

Advances in Social Science, Education and Humanities Research (ASSEHR), volume 126 2nd International Conference on Indonesian Economy and Development (ICIED 2017)

# The Middle Class is Us: Measuring Indonesian Middle Class

Ketut Krisna

Master Program in Population and Labor Economics Faculty of Economics and Business, Universitas Indonesia Depok, Indonesia krisnachandrawisika@yahoo.com

Abstract— This research has two main objectives, which are: (1) to test the appropriateness of existing measurements in identifying class status and (2) to identify Indonesian middle class using a new approach that combines economic and noneconomic measures. The results show that the size of middle class that is calculated using a composite index is smaller than the estimation produced by single-economic-variable measurement. It suggests that middle class can be identified not only by its expenditures but also by other things, such as its accomplishment in housing, education, job, and lifestyle. Majority of Indonesian middle class constitutes of young people and lives in urban area. Most of heads of middle class household are low educated and having informal jobs. The number of Indonesian middle class is predicted to keep expanding mainly driven by the improvement in income, education level, and occupation.

#### Keywords—middle class; composite index; Indonesia

### I. INTRODUCTION

The middle class is a hope. Jim Frederick, columnist of *Time* magazine in 2002 wrote that the future of modern China lies on its burgeoning middle class. Meanwhile Birdsall et al. (2000) considered the middle class as the backbone of both economy and democracy in the era of globalization. Easterly (2001) underlined that country with big proportion of middle class achieves higher level of income and economic growth as well. In his report, he mentioned that a higher share of income for middle class is linked with higher economic growth, better health, less political instability and poverty.

The contribution of middle class to the economy and social changes makes its existence becomes more significant and interesting to explore. By identifying the middle class, its potentials and vulnerability will be observed so that better policies can be drawn to manage this growing and dynamic fraction of the society. It brings to the main question: "Who is exactly the Indonesian middle class?"

Earlier studies on the middle class in Indonesia and other countries underlined that current measurement that focus on the level of household's expenditure as the only determinant of class status is no longer sufficient. In other words, it suggests that the middle class is not merely the middle-income class. It can be said that noneconomic variables should be put into account in any attempts in measuring and identifying the middle class. Turro S. Wongkaren Lembaga Demografi Faculty of Economics and Business, Universitas Indonesia Depok, Indonesia twongkaren@gmail.com

This study aims to test the competence of existing measurement that merely rely on the level of household's expenditure to identify the class status (i.e., the Asian Development Bank/ADB Method) and to propose a new approach that combines economic and noneconomic variables to identify and measure Indonesian middle class. The variables are drawn from existing class theories and the result of both methods will be compared in order to find a better answer for the ultimate question stated earlier above.

# II. LITERATURE REVIEW

### A. The Concept of Class

Karl Marx (in Coser, 1977) classified social class in the society based on the ownership of the means of production. There were Capitalists (those who own and control the means of production) and wage laborers who sell labor-power to capitalists for a wage and then produce the commodities which are sold by the capitalists. Max Weber (in Breen, 2001), on the other hand, classified social class based on the consumption patterns as the result of the ownership of means of production and status group. Weber linked social class to the idea of a status group. Meanwhile Giddens (1984) argued that social class is formed because of the people using their qualifications to achieve a better life, e.g. by pursuing higher education and steady jobs.

# B. Defining and Measuring The Middle Class

This study proposes a composite index as the new approach in identifying Indonesian middle class. The proposed measure is a combination of relative and absolute approaches applied to estimate the middle class; and the rationale is not merely economic but a collection of various socio-economic factors. The Index will be consisted of 5 (five) components drawn from the concept of social class as mentioned above. The 5 (five) components are 1) Housing, where the ownership of a house is the proxy of Marx's ownership of means of production that defines classes; 2) Lifestyle as the approach to Weber's concept of class; 3) Education and 4) Occupation as the approach to Giddens's concept of class; and last 5) Expenditure. Complete explanation of the proposed composite index is explained in next section.



# III. METHODOLOGY

This study uses the Indonesian National Socio-economic Survey (Susenas) conducted in 2012 with the number of sample approximately 75,000 households. In addition, data from Susenas 1995, 2000, 2009, and 2015 will also be used to learn the trend of the sizes and characteristics of Indonesian middle class. The identification of class status will be carried out in household level meanwhile the analysis will be presented in household and members of the household/individual level.

