THE IMPACT OF MIDDLE CLASS SPENDING ON ECONOMIC GROWTH AND INDUSTRY IN INDONESIA

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Abstract: This research aims to analyse the impact of middle class spending on economic growth and industry in Indonesia. In order to reach the aim, Table I-O and Keynes consumption model were used. The classification of middle class criteria has used World Bank standard classified the household into three parts. The household with 40% of middle income is called middle class. The simulation of the policy has been conducted by increasing the income of middle class as for 10%, 15% and 20% from the baseline. The result of the simulation shows that the growth of middle class income has less than 1% contribution to the economic growth, so that respond of output change on the change of middle class income is not elastic. The impact of the rise of middle class income on economic sector growth / relative industry is varied. Out of 66 economic sector/ industries, only 15 sectors receive the impact of more than 1%. Three economic sectors receive the biggest impact are tea sector (33,45%), food crops sector (25,63%) and tobacco sector (13,82%).

Keywords: Middle income, economic growth, growth of economic sectors/industries.

INTRODUCTION

"To create prosperous, moderate, precocious and independent Indonesians" is the vision of Indonesia's Economic Establishment Enlargement and Acceleration program (MP3EI). This has been stipulated by Indonesia Law number 17/2007 concerns about National Long Term Development Plan 2005-2025. Through MP3EI's Plans, Indonesia will be a developed nation in 2025 which capital income is targeted atUSD 14.250–USD 15.500 and total GDP reaches USD 4,0 – 4,5 trillion. In order to achieve it, the real economic growth is needed at 8,0%-9,0% within the period of 2015 – 2025. The economic growth shall be accompanied by the decreasing of inflation at the rate of 6,5% within the period of 2011-2014 becoming 3,0% in 2025. The combination and the rate of inflation

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as described earlier mirror the characteristic of developed nation (MP3EI,2011). This hope is in line with the positive trend of Indonesia's economic growth after the economic turmoil in 1998.

The positive economic growth in Indonesia which is very stable at 5% above since 2004 is very much related to the contribution of household expenditure stays dominant above 50% compared with the component of government expenditure, private sector and foreign demand (Figure 1).

Middle class has played a pivotal role in economic thinking for ages. (Kharas, 2010). Middle class depicts the ability to live comfortably, to get proper education and health facility, to secure the pension and job security, and to get the extra income to be used for vacation and recreation. Middle class has been seen as the source of entrepreneurship and small enterprises innovation triggers the economy to develop. The values of middle class emphasize on education, hardworking and saving. Hence, middle class is the source of all income needed to develop, the accumulation of physical capital and human capital.

The empirical evidence shows that the growth of middle class has always been related to a better government, economic growth and poverty alleviation (Ncube *et al*, 2011). Middle class has been viewed as the pre-requirement of the stability on nation's social-economic structure (Nayab, 2011). A country possesses an excellent growth will have more middle class (Landes, 1998). One of the ways to reduce the disparity in the society and to accelerate the growth and economic development is apparently through the middle class. Middle class also has been viewed as the backbone of economy market and democracy in order to challenge globalization (Birdsall *et al*l, 2000).
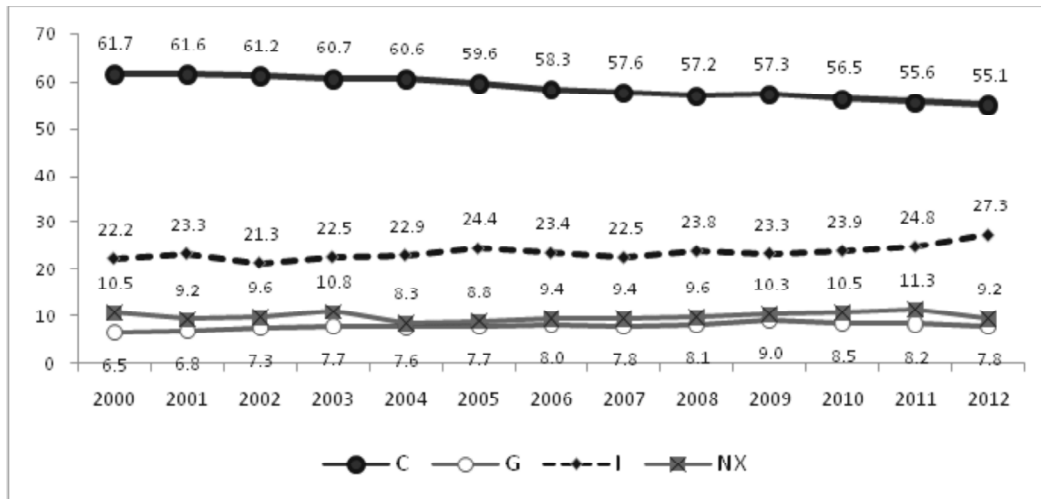
Source: Central Bureau of Statistic (BPS)

Figure 1: Expenditure Component Contribution on GDP Year 2000-2012

Easterly (2001) on his research finds that a country with a big portion of middle class can grow faster, at least in an ethical homogenous situation. Middle class in some countries including China and Africa is the main source of private sector growth (Ncube *et al*, 2011). The demand from middle class will impact on the increasing of investment, production, income and eventually economic growth (Chun *et al*, 2010). The economic growth, poverty alleviation and equitable distribution of income are some of the few main goals of a nation (Maipita *et al*, 2010; Maipita, 2013; Maipita, 2014).

