The Structure of Society

Nor Azam Abdul-Razak[1*] Roslan Abdul-Hakim[2] Mohd Zaini Abd-Karim[2]

1. School of Economics, Finance & Banking, Universiti Utara Malaysia, 06010 UUM Sintok, Kedah, Malaysia
2. Othman Yeop Abdullah Graduate School of Business, Universiti Utara Malaysia, 06010 UUM Sintok, Kedah, Malaysia

* E-mail of the corresponding author: azam@uum.edu.my

Abstract

This paper attempts to characterize the structure of society by examining the pattern of household expenditure, consumption, and saving of the lower, middle, and upper classes in Malaysia. The analysis is based on the household data taken from the Household Expenditure Survey of Malaysia in 2009/2010. The paper begins by arguing that the existing definitions of middle class fail to capture its essence as perceived by the society. Using a new definition, we find that the middle class constitutes about 60% of all households in the sample. By contrast, the lower class and upper class constitutes, respectively, 33.5% and 6.5% of all households in the sample. When the analysis is extended to cover the period 1998-2010, we find evidence of the shrinking lower class and the swelling middle class, signifying the presence of social mobility. We also find that the expenditure and consumption shares of income are pro-cyclical and the saving share of income is counter-cyclical for all income classes. When consumption is broken down into several sub-categories, we find that the idea of consumption smoothing appears to be most applicable to the upper class.

Keywords: lower class, middle class, upper class, consumption, saving

1. Introduction

One of the most pressing economic issues in Malaysia today is the increase in the cost of living brought about by the rationalization of fuel subsidy and the introduction of goods and services tax (GST). While the former was implemented in July 2010 to curb the swelling fiscal burden borne by the government due to the then rising world oil price (Jala, 2010), the latter was implemented in April 2015 to replace the conventional sales and service tax (SST) with the arguably more progressive GST (Abdul Razak, 2013).

In order to help compensate the public from the rising cost of living, the government has provided unconditional cash assistance known as the *Bantuan Rakyat 1 Malaysia* (BR1M). When it was first launched in 2012, the cash payment of RM500 was made to households who earned less than RM3000 per month (Abdul Razak, 2011). Over the years, however, the amount of cash payment has been increased and the coverage of recipients has been expanded to include households who earned below RM1000 and households who earned between RM3000 and RM4000 per month. In 2016, households who earned between RM1000 and RM3000 were paid RM1000 whereas households who earned between RM3000 and RM4000 were paid RM800 (Abdul Razak, 2015). In 2017, the two groups of households were paid RM1200 and RM900, respectively (Abdul Razak, 2016). While this policy initiative (as well as others such as tax exemptions, higher education loans, cash vouchers, and various subsidies) to help the low-income households is called for, it remains to address the plight of the remaining segment of the population.

In general, a country's population can be divided into three groups: the upper class, the middle class, and the lower class. If we rank households based on their income level, then the upper class is made up of the top 20% of the households (or T20), the middle class the middle 40% of the households (or M40), and the lower class the bottom 40% of the households (or B40). While these traditional definitions capture the essence of the three groups as perceived by the society (i.e. a small upper class and large middle and lower classes) and thus make an intuitive sense, they suffer from the fact that the size of these groups has been prefixed, thereby precluding the study of their evolution over time.

Of these, the central concept is the middle class because other groups can be residually derived once this group has been defined. Perhaps due to the deficiency of the above traditional definition of the middle class, scholars have offered several alternative definitions such as: a) the group of households whose income falls within the ±

25% of the median household income per capita (Birdsall, Graham and Pettinato, 2000); b) the group of households whose daily consumption per capita in 2005 PPP falls between i) $2 and $4, and ii) $6 and $10 (Banerjee and Duflo, 2008); c) the group of households whose daily income per capita in 2005 PPP falls between $2 and $13 (Ravallion, 2010); d) the group of households whose daily income per capita in 2005 PPP falls between $10 and the 95th percentile of income distribution (Birdsall, 2010); and e) the group of households whose income per capita in 2005 PPP falls between $10 and $50 (Birdsall, 2012).

Birdsall et al. (2000) conducted a study for a sample of 30 countries and found that the middle class constitutes between 22% and 42% of the households. Banerjee and Duflo (2008) conducted a study for a sample of 13 developing countries and found that the middle class constitutes between 23% and 40% of the households. Ravallion (2010) conducted a study for many developing countries in the world and found that the middle class constitutes between 26% and 79% of the households. Birdsall (2010) conducted a study for a sample of 18 developing countries and found that the middle class constitutes between 0% and 33% of the households. Finally, Birdsall (2012) conducted a study for a sample of eight Latin American countries and found that the middle class constitutes between 17% and 42% of the households.

