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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.

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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.

August 30, 2021

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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.

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A Correspondence Analysis of Educational Attainment and Location of Residents in Myanmar

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Central Statistical Organization

ABSTRACT: The aim of this study is to analyze the educational attainment of people in Myanmar. There are very few researches that investigate the educational attainment of people in Myanmar. The analysis is based on secondary data and it was collected from the 2014 Census conducted by the Department of Population (DoP) under the Ministry of Labor, Immigration and Population of the Republic of the Union of Myanmar. The target population is the people at aged 25 years and over in Myanmar. Correspondence analysis was used to analyze the educational attainment level by States and Regions in Myanmar. According to correspondence analysis of educational attainment and States and Regions, Shan State had very high correspondence with 'No Schooling' level. The highest number of no schooling residents was found in Shan State. According to correspondence analysis by Districts, Tachileik, Kengtung, Lashio, Linkhe, Loilin, Kunlon, Laukine, Minesat, Makman, Minephyat, and Hopan were related to 'No Schooling'category of educational attainment. If the study of younger people's educational attainment can be conducted, it will be more comprehensive.

Key words *: Educational Attainment, Correspondence Analysis*

I. INTRODUCTION

Education is one of the most essential tools for the development of every sector in any country. Education can improve the quality of citizens. The educated and qualified citizens can lead the nation. High educational attainment with better health increased family income, and decreased violence and crime, and can attain

sustainable development. Educational attainment refers to an important direct outcome of education or indirect outcomes of education.

Education and health are the important factors of human capital (Baharin et al., 2020). The most concerned aspects for any nation are education and employment which flow direct effect on all sectors of the economy (Rakshit et al., 2019). The inability to obtain a high school education has lifelong implications on the individual, family, society, community, and nation as a whole (Dowden et al., 2018). In the last few decades, the benefits of education to society extended beyond the monetary domain. In Ancient Greece, Plato and Aristotle identified that the key role of education is contributing to personal fulfilment and social well-being (Vera-Toscano et al., 2017). According to Connelly et al. (2016), measures of education are essential components of many sociological analyses and powerful predictors of a diverse range of social outcomes.

Rosenwaike (1973) said that educational attainment is influenced by geographic location, it is necessary to adequately control for the differential spatial distribution of ethnic groups in the nation. The availability ofdata motivated to focus on educational attainment for the population aged 25 and above, rather than for a younger age category or for subgroups of the population such as the labor force or employed persons (Robert J. Barro, 1993). The census provides a wealth of data on the individuals in the sample such thatrace, age, level of educational attainment, income, occupation, language ability, marital status, and so on (Bayer et al., 2004).

Myanmar is now trying to attain the quality education based on the sustainable development goal. To attain the sustainable development of Myanmar educational attainment of citizens is crucial. In this paper, educational attainment of Myanmar is highlighted based on its important factor. There are very few researches that investigate the educational attainment of people in Myanmar. Therefore, the educational attainment of specified areas in Myanmar isanalyzed in this paper.

1. Objectives

The aim of this study is to analyze the educational attainment ofpeople in Myanmar. There are twoobjectives of the study: (i) to investigate the educational attainment of people in Myanmar by States and Regions, and Districts and (ii) to examine the correspondence of location of residents and educational attainment of people in Myanmar.

2. Method and Limitations

In this study, educational attainment of people in Myanmar is investigated by using correspondence analysis (CA). Secondary data from the 2014 Myanmar Population and Housing Census was used to analyze the educational attainment level by States and Regionsin Myanmar. The analysis is based on secondary data and it was collected from the 2014 Census conducted by the Department of Population (DoP) under the Ministry of Labor, Immigration and Population of the Republic of the Union of Myanmar. The target population is the people at aged 25 years and over in Myanmar.