# A. Assessing the Appropriateness of Existing Measurement in Identifying Class Status

Multinomial logistics regression model will be used to assess the appropriateness of using expenditures as the measurement to identify the class status. To do so, the class groups are regressed based on ADB concept against noneconomic variables. The dependent variable (Y) is class status consist of 3 (three) categories. The ADB Method identifies the class status based on expenditure/capita/day in USD Purchasing Power Parity/PPP. Meanwhile the independent variables are Education, Occupation, Housing, and Lifestyle (see Appendix A). To have better understanding, the multinomial logistic model with the equations is composed as follows:

- 1. Logistic function for Y=1 compare to logistic function Y=0
- 2. Logistic function for Y=2 compare to logistic function Y=0

where:

Y = 0, for middle class, reference category

Y = 1, for upper class

Y = 2, for lower class

**a**t. 5

The general equation of the model will be:

$$\begin{split} L_{1} &= ln \left( \frac{p_{1}}{p_{0}} \right) = \beta_{10} + \beta_{11} x_{1} + \beta_{12} x_{2} + \dots + \beta_{1p} x_{p} + \varepsilon \\ L_{2} &= ln \left( \frac{p_{2}}{p_{0}} \right) = \beta_{20} + \beta_{21} x_{1} + \beta_{22} x_{2} + \dots + \beta_{2p} x_{p} + \varepsilon \end{split}$$
(1)

where:

- μ<sub>0</sub> the probability to be middle class
- the probability to be upper class
- <sup>1</sup> the probability to be lower class
- regression coefficient
- independent variables

The assessment of the ADB Method will be done by looking at the significance of the independent variables. If there are statistically differences in the independent variables between high and middle expenditure groups, as well as between low and middle expenditure groups, it confirms the ADB Method that relies on expenditures alone as an adequate measurement to identify class status; otherwise, it will confirm the need in a new approach to identify the class status.

# B. Proposed Index to Identify the Indonesian Middle Class

This study proposes a composite index as the new approach in identifying Indonesian middle class. The Index consists of 5 (five) sub-indices (components); those are Housing, Education, Occupation, Lifestyle, and Expenditure. The rationale of each component and the method used to measure them are as follows:

1) Housing Component

The ownership of a house is an important characteristic of the middle class (Wheary, 2005). Considering most of the house in Indonesia is self-owned, in order to differentiate between the classes, this component is disaggregated into ownership, size of the house, source of water for cooking and drinking, and defecate facility ownership.

Quantification of the component: the house is self-owned = 0,25; size of the floor area  $\geq$  50 meter square = 0,25; using quality water source = 0,25; the defecating facility is self-owned = 0,25; otherwise = 0.

2) Education Component

A significant income gap between high school graduate and college graduate is the reason why high education is a minimum requirement of the middle class (Wheary, 2005). Considering Indonesian school attainment is still at low level, the presence of even one member of the household with high school education (completed or currently in high school) qualifies it to be categorized as middle class.

Quantification of the component: at least one of the member of the household with high school education = 1, no one in the household has high school education = 0.

3) Occupation Component

After income, occupation is considered as the most important factor affecting any individual's or household's class categorization (Durr-e-Nayab, 2011). Occupations are divided into two categories in the index, based on common disaggregation of occupation status: formal and non-formal.

Quantification of the component: if the status of the occupation of the head of the household is formal = 1, otherwise = 0.

4) Lifestyle Component

The middle class is associated with a certain lifestyle associated with expenditure on certain activities or access to certain facilities. This component consists of 8 (eight) activities and/or goods and services, namely: i) Do travel within last 6 months, ii) Access the Internet, iii) Using automotive, iv) Access the Mass Media, v) Make spending for Entertainment, vi) Owning Insurance, vii) Do expenses for Other Services; viii) Access the Banking.

Quantification of the component: each item = 0,125. All the sub-components add to a maximum of 1 and a minimum of 0.

5) Expenditure Component

Instead of using any upper and lower bounds, a household expenditure of 1.6 times of national poverty

line is used to form the component. Being almost twice as much away from poverty line, these households are believed to be facing minimum risk of poverty.

Quantification of the component: household's expenditure (monthly average of the household's expenditure)  $\geq$  (1.6 x national poverty line x number of member of the household) = 1, otherwise = 0.

All these components will be compromised to the composite index and their scores will be added up to give the total scores for the households. The household then will be categorized into 3 (three) classes based on their total scores on the index.

