Role of Income Inequality in Decreasing Quality of Life in Malaysia

Adil Sajid

MBA, Finance

SZABIST, Karachi Campus

ABSTRACT

Purpose: The aim of this research papers is to address the aspects and role of income inequality in decreasing the quality of life in Malaysia.

Methodology: The collection of data is conducted through secondary sources where the data is gathered from 1971 till 2020. The numerical data taken for the study requires to conduct the statistical analysis techniques for which the statistical software STATA has been used for generating results. The analytical techniques that are applied on the dataset comprises of descriptive statistics and unit root testing. Based on the results of unit root, the ARDL technique is applied for evaluating the influence of income inequality on quality of life.

Results: The findings of the study indicates that the previous quality of life negatively affects the current quality of life in the current lag. The results of the study further indicates that quality of life has a significant impact on the income inequality of the country and this is due to the wealthy population being accommodated more and the poor people are getting less resources

Implications: It will increase the scope of future studies and enable the different variables to be considered and will cause the study to be carried out in an effective and efficient manner. Another implication is that involving the qualitative aspect in future studies will cause the overall scope of the study to increase

INTRODUCTION

The notion of quality of life refers to the proxy of health and social well-being. It is explained that QOL is served as critical indicator of the government policies implemented and developed strategies for the people living in the communities (Pupavac et al., 2020). It encompasses a diverse range of social, psychological, physical, and environmental aspects and is perceived as vital appraisal of assessing one's life satisfaction, needs and desires to comply with the cultural values and systems (Thangiah et al., 2020). Thus, it is evident that poor rural dwellers who not only face critical economic and social complexities but also reside in poor remote locations, are likely to experience poor quality of life.

While the rich people living in urban areas has wider range of benefits in terms of freedom of choice and access to basic needs, the poor are largely relied on core survival tactics to meet the ends. Hence, the increased income level and higher economic growth help people living in rural communities to meet basic necessities, and improve quality of life (Shadurskaya et al., 2019). It is examined that widening income inequality represents critical challenges of this modern era. In advanced economics, the gap is widening between rich and poor at its highest level, with some countries experiences declining inequality in terms of access to education, health and finance (Solt, 2020). This reflects the implications for growth and macroeconomic stability by making suboptimal decision of utilising human resources, investments and prevention in crisis risks.

In this context, Malaysia is considered one of the popular Asian countries comprising multiracial peoples belong to different cultures, traditions and beliefs. It comes in the category of developing country with a highly open upper-middle income (Liu et al., 2021). However, Malaysia currently focuses on the development of the service sector where people living in rural areas such as Sabah and Sarawak have low income inequality that significantly impedes their quality of life. Besides, agriculture is considered as vital source of income and employment, whilst the challenges observed in developing efficient food and agriculture consistently remain intact in rural areas of the country (Andrew et al., 2018). Thus, the country's major economic growth relies on the agricultural outputs which have critically low income returns, impeding quality of life.

According to the survey report Yusop et al., (2020), the income inequality in Malaysia is widened, despite the rise observed in median household income to RM5,783 in 2019. This presents the issue of rising of cost of living in the country reflecting the core agenda of the Malaysian Government to reduce the gap between the low income and high income. The income inequality and poverty presents a major limitation of economic growth and quality of life.

Therefore, the aim of this research papers is to address the aspects and role of income inequality in decreasing the quality of life in Malaysia. In this manner, the researcher attempts to address major concerns and challenges the rural communities in Malaysia facing by discovering the economic prospects, GDP and poverty issues, identify the factors affecting income inequality, and finally the impact of income inequality on QOL in Malaysia.

The research will benefit the market professionals, economist and government policy makers to bridge the gap between high income and low income. It will also highlight certain aspects that will realise the importance of preventive measures and policies to measure the quality of life and increase living standards for the people. In essence, comparison of different Asian countries will be made, and the income inequality will be analysed by integrating multiple studies reflecting upon the relevant discussion.