II. Literature Review

Education is a basic human right and a significant factor in the development of people, communities, and countries. Countries vary in terms of adult education participation and have different patterns for the relationship between no formallearning participation and the problem-solving skills of young adults (Kim, 2020). Providing an accurate and reliable assessment of human capital at small-area, regional and national levels is the critical value for evidence-based action by governments, civil societies, academics, researchers and other stakeholders. The essential role ofthe population and housing census is to provide that assessment. The majority of countries produce detailed statistics on population and housing by conducting a traditional census, which in principle entails canvassing the entire country, reaching every single household and collecting information on all individuals within a brief stipulated period of time (Vereinte Nationen, 2017).

According to the International Standard Classification of Education (ISCED), educational attainment is defined as the highest grade completed, or alternatively as the highest grade attended, in the educational system of the country where the education was received. Education includes all deliberate and systematic activities designed to meet learning needs (UNESCO, 2012). Educational attainment is defined as the highest grade completed within the most advanced level attended in the educational system of the country where the education was received. Some countries may also find it useful to present data on educational attainment in terms of the highest grade attended (OECD, 2001).

Firstly, data on educational attainment were collected by the United States Census Bureau in the 1840 Census. In the history of educational attainment questions, there have been three stages of data collection on educational attainment in American censuses and surveys. These steps were between 1840 to 1930, the question is just for basic literacy, and from 1940 to 1980, years of school completed was collected,

and 1990 to present, the highest level or degree completed for an individual (Snyder, 1993).

Educational attainment is a topic that has been discussed in both economics and sociology. The households with the highest educational attainment are with the highest household income and wealth. In general, income and educational attainment highly correlated. The human capital theory has established a direct relationship between higher education and higher income. Educational outcomes are one of the key areas influenced by family incomes. More educational attainment led to a higher level of labor force participation and
a lower chance of being unemployed. Unemployment rate was also extensively affected by the level of education (Ferguson et al., 2007).

Vilkama & Tammilehto-Luode (2015) presented a case study on the use of official statistics in monitoring change in educational level on the national, regional and city levels in Finland. This paper draws on the high-quality Finnish population registers that enable compiling a wide range of regional- and neighborhood-level timeseries on various socio-economic indicators. Unlike census data that is usually updated at fi ve to ten-year intervals, the Finnish register-based statistical system is now maintained and updated yearly. Furthermore, register-based statistical units can be linked to one another by means of the identification systems, and all units can be geocoded and located on a map. The links between the statistical and geographical data make it possible to conduct fine-scale analyses of the annual changes in population structures at various spatial levels. The aim of the paper is two parts. The main objective is to analyze regional differences, and changes, in educational level in Finland since the 1970s to the present. The second aim is to explore different ways to visualize these changes with thematic maps. By examining educational attainment, the focus is to explore the residential similarity and to analyze the effect of socio-economic factors on educational attainment of the individual based on microdata sample from census.

III. Pearson's Chi-square Test

To see whether there is a relationship between two categorical variables, Pearson's Chi-square test can use. Pearson's Chi-square statistic is also the central measure of association around which the classical approach to correspondence analysis is based. The Chi-square statistic is a non-parametric (distribution free) tool designed to analyze group differences when the dependent variable is measured at a nominal level.

When analyzing a contingency table, the focus is commonly on the association between the categorical variables. The simplest way of testing the statistical significance of the association between X and Yin the population from which the sample is selected is to define the null and alternative hypotheses. Null hypothesis States that X and $Y$are not associated and alternative hypothesis States that X and Y are related.

Equation can be presented by the form of

$$\chi^2 = \sum_{i=1}^{I}\sum_{j=1}^{J} \frac{(Observed_{ij} - Expected_{ij})^2}{(Expected_{ij})} \quad . \qquad (1)$$

This statistic can then be checked against a distribution with known properties. The degrees of freedom need to know and these are calculated as (r − 1) (c −1) in which r is the number of rows and c is the number of columns. Another way to think is the number of levels of each variable minus one and multiplied. Pearson's Chi-square statistic is very helpful for identifying the extent to which two categorical variables are associated (Beh & Lombardo, 2014).