A cursory look at these studies reveals that middle class was defined based on either the relative or absolute concept (which is very much like the notion of poverty). While Birdsall et al. (2000) employed the relative concept of the middle class, other studies used the absolute concept of the middle class. While the trend appears to move toward the absolute concept, all of these studies share a common finding: the size of the middle class is relatively small (and even nil in one of the studies). One way to interpret this finding is to argue that there is a thinning of the middle class in the society: households are moving toward either the high- or low-income group, leaving a small group in the middle. Another way to interpret this finding is to argue that a large bulk of the society fails to be captured by the existing definitions, thus begging for a new definition.

In this paper, we opt for the latter's interpretation and propose a new definition based on the shape of income distribution for a sample of households in Malaysia. The rest of this paper is organized as follows. In Section 2, the size of the three income classes is calculated. In Section 3, the pattern of expenditure, consumption, and saving of the three income classes is examined. In Section 4, the evolution and trend of the three income classes are analyzed. In Section 5, concluding remarks are offered.

2. The Size of the Three Income Classes

This paper measures the size of the three income classes based on the household data taken from the Household Expenditure Survey (HES) of Malaysia in 2009/2010, published by the Department of Statistics, Malaysia. To begin with, HES 2009/2010 data set contains the household data for a sample of about 19,000 households. Nonetheless, the data set for only one-third of the households is accessible to the researchers; hence, the available sample size is 6,495 households.

The household data are divided into three major categories: income, expenditure, and demographic characteristics. The income data are divided into seven categories, ranging from wage income, self-employed income, rental income, and so on to other transfer receipts. The expenditure data are divided into 12 major categories, ranging from food and non-alcoholic beverages, alcoholic beverages and tobacco, and so on to miscellaneous goods and services. The demographic data are available at two levels: household and individuals. At the household level, the available data are household size, number of income earners, number of children, number of dependents, and residential type. At the individual level, the available data are age, gender, ethnicity, education level, and occupation type of the head and members of the household.

If we rank these households based on their income level and divide them into a number of income groups in the intervals of RM1000 (i.e. < RM1000; RM1000 – RM1999; RM2000 – RM2999; and so on), we find that the income distribution of Malaysian households is skewed to the left (which is akin to the F- or chi-squared distribution) with the upward-sloping segment of the income distribution is formed by first two groups and the downward-sloping segment by the remaining groups (see Figure 1). Letting the first two groups denote the lower class, the remaining groups denote the middle and upper classes.
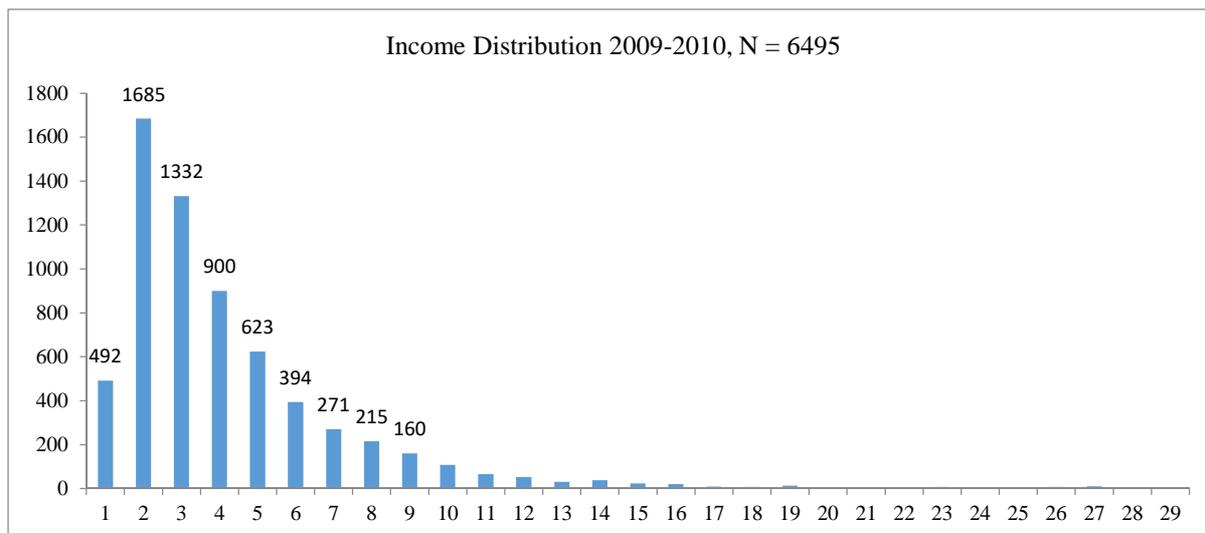
Figure 1: Income Distribution of Households in Malaysia, 2009-2010