Three reasons to consider that middle class is very important for economy

1. new entrepreneur emerges from the middle class eventually creates jobs and opportunities to grow for all the people,

2. middle class has values in emphasizing on human capital accumulation and saving,

3. middle class is eager to pay for the quality, so that it will encourage investment in the production with a better quality and competitiveness and apparently accelerate higher production and increase the income for the people (Bannerjee and Duflo, 2007; Nayab, 2011).

Jing (2010) in his research finds that middle class family in China, especially young couples have tried to be stable in the middle class position by moving to the places which living cost is more affordable.

The middle class term can be defined as relative or absolute (Kharas, 2010). Relatively, middle income can be defined as a group which income is at the percentage of 20% and 80% of consumption distribution and between 0,75 to 1,25 times of capital income average (Easterly, 2000; Birdsall *et al*, 2000; Kharas, 2010; Bhalla, 2009; Ncube *et al*, 2011). Other researchers such as Bhalla (2009) and Kharas (2010) use absolute approach to define middle income as the people whose income is more than USD3.900 per year (*purchasing power parity,* PPP). Banerjee, Duflo (2007) and Brulliad (2010) use two measurements to define middle class, those whose daily expenditure is between USD2 to USD4 and between USD6 to USD10 (Ncube *et al*, 2011).

Kharas (2010) in his research uses absolute research to define middle class, those whose daily expenditure is between USD10 and USD100 per person on purchasing power parity. The bottom limit has been chosen based on the average of poverty line in Portugal and Italy, two of developed European countries whose poverty definition is very strict and tight, while the top limit has been chosen based on two times average income of Luxemburg, the most developed nation in Europe. The approach used to define middle class is as follow (Kharas, 2010):

(a) Income approach: *Middle class should be a person with higher and stable income*,

(b) Job approach: *Middle class should be a person holding professional or managerial occupation*,

(c) Education approach: *Middle class should be a person with high education*, and

(d) Consumption approach: *the consumptive behavior and life-style of richer people*.

Hisao (1999), has classified six groups of middle income. They are

(a) *Capitalist Class* (entrepreneur who hires more than 20 employees),

(b) *New Middle Class* (professionals and managers),

(c) *Old Middle Class* (*small owners*),

(d) *Marginal Middle Class* (*routine workers*),

(e) *Working Class* (*blue-collar workers*), and

(f) *Farmers*.

RESEARCH METHOD

Types and Sources of Data

Data used in this research is secondary data consist of GDP from 1993 to 2012, national socio-economic household survey data from 2004 to 2012 for individual and household and Input- Output Table (I-O).

Middle Class Criteria

The middle class in this research has been determined by World Bank (WB), which classifies households into 40% of low income household, 40% of middle income household and 20% high income household. The 40% of middle income class is defined as middle class.

The Model of Analysis

Keynes consumption model is used by estimating the regression on middle class consumption. The result of the regression leads to the coefficient of Marginal Prosperity to consume which describes the consumption behaviour of middle class household.

Moreover, the value of MPC will be added by macro economy indicator data, used as simulation material with Table I-O. The simulation has been conducted by increasing the level of middle class income as 10%, 15% and 20% from the baseline. This way used to see the effect of increasing middle class income on economic growth and the growth of economic sector/ industry. The model used to make the simulation is Table I-O year 2008, so that we can utilize the change of household consumption as exogenous variable to influence total output or GDP. The same way has been done to see the effect of increasing expenditure of middle class on 66 economy sectors/ industry on Table I-O.

Consumption and saving function can be described as simple as (1).

$$C = a + MPCY \tag{1}$$

$$S = -a + (1 - MPC)Y \text{ or } S = -a + MPSY \tag{2}$$

C is the consumption of the people, Y is income and a is the constant which is always positive and not more than zero. If the people consume goods and services (x_1 and x_2) with the increase of the income as y and the price of each goods is p_1 and p_2 which is shown by the level of price index. Hence, the demand of goods and services of middle class shall be described as follow:

Cobb-Douglas *Utility Function*:

$$\max U(x_1, x_2) = Ax_1x_2 \tag{3}$$

Generic budget constraint:

$$p_1x_1 + p_2x_2 = y \tag{4}$$

by using Langrangian, then the *Marshallian Demand Function* can be described as follow:

$$x_2^* = \frac{(1-\alpha)y}{p_2} \; atau \; \ln x_2^* = \ln(1-\alpha)y - \ln p_2$$

$$x_1^* = \frac{\alpha y}{p_1} \; atau \ln x_1^* = \ln \alpha y - \ln p_1 \tag{5}$$

The above model has been used to reveal the demand of every level of goods and services in the economy.