IV. Correspondence Analysis (CA)

The term "correspondence analysis" was first proposed in the fall of 1962. The fi rst presentation under this title was made by J.-P. Benz´ecri at the Coll`ege de France in a course in the winter of 1963 (Murtagh, 2005). CA is not unlike principal components analysis in its underlying geometrical bases. While principal components analysis is particularly suitable for quantitative data, CA is appropriate for the following types of input data: frequencies, contingency tables, probabilities, categorical data, and mixed qualitative/categorical data (Murtagh, 2005).

CA is a related perceptual mapping technique with similar objectives. CA infers the underlying dimensions that are evaluated as well as the positioning of objects, but it follows a quite different approach. First, instead of using overall evaluations of similarity or preference concerning the objects, each object is evaluated (in nonmetric terms) on a series of attributes. Then, based on this information, CA develops the dimensions of comparison between objects and places each object in this dimensional space to allow for comparisons among both objects and attributes simultaneously (Hair, 2014).

The concept of a set of relative frequencies, or a profile, is fundamental to CA. Such sets, or vectors, of relative frequencies have special geometric features because the elements of each set add up to 1 (or 100 percent). In analyzing a frequency table, relative frequencies can be computed for rows or for columns. These are called

row or column profiles respectively. CA can be used for any type of studies with categorical variables. CA is also called correspondence mapping, perceptual mapping, social space analysis, correspondence factor analysis, principal components analysis of qualitative data, and dual scaling.

The correspondence map is a graphical tool which helps the researcher to notice easily relationships within this table. It is often helpful to refer back to the original correspondence table when interpreting a correspondence map. The correspondence map is the central output of CA. A correspondence map displays in relation to a data table transformed by CA. Thetable consists two sets of new variables for the rows and the columns. These new variables are called factor scores. These factor scores give the best representation of the similarity structure of the rows and the columns of the table.

The factor scores are plotted on the correspondence map. Rows and columns in the map are represented as points whose coordinates are the factor scores and the dimensions are also called factors, components or dimensions. The factor scores of the rows and the columns had the same variance. Therefore, rows and columns can be conveniently represented in one single map. The distinct advantage of CA is that it allows the researcher to visually represent two different structures on the same graph and the relationships within each structure and between the two structures (Harcourt, 2002).

In order to make the similarity measure like those used in MDS (i.e., positive/larger values are greater association and negative/smaller values are less association) the sign of the original difference is reversed and apply it to the Chi-square value. The Chi-square values act as the standardized measure of difference. The final value in each cell is the signed Chi-square value, where positive values represent greater similarity between the age group/product combination and negative values are lower similarity (Hair, 2014).

CA can address either of two basic objectives: (i) CA can be used to examine the association among the categories of just a row or column and (ii) CA can be used to examine the association between the categories of both row and column.

With a cross-tabulation table, the frequencies for any row–column combination of categories are related to other combinations based on the marginal frequencies. Developing in CA, it should be noted that two specific terms describe the properties of the frequency values and their relative contribution to the analysis. The first term is mass, which is first defined for any single entry in the cross-tabulation table as the percentage of the total represented by that entry. It is calculated as the value of any single entry divided by N (the total for the total for the table, which equals the sum of either the rows or columns). Thus, the sum of all table entries (cells) equals 1.0. It can also calculate the mass of any row or column category by summing across all

entries. This result represents the contribution of any row or column category to the total mass. The second measure is inertia, which is defined as the total Chi-square divided by N (the total of the frequency counts).

Eigenvalues, also known as singular values, are derived for each dimension and indicate the relative contribution of each dimension in explaining the variance in the categories. The maximum number of dimensions that can be estimated is one less than the smaller of the number of rows or columns. The researcher selects the number of dimensions based on the overall level of explained variance desired and the incremental explanation gained by adding another dimension.

Each dimension added to the solution increases the explained variance of the solution, but at a decreasing amount (i.e., the first dimension explains the most variance, the second dimension the second greatest, etc.). Adding dimensions increases the complexity of the interpretation process; perceptual maps of greater than three dimensions become increasing complex to analyze. A rule of thumb is that dimensions with inertia (eigenvalues) greater than 0.2 should be included in the analysis. In addition to representing the association of each category with each dimension, the inertia values can be totaled across dimensions in a collective measure. CA provides a valuable analytical tool for a type of data (nonmetric) normally not the focal point of multivariate techniques (Hair, 2014).