The top 10 percent of the population is considered as the upper class (0.5 points on the composite index. In a maximum total score of 5, the households with total score  $\geq 4.5$  will be categorized as the upper class) and the lowest 40 percent of the population is considered as the lower class (maximum 2 points on the composite index. In a maximum total score of 5, the households with total score between 0 and 2 will be categorized as the lower class). The 40 percent cutting point is the upper bound used by the government to identify poor and nearly poor households. As the consequences, the remaining index score (2—4,5) is where the middle class lies.

## IV. RESULTS AND DISCUSSION

Table 1 shows the summary of multinomial logistics regression model used to assess the competence of Expenditure to estimate the class status. Both models confirmed that all independent variables are significantly associated with the dependent variable at confidence level 99 percent. In other word, Expenditure alone as the measurement to define class status is sensitive to the change of education, occupation, housing, and lifestyle as the result of class changes. The model shows that the probability to be identified as higher class rises when there is at least one member in the household is a high school graduate or currently in high school, and/or the head of the household does a formal job. As well as the more housing characteristics and lifestyle items could be completed, the higher probability of the household to be identified in higher class.

Nevertheless, some inconsistencies occurred when the models were applied to provincial level data. The significance status of the independent variables is different from one province to the others. In several provinces, all independent variables significantly associated with the dependent variable but in some others not. These anomaly shows that the Expenditure alone is inadequate to identify the class status when it comes to provincial data level. This finding brings to the conclusion that a new approach in identifying the class status and estimating the middle class is needed. It also confirms the Weberian class concept that suggested the class in the society can be categorized based on consumption patterns reflected from the level of education, level of expenditure, and social status (Weber 1978 in Breen 2001, p.40—54).

TABLE 1. PARAMETER VALUE AND ODD RATIO OF MULTINOMIAL LOGISTICS REGRESSION MODELS

	Model 1: Upper class		Model 2: Lower class	
Variables/Definition	$\hat{oldsymbol{eta}}_{_{jk}}$	Exp $(\hat{oldsymbol{eta}}_{jk})$	$\hat{oldsymbol{eta}}_{_{jk}}$	Exp $(\hat{oldsymbol{eta}}_{jk})$
(1)	(2)	(3)	(4)	(5)
Housing	0.554	1.741	-0.326	0.722
Occupation	-0.314	0.730	0.481	1.645
Education	-0.835	0.434	0.756	2.203
Lifestyle: Traveling	-0.356	0.701	0.657	1.929
Lifestyle: Access to the Internet	-0.289	0.749	0.203	1.225
Lifestyle: Using Automotive Vehicles	0.712	2.038	1.704	5.497
Lifestyle: Access to the Mass Media	-0.689	0.502	1.807	6.092
Lifestyle: Expenditure for Entertainment	-0.839	0.432	0.436	1.546
Lifestyle: Insurance Ownership	-2.944	0.053	10.553	38300
Lifestyle: Expenditure for Other Services	-1.960	0.141	1.676	5.344
Lifestyle: Access to Banking	-0.908	0.403	2.031	7.622

After finding out that Expenditure alone has inconsistency issue, the proposed index is used to identify the class status. Class structure as calculated by the composite index shows that a large majority of the people in Indonesia falls in the middle class. The proportion of the middle class has been rising in the last 20 years. In 1995, only 2 out of 5 Indonesians were middle class; In 2015 the composition changed significantly. Now 3 out of 5 Indonesians are middle class as can be seen from Fig. 1. In 20 years period of time, the number of Indonesian middle class has increased from around 85.4 million people to be around 155.8 million people in 2015 or grows almost twice as much its size in 1995. At the same time, the number of lower class has declined and the upper class steadily stays below 10 million people (see Fig. 2). The rising number of the middle class is mainly affected by the improvement achieved by the households in education, occupation, housing, lifestyle, and income.



Fig. 1. Trend (in percent) of Class Structure, Indonesia





Fig. 2. Number of People (in million) by Class Structure, Indonesia

Having obtained the numbers, the estimation produced by the composite index and several existing measurements can be compared. It is found that the trend of the number of middle class estimated by the Index is more consistent than the estimations from the other measurements. Fig. 3 shows the comparison between four measurements including the Index.

