, big and small. In 1996, the sharing of the Ganga waters was successfully agreed upon between the two nations. However, the major area of dispute has been India's construction and operation of the Farakka Barrage. The aim of construction of the Farakka Barrage was to increase the lean period flow of the Bhagirathi-Hooghly branch of Ganga to increase the water depth at the Kolkota port which was threatened by siltation. As irrigation withdrawals increased in Bangladesh, dispute arose between India and Bangladesh over the sharing of the lean season flow at Farakka. The inadequacy of water during the lean season to meet the assessed demands in the two countries is the root cause of the conflict.

The Bangladesh government feels that the reduction in flow caused damage to agriculture, industry and ecology in the basin in Bangladesh. Because of the inability of the concerned governments to come to any lasting agreement over the last few decades on sharing the river water, this problem has grown and now it is also viewed

as a case of upstream-downstream dispute (Burki 2011, p. 45). The other reason for water dispute is Teesta River-which has its source in Sikkim -flows through the northern part of West Bengal in India before entering Bangladesh, where after crossing through about 45km of irrigable land, merges with the Brahmaputra River (or Jamuna when it enters Bangladesh). In 1983, an ad-hoc water sharing agreement was reached between India and Bangladesh, whereby both countries were allocated 39 percent and 36 percent of the water flow respectively. The new bilateral treaty expands upon this agreement by proposing an equal allocation of the Teesta River.

While South Asia has never been so actively engaged with the outside world, it remains woefully disengaged internally. The central relationship of the region, between India and Pakistan, continues to be oppressed by the weight of the past (Saez 2011, p. 92). History, ideology, and domestic politics have fostered divisiveness. And the geopolitics has sharpened the fault lines. Old disputes like Kashmir lurk in the background and overlap with the new ones, raising the ever present potential for conflict. The problem is India and Pakistan relate to each other but only negatively. They have known no other way to resolve these problems. Each has been engaged in weakening the other and they have done so by arms competition and use of proxies that has created an enabling environment for forces of destabilization like insurgencies, terrorism, and local and transnational religious extremism. The problem is India and Pakistan relate to each other but only negatively.

Following Prime Minister Narendra Modi's rise to power, tensions have risen to new heights. Prime Minister Narendra Modi has pursued a hardline policy designed to put internal and external pressure on Pakistan to force a change in its stance towards the jihadists and support for the Kashmir cause. The policy found kinship in Washington's own priorities in the region: containment of China, the war in Afghanistan, and the broader war on terrorism. India was a natural balancer against China and Pakistan's alliance with China, and what Washington saw as an unhelpful role in Afghanistan placed Pakistan on the wrong side (Wolf, Siegfried, Casaca, Paulo and Rodrigues, Catia, 2014, p. 110).

The unfolding political emergency in the Maldives has prompted calls for India to intervene and resolve the deteriorating situation. The crisis poses both a diplomatic and ideological challenge for New Delhi. The fast-paced flow of events in the Maldives over the past several days has caught India in a bind. The Indian government said it was "disturbed" by the Maldives government's decision of a state of emergency and concerned by the arrests of top judges and opposition leaders.

As the main regional power in South Asia, New Delhi has enjoyed traditionally close ties with the Maldives for decades. But relations between the two sides have been strained in recent years as Male has intensified its economic and political engagement with China. Indian analysts say Indian government's foremost priority is to ensure that

democracy returns to the Maldives and to that end, they say, India should use backdoor diplomacy. This is a huge challenge, given the security concerns in the region. The Maldives has forged links with China and any intervention could lead to a big fiasco. We have to be careful and ensure stability in the region (Menon and Paul 2017, p. 87).

Terrorism has plagued the region for the last several decades. However, counter-terrorism came on to the global agenda after 9/11. Though the US has managed to thwart terror after that, South Asia has not been equally lucky. Most South Asian nations are still facing the problem of terrorism, and if anything, the problem has only intensified in several cases. Nevertheless, some positive developments have also been noticed on this front during the last one or two years which have placed South Asia at a crucial juncture where further cooperation can help the region overcome this problem.

Terrorism has impacted domestic political structures in South Asian countries in a negative way. It has encouraged militarism, chauvinism and a distinct tilt towards right-wing extremism. It has been used as an excuse for undermining democracy. Though the LTTE as an organisation was set up to voice the legitimate demands of the Tamil population in Sri Lanka, its degeneration into a terrorist outfit gave the Sri Lankan state the excuse to use brute force and follow militaristic policies and it finally succeeded in obliterating the LTTE (Reddy and Devi 2002, p. 69). While this was welcomed, it also led to a massive upsurge in Sinhala nationalism, which is now coming in the way of a political settlement between the Tamil population and Sinhala-dominated Sri Lankan government.

III. Initiative for Increasing Regional Integration in South Asia

South Asia is one of the emerging economies and most dynamic regions of the world. It is home to almost 20 percent of the world's population, including 40 percent of the world's poor; yet it accounts for only three percent of the global Gross Domestic Product (GDP) and less than two percent of world trade (Chakma 2014, p 120). Despite the geographical proximity shared by South Asian countries, intra-regional trade is abysmally low. As these countries shares a common history, culture and preferences, the region has huge potential for economic cooperation, but because of political tensions and mistrust, efforts at regional inclusiveness and integration have been in the lurch. Rise in internal conflicts, political mistrust between neighbouring countries, low connectivity, and substantial trade barriers will continue to weaken South Asia's regional integration efforts as well as its identity as a region. Removal and

harmonization of all such problems is of high importance for a remarkable South Asia.

Over the last 50 years, South Asian countries have undergone substantial transformations and successfully integrated into the world economy. Regional dynamics have also changed to some extent, over time, with the presence of various institutional mechanisms. A number of institutions are working exclusively to make changes in the region, but their speed is appallingly slow. Regional cooperation initiatives began with the formation of SAARC in 1985, which led to the establishment of SAARC Preferential Trading Arrangement (SAPTA) in 1995 for enhancing regional cooperation through trade (Kumar and Goyal 2016, p. 151).

In order to deepen regional integration through increased trade flows, the South Asian Free Trade Agreement (SAFTA) came into force in 2006. SAFTA is confined only to trade in goods and has constricting conditions, such as lack of substantive tariff reduction offers, exclusion of many items through negative lists, and long time frames for tariff liberalization (Islam 2012, p. 43). Thus, in order to have regional inclusiveness to a greater extent, developed economies of South Asia will have to extend their support to push the pace of efforts towards making South Asia one unit and conceptualizing "unionism". Cooperative endeavours are required from all SAARC members, with an objective of making South Asia an ideal region with a motive to benefitting all.

India is a major emerging economy with substantial economic and political clout, not only in South Asia but also in the world. Pakistan, Sri Lanka and Maldives are developing nations, while Afghanistan, Bhutan, Bangladesh and Nepal are least developed member states. Additionally, while Sri Lanka and the Maldives are small island states, Afghanistan, Bhutan, and Nepal are landlocked nations. Given that the members are on different stairs of the development ladder, their structural composition and trade baskets do not completely overlap. Exploiting this diversity and seeking complementarities in trading structures would be the key to increase intra-regional trade. Above all, addressing political challenges and non-tariff barriers are crucial for increasing regional integration through trade (Michael 2013, p. 62).

India, being the major power among SAARC countries, must take necessary action to speed-up reforms and enhance regional harmony. Ever since the new NDA Government has been formed in India, some meaningful efforts can be seen towards improving relations with its South Asian neighbours. Escalation in efforts and sticking to the agenda of reforms is much required; the current emphasis on economic development and regional cooperation is likely to ameliorate trade relations and other associations within the region (Malone 2011, p. 46).

In case of Nepal, India played a valued role in ending the Maoist insurgency in 2006, but the period thereafter was marked by escalating micro-meddling in Nepal's internal affairs. In Constitution-writing, there were attempts to define the new provincial

boundaries according to Indian dictates pushing first an unwieldy and unworkable plains-only province, then a two-province formula (Razzaque and Basnett 2014, p. 44). Once Nepal and India get past the era of interventionism as but a bad memory, the two can concentrate on the numerous matters that need concentration and resolution. An important issue is the open border itself, which is a unique joint heritage of the two countries. While it is Nepal's Left that has traditionally demanded restrictions on the border, the call now rises from the Indian security establishment.

The Nepal plains are suffering from massive floods that have also affected downstream areas across the border. Besides the spread of settlements, a prime cause for the severity is that the Chure (Shivalik) hills have been gouged of rocks to build elevated roads and levees just south of the border, leading to inundation in Nepal (Sikri 2009, p. 88). A permanent bilateral mechanism is required to save the plains population of Nepal from suffering. The Kosi Barrage and attendant embankments have the possibility of wreaking havoc because siltation of six decades has raised the riverbed within the levees far above the outlying tracts.

In India-Sri Lanka relations, both countries having learnt lessons from recent history, the two countries now recognize the legitimacy of each other's concerns and are addressing them in a spirit of give and take to ensure that both operate within their respective comfort zones. The change was evident even in the body language of Indian and Sri Lankan leaders during the visit of Sri Lankan Prime Minister Ranil Wickremesinghe to New Delhi in the first week of October in 2015 (Pant 2016, p. 73). Several issues were resolved amicably. One of the outstanding features of the detente is India agreeing to fast track negotiations.

On the Economic and Technical Cooperation Agreement (ETCA) and sign the pact by the end of this year. But, unlike the Rajapaksa regime, the incumbent Maithripala Sirisena-Ranil Wickremesinghe government wants to build Sri Lanka economically through close links with India, especially the four South Indian states, which, together with Sri Lanka, have a combined $500 billion economy, as Wickremesinghe keeps saying. By touting close relations with South India, including Tamil Nadu, Prime Minister Wickemesinghe is signalling that Sri Lankans, at least in the top echelons, have begun to shed their fear of Tamil Nadu, which is suspected of inspiring Tamil separatism in north Sri Lanka.

Bhutan was the first country to start the battle against terrorists. This country decided to act against Indian insurgent groups in December 2003. These groups were hiding in Bhutan and running several camps there. The king of Bhutan personally led the operation and wiped out all insurgent groups. Though this step has largely solved the problem, Bhutan still faces threats from groups who claim to be Maoists and want to dislodge the present government (Chopra 2006, p. 135). This situation exists in the country despite the fact that it has successfully undergone a transition from a

monarchy to a democracy.

Another interesting turnaround has been noticed in the attitude of Bangladesh. Just two days after coming to power, Sheikh Hasina declared that Bangladesh will no longer be used as a safe haven for terror, either to launch operations within Bangladesh or to use its territory to indulge in terror activities in the neighbourhood. These were not empty words. As the year unfolded, the Sheikh Hasina government took several steps which indicated its seriousness. The government adopted a two-pronged policy-it acted against Islamist groups like the JMB and the HUJI, which were creating internal disturbances within Bangladesh.

IV. India's Space Diplomacy in South Asia

A peaceful and prosperous neighbourhood is vital if India is to achieve sustained economic growth and true national security. This thinking was evident in Indian Prime Minister Narendra Modi's invitations to the heads of governments of the South Asian Association for Regional Cooperation (SAARC) to attend his swearing-in ceremony. While this important gesture could have marked a new beginning for regional cooperation, such cooperation in South Asia still takes place mainly in the bilateral sphere (Mohan 2015, p. 145). Since 1985, India has been a key founding member of four regional initiatives, none of which have achieved any tangible results.

The European Union (EU) and the Association of Southeast Nations (ASEAN) both demonstrate that multilateral cooperation between diverse groups of countries can lead to dense economic integration and impressive growth (Khanijo and Tripathi 2018, p. 46). None of this holds true for the four regional groupings that currently exist in South Asia, the Bay of Bengal, the Indian Ocean Rim, and the Mekong-Ganga area. The genesis and cooperative state-of-affairs of all four exhibit comparable deficiencies, testament to Indian insistence on minimal multilateralism.

Figure 2. The South Asia Satellite

Source: Department of Space (2018), GSLV Launches South Asia Satellite

In the case of SAARC, it took seven years of protracted negotiations until the organization was eventually founded in 1985, with Bangladesh as its initiator. Today's members are Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka, totalling 1.5 billion people. Since the inception of SAARC, there have been eighteen summit meetings, hundreds of ministerial meetings, and, as of 2015, there are six conventions and eleven agreements. The weak institutional design is based upon a pyramidal structure with summits at the apex, supported by a Council of Ministers (foreign ministers), a Standing Committee (foreign secretaries), and technical and action committees (Deepak 2016, p. 50).

The secretariat, located in Kathmandu, coordinates and monitors the execution of the various SAARC activities and prepares meetings. The Secretary-General is assisted by a Professional and a General Services Staff. Each member country sends one country director to the secretariat who is assigned to one of eight Working Divisions. In all, the secretariat has a permanent staff of about fifty, and the annual SAARC budget for the secretariat stands at approximately $2.5 million.

The institutional and budgetary chains that the SAARC charter has put around the organization-on the diplomatic pressure of India-have severely limited the organization's ability to advance cooperation. The Charter stipulates that no bilateral and contentious

issues are to be discussed and that the Panchsheel are the guiding principles of the organization (Kugiel 2017, p. 29). There is general accord that SAARC has been somewhat useful as a forum for informal talks between, for example, India and Pakistan, but the major objective of a South Asian Free Trade Area (SAFTA), though officially in existence since 2004, has still not been achieved. India embarks on space diplomacy like never before. For the first time, New Delhi is flexing its prowess of space technology by embarking on an unprecedented and un-chartered 'stratospheric diplomacy' through a special 450 crore gift for south Asians.

India is carving a very unique place in the universe, this week New Delhi will 'gift' a heavyweight bird in the sky to its neighbours through the 'South Asia Satellite'. India is opening its heart out to its neighbours, explains External Affairs Ministry spokesperson Gopal Baglay, adding "neighbourhood first is now being extended beyond the stratosphere". It seems this 'gift' of a communications satellite for use by neighbours at no cost has no parallels in the space- faring world, all other current regional consortia are commercial for-profit enterprises. Therefore, it seems Prime Minister Narendra Modi, who is a known visionary space buff, is placing the Indian Space Research Organisation (ISRO) in a new orbit by providing this space-based platform that would cost the participating nations almost $1,500 million over the 12-year life of the satellite (Menon 2018, p. 29).

On May 5, 2017, the skies above the island of Sriharikota on the coast of the Bay of Bengal will be lit up as the Geo-Synchronous Satellite Launch Vehicle (GSLV) also called the 'naughty boy of ISRO' on its 11th mission will carry a message of peace like never before. The nearly 50-m-tall rocket that weighs about 412 tons will carry what is now dubbed as the 'South Asia Satellite' or what the Indian Space Research Organisation (ISRO) still prefers to call GSAT-9. The 2230-kg satellite has been fabricated in three years and is purely a communications satellite costing 235 crore. The uniqueness of this satellite is that it will have a footprint that extends all over South Asia and India is gifting this heavenly messenger to its neighbours who according to India's assessment could be helped in better utilising these space based technologies.

The South Asia Satellite has 12 Ku band transponders which India's neighbours can utilise to increase communications. Each country will get access to at least one transponder through which they could beam their own programming and there could be common 'south Asian programming' as well. Each country has to develop its own ground infrastructure though India is willing to extend assistance and know-how. According to the government. the satellite will "enable a full range of applications and services to our neighbours in the areas of telecommunication and broadcasting applications viz. television, direct-to-home (DTH), very small aperture terminals (VSATs), tele-education, telemedicine and disaster management support". The satellite also has the capability to provide secure hot lines among the participating nations in addition

since the region is highly prone to earthquakes, cyclones, floods, tsunamis, it may help in providing critical communication links in times of disasters.

In this unusual message of peace, India's most hostile neighbour Pakistan has fully opted out. Rest of the seven nations part of the South Asian Association for Regional Co- operation (SAARC) are already on-board with Afghanistan still to ink the deal with some minor technical details still to be fixed in Kabul. Nepal, Bhutan, Maldives, Bangladesh and Sri Lanka have agreed to be part of this mission. When Prime Minister Narendra Modi was just a fresher and just four weeks into his new position on June 30, 2014, he surprised the world while speaking to the scientists at ISRO in Sriharikota as he asked "the space community to take up the challenge of developing a SAARC Satellite that we can dedicate to our neighbourhood as a gift from India". The proposal emerged directly from Indian prime minister and the leadership at ISRO was stunned into silence not knowing what this space animal will look like.

A highly-impassioned Indian prime minister, who had just witnessed a successful launch, said "I believe that the fight against the poverty of the countries of SAARC is the fight against illiteracy, the fight against superstitions, the challenge of moving forward in the scientific field is the possibility of providing opportunities to young people of SAARC countries". "Our dream of this SAARC Satellite will work in the welfare of all our neighbouring countries Indian prime minister said and that's why I have proposed in front of you today that we offer a valuable gift to our SAARC countries through a SAARC Satellite launch so that we also become partners in their welfare. The Indian government reinforced this idea five month later when speaking in Kathmandu at the SAARC Summit on November 26, 2014. Indian prime minister said, India's gift of a satellite for the SAARC region will benefit us all in areas like education, telemedicine, disaster response, resource management, weather forecasting and communication (Chaulia 2016, p. 79).

India will also host a conference in India for all South Asian partners next year, to strengthen our collective ability to apply space technology in economic development and governance. And, we plan to launch our satellite by the SAARC Day in 2016. Indian prime minister's sincere efforts got a jolt when even after participating in the planning meeting on June 22, 2015, Pakistan decided to 'opt out' from the proposed SAARC satellite suggesting that 'Pakistan has its own space program'. So the project was renamed to 'South Asia Satellite' but sources say Pakistan was not allowed to veto the development project (Prasad 2017, p. 65). Meanwhile frequency co-ordination activities took longer than expected and the launch got postponed by almost six months. Among India's neighbours, three nations already possess full-fledged communication satellites with Pakistan and Sri Lanka having been helped by China; Afghanistan also has a communication satellite actually an old India-made satellite acquired from Europe.

Bangladesh is likely to have its first bird in the sky later this year made with help

from Thales. Essentially, it is the tiny nations of Bhutan and Maldives that may benefit in the long run. Incidentally, Nepal has already floated a tender to acquire two communications satellites. Experts say "Pakistan has missed an opportunity" since its own space program is currently in a primitive stage as compared to India's. This is despite the fact that Pakistan actually launched its first rocket five years ahead of India and its space agency Pakistan Space and Upper Atmosphere Research Commission (SUPARCO) is older than ISRO. Pakistan has had five satellites in space but today lacks heavy duty launchers and satellite fabrication facilities. There is no doubt that through the South Asia Satellite India is actively trying to counter China's growing influence on its neighbours (Viondan 2017, p. 55).

V. Conclusion

Despite its shared history, culture, and geography, South Asia is the least economically integrated region in the world. But with greater cooperation, the region can better develop, share resources, and foster a sense of common destiny and mutual belonging among its people. India made its biggest space diplomacy push today when the Geosynchronous Satellite Launch Vehicle (GSLV-F09), carrying the GSAT-9 or the "South Asia" satellite, was launched successfully at 4.57 p.m. from Sriharikota, Andhra Pradesh. The GSAT-9 has been launched with an objective to provide different communication applications in Ku-band with coverage over South Asian countries, The Geostationary Communication Satellite is built by the Indian Space Research Organisation (ISRO) and is part of Prime Minister Narendra Modi's space diplomacy efforts. GSAT-9, considered as a 'gift' to its South Asian neighbours, rode piggyback on the space agency's rocket GSLV-F09 with indigenous Cryogenic Upper Stage.

The immediate beneficiaries of the SAS programme will be the SAARC nations, each of which getting access to at least one out of the 12 Ku-band transponders, primarily used for broadcast services.No wonder that today's launch is being hailed as the high point of India's space diplomacy in the South Asian region, where China, a major space power, has significant influence. Responding to the launch, Modi and the heads of all participating nations were bullish on the new cooperation in this crucial sector. The SAS is seen as a turning point for India to play a greater role in the region. New Delhi's offer to help in the using of data collected by the satellite as also with setting up the ground infrastructure will enhance India's influence.

Meanwhile, China along with Pakistan, Bangladesh and a number of other countries have set up a regional partnership organization called the Asia-Pacific Space Cooperation Organization, with project that include sharing data, establishing a space

communication network, and tracking space objects. China is helping set up a space academy satellite ground station alongside the launch of a telecommunications satellite in 2015 for Sri Lankan firm Supreme SAT Pvt. Ltd., and signed an agreement with the Board of Investment of Sri Lanka for the purpose.

Bangladesh and Maldives were also expected to pursue a similar path. Meanwhile, Pakistan is expected to receive military grade positioning and navigation signals from China's BeiDou system. These developments have shocked the Indian establishment, but still New Delhi has yet to sign a memorandum of understanding or agreement with any of the other SAARC members. With the support of the new Modi government, ISRO is expected to reverse the trend and be proactive in space diplomacy.

The strategic significance of the South Asia Satellite is enormous, as it has signalled a deeper integration of India with its neighbours. The push towards regional cooperation of SAARC countries will be seen as an effort towards development of the South Asia region, with India being seen as a big brother. India is the only space faring country amongst the SAARC nations with fully developed satellite fabrication, launch and monitoring capability. Sharing the benefits accrued from the satellite will go a long way in bridging the gap between the countries of the region. What India has offered is not just its technological prowess, but also a shared future, as a developed South Asia is essential for India to emerge as a leading economy of the world. While putting a South Asia Satellite in orbit is just the beginning, sharing the services of Navigation Indian Constellation (NAVIC) could be the next step. Proactive diplomacy through space will also help in countering the growing influence of China in the neighbourhood.

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The Mediating Effects of Social Exchange Relationship in Predicting Employees Behaviors From Organizational Justice

Mya Thett Oo*

Yangon University of Economics

ABSTRACT : This study investigates the relationship between organizational justice and employee behaviors by considering the mediation effect of leader member exchange relationship. A sample of 150 employees from seven hotels in Yangon were randomly selected and analyzed using structured questionnaire, with five-point Likert scales. Multiple regression analysis is used to explore the relationship between organizational justice, leader member exchange relationship and employee behaviors using SPSS 22. Baron and Kenny approach was used to determine the mediation role of leader member exchange relationship. The results demonstrate that perceptions of organizational justice positively predicts in-role behavior (IRB) and organizational citizenship behavior (OCB). Leader Member Exchange relationship is a full mediator on the relationship between organizational justice and in-role behavior and organizational citizenship behavior. The results provide considerable insight into the perceptions of organizational justice and suggest guidelines for managers how to promote employees' perception of organizational justice and employee behavior at hotels in Yangon.

Key words : organizational justice, in-role behavior, organizational citizenship behavior, leader member exchange relationship,

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* Associate Professor, Department of Commerce, Yangon University of Economics
  Tel:(+95) 92059945, E-mail: myathet7 @gmail.com

I. Introduction

In this highly competitive business environment, organizations need to promote their efficiency and performance for their survival and long-term growth in the future. The success or failure of an organization largely depends on the behaviors of employees. Today, changes in organizational environments, their resultant innovations, flexibility are emphasized, which necessarily calls for in-role behavior and voluntary behavior from members of an organization. Employees, as members of the organization, react and elicit different behaviors depending on different external and internal stimuli.

Core task behaviors means in-role behaviors and extra-role behaviors as arbitrary behaviors Katz and Kahn (1966). The in-role behavior (IRB), also known as core-task behavior, was defined by William and Anderson's (1991) as the necessary or the expected behavior for the accomplishment of work; and reflected in the official salary system in the organization. Organ (1988) categorized extra-role behaviors as organizational citizenship behaviors. He defined extra-role behaviors, or "organizational citizenship behaviors" (OCB) as purely discretionary behaviors that could not be explicitly rewarded or punished, but which on the whole, contributed to organizational functioning. OCB come in a variety of forms such as loyalty, helping others, and organizational compliance and organizations benefit employees who are willing to contribute their efforts and abilities to the organizations even though that is not officially required of them.

Employee's thoughts about work and their feelings about work are influenced by their perception of how they are treated fairly by their organization and their superiors. The individual's perception of fairness in organizations was termed as "organizational justice" by Greenberg (1987). Although there are many potential linking mechanisms, this study focuses on social exchange process, such as what occurs between a supervisor and his/her subordinate (Cropanzano et al., 2007). This social exchange process is very important and meaningful to employees in an organization and therefore is likely to affect to their behavior. Leader- member exchange (LMX) represents the social exchange process between an employee and his/her supervisor.

This study tries to find the relationship between organizational justice and behaviors of employees at hotels in Yangon with the mediation effect of leader member exchange relationship. With the rapidly growing market potential, the demand for hotel business in Myanmar is eventually growing; and the competitiveness in this industry will gradually be intense in the near future. Meanwhile, they need to strive for the survival and long term growth in the economy, by trying to boost up the performance of the organization. Out of the other factors that influence the performance of the organization, one of the important yet often less emphasized one is employees'

behaviors. The behaviors of employees are most likely to be influenced by the organizational justice. This study contributes to the justice and behavior literature in Myanmar, as it employs the social exchange theory between the organizational justice and behaviors of employee relationship in the context of hotel business in Yangon.

II. Literature Review and Hypotheses

Organizational justice basically explains the fairness perceptions of individuals or of group and then their behaviors can be observed according to the treatment they receive from their organization (Deutsch, 1975). The concept of organizational justice, firstly coined by Greenberg (1987), was termed as an employee's perception of fairness in their organizations' behaviors, decisions and actions and how these influences the employees own attitudes and behaviors at work. Most researchers accept that a perceived injustice can be explained in terms of distributive, procedural, and interactional justice. Distributive justice (Homans 1961) relates to the perceived fairness of an outcome that a person receives. The most influencing theory in terms of distributive justice is the equity theory by Adams (1963). Equity theory indicates that individual makes fairness judgments regarding the outcomes they received by comparing the ratio of their outcomes to outcome/input to that of others. Thibaut and Walker (1975) were the pioneers who introduced the procedural justice. The key requirement for procedural justice is optimal distribution of control. Leventhal (1980) identified the six rules for fair procedures namely: consistency to all, free from bias, accuracy of information, representative, and consistency of ethical norms. Finally, interactional justice involves perceptions of the fairness of the communication involved in organizational practices. Interactional justice, an extension of procedural justice, pertains to the human side of organizational practices, that is, to the way the management (or those controlling rewards and resources) is behaving towards the recipient of justice. As such, interactional justice relates to the aspects of the communication process between the source and the recipient of justice, such as politeness, honesty, and respect (Bies & Moag, 1986). Thus, justice perception may interact with the perceptions of leadership in predicting employee behaviors. It is needed to describe particular theory of leadership that of LMX.

Theories of Leader-Member Exchange (LMX) first appeared almost 30 years ago (Dansereau et al., 1973). The basis of LMX is that "dyadic relationships and work roles are developed and negotiated over time through a series of exchanges between leader and member" (Bauer & Green 1996). In the context of a positive dyadic exchange, the individual or entity from which justice emanates will be the focus, or beneficiary, of the

resultant behaviors. Certainly, the organization as a whole benefits from both in-role and extra-role behaviors; the distinction here lies in the primary benefit provided to a specific individual, namely the partner in the LMX dyad. More specifically, LMX suggests that the supervisor cultivates his or her relationship with each of his or her employees, in a series of dyadic exchange relationships designed to enhance both the in-role performance of the employee, as well as to benefit the supervisor him- or herself.

Linking Organizational Justice, LMX, and Employee Behaviors. There are many studies finding the relationship between justice and employee behaviors. In the study of (Wang et al., 2002) found that distributive justice and interactional justice have positive relationship with task performance of employees but not procedural justice. Among them, interactional justice was the best predictor of task performance in comparing with distributive and procedural justice. According to (Burton, Sablynski, & Sekiguchi, 2008), distributive justice is found to have positive relationship with performance of employees and interactional justice with OCB. Procedural justice has positive significant relationship with OCB according to (Lee, Kim, & Kim, 2013). Justice literature, same like OCB also has a complicated history. Different authors discussed in different perspectives, viewing justice from one to two different dimensions. In this study, organization justice as single construct comprising of items from three different dimensions is to have positive impact on two types of employee behaviors, IRB and OCB.

Hypothesis 1: Organizational justice has a positive relationship with (a) In-role behaviors (IRB) and organizational citizenship behaviors (OCB).

Wayne et al., (2002) tested the distributive justice and procedural justice to have an effect on LMX. However, both of them failed to prove it. Manogran et al., (1994) and Masterson et al., (2000) found that interactional justice is positively related to LMX. Again, the latter also showed some support for the effect of distributive justice on LMX even though they did not include the path in their main study. Both of the studies tested the relationship from different dimensions of justice rather than treating the OJ as an overall construct. In this study, OJ is an overall construct of higher order latent factor and it would be interesting to know how OJ as a whole in general affect LMX.

Hypothesis 2: Organizational justice has a positive relationship with LMX of employees.

Empirical research indeed has demonstrated that LMX has significant influences on task performance (Gerstner & Day, 1997). Subordinates in higher quality LMX relationships "payback" their leaders by engaging in citizenship (i.e., discretionary) behaviors that benefit the leader and others in the work setting (Settoon, Bennett & Liden, 1996). To reciprocate high LMX relationships, it is likely that subordinates will go beyond required in-role behavior and engage in citizenship behaviors in order to maintain a balanced or equitable social exchange (Wayne et al., 2002). LMX was found related to in-role performance (Wayne et al., 2002). Therefore, this study propose to

substantiate these result by testing the following hypothesis.

Hypothesis 3: LMX of employees has positive the relationship with (a) IRB and (b) OCB of employees.

Masterson et al., (2000) found that LMX mediated the relationship between interactional justice and OCB beneficial to the supervisor. Wayne et al. (1997) also assessed whether LMX would mediate the relation between perceptions of procedural and distributive justice and OCB. They found that both procedural and distributive justice were not related to LMX, nor does LMX relate to OCB. Cropanzano et al., (2007) have found support for the association between interactional justice and performance by way of the LMX, but pointed out that the relationships demand further attention. Following Lee (2007), current study tests the mediation effect of LMX on organizational justice and two types of employee behaviors, IRB and OCB.

Hypothesis 4: LMX mediates the relationship between OJ and (a) IRB and (b) OCB of employees.

III. Method

Data were collected from 150 employees from seven hotels in Yangon. Although total number of sample collected was 170, some of the data were rejected because of the missing values, unresponsive questionnaires and for outlier adjustment purpose as well. Finally, a total of 150 responses were remained for the purpose of data analysis. The questionnaire was divided into two parts. Part A tried to investigate the demographic characteristics of the respondents such as gender, age, number of years in the current job, educational status, etc. Part B seeks the respondents self-rated scales about their perception on organizational justice, LMX, and OCB. It was also made sure that respondents were well informed about the consent, the purpose of the study, and their confidentiality. For each sub item of Part B in the questionnaire, five-point Likert Scale was used, ranging from 1 meaning "strongly disagree" to 5 "strongly agree" to the question about their perception.

IV. Analysis and Results

Multiple regression analysis was conducted with the help of SPSS version 22 software. Firstly, the descriptive statistics of the sample were computed. Out of the 150 remaining respondents, 100 were male participants, accounting for 66.7% of the whole sample; while 50 were female, representing 33.3% of the sample. The majority of the

respondents were from 18 to 25 age group comprising 29.3% of the whole sample, followed by 26 to 30 age group, with the number of 37 respondents, which means 24.7% of the whole sample group, while 31-35 group falls about 14%, 36-40 group accounts for 12% and respondents over 41 occupied 20% of the sample. In checking the area of work respondents belong to, it was found that respondents have diverse distribution of the fields in hotel service. It is good news as different sets of employees could give different information for the study.