V. Educational Attainment in Myanmar

Educational attainment of Myanmar people who areaged 25 years and over is analyzed based on the data from the 2014 Census.The population censuses of Myanmar in 1973 and 1983 collected some data on education. The 1973 census used a single questionnaire for all conventional households. There was only one educational question on highest grade obtained asked of all persons aged five and over.

In the 2014 Census, two types of questionnaires were used. They were (i) main questionnaire containing 41 questions for conventional households and (ii) a questionnaire containing 11 questions for institutions. The main questionnaire contained three questions on education asked of all persons aged 5 years and over. These questions have been covered literacy, school attendance and highest education grade/level attained.

According to the 2014 Census, it also reported that about 16 percent of the population aged 25 years and over having no schooling. The proportion with no schooling was higher in rural areas (20.2 percent) than in urban areas (7.3 percent),and highest in Shan State (44.9 percent) and lowest in Yangon Region (5.9 percent). It showed that there were large differences in the percentages with no

schooling between States and Regions. Shan (44.9 percent), Kayin (31.8 percent) and Chin (25.8 percent) havethe highest proportions while Yangon (5.9 per cent) and Nay Pyi Taw (8.1 percent) have the lowest. There was 1.9 million people aged 25 and over who graduated from university, 1.1 million, more than half, were women.

1. Relationship between Educational Attainment and States and Regions

Due to the form of table constructed in the thematic report on education for the 2014 Census, the educational variable was organized into eight categories. The results indicate a statistically significant relationship between level of educational attainment and their residence, ÷2= 4,017,550, $p < 0.01$. This means that the person who settled in different States and Regionshave different levels of education. The results are presented in Table 1.

Table 1. Results of Chi-Square Test (States and Regions)

Test	Estimated Values	df	p-value
Pearson's Chi-square	4,017,550	98	0.0000

According to Table 1, there is significant relationship between level of educational attainment and residential locations. There are 15 States and Regions in Myanmar. They are Kachin, Kayah, Kayin, Chin, Sagaing, Tanintharyi, Bago, Magway, Mandalay, Mon, Rakhine, Yangon, Shan, Ayeyawady, and Naypyitaw. The education levels were summarized into 8 categories. These are: (i) No schooling, (ii) Primary (grade 1-5), (iii) Middle (grade 6-9), (iv) High (grade 10-11), (v) Vocational/ Diploma, (vi) Graduate, (vii) Postgraduate and above, and (viii) Other.

2. Determining the Correspondence of Educational Attainment and Locations

Correspondence analysis (CA) is used to investigate the educational attainment level ofpeople and States and Regions. To carry out CA, it is needed to determine the optimum number of dimensions. The information retained by each dimension is called eigenvalue. Eigenvalues and percent of variation explained by dimensions are used to determine the optimum number of dimensions. The observed values are presented in Table 2.

Table 2. Eigenvalues of Dimensions and Percent of Variance Explained

	Eigenvalue (Variance)	Percent of Variance	Cumulative Percent of Variance
Dim.1	0.09815597	65.78	65.78
Dim.2	0.04469740	29.95	95.73
Dim.3	0.00377088	2.53	98.26
Dim.4	0.00231764	1.55	99.81
Dim.5	0.00019955	0.13	99.94

Dim.6	0.00007166	0.05	99.99
Dim.7	0.00000912	0.01	100.00

According to Table 2, dimension 1 explained 65.78 percent of variation in data set and 29.95 percent of variation in data set is explained by dimension 2. The cumulative percent of variation by dimension 1 and dimension 2 is 95.73 percent. This is an acceptably large percentage.