In order to separate the middle class from the upper class, let the third group be the reference group for the former. Then, the middle class can be defined as households who are *sufficiently close* to this reference group. For concreteness, let the term *sufficiently close* be defined as the groups that constitute at least 10% of the reference group. Then, the middle class can be defined as the group of households whose income is between RM2000 and $8999 (in this case). Given this definition, we find that the middle class constitutes about 60% of the Malaysian households in 2009-2010 (which captures the bulk of households). By comparison, the lower and upper classes constitute, respectively, 33.5% and 6.5%, of the households (see Table 1). Apparently, the middle class captures the largest share (its size is almost twice that of the lower class) followed by the lower class (its size is about five times that of the upper class) and then the upper class.

Table 1: The size of middle class versus other income classes

	Lower	Middle	Upper
Income Range (RM)	< 2000	2000 - 8999	≥ 9000
Class Size (%)	33.5	60.0	6.5

3. The Pattern of Expenditure, Consumption, and Saving

Once the middle class has been identified and measured, we examine whether the pattern of household expenditure varies across the three income classes. *A priori*, we expect the expenditure share of income is regressive (i.e. in terms of share, the lower class spends more than the middle class who, in turn, spends more than the upper class). Table 2 confirms that this is indeed the case: the expenditure share of income for the middle class is approximately "half-way" of that of the other two classes.

The household expenditure consists of all kinds of spending made by households, including those that are usually regarded as saving or investment such as mortgage payments and expenditures on durable goods, education, health, and insurance. If these expenditures are subtracted, we obtain household consumption. Like expenditure, the consumption share of income is also regressive (much to our expectation) and that of the middle class is about half-way of the other two classes (see Table 2). Given that the household saving is the difference between household income and household consumption, the saving share is progressive (much to our expectation) and that of the middle class is about half-way of the other two classes (see Table 2).

Table 2: The pattern of expenditure, consumption, and saving across income classes

	Lower	Middle	Upper
Expenditure Share (%)	80.15	59.16	43.02
Consumption Share (%)	60.34	42.71	28.01
Saving Share (%)	39.66	57.29	71.99

Since the pattern of household consumption mimics that of household expenditure, it could be argued that the

former plays a significant role in driving the variations in the latter across income classes. Thus, it is imperative that the sources of consumption components be investigated. Of the 12 major categories of expenditure, two of them do not fall under consumption: health and education expenses; thus, they need to be removed. Within the remaining 10 categories of expenditure, some sub-categories do not fall under consumption: the purchase of durables, mortgage payments, and insurance expenses. Excluding these items, we obtain the consumption share of income for the 10 categories of consumption.

Table 3 shows that four of the 10 consumption categories occupy the high rankings for all income classes: Food & Non-alcoholic Beverages (F&B), Housing & Utility (H&U), Transportation, and Restaurants & Hotels (R&H). However, the position of rankings differs across the income classes. For the upper class, F&B ranks the first followed by R&H, Transportation, and H&U. For the middle class, F&B ranks the first followed by Transportation, R&H, and H&U. For the lower class, F&B ranks the first followed by H&U, R&H, and Transportation. It is these components which chiefly drive the variations in household consumption across income classes. Of the three, the striking one is F&B: its consumption share of income varies from as low as 5% (for the upper class) to as high as 24% (for the lower class).

Table 3: The pattern of consumption components across income classes

	Lower	Middle	Upper
Food & Non-alcoholic Beverages	24.33	12.28	5.00
Alcoholic Beverages & Tobacco	1.71	1.22	0.57
Clothing & Shoes	2.90	1.97	1.14
Housing & Utility	9.02	5.36	3.55
Furnishing & Maintenance	1.20	1.12	1.28
Transportation	6.83	7.16	4.73
Communication	2.91	3.12	2.49
Recreation & Culture	1.49	1.96	1.88
Restaurants & Hotels	7.75	6.64	4.86
Miscellaneous Goods & Services	2.20	1.87	2.53

Regardless of their relative rankings, it should be noted that the consumption share of income is regressive for F&B, H&U, and R&H. This implies that these items are becoming relatively less important as individuals become richer. In contrast, the consumption share of income is progressive for Transportation, which implies that this item is becoming relatively more important as individuals become richer.

For completeness, let us examine the share of income for non-consumption components of expenditures. Of the five expenditure categories, two of them occupy the high rankings for all income classes: the purchase of durables and mortgage payments (see Table 4). However, the position of rankings differs between the upper class and other income classes: for the upper class, durables rank the first followed by mortgages; for the middle and lower classes, it is the other way around. It should be noted that the durable share of income is progressive while the mortgage share of income is regressive. Hence, the richer one becomes, the more (less) he spends on durables (mortgages).