The multiplier output is obtained from Leontief reversed matrix as in the equation (6), while income multiplier is obtained by using the equation (7).

$$X = (I - A)^{-1} F. \tag{6}$$

$(I - A)$ is Leontief Matrix, $(I - A)^{-1}$ is Leontief reversed matrix (*multiplier output*), F is the last exogenous demand and X is the total output determined by inserting various scores of last demand of F. while

$$M_{INC} = \hat{W}\left[I - A\right]^{-1} \tag{7}$$

M_{ICN} is income multiplier, $\hat{W}$ is *NTB's* coefficient diagonal matrix obtained from $\hat{W} = \dfrac{U_j}{X_j}$, and $[I - A]^{-1}$ is Leontief reversed matrix. Based on the basic assumption of $I - O$ model, then the relationship between *NTB* with output is linear as can be shown at the equation (8).

$$M_{NTB} = \hat{V}\left[I - A\right]^{-1} \tag{8}$$

M_{NTB} is the multiplier of *NTB*, $\hat{V}$ is *NTB's* coefficient diagonal matrix obtained from
$$\hat{V} = \frac{V_j}{X_j} \,.$$

Furthermore, the simulation can be conducted by giving certain score to the last demand. The impact of a change in the last demand on the creation of output, income, value added gross and the need of employees can be described in the equation (9) to (12).The impact of last demand changes on the creation of output:

$$\Delta Output = M_{out}\Delta F \tag{9}$$

The impact of last demand changes on income:

$$\Delta INC = M_{INC}\Delta F \tag{10}$$

The impact of last demand changes on the creation of value added gross:

$$\Delta NTB = M_{NTB}\Delta F \tag{11}$$

The impact of last demand changes on the need of employees:

$$\Delta TK = M_{TK}\Delta F \tag{12}$$

In order to measure the disparity of income distribution amongst individuals and households, Gini Index is used (Bellu and Liberati, 2006), as the formula can be described in the equation (13).

$$G = 2\sum_{i=1}^{k}(P_i - Q)(P_i - P_{i-1}) \tag{13}$$

G is Gini index, P_i is the cumulative percentage of total family or individual until *–i* class and *k* is the total of income class.

RESULTS AND DISCUSSIONS

The Profile of Middle Class Income Level

The development of individual expenditure of middle class from 2004 to 2012 is displayed at Table 1. During the time, the level of middle class expenditure average has been growing as much as 14,30% per year. During 9 years of observation, the expenditure level tends to be fluctuant. The lowest growth of expenditure happened in 2008. One of many factors triggers it is world's global crisis.

The biggest and the smallest expenditure average for 10 provinces is being sorted based on 2012, shown at Table 2. As displayed at Table 2, the biggest average expenditure of middle class in 2012 is South Kalimantan, East Nusa Tenggara, West Kalimantan and Lampung While the lowest average expenditure is West Sulawesi followed by Central Sulawesi, East Java, Maluku and Banten. According to Bidani and Ravallion (1993), The average consumption expenditure will have a real impact statistically on Indonesia's Provinces Gini Index.

Table 1
Minimum and Maximum Expenditure and Middle Class Average (Rupiah/Month)

Year	Minimum	(%)	Maximum	(%)	Average	(%)
2004	154,141.60		283,422.50		205,578.30	
2005	176,378.70	14.43	359,863.30	26.97	246,641.30	19.97
2006	211,216.00	19.75	409,832.20	13.89	288,479.30	16.96
2007	240,541.80	13.88	498,036.10	21.52	341,963.80	18.54
2008	258,702.10	7.55	523,342.30	5.08	363,307.30	6.24
2009	289,575.90	11.93	578,638.10	10.57	402,222.30	10.71
2010	335,091.30	15.72	712,412.50	23.12	486,369.60	20.92
2011	377,176.90	12.56	837,414.30	17.55	557,308.90	14.59
2012	404,383.70	7.21	890,959.60	6.39	593,319.50	6.46
Average	271,912.00	12.88	565,991.21	15.64	387,243.37	14.30

Source: National Socio-Economic Household Survey, data processed.

Table 2
The Average of Middle Class Expenditure in Indonesia's Provinces (the 10 Biggest and Smallest)

| No. Province	Year								
	2004	2005	2006	2007	2008	2009	2010	2011	2012
1. South Kalimantan	516,412	701,777	729,371	801,743	891,725	977,068	1,078,447	1,358,748	1,574,390
2. Central Kalimantan	–	565,366	644,777	707,913	797,369	883,343	982,746	1,210,714	1,373,570
3. East Nusa Tenggara	464,288	459,501	517,896	533,066	651,204	703,816	737,618	993,773	1,097,038
4. West Kalimantan	–	414,694	470,770	625,008	689,514	718,840	814,053	1,037,046	981,279
5. Lampung	300,504	333,845	389,443	488,726	525,654	593,131	612,900	823,460	962,306
6. West Nusa Tenggara	274,577	386,133	412,447	501,202	561,117	619,175	703,205	832,916	928,218
7. Bali	263,081	377,625	400,885	493,084	551,518	598,306	692,049	789,349	857,770
8. Gorontalo	311,424	388,721	413,976	403,756	474,747	526,971	625,503	745,485	838,156
9. West Papua	263,181	371,851	364,164	426,397	462,867	529,541	665,145	775,429	836,969
10. Papua	277,692	347,220	396,755	432,668	422,535	474,571	632,744	772,319	820,882
–	–	–	–	–	–	–	–	–	–
24. Aceh	189,182	–	300,370	354,425	395,337	442,377	502,481	569,251	608,029
25. West Java	170,407	212,486	270,630	342,449	384,183	417,694	481,060	569,326	598,461
26. Central Java	172,300	201,049	258,888	301,064	340,831	364,652	467,640	539,222	586,001
27. South Sulawesi	197,615	225,843	260,377	289,303	315,936	349,845	413,409	513,622	580,285
28. Capital Special Territory	174,386	207,062	257,354	324,824	360,316	394,204	460,293	538,975	565,129
29. Banten	163,188	218,716	248,876	320,786	331,491	355,280	423,635	513,627	541,851
30. Maluku	197,179	231,284	266,306	299,709	337,106	374,629	419,749	521,507	537,434
31. East Java	152,189	194,063	233,133	288,153	303,975	317,135	403,452	461,494	497,553
32. Central Sulawesi	181,507	203,341	238,799	272,936	290,693	321,395	391,058	434,338	476,290
33. West Sulawesi	179,132	208,559	244,076	286,314	312,147	348,701	407,658	448,778	461,691