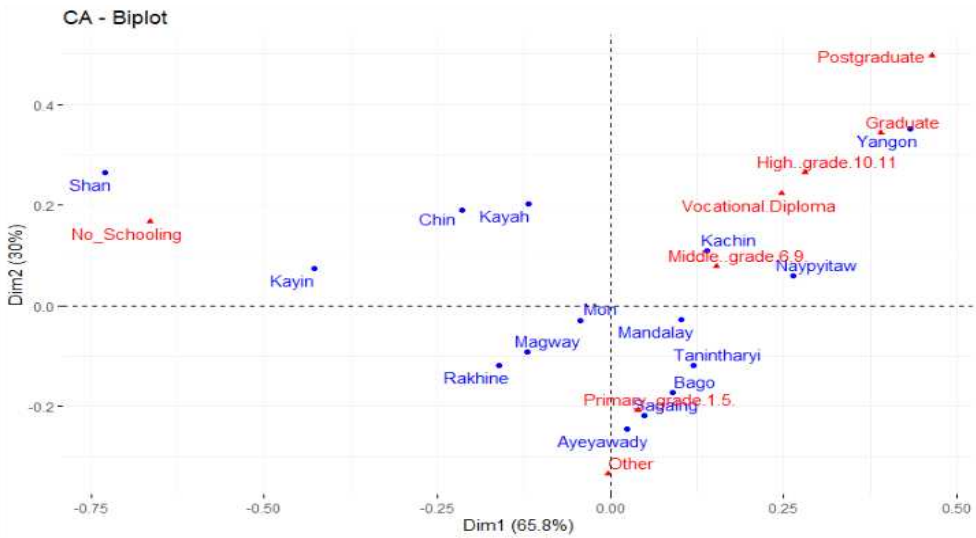
3. Educational Attainment by States and Regions Based on Two Dimensions

The CA biplot also called symmetric plot illustrates the educational attainment level and States and

Regionsprofiles simultaneously in a common space. Red triangles refer to educational attainment level and blue points refer to States and Regions.

In Figure 1, it can be clearly seen that the horizontal axis explains 65.8 percent of the variance in the plot while the vertical axis explains almost 30 percent. According to CA biplot, Kayah, Kayin, Chin, and Shan States were found the same portion of upper left quadrant. Thus, it can be concluded that these four States have similarity in characteristic of 'No Schooling' category of educational attainment. The percentage of people who never attended school is mostly found in these States. However, it can be also found that there is a close correspondence between Shan State and 'No Schooling'. The number of no schooling population aged 25 years and above in Shan State is the highest by 44.85 percent in Myanmar.

Figure 1. Biplot of the Education Attainment Level by States and Regions



The States and Regions of Kachin, Yangon, Naypyitaw and the educational attainment levels of 'Middle (grade 6-9)', 'High (grade 10-11)', 'Vocational/Diploma', 'Graduate', and 'Postgraduate and above' were lied in the upper right quadrant of the plot. It means that most of people from these areas can attained to high educational attainment level.

Ayeyawady, Sagaing, Bago, Tanintharyi and Mandalay Regions all belong to the 'Primary (grade 1-5)'level of educational attainment so these Regions all fall on the exact same point at lower right quadrant of the plot. Therefore, the high proportion of the residents from that Regions have linked to the 'Primary (grade 1-5)' level. According to CA biplot, Mon State, Rakhine State and Magway Region fall in lower left quadrant of the plot. In this quadrant, the monastery education ('Other') category situated. Therefore, Mon State, Rakhine State and Magway Region are related to monastery education. The high percentage of people whose educational attainment level is monastery education and mostly found in these States and Regions.

4. Contribution of States and Regions to Dimensions

Table 3 shows a list containing the highest inertia, and the highest contribution of States and Regions in dimension 1 and 2.