Table 1. Correlations matrix of the study variables

	Mean	SD	Cronbach's alpha	OJ	IRB	OCB	LMX
OJ	1.611	0.295	0.908	1			
IRB	3.979	0.596	0.877	0.177*	1		
OCB	3.378	0.501	0.821	0.262**	0.795**	1	
LMX	4.107	0.671	0.820	0.881**	0.284**	0.396*	1

*$p \leq 0.05$, **$p \leq 0.01$, ***$p \leq 0.001$. OJ= overall organizational justice, LMX= leader-member exchange, IRB= In-role behavior, OCB= organizational citizenship behavior

Mean, standard deviation, and the correlations of the variables are shown in Table 1, with Cronbach's alpha values for each variable. All the variables have alpha value above the 0.7 which is the cut-off criteria to show the reliability of the construct variables (Harir, Black, Babin, & Anderson, 2009). Then, Pearson's correlation analysis was conducted to test the further regression analysis. The results were shown in Table 1. From the table, we can see that variables have high, significant correlations to each other. It shows a good signal for further regression of the model.

Then, multiple regression analysis was run with the help of SPSS version 22 to test the hypotheses. The results were shown in Table 2. Firstly, the regression was run to test the relationship between OJ and IRB. F value is 4.756 and its p-value is 0.030. The regression coefficient is 0.356 (t=2.183, p=0.031) said that OJ is strongly and positively related with IRB. Since the relationship is positive, OJ can be said to have a direct relationship with IRB. Therefore, hypothesis 1 (a) was approved. Secondly, the regression was run to test the relationship between OJ and OCB. F value is 10.943 and its p-value is 0.001. The regression coefficient is 0.444 (t=3.308, p=0.000) said that OJ is fairly, significantly and positively related with OCB. Since the relationship is positive, OJ can be said to have a direct relationship with OCB. Consequently, hypothesis 1(b) is supported.

Table 2. The Regression Analysis on the Relationship between OJ and Employee Behaviors

Variables	Unstandardized coefficient	t value	Sig	F value	Sig
IRB	0.356	2.183	0.031	4.756	0.030
OCB	0.444	3.308	0.001	10.943	0.001

Source: Survey data (2019)

Baron and Kenny's approach to mediation analysis (1986) was used to determine the mediating effects of LMX on the relationship between OJ and IRB, and OCB respectively. Multiple regression analysis can be divided into four steps. The first one is regression analysis on the relationship between organizational justice and employee behaviors such as IRB, OCB. The second one is regression analysis on the relation between organizational justice and mediator, LMX. The third one is the regression analysis on the relationship between mediator and employee behaviors. All the above three paths should be significant to have a mediation effect. And the fourth and final one is mediator (LMX) adding to the third step. Again, if the direct effect of independent variables on dependent variables is significantly reduced, it shows the existence of partial mediating role; if the effect is not significant, it shows the existence of full mediation role. The results are shown in Table 3.

Table 3. Analysis on the Relationship between OJ, LMX and Employee Behaviors

Independent variables	Dependent Variable			
Step 1	IRB		OCB	
	Unstandardized Coefficient	Sig.	Unstandardized Coefficient	Sig.
OJ	0.356	0.031	0.444	0.001
Step 2	LMX			
	Unstandardized Coefficient		Sig.	
OJ	2.002		0.000	
Step 3	IRB		OCB	
	Unstandardized Coefficient	Sig.	Unstandardized Coefficient	Sig.
LMX	0.252	0.000	0.295	0.000
Step 4	IRB		OCB	
	Unstandardized Coefficient	Sig.	Unstandardized Coefficient	Sig.
OJ	-0.659	0.140	-0.605	0.470
LMX	0.551	0.000	0.510	0.001

Source: Survey data (2019)

According to the results shown in the first step of three regression models, the

standard regression coefficient between OJ and IRB is 0.356 (p=0.031), and that of between OJ and OCB is 0.444 (p=0.001). Since all the paths are significant from OJ to employee behaviors, the model in this step sets up. In the second step, the regression was run with the mediator and the dependent variables. The standardized regression coefficient between OJ and LMX is 2.002 (p=0.000). Since LMX is significantly related with OJ, the condition of the second step about mediating role is established and hypothesis 2 was approved. In the third step, the standardized regression coefficient between LMX and IRB is 0.252 (p=0.000) and significant. Hypothesis 3(a) was supported. The standardized regression coefficient between LMX and OCB is 0.295 (p=0.000) and the path is significant that we can further proceed to the mediation analysis. Again, hypothesis 3(b) was again approved. In the fourth step, LMX was added to the overall model of OJ and employee behaviors (IRB, OCB). The results show that from the path of OJ to IRB, and OCB are not significant, LMX serves as the full mediator on the relationship between OJ and employee behaviors. Thus, Hypothesis 4(a) and (b) were approved.

V. Discussion and Recommendation

From the results, organizational justice was found to have positive significant impact on each of the employee behaviors (IRB, OCB). Employees react very strongly to the perceptions of organizational justice and it would be very important for the managers to take charge of every aspects of organizational justice in the organization in order to have better employee outcomes. The results were also in line with the social exchange theory that employees do reciprocate the favorable treatment of their organization, believing that those reciprocation will help generate the future favorable treatment from the organization. Leader member exchange relationship also has greater portion of the explanation from organizational justice. For the long-run, hotels should have specific and detailed plan to change a different perspectives of organizational justice and behaviors of employees. For creating a better sense of distributive, procedural and interactional justice, top management should arrange corporate retreat programs for the employees to be ready for the organizational change. Gradually, the organization culture should be changed so that employees have better in-role and extra-role behaviors. Leader member exchange relationship also plays a full mediating role in organization justice and employee behaviors. Hotels should exploit these opportunities and train managers to be able to coach their subordinates not only through carrot and stick approach of motivating employees. Also with the relationship oriented approach in the highly collective society, they could utilize the group dynamics in the management

of better behaviors among employees.

VI. Conclusion

For hotel industry in Myanmar, the results clearly show that organizational justice has been linked to healthy, energized work environments and to the capacity to make the changes necessary to adapt to changing conditions and ensure organizational continuity. In a highly competitive marketplace, hotels in Myanmar must work to protect and advance their long term, distinctive role as essential organization or firms in the mosaic of postsecondary organizations. Overall, the results provide considerable insight into perceptions of organizational justice and suggest guidelines for managers on how to promote employees' perceptions of organizational justice and employee behaviors at hotels in Myanmar. As it is found that there is a relation between organizational justice and employee behaviors, not only the hotel industry in Myanmar but also other (both private and public) sectors become aware of the ways to promote employee behaviors. It enables them to participate more in changing environment and do better organizational change. Therefore, this study indirectly contributes to promote economy of Myanmar because it expresses the potentials to change and promote the attitudes and behaviors of human resources.

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An Analysis on Agricultural Sector of Myanmar: Trend and Estimation Approach

Khin Thida Nyein*
Yangon University of Economics

ABSTRACT: This study investigates the trend and estimation of agricultural sector in Myanmar from the period of 1988/89 to 2017/18 by employing data on agriculture, livestock & fishery, and forestry sectors. The objectives of the study are to analyze the situation of each sector; to investigate a suitable fitted trend of agricultural sector; and to estimate the production value of agricultural sector for the coming three years. Descriptive analysis and curve estimation regression model are used in this study. The data which is employed in this study is received from Ministry of Planning and Finance. It is found that the production value of livestock & fishery component considerably increases although that of agriculture and forestry components decreases a bit in last two years.The fitted trend of agriculture, livestock & fishery, and forestry sectors is cubic trend. A suitable fitted trend for agricultural sector is exponential trend. It is also found that the production value of agricultural sector for the coming three years will significantly increase. Therefore, the farmers should try to improve the volume of production by many possible ways such as discussing with agriculturalists and using modern technologies.

Key words : agriculture, livestock & fishery, forestry, trend,

I. Introduction

Myanmar is the largest country in Southeast Asia. The area of the country is 261,228 sq.miles (676,577 sq. km). Myanmar is rich in natural resources such as agricultural, fishery, timber, and mineral and water resources. Myanmar's land, water and weather

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* Ph.D, Professor, Department of Economics, Yangon University of Economics, email:ktdnyein@gmail.com

are suitable for agriculture. Being an agriculture-based country, the main commodities of Myanmar are – rice, and various kinds of pulses and beans. The others are fishery products, timber, and mineral products. Hence, the main exports of Myanmar become agricultural products. Therefore, it can be said that agricultural sector is very important for the economy of Myanmar. Accordingly, this study aims to analyze trend and estimation of agricultural sector in Myanmar from the period of 1988/89 to 2017/18.

II. Objectives

The objectives of the study are as follows:
To identify the situation of each sector: agriculture, livestock & fishery, and forestry,
To investigate a suitable fitted trend of agricultural sector, covering each component separately, and,
To estimate the production value of agricultural sector, covering each component separately, for the coming three years.

Aiming at the development of livestock and fishery sector, the government has been undertaking with the four main objectives

III. Methods

This study employs descriptive analysis based on secondary data which is received from Ministry of Planning and Finance to depict the situation of each sector in the economy of Myanmar during the study period. In order to investigate a suitable fitted trend of agricultural sector, covering each component separately, curve estimation regression model is used in this study based on time series data on the value of production with the assumption of unchanged time trend. The values of agricultural sector, covering each component separately, for the coming three years are derived from the results of suitable fitted trend.

IV. Situation of Agricultural Sector

Being an agro-based country, the development of agricultural sector is very important for the economy of Myanmar. Agricultural sector includes three components:

agriculture, livestock & fisheries, and forestry sectors. In accordance with three objectives which are laid down by the Ministry of Agriculture: to get paddy surplus; to be sufficient edible oil; and to increase the production of beans & pulses and industrial crops, the government is attempting to develop the agricultural sector. There are ten major crops which are grown across the country; namely Paddy, Maize, Matpe (black gram), Pedisein (green gram), Pesingon (pigeon pea), Groundnut, Sesamum, Sunflower, Long staple cotton, and Sugarcane. In addition, the Department of Agriculture is trying to develop more rubber and coffee as perennial crops. Aiming at the development of livestock and fishery sector, the government has been undertaking with the four main objectives[5] which are (1) increasing the production of draught animals, (2) encouraging the production of dairy products, aiming at facilitating import substitution (3) raising meat production, aiming at enhancing the nutritional status of the people, and (4) increasing the income of livestock farmers. The improvement of livestock breeding is shown in the following table.

Table 1. Progress in Livestock Breeding (in lakh)

S.N	Year	Cattle	Buffalo	Sheep/Goad	Pig	Fowl	Duck
1	1988/89	91	20	13	24	242	36
2	1989/90	93	21	13	22	232	32
3	1990/91	94	21	13	24	249	37
4	1991/92	95	21	14	26	265	47
5	1992/93	96	21	14	26	269	45
6	1993/94	97	21	14	27	273	43
7	1994/95	99	22	15	30	294	50
8	1995/96	101	23	16	33	327	54
9	1996/97	103	23	16	35	344	56
10	1997/98	105	23	17	36	376	59
11	1998/99	108	24	17	38	410	62
12	1999/2000	110	24	18	40	450	65
13	2000/2001	112	25	19	42	525	69
14	2001/2002	115	26	20	46	614	73
15	2002/2003	117	26	21	49	637	77
16	2003/2004	119	26	22	53	721	84

5) Myat Thein, Economic Development of Myanmar, 2004, pp-190

17	2004/2005	121	27	24	57	829	96
18	2005/2006	124	28	26	64	947	101
19	2006/2007	127	28	29	71	1080	111
20	2007/2008	129	29	32	78	1228	123
21	2008/2009	131	29	35	84	1355	127
22	2009/2010	1282		227	3271	5630	542
23	2010/2011	1433		256	3581	6114	601
24	2011/2012	1554		291	3788	6447	624
25	2012/2013	1701		324	4115	7094	701
26	2013/2014	1857		363	4540	7759	746
27	2014/2015	2022		413	5105	8518	791
28	2015/2016	2220		479	5365	9227	825
29	2016/2017	2319		494	5427	9435	831
30	2017/2018	2462		506	5630	9804	882

Source: Ministry of Planning and Finance

Myanmar is rich in natural resources for both inland fisheries and marine fisheries. There are several rivers, creeks, lake and ponds in the country; therefore, it can be said that there is a good potential for fish and prawn production. In addition, the government allows fish farming industry to the private sector, aiming at increasing fish production.   Accordingly, it can be seen that the production of fishery sector has been increasing during the period of 1988/89 and 2017/18 as shown in the following table.

Table 2. Production of Fishery Sector

Sr. No.	Particulars		Pearl (Momme)		Oyster Shell (Metric ton)		Fish and Prawn (Viss in Lakh)	
							Fresh Water	Marine
1	1988/89		7335		46.3		736	3438
2	1989/90		4800		64.0		878	3615
3	1990/91		5544		55.2		875	3601
4	1991/92		3318		40.6		1024	3615
5	1992/93		3849		23.7		1186	3660
6	1993/94		2812		26.7		1311	3687
7	1994/95		3100		24.0		1348	3692
8	1995/96		3971		28.6		1335	2789
9	1996/97		6655		21.8		1420	3865
10	1997/98		5748		32.6		1416	4170
11	1998/99		7909		33.5		1536	4652
12	1999/2000		10239		26.6		1828	5490
13	2000/2001		5990		34.3		2150	5704
14	2001/2002		22030		37.5		2721	6324
15	2002/2003		39263		49.7		3343	6493
16	2003/2004		72575		66.8		5230	6930
17	2004/2005		124207		98.4		6045	7523
18	2005/2006		177692		85.2		7380	8419
19	2006/2007		240596		97.7		8173	9341
20	2007/2008		235895		138.0		9205	10341
21	2008/2009		238745		131.1		10249	11429
22	2009/2010		229951		92.7		11390	12612
23	2010/2011		291700		75		12202	13279
24	2011/2012		291000		106		13139	14286
25	2012/2013		302500		134		13671	15211
26	2013/2014		351641		160		14362	16548
27	2014/2015		424628		157		15082	17479
28	2015/2016		433612		137		15892	18352

| 29 | | 2016/2017 | | 512334 | | 161 | | 16161 | | 18595 |
| 30 | | 2017/2018 | | 443137 | | 171 | | 16690 | | 19304 |

Source: Ministry of Planning and Finance

Similarly, the government has tried to increase the production of timber. So, it was seen that the production increased gradually up to the year 2012/13. However, the production gradually decreases after the year 2012/13 because of policy changes which leads to forest conservation, aiming at protecting environmental degradation. The production of teak and hardwood is shown in the following table.

Table 3. Production of Teak and Hardwood (Thousand cubic ton)

Sr.	Year	Teak	Hardwood			
No.			State	Co-operative	Private	Total
1	1988/89	291	399		631	1030
2	1989/90	391	530	4	803	1337
3	1990/91	440	648	10	884	1542
4	1991/92	362	653	6	887	1546
5	1992/93	341	624	3	791	1418
6	1993/94	332	712	2	866	1580
7	1994/95	272	512	3	702	1217
8	1995/96	230	623	1	626	1250
9	1996/97	203	734	2	624	1360
10	1997/98	246	828	2	689	1519
11	1998/99	262	865	3	693	1561
12	1999/2000	266	851	2	741	1594
13	2000/2001	254	950	3	778	1731
14	2001/2002	282	1136	3	766	1905
15	2002/2003	303	1073	4	775	1852
16	2003/2004	364	1127	4	777	1908
17	2004/2005	304	1149	5	788	1942
18	2005/2006	312	1177	5	794	1976
19	2006/2007	325	1218	4	839	2061
20	2007/2008	347	1269	3	846	2118
21	2008/2009	249	1316	2	864	2182
22	2009/2010	202	1448	3	861	2312
23	2010/2011	234				2176
24	2011/2012	274				2453

25	2012/2013	280				2510
26	2013/2014	248				1837
27	2014/2015	114				1643
28	2015/2016	118				1595
29	2016/2017	16				893
30	2017/2018	24				1190

Sources: Ministry of Planning and Finance

As shown in the above table, timber production is decreased in later periods because of a change in government policy regarding timber production. The following table shows the production value of agricultural sector including agriculture, livestock & fisheries, and forestry components.

Table 4. Situation of Agricultural sector from 1988/89 to 2017/18 1985/86 Constant Price (kyats-million)

S.N	Year	Agricultural Sector	Agriculture	Livestock & Fishery	Forestry
1	1988/89	22595.2	18137.6	3780.2	677.4
2	1989/90	23589.1	19088.8	3630.3	870
3	1990/91	24022.2	19470.6	3609.8	941.8
4	1991/92	23451	18708.3	3816.7	926
5	1992/93	25914.4	21028.6	3990.2	895.6
6	1993/94	27095.2	22008.7	4182	904.5
7	1994/95	28693.5	23483.3	4434.8	775.4
8	1995/96	30072.1	24764.7	4567.1	740.3
9	1996/97	31562.1	25697.6	5108.5	756
10	1997/98	32729.4	26480.4	5471.7	777.3
11	1998/99	34202.8	27417.3	5983.3	802.2
12	1999/2000	38124.3	30297.3	6988	839
2000/01 Constant Price					
S.N	Year	Agricultural Sector	Agriculture	Livestock & Fishery	Forestry
13	2000/01	1461149.5	1245437.8	201379	14332.7
14	2001/02	1588268.2	1346030.3	226801.9	15436
15	2002/03	1684056.4	1409041.3	258619.9	16395.2
16	2003/04	1881224.1	1539696.6	324082	17445.5
17	2004/05	2087812	1697099.7	374298	16414.3
2005/06 Constant Price					

S.N	Year	Agricultural Sector	Agriculture	Livestock & Fishery	Forestry
18	2005/06	5736351.7	4718474.3	941058.8	76818.6
19	2006/07	6290347.2	5151261.6	1055869.9	83215.7
20	2007/08	6789895.2	5535774.1	1170634	83487.1
21	2008/09	7170165.3	5799789	1288795.6	81580.7
22	2009/2010	7569840.4	6043622	1447155.2	79063.2
2010/11 Constant Price					
S.N	Year	Agricultural Sector	Agriculture	Livestock & Fishery	Forestry
23	2010/11	14658961.3	11108404.4	3392103.2	158453.7
24	2011/12	14562113.6	10750196.9	3641799.6	170117.1
25	2012/13	14807052.2	10724796.7	3900918.6	181336.9
26	2013/14	15346105.9	10959270.5	4217589.2	169246.2
27	2014/15	15768771.3	11113012.3	4529326.4	126432.6
28	2015/16	16306177.9	11357413.2	4820334.8	128429.9
29	2016/17	16230932.4	11261660.5	4917638.2	51633.7
30	2017/18	16439257.3	11272922.2	5099501.9	66833.2

With the base of 1985/86 constant price, 1999/2000 is getting increased over 1988/89 in terms of the production value of agriculture and livestock & fishery sectors. With the base of 2000/01 constant price, 2004/05 is getting increased over 2000/01 in terms of the production value of agriculture and livestock & fishery sectors. With the base of 2005/06 constant price, 2009/10 is getting increased over 2005/06 in terms of the production value of agriculture and livestock & fishery sectors. With the base of 2010/11 constant price, 2017/18 is getting increased over 2010/11 in terms of the production value of agriculture and livestock & fishery sectors. However, it is seen that although the production value of forestry sector in 1999/2000, 2004/05, and 2009/10 has increased to some extent compared to that of 1988/89, 2000/01, 2005/06, based on 1985/86 constant price, 2000/01 constant price, and 2005/06 constant price, respectively, but the production value of forestry sector in 2017/18 has decreased significantly compared to that of 2010/11, based on 2010/11 constant price. This is because, timber production are reduced significantly due to the policy of the Ministry of Environmental Conservation and Forestry according to environmental conservation.

V. Empirical Analysis

For investigating a suitable fitted trend of agriculture, livestock & fishery, and forestry components and for estimating the production value of that for coming three years, curve estimation regression model is employed here. With the assumption of unchanged time trend, time series data on agricultural sector from 1988/89 to 2017/18 is also employed. The base year is 2000/2001.

The fitted trend of agriculture, livestock & fishery, and forestry components is cubic trend. The Cubic model equation is:

$$(\hat{Y_t} = b_0 + b_1t + b_2t^2 + b_3t^3) \quad \text{---------------------(1)}$$

The results of cubic trend for agriculture, livestock & fishery, and forestry components are as follows:

	t	t2	t3	b0	Ra2	F
Agriculture	-89855.456 (-5.272)***	13024.586 (10.283)***	-270.505 (-10.062)***	858610.816 (13.842)***	.991	953.142***
Livestock & Fishery	-33906.680 (-6.701)***	3516.820 (9.353)***	-42.333 (-5.304)***	158543.777 (8.610)***	.997	2543.081***
Forestry	-1573.373 (-3.651)***	162.966 (5.090)***	-4.027 (-5.926)***	17010.239 (10.848)***	.691	19.383***

Note: t values are presented in parentheses, and *** means significant at 1 % level.

The estimated trend is supported by the coefficient of multiple determinations (Ra2), F test, and t – test. The estimated value for agriculture, livestock & fishery, and forestry components from 2018/19 to 2020/21 is calculated as follows. It is found that in coming 3 years, the estimated value of agriculture sector will gradually decrease while that of forestry sector will significantly decrease. However, the estimated value of livestock & fishery sector will gradually increase.

	2018-2019	2019-2020	2020-2021
Agriculture (kyats million)	2531095	2456494	2356005
Livestock & Fishery (kyats million)	1225946	1287572	1348104
Forestry (kyats million)	4872.093	1576.646	-2166.09

The fitted trend of agricultural sectoris exponential trend. The exponential model equation is as follow:

The exponential model equation is:

$$\ln \hat{Yt} = \ln(b0) + b1t \text{ --------------------------------- (2)}$$

The result of exponential trend for agricultural sector is as follow:

	t	b0	Ra2	F
Agricultural Sector	.096 (19.812)***	494492.818 (11.662)***	.933	392.499***

The estimated trend is supported by the coefficient of multiple determinations (Ra2), F test, and t – test. The estimated value for agricultural sector from 2018/19 to 2020/21 is calculated as follows. It is found that the estimated value of agricultural sector in coming 3 years will significantly increase.

	2018-2019	2019-2020	2020-2021
Agricultural Sector(kyats million)	9605159	10569735	11631175

VI. Conclusions

This study investigates the trend and estimation of agricultural sector in Myanmar from the period of 1988/89 to 2017/18. Employing data on agriculture, livestock & fishery, and forestry sectors, this study identifies the situation of each sector, investigates a suitable fitted trend of agricultural sector, covering each component separately, and estimates the production value of agricultural sector including each component of agricultural sector - agriculture, livestock & fishery, and forestry, separately, in coming 3 years. Based on the findings, it can be said that the production value of agriculture, livestock & fishery sectors has increased to some extent during the period of 30 years albeit base year is not always the same. However, the production value of forestry sector has decreased significantly at later periods during 30 years. It is observed that changes in the government's policy concerning timber production reduce the production of forestry sector. The fitted trend of agriculture, livestock & fishery, and forestry sectors are cubic trend. It is found that the estimated

value of agriculture sector during coming 3 years will gradually decrease. The estimated value of forestry sector in coming 3 years will notably decrease. However, the estimated value of livestock & fishery sector in coming 3 years will gradually increase. The suitable fitted trend of agricultural sector is exponential trend. It is found that the estimated value of the whole agricultural sector in coming 3 years will significantly increase. Being agriculture – based country, it is important to maintain the production volume not to reduce. Therefore, the farmers should try to improve the volume of production by many possible ways such as discussing with agriculturalists and using modern technologies.

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ICT ODA statistics classification status and It's main issues

Shinwon Kang

Sunchon National University

ABSTRACT: Currently, the demand for ICT ODA continues to increase, and a systematic response to the demand for ICT development cooperation in the international community is required. In addition, the importance of ICT in ODA is known to be very high, but it seems that the importance of ICT is not fully recognized in Korea's ODA policy. And although the ICT field is a very important area in ODA, the international definition of it is unclear. Therefore, in order to strategically support ICT ODA and expand Korea's international contribution, the definition of ICT ODA concept and clarification of statistical classification standards are required.

Key words : ICT ODA, OECD DAC, CRS, KOICA, Korea Export-Import Bank,

I. Introduction

Since aid is an exchange between donor and partner countries, it is advantageous to apply to the areas needed by partner countries, but to focus on the comparative advantage areas of donor countries.

In the information age, Korea's advanced information communication technology (ICT) sector has a comparative advantage over other aid sectors, and for this reason, the ICT sector's ODA (Official Development Assistance) is continuously expanding (Jang-Hong Kang, 2011). Currently, demand for ICT development cooperation among partner countries, including developing countries, is steadily increasing.

The IDA sector's ODA is primarily aimed at helping to bridge the information gap between developed and developing countries through various projects in the field of

information and communication. However, by strengthening institutional capabilities through supporting ICT infrastructure improvement and by developing ICT human resources, we have established a foundation for poverty alleviation and economic and social development, not only contributing to economic growth in developing countries, but also achieving various goals related to the Millennium Development Goals (MDGs). It is also very important as a basic means (Jang Hong Hong, 2011).

On the other hand, the ODA support environment in Korea's ICT field has the advantage of possessing various ICT-specialized institutions and business experience. However, problems such as decentralized ICT assistance promotion system and insufficient institutional cooperation, lack of linkage with other support fields, uniformity of business type and lack of follow-up measures, and limited role of the private sector have been raised (KISDI, 2015).[1)2)]

In addition, the importance of ICT in ODA is known to be very high, but it seems that the importance of ICT is not fully recognized in Korea's ODA policy. As a fragmentary example, there is no ICT in the KOICA (ODA Performance Agency, Free aid Agency) business classification system. KOICA categorizes ODA projects into education, health care, public administration, agriculture, forestry and fisheries, technical environmental energy (water, energy, transportation, science), and general fields (environment, gender equality, human rights, etc.).

In addition, the importance of ICT in ODA is known to be very high, but it seems that the importance of ICT in Korea's ODA policy is not fully recognized. In a fragmentary case, ICT is not classified in KOICA's business classification system, which carries out the projects of the Ministry of Foreign Affairs, which is the agency responsible for free aid.[3)] On the other hand, the Ministry of Strategy and Finance and

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1) Since the Korean ICT ODA project type is uniform, such as network construction, development consulting, invitational training, and dispatch of experts, there are difficulties in not actively responding to various development cooperation demands. In addition, it is also necessary to respond to follow-up measures (performance tracking, identification of additional cooperation demand through follow-up management, etc.) (KISDI, 2015).

2) The ideology and goals of the OCT policy in the ICT sector are unclear, and the long-term strategy is insufficient. KOICA has established mid-term strategies for each sector and has been promoting the project, but in the meantime, our ODA project has been limited in improving performance by organically linking given aid. This is because formal support such as equipment aid and trainee education and training has been provided randomly according to the needs and needs of the time, rather than the support that clarifies the goals and expectations for specific sectors and projects (Korea Development Strategy Institute, 2007). In addition, in the absence of long-term strategy, there are problems such as redundant support, insufficient linkage between projects, and lack of follow-up management due to insufficient information exchange between IDA departments in charge of ICT and segmented project promotion. In the case of project selection, so far, the tendency has been made from a supplier's perspective rather than the position of a partner that is a consumer, and the linkage between each unit project is insufficient, and thus, a project has been selected and promoted mainly for individual short-term projects (Juhong Kang, 2011).

3) KOICA categorizes ODA projects into education, health care, public administration, agriculture, forestry and

the Korea Export-Import Bank, which are in charge of paid assistance, manage the telecommunications sector according to the OECD DAC's Creditor Reporting System (CRS) classification system, but are only responding at the statistical level(Yoo Ji-soo, Yoo Seong-hun, 2019). Therefore, it is necessary to raise awareness of the importance of ICT ODA and to prepare statistical standards for ICT ODA projects.

Therefore, in this paper, the main issues and implications of the statistical classification of ICT ODA in OECD and Korea were explored.

II. ICT ODA concept

1. ODA concept

In 1969, the Organization for Economic Cooperation and Development (OECD) Development Assistance Committee (DAC) referred to the "Flow of financial resources to developing countries" as Development Assistance (Development Assistance).

ODA is an aid provided by governments and other public institutions with the aim of promoting economic development and social welfare in developing countries. It is a concept that includes funding and technical cooperation provided to governments, regional or international organizations in developing countries (OECD DAC, 2014).

In 1972, the OECD DAC adopted a stricter definition of ODA in the Revised DAC Terms Recommendation and applied it to this day (Korea Export-Import Bank, 2017).

According to the definition of the Development Assistance Committee of Organization for Economic Cooperation and Development (OECD DAC), Official Development Assistance (ODA) is: 1) Public organizations such as central and local governments and their enforcement agencies. It should be provided by 2) the main purpose of contributing to the economic development and welfare improvement of developing countries, and 3) aid with relaxed donation conditions, that is, funds with concession conditions with a grant element of 25% or more.

Table 1. Definition of ODA by OECD DAC and International Development Cooperation Committee

Who(donor country)?	Government, local government, and public institutions
To whom? (Receiving country / partnership)	To developing countries on the OECD's list of recipient countries

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fisheries, technical environment energy (water, energy, transportation, science), and general fields (environment, gender equality, human rights, etc.).

how?	Providing grants or concessional loans for the purpose of improving economic development and welfare in developing countries

Source: ODA KOREA website (http://odakorea.go.kr/)

Meanwhile, Korea is also borrowing the concept of ODA defined by OECD DAC. The International Development Cooperation Committee, which serves as a general and coordinating role for public development assistance in Korea, divides development resources used for international development cooperation into ODA, other public funds, the flow of private funds, and private donations. Among them, financial resources aimed primarily at developing countries are referred to as Public Development Assistance (ODA) (ODA KOREA).

Table 2. Status of ODA responsible organizations and related laws

ODA form		Agency in charge	Remark
Bilateral Aid	Concessional Aid	Ministry of Strategy and Finance (EDCF)	Foreign Economic Cooperation Fund Act
	Grant Assistance	Ministry of Foreign Affairs (KOICA), 30 institutions	Korea International Cooperation Agency Act, etc.
Multilateral Aid	International financial institutions	Ministry of Strategy and Finance	International Financial Institution Registration Act
	Other international organizations	Ministry of Foreign Affairs and individual organizations	

Source: Prime Minister's Office, 2011

2. ICT ODA concept

Since joining the OECD DAC in November 2009, Korea has been a donor in the international community. In particular, it has been pursuing ODA projects in the field of ICT, focusing on the establishment of ICT infrastructure in developing countries and public service improvement using ICT.

Korea's ICT ODA projects are being promoted through related organizations such as the Korea Institute of Information and Communication Policy (KISDI), Korea Information Technology Agency (NIA), Korea Information Technology Industry Agency (NIPA), Korea Radio Promotion Association (RAPA), and Korea Internet Security Agency (KISA).

The Ministry of Science and Technology, through the relevant organizations, has been conducting projects such as information and communication broadcasting policy consulting, information and communication broadcasting expert invitation training, K-Lab installation and operation, broadcasting environment improvement support, information access center establishment, and overseas IT policy maker cooperation channel programs(KOIT, 2019)

Although the ICT field is a very important area at the ODA level, the international definition of it is currently unclear (STEPI, 2014).

Meanwhile, there is no clear concept or definition of ICT ODA so far. Therefore, studies analyzing the trends of ODA in the ICT field have classified the ICT ODA according to the OECD DAC's creditor reporting system (CRS) aid purpose code. OECD identifies ICT ODA as "Communication", a sub-category in "Economic Infrastructure & Services" category, as Communication policy and administrative management (22010), Telecommunications (22020), Radio/television/print media (22030), and Information and communication technology(ICT)(22040)(KISDI, 2015).

III. OECD and Korea ICT ODA statistics classification status

1. OECD ICT ODA statistical classification

The OECD DAC categorizes ODA as follows: Social infrastructure (education, health, population policy / measures and reproductive health, water resources and sanitation, public administration and civil society, etc.), economic infrastructure (transportation and logistics, communication, energy development and supply, financial and financial services, etc.), production sector (Agriculture, forestry, fishing, manufacturing, mineral resources and mining, construction, trade policies and regulations, tourism, etc.), multi-sector (environment, other education, research institutes and scientific institutions, etc.), other (material support, debt-related support , Humanitarian aid, general administrative costs, food aid, unallocated, etc.).