LITERATURE REVIEW

Income disparities and its relation with economic growth and development has been widely debated and assessed in the literature. It is evaluated that income disparities have been increased since 1970s, while the magnitude of the change in income inequality is directly proportional to the current income being utilised (Mnduca, 2018). It is supported that rising income inequality has widened the gap between rich and poor which is rapidly broadening as compare to three decades ago. Besides, it is explored that rich population attain significant benefits in terms of freedom of choice, life satisfaction and access to the education, finance and jobs (Graafland & Lous, 2018). While, it is reported that poor people struggle due to their dependency on survival strategies to accommodate basic needs.

Further, the evidence obtained showed that income inequality has significant impact on the economic growth of the developing countries. The relationship between per capita income and income inequality reflects the positive relationship as when GDP per capita is doubled, it is proved that the income inequality will declined by 87.36% in the long-run (Brueckner & Lederman, 2018). Likewise, it is noticeable that quality of life is greatly influenced by the rising and declining economic growth. This is explored that challenges of rural communities in terms of access to basic commodities, education, finance, and health and safety measures remain intact which in turn impact the quality of life (Ma et al., 2020). Hence, rise in income level is significant to manage the basic needs of rural communities that would help achieve higher quality of life.

In this context, the findings revealed from the study that, China, Malaysia and Russia showed a positive relationship between increasing income levels and poor rural dwellers' quality of life (Thangiah et al., 2020). While, it is proven that income levels have significant association with the expected life spans. People with higher incomes tend to live longer and happier than people with lower incomes (Sum et al., 2019). The empirical evident obtained investigate the relationship between income inequality and mortality and stated that mortality is positively and significantly correlated with any measure of income inequality in the Asian countries (Founou et al., 2017).

Moreover, the body of evidence reflected upon the notion that income inequality has been damaging health and social well-being, specifically in the country where income inequality is rising (Whelan et al., 2019). As a result, many developing countries like Malaysia are facing criticalities in terms of narrowing the gap between high and low income groups. The increase in income inequality is preventing people to access affordable healthcare. This in turn impacting the quality of life, specifically the people living in remote location.

The study conducted by Zagorski et al (2014) has evaluated the impact of the inequality of the income on the European's life quality specifically on the wellbeing in terms of the life satisfaction and the happiness, financial wellbeing in regards to the goods and services availability, living standard satisfaction and the subjective poverty and the health wellbeing. It has been found from the simple bivariate correlation of inequality with the quality of the life in terms of the financial,

health and overall wellbeing is negative. However, the result might be misleading due to differentiating effect of the main variable omitted that is the economic development. Societies and economies that are unequal tends to be poorer on average and hence due to this they are among the disadvantaged nations. The research has used the survey that is conducted of the multi-level quality of life of European in 2003 that involves data at the national level on the inequality and the development of the economy. It tends to also involve the data from the individual level for the overall quality including all aspects of life. The individual cases has been gathered from 28 European countries from the sample. The variance component multilevel models that are controlled for the unknown predictors at the individual level indicates that per capital GDP increases the subjective quality of life. It has been identified from the analysis that national inequality level measured using the Gini coefficient does not have any statistically significant influence that reflects that income inequality would not decline quality of life. It has been indicated from the results that the directing policies and resources to reduction of inequality is unlikely to be benefiting general public in the developed countries.

The research conducted by Schneider (2012) has provided that the income inequality influences on the wellbeing of the individual. However, it has been argued much that whether people that are living in the areas with the higher income disparity tends to be reporting more or less happiness than those that are in the areas with equal income therefore reflects research requirement on how and why income quality matters for the individual wellbeing. This study has evaluated the hypothesis that the preferences for the inequality and the possibility of social mobility perception might account for the indistinct association between the inequality and the subjective well-being drawing social justice theory. The research has aimed to evaluate the mediating nature of the income inequality perceptions. The empirical analysis of the study is on the basis of the data taken from project of international social justice which is developed from interviews conducted face to face with the German population sample. Using the structural equation modelling, the study has found the structural bias in the income inequality perception. The research has concluded that subjective wellbeing is resultant from the product of the individual perception and the legitimating

procedures. The results have indicated that the social cognition is the useful instrument for the studies of the income inequality and subjective wellbeing.