Source: the calculation result of the research; - no data.

The Profile of Middle Class Disparity

The calculation of income distribution disparity in middle class has used Gini Index which eventually combined with the total of Gini Index. Figure 2 shows national gini index for all income level in Indonesia and middle class gini index. Overall, there is a tendency of the increasing gini index (level of income distribution disparity) in Indonesia, either real or nominal have experienced the rising income. Middle class has experienced the same thing as well, even though the tendency of the rise is relatively small compared to national gini index.

Income distribution disparity in middle class is way lower compared to the total disparity, even in 2012, national gini index is three times bigger than middle class gini. The low gini index in middle class indicates that income distribution in middle class is more equal compared to the total of income distribution (national).

The level of middle class disparity in Indonesia's provinces is displayed at Table 3. In total, Bangka Belitung Islands Province has low income distribution disparity compared with other provinces in Indonesia. It can be viewed by its relatively low gini index compared with other provinces. But this is not the case of Special Capital Territory of Jakarta. Jakarta is at the 26th position out of 33 provinces in Indonesia in 2012 and was at 26th position in 2011. In other words, even though the total of income disparity in Jakarta is relatively high, but its middle class is relatively low.
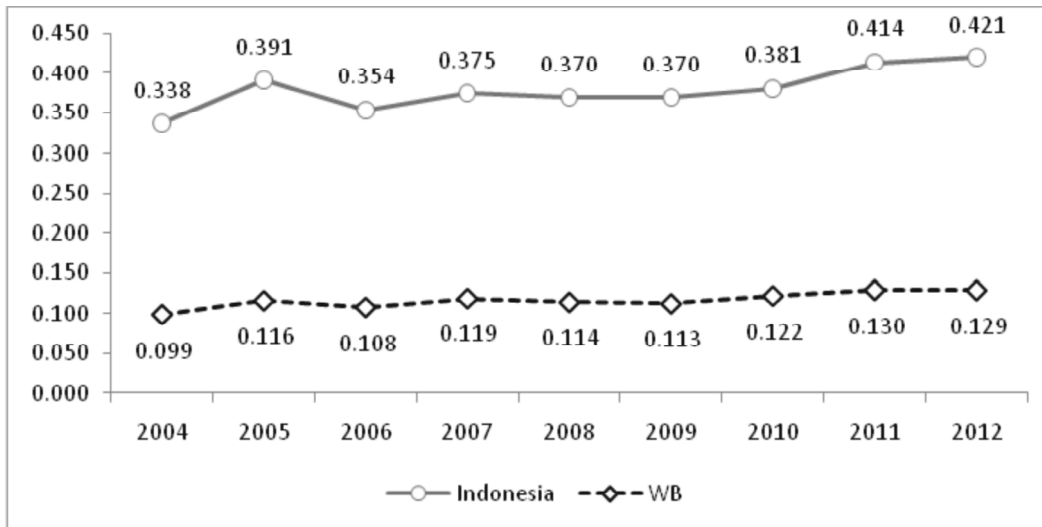
Source: Data of national socio-economic household survey, processed

**Figure 2: Indonesia's Gini Index and Middle Class**

In 2012, the highest income distribution disparity comes from Riau province. If we look meticulously, the income distribution disparity in medium class amongst the provinces in Indonesia is relatively low. This can be proven by the difference of Gini Index amongst provinces in Indonesia which is relatively low. For example, the difference of Gini Index between Bangka Belitung province (the lowest gini) and Riau province (the highest gini) is as 0,011.

Figure 3 displays income distribution amongst the group (40% low income, 40% middle income and 20% high income) income distribution in high income class is more unequal compared with the middle income and low income class. Middle income class has a relatively low disparity compared with the high and the low income, even though the difference of disparity between low income class and the middle income class is relatively very small. This is clearly seen at figure 3, where the curve of high income class gini index has exceeded the curves of other 2 gini indexes.