Table 3. OECD DAC의 Communication Division ODA>

200:Ⅱ. Economic Infrastructure & Services[4]
210:Ⅱ.1. Transport & Storage
210:Ⅱ.2. Communication
22010: Communication policy and administrative management[5]
22020: Telecommunications
22030: Radio/television/print media
22040: Information and communication technology(ICT)
210:Ⅱ.3. Energy
210:Ⅱ.4. Banking & Financial Services
210:Ⅱ.5. Business & Other Services

Source: https://stats.oecd.org/Index.aspx?DataSetCode=CRS1

2. Korea ICT ODA statistics classification

1) KOICA

Korea's ODA implementation is operated separately by free aid KOICA (Ministry of Foreign Affairs) and paid aid import and export bank (Ministry of Strategy and Finance), and the amount of aid provided is relatively large.[6]

Table 4. ODA support method and form

Method	Form	Contents	Remark
Bilateral	Grant	Donation, technical cooperation, project assistance, food assistance, emergency disaster relief, NGOs support	KOICA
	Concessional	Concessional Loan	Export-Import Bank

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4) The DAC code classifies business areas into society (100), economy (200), production (300), and others (400), and combines them with the next two digits to classify approximately 200 sectors in detail (OECD, 2020)

5) The CRS (Creditor Reporting System) objective code is a 5-digit code that identifies the DAC business area (OECD). In other words, it means a code that combines 3 digits of the DAC business field and 2 digits of function to identify what the business is.

6) In 2019, the size of the ODA is about 3,200 billion won, and more than 1,400 projects are in progress. The ratio of bilateral cooperation vs. multilateral cooperation is about 78:22 in 18 years, and the ratio of concessional and free cooperation is 44:56.

Multilateral	-	International organization contributions	OECD

KOICA categorizes ODA into seven areas, including education, health, public administration, agriculture, forestry and fisheries, technical environment energy, emergency relief, and others.

The Export-Import Bank categorizes ODA into transportation, telecommunications, energy, water and sanitation, environmental protection, health, education, public administration, agriculture, and others, and supports related ICT projects by sector.

In the past 5 years (205 ~ 2019), the size of ODA in Korea is about 13,700 billion won, of which the pure ICT field is about 286.7 billion won (about 2.1% of the total), and the expanded scope of application such as ICT convergence and utilization It accounts for about 1.67 trillion won (approximately 7.8% of total) (Yoo Ji-soo, Yoo Seong-hun, 2019).

Table 5. The size of ICT ODA in Korea for the last 5 years (2015-2019)

(Unit: KRW 100 million)

division	2015	2016	2017	2018	2019	Total
Overall ODA scale	23,782	24,394	26,359	30,482	32,003	137,020
Convergence ICT ODA scale	1,735 (7.3%)	1,183 (4.8%)	2,297 (8.7%)	2,695 (8.8%)	2,766 (8.6%)	10,676 (7.8%)
Pure ICT ODA scale	836 (3.5%)	429 (1.8%)	534 (2.0%)	630 (2.1%)	438 (1.4%)	2,867 (2.1%)

Source: Yoo Ji-soo and Yoo Seong-hoon, 2019.

2) Korea Export-Import Bank

Korea's ODA statistics have been collected by the Korea Export-Import Bank since the establishment of the Foreign Economic Cooperation Fund (EDCF) in 1987, and the ODA statistics with the current form (DAC table and CRS ++ type) have been transferred to Korea as an official DAC member country in 2010. It was written from the previous 2006.

The statistics gathering process of Korea Import and Export Bank is basically the same as the statistics gathering schedule of the OECD Working Group on Statistics.

Table 6. 2016 Korea ODA statistics submission agency

Gangwon-do, Ministry of Health and Welfare, Gyeonggi-do, Busan Metropolitan City, Gyeongsangnam-do, Forest Service, Gyeongsangbuk-do, Ministry of Trade, Industry and Energy, Ministry of Employment and Labor, Seoul Metropolitan Government, Fair Trade Commission, Ministry of Food and Drug Safety, Korea Customs Service, Ministry of Gender Equality and Family, Gwangju Metropolitan City, Ministry of Foreign Affairs, Ministry of Education, Ulsan Metropolitan City, Ministry of Education, Human Resources Innovation, National Veterans Affairs Office, Incheon Metropolitan City, Office of Government Coordination, Jeollanam-do, National Rights Commission, Jeju Special Self-Governing Province, National Safety Agency, Small and Medium Business Administration, Ministry of National Defense, Central Election Management Committee, Ministry of Land, Infrastructure and Transport, Chungcheongnam-do, Meteorological Administration, Statistics Korea, Ministry of Strategy and Finance, Korea Intellectual Property Office, Ministry of Agriculture, Food and Rural Affairs, Korea International Cooperation Agency, Rural Development Administration, Bank of Korea, Daegu Metropolitan City, Ministry of Oceans and Fisheries, Cultural Heritage Administration, Ministry of Government Administration and Home Affairs, Ministry of Culture, Sports and Tourism, Constitutional Court, Ministry of Science, ICT and Future Planning, Ministry of Environment, Ministry of Justice,

Table 7. OECD DAC, KOICA, Export and Import Bank ODA Statistics Classification

OECD DAC (https://stats.oecd.org/)	KOICA (http://stat.koica.go.kr/)	Export-Import Bank (https://stats.koreaexim.go.kr/)
Social infrastructure and services - Education, health, public administration, ... Economic infrastructure and services - Transportation, communication, energy, ... Production sector - Agriculture, fishing, mining, ... Other Multi Sector Consumer goods and general programs Debt related Humanitarian aid Administrative costs of the donor country Refugee assistance in donor countries Non-allocation / non-specific	Health care education Public administration Technology Environment Energy Agriculture, Forestry and Fisheries Emergency aid Etc	traffic, Communication, energy, Water and Sanitation, Environmental Protection, Health, education, Public Administration, Agriculture, Etc

Meanwhile, the Export-Import Bank plays the following roles in the process of collecting ODA statistics.
- Preparation and distribution of ODA statistical guidelines
- Collection of statistics submitted before OECD
- Confirmation and verification of reported ODA data for each aid agency
- DAC Tables and CRS ++ writing and sending
- Participate in meetings of the OECD Working Group on Statistical Working Groups and respond to discussions
- ODA statistics revision work and final submission.

The collected ODA statistics of the Export-Import Bank can be viewed by anyone on the ODA Statistics Inquiry website, and the ODA business information for each agency, aid type, and regional support status can be cataloged and downloaded according to the user's intention (Https: / /www.stats.odakorea.go.kr).

IV. Main issues of Korea's ICT ODA statistical classification system

Currently, in Korea, the business classification system used in the implementation plan and performance is different, so the ODA statistics for each field differ depending on the user's criteria (enforcement plan vs. performance) (KIEP, 2019). The implementation plan uses the classification system of the nine fields set by the 'Guidelines for Preparing the Implementation Plan for Free Aid Projects'. On the other hand, performance uses the OECD DAC classification system (KIEP, 2019).

In other words, Korea is currently applying different business classification systems for each stage of project discovery, planning, and execution (KIEP, 2019). In the case of business discovery, the classification system of "Priority Cooperation Area in the National Cooperation Strategy (CPS)" is applied. When planning, the classification system in the "Comprehensive Implementation Plan" for each year is applied. In addition, the "OECD Development Assistance Commission (DAC) Code" classification system is used for reporting the execution amount.

Table 8. Classification of ODA business areas in Korea

Field	Field name
Comprehensive implementation plan (Used for planning)	Transportation, health, environment, education, agriculture, forestry and fisheries, public administration, humanitarian assistance, industrial energy

OECD DAC classification (Used when reporting the execution amount)	Education, health, water and sanitation, government and civil society, transportation, communication, energy, agriculture, forestry and fisheries, industry, environmental protection, multi-sector, emergency relief, reconstruction and recovery, disaster prevention, etc.
CPS key cooperation areas (Used for business discovery)	Transportation, water management, health and hygiene, environmental protection, education, regional development, fisheries, public administration, energy, communication, peace building, industry, disaster prevention

Source: KIEP, 2019.

Accordingly, it is often the case that the applicable field name is applied differently for each stage of the business even though it is the same project (KIEP, 2019).[7] This situation is possible because it is not linked to the step-by-step statistical input system and is operated individually. Therefore, it is necessary to integrate and manage the project discovery-planning-execution reporting system (KIEP, 2019).

Table 9. 2017 Implementation Plan, Business Scale by Area

Implementation plan field	2017 Implementation Plan		Performance reported business	
	Scale (100 million won)	importance	Scale * (KRW 100 million)	importance
traffic	2,638.0	12.4%	2,272.9	14.1%
Health	2,597.7	12.2%	2,234.9	13.9%
Public administration	**2,584.9**	**12.2%**	**2,197.7**	**13.6%**
Agriculture, Forestry and Fisheries	2,210.8	10.4%	1,993.6	12.4%
education	1,861.4	8.8%	1,758.1	10.9%
Industrial energy	1,505.8	7.1%	1,446.2	9.0%
Humanitarian aid	899.9	4.2%	868.4	5.4%
Humanitarian aid	254.8	1.2%	240.3	1.5%
Etc	6,702.5	31.5%	3,109.0	19.3%

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7) For example, there is a project classified as a water management field according to the criteria of the CPS 'focus area. However, in the comprehensive implementation plan, it is classified as an environmental field project. Therefore, confusion arises when tracking the amount of support by sector.

| sum | 21,256.0 | 100.0% | 16,121.1 | 100.0% |

*: Budget size in 2017 implementation plan
Source: 2017 International Development Cooperation Plan; ODA Statistical Reporting
System

Also, in the "Comprehensive Implementation Plan", communication is classified, and statistics are not classified. Although the current ICT plays an important role in the economic development of developing countries, communication is classified in the implementation plan, and statistics are not classified, but included in "Public administration" and "Other".

Therefore, the communication related business is included in the public administration in the classification of the comprehensive implementation plan, but it can be divided into separate fields. Of the 2017 implementation plan projects, the reported scale of the 'communications' business was 538.4 billion won, which was the largest after transportation, water supply and sanitation, health, education, agriculture, forestry and fisheries, energy, and public administration (Except for emergency aid, unspecified sectors, and other sectors that are difficult to designate).

V. Conclusions and Implications

Currently, the demand for ICT ODA continues to increase, and a systematic response to the demand for ICT development cooperation in the international community is required.

In addition, the importance of ICT in ODA is known to be very high, but it seems that the importance of ICT in Korea's ODA policy is not fully recognized. ICT is not classified in KOICA's business classification system. On the other hand, in the case of the Korea Export-Import Bank, the telecommunications sector is classified according to the OECD DAC (Creditor Reporting System) classification system, but only at the statistical level. Therefore, it is necessary to raise awareness of the importance of ICT ODA and to prepare statistical standards for ICT ODA projects.

And although the ICT field is a very important area in ODA, the international definition of it is unclear. Therefore, in order to strategically support ICT ODA and expand Korea's international contribution, the definition of ICT ODA concept and clarification of statistical classification standards are required.

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Factors Influencing the Development of Stock Market in Myanmar

Dr. Tin Tin Htwe* and Banyar Aung**

Yangon University of Economics

ABSTRACT : The objective of the study is to examine the factors that affect the development of stock exchange in Myanmar. Primary data were collected by distributing questionnaire to randomly selected 50 investors, to randomly selected 11 respondents from YSX, Listed Companies and Security Companies. The survey period was during September, 2019. The secondary data were collected from YSX website and SECM website. Descriptive method was used for analysis. This study found that several macroeconomic factors influencing on the stock market. As an economic factor, unattractive dividend and return on investment create a negative impact on the development of stock market. As legal factors, poor law and regulation to protect investors, current government's rules and policies regarding the stock market, strict listing criteria and requirements to enter YSX, and information disclosure and poor corporate governance of listed companies are the barriers to the development of stock market. As technological factor, lack of user's technical knowledge on online trading system have negative effect on the stock market development. Therefore, the study recommends that for the development of stock market, YSX, SECM and responsible members should search, collect, and follow excellent manners that would support the stock market development by observing how stock market in developed countries are implemented and operated.

Key words : Stock Market, Yangon Stock Exchange, Investment Behavior, Macroeconomic Factors,

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* Professor at Commerce Department, Yangon University of Economics
** Tutor at Commerce Department, Yangon University of Economics

I. INTRODUCTION

Stock market is an important part of the economy of a country, supporting the growth of the industry and commerce of the country that eventually affects the economy of the country to a great extent. The government and business which are seeking the capital can generate the funds themselves easier from the investors who want to invest their surplus fund by trading on stock market. Without stock markets, businesses would borrow huge loans which must be repaid with interest from banks or individuals. When businesses have access to buy the share, they can easily expand their operations and create more job opportunities. From a national perspective, this will lower unemployment levels. Stock exchanges also play a vital role in the functioning of the economy by providing the backbone to a modern nation's economic infrastructure, Divya (2018).

The stock exchange can be described as a market or a place where different types of securities are bought and sold. Securities include equity securities, debt securities and derivatives. The initial offering of stocks and bonds to investors is done in the primary market and subsequent trading is done in the secondary market. Stock exchange is a secondary market where prospective buyers purchase shares from other investors through it. The stock market serves two very important purposes. The first is to provide capital to companies that they can use to fund and expand their businesses. The second purpose is to provide the investors profit in term of dividends or capital gain.

Stock market development is an important component of financial sector development as it supplements the role of the banking system in economic development, Goldsmith (1969); Boot and Thakur (1997). European stock markets have significant progress in the developments of institutional and legal framework against their barriers. The U.K. stock market suffers from the challenges that come with the globalization of financial markets, Nyasha (2013). Africa stock market also influence on macroeconomic stability, banking sector development, and shareholder protection. Therefore, they promoted the stock market development by promoting institutional investors, strengthening regulation and supervision, encouraging foreign participation and strengthening education. Implementing and developing stock market in Myanmar gains a couple of benefits to the country.

The development of stock market in Myanmar faced with both challenges and difficulties. Public companies of Myanmar have not on the qualified to be listed on the securities exchange because of their weak financial position, corporate and financial structure. The country's lack of infrastructure, such as technology, communications, building, the limited pool of skilled financial professionals and the general financial illiteracy among most Myanmar citizens.

1. Problem Statement

The stock market not only provides government and private sectors to make long-term investments but also gives the opportunities to investors to participate in the various huge businesses. In above motivation, Yangon Stock Exchange became the first stock exchange in Myanmar so as to develop the stock market after long decade passed. Myanmar people regard gold, US dollar and property as the investment; however, the kinds of investment which international regard are stock, bond, cash, property and commodities and gold. Stock has a running business behind it; and the more growth the businesses' profit, the more stock value increases.

Yangon Stock Exchange was officially launched on 9th December, 2015 with a sequence of endeavors like enacting the Securities and Exchange Law and related rules, formation of Myanmar Securities Commission as regulatory body, stipulating business regulations and issuing listing criteria, introduction of Stock Exchange system and installation of ICT infrastructure and capacity building to staff and etc.

However, the newly stock exchange market isn't active and daily trading volume and value remains quite small. In the present time, in spite of having over 40,000 investors of listed companies, only over 1500 investors are making stock trading actively in Yangon Stock Exchange. Although Yangon Stock Exchange vibrantly started its stock trading with three listed companies, in these days, stock market of Myanmar is still quiet and stable among citizens. Thus, limited number of listed companies, lack of capacity or knowledge of investors, poor public awareness and participation are considered as hot issue for the development of Myanmar's Stock Market. As mentioned above, this study will identify the current situation of stock trading of YSX, investor's knowledge of stock trading and barriers to stock market development.

2. Objectives of the Study

The main objectives of the study are as follows:
i   To identify the current situation of stock trading in Yangon Stock Exchange, and
ii To examine influencing factors towards the development of Stock Market in Myanmar

3. Scope and Method of the Study

Although Yangon Stock Exchange was officially launched on 9th December, 2015, its trading started on March 25th, 2016.   Therefore, this study emphasized present

situation of stock trading of Yangon Stock Exchange from March, 2016 to August, 2019. The study also identifies on development of stock market in Yangon Stock Exchange.

Descriptive method together with data analysis was mainly used in this study. The data for this study were gathered through the use of primary and secondary data sources. As a primary data collection, questionnaires were constructed by using convenient sampling method, and in order to fulfill the term paper objective, the study used questionnaire to ask investors trading shares currently in YSX, securities companies and Yangon Stock Exchange. Secondary data and information are collected from YSX website, Securities Companies, relevant books, references, thesis papers and other internet websites.

Ⅱ. Literature Review

Assessing stock market development requires not only an understanding of its main determinants but also a clear definition of what "stock market development" means and how progress towards it can be measured. First, stock market development is a difficult, complex, multi-faceted, and long-term process. Second, stock market development is only part of the overall development of a country's financial system. Third, stock market development is mainly a private sector activity, Kamal (2013). Garcia and Liu (1999) investigated the macroeconomic determinants of stock market development show GDP growth, domestic investment and financial intermediary sector development.

There are two sets of factors affecting the development of stock markets: "macroeconomic factors" and "other factors (institutional factors)". Macroeconomic factors include economic development level, inflation and capital flows, etc., while institutional factors include variables that reflect the state of regulatory and supervisory institutions, such as legal frameworks and the protection of property rights, (Adarov and Tchaidze, 2011). Economic factors, legal factors, political factors, sociology factors and also technology factors involve in the microeconomic factors. The economic factors include government's rules and policies, inflation rate, taxation rate and exchange rate that are influencing the stock market development. Overall, the range of economic factors underlying stock market development can be roughly aggregated to the level of economic development. Further, Perotti and Oijen (2001) argue that political risk has an indirect negative impact on stock market development.

Claessens et al. (2001) find that foreign direct investment contributes to stock market development. Institutional factors include the absence of credit rating agencies and other market infrastructures. A common law basis is more conducive to the development of stock markets, as the flexibility of the common law legal system allows

for protection of small investors. La Porta et al. (1997, 1998) argue that the origin of a country's legal system affects the level of financial development. Moreover, they find that countries with a lower quality legal regime and poorer law enforcement exhibit smaller and narrower stock markets.

La Porta et al. (2000, and 2002), Perotti and Van Oijen (2001), Galindo and Micco (2004) and Djankov et al. (2005) argue that strengthening rights and investor protection through company laws, as well as disclosure of companies' activities and proper accounting rules and practices are key determinants of the development of corporate securities markets. They foster competitiveness and efficiency in primary markets and create for the establishment of regulatory and supervisory framework. This study emphasizes that the role of macroeconomic factors in the development of stock markets identifies the country's emerging economy.

III. Analysis on the influencing factors towards development of Stock Exchange in Yangon

1. Research Design

This study was descriptive to the extent of investor knowledge of stock trading and the barriers towards stock market development. Currently, although there are over 40,000 investors who opened securities accounts in securities companies, only about 700 investors are trading shares in Yangon Stock Exchange through securities companies they opened. This study used both primary data and secondary data. The first approach of the study distributed questionnaire survey to 50 of investors opened securities accounts in 6 securities companies.11 respondents from YSX and 6 securities companies and listed companies are also distributed questionnaire survey. The respondents from YSX and listed companies are responsible company staff. In order to increase the validity and reliability of the study, descriptive method is used.

2. Profile of the Respondents

Table 1. presents about the profile of respondent of surveyed. Age level, kind of gender, marital status, educational level, occupation status, monthly income, and expenditure condition are summarized as follows:

Table 1. Profile of Respondents

Description	No of Respondents	Percent
Age (Years)		
Up to 30	7	14
31-40	9	18
41-50	27	54
Above 50	7	14
Gender		
Male	26	52
Female	24	48
Marital Status		
Married	24	48
Single	22	44
Divorced	4	8
Education		
High School	10	20
Graduate	18	36
Post graduate	22	44
Occupation		
Company staff	20	40
Government staff	4	8
Business owner	22	44
Dependent	4	8
Monthly Income		
Up to Kyat 250,000	4	8
Kyat 250,000 – Kyat 500,000	14	28
Kyat 500,000 – Kyat 750,000	27	54
Up to Kyat 750,000	5	10
Total	50	100

Source: Survey Data 2019

According to Table 1, number of respondents by age, 41 years to 50 years was the largest group, with 27 investors, accounted for 54% of the total number of investors. For the gender, 52% of total respondents are male investors. The survey result is that 48% of total respondents are single and 44% of total respondents are married. The 44% of total respondents are post graduate persons, 36% of total respondents are graduate persons. The occupation of respondent in accordance with survey result, one can see that 44% of total respondent are business owner, 40% of total respondent are company staff, the minority is government staff and dependent. Monthly incomes of respondents are classified into four groups. In accordance with Table, 54% of total respondents are between kyat 500,000 and 750,000 and 10% of total respondents are above 750,000 kyats.

3. Investment Behavior of Investors

Table 2. illustrates the general information of their investment behaviors representing their average spending on their income, the other types of assets for investment aside from stock, their types of investment and its time horizon.

Table 2. Investment Behavior of Respondents

Investment Behavior	Number of Respondents	Percent
Average spending on investment		
25%-40%	31	62
41%-60%	14	28
61%-80%	5	10
Other types of Assets for investment		
Bank deposit	20	40
Gold	2	4
Jewelry	1	2
Real estate	4	8
Others (Mix of any two)	23	46
Type of investment		
Short term investment	19	38
Mid-term investment	12	24
Long term investment	10	20
Mix of any two	9	18
Investment time horizon		
Less than 1 week	2	4
Between 1 week and 1 month	10	20
Between 1 month and 6 month	27	54
Between 6 month and 2 year	11	22
Total	50	100

Source: Survey Data, 2019

Table 2 shows the general information of investment behaviors of the respondents on stock. The 62% of the respondents are spending between 20% and 40% of their income for investment. Another 28% investors are spending between 41% to 60% of their income on stocks.

The other favorable type of investment aside from stock is bank deposit which is chosen by 40% of investors 50 samples. 46% of investors are investing in the mixed of bank deposit and stock. The survey data also presents that majority of the respondents prefer short-term investment; 38% of total investors make short-term investment, 24% of total investors with mid-term investment and 20% of total investors with long term investment respectively. In terms of time horizon for investment, the most favorable is between 1 month and 6 months with 54% of the

respondents.

4. Investor Behavior in Stock Market

Table 3 represents the investment behavior of investors in stock market regarding their reasons of investing in stock market, types of information to purchase the stock, their purchasing behavior and their purchase methods, and their condition to sell their stocks.

Table 3. Investors Behavior in purchasing Stock Market

Description	Number of Respondents	Percent
Reason for purchasing the stocks		
To get capital gain	22	44
To get dividend and capital gain	15	30
To get dividend	8	16
Just for safety	5	10
Types of information to purchase the stock		
Company's good reputation	18	36
Company's financial condition	17	34
Company's future potential	15	30
Types of company	10	20
Purchasing method		
Online	21	53
Purchasing at YSX Trading floor	18	36
Securities companies (brokers)	11	21
Advicce to purchase the stock		
Based on your experience	32	64
Based on advices from friends/ relatives	14	28
Brokers	3	6
Consultants	1	2
Condition to sell the purchased stock		
When the stock price is rising	33	66
When the stock price is falling	8	16
When the price is rising and falling	5	20
When you urgently need the cash	4	8
Total	50	100

Source: Survey Data, 2019

According to survey result, Table 3.3 shows that 44% of respondents want to invest in stock market to get capital gain from the stock price increases, 30% of investors

want to get both dividend and capital gain for their stock investment, and only 10% of the respondents invest in share just for safety. This shows that the investors expect their income increase particularly from price changes.

The most reliable of information to purchase the stock is based on the company's good reputation indicating 36% of respondents followed by 34% of respondents, who considered based on company's financial condition. The study also found that 53% of respondents use online trading system for purchasing stocks and 36% of respondents with on their own/ traditional at YSX trading floor. The remaining group of respondents is purchasing through securities companies.

As regards the advice for stock purchase, most investors decide to buy the stock based on their own experience indicating the majority 64% of total respondents. Only 2% of the investors get the advices of consultants for the purchase of stocks. Most of the investors are willing to sell their stock while the stock price is rising. It is the highest score with 64% of respondents. The minority group of 8% of respondents is selling their stocks when they urgently need the cash.

5. Knowledge Level of respondents

To identify the respondent knowledge level, the statements are prepared by five-point Likert scale. Table (3.4) represents the investor's knowledge level regarding the stock purchase.

Table 4. Knowledge level of Respondents

No	Statements	Mean	Std. deviation
1	Now, I'm investing into Stock Market	3.64	0.88
2	I usually visit the YSX website	3.62	1.01
3	I usually buy shares based on future expectation rather than past performance	3.52	0.93
4	I always have trust when trading on YSX	3.36	0.96
5	I usually follow the stock market through financial news	3.32	1.04
6	The return on investment in stock market is higher than those of other investments	3.24	1.04
7	I'm somewhat knowledgeable about stock market	3.22	1.09
8	Raising funds from the stock market is much easier and cheaper than other sources	3.06	0.87
9	I clearly understand the role of brokerage firms	2.98	1.00
10	When seeking financial advice, I deal with licensed broker	2.76	1.00

Overall Mean	3.27

Source: Survey Data 2019

Table 4 illustrates the rank by means and standard deviations of analysis knowledge level and their perception of investors. From survey result, it is found that the overall mean is 3.27. This means that the investors have fairly knowledge level and trust on stock market. They are regularly investing in stock market expressing their interest and expectation on investing stock markets noted by the highest mean value of 3.64. These investors usually visit the YSX website. They buy shares based on future expectation indicating the mean value of 3.52 and can be said as significant level. Thus it can be considered that they have trust on trading with YSX. According to the survey data, the lowest mean value of 2.98 and 2.76 indicates that most of the investors do not rely the role of brokerage firm so they don't get assist from the brokerage firm while seeking financial advice.

6. Macroeconomic Factors Influencing the Stock Market's Development

Under this section, the macroeconomic factors influencing the development of stock market remarked from the perception of investors, YSX, securities and listed companies are analyzed. These macroeconomic factors are categorized into economic factors, legal factors, technological factors, political factors and other macroeconomic factors. Table 5 illustrates the survey summary result about average perception of investors and staff persons of YSX, securities companies and listed companies upon the four key macroeconomic factors (the detail results can be seen in Appendix)

Table 5. Macroeconomic Factors

No	Economic factors	Average
1	Low income level of Myanmar people affects the stock market's development.	3.54
2	Fluctuation on exchange rates affects the stock market development.	3.61
3	Favorable bank interest rates in Myanmar affects the stock market development.	3.84
4	Inflation rate in Myanmar affects the stock price.	3.74
5	Currently, unattractive (stable) stock price also affects the stock market.	3.62
6	Current taxation rate of your country on corporate firm affect the stock development.	3.61

7	Dividend and return on investment of existing listed companies can affect on investors' decision.	3.92
	Average	3.70
	Legal Factors	Average
8	Strict listing criteria and requirements affect the stock market development.	3.54
9	Poor law and regulation is a barrier of stock exchange market's development.	3.66
10	Information disclosure and poor corporate governance is a barrier of public companies to be listed.	3.65
11	Current government's rules and policies also affect the stock market development.	3.59
12	Current foreign trade investment policy can cause the negative impact on stock market development.	3.31
	Average	3.55
	Technological Factors	Average
13	Existing online trading system is not still effective to the stock market development.	3.20
14	Delaying online system can cause the negative effect on the stock market development.	3.51
15	Lack of user's technical and financial knowledge on online trading limits the stock market development.	3.74
	Average	3.48
	Political Factors	Average
16	2020 election can affect the stock market development.	3.54
	Average	3.54
	Other Factors	Average
17	High trading costs (underwriting fees) affects stock market development.	3.74
18	Absence of credit rating agencies (specialists, market analyst) affects the stock market development.	4.00
	Average	3.87
	Overall Mean	3.63

Source: Survey Data 2019

Table (3.5) describes the results in the comparison of investors' and staff persons' perspective. The calculations claim that economic factors affect the development of stock market with the mean of 3.70. Among all economic factors, dividend and return on investment of existing listed companies affect on investors' decision with the high level of 3.92 from all investors and staff persons perspective..

The calculating of the study also shows that legal factors have impact upon the stock market development with the mean of 3.55. Regarding the legal factors, the result of the study suggests that "poor law and regulation" is a major barrier of stock

exchange market's development which is at the mean value of 3.66. Respondents highly agree that information disclosure and poor corporate governance is a major barrier of public companies to be listed with the mean of 3.66. Current government's rules and policies also affect the stock market development with the mean value of 3.65. Another significant result shows that strict listing criteria and requirement is also a barrier for the stock market development with the mean of 3.54.

The analysis on the technological factors shows that the stock market development affects with the mean of 3.48 from investors and staff persons perspective. A significant technological issue that affects stock market development is the lack of user's technical and financial knowledge on online trading limits the stock market development with the mean value of 3.74.

In accordance with the political factors, this survey shows that political uncertainty such as election can affect the stock market development with the mean of 3.54. Finally, both investors and staff persons highly agree that macroeconomic factors such as high trading costs and absence of credit rating agencies affect stock market development with the mean of 3.87.

IV Findings

In this section, the findings of the study are discussed by dividing into three categories; the analysis of investment behaviors of investors, the analysis of investors' knowledge level, and the analysis of barriers toward the development of stock market.

In accordance with the analysis of investment behavior of investors in stock market, this study found that most investors utilize only 25% to 40% of their income on investment. Most investors prefer short-term investments such as bank deposit. Fewer investors prefer long-term investment such as gold, jewelry and real estate. Most likely investment time horizon for investors is between 1 month and 6 months. The results of the study also reveal that most investors make investment in stock to get capital gain while some investors make investment to get both dividend and capital gain. Before making decision to purchase a stock, investor primarily consider "good reputation", "sound financial conditions", and "future potential" of the company that sells the stocks. To get capital gain, most investors wish to sell the stocks that they hold when the stock price is rising. Though, some wish to sell when the stock price is falling to avoid the loss resulted from the stock price falling.

Regarding the analysis of investors' knowledge level, this study finds that investors usually follow financial news about stock market through YSX websites, Security Companies websites, TV, and newspapers. Nonetheless, some investors have a little

knowledge about the roles of brokerage firms. Consequently, they are not seeking financial advice from brokerage firms and they buy the shares based on their experience and advice from their friends and relatives. Another finding is that the investors trade or hold their shares, depending on future expectation rather than past performance.

This study also finds out some macroeconomic factors especially in economic, legal, technological, and political factors in the country, existing as barriers to the development of stock market. In the field of economy, unattractive dividend and return on investment create a barriers on the development of stock market. The legal factors that limit the growth of stock market are poor law and regulation to protect investors, current government's rules and policies regarding the stock market, strict listing criteria and requirements to enter YSX, and information disclosure and poor corporate governance of listed companies. The technological issue that drawbacks the growth of stock market is lack of user's technical and financial knowledge on online trading. Political factor such as election of a new government can also affect the stock market development. Other macroeconomic factors such as high trading (underwriting) costs and absence of credit rating agency have negative impact on the development of stock exchange.

This study recommend that brokerage firms should give investors a clear explanation of their roles and functions as a participant in the stock market and should attempt to help investors trade in the way of profitably and smoothly. Another suggestion is that SECM, YSX and Securities Companies need to give the education in concerned with capital market to the public throughout country by making seminars or workshops. To understand the stock market well, YSX should attract the public to visit YSX Website.

The study suggests that listed companies should afford to distribute an attractive dividend to attract investors, so that they can obtain more capital from the investors for the growth of the business. The willingness of the investors to participate in the stock market consistently depend on the amount of dividend they received. The study also suggest policy makers and regulators should have to establish a clear regulatory framework that is easy to understand and enforce in order to protect the investor's ownerships and rights.

This study also suggests that Yangon Stock Exchange should afford to release the listed criteria and requirements for public companies so that investors have a wide chance to choose shares they like among many listed companies. Consequently, listed companies should declare to make new dividend policies and company information about future investment policy available in time to public investors. FinFor the development of stock market, Yangon Stock Exchange, securities companies and investors are responsible to involve in the stock market in harmony. YSX should provide the frequent trainings and workshops for promotion for stock trading and financial

literacy and education. The rules and regulations and entrance fees for investors, also listing criteria for the new coming local companies should be considered to attract them for the development of Stock market of Myanmar.