The study conducted by Tran, Nguyen and Vu (2017) has evaluated if the inequality of expenditure has any influence on the quality of life that is happiness and life satisfaction among rural Vietnam. The study has combined the data from 2011 Vietnam National Aging Survey and the 2011 Rural and Agricultural and Fishery Census. The study has confirmed using the regression analysis that the individual that are living in the communes with the higher level of inequality are reported to be less happy even though controlled for different individuals and household characteristics. The findings have been indicated to be robust to choice of inequality measures and the econometric models specification. The research has further also found that the older rural people that are poor or farmers are more sensitive to the inequality. Provided that these people are likely to be less happy than the others, the results indicate the risk that inequality declines the subjective wellbeing of the individual and supports the view that the rural Vietnam is not indicated to be mobile economy.

METHODOLOGY

Data Collection Method

The data of the study has been collected from sources such as World Bank and Numbeo and other authentic sources. The dependent variable of the study is quality of life and the independent variables of the study are inflation, income inequality that is measured through the GINI index, unemployment rate and final consumption in the country. Therefore, secondary quantitative data is collected from the sources and the variables of the study are follows:

Variable	Measurement	Source
Quality of Life	Quality of life is measured through cost of living in the country, affordability of housing, pollution of air,	Numbeo and www.epu.gov.my/ms

	crime rate, health system and traffic.	
Inflation	Inflation is the rate of increase in prices of goods and services	World Bank
Income Equality	This is known as uneven distribution of wealth in the country.	World Bank
Unemployment	This is the number of people that are unemployed in the country as per the total population	World Bank
Final Consumption	This is the total consumption of goods and services in the country.	World Bank

Data Analysis Techniques

The numerical data taken for the study requires to conduct the statistical analysis techniques for which the statistical software STATA has been used for generating results. The study has firstly used the preliminary testing that is unit root testing which is applied on the time series data before conducting the regression analysis that helps in determining if the data is stationary or non-stationary. In the case of the data being non-stationary, it is indicated that the data has random walk drift in which regression technique will not be feasible. The technique used for conducting the unit root test is ADF. The null hypothesis of the ADF test is identified that there is the presence of the unit root test and hence data is indicated to be non-stationary. The mathematical equation for the ADF includes the following;

$$\Delta g_t \;=\; \vartheta_0 \;+\; \vartheta_1 t + \vartheta_2 g_{t-1} \;+\; \sum_{i=1}^{n} ni\,1\,\Delta h_{t-1} +\; \pounds_t$$

In line with the above equation, the component Δ indicates to the difference operator whereas the £t is reflected as the random error of stationary. The g in the equation is referred to be the non-stationary series. As per the regression analysis, the application of the technique is identified to be dependent on the ADF where vector auto regression is conducted in the case when there is no unit root presence indicated; however, when the unit root is identified to be present, then ARDL technique would be preferred. The linear regression equation would be

$$QoL = \alpha + \beta_1 Gini + \beta_2 Unemployment + \beta_3 FC + \beta_4 inflation + \varepsilon$$

However, when the presence of the unit root is identified then the above linear regression equation is not useful and hence the following ARDL equation would be required.

$$\Delta QoL_t \;=\; \beta1 \;+\; \sum_{i=1}^{m1} \alpha_{2j}\,\Delta Gini_{t-i} + \sum_{j=0}^{n2} \alpha_{2j}\,\Delta Unemployment_{t-j} + \sum_{j=0}^{n2} \alpha_{3j}\,\Delta FC_{t-j}$$

$$+ \sum_{j=0}^{n2} \alpha_{4j}\,\Delta inflation_{t-j} + \gamma_1 Gini_{t-1} + \gamma_2 Unemployment_{t-1} + \gamma_2 FC_{t-1} + \mu_t$$

