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Uganda's vision of middle income status: why the growth of the middle class matters?

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UGANDA'S VISION OF MIDDLE INCOME STATUS:
WHY THE GROWTH OF THE MIDDLE CLASS MATTERS?

Madina M. Guloba, Tonny Odokonyero, Marios Obwona and Patrick Olowo

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ABSTRACT

Uganda aspired to become a lower middle income status country by 2020. The study examines why Uganda could or may not achieve this goal. The study uses two most recently available rounds of Uganda National Household Survey (i.e. 2012/13 and 2016/17) to achieve three objectives of; (i) estimating the size, geographical distribution, composition and characteristics of the middle class; (ii) examine patterns and spatial distribution of the middle class; and (iii) identify the factors driving Uganda's middle class. Analysis shows that the middle class population (without those in floating category) more than doubled from about 3.7 million in 2012/13 to about 8.3 million Ugandans (22 percent) in 2016/17. However, if those in floating middle class category are included, this group was about 21 million, indicating that majority of Uganda's middle class (over 13 million) are floating, classified as between the poor class and the lower-middle class. This alludes to Uganda's middle class being of an inferior quality and highly fragile.. Nonetheless, the middle class plays a critical role in the economy – for example in, driving consumer markets; partaking technological application, and promoting the services sector. Key drivers of the middle class in Uganda include urbanization, small household sizes, education , and economic activities including entrepreneurial development.. Policies that reduce vulnerabilities of the floating class to ensure that they are resilient to economic shocks should be promoted. In addition, policy should target growing and sustaining the lower and upper middle classes, as a pathway to sustainably accelerate the attainment of national policy goal of middle income status.

1.   INTRODUCTION

A nation's productive — and moral and intellectual — top is the middle class. It is a broad reservoir of energy, it is a country's motor and lifeblood, which feeds the rest. ….. The upper classes are merely a nation's past; the middle class is its future.
'The Dead End', **The Ayn Rand Letter** 1, 20, 3

Understanding a country's middle class is important given the global consensus on the growth of the middle class and its impacts on better governance, accountability, quality of life of members of the household and decent work rights due to changing behavioural patterns among other aspects (African Development Bank, 2011; Asian Development Bank, 2010). Worldwide, in 2016, about 3.2 billion people in the world were classified as middle class, spending about $35 trillion (in 2011 PPP terms) and accounting for one third of the global economy (Kharas, 2017). The middle class is projected to grow by 140 million annually for the next five years (*ibid*). In 2010, Africa's middle class was a third of the population-about 373 million or 36 percent (African Development Bank, 2011)[1]. According to Ncube (2015), this category is expected to grow to 1.1 billion (42 percent of the population) by 2060.

Evidence elsewhere shows that, the middle class is strongest in countries with a robust and growing private sector—making the middle class crucial not only for growth of democracy but also for economy growth. On the other hand, in order to attain middle income status—countries must be characterised by a sound, sustainable middle class whose aspirations, incomes, wealth, and consumption patterns depict a certain behavioural lifestyle (Lipset, 1969; Asian Development Bank, 2010). Therefore, the middle class population is often associated with better educated individuals and a greater awareness of human rights. Often, it is the main source of the leadership and activism that create and operate many of the non-

governmental organisations (NGOs) that call for greater accountability, better governance, and improved public services. This is good for the creation of a socio-political environment conducive to sustainable future growth and development.

One of Uganda's Vision 2040 aspirations is to transform the country from being a predominantly peasant and low income to a competitive, upper middle income status with a per capita income averaging at $9,500 by 2040 (Vision 2040-GoU). This vision is being implemented through the various National Development Plans (NDPs) in a stepwise format of five years rolling forward. Uganda is in its current NDP II implementation phase. This study examines whether efforts made in the NDPs i.e. toward attaining a lower middle income by 2020 are feasible. To do this, the study provides evidence on the size of Uganda's middle class and tries to put into context on whether this category will drive Uganda towards a lower middle income status by 2020. More specifically, the paper:

- Estimates the size, geographical distribution, composition and characteristics of the middle class and examines these patterns over time;
- Analyses spatial distribution of the middle class ; and
- Identifies the factors driving the middle class.