ACKNOWLEDGEMENTS

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Appendix

No	Macroeconomic Factors	Investors		Staffs of YSX, securities and listed companies		Overall Mean
	Economic factors	Mean	Std. deviation	Mean	Std. deviation	
1	Low income level of Myanmar people affects the stock market's development.	3.62	0.92	3.18	1.17	3.54
2	Fluctuation on exchange rates affects the stock market development.	3.62	0.92	3.55	0.93	3.61
3	Favorable bank interest rates in Myanmar affects the stock market development.	3.76	0.80	4.18	0.75	3.84
4	Inflation rate in Myanmar affects the stock price.	3.76	0.87	3.64	0.67	3.74
5	Currently, unattractive (stable) stock price also affects the stock market.	3.7	0.93	3.27	0.47	3.62
6	Current taxation rate of your country on corporate firm affect the stock development.	3.64	0.85	3.45	0.82	3.61
7	Dividend and return on investment of existing listed companies can affect on investors' decision.	3.86	0.73	4.18	0.60	3.92
	Mean	3.71		3.63		3.70
	Legal Factors	Mean	Std. deviation	Mean	Std. deviation	Average
8	Strict listing criteria and requirements affect the stock market development.	3.60	0.97	3.27	0.79	3.54
9	Poor law and regulation is a barrier of stock exchange market's development.	3.58	0.76	4.00	1.10	3.66
10	Information disclosure and poor corporate governance is a barrier of public companies to be listed.	3.70	0.86	3.45	0.93	3.65
11	Current government's rules and policies also affect the stock market	3.54	0.93	3.82	1.08	3.59

	development.					
12	Current foreign trade investment policy can cause the negative impact on stock market development.	3.50	0.81	2.45	0.93	3.31
	Mean	3.58		3.40		3.55
	Technological Factors	Mean	Std. deviation	Mean	Std. deviation	Average
13	Existing online trading system is not still effective to the stock market development.	3.38	1.12	2.36	0.81	3.20
14	Delaying online system can cause the negative effect on the stock market development.	3.60	0.92	3.09	0.83	3.51
15	Lack of user's technical and financial knowledge on online trading limits the stock market development.	3.74	0.90	3.73	0.9	3.74
	Mean	3.57		3.06		3.48
	Political Factors	Mean	Std. deviation	Mean	Std. deviation	Average
16	2020 election can affect the stock market development.	3.56	0.82	3.45	0.9	3.54
	Mean	3.56		3.45		3.54
	Other Factors	Mean	Std. deviation	Mean	Std. deviation	Average
17	High trading costs (underwriting fees) affects stock market development.	3.76	0.89	3.64	0.81	3.74
18	Absence of credit rating agencies (specialists, market analyst) affects the stock market development.	4.00	0.70	4.00	0.77	4.00
	Mean	3.88		3.82		3.87
	Overall Mean	3.47		3.49		3.63

Source: Survey Data, 2019

Factors Affecting Children Ever Born in Myanmar: Application of Poisson Regression Model

Sanda Thein

Yangon University of Economic

ABSTRACT : Children ever born is defined as the total number of children a woman has ever given in her lifetime. Fertility is one of the key determinants of population pattern and is also important in resource planning and development This paper attempts to identify the socioeconomic and demographic determinants of number of children ever born (CEB) to women of age 15- 49 years using 2015-16 Myanmar Demographic and Health Surveys data. Poisson regression model is explored to study the impact of potential regressors on fertility. The results indicate that the older women have a significantly higher number of CEB. It could be that the average number of children will increase as women's age increases. Mother's education negatively affects the average number of children ever born to a fertility. Moreover, mother's employment has negative impact on the number of children. The results indicate that working mothers had 15.72% fewer number of children compared to those not working. In this study, the wealth status and number of children born are inversely related. Women who were currently using contraceptive had a lower number of children by 8.1% compared to those who have never used. The finding reflected that women living in urban area had 7.14% lower number of children than women living in rural area. On the above findings we recommend that more emphasis is needed on women's may take care of other social and economic indicators.

Key Words : Children ever born (CEB), Poisson regression,

I. Introduction

Children ever born (CEB) is defined as the total number of children a woman has ever given in her lifetime. The number of children ever born to a particular woman is a measure of her lifetime fertility experience up to the moment at which the data are collected. Fertility is one of the key determinants of population growth and pattern and is essential for planning and achieving sustainable development. In most cases, the mean number of children ever born is computed as the ratio of the number of children born alive to all women in a particular age group to the total number of women.

The world's total fertility rate (TFR) in 2012 was 2.4; it was 1.7 for developed countries, 2.7 for less developed countries and 5.05 for sub-Saharan Africa. In Myanmar, the total fertility rate (TFR) is 2.3 in 2014, slightly above replacement level, especially as compared to other. Southeast Asian countries of similar economic standing, like Cambodia (2.7) and Laos (3.1). There has been a significant decline in Myanmar's fertility, from a rate of 4.73 children per woman in 1983, down to 2.3 in 2014, despite the absence of any national population policy. Fertility decline in Myanmar is likely to be influenced by the factors such as place of residence, education, employment, increase in contraceptive use, increase in age at first marriage and increase in the proportion of women never married. Several factors have been associated with this decline in fertility in Myanmar society. For this reason, this study is an attempt to (i) model using the Poisson regression model to individual woman's fertility level and identifies socioeconomic determinants which determine fertility among women, and (ii) examining empirically the validity of the proposition that fertility is a function of socio-economic and demographic variables.

II. Methodology

The study was retrospective cross-sectional in design and utilized Myanmar Demographic and Health Survey (MDHS) 2015/16. It was conducted by the Ministry of Health and Sports (MoHS). It is a nationally representative survey. Children Ever Born (CEB) to women of age 15-49 is used to study the hypotheses about general behavior of fertility to each woman. The deendent variable was CEB while the independent variables are mother's age groups, mother's age at first marriage, mother's education, mother's employment, wealth index, mother's marital status and used of contraceptive

Ⅲ. Statistical Modeling and Data Analysis

In statistical analyses, dependent variables may be limited by being count data only taking on nonnegative (or only positive) integer values. Especially, interested in cases where takes on relatively few values, including zero. The total number of children ever born (CEB) per woman was used as a measure of fertility. In various demographic studies CEB is used as proxy for fertility. Since CEB is a count outcome, Poisson regression model of generalized linear models (GLM) family has been used for the data analysis. The generalized log-linear model for CEB under the assumption of Poisson error structure and link log has been used. Being Poisson regression model of nonlinear nature, has many advantages over the linear regression models. The Poisson regression model was recommended by previous researchers and has been used in many studies.

Poisson regression model: The standard model for the count data is the Poisson regression model, which is a non-linear regression model. This regression model is derived from the Poisson distribution by allowing the intensity parameter λ to depend on covariates (regressors). If the dependency is parametrically and involves exogenous covariate but no other sources of stochastic variation, we obtained the standard Poisson regression. In Poisson regression it is assumed that the dependent variable Y, number of occurrences of an event (CEB), has a Poisson distribution given the independent variables X1,X2,....,X8,

$$\Pr\{Y=y\} = \frac{e^{-\lambda}\lambda^{y}}{y!} \; ; \text{for } \lambda > 0, \; y = 0, 1, 2, \ldots \tag{1}$$

where the log of the mean λ is assumed to be a linear function of the independent variables.

That is, $\ln(\lambda) = \alpha + \beta_1 x_1 + \beta_2 x_2 + \ldots + \beta_8 x_8 = x'\beta$; $\tag{2}$

Where, $x' = [\,1 \quad x_1 \quad x_2 \ldots \quad x_8\,]$ $\tag{3}$

α is intercept and $\beta's$ are the Poisson regression coefficients.

This implies that λ is the exponential function of independent variables,

$$\lambda = e^{\alpha + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_8 x_8} = e^{x'\beta} \tag{4}$$

For subject i

$$\ln(\lambda_i) = \alpha + \beta_1 x_{1i} + \beta_2 x_{2i} + \ldots + \beta_8 x_{8i} = x'_i\beta \tag{5}$$

This is often referred to as "Poisson loglinear model". We can also represent,

regression coefficient exp{βi} which represents a multiplicative effect of the predictor on the mean. Increasing by one unit multiplies the mean by a factor exp{βi}. The exp{βi} is also known as Incidence Rate Ratio (IRR) which quantifies the direction and strength of relationship between predictors and dependent variable (CEB).

Goodness of Fit: A measure of discrepancy between observed and fitted values is the deviance. The deviance for Poisson responses takes the form

$$D = 2 \sum \left\{ y_i \left(\frac{y_i}{\hat{\lambda}_i} \right) + \left(y_i - \hat{\lambda}_i \right) \right\}$$

For large sample an alternative measure of goodness of fit is Pearson's Chi-squared statistic with (n-p) degree of freedom, it is defined as

$$\chi_p^2 = 2 \sum \frac{(y_i - \hat{\lambda}_i)^2}{\hat{\lambda}_i}.$$

The Akaike information criteria (AIC), a goodness of fit measure defined as (-2 ln L + 2k) where k is the number of parameters in the model and L is the likelihood function of the final model. Bayesian information criteria (BIC) a goodness of fit measure defined as $\dfrac{-2 \mathrm{Ln} L + k \ln(n)}{n}$ where n is the total number of observations.

IV. Results

This study consisted of 12885 women respondents in reproductive age 15-49 year old from MDHS (2015-16). Table (1) shows the percent distribution of women with summary of their children ever born (CEB). The maximum (63.3%) women belong to age group 20-39 years. The proportion of women who have first marriage in the age group of 15-29 years was 71.2%. Most (87.7%) of the mothers were educated. The proportions of working and not-working respondents were 71.4% and 28.6% respectively. The majority at nearly one- fourth of women (21.3) were rich women. . The use of contraceptive and non-using contraceptive were 44.2% and 55.8%. Women who never married and married were 32.2% and 61.1% respectively, while the living together and others were about 3.3% and 3.5% respectively. The distribution of women (respondents) who gave at least one child birth according to urban and rural was 70.6% and 29.4% respectively.

The fertility level is indicated by number of children ever born to a woman which is defined as the dependent variable in this study. The findings showed that the mean number of children ever born to women age 15-49 year old in Myanmar is 1.78 and the standard deviation is 2.088. The mean CEB (1.99) in rural area was higher than in urban residence. The mean CEB by women's age 15-19 years was 0.06 while it was 3.50

for those aged 45-49 years. As expected the mean CEB was more for mothers with no education (3.33), married marital status (2.65), and non-working (1.85) and wealth index (2.59) among their respective groups. Respondents who using contraceptive had the lower (1.48) CEB in comparison to who never used contraceptive.

V. Generalized Linear Model (GLM) analysis

The CEB (continuous variable) information provides a rudimentary check of the data for over dispersion. The ratio of the variance to the mean (2.088/1.78= 1.17) indicate equidispersion for such large sample. The most widely-used diagnostic for multicollinearity is VIF (Variance Inflation Factor). The VIF value ranged between 1.23 and 1.52 which indicates no interrelationship among the predictors. The deviance (16209.832) was evaluated using Chi-square distribution with model degree of freedom (7770) and conclude that model fits reasonably well because the Chi-square test is not significant in the following Table (2).

According to the Table (3), the Omnibus Test is a likelihood ratio test which compares the fitted model against the intercept-only model, since p < 0.05; it indicates that the model is statistically significant. According to the Table (4), the test of model effects indicates that seven regressors are statistically significant predictors of CEB (p< 0.05) and place of residence is statistically significant of CEB (p < 0.1).

Poisson regression results: The incidence rate ratio (IRR) which is the exponential of estimated Poisson regression coefficients along with its 95% confidence interval is depicted in Table (5). As expected the association of CEB with women age group shows that the women in the age group 45- 49 had the highest number of children than any other age groups. The percentage of number of children was consistently decreasing with decrease of age groups. For example, women in the age group 30-34 have about 81.72% (IRR= 0.1828) fewer number of children than the women in 45-49 years.

According to the mother's age at first marriage, the women whose age at first marriage was in the age groups 10-14 and 15-24 had 56.52% (IRR= 1.5652) and 21.17% (1.2117) more number of children respectively than 25-39 years old mothers. The percentage of number of children is consistently increasing with decrease of age groups pertaining to her first marriage holding all other variables constant. Compared to those women with no education, women who had primary, secondary and higher education had fertility lower by 6.4% (IRR= 0.936), 7.6% (IRR= 0.924) and 50.84% (0.4916) respectively. This indicates the inverse association of education and the number of children born per woman.

Mother's employment has negative impact on the number of children. The results

indicate that working mothers had 15.72% (IRR= 0.8428), fewer children compared to those not working. The effects of wealth status show that poorest women had the highest fertility. Compared to those women with poorest wealth status, women who had poorer, middle, higher and highest wealth status had lower number of children by 23.51% (IRR= 0.7649), 41.32% (IRR=0.5868), 53.61% (IRR=0.4639) and 64.41% (IRR=0.3559) respectively. The indicates that the wealth status and number of children born are inversely related.

The effects of marital status show that married women had the highest fertility, that is, 87.57% (IRR= 1.8757) more number of children per women than women never married. To delay or avoid a pregnancy ever use of contraception indicate that the women who had ever used contraceptive, compared to those who had never used, had a lower fertility by 10.15% (IRR= 0.8985). The effects of residence show that women living in rural area had the high fertility. The women living in urban area had 7.14% (IRR= 0.9286) lower fertility than women living in rural area.

VI. Discussion

The study used the Poisson regression model to analyses the fertility (children ever born) of Myanmar women of child bearing age (15-49 years) from the MDHS survey (2015-16) as reported on Ministry of Health and Sports (MoHS). Some basic socio-economic and demographic information of mother (respondent) were fitted into model. The findings indicate that women age, age at first child birth, women education, women employment, wealth status, marital status, use of contraceptive and place of residence have significant effect on fertility level in Myanmar.

Mother's age is one of the most important biological and demographic determinants of fertility. It is natural that an older woman has more number of children as compared to her younger counterpart. This study revealed the inverse association of CEB with mother's age group, it shows that the women in the age group 45-49 had the highest number of children than any other age groups starting at 15 years.

Respondents' age at first marriage was found to be an important determinant of the number of children that women will have in her lifetime. Similar findings have been reported by a previous study, where they acknowledged that early marriage and childbearing at young ages are associated with high fertility. Early marriage not only marks a woman's entry into a sexual union and the beginning of exposure to childbearing but may also be an important gauge of women's status, since the older the woman is when she marries, the greater the likelihood that she has attended school or been employed, and the greater her chances of having a more equal

relationship with her husband. The finding is similar to many studies shows that older age at first marriage played an important role in reduction in fertility. Most of studies conducted in various countries with reference to fertility determinants produced significant inverse relationship between women's education and fertility. In the present study we also found that as level of education increased, the number of children born per woman reduced. Women who had secondary and higher education had less number of children than the women without education or those with primary education.

Women's employment status is also strongly influencing fertility level in Myanmar. In this study, women who were working were found to have lower number of children than those who were not working. Women who were working usually want to have more income to support their family. They carefully considered the tradeoff between having more child and less time or opportunity to work. This explains why working women were found to have less number of children that those who were not working. This study also indicates that current work status is inversely related to fertility and also plays a significant role in determination of fertility.

The result supported concerning the poorest women would have higher fertility than the richest women. The relation of wealth and fertility can be clearly seen in the study. An inverse relationship was observed between wealth status and fertility, with significantly lower fertility among the richest women compared to fertility among the poorest. Because the poorest people have less access to education and family planning methods.

Women, who were legally married, were more likely than those living together with a sexual partners (without a legal marriage) to have higher fertility. Past studies have shown that married women have tendencies for high fertility compared to unmarried women. The result indicated that those women who had ever use of contraceptive had the significant impact on fertility reduction. The findings of the present study discovered that use of contraceptive had lower fertility than non-user of contraceptive.

Current analysis shows that urban fertility is less than rural indicating that fertility has started declining in urban areas. The reason for higher rural fertility is obviously due to differentials in education, use of contraceptives, and economic status of respondents and may be of opportunity cost of children among urban and rural. In rural areas there is also lack of accessibility to contraceptives and health facility. Overall it is concluded that Poisson regression model explicitly explained the association of CEB with socioeconomic and demographic predictors.

VII. Recommendation

The government should provide the programs to increase skilled people for working group population by providing more education facilities and job opportunities and by encouraging them to study more at school or more to participate in labor force. Only the skilled people can improve the development of the country. Besides, government should improve education infrastructure and appoint more number of teachers, especially in rural areas.

Women have knowledge about contraceptive methods only fewer were used contraceptive method. Therefore, in order to increase family plaining users, effective awareness program should be lunch by providing proper counseling and knowledge about use of contraceptive method.

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Appendix

Table 1. Children Ever Born (CEB) by socio-economic and demographic characteristics

Variable Characteristic		Standardized Weighted Percent of Women (N= 12885)	Mean of CEB	Standard Deviation
Mother's Age	15-19	2.9	0.06	0.253
	20-24	10.6	0.48	0.770
	25-29	16.0	1.24	1.241
	30-34	18.2	1.87	1.646
	35-39	18.5	2.50	2.011
	40-44	17.4	3.11	2.346
	45-49	16.4	3.50	2.610
Mother's Age at First Marriage	10-14	1.1	4.95	2.541
	15-29	71.2	3.25	2.023
	30-39	27.5	2.09	1.307
	40-49	0.2	1.15	0.376
Mother's Education	No education	12.4	3.33	2.641
	Primary	39.8	2.25	2.144
	Secondary	37.6	1.08	1.520
	Higher	10.3	0.70	1.058
Mother's Employment	Working	71.4	1.76	2.082
	Not working	28.6	1.85	2.102
Wealth Index	Poorest	18.3	2.57	2.452
	Poorer	19.0	2.17	2.261
	Middle	20.4	1.79	2.139
	Higher	21.3	1.43	1.765
	Highest	20.9	1.09	1.418
Use of Contraceptive	Never used	55.8	2.49	1.675
	Ever used	44.2	1.48	2.173
Marital Status	Never married	32.2	0.00	0.16
	Married	61.1	2.65	2.048
	Living together	3.3	1.83	1.817
	Others	3.5	3.19	2.150
Place of Residence	Urban	29.4	1.30	1.643
	Rural	70.6	1.99	2.217
	Total	100	1.78	2.088

Data Source: Myanmar Demograpphic and Health Survey (2015-16)

Table 2. Goodness of Fit

	Value	df	Value/df
Deviance	16209.832	7770	2.086
Pearson Chi-Square	16209.832	7770	2.086

Log Likelihood[a]	-13912.839	-	-
Akaike's Information Criterion (AIC)	27875.677	-	-
Finite Sample Corrected AIC (AICC)	27875.845	-	-
Bayesian Information Criterion (BIC)	28049.705	-	-
Consistent AIC (CAIC)	28074.705	-	-

Source: Based on calculation (Myanmar Demograpphic and Health Survey (2016-16))

Table 3. Omnibus Test

Likelihood Ratio Chi-square	df	Sig (p value)
4642.822	23	0.000

Source: Based on calculation (Myanmar Demograpphic and Health Survey (2016-16))

Table 4. Tests of Model Effects

Source	Type III		
	Wald Chi-Square	df	Sig.
(Intercept)	8.059	1	0.005
Mother's Age	3534.722	6	0.000
Mother's Age at First marriage	1383.616	3	0.000
Mother's Education	219.502	3	0.000
Mother's Employment	22.278	1	0.000
Wealth Index	290.198	4	0.000
Use of Contraceptive	10.627	1	0.014
Marital Status	138.421	3	0.000
Place of Residence	2.676	1	0.090

Source: Based on calculation (Myanmar Demograpphic and Health Survey (2016-16))

Table 5. Association of Predictors with Children Ever Born (CEB)

Variables	Predictors	IRR = exp(b)	Std.Error	95% Wald Confidence Interval	
				Lower	Upper
	(Intercept)	1.4564	.4611	-.527	1.280
Mother's Age Group	15-19	0.0234***	.1542	-4.059	-3.455
	20-24	0.0363***	.0731	-3.459	-3.173
	25-29	0.0810***	.0600	-2.630	-2.395
	30-34	0.1828***	.0566	-1.810	-1.588
	35-39	0.3573***	.0556	-1.138	-.920
	40-44	0.6603***	.0550	-.523	-.308
Mother's Age at First Marriage	10-14	1.5652***	.4305	0.292	0.604
	15-24	1.2117***	.4021	-0.981	0.404
Mother's Education	Higher	0.4916***	.0864	-0.540	-0.879
	Secondary	0.9240	.0770	-.072	-0.230
	Primary	0.9360	.0740	-.211	.079
Mother's	Working	0.8428***	.0362	-.242	-.100

Employment					
Wealth Index	Highest	0.3559***	.0672	-0.901	1.164
	Higher	0.4639***	.0650	-0.641	0.895
	Middle	0.5868***	.0630	-0.410	0.657
	Poorer	0.7649***	.0584	-0.154	0.382
Marital Status	Married	1.8757***	.2189	.200	1.058
	Living together	1.2068***	.2296	-.262	.638
	Windowed	0.7921***	.2327	-.689	.223
	Divorced and Others	0.0328***	1.4597	-6.277	-.555
Use of Contraceptives	Yes	0.8985***	0.0359	-0.177	-0.037
Place of Residence	Urban	0.9286***	.0458	0.200	1.058

Source: Based on calculation (Myanmar Demograpphic and Health Survey (2016-16))

The Effect of Emotional Labor and Job Stress on Turnover Intention of Child Care Support Workers

Lee Shin Sook
Sunchon National University

ABSTRACT : The child care support project is a government-sponsored home nursing service that is being promoted by social demand to publicly support, supplement and replace child care. Most people in the service industry, including child care, cannot express their feelings as they are and cannot control emotions in the relationship between the superficial behavior, tension and depressive moods demanded by customers. Parenting support workers play a pivotal role in parenting support projects, but are expected to have a negative impact on parenting due to frequent transitions due to various forms of emotional work and work stress. Therefore, this study aims to provide practical help to prevent the intention of the childcare worker to turn over by investigating the effect of emotional labor and job stress on the intention to turn over the female childcare support worker.

Key words : Emotional Labor, Job Stress, Child Care, Turnover Intention,

I. Introduction

Due to the increase in dual income due to women's participation in economic activities and the nuclear familyization, there is a gap in child care in the family, which makes it difficult to balance work and family due to the burden of work-family conflict and child care. The function and role of the family in child rearing is very important. Today's social phenomena do not provide a stable parenting environment for children.

Moreover, even though women's social activities are steadily expanding, the

responsibility for raising children and domestic work is still increasing for women, and the difficulty of raising working mothers is increasing.

In addition, existing facility-based childcare alone has made it difficult to meet care needs. As the demand for care services is diversified according to the age, characteristics, and working conditions of working parents, governmental measures are needed. In other words, there is a wide variety of demands for child care support, such as temporary gaps in child care, or preferring individual care to care for children at home. There is something that cannot be done. In order to solve these problems related to child care, 'socialization of caring labor' was started to recognize caring labor, which was considered as women's only within the family, as a public domain.

The child care support project is a government-supported home care service that is being promoted by social needs to publicly support, supplement, and replace child care (Kim, Yoo-Kyung, Park Jung-Yoon, Song Hye-Lim, 2010). In addition, the workers in charge of child care reduce the parenting burden of working parents and respond flexibly to the demand for individual parenting by activating individual service in the home that can satisfy parents' various child rearing needs. Therefore, child care workers experience psychological disparity between basic feelings and formal feelings while performing childcare services required differently from their own emotions.

In this way, emotional labor should be used to express dissatisfied feelings of parents' needs in caring services irrespective of their feelings of caring (Park Han-soo, 2014).

Most people in the service industry, including child care, are unable to express their feelings as they are and control emotions in the relationship between surface acting, strain and depressed mood required for customers. It is clear from the research (Prati, Liu, Perrewe & Ferris, 2009) that people who need skills and those who excel in these skills perform well and have good customer relationships.

In the field, caregivers become the hands, feet, eyes, and mouths of infants and young children, and their role is very central to the purpose of the project, but they are involved in the interrelationship between individual and environmental factors in carrying out their duties. Emotional labor resulting from the psychological and physical imbalances that arise occurs a high turnover intention, and even if they provide services with a sense of consciousness, the job stress that occurs in the job process is reported to be significant. In particular, child care workers are stressed about their jobs for a variety of reasons, and stress caused by the job is an important factor that lowers the motivation of child care workers and lowers the quality of service when providing services to users.

Child care support workers play a pivotal role in child care support projects, but are expected to negatively affect child care due to frequent turnovers due to various forms of emotional labor and job stress.

Therefore, this study aims to provide practical help to prevent the turnover intention of childcare workers by examining the effect of emotional labor and job stress on the turnover intention of female childcare support workers.

II. Theoretical background

1. Child care support business and child care workers

In recent years, the reduction of family structure, weakening of family functions, and weakening of community functions have increased the burden of raising children in the home, and the burden of raising children is increasing not only for two-in-one families but also many other types of families. In particular, the rapidly increasing number of marriage immigrant families requires various support for raising children, which makes it difficult for mothers who do not know Korean culture to raise children. As such, child rearing cannot be solved in the home, which seems to be an urgent problem that society must solve (Lee, 2015).

For this purpose, the Ministry of Gender Equality and Family selected 'Socialization of Care and Support for Work and Family' as the main core task of family policy in 2006. With this, 'Home Childcare Support Service' became an important project to support the family.

According to the 2013 Guidelines of the Ministry of Gender Equality and Family, the background of the childcare business is as follows. First, the necessity of promoting child-care services was raised because the childcare facility could not respond flexibly to urgent and temporary care needs due to overtime, business trips, or illness of children. Nuclear familyization and the increase of dual-family families have created a gap in child care for the family. Existing institutional care is limited to support urgent and temporary care needs caused by diseases and night work of parents. In particular, low-income women with double-earning, temporary and daily employment have a high demand for time-consuming and part-time care for infants, but there is a shortage of services for them (Chun Byung Hill, 2009). In particular, childcare may not be suitable for certain children depending on the child's health condition and illness. In this case, childcare service to individual families is required. Second, working parents with infants under 2 years of age tend to prefer one-on-one individual childcare for the safety and health of their children. In addition, as the needs for caring services are more diversified according to the age of the children, parental employment, and the way of life, there is a limit in satisfying the care needs by facility care alone. As such, the child care support project is being promoted by the social need to publicly support,

supplement, and replace child care as a government-supported home care service (Kim, Yoo-Kyung, Park Jung-yoon, Song Hye-Lim, 2010).

The child care support program has brought about the effect of creating jobs for women, and the person who plays a pivotal role in this business is the child care worker. Child care workers go directly to families in need of services, and care for children aged 3 months to 12 years old (elementary school students). It refers to the individual care provider in the family who takes care of three- to 12-month-old infants who have difficulty in carrying out personal protection or collective childcare for all day care such as daily care and health care (Ministry of Gender Equality and Family, 2011).

Child care workers can be seen as a person who strives to grow into a healthy adult by developing social development, emotional development, gender role recognition, and interpersonal skills through safe protection and guidance of infants and young children and school age children.

2. Emotional labor

Emotional labor refers to labor that routinely suppresses and controls one's own emotions in order to meet the service's goals and customers' feelings, and those who engage in such work are called emotional workers (Grandey, 2000).

Hochschild (1983) was the first scholar to use the term Kim Jong Labor to recognize emotion as a form of labor. In his research of aircraft crews, he found intentionally expressing the right feelings to others when performing a job, insisting that certain emotions that had not been evaluated as labor could be a new labor factor centered on service occupations.

Emotional labor, therefore, is defined as 'the effort, planning and control required by individuals for the expression of emotions required by the organization during the interaction of people,' or 'the process of adjusting feelings and expressions as part of the work role'. do.

Emotional labour is more and more evident in the work of a person's service in which a particular position of work occurs socially or organizationally. For example, employees who perform emotional labor in service tasks such as bank tellers, medical workers, and babysitters continually hide and control their emotions for work.

Emotional labor can be divided into deep action and surface action. First, deep acting is the service worker's effort to meet the expression standard provided by their goal. It is an act of unity with the inner emotions of a person and an individual. To this end, members must actively express their emotions from their expressions, thoughts, memories, and images, and deepening behavior becomes more effective when they are immersed in the expression norms presented by the organization.

Next, surface acting is an action that does not occur internally to the expression norms presented by the organization. In other words, it is a personal effort to meet the expectations of the organization or the customer, but not the internal representation of the mind, but the willingness to meet the expectation by manipulating the external representation.

Intensive or superficial behaviors require some personal effort. Many demands and high levels of emotional labor cause stress because of the mental demands of economic sentiment control and affect the individual's identity and self-esteem as a result of job performance, which in turn affects the performance of the job due to interactions with customers. Madness (Ashforth and Humphrey, 1993).

3. Job stress

Stress is a term originally used in physics that involves feelings of anxiety and threatening feelings when a person is psychologically or physically stressed or in a difficult situation. The study of stress required the treatment of the soldiers and their families who were mentally and physically damaged by the pre and post war wars in the 1920s. happened. The problems began when doctors were interested in the pathology of industrial society, and they defined stress as a pathological phenomenon, with negative consequences. Stress is the physical and mental tension that arises from factors that attempt to change from a person's hardship, misery, or adversity to its original stable state, which leads to physiological tension and even disease by not adapting to individual standards. It is defined as a degree of discomfort or physical, chemical and emotional factors that can be done (Lazarus, 1966).

When stress and job are linked, the concept of job stress is derived. Looking at the various definitions related to job stress, Kahn et al suggest that harmful physical reactions occur when a job's demands do not fit the worker's resources, abilities, and needs, and that the ability and resources held by the individual It is defined as a result of inadequacy or inadequacy of the work environment that can enable individual needs and needs to be met (Lee, Jong-Yeol, 2011; Khan, 2001).

People who are engaged in supporting interpersonal services are exposed to various scenes and situations because they are faced with many welfare service users and have to find solutions. As a result, adaptation and relationship formation are required for individuals with various needs. Therefore, emotional stress and workload are higher than those in other occupations. Since the environment, values, personalities, and physical characteristics of the users are different from each other, the human service worker experiences stress in the process of providing appropriate counseling and services to the subjects while suppressing their feelings and personalities(Jung Hoon, 2008; Employment season, cited in 2010)..

In addition, idol caregivers, who are in charge of caring for their children at the request of great parents, have heavy job stress among any of the welfare services.

4. Turnover Intention

Turnover is defined as 'disengagement of an organization's status as a personal journey of whether or not an organization is staying in or leaving the organization', Price (1997), and Mobley (1982). It is to terminate the membership of the organization arbitrarily. However, turnover intention does not mean the result of a turnover, but rather a state of mind where the urge to leave before the turnover can be a psychological conflict that can result in a turnover.

Theories related to turnover intention include human capital theory, exchange theory and organizational balance theory. In the theory of human capital, the concept derived from economics states that the decision to leave or remain an organizational member determines the turnover in view of the cost-benefit of leaving or remaining an organization. According to this theory, wage effects, periodic effects, age and working periods, and turnover costs are affected. It is believed that the specific behavior of a person should be greater or equally received than giving, and it is possible to act on the basis of the possibility of reward and the valuation of reward.

In other words, human behavior is regarded as the coincidence of investment and compensation, and if the members of the organization do not meet the same level of expectations (job satisfaction, compensation, etc.) for the organization, the possibility of turnover is increased. The intention to turnover in organizational balance theory is that motivation of organizational members is not only made by material and economic rewards, but that changes can be made through conditions recognized by the members. It is a balance with rewards. In other words, if an organization is dissatisfied with or does not meet the desired compensation, the intention to turnover appears and other alternatives are explored, thereby selecting a turnover.