Table 3
Middle Class Gini Index in Indonesia's Provinces (10lowest and highest in 2012)

						Year				
No.	Province	2004	2005	2006	2007	2008	2009	2010	2011	2012
1.	Bangka and Belitung	0.095	0.110	0.103	0.113	0.110	0.098	0.116	0.131	0.122
2	Special Capital Territory Jakarta	0.082	0.097	0.091	0.100	0.099	0.094	0.107	0.116	0.123
3	South Sumatera	0.097	0.113	0.106	0.116	0.117	0.114	0.123	0.130	0.123
4	Bengkulu	0.099	0.116	0.108	0.112	0.114	0.108	0.120	0.131	0.124
5	Gorontalo	0.097	0.112	0.108	0.121	0.116	0.112	0.123	0.130	0.124
6	East Java	0.097	0.115	0.107	0.118	0.113	0.111	0.121	0.127	0.124
7	Special Territory of Jakarta	0.098	0.117	0.111	0.121	0.115	0.115	0.124	0.131	0.125
8	North Maluku	0.097	0.118	0.109	0.113	0.113	0.106	0.124	0.125	0.125
9	Lampung	0.096	0.114	0.106	0.123	0.113	0.099	0.119	0.127	0.125
10	West southeast nusa	0.098	0.114	0.106	0.118	0.113	0.110	0.125	0.126	0.126
	–	–	–	–	–	–	–	–	–	–
24	North Sumatera	0.096	0.115	0.107	0.117	0.110	0.109	0.123	0.129	0.130
25	Maluku	0.101	0.115	0.107	0.119	0.113	0.099	0.122	0.133	0.130
26	West Kalimantan	0.098	0.112	0.107	0.119	0.113	0.112	0.121	0.130	0.130
27	Papua	0.103	0.120	0.110	0.117	0.117	0.113	0.129	0.129	0.131
28	Bali	0.097	0.116	0.106	0.116	0.112	0.108	0.125	0.131	0.131
29	West Java	0.098	0.116	0.108	0.120	0.112	0.112	0.121	0.130	0.131
30	Riau Islands	–	0.112	0.103	0.111	0.110	0.102	0.113	0.113	0.131
31	Banten	0.096	0.116	0.106	0.118	0.116	0.114	0.124	0.131	0.131
32	West Sulawesi	–	–	0.108	0.127	0.109	0.113	0.123	0.129	0.132
33	Riau	0.098	0.113	0.104	0.115	0.112	0.112	0.121	0.128	0.133

Source: The calculation result of the research; - no data
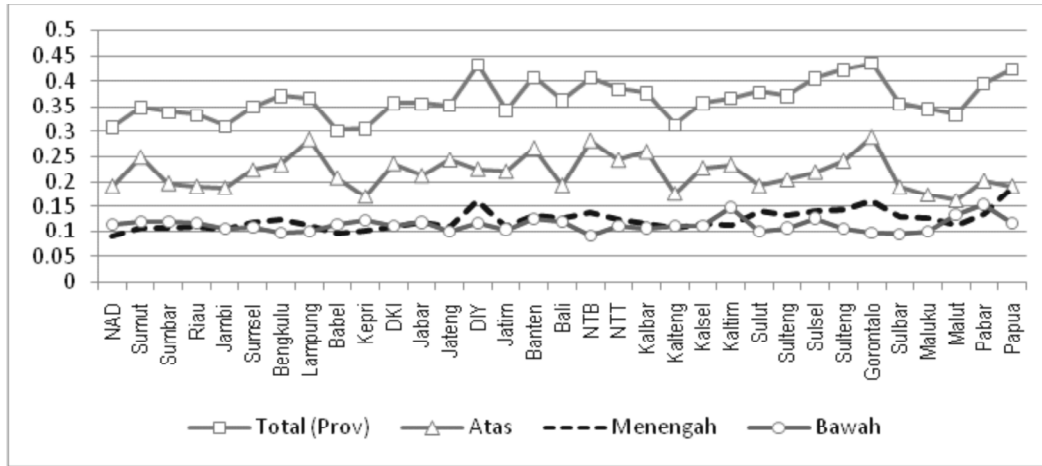
Source: National Socio-Economic Household Survey, data processed

Figure 3: Index gini of high, middle and low in 2010

The Impact of Middle Class on Economy

Consumption Function

Consumption model of Keynes shows that consumption level is apparently influenced by the income from the demand side. Based on the household consumption data and the income of Indonesia's GDP data during the period of 20 years (1993-2012), consumption function was obtained as in the equation (13).

$$\text{Consumption} = -22939.6 + 0.779844 \text{ Income} \qquad (13)$$

Consumption function in the equation (13) has alpha significant level of 1 percent, so that it can be utilized as the foundation to forecast or simulate. In the equation (13) it can be seen that the value of Indonesia's MPC in this research is 0,78 and this is the ratio of people's consumption level on their income. MPC value of 0,78 indicates that if there is an increase in people's income as Rp 100, then Rp 78 or 78% out of 100% will be used for consumption.

Due to the lack of the data, MPC obtained from the equation (13) is not the MPC for middle class, but it is a total MPC. However, this MPC is still can be utilized as a proper proxy to forecast consumption level for all Indonesia's household's income.