Table 4: The pattern of non-consumption components across income classes

	Lower	Middle	Upper
Durable Share (%)	5.47	6.40	6.43
Mortgage Share (%)	12.29	7.59	5.74
Education Share (%)	0.59	0.81	0.90
Health Share (%)	0.91	0.76	0.90
Insurance Share (%)	0.55	0.89	1.03

4. The Evolution of the Three Income Classes

Besides HES 2009/2010, we also have access to HES 1998/1999 and HES 2004/2005, which were also published by the Department of Statistics, Malaysia. Therefore, we are able to examine the evolution of the three income classes during the period 1998-2010, albeit in three discrete data points. Like HES 2009/2010, the data set for only one-third of the households is made available to us in each of the reports; accordingly, the available sample size is 2,761 and 4,225 households, respectively. Overall, the arrangement of the data set in these reports is similar to that in HES 2009/2010. However, there is one slight discrepancy in the expenditure category: there are 12 major categories of expenditure in both HES 2009/2010 and HES 2004/2005 but there are only nine major categories in HES 1998/1999. Therefore, some expenditure items in HES 1998/1999 are appropriately disaggregated in order to minimize the discrepancy.

It should be noted that the period 1998-2010 is initiated by the Asian financial crisis of 1998 (with the per capita real GDP growth rate of -9.70%) and interrupted by two episodes of economic recession: the recession of 2001 (with the per capita real GDP growth rate of -1.72%) and the recession of 2009 (with the per capita real GDP growth rate of -2.4% (Economic Planning Unit, 2015). Apart from these interruptions, this 12-year period can be generally characterized as a relatively rapid episode of economic boom with the annual average per capita real GDP growth rate of 3.93% (Economic Planning Unit, 2015). Given the three discrete data points, the 12-year period can be divided into two sub-periods: 1999-2004 and 2005-2010. Inasmuch as each sub-period is characterized by economic boom (with the respective annual average per capita real GDP growth rates of 3.92% and 3.94% (Economic Planning Unit, 2015), it is interesting to see how the three income classes evolve (if any) during each sub-period of economic boom.