RESULTS AND ANALYSIS

Descriptive Statistics

The table of descriptive statistics indicates that the mean level of inflation on Malaysia is 3.36 and it can deviate or decrease to the value of 2.94 and this indicates that inflation rate in the country can decrease. The mean value for GINI index is 45.38 and it can deviate and decrease to the value of 3.39 and this indicates that income inequality can decrease in the country. The mean unemployment rate in the Malaysia is 3.54 and it can deviate or decrease to the value of 0.323 and this indicates that the unemployment rate in the country can decrease due to proper governance in the country. The mean Quality of life in Malaysia is 96.93 and it can deviate to the value of 14.1

and this indicates the quality of life can decrease in the country depending on the situation. The mean final consumption in the country is 26.2 and it can deviate to the value of 0.88.

Table 1 Descriptive

Variable	Mean	Std. Deviation	Min	Max
Inflation	3.36816	2.946853	-1.1387	17.32898
GINI Index	45.38	3.387858	37.07	50.7
Unemployment	3.40556	.3234018	2.45	4.55
Quality of Life	96.9314	14.19416	51.65	122.11
Final Consumption	26.20154	.866042	24.69685	27.63913

Unit Root Testing

The role of the researcher is to conduct unit root testing on the dataset for evaluating whether the data is stationary or non-stationary. The data that are found to be non-stationary are indicated to have random walk on the trend of data which means that the characteristics of the data is identified by chance. Moreover, the unit root testing also enables in determining the relevant statistical tests pertaining to the regression analysis. In case of data found to have no unit root, then the most feasible statistical technique is the vector autoregressive (VAR). However, if the unit root is found to be mixed where some variables have unit root and some variable do not, then in this case, the ARDL technique is appropriate with the dataset. Table 2 represents the results of the unit root testing that is applied through the augmented Dickey Fuller (ADF) test where it investigates on the variables inflation, income inequality, unemployment, lag of final consumption and quality of life. As per the results of the unit root testing, the only variable that was identified to have no presence of unit root was inflation rate at 5% significance. However, the other variables were found to have the presence of unit root at the first level which required to investigate from the perspective of trend and drift along with transforming at first difference. In respect to the results, the conversion to drift on unemployment has enabled in removing the unit root presence whereas

the data of income inequality, LFC and quality of life required in transforming to first difference in the removal of unit root. Based on the unit root results, the findings had indicated that there was mixed outcome regarding the stationary and non-stationary. In this manner, the regression analysis technique such as OLS and VAR are not suitable. The only technique that can support in the investigation of the variables is through the Autoregressive Distributed Lag (ARDL).

Table 2: Unit Root Testing

	Level	Trend	Drift	Different
Inflation Rate	0.3587*			
Income Inequality	-1.477	-2.011	-0.715	-9.356*
Unemployment	-2.77	-2.496	-3.277*	
Lag of Final Consumption	-0.729	-2.32		-4.594*
Quality of Life	-2.700			-6.394*
* Significance at 5%				

Autoregressive Distributed Lag (ARDL)

In accordance to the results of the unit root, the mixed results regarding the presence of unit root has demonstrated that the ARDL technique is feasible rather than applying OLS regression or VAR. The purpose of ARDL is to investigate the influence of income inequality, inflation rate, unemployment and LFC on the quality of life of Malaysia. The data has been gathered from 1971 till 2020 where the main purpose of utilizing the data is to examine the influence of income inequality on the quality of life in Malaysia. Table 3 represents the results of ARDL where the results are based on 3 aspects which are adjustments (ADJ), short-run (SR) and long-run (LR). Each of the aspects are discussed based on the variables influence. The R-square of the ARDL model is computed as 0.2461 which demonstrates that the variables inflation, income inequality, unemployment and LFC are able to explain or predict the quality of life of Malaysia by 24.61%. Concerning the results of ADJ, it was determined that the lag of quality life (L1) was found to have

significant influence as the p-value was computed as 0.002 and is less than 0.01. Moreover, the coefficient value of lag of quality life is computed as -0.568 which highlights that the lag effect of quality of life is negative. As per the results, it implies that the preceding quality of life negatively influence on the current quality of life by -0.568.