Table 3. Results of States and Regions in Dimension 1 and 2

States/ Regions	Inertia*1000	Contribution	
		Dimension 1	Dimension 2
Yangon	47.84	29.36	42.29
Shan	64.25	57.76	16.63

As can be seen in Table 3, the inertia (*1000) is 64.25 at Shan State, and the contribution of Shan State in dimension 1 is 57.76 percent and 16.63 percent in dimension 2. In another category, Yangon Region consists the inertia (*1000) of 47.84 and it is contributed by 29.36 percent and 42.29 percent in the dimension 1 and dimension 2 respectively. The most contributed States and Regions to dimension 1 and dimension 2 are the most important in explaining the variability in the data set. Shan State is mostly contributed to the dimension 1 and Yangon Region was also contributed by mostly to the second dimension. Concerning Shan State, 44.85 percent of the population aged 25 and over have never been to school and about 29.08 percent has finished 'Primary (grade 1-5)'. And just 0.25 percent completed 'Postgraduate and above'. Regarding Yangon Region, 5.89 percent of the population aged 25 and over have never been to school while 31.97 percent attained 'Primary (grade 1-5)' and 1.06 percent finished 'Postgraduate and above' level.

5. Contribution of Educational Attainment Levels to Dimensions

The results of the inertia, and the contribution for educational attainment levels to dimension 1 and dimension 2 were presented in Table 4.

Table 4. Results of Educational Attainment in Dimension 1 and 2

Educational Attainment	Inertia*1000	Contribution	
		Dimension 1	Dimension 2
No Schooling	76.35	73.10	10.26
Primary (grade 1-5)	20.23	0.70	43.13
Middle (grade 6-9)	6.45	4.28	2.50
High (grade 10-11)	14.97	7.94	15.41
Vocational/Diploma	0.51	0.25	0.45
Graduate	23.24	12.79	21.73
Postgraduate and above	2.14	0.95	2.38
Other	5.34	0.00	4.15

As can be seen in Table 4, the inertia (*1000) is 76.35 at 'No Schooling' category, and the contribution in dimension 1 is 73.10 percent and the contribution in dimension 2 is 10.26 percent. In another category, 'Graduate'consists the inertia (*1000) of 23.24 and it is contributed by 12.79 percent and 21.73 percent in the dimension 1 and dimension 2 respectively.

It can be distinctly found that the educational attainment level 'No Schooling' highly contributed to the dimension 1. It means that dimension 1 is mainly defined by the contribution of 'No Schooling' category. The 'Primary (grade 1-5)' level was also mostly contributed to the dimension 2. Therefore, it can be determined that the educational attainment levels, 'No Schooling' and 'Primary (grade 1-5)' have evidently importance contribution to dimension 1 and dimension 2.

6. Relationship between Educational Attainment and Districts

In the 2014 Census, the classification system for residence in Myanmar is also composed of 74 districts. Chi-square results indicate a statistically significant relationship between level of educational attainment and districts of residence, $\div 2 = 6{,}463{,}546$, $p < 0.01$. This means that the person who settled in
different districts of residence have different levels of education. The results are presented in Table 5.

Table 5 Results of Chi-Square Test (Districts)

Test	Estimated Values	df	P-value
Pearson's Chi-square	6,463,546	584	0.0000

According to Table 5, there is significant relationship between educational attainment and their location of residence.

7. Determining the Correspondence of Educational Attainment Level and Districts

Eigen values and their percent of variance explained are used to determine the optimal number of dimensions in CA of educational attainment level by Districts. The observed values are presented in Table 6.