As was the case with HES 2009/2010, the identification of the three income classes should be preceded by the definition of the middle class for HES 1998/1999 and HES 2004/2005. It turns out that the household income is also skewed to the left with the reference group of RM2000 – RM2999 for these earlier reports (see Figures 2 and 3). Hence, using the "sufficiently close" concept of 10% to this reference group, we can define the middle class as the group of households whose income is between RM2000 and $6999 for each data set. Given this definition, we find that the lower class constituted about 54% in 1998-1999 and 47% in 2004-2005, the middle class constituted about 41% of the households in 1998-1999 and 46% in 2004-2005, and the upper class constituted about 5% in 1998-1999 and 7% in 2004-2005 (see Table 5).
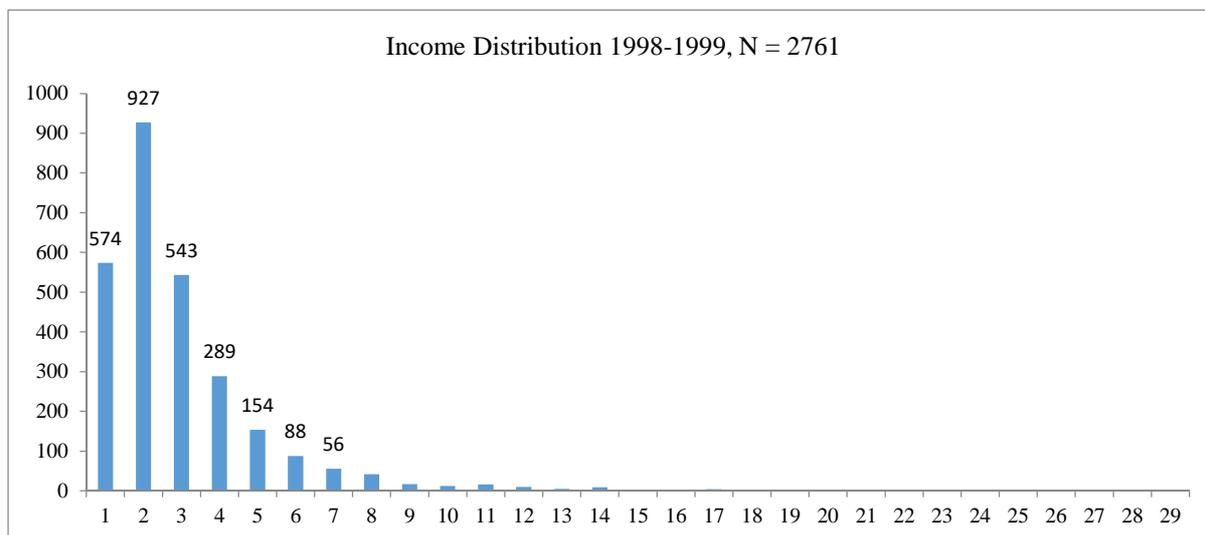
Figure 2: Income Distribution of Households in Malaysia, 1998-1999
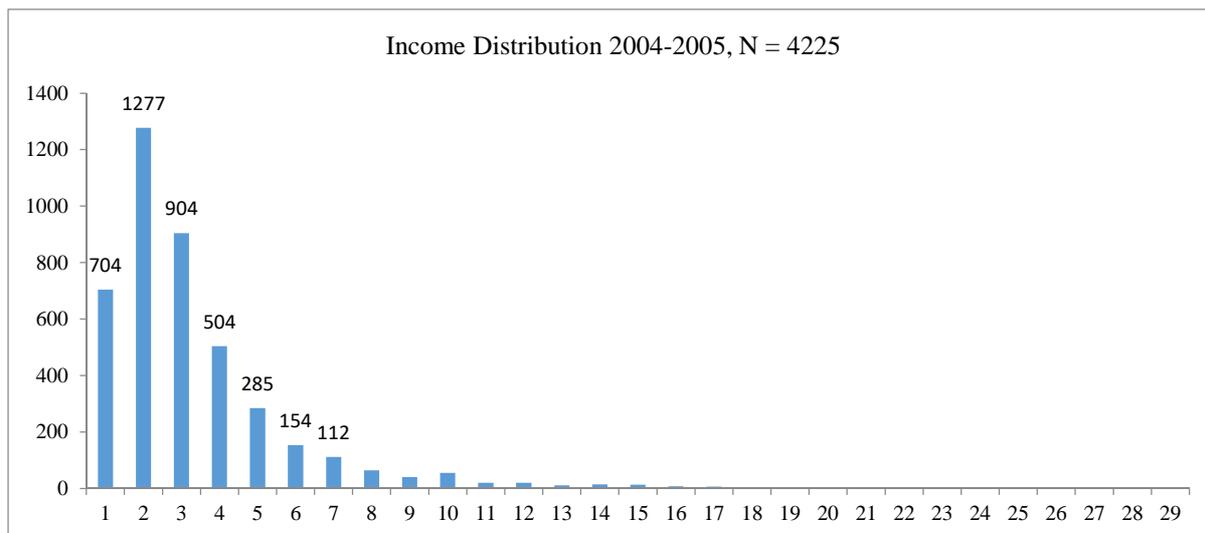
Figure 3: Income Distribution of Households in Malaysia, 2004-2005

Table 5: The evolution of various income classes

	HES 1998/1999	HES 2004/2005	HES 2009/2010
Lower Class (%)	54.4	46.9	33.5
Middle Class (%)	40.9	46.4	60.0
Upper Class (%)	4.7	6.7	6.5

Together with the corresponding figures in 2009-2010, we find that economic boom can be associated with the shrinking lower class and the swelling middle class, each of which occurs at an increasing rate. However, the upper class seems to be immune to economic boom. Hence, there appears to be some social mobility from the lower class to the middle class (but no social mobility from the middle class to the upper class) during the period of economic prosperity.

5. The Trend of Expenditure, Consumption, and Saving

Once the evolution of the three income classes has been identified, we are now in a position to examine the trend of expenditure, consumption, and saving based on three discrete data points over the 12-year period. At this point, it is important to distinguish between, say, the size of the middle class and its expenditure share of income. While the former is a stock variable (which reflects the long term), the latter is a flow variable (which reflects a short term). Therefore, it is appropriate to discuss the former in longer period terms (i.e. 1999-2004 and 2005-2010) and the latter in shorter period terms (i.e. 1998-1999, 2004-2005, and 2009-2010).

With this distinction in mind, we begin by exploring the trend of these variables for the lower class. Panel A of Table 6 shows the following results. First, the expenditure share of income was 62% in 1998-1999; then it increased by about 23 percentage points in 2004-2005 before it dropped by about five percentage points in 2009-2010. Second, the consumption share of income was 42% in 1998-1999, then it increased by about 21 percentage points in 2004-2005 before it fell by about three percentage points in 2009-2010. Third, the saving share of income was 58% in 1998-1999; then it decreased by about 21 percentage points in 2004-2005 before it rose by about three percentage points in 2009-2010. These results indicate that spending and consumption by the lower class are pro-cyclical (they rise during economic expansion and fall during economic slowdown) while saving is counter-cyclical (they fall during economic expansion and rise during economic slowdown).