Simulation and The Findings

In order to see the impact of the rising income in the middle class on economic growth, the simulation of income change from the process of proxy of middle class household's income has been conducted. The result of the simulation for the three scenarios is displayed at Table 4.

Table 4
The Simulation Result of Increasing Income in the Middle Class

Average of Expenditure (Rp):	
Total of Population	2,449,919.00
Middle class	2,174,802.19
Simulation	*Economic Growth (%)*
I. the increase in income 10 % from*baseline*	0.1382
II. the increase in income 15 % from*baseline*	0.2138
III. the increase in income 20 % from*baseline*	0.2759

Source: Simulation calculation with Table I-O

The simulation result on Table 4 shows the change on expenditure which is apparently the portion of MPC (0,78) on the change of income. In general, the increase in middle class's income, impacts less than 1% on economic growth. One of the reasons why this happens is that economic growth is triggered by many factors. If GDP is the function of consumption, investment, government spending and net export (GDP = $C + I + G + X − M$), then it will be relatively common if the impact of increase in C is relatively small on the increase in GDP. Besides that, consumption (C) calculated in the simulation above is merely a middle class household consumption and not the total consumption of all classes.

Table 4 displays that simulation III contributes bigger impact on economic growth compared with simulation I and simulation II. This indicates as well that the higher people income, the bigger the impact on economic growth. Chun *et al*, (2010) agrees this situation by asserting that the demand of middle class will impact on the increase in income and economic growth.

Furthermore, the simulation has been conducted to overview the impact of the increase in middle class income on the 66 economy sectors/industries which is displayed at Table I-O. This simulation has been conducted by increasing the middle class income as 20%. This criterion is chosen because it has biggest impact on economic growth. The result of this simulation is displayed in detail at Table 5.

When the income of middle class increases, their consumption will increase. The increase in income will impact in economy sectors. When the income increases as 20%, the tea sector is the most impacted one which records as much as 33,45%, followed by food crops sectors (25,63%) and tobacco sector (13,82%).

The interesting fact is that the staple food sector is not impacted much. The rice sector is only benefited as much as 0,25% (37th position), fishery sector 0,36% (30th position) and husbandry sector 1,03% (15th position).

Another interesting fact is the impact on transportation sector. Out of 4 transportation sectors, (land, air water and train transportation), train sector is benefited most, which grows 6,31%, followed by air transportation (0,56%), water transportation

(0,24%) and land transportation (0,22%). In other words, even though air transportation sector has grown rapidly in the last decade, even it has surpassed the land and water transportation sectors, but the 20% increase in income of middle class household has only impacted as 0,5% on the air transportation sector.

Table 5
The Result simulation of the impact of increase in middle class household income as 20% from the Baseline on the growth of economy sectors and industries.

No.	Sector	Growth (%)	No.	Sector	Growth (%)
1.	Tea	33.4475	34.	Vegetables and fruits	0.3299
2.	Food crops	25.6313	35.	Mining	0.3283
3.	Tobacco	13.8216	36.	Communication	0.2662
4.	Unlimited and uncertain activities	10.7908	37	Rice	0.2454
			38.	Rice milling industry	0.2418
5.	Train	6.3064	39.	Other services	0.2390
6.	Bean and Peas	4.2512	40.	Water transportation	0.2367
7.	Sugarcane	3.5977	41.	Land transportation	0.2222
8.	Other forest's product	3.5196	42.	Chemical industry	0.2186
9.	Drink Industry	2.5583	43.	Building and service company	0.2160
10.	Coconut	2.4412	44.	Rubber made and plastic industry	0.1873
11.	Other crops/plants	2.2743	45.	Transportation and improvement industry	0.1866
12.	Sugar industry	2.1717	46.	Paper, paper made and cardboard industry	0.1787
13.	Tuber crops	1.7910	47.	Rubber	0.1762
14.	Fertilizer and pestisides industry	1.1500	48.	Petroleum refining industry	0.1636
			49.	Oil extraction, geothermal and gas industry	0.1613
15.	Husbandry	1.0314	50.	Rattans, woods and bamboo industry	0.1571
16.	Corn	0.8780	51.	Fiber crops	0.1358
17.	Unclassifed food industries	0.7050	52.	Restaurant and Hotel	0.1345
18.	Other crops	0.6633	53.	trade	0.1226
19.	Flour industry	0.5691	54.	Leather, clothes and textile industry	0.1154
20.	Fowls and derivations	0.5677	55.	Palm oil	0.0997
21.	Air Transportation	0.5552	56.	Metal made industry	0.0933
22.	Coffee	0.5550	57.	Spinning industry	0.0922
23.	Butchery	0.5531	58.	Machine, tools and electrical equipments industry	0.0820
24.	Woods	0.5425			
25.	Transport supporting services	0.5321	59.	Oils and fats industry	0.0781
26.	Electricity, gass and clean water	0.5194	60.	Social services	0.0650
			61.	Coal and steal mining industries	0.0586
27.	Other food industry	0.4855	62.	Basic iron and steel industry	0.0527
28.	Clove	0.4703	63.	Cement industry	0.0280
29.	Cigarette Industry	0.3703	64.	Building	0.0220
30.	Fishery	0.3600	65.	Public administration and defence	0.0184
31.	Food processing and preservation industry	0.3449	66	Non iron or basic mineral industry	0.0165
32.	Non metal or mineral goods industry	0.3403			
33.	Financial Instituitions	0.3318			

Source: simulation result I-O

CONCLUSIONS

The result of this research has concluded and recommended some findings as follows:

1. The increase of middle class income in Indonesia has a positive contribution on economic growth. But, in general the contribution of the increase in income as 20% on economic growth is less than 1%. Hence, the respond of output change on the change of income in middle class in inelastic.