Table 6. Eigenvalues of Dimensions and Percent of Variance Explained

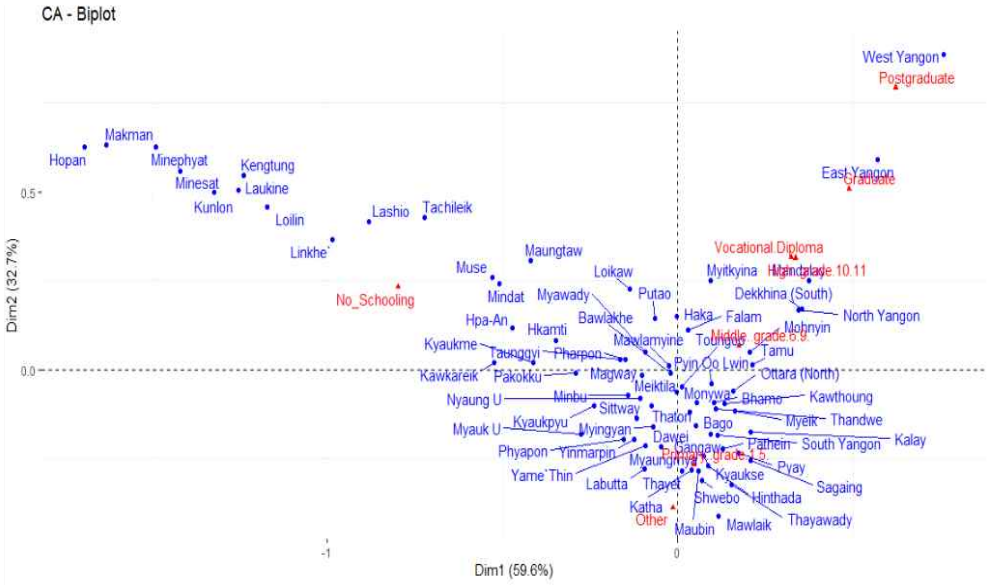
	Eigenvalue (Variance)	Percent of Variance	Cumulative Percent of Variance
Dim.1	0.1430746	59.62	59.62
Dim.2	0.0785121	32.72	92.34
Dim.3	0.0093730	3.91	96.25
Dim.4	0.0081358	3.39	99.64
Dim.5	0.0006034	0.25	99.89
Dim.6	0.0001969	0.08	99.97
Dim.7	0.0000838	0.03	100.00

As shown in Table 6, dimension 1 explains the most variance (59.62 percent) in the solution, followed by dimension 2 (32.72 percent) and so on. About 92.34 percent of the variation is explained by the first two dimensions. Therefore, these two primary dimensions explain a lot of the variation.

8. Educational Attainment by Districts Based on Two Dimensions

Educational attainment by Districts based on two dimensions can be accomplished by using CA on the respondent data. The rows represent the educational attainment levels and the columns represent Districts. The resulting plot is produced in Figure 2.

Figure 2. Biplot of the Education Attainment Level by Districts



From Figure (2), it can be seen that dimension 1 explains 59.6 percent of the variance in the plot while dimension 2 explains 32.7 percent. Hopan, Makman, Minephyat, Minesat, Kunlon, Kengtung, Laukine, Loilin, Linkhe, Lashio, Tachileik, Muse, Maungtaw, Mindat, Loikaw, Putao, Haka, Hpa-An, Hkamti, Kawkareik, Kyaukme, Taunggyi, Pharpon, Myawady, and Mawlamyine Districts were found in the upper left quadrant of the plot. Therefore, it can be concluded that these Districts related to the characteristic of 'No Schooling' category of educational attainment.

The people who never been attended school is mostly found by 82.81 percent in Hopan District, 80.73 percent in Makman District, 75.72 percent in Minephyat District, 72.54 percent in Minesat District, 68.39 percent in Kunlon District, 66.03 percent in Kengtung District, 65.96 percent in Laukine District, 62.61 percent in Loilin District, 55.05 percent in Linkhe District, 52.08 percent in Lashio District, and 46.61 percent in Tachileik District.

The Districts of West Yangon, East Yangon, Mandalay, Myitkyina, Dekkhina (South), North Yangon, Mohnyin, Tamu, and Falam and the educational attainment levels of 'Middle (grade 6-9)', 'High (grade 10-11)', 'Vocational/Diploma', 'Graduate', and 'Postgraduate and above' were linked in the upper right quadrant of the plot. It means that most of residents from these areas were matched to high educational attainment levels. Toungoo, Pyin Oo Lwin, Ottara(North), Monywa, Bhamo, Kawthoung, Thaton, Thandwe, Myeik, Dawei, Bago, South Yangon, Kalay, Pathein, Gangaw, Kyaukse, Pyay, Sagaing, Thayet, Katha, Maubin, Hinthada, Shwebo, Thayawady, and

Mawlaik Districts all belong to the 'Primary (grade 1-5)' level of educational attainment so these Districts all fall on the lower right quadrant of the plot. Therefore, the high proportion of the residents from that area was attached to the 'Primary (grade 1-5)' level. According to CA biplot, the left districts fall in lower left quadrant of the plot. In this quadrant, the education level 'Other' category situated. Therefore, these Districts are related to 'Other' level of education. The percentage of people who have 'Other'level of education is mostly found in these areas.