As seen from Fig. 3, both Ravallion's and ADB's had estimated the declining of the Indonesian middle class since 2009. These numbers must be seen carefully since the reason behind the declining is not because of the decline in welfare level but more because of the technical reason. Ravallion's middle class's expenditure is between the lower bound of 2 USD/capita/day and upper bound of 13 USD/capita/day; meanwhile ADB uses the lower bound of 2 USD/capita/day and upper bound of 20 USD/capita/day. The decline of middle class estimated by these two methods is caused by the incline of number of people who exceed the upper bounds and can not be categorized as the middle class anymore. This finding also confirms that the composite index is a better method in estimating the number of middle class.



Fig. 3. Number of the Indonesian Middle Class (in thousands) Estimated with 4 (Four) Methods

The study found that most of Indonesian middle class lives in urban area and is constituted by productive-aged people. In 2015, 3 out of 5 middle-class Indonesians lived in urban area meanwhile around 64 out of 100 productive-aged Indonesians were identified in middle class households. One consequence of having big proportion in productive-aged people is the dependency ratio in the middle class has dropped below 0,50 since the year of 2000.

The contribution of each component to the status of middle class is showed in Fig. 4. The counting of the composite index shows that Housing is the most dominant component that contributes in the status of Indonesian middle class. In other word, the ownership of a house and its characteristics is the most important aspect to be a middle class in Indonesia. The second most important aspect is Expenditure and the least important aspect is Lifestyle. However, it is believed that the least contribution from Lifestyle is mainly due to the lack of data that could capture the specific lifestyle of the middle class properly. It is suggested that future study or research could develop a more reliable measurement to capture the Lifestyle.



Fig. 4. Contribution of Components to the Index Score of the Middle Class, 2012

# V. CONCLUSION

The Method that relies on Expenditure e.g. The Asian Development Bank/ADB Method as the only measurement to identify the class composition and estimate the middle class is no longer adequate because of some inconsistency issues. Therefore this study proposes a new approach in identifying class composition and measuring the middle class; that is a composite index.

The composite index consists of five components of factors believed to be important of being part of the middle class that are drawn from some concepts related to social class by Marx, Weber, and Giddens. These five components are Housing, Lifestyle, Education, Occupation, and Expenditure.

The Index estimated that middle class in Indonesia reaches around 61 percent of the total population, which approximates to a substantial 155.8 million. This number has increased almost twice as much its size in 1995. The increase number of the Indonesian middle class is mainly affected by the improvement achieved by the households in education, occupation, housing, lifestyle, and income.

Compared to several existing measurements, the trend of the number of Indonesian middle class estimated by the Index are more consistent. Housing is the most dominant component that contributes to the status of Indonesian middle class. The middle class is found to be more of an urban phenomenon with its size being much larger in the urban areas. More than 60 percent of Indonesian middle class in 2015 lived in the urban areas. Indonesian middle class is mainly constituted by productive-aged. In 2015, around 64 out of 100 productive-aged Indonesians were identified in middle class households that lead to lower dependency ratio.

The growth of Indonesian middle class in the last 20 years is the consequences of improvement in multidimensional aspects such as education, occupation, housing, lifestyle, and welfare. Likewise, the multidimensional definition of class proposed in this research has a sense of stability linked to it, making the middle class less susceptible to fluctuations in income or expenditure. The Index however is a useful tool to differentiate the middle class from that of middle-income class. It is concluded that since all the components linked to being a part of the middle class are reflected in their inclusion in the proposed composite index, it shows an increasing trend over time; the size of Indonesian middle class is bound to increase.

#### REFERENCES

- N. Birdsall, C. Graham, and S. Pettianto, "Stuck in the Tunnel:Is Globalization Muddling the Middle Class?" in Center on Social and Economic Dynamics, 2000.
- [2] R. Breen, "A Weberian Approach to Class Analysis," 2001.
- [3] L.A. Coser, "Masters of Sociological Thought: Ideas in Historical and Social Context," in Humboldt Journal of Social Relations, vol. 5 (1), pp. 119—121, 1977.
- [4] Durr-e-Nayab, "Estimating the Middle Class in Pakistan," in The Pakistan Development Review, vol. 50 (1), pp. 1–28, 2011.
- [5] W. Easterly, "The Middle Class Consensus and Economic Development," in Journal of Economic Growth, vol. 6 (4), pp. 317– 335, 2001.
- [6] A. Giddens, "The Constitution of Society", London: Polity Press, 1984.
- [7] J. Wheary, "Measuring the Middle, Accessing What It Takes to be Middle Class," in Demos Working Paper, 2005.