2. The increase of middle class income in Indonesia has a positive contribution on economy sectors and industries. 15 sectors out of 66 economy sectors/industries in this research grow more than 1% triggered by the 20% increase on middle class income. Some sectors even grow relatively high, such as tea sector (33,45%), and other food corps sector (25,63%).

3. Food sector hasn't impacted much from the increase in income of middle class. Rice sector only grows 0,25% (37th position), fishery sector records 0,36% growth (30th position) and husbandry sector records 1,03% growth (15th position).

4. Level of consumption, income/expenditure are one of dimensional characteristics of middle class. Other variables such as education, profession, health condition, savings, capital development, investment, democracy and many others are also important features relate to the middle class. Hence, future research requires adding those variables in order to acquire more comprehensive result.

5. Indonesia is experiencing a demographic bonus; hence the result of this research (especially the impact of increase in middle class income on economy sectors/industry) is expected to be the consideration and deliberation in Indonesia's economic development planning.

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Attachment 1
The Average Expenditure Middle Class by Province

		Year								
No.	Province	2004	2005	2006	2007	2008	2009	2010	2011	2012
1.	NAD	189,182	–	300,370	354,425	395,337	442,377	502,481	569,251	608,029
2.	Sumut	191,739	–	330,216	357,086	403,617	446,823	509,180	633,892	688,514
3.	Sumbar	206,804	259,844	293,465	356,876	391,069	430,630	503,870	578,710	630,314
4.	Riau	209,979	258,123	293,718	373,005	420,712	464,755	536,982	604,028	658,547
5.	Jambi	215,317	268,900	302,547	399,185	407,477	467,240	558,920	653,483	700,794
6.	Sumsel	230,211	282,485	316,872	407,134	432,023	485,462	564,774	746,332	780,632
7.	Bengkulu	293,744	311,509	372,257	495,981	497,110	560,085	632,043	768,228	813,781
8.	Lampung	300,504	333,845	389,443	488,726	525,654	593,131	612,900	823,460	962,306
9.	Babel	201,960	248,307	290,586	358,472	387,699	404,778	510,046	591,494	609,422

		Year								
No.	Province	2004	2005	2006	2007	2008	2009	2010	2011	2012
10.	Kep. Riau	201,234	262,281	303,557	373,116	402,374	416,002	507,219	620,797	663,541
11.	DKI	174,386	207,062	257,354	324,824	360,316	394,204	460,293	538,975	565,129
12.	Jabar	170,407	212,486	270,630	342,449	384,183	417,694	481,060	569,326	598,461
13.	Jateng	172,300	201,049	258,888	301,064	340,831	364,652	467,640	539,222	586,001
14.	DIY	192,514	201,681	252,256	302,777	388,373	393,525	503,401	576,066	653,305
15.	Jawa Timur	152,189	194,063	233,133	288,153	303,975	317,135	403,452	461,494	497,553
16.	Banten	163,188	218,716	248,876	320,786	331,491	355,280	423,635	513,627	541,851
17.	Bali	263,081	377,625	400,885	493,084	551,518	598,306	692,049	789,349	857,770
18.	NTB	274,577	386,133	412,447	501,202	561,117	619,175	703,205	832,916	928,218
19.	NTT	464,288	459,501	517,896	533,066	651,204	703,816	737,618	993,773	1,097,038
20.	Kalbar	–	414,694	470,770	625,008	689,514	718,840	814,053	1,037,046	981,279
21.	Kalteng	–	565,366	644,777	707,913	797,369	883,343	982,746	1,210,714	1,373,570
22.	Kalsel	516,412	701,777	729,371	801,743	891,725	977,068	1,078,447	1,358,748	1,574,390
23.	Kaltim	217,279	263,848	313,477	361,902	369,015	406,994	488,311	570,910	624,576
24.	Sulut	233,515	294,478	339,854	372,433	398,342	455,084	499,147	652,552	734,529
25.	Sulteng	181,507	203,341	238,799	272,936	290,693	321,395	391,058	434,338	476,290
26.	Sulsel	197,615	225,843	260,377	289,303	315,936	349,845	413,409	513,622	580,285
27.	Sultra	276,711	345,994	389,705	384,993	400,277	447,441	554,727	649,717	709,654
28.	Gorontalo	311,424	388,721	413,976	403,756	474,747	526,971	625,503	745,485	838,156
29.	Sulbar	179,132	208,559	244,076	286,314	312,147	348,701	407,658	448,778	461,691
30.	Maluku	197,179	231,284	266,306	299,709	337,106	374,629	419,749	521,507	537,434
31.	Malut	249,266	314,521	354,354	422,713	428,434	474,114	598,288	685,385	719,860
32.	Pabar	263,181	371,851	364,164	426,397	462,867	529,541	665,145	775,429	836,969
33.	Papua	277,692	347,220	396,755	432,668	422,535	474,571	632,744	772,319	820,882
	Average	237,694	308,423	347,641	407,854	446,266	489,806	572,174	690,332	748,811