Table 6: The trend of expenditure, consumption, and saving of various income classes

	HES 1998/1999	HES 2004/2005	HES 2009/2010	Average
Panel A: Lower Class				
Expenditure Share (%)	62.22	85.36	80.15	75.91
Consumption Share (%)	42.07	63.88	60.34	55.43
Saving Share (%)	57.93	36.12	39.66	44.57
Panel B: Middle Class				
Expenditure Share (%)	51.95	66.13	59.16	59.08
Consumption Share (%)	31.39	47.13	42.71	40.41
Saving Share (%)	68.61	52.87	57.29	59.59
Panel C: Upper Class				
Expenditure Share (%)	41.21	46.52	43.02	43.58
Consumption Share (%)	20.11	30.95	28.01	26.36
Saving Share (%)	79.89	69.05	71.99	73.64

Next, we turn to the trend of these variables for the middle class. Panel B of Table 6 shows the following results. First, the expenditure share of income was initially 52%; then it increased by about 14 percentage points in 2004-2005 before it declined by about six percentage points in 2009-2010. Second, the consumption share of income was initially 31%; then it increased by about 16 percentage points in 2004-2005 before it declined by about four percentage points in 2009-2010. Third, the saving share of income was initially 68%; then it decreased by about 16 percentage points in 2004-2005 but it rose by about four percentage points in 2009-2010. Overall, these results are similar to those for the lower class in terms of the direction of change of the variables (i.e. spending and consumption are pro-cyclical while saving is counter-cyclical). However, the two sets of results are different from each other in terms of the magnitude of change (i.e. the magnitude of these variables is invariably smaller for the middle class).

Finally, we explore the trend of these variables for the upper class. Panel C of Table 6 shows the following results. First, the expenditure share of income was initially 41%; then it increased by about five percentage points in 2004-2005 before it fell by about three percentage points in 2009-2010. Second, the consumption share of income was initially 20%; then it increased by about 10 percentage points from in 2004-2005 before it fell by about three percentage points in 2009-2010. Third, the saving share of income was initially 80%; then it decreased by about 10 percentage points in 2004-2005 before it rose by about three percentage points in 2009-2010. Overall, these results are similar to (different from) those for the middle class in terms of the direction (magnitude) of change of the variables.

We now examine the trend of the components of consumption with a particular emphasis on the four major categories: F&B, H&U, R&H, and Transportation. We begin by exploring the trend of these variables for the lower class. Panel A of Table 7 shows the following results. First, the F&B share of income was initially 19%; then it increased by about five percentage points in 2004-2005 before it stabilized in 2009-2010. Second, the H&U share of income was initially 7% and remained stable throughout the period. Third, the R&H share of income was almost 4% initially; then it rose by about five percentage points in 2004-2005 before it stabilized thereafter. Finally, the Transportation share of income was almost 3%; then it increased by about five percentage points in 2004-2005 before it stabilized thereafter. These results indicate that the consumption on F&B, R&H, and Transportation by the lower class appears to be positively related to economic expansion but unrelated to economic slowdown. The consumption on H&U by the lower class seems to be immune to economic fluctuations.

We proceed by exploring the trend of these variables for the middle class. Panel B of Table 7 shows the following results. First, the F&B share of income was initially 11% and remained stable throughout the period. Second, the H&U share of income was almost 5% initially and remained stable throughout the period. Third, the R&H share of income was 4% initially; then it rose by three percentage points in 2004-2005 before it stabilized thereafter. Finally, the Transportation share of income was 3% initially; then it rose by almost five percentage points in 2004-2005 before it stabilized thereafter. These results indicate that the consumption on R&H and

Transportation by the middle class appears to be positively related to economic expansion but unrelated to economic slowdown. The consumption on F&B and H&U by the middle class seems to be immune to economic fluctuations.

Finally, we explore the trend of these variables for the upper class. Panel C of Table 7 shows the following results. First, the F&B share of income was initially 5% and remained stable throughout the period. Second, the H&U share of income was 2% initially and remained stable throughout the period. Third, the R&H share of income was almost 4% initially and remained stable throughout the period. Finally, the Transportation share of income was 2% initially; then it rose by about three percentage points in 2004-2005 before it stabilized thereafter. These results indicate that the consumption of all of these items (except Transportation) by the upper class seems to be immune to economic fluctuations.

It is intriguing to note that these results can be given some economic interpretations in terms of the idea of consumption smoothing (Attanasio and Weber, 2010). First, it seems that the idea is most likely to be applicable to the upper class and least to the lower class. This is hardly surprising since the higher-income households are more capable of adjusting their saving in order to smooth their consumption. Second, it seems that the idea is most likely to be applicable to H&U and F&B and least to Transportation and R&H. This is also hardly surprising because H&U and F&B are more likely to be necessities compared to Transportation and R&H.