A study of disabled assistants (Kim Eui-geun and Park Eu-jin, 2011) found that low job satisfaction, which is spread from low wages and job instability, and extreme work stress from service preferences of various customers are represented by turnover. In addition, according to a study by Choi Seok-bong and Moon Jae-seung (2013), if the task importance and autonomy of the human care service workers were low, the fatigue and the job tension were increased, leading to turnover intention. Choi Choi (2011) found that the higher the job satisfaction of child care center teachers, the lower the burnout, and the higher the job stress, the higher the burnout rate.

Ⅲ. Research method

1. Subject of investigation

   The subjects of this study were women over 30 years of age who are engaged in childcare support projects in Jeonnam. A total of 350 questionnaires were distributed from May 20, 2019 to July 31, 2019, but a total of 303 copies were used for this study, except for questionnaires that were not suitable.

2. Research tool

   The data for this study was made through a questionnaire. The questionnaire consists of 48 questions including 9 questions to examine the socio-demographic characteristics of the survey subjects, 15 questions to determine the degree of emotional labor, 13 questions to determine job stress, and 11 questions to determine the intention of turnover. It was.

1) Socio-demographic characteristics
   The socio-demographic characteristics of the survey subjects consisted of nine items including age, education, marital status, residence, religion, domestic family, average monthly household income, health status, and economic status.

2) Emotional Labor Scale
   In order to find out the degree of emotional labor of women participating in the childcare support project, Kim Ki-Joong (2014) used the measures used in the previous research. The scale consisted of 15 questions and consisted of the frequency of emotional expressions (4 questions), the degree of attention required for emotional expressions (4 questions), the variety of emotional expressions (3 questions), and the discord of emotions (4 questions). Each question score consists of 5 points, 1 point for "No", 2 points for "No", 3 points for "Normal", 4 points for "Yes" and 5 points for "Very Yes". The higher the sum, the higher the level of emotional labor, and the lower the score, the lower the level of emotional labor. The reliability of the emotional labor scale used in this study was Cronbach 's α = .89.

3) Job Stress Scale
   Job stress scale was used by Kim Seung-tae (2014). The job stress scale consists of three categories of role conflict (4 questions), role ambiguity (4 questions), and over role (5 questions), and the response categories range from "not at all" (1 point) to

"very so" (5 points).As measured by the 5-point Likert equator, the higher the sum of scores, the higher the job stress. The reliability coefficient of the job stress scale used in this study is Cronbach's α = 0.82, indicating that reliability is secured.

4) Turnover Intention Scale

   To determine the degree of turnover intention, we used the scale used by Jang Sung-ae (2015), which consists of 11 questions, each of which is "not at all" (1 point) to "very yes" (5 points). It was composed of a five-point Likert scale, and the higher the score, the higher the turnover intention. The reliability of the turnover intention scale used in this study was Cronbach's α = .94, indicating that reliability was secured.

3. Analysis method

   For the data processing for this study, statistical processing was performed using SAS Package program. Detailed analysis methods are as follows.
   First, frequency and percentage were used to examine the socio-demographic characteristics of the subjects, and Cronbach's coefficient was calculated to determine the reliability of the scale. Second, the average and standard deviation were calculated to examine the degree of emotional labor, job stress and turnover intention of the survey subjects. Third, correlation analysis was conducted to examine the relationship between emotional labor, job stress and turnover intention of the survey subjects. Stepwise Multiful Regression Analysis) was conducted.

IV. Results

1. Socio-demographic characteristics of survey subjects

   The results of the socio-demographic characteristics of the survey subjects are shown in <Table 1>.

Table 1. Characteristics of the Sample(N=303)

Variable	Category	N	%
Age(yr)	≥ 39	23	7.5
	40-49	83	27.3
	50-59	121	39.9
	60 ≤	76	25.3
Education	Middle School≤	67	22.1
	High School≤	161	53.1
	College≦	75	24.8
Spouse	yes	273	90.0
	no	30	10.0

Residence	City	184	60.7
	Rural	119	39.3
Religion	Christianity	114	37.6
	Buddhism	54	17.8
	Catholicism	68	22.4
	NO	67	22.2
Living State	Alone	13	4.2
	Only Couple	127	41.9
	With Family	163	53.9
Monthly Income	≥ 50	28	9.2
	51-100	55	18.1
	101-150	62	20.4
	151-200	53	17.4
	201 ≤	105	34.9
Health State	Poor	21	6.9
	Moderately	146	48.1
	Good	136	45.0
Economic State	Poor	36	11.8
	Moderately	206	67.9
	Good	61	20.3
total		303	100

2. Emotional Labor, Job Stress and Turnover Intention of Child Care Support Project Workers

The emotional labor, job stress, and turnover intentions of women engaged in child care support are shown in <Table 2>. As shown in the table, the average level of emotional labor was 3.90, higher than the median of 3, indicating that the level of emotional labor was relatively high. Job stress was 3.39 points (median: 3 points), and there was some stress. When looking at each sub-area, the role overload was 3.78 points, the role conflict was 3.39 points, and the role ambiguity was 3.01 points. The stress caused by the excess was the highest and the role ambiguity was the lowest. The results of this study imply that women who participate in child care support programs have a clear role and that women who are workers are aware of their roles, but child rearing is a very difficult task. Lastly, the average turnover intention of women in childcare support projects is 3.08 points, which is almost close to the median.

Table 2. The Level of emotion labor, job stress and turnover intention

Variable	N	Min	Max	M(SD)	Medium
emotion labor	303	1	5	3.90(4.01)	3
role overload	303	1	5	3.78(.84)	3
role conflict	303	1	5	3.39(.88)	3
role ambiguity	303	1	5	3.01(.65)	3
job stress	303	1	5	3.39(.73)	3
turnover intention	303	1	5	3.08(.81)	3

4. Correlation between Emotional Labor, Job Stress, and Turnover Intention of Child Care Support Workers

The results of the correlation analysis between emotional labor, job stress and turnover intention of women participating in child care support are shown in <Table 3>. As shown in the table, r = .6204 (p <.001) was found to be very high between job stress and turnover intention of child care support workers, and there was a significant positive correlation among all subfactors. There is also a close relationship between emotional labor and job stress, r = .4545 (p <.001), which suggests that emotional labor causes job stress. In other words, the emotional labor of women participating in child care support project was closely related to job stress and turnover intention, and the role of job stress was closely related to turnover intention.

Table 3. Correlation between Emotional Labor, Job Stress, and Turnover Intention of Child Care Support Project Workers

Variable	emotion labor	role overload	role conflict	role ambiguity	job stress	turnover intention
emotion labor	1					
role overload	.5673 (***)	1				
role conflict	.3045 (***)	.4960 (***)	1			
role ambiguity	.0014 (***)	.2683 (***)	.3290 (***)	1		
job stress	.4545 (***)	.5302 (***)	.4203 (***)	.0634 (***)	1	
turnover intention	.3601 (*)	.6027 (***)	.3888 (***)	.0056 (***)	.6204 (***)	1

*** p<.001

5. Relative Influences of Variables (Sociodemographic Characteristics, Emotional Labor, Job Stress) on Turnover Intention of Child Care Support Project Workers

In order to analyze the socio-demographic characteristics, emotional labor, and the relative impact of job stress on turnover intention of women in child care support projects, the results of multiple stepwise regression are shown in <Table 4>. Before the regression analysis, the Durbin-Warson coefficient through residual analysis was used as a regression analysis. As a result, the Durbin-Watson coefficient was close to 2, indicating that there was no autocorrelation between the residuals. The regression analysis was performed because the correlation between the independent variables was 0.0520 <r <0.3291 and there was no linear relationship and there was no problem of multicollinearity that occurred when VIF was more than 10.

As shown in the table, the influence of the socio-demographic variables of child care support workers on turnover intention was 11%. Among them, age (β = .3203) showed the highest influence with 5% explanatory power, followed by health status (β =-. 2920), economic status (β = .2203), and education level (β = .1412) In order. The higher the age, the poorer the health status, the better the economic status, the higher the education level, the higher the intention to turnover.

Next, in Step Ⅱ, where emotional labor variables were added to socio-demographic variables, an increase of 24% resulted in 35% of explanatory power, among which the effect of emotional labor (β = .5897) was the largest. Statistically significant variables were economic status (β = .5004), health status (β =-. 3088), and age (β = .2708). In other words, the more emotional labor, the better the economic condition, the poorer the health status, and the older the intention to turnover.

Lastly, in Step Ⅲ, where job stress variables (over role, role conflict, role ambiguity) were added to socio-demographic variables and emotional labor variables, a 13% increase resulted in 48% of the explanatory power. The effects of over-role (β = .3115) and role conflict (β = .1674) were the greatest, with the overall impact of job stress variables being 15%. In addition, the statistically significant variable was emotional labor (β = .4221).), Economic status (β =-. 3088), age (β = .2708), health status (β =-. 1960), education level (β = .1483), that is, higher job stress, The more emotional labor, the better the economic status, the older the age, the poorer the health status, the higher the educational order, the higher the intention to turnover.

Table 4. Variables Influencing on Turnover Intention

Step	Variable	B	β	R^2	Rank
Step I	Age(yr)	1.4630	.3203***	.05	1
	Education	.9649	.1412*	.01	4
	Spouse(a)	- .1023	- .0245		
	Residence(a)	.3327	.0438		
	Religion(a)	.2943	.1204		
	Living State(a)	.3206	.0437		
	Monthly Income	.7302	.1130		
	Health State	-1.8832	-.2920**	.03	2
	Economic State	1.6230	.2203**	.02	3
	Cons = 52.02 R^2 = 0.11 F = 34.25***				
Step II	Variable	B	β	R^2	Rank
	Age(yr)	.9543	.2708**	.03	4
	Education	.4208	.1239		
	Spouse(a)	- .2753	- .0164		
	Residence(a)	.3348	.0233		
	Religion(a)	.5123	.0452		
	Living State(a)	.1511	.0042		
	Monthly Income	.3683	.1896		
	Health State	- .9477	- .3088**	.05	3
	Economic State	1.2076	.5004***	.08	2
	emotion labor	1.6420	.5897***	.13	1
	Cons = 21.08 R^2 = 0.35 F = 40.23***				

	Variable		B	β	R^2	Rank
Step Ⅲ	Age(yr)		1.0023	.2007**	.06	4
	Education		.5210	.1483*	.03	7
	Spouse(a)		-.3367	-.0950		
	Residence(a)		.4720	.1290		
	Religion(a)		.4852	.1299		
	Living State(a)		.3321	.0945		
	Monthly Income		.6889	.1048		
	Health State		-.8353	-.1960**	.06	5
	Economic State		1.9223	.3243***	.09	2
	emotion labor		2.3003	.4221***	.11	1
	job st-res s	role overload	1.3035	.3115***	.08	3
		role conflict	.8675	.1674**	.05	6
		role ambiguity	.4545	.1132		
	Cons = 15.08 R^2 = 0.48 F = 23.48***					

· * p<0.5, ** p<.01, *** p<.001
· (a) dummy variables
　　Spouse; yes(1), no(0).
　　Residence; city(1), rural(0).
　　Religion; yes(1), no(0).
　　Living state; alone(1), others(0).

V. Conclusion

This study examined the degree of emotional labor, job stress and turnover intention of workers participating in child care support projects, and how emotional labor and job stress affect turnover intention.

The results and suggestions of this study are as follows. First, the level of emotional labor and job stress of women in childcare support projects was relatively high. In addition, the degree of turnover intention is almost higher than the median, indicating that it is not high.

Second, there was a significant positive correlation between emotional labor, job stress, turnover intention.

Third, the relative influence of socio-demographic characteristics, emotional labor variables, and job stress on the turnover intention of women in child care support project was 48%. Among them, job stress had the highest influence (18%), followed by emotional labor, economic status, age, health status, and education level. In other words, the higher the job stress, the more emotional labor, the better the economic status, the older the age, the poorer the health status, and the higher the educational order, the higher the intention to turnover.

Based on the above results, suggesting ways to reduce the turnover intention of workers participating in child care support projects are as follows.

First, child care support projects are directly related to the issue of low birth rates that must be solved nationally. In other words, as one of the preparations for the upcoming population cliff, it should be sought for the child care not to be the private care that has been done in the family, but to be one of the public cares that the state is responsible for. These measures are required to enhance the business, and to increase satisfaction and pride in the work of women in childcare support projects and to reduce job stress such as over-role and role conflict. In other words, various considerations such as improvement of working environment, proper wage level, and flexible working hours are necessary as policy measures that can motivate people to work without stopping or leaving participating work due to tiredness or inconvenience.

Second, in order to prevent job stress and turnover intention, which is a negative effect of emotional labor that occurs to child care support workers who provide services to their families, organizational support has been expanded more aggressively. It should be possible to control the negative effects that occur. As mentioned earlier. Since these child care workers are usually unable to eliminate the emotional labor that occurs in the context of providing services to the subjects, organizational support to offset the negative effects of emotional labor is the human rights and welfare of individual social workers. It is a positive factor for improvement and important for the effectiveness of support projects in the long term.

Third, workers participating in service occupations are being unilaterally demanded from the organization to hide their feelings and express the feelings they want, and they are experiencing the stress of facing their subjects by controlling their feelings. Therefore, child care workers offset their negative roles by presenting and sharing a common vision so that individual members can internalize the emotion rules required by the organization rather than unilaterally demanding and directing the principle of customer-centered organizational operation. And promote a positive role. In addition, various efforts should be made to improve the awareness of emotional labor by developing and applying various programs to relieve stress and prevent negative effects of emotional labor from invading or encroaching on their own lives.

Fourth, workers in ear care programs provide all services such as physical activity

support, social activity support, and emotional support for caring children. However, when faced with a situation where it is difficult to deny what the family receives, they face job stress due to over-role, role conflict and role ambiguity. Therefore, in order to reduce these job stresses, work guidelines that provide specific business standards should be provided, and specific manuals should be established for finding and dealing with unclear tasks in service provision. These work guidelines and manuals will have a great impact on reducing job stress and preventing employees' turnover intentions by reducing the role excessive, role conflict and role ambiguity faced by service providers. do.

Fifth, efforts to prevent turnover intentions are needed through more professional and systematic education for childcare support workers. At present, workers are required to complete 80 hours of state-provided curriculum in order to participate in child care support projects, and to undergo 10 hours of on-site training at relevant institutions. In addition, if you participate in the child care support project, it is recommended that you reinforce your competency through remuneration training a year under the supervision of the support organization during the period of activity. Therefore, it is necessary to take precautionary measures to reduce the intention of employees to turn over by maintaining a good relationship with their families by dealing with attitudes and attitudes that should be acquired by professional workers through such education.

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INFLUENCING FACTORS OF WOMEN'S NUTRITION STATUS IN MYANMAR

Mya Thandar* **and Hlaing Hlaing Moe****

Yangon University of Economics

ABSTRACT: Female nutrition is one of the essential concepts in development planning. The nutritional status of women is related to the nutritional status of children. In recent years, the nutritional status of mothers and children has been an important point in Myanmar as it has been shown to be essential for sustainable development goals. The study found that demographic and socioeconomic variables have a significant impact on female malnutrition. Women's self-determination of age, quartiles, drinking water, cigarette smoking, state / region, women's income control and health care are important determinants of malnutrition for women of reproductive age (15-49) years. Further studies are proposed on socio-cultural practices, distribution of food in the home, women's workload, seasonal food insecurity and other related factors. In addition, further research is needed on the effects of malnutrition in women.

Key words : Women's Nutrition, Sustainable Development, Goals, Self-determination, SNUPR, DHS,

I. INTRODUCTION

Hunger and malnutrition are devastating problems, particularly for the poor and unprivileged. According to the Myanmar Living Conditions Survey 2017, nearly 25 percent of the population is living below the food poverty line. Myanmar is still the third-most malnourished country in Southeast Asia after Timor-Leste and Cambodia. It's

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* Professor, Department of Statistics, Yangon University of Economics
** Associate Professor, Department of Statistics, Yangon University of Economics

a country that's rich in resources. These resources are needed to change to promote better nutrition, as in the education, behavioral issues, cultural practices and etc.

The worst malnutrition in Myanmar is in the border with Bangladesh in the northern part of Rakhine State. Women in the reproductive age group are most vulnerable to malnutrition due to low dietary intakes, inequitable distribution of food within the household, improper food storage and preparation, dietary taboos, infectious diseases, and care. Particularly for women, the high nutritional costs of pregnancy and lactation also contribute significantly to their poor nutritional status. Essentially, border areas and the central dry zone are the most food insecure areas in Myanmar. In Chin State, it's caused by remoteness and isolation, and lack of job opportunities and arable land. For the central dry zone, it's poor soil, and agriculture techniques (Myanmar Time, 2016).

The Poverty Report shows that the proportion of the population living under the national poverty line halved from 48.2 percent in 2005 to 24.8 percent in 2017, but poverty and vulnerability to poverty still remain important issues in Myanmar. Yet, several states and regions are still lagging behind. Targeted interventions are needed to promote more inclusive growth and to ensure that all people can benefit from the economic progress Myanmar is experiencing (Poverty Report-MLCS, 2017). In this pursuit, the government of Myanmar has launched the Zero Hunger Challenge since late 2014. It's a first step and a global initiative as well as there's a draft action plan on nutrition and food security, with clear responsibilities so that by 2025 there won't be any stunted children in Myanmar.

II. LITERATURE REVIEW

Adequate nutrition is essential for everyone's health and development. Malnutrition literally means "bad nutrition" and technically includes both over nutrition and undernutrition. In the context of developing countries, undernutrition is generally the main issue of concern, though industrialization and changes in eating habits have increased the prevalence of over-nutrition. "Nutrition is the most important condition for the preservation of health, normal growth and development of the human body. According to World Health Organization (WHO), human health only 15% depends on the organization of health services at the same rate. WHO estimated that about 60% of all deaths and 47% of the total number of diseases were caused by non-infectious diseases.

A recent small-sale study in Kersa sub-district of Oromiya region showed that 35% of non-pregnant women in this southwestern part of the country had a body mass

index (kg/m2)lower than 18.5 (indicative of poor nutritional status). The average height of these women was 155.5 cm and 20% of them were under 150 cm (Zerihun et al., 1997). Ferro-Luzzi et al. (1990) illustrated that 16% of rural non-pregnant women were found to have second to third degree of chronic energy deficiency (CED). CED is defined as a steady state at which a person is in energy balance at a cost to their health (James et al., 1988). Investing in women's nutrition will have both short-term and long term effects on the social and economic well-being of not only the individual but alsothecommunityandthenation(ACC/SCN,1992).

All of the national surveys on women nutrition were descriptive in nature and limited to analysis of associations between nutritional statuses with certain nutrition-related variables and socioeconomic and demographic characteristics. This present analysis focuses specifically on women's nutritional status in Myanmar and influences of women's economic and social factors on their nutritional status.

Some evidence in developing countries indicate that malnourished individuals, that is, women with a body mass index (BMI) below 18.5, show a progressive increase in mortality rates as well as increased risk of illness (Rotimi et al., 1999). For social and biological reasons, women of the reproductive age are amongst the most vulnerable to malnutrition. Increased perinatal and neonatal mortality, a higher risk of low birth weight babies, stillbirths, and miscarriage are some of the consequences of malnutrition in women (Krasovec and Anderson, 1991). Some of the socioeconomic and demographic factors explaining women's nutrition according to studies done in different places are reviewed below.

Myanmar has recently been classed as lower-middle-income country. The change in classification creates the scope for challenging a first world problem in Myanmar, that is, a problem of its people being overweight and underweight alongside already existing malnutrition particularity in rural areas. This study considered both underweight and overweight factors based on BMI as an unhealthy factor and assessed its association with various socioeconomic issues. The data comprised ever-married women aged between 15 and 49. The most commonly applied measurement index for health and fitness is the body mass index (BMI). General wellbeing and nutritional requirements of women have recently received more attention especially in developing and under-developed countries. Body mass index (BMI) is calculated from a person's weight and height. It is an important indicator of the nutritional status for a population. BMI value of less than 18.5 (kg/m2) is considered as underweight, and this is a common finding among people suffering from chronic energy deficiency. Underweight women were associated with higher risk of adverse health outcomes like hip fractures. Pregnant mothers who were underweight have higher risk of perinatal mortality, and delivering low birth weight babies.

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women with a body mass index (BMI) below 18.5, show a progressive increase in mortality rates as well as increased risk of illness (Rotimi et al., 1999). For social and biological reasons, women of the reproductive age are amongst the most vulnerable to malnutrition. Increased perinatal and neonatal mortality, a higher risk of low birth weight babies, stillbirths, and miscarriage are some of the consequences of malnutrition in women (Krasovec and Anderson, 1991). Some of the socioeconomic and demographic factors explaining women's nutrition according to studies done in different places are reviewed below.

The economic status of a household is an indicator of access to adequate food supplies, use of health services, availability of improved water sources, and sanitation facilities, which are prime determinants of child and maternal nutritional status (UNICEF, 1990). A study of most of the DHS surveys conducted in developing countries (Loaiza, 1997) and a study in the Southern Nations, Nationalities and Peoples Region (SNNPR) of Ethiopia (Teller and Yimar, 2000) showed that women from low economic status households were the most affected by malnutrition.

Women who receive even a minimal education are generally more aware than those who have no education of how to utilize available resources for the improvement of their own nutritional status and that of their families. Education may enable women to make independent decisions, to be accepted by other household members, and to have greater access to household resources that are important to nutritional status (ACC/SCN, 1990). A comparative study on maternal malnutrition in ten sub-Saharan African countries (Loaiza, 1997) and a study in the SNNPR of Ethiopia (Teller and Yimar, 2000) showed that the higher the level of education, the lower the proportion of undernourished women.

A comparative study on maternal nutritional status in 16 of the 18 DHS conducted countries (Loaiza, 1997) and a study in the SNNPR of Ethiopia (Teller and Yimar, 2000) showed that rural women are more likely to suffer from chronic energy deficiency than women in urban areas. These higher rates of rural malnutrition were also reported by local studies in Ethiopia (Zerihun et al., 1997 and Ferro-Luzzi et al., 1990).

Women's employment increases household income, with consequent benefit to household nutrition in general and the woman's nutritional status in particular. Employment may increase women's status and power, and may bolster a woman's preference to spend her earnings on health and nutrition. Though employed, women without control over their income and decision making authority within the household are deprived of economic and social power and the ability to take actions that will benefit their own well-being. Studies in Africa have indicated that, at similar levels of income, households in which women have a greater control over their income are more likely to be food secure (Kennedy and Haddad, 1991).

Women's age and parity are important factors that affect maternal depletion,

especially in high fertility countries (Zerihun et al., 1997). DHS surveys conducted in Burkina Faso, Ghana, Malawi, Namibia, Niger, Senegal, and Zambia show a greater proportion of mothers age 15-19 and 40-49 that exhibit chronic energy deficiencies (CED). A study in Ethiopia also showed that women in the youngest age group (15-19) and women in the oldest age group surveyed (45-49) are the most affected by under nutrition (Teller and Yimar, 2000).

Marital status of the women is associated with household headship and other social & economic status of the women that affects their nutritional status. Nutritional and social securities could be endangered by a negative change in marital status. A study on the SNNPR Region of Ethiopia showed that women's malnutrition is significantly associated with marital status indicating that compared to married women malnutrition is higher among unmarried rural and divorced/separated urban women compared to married ones (Teller and Yimar, 2000). Source of drinking water and smoking cigarette can increase the probability of infectious diseases and indirectly cause certain types of malnutrition (UNICEF, 1990 and Engle, 1992).

III. OBJECTIVES OF THE STUDY

The objectives of the study are

(1) To investigate the women's malnutrition status in urban and rural area of Myanmar.

(2) To examine the relationship between women's nutritional status and their demographic and socioeconomic characteristics in Myanmar.

IV. DATA AND METHODS

The analysis uses datasets from the newly available national 2015-16 Myanmar Demographic and Health Survey (MDHS), which collected data for multiple indicators of demographic and health information (Ministry of Health and Sports and ICF 2017). Approval was obtained from Myanmar Ministry of Health and Sports and The DHS Program to use the datasets for this study. The MDHS data are publicly available free of charge from The DHS Program in the form of standard recode data files, at https://www.dhsprogram.com/Data/.

The data analysis of this study focuses only on currently married women age 15-49. Although data on 12,885 women are available from the 2015-16 MDHS, this study was limited to 7,870 currently married women age 15-49. To obtain nationally representative

estimates, sampling weight was applied and the final weighted samples included 7,758 currently married women age 15-49. However, this study was not considered the pregnant married women. Information for this cross sectional study, a sample of 7366 non-pregnant married women was considered.

In this study, the indicator used to assess chronic energy deficiency malnutrition in women is body mass index (BMI), also known as the Quetelet index. This indicator is the most frequently used standardized indicator of thinness (wasting) to assess the progressive loss of body energy in developing countries. It is defined as the weight in kilograms divided by the square of the height in meters (kg/m2). Cut-off points of chronic energy deficiency (malnutrition) in adults (BMI<18.5) established by the International Dietary Energy Consultative Group (James et al., 1988). Woman with BMI lower than 18.5 is considered as malnourished women.

1. Key Variables and Measurements

Table 1 shows the identification and measurement of dependent and independent variables considered for fitting three models in this study.

Table 1. Identification of dependent and independent variables

Dependent Variables	Independent Variables	
Model 1 Women's nutritional status in urban area Y= 1 if malnourished women = 0 if nourished women	Women's age X_1=1if35-49years = 2 if 25-34 years = 3 if 15-24 years Women's employment X_2=1ifemployed = 2 if unemployed	States/ Regions X_7 =1 if Yangon =2 if Kachin =3 if Kayah =4 if Kayin =5 if Chin =6 if Sagaing =7 if Tanintharyi =8 if Bago
Model 2 Women's nutritional status in rural area Y= 1 if malnourished women = 0 if nourished women	Educational level X_3=1ifhigher = 2 if secondary = 3 if primary = 4 if no education Wealth quintile X_4=1ifrichest = 2 if richer = 3 if middle	=9 if Magway =10 if Mandalay =11 if Mon =12 if Rakhine =13 if Shan =14 if Ayeyarwady =15 if Nay Pyi Taw Control over women's earnings X_8= 1 if women alone
Model 3 Women's nutritional status in nation Y = 1 if malnourished women = 0 if nourished women	= 4 if poorer = 5 if poorest Drinking water X_5=1ifpurifiedwater = 2 if non-purified water Smokes cigarette X_6=1ifno =2 if yes	= 2 if women and husband/partner = 3 if husband/ partner alone, someone else and other Women's own decision on health care X_9=1ifwomenalone =2 if women and husband/partner = 3 if husband/partner alone, someone else and other Residence X_{10}=1ifrural = 2 if urban

2. Statistical Analysis

For the multivariate analysis, a binary logistic regression model is used when the dependent variable is dichotomous, such as women's malnutrition. Using STATA Version 15.1, data analysis was carried out in multiple phases. First, by means of binary logistic regression analysis, three different models (Models 1 to 3) were fitted for women's malnutrition in urban area, rural area and national level. Second, the independent variables used are mentioned in Table 1. Finally, the binary logistic regression model for women's nutrition status was carried out to determine the demographic and socioeconomic factors related to women's malnutrition.

V. RESULTS

1. Descriptive Analysis

Table 2 provides information on demographic and socioeconomic characteristics of women included in the study, as well as descriptive statistics on their malnutrition status. The age group (15-24) year is the most malnutrition of women, followed by (25-34) years. Regarding the vast majority of malnutrition women, 12.1% live in rural areas, 11.7% are currently unemployed, 18.3% are the poorest wealth quintile, 13.3% are drinking non-purified water, and 21.8% are smoking cigarette. In addition, Rakhine State is the highest level of malnutrition among women and Bago Region is the second highest level of malnutrition among women in Myanmar.

2. Association between Women's Nutrition Status and Demographic and Socioeconomic Characteristics

In Table 3, the bivariate analysis is performed using chi-square test and the results are shown. This study shows that a significant association between nutritional status of women and each of the independent variables. Women' ages are also found to be significantly associated with women's nutritional status. The highest proportion of malnourished women is observed in the youngest age group of 15-24 years (20.6%), followed by the age group of 25-34 (11.4%). The lowest rate is found in the age group 35-49 years (9.3%). Women's educational level is also found to be negatively associated with malnutrition in women. A significant association between malnutrition in women and their wealth quintile status is observed, and the prevalence of women's malnutrition

is higher among poorest women than among poorer women. There is significant association between women's malnutrition and their drinking water. Regarding the result, the prevalence of malnutrition in women is also higher among drinking non-purified water than women who drink purified water. A significant association between malnutrition in women and their smoking cigarette is also observed; the prevalence of malnutrition in women is also higher among smoking cigarette than women who do not smoke cigarette.

The proportion of women suffering from malnutrition is significantly higher in rural areas than in urban areas. The highest prevalence of malnutrition in women is observed in Rakhine State (18.5%), followed by Bago Region (16.2%), Ayeyarwady Region (15.3%), and Magway Region (13.7%), and the lowest prevalence of malnutrition is Kayah (6.9%). There is a significant association between women's malnutrition and control over women's earning. Women who do not decide to spend their earnings are more likely to suffer from malnutrition compared with women who decide alone or joint their husbands. There is a significant association between women's malnutrition and own decision on health care. Women who do not decide their health care are more likely to suffer from malnutrition compared with women who decide alone or jointly with their husbands.

3. Multivariate Analysis

1) Model 1

Binary logistic regression model was performed on women's malnutrition status in urban women, using the independent variables presented in Table 1. The summary results are shown in Table 3. In this model, women's age, wealth quintile, drinking water and states/regions are found to be determinants of women's nutrition status. The results show that urban women's in 25-34 years group are about three times more likely to be malnourished than women's oldest age group (35-49) years. The urban women in poorest wealth quintile are more than four times more likely to be malnourished than women have richest wealth quintile. The urban women who drink non-purified water are more than two times more likely to be malnourished than women who drink purified water. The urban women who live in Rakhine State are almost three times more likely to be malnourished than women who live in Yangon Region.

2) Model 2

Binary logistic regression model was performed on women's malnutrition status in

rural women, using the independent variables presented in Table 1. The summary results are presented in Table 3. In this model, women's age, wealth quintile, smoking cigarette, states/regions, control over women's earnings and women's own decision on health care are found to be determinants of women's nutrition status. Based on the results, it is found that rural women's in (25-34) years age group are three times more likely to be malnourished than women's oldest age group (35-49) years. The rural women in poorest wealth quintile are two times more likely to be malnourished than women have richest wealth quintile. The rural women who smoke cigarette are two times more likely to be malnourished than those who do not smoke cigarette. The rural women who live in Bago Region, Mandalay Region, Rakhine State and Nay Pyi Taw are two times more likely to be malnourished than those who live in Yangon Region. The rural women who decide jointly with their husbands to spend their earnings are1.3 times more likely to be malnourished than women decide alone for their earnings. The rural women who do not decide on their health care are about 1.4 times more likely to be malnourished than women decide alone for their health care.

3) Model 3

Binary logistic regression model was performed on women's malnutrition status in national level, using the independent variables presented in Table 1. The summary results are shown in Table 3. In this model, women's age, wealth quintile, smoking cigarette, states/regions and women's own decision on health care are found to be determinants of women's nutrition status. According to the results, women's in (25-34) years age group are nearly three times more likely to be malnourished than women's oldest age group (35-49) years. The women in poorest wealth quintile are two times more likely to be malnourished than women have richest wealth quintile. The women who smoke cigarette are about two times more likely to be malnourished than those who do not smoke cigarette. The women who live in Bago Region, Magway Region, Mandalay Region, Rakhine State and Nay Pyi Taw are around two times more likely to be malnourished than those who live in Yangon Region. The women who do not decide on their health care are about 1.4 times more likely to be malnourished than women decide alone for their health care.

VI. DISCUSSION AND CONCLUSIONS

Women's nutrition is one of the essential concepts in development plan. Women's nutritional status is related to children's nutritional status. In recent years, maternal and

child nutritional status has been the vital point in Myanmar, as it has been shown to be essential for sustainable development goals. This study found that demographic and socioeconomic variables have a significant influence on women's malnutrition. Age, wealth quintile, drinking water, smoking cigarette, states/regions, control over women's earnings and women's own decision on health care are important determinants of malnutrition among reproductive age women (15-49) years.