Source: Susenas, Calculation Results; Note: – none

Attachment 2
The Gini index Middle Class by Province

		Year								
No.	Province	2004	2005	2006	2007	2008	2009	2010	2011	2012
1.	NAD	0.0975	–	0.1066	0.1163	0.1174	0.1120	0.1137	0.1300	0.1283
2.	Sumut	0.0964	0.1146	0.1067	0.1165	0.1102	0.1092	0.1230	0.1294	0.1301
3.	Sumbar	0.0981	0.1160	0.1071	0.1170	0.1096	0.1131	0.1208	0.1264	0.1287
4.	Riau	0.0978	0.1128	0.1041	0.1147	0.1116	0.1120	0.1214	0.1278	0.1331
5.	Jambi	0.0975	0.1145	0.1050	0.1140	0.1100	0.1083	0.1235	0.1285	0.1299
6.	Sumsel	0.0972	0.1134	0.1060	0.1159	0.1172	0.1138	0.1229	0.1302	0.1229
7.	Bengkulu	0.0993	0.1156	0.1075	0.1123	0.1144	0.1083	0.1195	0.1310	0.1240
8.	Lampung	0.0957	0.1138	0.1056	0.1225	0.1133	0.0989	0.1190	0.1270	0.1253
9.	Babel	0.0953	0.1103	0.1029	0.1132	0.1104	0.0976	0.1158	0.1309	0.1222
10.	Kep. Riau	–	0.1118	0.1029	0.1113	0.1104	0.1021	0.1129	0.1128	0.1310
11.	DKI	0.0819	0.0965	0.0910	0.0999	0.0991	0.0941	0.1065	0.1161	0.1226
12.	Jabar	0.0980	0.1159	0.1077	0.1199	0.1121	0.1119	0.1211	0.1300	0.1307
13.	Jateng	0.0973	0.1126	0.1046	0.1163	0.1145	0.1094	0.1204	0.1280	0.1265
14.	DIY	0.0980	0.1168	0.1112	0.1211	0.1146	0.1146	0.1237	0.1312	0.1249

15.	Jawa Timur	0.0973	0.1149	0.1065	0.1178	0.1132	0.1113	0.1212	0.1267	0.1242
16.	Banten	0.0961	0.1164	0.1063	0.1178	0.1158	0.1141	0.1241	0.1311	0.1311
17.	Bali	0.0969	0.1158	0.1057	0.1162	0.1124	0.1081	0.1254	0.1314	0.1306
18.	NTB	0.0981	0.1144	0.1056	0.1181	0.1129	0.1101	0.1251	0.1256	0.1262
19.	NTT	0.0981	0.1121	0.1063	0.1185	0.1158	0.1115	0.1196	0.1303	0.1264
20.	Kalbar	0.0977	0.1123	0.1066	0.1194	0.1132	0.1121	0.1205	0.1295	0.1304
21.	Kalteng	0.0994	0.1134	0.1047	0.1197	0.1136	0.1129	0.1258	0.1305	0.1273
22.	Kalsel	0.0997	0.1145	0.1078	0.1184	0.1127	0.1126	0.1224	0.1318	0.1274
23.	Kaltim	0.0967	0.1120	0.1037	0.1074	0.1074	0.1127	0.1114	0.1233	0.1262
24.	Sulut	0.0979	0.1173	0.1077	0.1165	0.1120	0.1106	0.1249	0.1306	0.1287
25.	Sulteng	0.0992	0.1163	0.1060	0.1181	0.1121	0.1151	0.1247	0.1305	0.1284
26.	Sulsel	0.0980	0.1142	0.1084	0.1174	0.1146	0.1120	0.1204	0.1249	0.1267
27.	Sultra	0.0942	0.1148	0.1071	0.1125	0.1125	0.1151	0.1190	0.1218	0.1266
28.	Gorontalo	0.0974	0.1122	0.1083	0.1206	0.1163	0.1120	0.1227	0.1296	0.1241
29.	Sulbar	–	–	0.1083	0.1271	0.1094	0.1127	0.1233	0.1294	0.1317
30.	Maluku	0.1011	0.1152	0.1074	0.1190	0.1131	0.0990	0.1217	0.1330	0.1303
31.	Malut	0.0974	0.1177	0.1094	0.1131	0.1127	0.1055	0.1240	0.1253	0.1252
32.	Pabar	–	–	0.1051	0.1269	0.1125	0.1116	0.1207	0.1232	0.1296
33.	Papua	0.1031	0.1203	0.1095	0.1172	0.1173	0.1131	0.1292	0.1291	0.1305
	Average	0.0973	0.1139	0.1060	0.1168	0.1126	0.1096	0.1209	0.1278	0.1276

Source: Susenas, Calculation Results; *Note:* – none