9. Contribution of Districts to Dimensions

The most contributed districts to dimension 1 and dimension 2 are the most important in explaining the variation of the data set.

Table 7. Results of District in Dimension 1 and 2

District	Inertia*1000	Contribution	
		Dimension 1	Dimension 2
East Yangon	34.98	11.70	22.87

In Table 7, East Yangon District consists the inertia (*1000) of 34.98 and it is contributed by 11.70 percent in dimension 1 and 22.87 percent dimension 2. It indicates only East Yangon District mostly contributed to the dimension 1 and dimension 2. Therefore, East Yangon District was the most important variable in explaining the variability in the data set. As regards East Yangon District, just 4.56 percent of the population aged 25 and over have never been to school in and about 22.14 percent completed 'Primary (grade 1-5)'. It was also found that only 22.47 percent attained 'Graduate' level.

10. Contribution of Educational Attainment Levels to Dimensions

The results of the inertia, and the contribution for educational attainment levels to dimension 1 and dimension 2 were stated in Table 8.

Table 8. Results of Educational Attainment in Dimension 1 and 2

Educational Attainment	Inertia*1000	Contribution	
		Dimension 1	Dimension 2
No Schooling	112.32	72.36	11.18
Primary (grade 1-5)	34.20	0.66	41.13
Middle (grade 6-9)	10.07	3.85	1.00
High (grade 10-11)	22.23	7.83	12.41

Vocational/Diploma	0.96	0.30	0.51
Graduate	43.75	13.82	27.12
Postgraduate and above	5.28	1.17	3.47
Other	11.17	0.00	3.19

As it can be seen in Table 8, the inertia (*1000) is 112.32 at 'No Schooling' category, and the contribution in dimension 1 is 72.36 percent and the contribution in dimension 2 is 11.18 percent. 'Graduate' consists the inertia (*1000) of 43.75 and it is contributed by 13.82 percent and 27.12 percent in the dimension 1 and dimension 2 respectively. Thus, the educational attainment categories of 'No Schooling' and 'Graduate' largely contributed to dimension 1 and dimension 2. Therefore, dimension 1 is mainly defined by the contribution of 'No Schooling' category. The 'Primary (grade 1-5)' level was mostly contributed to the dimension 2. It can be said that the educational attainment levels, 'No Schooling' and 'Primary (grade 1-5)' have evidently importance contribution to dimension 1 and dimension 2 respectively.

VI. Conclusion, Findings and Recommendations

Education is crucial to opportunities for participation in society. Educational attainment provides a platform for performing better on all levels of human development. According to needs of the world, co-creation and partnership can improve social protection based on the high level of educational attainment.

One of the motivations of this study was to correspond where the States and Regions, Districts, and Townships of a country can be grouped based on level of educational attainmentin Myanmar. It was found that some States, or Regions or Districts or Townships share a similar profile. This information could be used for resource planning and allocation. Correspondence analysis method was used to match educational attainment level with the residence of people in Myanmar.

Accordingto correspondence analysis of educational attainment and States and Regions, Shan State had very high correspondence with 'No Schooling' level. The highest number of no schooling residents was found in Shan State. According to correspondence analysis by Districts, Tachileik, Kengtung, Lashio, Linkhe, Loilin, Kunlon, Laukine, Minesat, Makman, Minephyat, and Hopan were related to 'No Schooling' category of educational attainment.

Needs for Further Studies

In this study, the educational attainment of people aged 25 years and over was studied. If the study of younger people's educational attainment can be conducted, it will be more comprehensive. There are many variables to measure the educational attainment, the highest level completed is only observed because of census data. If the mean years of schooling, enrollment rates are used, the results will be more interested.

Further research on the effect of determinants of educational attainment should be carried out to find the different impacts based on the primary data. If all points of view can be considered, it will be better.

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