The investigation of the relationship between women's nutrition and their demographic and socioeconomic characteristics revealed the following points:

(i) Women who are in the middle age, having lower level of education, drinking non-purified water, smoking cigarette, and in low wealth quintile households show increasing women's malnutrition.

(ii) Women who can make own decision on control over their earnings and health care shows decreasing women's malnutrition.

Women who live in rural areas are more malnourished than those in urban areas. The strength of this study was that it used nationally representative sample from urban and rural settings of the fifteen states and regions which allow generalization of the results. Therefore, these study findings could help as an intervention to policy makers, charity organizations across the globe for places having similar settings. It also applied all of the MDHS data principles, like weighting. Regarding limitations, the cross-sectional data cannot examine causation.

Based on the findings of the study, the key areas of policy priority to reduce malnutrition in the country are:
• Promoting education level of women
• Providing health education to women
• Empowering of women and
• Developing rural areas.

Further research on socio-cultural practices, intra-household food distribution, women's workload, seasonal food insecurity, and other related factors is suggested. In addition, the impact of malnutrition of women should be explored as a further research.

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APPENDIX

Table 2. Percent distribution of women's malnutrition status for non-pregnant married women age 15-49 years

Characteristics	Malnourished women		
	Urban women	Rural Women	Total women
Women's age			
15-24 years	4.5%	16.1%	20.6%
25-34 years	2.8%	8.6%	11.4%
35-49 years	2.0%	7.3%	9.3%
Women's employment			
Currently employed	2.5%	8.9%	11.4%
Currently unemployed	2.9%	8.8%	11.7%
Women's educational level			
No education	2.8%	8.4%	11.2%
Primary /Secondary /Higher	1.4%	11.5%	12.9%
Wealth quintile			
Poorest	1.6%	16.7%	18.3%
Poorer	0.8%	11.5%	11.8%
Middle	1.7%	8.7%	10.4%
Richer	3.0%	4.8%	7.8%
Richest	6.4%	2.0%	8.4%
Drinking water			
Purified water	2.5%	8.7%	11.2%
Non-purified water	1.1%	12.2%	13.3%
Smokes cigarette			
No	2.4%	8.5%	11.2%
Yes	5.7%	16.1%	21.8%
States/ regions			
Yangon	5.4%	3.2%	8.6%
Kachin	3.1%	5.0%	8.1%
Kayah	3.0%	3.9%	6.9%
Kayin	1.1%	9.6%	10.7%
Chin	1.2%	8.1%	9.2%
Sagaing	1.5%	7.1%	8.6%
Tanintharyi	1.5%	8.5%	10.0%
Bago	3.4%	12.8%	16.2%
Magway	2.1%	11.6%	13.7%
Mandalay	3.2%	9.9%	13.1%
Mon	1.6%	6.1%	7.6%

Rakhine	2.9%	15.7%	18.5%
Shan	2.3%	7.6%	9.8%
Ayeyarwady	2.9%	12.5%	15.3%
Nay Pyi Taw	3.4%	10.0%	13.4%
Control over women's earnings			
Women alone	2.8%	9.2%	12.1%
Women and husband/partner	2.4%	7.3%	9.7%
Husband/ partner alone, someone else and other	3.4%	11.9%	15.3%
Women's own decision on health care			
Women alone	2.6%	8.3%	10.9%
Women and husband/partner	2.7%	7.9%	10.7%
Husband/ partner alone, someone else and other	2.3%	12.8%	15.1%
Residence			
Rural			12.1%
Urban			9.9%

Source: MDHS (2017)

Table 3. Association between malnutrition and demographic and socioeconomic
characteristics for non-pregnant married women age 15-49 years

Characteristics	Number of women	Malnourished women	χ^2	P-value
Women's age				
15-24 years	938	193	93.92***	0.000
25-34 years	2,533	288		
35-49 years	3,895	364		
Women's employment				
Currently employed	4,588	521	0.17	0.680
Currently unemployed	2,776	324		
Women's educational level				
No education	6,234	699	2.75*	0.097
Primary /Secondary /Higher	1,132	146		
Wealth quintile				
Poorest	1,546	283		
Poorer	1,514	179		
Middle	1,514	157	104.75***	0.000
Richer	1,466	114		
Richest	1,326	112		
Drinking water				
Purified water	6,399	714	5.46**	0.019
Non-purified water	797	106		
Smokes cigarette				
No	7,155	799	22.82***	0.000
Yes	211	46		
States/ regions			84.26***	0.000
Yangon	556	48		

Kachin	457	37		
Kayah	432	30		
Kayin	458	49		
Chin	433	40		
Sagaing	581	50		
Tanintharyi	411	41		
Bago	562	91		
Magway	533	73		
Mandalay	495	65		
Mon	445	34		
Rakhine	491	91		
Shan	488	48		
Ayeyarwady	554	85		
Nay Pyi Taw	470	63		
Control over women's earnings				
Women alone	2,390	289	12.20***	0.002
Women and husband/partner	1,846	179		
Husband/ partner alone, someone else and other	386	59		
Women's own decision on health care				
Women alone	3,158	343	18.28***	0.000
Women and husband/partner	2,990	319		
Husband/ partner alone, someone else and other	1,187	179		
Residence				
Rural	5,418	653	6.80***	0.009
Urban	1,948	192		

Note: ***, **, * represent 1%, 5% and 10% level of significance, respectively.
Source: MDHS (2017)

Table 4. Summary results of logistic regression for women's malnutrition status among non-pregnant married women age 15-49 years

Independent variables	Model (1) Urban women	Model (2) Rural Women	Model (3) Total women
	Odds ratio (95% CI)	Odds ratio (95% CI)	Odds ratio (95% CI)
Constant	0.02*** [0.01-0.08]	0.04*** [0.02-0.09]	0.04*** [0.02-0.07]
Women's age 15-24 years 25-34 years 35-49 years	1.25 [0.76-2.07] 2.63*** [1.32-5.25] 1	1.08 [0.82-1.43] 3.02*** [2.19-4.19] 1	1.10 [0.86-1.39] 2.88*** [2.14-3.87] 1
Women's employment Currently employed Currently unemployed	1 1.56[0.73-3.3]	1 0.99[0.62-1.57]	1 1.07[0.73-1.58]
Women's educational level No education Primary /Secondary /Higher	0.99[0.37-2.64] 1	1.24[0.87-1.78] 1	1.20[0.86-1.67] 1

Wealth quintile			
Poorest	4.43***[2.07-9.46]	2.06**[1.16-3.67]	2.13***[1.4-3.26]
Poorer	1.53[0.61-3.81]	1.31[0.74-2.32]	1.27[0.84-1.92]
Middle	1.02[0.52-2.00]	1.21[0.68-2.16]	1.14[0.77-1.69]
Richer	0.74[0.35-1.54]	1.12[0.59-2.16]	0.95[0.6-1.49]
Richest	1	1	1
Drinking water			
Purified water	1	1	1
Non-purified water	2.21**[1.02-2.42]	0.89[0.64-1.24]	1.19[0.88-1.63]
Smokes cigarette			
No	1	1	1
Yes	0.71[0.21-2.42]	2.20***[1.15-4.20]	1.99**[1.09-3.63]
States/ regions			
Yangon	1	1	1
Kachin	1.37[0.53-3.58]	1.51[0.76-3.00]	1.44[0.82-2.54]
Kayah	1.20[0.45-3.17]	0.77[0.35-1.7]	0.91[0.48-1.72]
Kayin	0.78[0.17-3.64]	1.69[0.72-3.94]	1.44[0.70-2.98]
Chin	0.63[0.18-2.12]	0.93[0.34-2.57]	0.81[0.36-1.83]
Sagaing	0.80[0.15-4.32]	1.06[0.54-2.06]	1.02[0.56-1.85]
Tanintharyi	0.46[0.09-2.28]	1.03[0.47-2.26]	0.93[0.46-1.85]
Bago	1.97[0.83-4.69]	2.00**[1.04-3.88]	2.01**[1.16-3.49]
Magway	2.24[0.83-6.05]	1.70[0.85-3.4]	1.75**[0.98-3.14]
Mandalay	1.84[0.85-3.96]	2.07**[1.08-3.99]	2.01***[1.8-3.36]
Mon	0.80[2.22-2.88]	1.05[0.49-2.26]	1.01[0.52-1.94]
Rakhine	2.66**[0.98-7.24]	2.00*[0.95-4.22]	2.05**[1.1-3.84]
Shan	1.39[0.27-7.07]	0.89[0.39-2.01]	1.01[0.48-2.14]
Ayeyarwady	1.51[0.62-3.72]	1.42[0.71-2.85]	1.48[0.83-2.66]
Nay Pyi Taw	1.07[0.36-3.17]	2.01*[0.97-4.18]	1.69[0.89-3.19]
Control over women's earnings			
Women alone	1	1	1
Women and husband/partner	1.08[0.58-2.00]	1.29*[0.96-1.74]	1.24[0.95-1.62]
Husband/ partner alone, someone else and other	1.40[0.59-3.3]	1.03[0.66-1.59]	1.11[0.75-1.63]
Women's own decision on health care			
Women alone	1	1	1
Women and husband/partner	1.31[0.7-2.47]	1.11[0.83-1.48]	1.16[0.89-1.52]
Husband/ partner alone, someone else and other	1.14[0.61-2.1]	1.38**[0.99-1.93]	1.35**[1.01-1.8]
Residence			
Rural			1
Urban			1.17[0.87-1.61]

Note: ***, **, * represent 1%, 5% and 10% level of significance, respectively.
Source: MDHS (2017)

WORK-LIFE BALANCE AND JOB SATISFACTION AMONG TEACHING STAFF AT YANGON UNIVERSITY OF ECONOMICS

Than Soe Oo*, Phyu Phyu Thant** and Zin Mar Myint***

Yangon University of Economics

ABSTRACT: This study intends to analyze the relationship between perceived level of work-life balance and job satisfaction among teaching staff at Yangon University of Economics. Quantitative and qualitative research methods are used in this study. A sample size of 144 teaching staff is used in this study. This research is used Spillover Theory. Descriptive type of research, inferential analysis and multiple regression analysis are used to measure work-life balance and job satisfaction among teaching staff. In this research, both primary and secondary sources of data are used. The structured questionnaires are distributed to the teachers to collect the primary data. Secondary data will be acquired from the relevant books, articles, journals, and internet website. In findings, personal life interference with work and work interference with personal life have no impact on job satisfaction. In addition, work enhancement by personal life and personal life enhancement by work have impact on job satisfaction is found in this study. Therefore, the authorized persons should try to balance professional life and personal life to retain experienced teaching staff.

Key words : Work-life balance, Job satisfaction,

I. Introduction

Education sector plays an important role in every country. Teachers' corporations, efforts, profession expertise and experiences can create the successful education system.

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* Ph.D., Lecturer, Department of Commerce, Yangon University of Economics
** Lecturer, Department of Commerce, Yangon University of Economics
*** Candidate, M Com

Teachers are involving a very important sector for the development of students' knowledge, personal developments which can dominate the development of human resources and technical developments. The contribution of teachers is greatly depending on the motivation and eagerness of teachers. A high level of commitments, hard workings, and dedications are the factor of organizations as a motivated teacher. Teachers are the role models for young students in sectors for active inspiration activities because they are the most important human resource for the development of human resources. The perfect purpose of teachers is to fulfill the need of the knowledge of the society. Moreover, to fulfill the intellectual knowledge and to create the better fulfillment for the need of the resource is the duty and responsibility for the University. Teachers are main sources in the University Education level. So, the fully job satisfaction of teachers can achieve the objectives of the University. Therefore, this study is conducted to the work-life balance and job satisfaction of the teaching staff in Yangon University of Economics.

Work-life balance is important and essential for every human. (Clutterbuck, 2006) one of the human resource practitioner said, it just one a business matter for employees and employers which can benefit for both. In the study of (Blyton, Blunsdon, Reed & Datmalchian, 2006) shows organizations have recently received more pressure to perform better and cost effectively. The concept which includes the proper prioritizing the task between the work and life is the work-life balance concept. To gain the equilibrium between the professional work and personal work is the requirement of work-life balance. The metric quality and performance of every work place are usually developed according to the association, dedication or passion for the work of the incorporation workplace of each individual or team. Some people didn't aware about how to balance their life. Though they didn't awareness of life balance, these people cannot concentrate about their health and family. As people are maintained their personal life, they also are looking for a job with enjoyment, pay, promotion and satisfaction. At the same time, organizations are also looking for an employee with better performance. To be able to gain a good result together with better performances from employees, organizations should adapt a work-life balance for different perspectives. Such as different people have different needs from work-life balance depending on his or her life.

In the study of Warren, 2004, shows working hours for people had increased from 43 hours to 47 hours on a week. Such a much working hours can cause the health problem like stress, work problems like absenteeism and lack of job satisfaction for employees. Some employees are feeling stressful from the work due to the heavy work load, and meeting deadlines. These stressful factors can happen not only health problems but also can cause the lower performance and work absent of an employee. People can decide and control for how, when and where they work through the

work-life balance concept. People always want to create a good balance between their work life and their personal life.

In the study of Guest, 2002, he mentions, work-life balance has always been a concern of those interested in the quality of working life and its relation to broader quality of life. To provide the quality of an employee at the same time retaining the productivity levels of an employee at the work place is the aim of work-life concern. Need to have a flexible time policy for married teachers for handing of their family matters. Organizations can achieve productive and innovative employees by using the balance work life score, (Greenhaus, 2003). The disparity assumption of is the work-life balance tends to develop depressed and dissatisfied staff (Kofodimos, 1993). Through it is a very broad subject which speaks about both career develop on one side and the family care on the other side, it is very necessary to know how the people balance the professional demands and domestic compulsions. The definition of professional life is aimed to grow and earn respect in the organization and society at large. Meanwhile personal life is to create a life for taking care of family, children, parents, health and spending the leisure time effectively. People are now can balancing their life with the development of education, economic, and social standards to great extent. In today's world, one of the most challenging problem of facing teachers in education sector is how to balance between their work and life. On the other hand, it is a work-life balance for teachers. To be able to face the challenging atmospheres and to reach the higher levels, teachers need to spend extra hours in every day. By using extra hours, teachers will get effective performances and goals. Moreover, teachers not only look forwards teaching, but need to also focus soft skills and life skills so that they not only produce good professionals but develop well on citizens.

Job satisfaction is the important in term of organizational psychology and organizational behaviors. The clear vision of job satisfaction is not only the organizational psychology but also for the employees' physical and mental well-beings. Cranny, Smith & Stone, 1992 found out that in order to improve organizations productivity and profitability, they need to establish policies which may improve employees job satisfaction and employees job related behaviors. The other human resource practitioners, (Herberg, Mausner & Snyderman, 1993) through the aim and meaning of job satisfaction and job competence are similar.

In summarizing, work-life balance concept is greatly important and necessary for every nation in every sectors of work. And it is also an essential thing for continuous learning society like today 21st century environment.

1. Objective of the Study

The main objective of this study is to provide better understanding of the work-life

balance and job satisfaction among teachers at Yangon University of Economics. This study is conducted with the following objectives;

1. To identify perceived level of work-life balance among teaching staff at Yangon University of Economics.

2. To identify the job satisfaction among teaching staff at Yangon University of Economics.

3. To analyze the relationship between perceived level of work-life balance and job satisfaction among teaching staff at Yangon University of Economics.

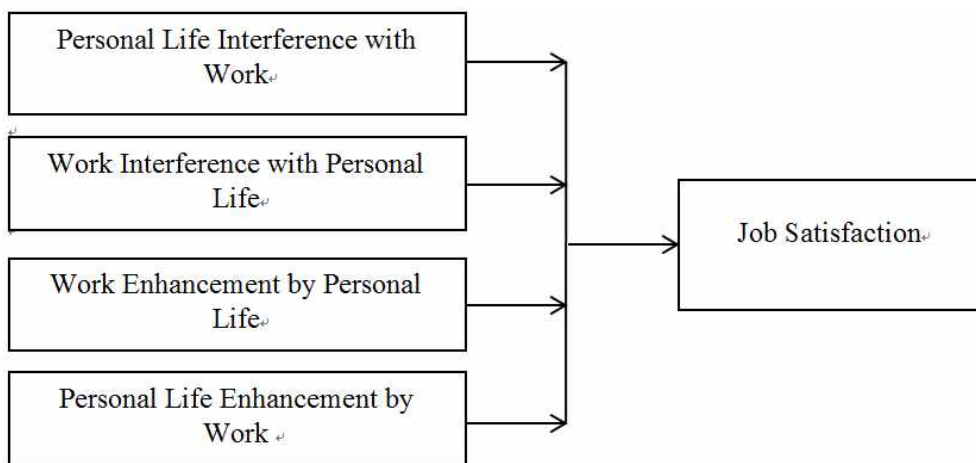Conceptual framework of the study is show in figure 1.

Figure 1. Conceptual Framework of the Study

Source: Own Compilation

2. Scope and Method of the Study

This study generally focuses on work-life balance and job satisfaction among teaching staff at Yangon University of Economics. The total teachers 226 sample size of 144 teaching staffs are used in the study. This study uses descriptive type of research. Quantitative and qualitative methods are used in this study. The scope of this study is limited to the teaching staff at Yangon University of Economics. In this research, both primary and secondary sources of data are used. The structured questionnaires are distributed to the teachers to collect the primary data. Secondary data are acquired from the relevant books, articles, journals, and internet website. Factor Analysis and Multiple regression analysis are used to study the work-life balance and job satisfaction among teaching staff.

II. Analysis of Work-Life Balance and Job Satisfaction among Teaching Staff at Yangon University of Economics

1. Research Design

This research applied qualitative and quantitative research are used in this study. Qualitative research is the measure of the respondent's perceptions. This qualitative information is measure by using five-point Likert scale. The statistical analysis methods are applied describe the research compliance both qualitative and quantitative. The most analysis is used qualitative methods. The approach of this research is deductive research. Type of research is survey research because this research is deductive structure. The research analysis methods are factors analysis and multiple regression analysis.

In line with this approach, descriptive research and inferential analysis is carried out to measure work-life balance and job satisfaction among teachers at Yangon University of Economics. Questions are designed to answer the level of job satisfaction on variables regarding work-life balance and job satisfaction. In order to minimize the biasness, questions are developed in a simple and understandable manner for the ease of respondents and the researchers. The four dimensions of work-life balance which include personal life interference with work, work interference with personal life, work enhancement by personal life, personal life enhancement by work are to be rated with five-point of Likert-scale.

This study uses both factor analysis and multiple regression methods to arrive at conclusion and recommendation. Secondary data is obtained from Secondary data will be acquired from the relevant books, articles, journals, and internet website Primary data are collected from Yangon University of Economics, by personal interview, and telephone interview through questionnaires.

This study is carried out with an intention to understand the nature of the relationship between work-life balance and job satisfaction among teaching staff at Yangon University of Economics. Hence the population of the study includes all departments and all teachers from this University. The current study focuses only on Yangon University of Economics which has the population of the 226 teachers. According to the list, there are 9 departments; Department of Economics, Department of Commerce, Department of Statistics, Department of Management Studies, Department of Applied Economics, Department of Myanmar, Department of English, Department of Mathematics and Department of Geography.

The total teaching staff 226 and the lists of sampling random samples of 144

teaching staff are proportionately selected from Yangon University of Economics. The proportion of population and sample of Yangon University of Economics are mentioned in Table 4.1. According to Krejice & Morgan, 1970 (shown in Appendix A), the required sample size for this study is 144 teaching staffs.

Table 1. Population and Sample of Teaching Staff in Yangon University of Economics

Departments	Population	Sample
Department of Economics	34	22
Department of Commerce	42	26
Department of Statistics	42	27
Department of Management Studies	35	21
Department of Applied Economics	32	20
Department of Myanmar	8	5
Department of English	10	7
Department of Mathematics	16	12
Department of Geography	7	4
Total	226	144

Source: Current Study

2. Demographic Profile of the Respondents

Yangon University of Economics is the sample of the study. Respondents from this university are listed in Table 2.

Table 2. Respondents by Yangon University of Economics

Department	No of Respondents	Percent
Department of Economics	22	15
Department of Commerce	26	18
Department of Statistics	27	19
Department of Management Studies	21	15
Department of Applied Economics	20	14
Department of Myanmar	5	3
Department of English	7	5
Department of Mathematics	12	8
Department of Geography	4	3
Total	144	100

Source: Survey Data (2018)

Table 2 shown the number of respondents from each department.

Table 3. Demographic Variables of Respondents

Attribute		No of Respondents	Percent
Gender	Male	7	5
	Female	137	95
Designation level	Associate Professor	12	8
	Lecturer	73	51
	Assistance Lecturer	32	22
	Tutor	27	19
Material Status	Single	89	62
	Married	55	38
Total Experience	Up to 5 years	24	17
	06 - 10 years	25	17
	11 - 15 years	38	26
	Above 15years	57	40

Source: Survey Data (2018)

According to Table 3, the total respondents comprised of 144 teachers from the Yangon University of Economics. Of these, male respondents constituted 5 percent and female respondents constituted the majority, i.e. 95 percent. This study shows female respondents are more than male respondents. It can be seen that out of 144 respondents, 8 percent (12) of the respondents are Associate Professor, 51 percent (73) of the respondents are Lecturers, 22 percent (32) of the respondents are Assistance Lecturer, and 19 percent (27) of the respondents are Tutors. This reflects the hierarchy of structure in most University. The total respondents comprise of 144 teachers from the Yangon University of Economics. Of these, married respondents constituted 38 percent (55) of the respondents and single respondents constituted the majority, i.e. 62 percent (89) of the respondents. This study shows single teachers are more than married teachers.

In term of total experience in university 57 respondents have the total experience of above 15 years at 40 percent, 38 respondents have the total experience of 11 - 15 years at 26 percent, and 25 respondents have the total experiences 06 - 10 years at 17 percent, and 24 respondents are up to 5 years who are normally Tutor in Yangon

University of Economics with 17 percent. The study shows the majority groups of respondents are with above 15 years total experiences.

3. Reliability and Validity Test

Reliability analysis is conducted by computing the Cronbach's alpha. The result of the study is presented in table 4.

According to Table4, personal life interference with work is measured with nine items but to strengthen the reliability of the factor in the study two items were deleted and has got Cronbach's alpha value of 0.774. Work interference with personal life is measured with nine items but to strengthen the reliability of the factor in the study three items were deleted and has got Cronbach's alpha value of 0.802. Work enhancement by personal life is measured with nine items but to strengthen the reliability of the factor in the study one item were deleted and has got Cronbach's alpha value of 0.756. Personal life enhancement by work is measured with nine items but to strengthen the reliability of the factor in the study one items were deleted and has got Cronbach's alpha value of 0.838. Job satisfaction is measured with thirteen items but to strengthen the reliability of the factor in the study five items were deleted and has got Cronbach's alpha value of 0.786.

Table 4. Reliability Test

No.	Variables	Cronbach's Alpha	No. of Item	Items Retained
1	Personal Life Interference with Work	0.774	9	7
2	Work Interference with Personal Life	0.802	9	6
3	Work Enhancement by Personal Life	0.756	9	8
4	Personal Life Enhancement by Work	0.838	9	8
5	Job Satisfaction	0.786	13	8

Source: Survey Data (2018)

Factor analysis was done on the four dimensions of work-life balance. Principle components analysis with varimax rotation was used to assess the dimensionality and uniqueness of the variables. The data was appropriate for factor analysis since the KMO's value was 0.734 for personal life interference with work, 0.745 for work interference with personal life and 0.689 for work enhancement by personal life, 0.815 for personal life enhancement by work. The overall significant of correlation among all items was also sufficient with Bartlett's test of sphericity achieving a p-value of less than 0.01. The Eigenvalues greater than 1.0 were maintained.

In this study, confirmatory factor analysis with varimax rotation was performed. For

each measure variable, the value of factor loading of each variable above 0.50.   Thus, all factors are retained to do the final analysis. Then factors analysis was done on the job satisfaction. Principle components analysis with varimax rotation was used to assess the dimensionality and uniqueness of the variables. The data was appropriate for factor analysis since the KMO's value was 0.684 for job satisfaction. The overall significant of correlation among all items was also sufficient with Bartlett's test of sphericity achieving a p-value of less than 0.01.

4. Perceived level of Work-Life Balance among Teaching Staff

In this section, job satisfaction on four dimensions of work-life balance is analyzed. These four dimensions are personal life interference with work, work interference with personal life, work enhancement by personal life and personal life enhancement by work. Regarding these dimensions, respondents are asked to rate their level of agreement on each statement, and then mean value for the dimension is calculated. For this purpose, six to nine statements are used in the study and five point Likert scales are applied.

Taking into consideration that the scale used for work-life balance dimensions is 1 to 5 where 3 is the middle point; the high averaging scores might suggest that the teachers have high satisfaction on these dimensions. The higher the score, the greater the level of teachers' job satisfaction on work-life balance of the University to them. The analysis is presented in Table 5.

Table 5. Mean and Standard Deviation of Work-Life Balance Variables

Factor	Mean	Standard Deviation	Level of WLB
Personal Life Interference with Work	2.53	0.738	Moderate
Work Interference with Personal Life	3.23	0.623	Moderate
Work Enhancement by Personal Life	3.31	0.674	Moderate
Personal Life Enhancement by Work	3.41	0.596	Moderate
Total Work-Life Balance	3.12	0.663	Moderate

Source: SPSS Outputs (2018)

According to the mean value of the items, the respondents generally agree the four work-life balance variables of their job (mean values more than 3: Neither agree nor Disagree). In this study, four work-life balance variables and job satisfaction have been measured. Each factor includes different number of items and is measured on five-point Likert scale. As shown in Table 4.19, Personal Life Interference with Work includes 7 items, Work Interference with Personal Life includes 6 items, Work Enhancement by

Personal Life includes 8 items, Personal Life Enhancement by Work includes 8 items. These items are asked by using five-point Likert scale. The choices normally as strongly disagree (SD), disagree (D), Neutral (N), agree (A) and strongly agree (SA). All question in section of the questionnaire for employee are using Likert scale, therefore the respondent can fill up their answer by selecting one from the five options. The means value of variables is categorized into the three levels. Means value of less than 2.00 are as low level, means value between 2.00 and less than 3.50 are as moderate level and means value of 3.50 or higher are as high level of satisfaction towards a particular variable (Sekaran, 2010). According to descriptive statistics, most of the respondents agree upon the fact that their University use the personal life enhancement by work as moderate work-life balance, representing 3.41 overall score. Another, work-life balance that teaching staff perceived they received from the University are work enhancement by personal life. Thus, it can be concluded that the University focuses the most on personal life enhancement by work, followed by, work enhancement by personal life. Other work-life balance such as personal life interference with work and work interference with personal life are perceived as moderately offered. On average, from the teaching staff point of view the Yangon University of Economics work-life balance to a moderate level.

5. Effect of Work-Life Balance Practices on Job Satisfaction

In this study, the dependent variable and the four dimensions of work-life balance as the independent variables. This method is used to predict the change in dependent variable in response to changes in the independent variable. Job satisfaction (Y) was expressed as a function of work-life balance variables specified in the following regression equation:

$$Y= \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \beta_4 X_{i4} + \varepsilon$$

Where,
- Y =Job Satisfaction
- β_0 =Constant
- β_i =Regression Coefficients for Independent Variables X_i
- X_1 =Personal life Interference with Work
- X_2 =Work Interference with Personal Life
- X_3 =Work Enhancement by Personal Life
- X_4 =Personal Life Enhancement by Work
- ε =Standard Error Term

Table 6.Mean and Standard Deviation of Job Satisfaction Variables

Factor	Mean	Standard Deviation	Level of Job satisfaction
Job Satisfaction	3.48	0.637	Moderate

Source: SPSS Outputs (2018)

According to the mean value of the items, the respondents generally agree the four work-life balance of their job (mean values more than 3: Neither agree nor Disagree). In this study, four work-life balance practices and job satisfaction have been measured. Each factor includes different number of items and is measured on five-point Likert scale. According to job satisfaction is perceived by teachers as moderate levels.

Regression analysis is conducted with job satisfaction as the dependent variable and the four dimensions of work-life balance as the independent variables.

$$Y=1.214+ 0.039\ X_{1i}+ 0.018\ X_{2i}+ 0.214\ X_{3i}+ 0.324\ X_{4i}$$
$$(0.002)\quad(0.589)\quad\quad(0.815)\quad(0.013)\quad(0.000)$$

Result of regression analysis indicate that much of the variation in the dependent variable is explained with R square of 0.265 and F-value 8.113 (p<0.01) with four independent variable. Adjusted R square of 0.232 reveals that 23 percent of total variance of job satisfaction is explained by work- life balance practices.

According to results, work enhancement by personal life and personal life enhancement by work emerged as the significant variables in explaining the variance in job satisfaction. Personal life interference with work and work interference with personal life are insignificant variables in explaining the variance in job satisfaction. It is of interest to note that only two dimensions of work-life balance variables emerged as the predictor of job satisfaction in the case of Yangon University of Economics. Personal life enhancement by work had the strongest effect on job satisfaction with a standardized coefficient beta of 0.324.

III. Conclusion

1. Findings and Discussion

The findings of the study supported the importance of work-life balance to increase job satisfaction among teaching staff at Yangon University of Economics. The study identifies the most influential work-life balance on job satisfaction among teaching staff

at Yangon University of Economics.

As part of preliminary analysis, demographic factors of the respondents in the study are explored according to the variables such as gender, department, designation, marital status, total experience. Regarding with gender, it is found that more female respondents participated than the males do. This is not surprising since the nature of work of education sector demands more female teaching staff than male teaching staff.

According to department, 22 respondents are Department of Economics, 26 respondents are Department of Commerce, 27 respondents are Department of Statistics, 21 respondents are Department of Management Study, 20 respondents are Department of Applied Economics, 5 respondents are Department of Myanmar, 7 respondents are Department of English, 12 respondents are Department of Mathematics, and 4 respondents are department of Geographic. Most of the respondents are Department of Statistics. Regarding with marital status of respondents, majority of respondents are single. According to total experience of respondents, most of respondents are 15 years above than others.

By using the Statistical Packages for Social Science 22, the collected data are checked for reliability and validity. Some of the items are deleted in the final analysis to strengthen the reliability of the instrument in the study. Regarding the validity, all the independent items in the study have factor loading value of 0.6 and above. Thus, all the items are retained in the final analysis. And the KMO value suggests that the data was appropriate for factor analysis in the study. The overall correlation between all the items was significant in the study.

Then, the study explores the relationship between perceived level work-life balance and job satisfaction among teaching staffs in the Yangon University of Economics. In the current study, four main dimensions namely; personal life interference with work, work interference with work, work enhancement by personal life and personal life enhancement by work are included as the work-life balance. This work-life balance is measured from the teaching staff point of view in the study. Thus, focus of the study is the job satisfaction on work-life balance practices of Yangon University of Economics. These work-life balance are measured by using five point Likert scale item (1= strong disagree to 5= strongly agree). The higher mean value upon each item suggests that the teaching staff have high satisfaction on work-life balance.

According to descriptive statistics, most of the respondents agree upon the fact that their University uses the personal life enhancement by work as highest work-life balance, representing 3.41 overall score. Another, work-life balance that teaching staff perceived they received from the University are work enhancement by personal life. Thus, it can be concluded that the University focuses the most on personal life enhancement by work, followed by, work enhancement by personal life. Other work-life balance such as personal life interference with work and work interference with personal

life are perceived as moderately offered. On average, from the teaching staff point of view the Yangon University of Economics work-life balance to a moderate level.

After that the study measures the satisfaction level of teaching staff at Yangon University of Economics. To measure the job satisfaction level, the study uses the five point Likert scale assessing the agreement degree on the given statements (1= Strong disagree to 5= strong agree). Thus, the study suggests that the higher mean value, the higher satisfaction of the teaching staff at Yangon University of Economics. It implies that most of the teaching staff at Yangon University of Economics has the moderate satisfaction their jobs. According the study suggests that the University should also encourage their teaching staff to experience greater job satisfaction. When converting the numerical mean value to level of satisfaction is high level in teaching staff at Yangon University of Economics.