Finally, we examine the trend of non-consumption components of expenditure with a particular emphasis on two major categories: durables and mortgages. For the lower class, the durable share of income was 7% initially and remained stable throughout the period while the mortgage share of income was 10% initially and remained stable throughout the period (see panel A of Table 8). For the middle class, the durable share of income was 9% initially and remained stable throughout the period whereas the mortgage share of income was almost 8% initially and remained stable throughout the period (see panel B of Table 8). For the upper class, the durable share of income was 10% initially; then it fell by about three percentage points in 2004-2005 before it stabilized thereafter while the mortgage share of income was 7% initially and remained stable thereafter (see panel C of Table 8). All of these results indicate that the purchase of durables and mortgages seems to be immune to economic fluctuations for all income classes.

5. Conclusion

In this paper, we seek to characterize the structure of society by examining the pattern of household expenditure, consumption, and saving of the three income classes in Malaysia. Our analysis is based on the data set from the Household Expenditure Survey in 2009/2010. We begin by arguing that the existing definitions of middle class fail to capture the essence of middle class as perceived by the society. We then proceed by offering a new definition based on the shape of income distribution. Using this definition, we find that the middle class constitutes a major bulk of households in our sample (60%), followed by the lower class (33.5%) and the upper class (6.5%).

Next, we examine the pattern of expenditure, consumption, and saving of the three income classes. We find that the expenditure and consumption shares of income are regressive (i.e. in terms of share, the lower class consumes more than the middle class which, in turn, consumes more than the upper class) while the saving share of income is progressive (i.e. in terms of share, the upper class saves more than the middle which, in turn, saves more than the lower class). When consumption is broken down into 10 categories, we obtain the following results. First, four categories occupy the high rankings for all income classes: food and non-alcoholic beverages, housing and utility, restaurants and hotels, and transportation. Second, the relative rankings of these four categories differ among income classes. Third, the consumption share of income is regressive for food and non-alcoholic beverages, housing and utility, and restaurants and hotels.

Table 7: The trend of consumption components of various income classes

	HES 1998/1999	HES 2004/2005	HES 2009/2010	Average
Panel A: Lower Class				
Food & Non-alcoholic Beverages	19.18	24.13	24.33	22.55
Alcoholic Beverages & Tobacco	0.56	2.01	1.71	1.43
Clothing & Shoes	3.38	3.23	2.90	3.17
Housing & Utility	7.25	9.14	9.02	8.47
Furnishing & Maintenance	1.20	1.19	1.20	1.20
Transportation	2.76	7.61	6.83	5.74
Communication	2.15	3.05	2.91	2.70
Recreation & Culture	1.08	1.33	1.49	1.30
Restaurants & Hotels	3.94	9.57	7.75	7.09
Miscellaneous G&S	0.57	2.61	2.20	1.79
Panel B: Middle Class				
Food & Non-alcoholic Beverages	11.16	13.22	12.28	12.22
Alcoholic Beverages & Tobacco	0.29	1.26	1.22	0.92
Clothing & Shoes	2.24	2.29	1.97	2.17
Housing & Utility	4.86	5.99	5.36	5.41
Furnishing & Maintenance	1.35	1.25	1.12	1.24
Transportation	3.00	7.96	7.16	6.04
Communication	2.37	3.32	3.12	2.94
Recreation & Culture	1.17	2.13	1.96	1.75
Restaurants & Hotels	4.10	7.69	6.64	6.14
Miscellaneous G&S	0.85	2.02	1.87	1.58
Panel C: Upper Class				
Food & Non-alcoholic Beverages	5.10	5.90	5.00	5.33
Alcoholic Beverages & Tobacco	0.17	0.65	0.57	0.46
Clothing & Shoes	1.07	1.37	1.14	1.19
Housing & Utility	2.06	4.11	3.55	3.24
Furnishing & Maintenance	1.58	1.54	1.28	1.47
Transportation	2.35	5.62	4.73	4.23
Communication	1.83	2.42	2.49	2.25
Recreation & Culture	1.38	2.13	1.88	1.80
Restaurants & Hotels	3.86	4.95	4.86	4.55
Miscellaneous G&S	0.70	2.26	2.53	1.83