Concerning the results of LR, it was determined that the variables inflation rate, unemployment and log of financial consumption has insignificant influence on the quality of life as the p-value of the variables is above 0.10 (10% significance). On the other hand, the only variable found to have significant influence on quality of life pertaining to long-run is the income inequality. The p-value of income inequality is computed as 0.078 which is below 0.10; thus, this illustrates a significant influence on quality of life. Moreover, the coefficient value is computed as 1.792 which demonstrates that income inequality has positive influence on the quality of life. This implies that the income inequality is causing the quality of life index to increase in Malaysia based on the long run.

Pertaining to the results of short-run, the only variable that is identified to have significant influence is the quality of life. The lag of quality of life is found to have significant influence on the basis of 0.028 p-value which is below 0.05. Moreover, the coefficient value of quality of life is computed as 0.406 which demonstrates that the lag of quality of life has positive effect on the current quality of life. With one unit increase to the lag of quality of life would cause an increase to the current quality of life by 0.406 units in the short run.

Table 3: ARDL

	D. Quality of Life	Coef.	Std. Err.	t	P>|t|
ADJ	Quality of Life				
	L1.	-0.568***	0.170	-3.340	0.002
LR					
	Inflation Rate	-0.626	1.106	-0.570	0.574
	Income Inequality	1.792*	0.990	1.810	0.078
	Unemployment	7.581	8.880	0.850	0.398

LFC	2.734	4.598	0.590	0.555
SR				
Quality of Life				
LD.	0.406**	0.179	2.270	0.028
_cons	-45.081	99.446	-0.450	0.653
R-square	0.2461			
*** Significance at 1%; ** Significance at 5%; * Significance at 10%				

Bounds Tests

Table 4 is the last statistical tests that is related with the ARDL results which is the bounds test. The purpose of this test is to determine as whether there is a long-run effect in the ARDL. On this basis, the p-value is investigated in which the value of p-value is determined to be above 0.05; therefore, this leads to the acceptance of null hypothesis in which there is no significant effect of the long run in the ARDL.

Table 4: Bounds Test

	10%		5%		1%		p-value	
	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
F	2.616	3.782	3.142	4.438	4.363	5.939	0.097	0.308
t	-2.56	-3.668	-2.896	-4.053	-3.573	-4.818	0.018	0.167

CONCLUSION

The findings of the study indicates that the previous quality of life negatively affects the current quality of life in the current lag. Moreover, the results of the study further indicates that quality of life has a significant impact on the income inequality of the country and this is due to the wealthy population being accommodated more and the poor people are getting less resources. Moreover,

it also indicates that the overall distribution of wealth in the country is affected due to certain policies and it has caused the rich to take advantage of the scenario. The results of the study further indicates that quality of life has significant association on the new quality of life in the short run and this has caused income inequality in the country to occur. The rich people are living urban areas and it has caused them to benefit from different choices and freedom and the poor are only able to survive based on tactics and strategies that have been developed. This is a major challenge in the region and has led to the economic gap in the country to increase. Different studies have been analysed in the study and it can be stated that there are challenges in the local community and the poverty rate has increased and has affected the quality of life in the country. Therefore, it is recommended that government should introduce grants and different policies to improve the quality of life and reduce income inequality in the region in an effective manner.