In addition, the study explores the influential factors on job satisfaction in teaching staff at Yangon University of Economics using multiple regression analysis. Regarding the job satisfaction, work enhancement by personal life, and personal life enhancement by work are significant influential factors in the current context. Among them, personal life enhancement by work is the most influential factor. According to this result, it can be interpreted that job satisfaction of teaching staff at Yangon University of Economics is largely depend on work enhancement by personal life, and personal life enhancement by work. This finding coincides with the previous literature on satisfaction of the teaching staff. Thus, if the University has best practices for these two factors, their teaching staff will have high level of job satisfaction.

2. Suggestions and Recommendation

This result of this study have important implications both for theoretically and practical perspectives. From the theoretical perspectives, this study contributes to the impact of work-life balance on job satisfaction at Yangon University of Economics. This impact and influences are tested in other context, but for Myanmar context this is the first attempt in this field of work-life balance. Thus, this could stimulate further study in the area.

From a practical perspective, this study provides practitioners in Yangon University of Economics with key information that makes helpful for human resources management decisions and social responsibility decisions in Myanmar context. According to result, it can be interpreted that work-life balance such as work enhancement by personal life and personal life enhancement by work largely impact on job satisfaction among teaching staffs at Yangon University of Economics. Work enhancement by personal life involves positive impact of work on personal life such as giving apartment to stay, for convenient commuting of teachers, arranging ferry, placing dispensary in University,

giving job advancement opportunities for their special effort. And, University should raise the level of their teaching staff job satisfaction by improving work place environment. And them, teaching staff should be paid high salary because giving effort and taking salary is not balance. Office and teaching resources should be completely supported. Therefore, teaching staffs to be more self-confident, to satisfy and to accomplish the job well. And, working environment should be careful to safe and fresh. Because, due to reduce the workplace accident, to cover the accident risk and to maintain teaching staff's health.

Another work-life balance the head officers must consider is personal enhancement by work which is the key impact on job satisfaction of teaching staff at Yangon University of Economics. According to data, teaching staff at Yangon University of Economics perceived that they have high level personal life enhancement by work. Thus, head officers are suggested to improve the personal life enhancement by work to increase the job satisfaction. Thus, they need to explore personal life enhancement by work are important for their teaching staff because, their satisfaction would be increased individual performance and university performance. When the teaching staff has permit to participate in decision making process and other critical process in the job place to some extent, they are more attachment to the job place. Moreover, most teaching staff are feeling of self-esteem by their job. Thus personal life enhancement by work would lead teaching staff feel self-esteem and thus would support to strengthen the job satisfaction. According to job characteristics model, personal life enhancement by work is one of the core job dimensions which increases the teaching staff satisfaction. Thus, personal life enhancement by work for teaching staff is important to increase job satisfaction. At the end of discussion, it is concluded from the research that the teaching staff work-life balance affects job satisfaction. Those university teaching staff's having balance in their work and life are more satisfied with their job. Thus, it is concluded that professional life and personal life needs to be integrated and balanced by organizations through work-life balance initiatives. The results of the study contributed to the recommendations for the improvement of the literature on work-life balance and job satisfaction at Yangon University of Economics. These proposed factors are required to consider by the firms and also the future studies should test these factors to create a more complete model of work-life balance and job satisfaction.

It is important for every organization in different sectors should conduct a study the impact of job satisfaction on work-life balance and the relationship between work-life balance and job satisfaction. Because job satisfaction is the key important factor for organizations. According to Spillover Theory, several researchers suggested that workers carry the emotions, attitudes, skills and behaviors that they establish at work into their family life (Piotrkowski & Crits Christoph, 1981) and vice-versa (Crouter, 1984). Positive spillover refers to fact that satisfaction and achievement in one domain may bring

along satisfaction and achievement in another domain. Negative spillover refers to the fact that difficulties and depression in one domain may bring along the same emotion in another domain. Therefore, Personal life not interference with work head officers should be taken to balance between the family responsibilities and work responsibilities. And then, it has become a challenge for the teaching staff in all professional. Work life imbalance effect both personal and work life. With increasing levels of stress, competition and insecurities in life, work-life balance issues have become important. Thus, head officers should take consideration practically the findings of the study as a guideline for them to provide their level of job satisfaction. Single and married teaching staffs can also have social concerns which scheduled to perform in holidays. Therefore, they have difficulties to carry out these plans because of the university's weekend programs. Married teaching staff may also have difficulties to fully fulfill the responsibilities at their home. Thus, many extra working hours can lead to problems between work and life. Furthermore, excess workload has become an issue for dual-career families because of the high demand of with the longer working hours has become their norm. In the present scenario, people nowadays are difficult to achieve desired work-life because they work long hour and harder than before. In this circumstances, can also work interference with personal life. Therefore, university can recognize excessive hours of work and enhance their teaching staff job satisfaction level by means of reducing working hours of their teaching staff. And then, university should organize seminars, workshops, conferences, training programs to develop knowledgeable manpower, create awareness and change mental attitudes among the professional. And them, professional life and personal life should be balanced to retain experienced teaching staff. Because, more experienced teachers support greater student learning for their colleagues and their school as well as for their own student.

Work-life balance has different benefits to the organization as well as to the individual. Organization benefits are increased productivity, commitment and better team work. Individual benefits have more value, balance in daily life and work and reduce stress. This study proved to be a milestone for the students, researchers and policy makers to properly understand the concepts of teaching staff work-life balance and job satisfaction.

3. Limitations and Need for Further Study

This section will attempt to explain the requirements of the further studies and the limitations of the current study. The main limitation of this study is that it was narrowed to only one University. This study was only done on teaching staff. Time has become one of the major limitations as it has to be involves in other academic activities. For the purpose of the future study and much better results, the sample size

and different locations of the respondents can be increased. Data collection was a problem because most of the teachers generally do not have time to provide responses. Some respondents were so busy in their routine task that they are not easily ready to fill the questionnaire.

Firstly, this study only focuses on work-life balance and job satisfaction among teaching staff at Yangon University of Economics. The recommendations for further researches would provide several advantages in the exploration of new model or modifying the proposed model to gain a better understanding of the relationship between work-life balance and job satisfaction.

Further researchers are recommended to explore the relationship between work-life balance and job satisfaction on organizational commitment and work-life balance, job satisfaction and intention to stay should be studied in the future. And then, Yangon University of Economics of different geographic locations also should be conducted to know work-life balance and job satisfaction among teaching staff of different areas.

Further researchers are recommended to compare the public school with other private school to assess work-life balance and job satisfaction. Work-life balance and job satisfaction in other relevant industries, school or university etc. (e.g., Private or Public School, Private or Public industries, and other Private or Public University etc.) should also be explored in the future.

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The Effect of Working Condition on Job Satisfaction: A case study on Lower-level staff at Yangon University of Economics

Banyar Aung

Yangon University of Economics

ABSTRACT: The study attempts to identify the effect of working condition on job satisfaction. The objectives of the study are to identify the working condition factors of Yangon University of Economics and to analysis the employee's job satisfaction on the working condition factors of Yangon University of Economics. Questionnaires are used to collect data from 50 sampled of lower level staff by using simple random sampling method. This study uses the descriptive research method and inferential analysis. According to the finding from analysis of job satisfaction towards hygiene factor (working conditions), there are no dissatisfaction with hygiene factor (working conditions) as administrative department supports properly salary, working hours, job safety and security, relationship with co-worker and supervisor facilities, work life balance, effective communication channel, health care, top management support and training and development. According to the correlation's result, there are positive and significantly correlated working condition factors with job satisfaction. This analysis expressed that the most significant factor is work life balance provided by the Yangon University of Economics. Therefore, Administrative department need to be implemented in order to improve more and more employee satisfaction by identifying employees' needs and fulfil their needs individually.

Key words : Working Condition, Job Satisfaction, YUE, Employees' Needs,

I. Introduction

The organizational success relies on technical expertise and on the interest of the

staff. Many businesses fail to understand the important of working conditions for employee job satisfaction and thus face a lot of difficulties during their work. Employee is an essential component in the process of achieving organizational goals. To meet the standards of organization, employees need a working condition that allows them to work freely without problems that may restrain them from performing up to the level of their full potential.

Working conditions are affected by factors including health and safety, security and working hours. Poor working conditions can damage employees' health and put employees' safety at risk. Difficult working conditions can be influenced by (1) external factors that include climate-temperature, drafts, humidity, lighting in the workplace, noise and interference, gases, dust, smoke and other harmful factors; (2) subjective factors that include gender and age of the worker, fatigue, monotony, unfavourable posture during work, etc; (3) factors related to the organization of production such as duration of the work shift, work schedule, working time, work pace, excessive strain etc. Different factors within the working conditions such as wages, working hours, autonomy given to employees, working environment, organizational structure and communication between employees and management may affect job satisfaction (Lane, Esser, Holte & Anne, 2010).

Hoppok & Spielgler (1938) defines job satisfaction as the integrated set of psychological, physiological and environmental conditions that encourage employees to admit that they are satisfied or happy with their jobs. Job satisfaction can affect work behaviour. The definitions of job satisfaction should include a variety of factors such as nature of work, salary, stress, working conditions, superiors, working hours etc. According to Vroom (1964) Job satisfaction is an orientation of emotions that employee possess towards role they are performing at the workplace. Job satisfaction is the essential component for employee motivation and encouragement toward organizational goals. Job satisfaction of an individual depends on the individual characteristics and job situation. Understanding also implies, job satisfaction is an individual thing. Each individual will have the satisfaction of differing stages in accordance with the prevailing value system.

1. Objectives of the study

The objectives of the study are;

1. To identify the working condition practices on the lower-level staff at Yangon University of Economics

2. To explore employee's job satisfaction on the hygiene factors of Lower-Level staff at Yangon University of Economics

2. Scope and Method of the Study

This study focuses on employee motivation of Lower-Level staff at Yangon University of Economics by using Herzberg's Two-Factor Theory. The study will focus on employees who are cleaning staff and security staffs. So, asample of 50 lower-level staffis taken from the total population of 100 staff at Yangon University of Economics. It may be about 50% of total population in Yangon University of Economics.

This study uses the descriptive research method and inferential analysis. Primary data was collected from staff department of employees in Yangon University of Economics. Random sampling method was used to get data. Data has been gathered questionnaire and personal interview. Secondary data is gathered from university staffs' records, previous thesis, research papers, text books and internet websites. As the analysis method, to explore the more influencing factors on Lower-Level staff in Yangon University of Economics.

Working Conditions
1. Working hour
2. Job safety and security
3. Relationship with supervisors
4. Facilities
5. Work life balance
6. Effective communication channels
7. Health Care
8. Training and Development
9. Top management support
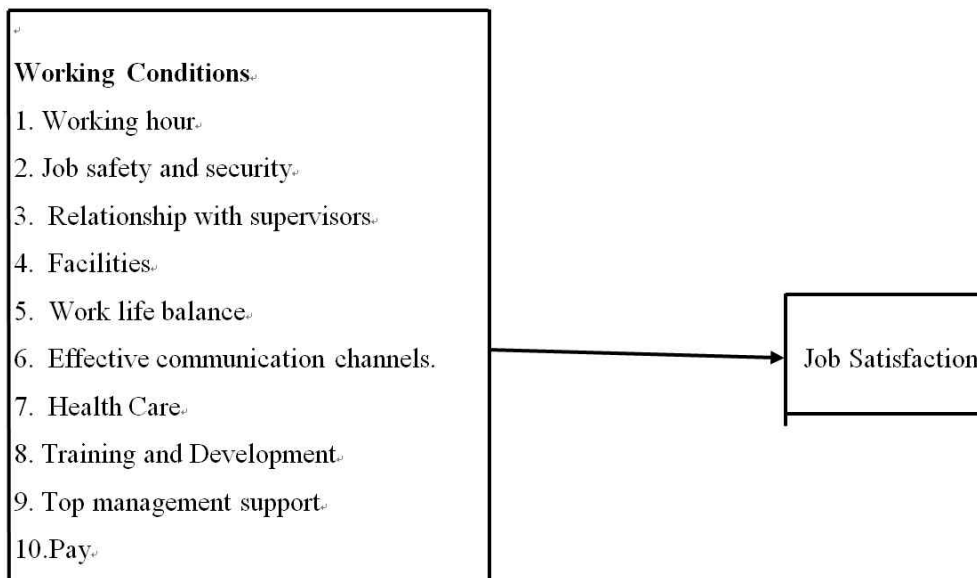10. Pay

→ Job Satisfaction

Figure 1. Conceptual Framework of the Study

Sources: Own complication

II. Data Analysis

Table 1. Kinds of Respondents

SR. No	Particulars	Numbers of respondents	Percentage
1	Security	32	62%
2	Cleaning staff	17	34%
	Total	50	100%

Source: Survey data (2018)

According to table (1) From the 50 respondents participating in this study, 62% are security and 34% are cleaning staff.

Table 2. Service Years of Respondents

SR. No	Particulars	Numbers of respondents	Percentage
1	Below 5 years	23	44.2%
2	Below 10 years	18	34.6%
3	Above 10 years	9	17.3%
	Total	50	100%

Source: Survey data (2018)

According to Table (2), there are 50 respondents, out of them (23) (44.2%) respondents have below 5years service, (18) (34.6%) respondents have below 10years service and (9) (17.5%) respondents have above 10years service.

1. Assessing Average Mean and Standard Deviation of Factors

Table 3. Assessing Average Mean and Standard Deviation of Factors

Particular	N	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistics	Statistics	Std. Error
Salary	50	12.88	10.095	1.174	.337
Relationship between supervisor	50	2.66	.798	.452	.337
Work life balance	50	2.94	.978	.260	.337
Health Care	50	2.20	.857	1.215	.337
Training and development	50	2.52	.931	.809	.337
Job safety and security	50	2.80	.904	.415	.337
Top management support	50	2.60	.904	.380	.337
Facilities	50	2.62	.753	.768	.337
Working hours	50	2.70	.814	.378	.337
Effective communication channel	50	2.57	.890	.793	.340

According to Table 3 also shows the statistical mean and standard deviation for variable. In the above data Mean clearly shows that respondents are agreed with the fact that hygiene factors do impact their job satisfaction, except in the case of salary 'where means lies at 12.88, where employees are neutral or disagree that the salary are sufficient. The averages mean values from 9 dimensions (except salary) that ranged from 2.66 to 2.57. Based on the table, among the nine variable, Work life balance is the most influential variables
with mean score of 2.94 with standard deviation (SD=0.97), Job safety and security is 2.80 (SD=0.90), followed by Working hours with mean score of 2.70 (SD=0.81), Relationship between co-worker and supervisors 2.66 (SD=0.79). Facilities 2.62 (SD=0.75), Top management support 2.60 (SD=0.90), Effective communication channel 2.57 (SD=0. 89), Training and Development 2.52(SD=0.93) and Health care 2.20(SD = 0.85) The result indicates that variables are moderately agreed that these variable impact on job satisfaction.

Among them, work life balance has the highest mean of 2.94 so it is the most influent factors of employee's satisfaction, job safety and security have the second highest mean of 2.80 and it is the second important factors and Relationship between supervisor have the mean of 2.66 and it is also the third important factors for employee's satisfaction.

According to data, except the salary, the Standard deviation of the all others data are less than one case of maximum variable which support that data is normal. Skewness of the collected data also shows that data is normal which signifies that the response of the employees is not skewed either positively or negatively. The response of respondents is forming a particular group which signifies that they are agreed in same manner.

2. Assessing with Multiple Regression Analysis: Analysis of Variance (ANOVAO and F-test)

The ANOVA table shows a significance value of 0.0000. This indicates that the regression is significant. (i.e., the regression model of is good fit of the data).

Table 4. Analysis of Variance (ANOVA)

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	24.730	10	2.473 .558	4.435	.000
Residual	21.188	38			
Total	45.918	48			

3. Analysis with Multiple Regression

Multiple regression analysis was applied to investigate the factors of job satisfaction. To develop the multiple regression model, the job satisfaction was used as dependent variable and Salary, Relationship between supervisor, Work life balance, Health Care, Training and Development, Job safety and security, Top management support, Facilities, working hours, Effective Communication channels were used as independent variables.

The estimated multiple regression model

Table 5. Results of Multiple Regression Model

Dependent Variable (Job Satisfaction)	Coefficient	Standard error	t test	Sig	Tolerance	VIF
Constant	.832***	.540	1.541	.132	-	-
Work life balance	.523***	.463	2.156	.038	.264	3.793
Working hours	.323***	.242	1.335	.012	.251	3.991
Top management support	.112	.198	.567	0.000	.461	2.407
Adjusted R Square	0.539	-	-	-	-	-
F – value	4.435	-	-	0.000	-	-
Durbin - Waston	1.781	-	-	-	-	-

*, **, ***: Indicate statistical significance at the 1% level, 5% level and 10% level

According to (Table 5), Regression analysis was conducted with job satisfaction and the ten dimensions of Hygiene factors as the independent variables. Adjusted R square is 0.539. This mean the predictors (independent variables) represents 53.9% changes job satisfaction and remaining 50.8% can be contributed by others factors which are not studied as these beyond the scope of this study. However, as a general rule, this model is not a good fit as the adjusted R square is less than 60%. Results show that F value is 4.435 that is significant at p = 0.000(<0.01), suggesting that ten dimensions of Hygiene variables have significantly explained the 53.9% of the variance in job satisfaction. The value of calculated (Durbin-Watson) was 1.781, the model is acceptable as its value is lower than 2. and each Variance Inflation Factor (VIF) was less than 5. These results show that serial correlation and multicollinearity problems were not included in this case.

The regression coefficient between mean work life balance and job satisfaction is 0.523 (t = 2.156, p = 0.038<0.05). This shows that there is direct relationship between mean work life balance and job satisfaction. The regression coefficient between and job satisfaction is 0.323 (t = 1.335, p 0.019<0.1). This shows that there is direct relationship between working hours and job satisfaction. The regression coefficient between mean

top management support and job satisfaction is 0.112 (t = 0.567, p = 0.000<0.01). This shows that there is direct relationship between top management support and job satisfaction. This shows that there is direct relationship between work life balance, working hours, top management support and job satisfaction. The information in the table above also allows us to check for multicollinearity in our multiple linear regression model. Tolerance should be > 0.1 (or VIF < 10) for all variables, which they are. All tolerance is above 0.1 and all VIF value is obtained between 1 to 10 and it can be concluded that there are no collinearity symptoms.

III. Findings and Recommendations

This study analysed the relationship between Hygiene factors and job satisfaction of Lower-level staff in Yangon University of Economics. It can be found that work life balance, working hours, top management support is the most influence hygiene factors on employee job satisfaction

Based on the findings of the research, some relevant suggestion can be made for job satisfaction. The succession of the organization depends on satisfaction of employees. Under this study, working hours are less prevent dissatisfaction among working condition factors. Concerning with staff working hours, management of departmental head should set out staff working hour policies and guidelines to support staff. To reduce some work burden on staff and to improve the efficiency and performance of individual department, management should also consider employment of additional staff. From the finding of top management support factors, managers should create neat and tidy physical environment and they need to build co-operation and teamwork performance and social relationship properly. Moreover, supervisor exercise putting too much emphasis and resource towards the hygiene factor which employees decrease dissatisfaction. The study results suggest that the importance of hygiene factor cannot be ignored since they so have an effect on the job involvement of participants.

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An Assessment of the Relationship between Foreign Trade and GDP Growth of Myanmar

Cing Do Nem

Yangon University of Economics

ABSTRACT: This study attempts to identify the relationship between foreign trade and GDP growth of Myanmar. To investigate the relationship between the foreign trade and GDP growth, data were subdivided into three periods, Parliamentary Period (1948/49 - 1961/62), Socialist Economy Period (1962/63 - 1987/88) and Market Oriented Economy Period (1988/89 - 2017/18). Annual values of exports, imports and GDP growth were derived into quarterly figures by using Boot, Feibes and Lisman (1967) method. Check of seasonality is conducted prior to causality analysis. The effects of seasonal variations are removed using seasonal indices computed by ratio to moving average method. For the three sub period causality test is checked by using Toda and Yamamoto (1995) causality analysis. For the first period, Toda and Yamamoto (1995) causality analysis reported the evidence of unidirectional causality from imports to GDP growth. Similarly, the result shows that a unidirectional causality from imports to exports and from exports to GDP growth. In addition, bidirectional causality between quarterly real value of imports and exports and between quarterly real value of exports and GDP growth are found. For the second period, the evidence of feedback relationship between GDP growth and imports is observed. Furthermore, unidirectional causality from GDP growth to exports is pointed out. However, in the third period, there found no relationship between the quarterly real value of imports, exports and GDP growth of Myanmar.

Key words : Foreign Trade, and GDP growth, Toda and Yamamoto (1995) causality analysis,

1. INTRODUCTION

1. Rationale of the Study

It has been theoretically argued that both exports and imports may play a crucial role in economic development. The theoretical and empirical studies mainly concentrate the relationship between imports, exports and economic growth. In the context of world trade modeling, Polak (1954) provided a hypothetical causal inference on the interdependence between three macro variables, exports, imports and income. His concern was that exports determine income and income determines imports. Polak's hypothesis contributed to the income channel between exports and imports, whereas imports were directly reviewed from exports in input-output system of trade flows.

Polak's model of the international economic system involved constructing national economies of various countries into an international economic system through international trade, international capital movements and other international transactions. Through these channels, the occurring fluctuations of the economic system in the various countries were transmitted from one country to another. The economies of individual countries were linking together into one economic system describing the economic fluctuations in the world as a whole. Polak suggested a transmission model by the following four major relationships: Variations in exports tend to fluctuate income, fluctuations in income influence imports with or without time lag, the volume of each country's exports is determined by the level of world trade and the total imports of all countries equal to the total volume of world trade.

In Myanmar, democratic system was headed during (1948 to1962) and the government allowed some private sectors to participate in open market mechanism. After the Revolutionary Council took over power in 1962, foreign trade came to a monopoly of the State. Under Socialism (1962-1988), the government practiced centrally planned and inward-looking strategy of 'close-door-economic' policies. During this period, not only foreign, but also domestic wholesales and even retail trade were nationalized. After 1988, the government has been undertaking reform measures for laying down the market oriented economic system to prevent the decline and spur immediate economic recovery. It expanded the role of the private sector and opened the economy to foreign investors. This study is carried out to investigate whether changes in policies are bring about changes in the parameters of the relationships. Thus, the impact on Polka's relationships is examined, using the data on exports, imports and national income of Myanmar.

II. RELATED THEORY

1. Polka's Model on International Economic System

Polak (1954) presented an interpretation of the interaction of national economies through international trade. It makes clear the causal relationship that exists between individual country and it's exported or imported country and then connects these links for all countries into an international system.

To describe the world economy, the relationships of individual countries were combined into one set of equations. For the world as a whole, exports (X), national income (Y), and imports (M) were considered as endogenous variables. On the other hand, autonomous variables were set as exogenous variables. In order to concentrate on endogenous variables systematically, the relationships which explain exports, national income and imports of each country were presented simply by omitting all exogenous variables and constant terms as:

$$Y_i = \lambda_i X_i$$
$$M_i = \theta_i Y_i$$
$$X_i = \Omega_I W$$
$$W = \sum_{i=1}^{n} M_i$$

where subscript 'i' denotes the ith country and Y = national income,   X = volume of exports, M = volume of imports, W = total volume of world trade, λ = foreign trade multiplier, θ = marginal propensity to import, Ω = marginal propensity of foreign countries to import.

In this model, Polak derived the foreign trade multiplier λ_i from income identity, by treating domestic investment and exports as exogenous variables. According to the derivation, the obtained foreign multiplier was $\frac{1}{(1-\beta_i+\theta_i)}$, β_i being the marginal propensity to consume which was derived from the equation of domestic consumption, Chi = $\beta_e y_e$. Imports were linked with exports by a fraction called "international reflection ratio" of $\frac{\theta_i}{(1-\beta_i+\theta_i)}$. Polak suggested that this ratio should be less than unity for the stability of an economy. Finally, world trade multiplier was derived from Equation (2.4).

2. Causality

Causality is an active relationship, a relationship which brings to life something new, which turns possibility into actuality. A cause is an active and primary thing in relation to the effect. The connection between cause and effect takes place in time. The cause-effect connection can conceive as a one-way, one-directional action only in the simplest and most limited cases. The idea of causality as the influence of one thing on another is applied in fields of knowledge where it is possible and necessary to ignore feedback and actually measure the quantitative effect achieved by the cause. Such a situation is mostly characteristic of mechanical causality. For example, the cause of a stone falling to the ground is mutual gravitation, which obeys the law of universal gravitation, and the actual fall of the stone to the ground results from gravitational interaction. However, since the mass of the stone is infinitely small compared with the mass of the earth, one can ignore the stone's effect on the earth.

The Aristotelian theory described causality as the issue of how change occurs. It was in the opinion of Aristotle (384 -322 BC), that change occurred through the interaction of four specific causes. Aristotle recognized the four causes as follows:

(i) The substance of a thing (the material cause)

(ii) The subject (the formal cause)

(iii) The source of motion (the efficient cause) and

(iv) The final cause.

Granger (1969) provided definitions of causality, feedback, instantaneous causality and causality lag and illustrated by using simple two-variable and three-variable models. In his 1980 paper, he cited that the past and present may cause the future but the future cannot cause the past. Definition of causality is testable by using regression or correlation techniques. He defined simple causality such that X causes Y if knowledge of past X reduces the variance of the errors in forecasting Y beyond the variance of the errors which would be made from knowledge of past Y alone. If X causes Y and Y causes X, then there is feedback between the variables. If Y does not cause X and X does not cause Y (even instantaneously) the two series are unrelated. Granger defined instantaneous causality in which the current value of a series helps in predicting the current value of a second value.

3. Some Empirical Studies on Linkages among Economic Variables

Kirchassner and Wolters (1987) investigated whether there was an international linkage of interest rates between the United States, West Germany, and Switzerland

during the period of flexible exchange rate from1974 to 1984. Spectral analysis and Granger causality tests were applied and trivariate autoregressive models were estimated. It was shown that a strong linkage exists during the second period, but during the first sub period, it was found only a weak linkage.

Similarly, Ramos (2000) investigated the Granger causality between exports, imports and economic growth in Portugal over the period 1865-1998. The results confirmed a feedback effect between exports-output growth and imports-output growth. Clarke and Ralhan (2005) examined causality from exports to output for developing countries, including Bangladesh and Sri Lanka using vector auto regressions and/ or vector error correction models. The finding showed that there exists bidirectional causality between exports and output.

In addition, Shirazi and Manap (2005) examined the export-led growth (ELG) Granger causality tests. The results supported that there exists feedback effect between imports and GDP for Pakistan, Bangladesh and Nepal, as well as unidirectional causality runs from imports to output growth for Sri Lanka.

Won and Hsiao (2008), found bi-directional causality relations among FDI, exports and economic growth for the three first generation ANIEs (Korea, Taiwan, Singapore) but only statistically weak bi-directional causality between exports and GDP for the four second generation ANIEs (Malaysia, Philippines, Thailand and China). However, when all seven ANIEs are grouped for panel data analysis, it was found that FDI has unidirectional effects on GDP directly and also indirectly through exports, exports also cause GDP and there also exists bi-directional causality between exports and GDP for the group.

Silaghi (2009) examined the export-led growth hypothesis (ELG) and growth-led export hypothesis (GLE) for the Central and Eastern European Countries (Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovenia, Slovakia) through cointegration and causality tests. When considering bivariate systems, unidirectional causality from exports to GDP is obtained for Bulgaria, the Czech Republic, Estonia, Latvia and Lithuania. Unidirectional causality from GDP to exports I indicated for Bulgaria, the Czech Republic, Estonia, Hungary, Lithuania Romania and Slovenia.

Chimobi (2010) examined the causal relationship among financial development, trade openness and economic growth in Nigeria for the period 1970 to 2005. The findings suggested that the Granger causality runs from trade openness and financial development to economic growth. Dritsaki and Dritsaki (2010) studied to determine the direction of causality between national income and government expenditure for twelve new members of E.E (Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Lithuania, Latvia, Malta, Poland, Romania, Slovenia, and Slovakia) and supported for the hypothesis that causality runs from government expenditures to national income has been found

only in the case of Bulgaria and Cyprus. Jayachandran and Seilan (2010) investigated the relationship between Trade, Foreign Direct Investment (FDI) and economic growth for India over the period 1970-2007. The results of Granger causality test showed that there is a causal relationship between the examined variables.

Bhattacharya and Bhattacharya (2011) investigated the interrelationship between merchandise trade, economic growth and FDI inflows in India. The findings suggested that unidirectional causality from merchandise trade to economic growth and feedback causality between FDI inflows and economic growth. Pistoresi and Rinaldi (2011) investigated the relationship between real export and real GDP in Italy from 1863 to 2004. The outcome suggested that unidirectional causality runs from the Italian economy to exports in the period prior to WW1 while in the post-WW2 period the causal relationship was reversed with the expansion of exports determined the growth of the Italian economy.

Khan, Azra, Umar, Zaman, Ahmad and Shoukat (2012) studied the relationship among economic growth, exports and imports of Pakistan for the time period of 1972 to 2009.He found that both exports and imports are essential for economic growth of Pakistan. The studied further revealed that economic growth has an important impact on exports and imports. Ahmed, Hoque and Jobaer (2013), analyzed the effects of exports and imports on GDP of Bangladesh using annual data from 1972 to 2006. The analysis revealed that both exports and imports are moderately related to the growth of GDP.

Ⅲ. Methodology

1.. Augmented Dickey Fuller (Unit Root) Test

Augmented Dickey Fuller unit root test is estimated in three different forms. Pure random walk

$$Y_t = \beta Y_{t-1} + u_t \qquad (3.1)$$

Random walk with drift

$$Y_t = \theta_0 + \beta Y_{t-1} + u_t \qquad (3.2)$$

Random walk with drift and stochastic trend

$$Y_t = \theta_0 + \theta_1 t + \beta Y_{t-1} + u_t \qquad (3.3)$$

$$Y_t = \theta_0 + \theta_1 t + \beta Y_{t-1} + u_t + \alpha \sum_{i=1}^{m} y_{t-1} + \epsilon_t \qquad (3.4)$$

The null hypothesis of Augmented Dickey Fuller test is that b= 0 with alternative

hypothesis b < 0. If b is rejected then Yt is stationary. The difference between Dickey Fuller and Augmented Dickey Fuller is that in ADF the lagged values of dependent variables Yt is also added as independent variable just to make error terms pure white noise. Thus, the error term in Equation (3.4) is serially un-correlated. If the series are found non stationary, their first difference series is tested for stationarity. If the first difference series is stationary, it is called integrated of first order i.e., I(1). If the series is difference "d" time to make stationary, it is called I(d).