Table 8: The trend of non-consumption components of various income classes

	HES 1998/1999	HES 2004/2005	HES 2009/2010	Average
Panel A: Lower Class				
Durable Share (%)	7.33	8.35	5.47	7.05
Mortgage Share (%)	10.24	10.25	12.29	10.93
Education Share (%)	0.92	0.99	0.59	0.83
Health Share (%)	0.92	0.93	0.91	0.92
Insurance Share (%)	0.73	0.96	0.55	0.74
Panel B: Middle Class				
Durable Share (%)	9.27	7.95	6.40	7.87
Mortgage Share (%)	7.89	7.30	7.59	7.59
Education Share (%)	1.10	1.22	0.81	1.04
Health Share (%)	1.19	0.99	0.76	0.98
Insurance Share (%)	1.12	1.55	0.89	1.19
Panel C: Upper Class				
Durable Share (%)	10.10	6.83	6.43	7.79
Mortgage Share (%)	7.68	5.14	5.74	6.19
Education Share (%)	1.42	1.31	0.90	1.21
Health Share (%)	0.95	0.73	0.90	0.86
Insurance Share (%)	0.95	1.56	1.03	1.18

Turning to other expenditures that are usually considered as either saving or investment, we find the following results. First, the purchase of durables and mortgage payments occupies the high rankings for all income classes. Second, the relative rankings of these two categories differ between the upper class and other income classes. Third, the durable share of income is progressive while the mortgage share of income is regressive.

In this paper too, we exploit the availability of the Household Expenditure Survey in 1998/1999 and 2004/2005 in examining the evolution of the three income classes during the period 1998-2010. We find that the size of lower class was 54% initially; then it decreased to almost 47% and 33% in 2004-2005 and 2009-2010, respectively. The size of middle class was almost 41% initially; then it increased to 46% and 60% in 2004-2005 and 2009-2010, respectively. The size of upper class was 5% initially; then it rose to almost 7% in 2004-2005 and stabilized thereafter. Hence, there appears to be some social mobility from the lower class to the middle class (but not from the middle class to the upper class).

Using the three distinct data points, we examine the trend of expenditure, consumption, and saving of the three income classes. We find that the expenditure and consumption shares of income are pro-cyclical and the saving share of income is counter-cyclical for all income classes. However, the strength of pro- and counter-cyclicality differs across the income classes (it is strongest for the lower class and weakest for the upper class).

When consumption is broken down into 10 components, we find that the idea of consumption smoothing seems to be more applicable to certain groups than others. Among the income classes, the idea seems to be most likely applicable to the upper class (and least to the lowest class). Among the four major consumption components, the idea seems to be most likely applicable to housing and utility and food and beverages (and least to Transportation and restaurants and hotels). Finally, it is interesting to note that the idea of consumption smoothing seems to be applicable to the non-consumption components of expenditure too, namely, durable purchase and mortgage payments.

References

Abdul Razak, Najib. 2011. Budget Speech 2012. Ministry of Finance, Malaysia. Retrieved from http://www.treasury.gov.my/pdf/budget/speech/bs12.pdf

Abdul Razak, Najib. 2013. Budget Speech 2014. Ministry of Finance, Malaysia. Retrieved from http://www.treasury.gov.my/pdf/budget/speech/bs14.pdf

Abdul Razak, Najib. 2015. Budget Speech 2016. Ministry of Finance, Malaysia. Retrieved from http://www.treasury.gov.my/pdf/budget/speech/bs16.pdf

Abdul Razak, Najib. 2016. Budget Speech 2017. Ministry of Finance, Malaysia. Retrieved from http://www.treasury.gov.my/pdf/budget/speech/bs17.pdf

Attanasio, Orazio and Guglielmo Weber. 2010. "Consumption and Saving: Models of Intertemporal Allocation and Their Implications for Public Policy." *Journal of Economic Literature*, 48: 693-751.

Banerjee, Abhijit and Esther Duflo. 2008. "What is Middle Class about the Middle Classes around the World?" *Journal of Economic Perspectives* 22(2): 3-28.

Birdsall, Nancy 2010. "The (Indispensable) Middle Class in Developing Countries." Working Paper No. 207, Center for Global Development.

Birdsall, Nancy 2012. "A Note on the Middle Class in Latin America." Working Paper No. 303, Center for Global Development.

Birdsall, Nancy, Graham, Carol and Stefano Pettinato. 2000. "Stuck in the Tunnel: Is Globalization Muddling the Middle Class?" The Brookings Institution Center on Social and Economic Dynamics, Working Paper No. 14.

Economic Planning Unit. 2015. Retrieved from http://www.epu.gov.my/national-accounts;jsessionid=B15D33DDD5D1CF0D4CFE7EB38C3B9273

Jala, Idris (2010). Subsidy Rationalization Lab: Opening Presentation, PEMANDU. Retrieved from http://www.slideshare.net/kzamandarus/malaysian-subsidy-2010-report

Ravallion, Martin. 2010. "The Developing World's Bulging (but Vulnerable) Middle Class." *World Development* 38(4): 445-454.