One of the main implications of the study is that is does not contain any mediating and moderating variables and it has caused the scope of the research to be limited. Certain factors were involved in the study as it caused the data collection process of the study to limited. However, it will increase the scope of future studies and enable the different variables to be considered and will cause the study to be carried out in an effective and efficient manner. Another implication is that involving the qualitative aspect in future studies will cause the overall scope of the study to increase and will assist in determining certain factors that will cause the future studies to counter he issues. This study will assist in development of new policies and will help to develop strategies that will cause the quality of life in the country to increase.

REFERENCES

Andrew, J., Ismail, N. W., & Djama, M. (2018). An overview of genetically modified crop governance, issues and challenges in Malaysia. *Journal of the Science of Food and Agriculture*, *98*(1), 12-17.

Brueckner, M., & Lederman, D. (2018). Inequality and economic growth: the role of initial income. *Journal of Economic Growth*, *23*(3), 341-366.

Founou, R. C., Founou, L. L., & Essack, S. Y. (2017). Clinical and economic impact of antibiotic resistance in developing countries: a systematic review and meta-analysis. *PloS one*, *12*(12), e0189621.

Graafland, J., & Lous, B. (2018). Economic freedom, income inequality and life satisfaction in OECD countries. *Journal of Happiness Studies*, *19*(7), 2071-2093.

Liu, X., Li, X., Shi, H., Yan, Y., & Wen, X. (2021). Effect of economic growth on environmental quality: Evidence from tropical countries with different income levels. *Science of The Total Environment*, *774*, 145180.

Ma, L., Liu, S., Fang, F., Che, X., & Chen, M. (2020). Evaluation of urban-rural difference and integration based on quality of life. *Sustainable Cities and Society*, *54*, 101877.

Manduca, R. (2018). Income inequality and the persistence of racial economic disparities. *Sociological Science*, *5*, 182-205.

Pupavac, D., Delibasic, M., Pupavac, J., & Streimikis, J. (2020). Interdependence of quality of life and happiness of the population in Southeast European Countries. *Montenegrin Journal of Economics*, *16*(4), 7-15.

Schneider, S.M., 2012. Income inequality and its consequences for life satisfaction: What role do social cognitions play?. *Social Indicators Research*, *106*(3), pp.419-438.

Shadurskaya, M. M., Prokofyeva, Y. N., & Istomina, N. N. (2019). Influence of the Income Taxation in the Quality of Life of the Population. *population*, *10*, 20.

Solt, F. (2020). Measuring income inequality across countries and over time: The standardized world income inequality database. *Social Science Quarterly*, *101*(3), 1183-1199.

Sum, G., Salisbury, C., Koh, G. C. H., Atun, R., Oldenburg, B., McPake, B., ... & Lee, J. T. (2019). Implications of multimorbidity patterns on health care utilisation and quality of life in middle-income countries: cross-sectional analysis. *Journal of global health*, *9*(2).

Thangiah, G., Said, M. A., Majid, H. A., Reidpath, D., & Su, T. T. (2020). Income Inequality in Quality of Life among Rural Communities in Malaysia: A Case for Immediate Policy Consideration. *International journal of environmental research and public health*, *17*(23), 8731.

Tran, T.Q., Nguyen, C.V. and Van Vu, H., 2018. Does economic inequality affect the quality of life of older people in rural Vietnam?. *Journal of Happiness Studies*, *19*(3), pp.781-799.

Whelan, C. T., Watson, D., & Maître, B. (2019). From Income Poverty to Multidimensional Quality of Life. *The Economic and Social Review*, *50*(4), 683-705.

Yusop, N., Nor, N. H. M., Chin, T. N., Beli, S. R. B., & Jasnie, F. (2020). The Linkages between Household Debt, Household Consumption and Income Inequality in Malaysia. *Global Business and Management Research*, *12*(1), 10-17.

Zagorski, K., Evans, M.D., Kelley, J. and Piotrowska, K., 2014. Does national income inequality affect individuals' quality of life in Europe? Inequality, happiness, finances, and health. *Social Indicators Research*, *117*(3), pp.1089-1110.