2. Toda and Yamamoto (1995) Modified Wald (MWALD) Test

In terms of avoiding integration and complexity, Toda and Yamamoto (1995) adopted procedure to improve the power of the Granger causality test. The procedure is a methodology of statistical inference, which makes parameter estimation valid even when the system of the equation is not cointegrated. The main objective is to overcome problems relating to invalid systematic critical value when causality tests are conducted on nonstationary variable series. In their framework, the pretests on variables in determining the integration level and cointegration features do not have to be conducted. That is, this procedure can be applied regardless of whether the series are I(0), I(1) or I(2) and are cointegrated or not. The appropriate maximum lag length 'k' is unknown and is obtained from the VAR estimation of the variables in their levels. The 'k' can be determined based on sequential modified LR test statistic, Final Prediction Error (FPE), Schwarz Information criterion (SIC), Akaike Information criterion (AIC), and Hannan-Quinn information criterion (HQ) by measuring no serial correlation in the residuals. Let, the maximum order of integration for the group of time series be 'd'. If there are two time series, one is found to be I(1) and the other is I(2), then d = 2. If one is I(0) and the other is I(1), then d =1 etc. If there is serial correlation in the residuals, maximum lag length 'p' can be increased until any autocorrelation is removed. The Granger causality can be test by the following equation.

$$X_t = \alpha_1 + \sum_{t=1}^{P} \beta_{1i} X_{t-i} + \sum_{t=1}^{P} \theta_{1i} Y_{t-i} \sum_{t=1}^{P} \gamma_{1i} M_{t-1} + \epsilon_{1i} \tag{3.5}$$

$$Y_t = \alpha_2 + \sum_{t=1}^{P} \beta_{2i} X_{t-i} + \sum_{t=1}^{P} \theta_{2i} Y_{t-i} \sum_{t=1}^{P} \gamma_{2i} M_{t-1} + \epsilon_{2i} \tag{3.6}$$

$$M_t = \alpha_3 + \sum_{t=1}^{P} \beta_{3i} X_{t-i} + \sum_{t=1}^{P} \theta_{3i} Y_{t-i} \sum_{t=1}^{P} \gamma_{3i} M_{t-1} + \epsilon_{3i} \tag{3.7}$$

where a1,a2, a3, b1i, b2i, b3i, q1i, q2i, q3i, g1i, g2i, and g3i   are unknown

parameters;

　e1t, e2t, and e3t are mutually uncorrelated white noise variables;

　P = k + d_{max}

　k = optimal lag length

　d = the maximum order of integration for the group of time series

　d_{max} = I(1);　if Y_t -> I(1), M_t -> I(1), and X_t -> I(0)

　d_{max} = I(2);　if Y_t -> I(2), M_t -> (1) and X_t -> I(1)

　Y_t=GDP growth, X_t = Exports, and M_t = Imports

After estimating Equations (3.5), (3.6) and (3.7), causality from GDP growth to exports variable $H_0 : \theta_{1i} = 0$ hypothesis is tested by using modified WALD test statistic. Similarly, causality from imports to exports variable $H_0 : \gamma_{1i} = 0$ hypothesis is checked by the use of the modified WALD test statistics. Again, in order to detect causal link from GDP growth and exports to imports variable can be tested by $H_0 : \theta_{3i} = 0$ and $H_0 : \beta_{3i} = 0$ hypotheses respectively. Finally, the presence of causality from imports and exports to GDP growth can be determined using the modified WALD statistic on $H_0 : \gamma_{2i} = 0$ and $H_0 : \beta_{2i} = 0$ hypotheses respectively.

IV. RESULTS AND FINDINGS

1. Data

In this study, imports and exports data are used as a proxy for foreign trade data. Annual values of imports, exports, GDP for current prices and GDP at (1961/62) constant prices are attained from National Income of Burma. Annual values of imports and exports at (1963/64) prices are obtained from Quarterly Bulletin of Statistics. The base period of imports and exports is shifted to (1961/62). For the Socialist Economy Period (1962/63 to 1987/88) annual values of imports, exports, GDP for current prices and constant prices are taken from various issues of the Report to the Phythu Hlutaw on Financial, Economic and Social Conditions of Myanmar, Statistical Yearbook. The data on annual values of imports, exports, GDP at current prices and constant prices for the third period or Market Oriented Economy Period (1988/89 to 2017/18), are obtained from various issues of the Report to Pyithu Hluttaw on the Financial, Economic and Social Conditions of the Socialist Republic of the Union of Myanmar, Statistical Year Book, and Selected Monthly Economic Indicators. The base period of annual values on imports, exports, and GDP is shifted to (2005/06) constant prices.

2. Derivation of Quarterly Data from Annual Data

Quarterly figures are derived from annual data of the real values of imports, exports and GDP by using Boot, Feibes and Lisman (1967) method. The derivation of quarterly data from annual data was originally proposed by Lisman and Sandee (1964), followed by Boot and Feibes (1967) and Boot, Feibes and Lisman (1967). As shown in the following, the derived coefficients are:

$$\begin{bmatrix} q_5 \\ q_6 \\ q_7 \\ q_8 \end{bmatrix} = \begin{bmatrix} 0.07275 & 0.19825 & -0.02100 \\ -0.01025 & 0.30175 & -0.04150 \\ -0.04150 & 0.30175 & -0.01025 \\ -0.02100 & 0.19825 & 0.07275 \end{bmatrix} \begin{bmatrix} t_1 \\ t_2 \\ t_3 \end{bmatrix}$$

Test of seasonality is conducted to the quarterly figures of the real values of imports, exports and GDP growth. Seasonal effect is found in the quarterly figures of real GDP growth for the three sub periods. There are no seasonal effects in quarterly data of real imports and exports for the first and second periods. However, seasonality is found in quarterly real value of imports and exports for the third period or the Market Oriented Period or third period (1988/89 to 2017/18). These seasonal effects are removing using ratio to moving average method. After removing seasonal effects, GDP growth is calculated.

3. Testing for Stationarity and Integrated Order

1) Parliamentary Period (1948/49-1961/62)

For the three sub periods, Augmented Dickey Fuller (unit root) test is conducted using automatic based on SIC maximum lag length criteria. As shown in Table (1), the quarterly real value of imports and GDP growth with constant term included are stationary at their levels but the quarterly real value of exports is not stationary. However, the first difference series of exports with constant term included is stationary. Therefore, the quarterly real value of imports and GDP growth are zero order I(0) and exports is first order I(1) series.

Table 1. H_0: Non stationary test.

Variable	t-statistic	Decision Rule
Imports	- 3.35[**]	Rejected H_0
GDP growth	- 5.95[***]	Rejected H_0
D Exports	- 4.54[***]	Rejected H_0

Note: (i) D denotes the first difference operator.
  (ii) **,*** stands for 5% and 1 % level of significance.

2) Socialist Economy Period (1962/63-1987/88)

For the second period, the results of Augmented Dickey-Fuller (unit root) test are presented in Table (2). The unit root test states that the level value of quarterly real GDP growth with constant term included is stationary. However, the level value of quarterly real value of exports and imports are not stationary but their first differences series with constant term included are found to be stationary. Thus, for the second period, the quarterly real GDP growth is zero order I(0) and exports and imports are first order I(1) series.

Table 2. H_0: Non stationary test.

Variable	t-statistic	Decision Rule
D Imports	- 3.51[***]	Rejected H_0
GDP growth rate	- 3.58[***]	Rejected H_0
D Exports	- 3.38[**]	Rejected H_0

Note: (i) D denotes the first difference operator.
  (ii) **,*** stands for 5% and 1 % level of significance.

3) Market Oriented Economy Period (1988/89-2015/16)

In the last period, the Augmented Dickey Fuller (unit root) test confirms stationarity condition in level series for quarterly real value of imports and first differences series for quarterly real value of exports and GDP growth. Thus, all the series in third period, quarterly real value of imports is found to be zero order I(0) and exports and GDP growth are first order I(1) series.

Table 3. H_0: Non stationary test.

Variable	t-statistic	Decision Rule
Imports	- 3.35**	Rejected H_0
DGDP growth rate	- 7.56***	Rejected H_0
D Exports	- 4.19***	Rejected H_0

Note: (i) D denotes the first difference operator.
(ii) **, *** stands for 5% and 1 % level of significance.

V. Results of Causality Analysis

To conduct Toda and Yamamoto (1995) Granger causality analysis, the optimal lag length to be used is checked by using (AIC) Akaike Information Criterion, (SC) Schwarz Information Criterion, and (HQ) Hannan-Quinn information criterion, sequential modified (LR) test statistic, and (FPC) Final prediction error.

1. Parliamentary Period (1948/49-1961/62)

As shown in Table (4), all criterion shows that a lag length of four as optimal lag length each at 5% level for this first period. Thus, in this study maximum lag length four is used as optimal lag length for Granger causality test between exports, imports and GDP growth.

Table 4. Lag Length Criteria for Causality Test

Lag	LR	FPE	AIC	SC	HQ
1	NA	21153784	25.38094	25.50138	25.42584
2	219.4313	149752.0	20.42896	20.91073	20.60856
3	100.7600	15857.29	18.17738	19.02049	18.49168
4	54.12142*	5115.555*	17.03105*	18.23549*	17.48005*

Note: * indicates lag order   selected by the criteria.

Table 5. Toda and Yamamoto Causality (modified WALD) Test Results

Null hypothesis	c2	d. f	Direction of Causality
Imports does not Granger cause Exports	20.79***	4	Bidirectional
Exports does not Granger cause	8.09*	4	Imports <-> Exports

Imports			
GDPGR does not Granger cause Exports	8.36*	4	Bidirectional
Exports does not Granger cause GDPGR	8.71*	4	Exports <-> GDPGR
Imports does not Granger cause GDPGR	14.50***	4	Unidirectional
GDPGR does not Granger cause Imports	4.55	4	Imports -> GDPGR

Note: *, **, *** stand for 10%, 5% and 1% level of significance respectively.

As shown in Table (5), unidirectional causality runs from Myanmar's imports to exports and vice versa. Similarly, the evidence of bidirectional causality is found between GDP growth and exports at 5% significance level. However, only unidirectional causality occurs from imports to GDP growth. Thus, in this period fluctuation in the level of Myanmar's imports brings about fluctuation in Myanmar's GDP growth and exports.

2. Socialist Economy Period (1962/63-1987/88)

Based on the following lag lengths selection, (LR) sequential modified LR test, (FPE) final prediction error and (AIC) Akaike information criterion test pointed out lag length eight as optimal lag length each   at 5% level for this period.

Table 6. Lag Length Selection Criteria for Causality Test

Lag	LR	FPE	AIC	SC	HQ
1	619.8901	1959258.0	23.0015	23.3241	23.1319
2	264.3978	117440.0	20.1865	20.7510	20.4146
3	162.7001	20964.43	18.4618	19.2683	18.7877
4	75.4176	10129.06	17.7316	18.7800*	18.1552
5	27.8549	8643.651	17.5684	18.8588	18.0899
6	28.1042	7265.818	17.3881	18.9205	18.0073
7	25.5190	6248.576	17.2280	19.0023	17.9450*
8	18.4725*	5872.647*	17.1536*	19.16987	17.9683

Note: * indicates lag order selected by the   criteria.

Table 7. Toda and Yamamoto Causality (modified WALD) Test Results

Null hypothesis	c2	d. f	Direction of Causality
Imports does not Granger cause Exports	60.63***	8	Unidirectional
Exports does not Granger cause Imports	10.58	8	Imports -> Exports
GDPGR does not Granger cause Exports	16.04**	8	Unidirectional
Exports does not Granger cause GDPGR	12.07	8	GDPGR -> Exports
Imports does not Granger cause GDPGR	15.93**	8	Bidirectional
GDPGR does not Granger cause Imports	15.37*	8	Imports <-> GDPGR

Note: *, **, *** stand for 10%, 5% and 1% level of significance respectively.

As described in Table (7), unidirectional causality runs from Myanmar's imports to exports. Similarly, the evidence of unidirectional from GDP growth to exports is observed. However, bidirectional causality is found between imports and GDP growth at 5% and 10% level of significance respectively. As the first period, fluctuation in the level of Myanmar's imports brings about fluctuation in Myanmar's GDP growth and exports.

3. Market Oriented Economy Period (1988/89- 2017/18)

Table (8) reports the lag length of four as optimal lag length selected by Final Prediction Error (FPE), Schwarz Information criterion (SIC), and Akaike Information criterion (AIC) each at 5% level.

Table 8. Results of Lag Order Selection Criteria for Causality Test

Lag	LR	FPE	AIC	SC	HQ
1	807.7231	4.64e+10	33.0742	33.3812	33.1985
2	230.2311	5.03e+09	30.8507	31.3879	31.0683
3	193.0746	7.52e+08	28.9494	29.7168	29.2602
4	48.5926*	5.23e+08*	28.5842*	29.5819*	28.9883*

Note: * indicates lag order selected by the criteria.

As shown in Table (9), neither unidirectional causality nor bidirectional causality is found between the quarterly real value of imports, exports and GDP growth of Myanmar. Next step is to compare the results of three sub periods.

Table 9. Toda and Yamamoto Causality (modified WALD) Test Results

Null hypothesis	c2	d. f	Prob.	Direction of Causality
Imports does not Granger cause Exports	2.70	4	0.61	
Exports does not Granger cause Imports	2.65	4	0.62	
GDPGR does not Granger cause Exports	1.10	4	0.89	
Exports does not Granger cause GDPGR	2.04	4	0.73	
Imports does not Granger cause GDPGR	1.76	4	0.78	
GDPGR does not Granger cause Imports	1.59	4	0.81	

Note: *, **, *** stand for 10%, 5% and 1% level of significance respectively.

VI. Comparison of the Results from the Three Sub Periods

As shown in Table (10), it is found that the quarterly real value of imports for the first and third periods, GDP growth for the first and second periods have the same level I(0) of integration according Augmented Dickey Fuller (unit root) test. However, the quarterly real value of exports for the three sub periods, imports for the second periods and GDP growth for the third periods have the same order of I(1) integration. Thus, in this study, the Granger causality test is checked using Toda and Yamamoto (1995) procedure by regardless of cointegration. The results of Granger causality test for the three sub periods are shown in Table (11).

Table 10. Comparison of the Order of Integration Level for the Three Sub Periods

Period	Order of Integration	
	Level	First difference
First	Imports GDP growth	Exports
Second	GDP growth	Imports Exports
Third	Imports	Exports GDP growth

As shown in Table (11), in the first period, unidirectional occurs from the quarterly real value of exports to GDP growth. The evidence of bidirectional causality is found between GDP growth and exports and between exports and imports. In the second period, it is found that a unidirectional causality from GDP growth to exports and from imports to exports. In addition, bidirectional causality is observed between GDP growth and imports. However, in the third period, there is no relationship between the quarterly real value of imports, exports and GDP growth of Myanmar.

Table 11. Comparison on the Direction of Causality test for the Three Sub Periods

Period	Unidirectional	Bidirectional
First Period	Imports => GDP growth Imports => Exports Exports => GDP growth	Imports <=> Exports GDPGR <=> Exports
Second Period	Imports -> Exports GDP growth rate -> Exports	GDPGR <=> Imports
Third Period		

VII. CONCLUSION

The purposes of this study are to examine the relationship between foreign trade and GDP growth for the periods of Market Based Economy (Parliamentary Period) (1948/49-1961/62), Socialist Economy (1962/63-1987/88) and Market Oriented Economy (1989/90- 2017/18) in Myanmar and to compare these relationships among the three periods.

For the three sub period annual data of imports, exports and GDP are derived to quarterly figures by using Boot, Feibes and Lisman (1967) method. When test of seasonality is conducted to the quarterly figures of the real values of imports, exports and GDP, the seasonal effect is found in the quarterly figures of GDP and this effect are eliminated by using seasonal indices computed by ratio to moving average method. There is no evidence of seasonality in quarterly data of real exports and real imports for this period. After removing the effect of seasonality, GDP growth is calculated for the three sub periods.

Thereafter, unit root test is conducted for the three sub periods by using Augmented Dickey-Fuller (unit root) test. For the first period, the stationarity test clarified that the level value of exports is nonstationary but stationarity is found at its first differences series. The quarterly real value of imports and GDP growth are found to be level stationary. Therefore, the series of all variables used, imports, and GDP growth are integrated of zero order I(0) and exports is first order I(1). The Granger causality test suggested that unidirectional causality run from imports to GDP growth and from imports to exports. Similarly, unidirectional causality runs from exports to GDP growth. The results also suggested that the evidence of bidirectional causality between imports and exports and between GDP growth and exports. During this period, the economy or economic policy was characterized by a mix of nationalism, socialism, and

market system. The government created a number of state enterprises and nationalized many foreign firms. In addition, they put emphasis on industrialization and the role of the state for long-term development and introduced ISI (import-substituting industrialization) policy. Based on this policy, the leaders at that time, formed the two-year plan in April 1948, followed by the eight-year plan in 1952 by objecting the level of GDP roughly doubling the gross domestic product in real terms between 1950/51 and 1959/60. In addition, according to ISI policy, capital goods, intermediate goods and consumer goods were imported in order to invest and promote the production. The increased in availability of imports had reduced living costs throughout Burma during in the first period.

For the second period, the ADF unit root test pointed out that the level of imports, exports are nonstationary but found that their first differences series are stationary. However, the level value of GDP growth is stationary. Thus, the series of this period are found to be integrated of order one, I(1) for exports and imports. GDP growth is zero order or I(0) series. According to the Granger causality test, unidirectional causality runs from imports to exports and from GDP growth to exports. In addition, the evidence of bidirectional causality is observed between GDP growth and imports. Polak(1954) found in his international economic system that fluctuations in the level of country's exports bring about fluctuation in its domestic activity and national income. Thus, in this Socialist Period, GDP growth influenced exports and imports of Myanmar economy. This is because this period was the period of Revolutionary Council and the economy policy was characterized by "the Burmese Way to Socialism". The government nationalized private and foreign firms and established State-owned Economic Enterprises (SEEs). However, due to the cumulative adverse effect of nationalization, mismanagement and inappropriate economic policies, Myanmar economy began to show downward trend especially in rice exports, overall export earnings, saving and investment.

Finally, for the third period, the stationarity test clarified that exports and GDP growth are nonstationary at the level but found stationarity at their first differences series. However, the level value of imports is stationary. Therefore, the series of all variables, exports and GDP growth are found to be integrated of order one I(1) and imports was I(0). According to the results of Granger causality test, there is no evidence of causality between quarterly real value of exports, imports and GDP growth. In this period, the government introduced a new foreign investment law and some state enterprises are transferred to private sector in momentum. In addition, because of the high cost and difficulty of electricity, land rent, and factory lease com-pounded with the transport cost and logistic cost the foreign investment was not practicable.

To summing up all three sub periods, it is observed that imports played the major role in Myanmar economy because there found unidirectional causality from imports to exports, and from imports to GDP growth for the first period. For the second period

unidirectional causality was also found from imports to exports. In addition, the evidence of bidirectional causality was observed between imports and exports in the first period and between GDP growth and imports in the second period. As a recommendation, the policy maker should include it's economic policy to enhance economic growth such as import substitution industrialization, in order to impact more on exports.

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The Impact of Administrative Expenditure on Economic Growth in Myanmar (1980 – 2014)

Naw Htee Mue Loe Htoo*[15]

Monywa University of Economics

ABSTRACT: The study applied the Economic Analysis of Time Series and the Dynamic Model of ARDL as the main analytical tools to investigate the impact of administrative expenditure on economic growth in Myanmar from 1980 to 2014. The study discovered that administrative spending leads to promoting positive impact on economic growth in the short run however an increase in administrative expenditure causes less and lower contribution to economic growth in the long run. In addition, the study investigated that the hike of budgetary expenditure for administration in 2010 generates the short run positive impact on economic growth but it causes the long run negative impact on economic growth. Thus, it is necessary to reconsider whether an increase in administrative spending retards or boosts economic growth. Moreover, the budget allocation should be more on the productive activities rather than unproductive activities. Besides, it should also have a well-defined expenditure policy which pursued and effective management of resources in the development process.

Key words : Administrative Expenditure; Economic Growth; Budget, ARDL- Auto Regressive Distributed Lag Model; Time Series Analysis,

I. Introduction

Myanmar is one of the developing countries and it is also ASEAN member

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* Professor, Department of Economics, Monywa University of Economics, Upper Myanmar, ruthhtoo@gmail.com, + 959 09444438585

countries. Presently, Myanmar is also under going macroeconomic adjustment and struggling for its economic development with a new transition to abreast with other neighboring countries. To achieve development, it is realized that without the supporting factors of the public spending, the policy for development cannot be achieved.

By examining the past economic history of Myanmar, at one time before 1988, Myanmar had exercised a planned economy where the size of government expenditure had increased with a slow process during the years of the planned economy. After Myanmar had abandoned the central planned economy, at the same time, Myanmar had started to adopt the market-oriented economy after 1989 with the efforts of the government SLORC[1] and later it was known as SPDC[2] after 1997 up to 2011. To introduce the market oriented economy during those periods, there were many reforms in every sector are badly needs for Myanmar to drive the economy to be line with the market economy. This fact led to the role of government to become prominent when implementing and, establishing market oriented economy. Then, the government had undertaken a serious of comprehensive reforms to achieve smooth transition and large functions of and then growing government has to place on better economic performance over 20 years from 1989 to March 2011. Further, when the SPDC was officially dissolved on March 2011 and there was the period of introducing the transition towards Parliamentary Democracy from 2011 to 2015 led by the new government namely USDP[3]. Again, this new government began a series of political, economic and administrative reforms with the positive responds of the international community and building a nation's human resource development based on improving the health sector and upgrading international education system which have played a key role in this era. Again, on March 2016 and up to the present, Myanmar is now exercising parliamentary democracy leading by the democratic government of NLD[4]. The interest of this paper is to study the period from 1980 to 2014 which was about 34 years. The main reason are that those periods were the near end of the socialist era and the period of an enormous change towards the transition to market oriented economy in Myanmar.

The government who took responsibility in those periods had faced enormous challenges that were aroused from political turmoil and economic downturn. More seriously, when moving and adapting to the market oriented economy, there were many reforms are severely required and at the same time the required political and economic reforms are intensively implemented and established by the government who took responsibility in those period namely SLOC & SPDC. Reforms had been made in

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1) SLORC- State Law and Restoration Council
2) SPDC - State Peace and Development Council
3) USDP- Union Solidarity and Development Party
4) NLD - National League for Democracy Party

every economic and social sector. Amongst, to maintain peace and security across the country is the one of the main challenging for the government. Without achieving peace, security, stability, and tranquility, there is no solution for achieving growth even development for the country. Therefore the government had paved the way and had put numerous efforts in reforms in accordance with the economic, social and political objectives laid down by the government. This fact reflected that growing government took place as a major role in economic growth and the size of public sector have grown together with the growing government. The government has been increasing used expenditure as a fiscal instrument to revitalize, stabilize and promote the economic situation in every sector such as in economic, social and administrative sectors.

Amongst, the budget share of expenditure injected to administration affairs was rather important than to that of sharing to other economic and social sectors. As a result, there has been significantly used of administrative expenditure on administrative affairs in those periods. As compared to the other sector, it has seen that administrative sector has been received a substantial share of the total budget as given by the priority of government in those periods.

II. The objective of this study

The main focus of this paper is how much the contribution of administrative spending has an impact on economic growth and then to support development for Myanmar as given this sector as a priory; and to observe how much the trend of changes in administrative expenditure in those periods effect on the economic growth over time. This will provide the important information for more efficient targeting of the limited budget and will provide policy implication for setting an appropriate targeting of the limited budget allocation and then to support economic growth of Myanmar.

III. Data and Variable Description

To analyze the impact of administrative expenditure on economic growth, the source of data is taken form the annual reports of Financial, Economic and Social Conditions that released from the Ministry of National Planning and Economic Development (MNPED)[5]. The annual series of GDP and the annual series of all value of administrative spending are converted into the real value by using 2005 as a base year.

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5) MNPED- Now it is renamed as Ministry of Planning and Finance (MOPF).

The study period from 1980 to 2014 is broken down into two periods in order to see the effect of changes in an economic system. Accordingly, the period from 1980 to 1988 is restricted as the economy with socialist-system while the period from 1989 to 2014 is considered as the economy with market oriented economic system. Moreover, the year 2010 represents the administrative expenditure had increased sharply in this year. Thus, this period is recognized as the policy variable and it is taken into account as the dummy variables in order to observe the effect of this change on growth in this study. In addition, as the total consumption expenditure which is the largest portion among the components of aggregate demand is considered in this study because a change in a consumption spending can directly effect on economic growth through spending allocation, thus as total consumption expenditure is used as a control variable in this study. Moreover, the related theories and the empirical studies relevant to this study are obtained from various sources such as libraries, reference books, and internet websites.

IV. Methodology

With respect to the methodology, this study employs (i) the econometric model of Time Series Analysis, (ii) Bound Test to Cointegration of ARDL Approach, (iii) Error Correction Method of Auto Regressive Distributed Lag model (ECM of ARDL) and (iv) the Diagnostic Tests. The estimation of the ECM of ARDL with the-lag structure (2, 0, 1, 1, 1, 1,) for this analysis is elaborated as follows.

$$\triangle LNNRPCGDP_t = \psi_0 + \psi_1 \sum_{T=1}^{P} \triangle LNRPGDP_{T-1} + \psi_2 \sum_{T=1}^{P} \triangle LNTAD_T +$$

$$\psi_3 \sum_{T=1}^{P} \triangle LNC_T + \phi_4 \sum_{T=1}^{P} \triangle Dstru_t + \phi_5 \sum_{T=1}^{P} \triangle AD_{2010} + \phi_6 \sum_{T=1}^{P} \triangle ADSTAD_T +$$

$$\lambda ECT_{t-1} + \Theta_1 \ln TAD_T + \Theta_2 \ln C_t + \Theta_3 D_{stru} + \Theta_4 D_{2010} + \Theta_5 DSTADt + \varepsilon_t$$

Where:
Δ is the difference operator
p is the optimal lag length
ECT_{t-1} is the lagged residual term
$\psi_0, \ \psi_1, \ \psi_2, \ and \ \psi_3$ are the coefficients of the short run parameters
$\phi_4, \ \phi_5 \ and \ \phi_6$ are the Coefficient of dummies
λ is the coefficient of the lagged residual term
$\Theta_1, \ \Theta_2, \ \Theta_3, \ \Theta_4, \ and \ \Theta_5$ are the coefficient of the long run variables

$\triangle LNRPGDP_t, \ \triangle LNTAD_t, \ \triangle LNC_t, \ \triangle D_{2010}, \ \triangle D_{stru}, \ \triangle LNDSTAD_t$

(ie., D_{stru} * $LNTAD_t$) are short-run parameters, which measure the immediate impact of independent variables on the dependent variables $LNTAD_t$, LNC_t, D_{stru}, D_{2010} and $\triangle LNDSTAD_t$ are the long run variables and the coefficients of these variables describe the long run effect on economic growth.

V. Results and Discussion

The results of the ARDL long run and ARDL-ECM short-run dynamic adjustment between administrative spending and economic growth is presented in the following table.

Table 1. The ARDL Long Run and ARDL-ECM Short Run Dynamic Adjustment between Administrative Expenditure and Economic Growth (1980-2014)

The Short Run Effect of Administrative Spending on Economic Growth				
Dependent Variables: $\triangle LNRPGDP_{t-1}$				
Independent Variables	Coefficient	Std error	t- statistic	Prob.
$\triangle LNRPGDP_{t-1}$	-0.165156	0.1035	-1.5960	0.1254
$\triangle LNTAD_t$	0.1857***	0.0548	3.3919	0.0027
$\triangle LNC_t$	0.3855***	0.0487	7.9152	0.0000
$\triangle D_{stru}$	2.3584***	0.6637	3.5534	0.0019
$\triangle D_{2010}$	0.2942***	0.0387	7.5952	0.0000
$\triangle LNDSTAD_t$	-0.1913***	0.0560	-3.4182	0.0026
C	-3.6439***	0.3052	-11.9414	0.0000
ECT_{t-1}	0.0728***	0.0061	11.9941	0.0000
Cointeq = $LNRPGDP_t$ - (-3.0194*$LNTAD_t$ + 0.1014*LNC_t − 49.5769D_{stru} − 7.0516*D_{2010} + 4.0119*$LNDSTAD_t$)				
The Short Run Effect of Administrative Spending on Economic Growth				
$LNTAD_t$	-3.0194*	1.6800	-1.7973	0.0867
LNC_t	-0.1014	0.5367	-0.1890	0.8519
D_{stru}	-49.5769*	25.8991	-1.9142	0.0693
D_{2010}	-7.0516**	3.0501	-2.3120	0.0310
$LNDSTAD_t$	4.0119*	2.1028	1.9080	0.0702

Note: ***, **,* represent the p-values are significant at 1%, 5% and 10% level, respectively

Source: Based on Calculation

The result reported that the coefficient of error term (ECT t-1) is very significant at 1% but it has positive unexpected sign. This means that the speed of adjustment was

not able to correct disequilibrium that has occurred in the process instead it diverges from the long run equilibrium. The magnitude of coefficient of the error term 0.072819 suggests that at around 0.07% of any disequilibrium between administrative expenditure and real per capita GDP that had occurred owing to the shocks but which were not corrected and thus the adjustment process always deviates from the long run path at around 0.07% after a shock happening. Thus, the real per capita GDP stays far away from its original equilibrium position. This indication shows unexpected result. Therefore, it is necessary to consider what the disequilibrium or the change in equilibrium position provides a good approximation to what actually happens in this situation.

As a consequence, this fact may lead to the last year of the real per capita GDP could not support to the current year per capita GDP since the p-value of estimated parameter of the real per capita is not significant . Moreover, a negative sign has shown that the last year of per capita GDP has a negative relationship to the current year per capita GDP.

With respect to the result of short-run parameter, it is reported that administrative expenditure contributes to economic growth in the short run. Since the p value of estimated parameter of the current year of administrative expenditure is significant at 1%, level. It has shown that a one percent increase in administrative expenditure leads to an increase in 0.19% in economic growth. Thus, an increase in administrative expenditure causes the aggregate spending to increase in the short run, which in turn gives rise to the real per capita GDP to increase.

Regarding the long run effect, the result reported that there is a negative relationship between administration expenditure and economic growth since the p-value of estimated long run coefficient is significant at 10%. The result has shown that a one percent increase in administrative expenditure causes a 3% decrease in the economic growth or 3% decline in real per capita GDP. By this mean, in the long-run administrative expenditure was not contributed to economic growth instead an increase in administrative expenditure causes the less contributing to economic growth.

The dummy D2010 stands for a sharply increased in administrative expenditure in the year 2010. The massive administrative expenditure has been used since 2005 owing to the establishment of the productive and standard national defense/army and many investing in the expansion of sophisticated equipment's, tools and modern technologies related to this sector. This expenditure has been continuously increasing throughout the years and it was remarkably reached a peak in 2010. The result reported that an increase in administrative expenditure in 2010 generates the immediate impact on economic growth at 0.29% only in the short run. However, in the long-run, a sharply increase in administrative expenditure in 2010 causes the negative impact on economic growth since the p value of estimated parameter is significant at 5% level. It has shown that a one percent increase in administrative expenditure in 2010 leads to GDP to

decrease at 7%. Therefore, it is necessary to reconsider efficiency and effective use of the government total revenue to spend for administrative expenditure since the share of administrative spending has been substantially larger than the share received by the other sectors but which generates less productive contributing to growth.

Likewise, the (Dstru) dummy variable, which figures out the effect of structural change of the economy after 1989 provided the short run effect on as the p value is significant at 1% and it has positive relationship to economic growth. However, in the long-run, the effect of structural change after 1989 had not been contributed to economic growth through the allocation of administrative spending.

However, the interaction term between the administrative spending and the economic structure after 1989 together determines the long run impact on the real per capita GDP to increase. This implies that in the long run there is a relationship between peace, security, tranquility and the market-oriented economy. In other words, peace and tranquility supports the activities of the market economy to be work very well and thus this fact leads to an increase in economic growth.

VI. Conclusion

In Myanmar, with respect to administrative expenditure, there has been increasing in administrative expenditure and in term of percentage of GDP, it is accounted to 5% of GDP on average in throughout the years. Moreover, as compare to the other spending, administrative spending is relatively large and this sector is the top sector receiving the public spending. However, this study finds that administrative expenditure contributes to economic growth in the short run but not in the long run instead it causes a negative contribution to the long run economic growth. This fact neither does mean that society will benefit from the reallocation of administrative spending, nor does it means that administrative spending is the best way to achieve economic growth.

Base on the findings, this study provides the policy implication that policy marker should address the spending allocation pattern given to administrative sector as a highest priority as compare to the other sectors: for example; spending allocation from the unproductive sectors to the productive sector like agricultural sector, education and health. Moreover, it should focus on the factors causing the negative impact on economic growth based on insufficient and ineffective use of the spending. In addition, it should be considered whether further increases in administrative spending are likely to see as at the expense of economic growth in the long run.

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