The strength of the paper lies in the analysis of the various definitions of the middles class and their comparison to the poor and rich classes using a renowned categorisation of the middle class as proposed by the African Development Bank. In addition, it is the first of its kind in Uganda to provide evidence at the national level on estimate of Uganda's middle class and linking it to attainment of the lower middle income status by 2020 as postulated in the NDPII. The paper findings indicate that Uganda's middle class is mainly in the floating category (13 million in 2016/17) and growing, which will not lead us to a sustainable middle income status in both the short and medium

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1   This was based on African Development Bank (AfDB) definition of middle class as those with daily consumption expenditure of $2-$20.

Figure 1   Defining middle class
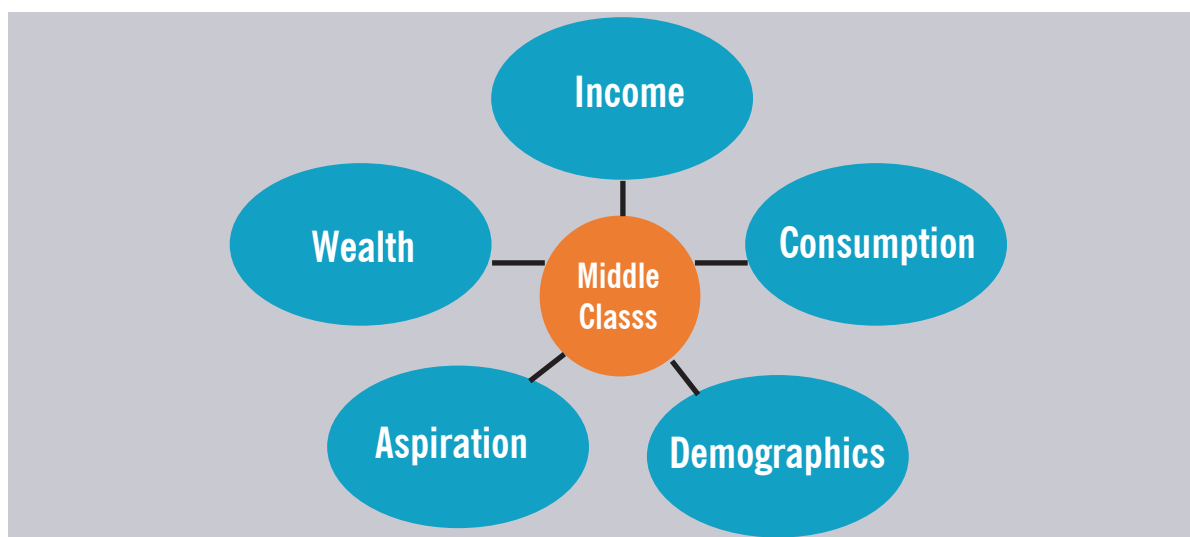
Source: Own classification from various literature

term. Thus, avenues must be put in place that grow the floating class's resilience to ensure that majority graduate to the lower middle class for Uganda to attain the lower middle income aspiration by 2020.

The rest of the paper is organised as follows: section 2 contextualises who the middle class are by definition and their characteristics. Section 3 presents the approaches and data the paper uses; section 4 presents findings and discussion that characterise the middle class together with their spatial distribution in Uganda. Section 5 presents a discussion of the determinants of the middle class while section 6 provides the conclusions and policy implications.

2.   WHO ARE THE MIDDLE CLASS?

The rule of the thumb for the middle class is that these are households able to allocate at least one third of their income left for discretionary spending after paying for basic food and shelter. This allows them to buy consumer goods, improve their health care, and provide for their children's education. In Western cultures, persons in middle class tend to have higher proportion of college degrees, have more income available for consumption and may own property. Furthermore, those in the middle class in Western Countries often are employed as professionals, managers and civil

servants. Therefore, the middle class has capacity to increase domestic consumption; contribute to private sector growth and entrepreneurship; boost demand for better governance and public services; improve gender quality; and raise standards of living, allowing many people to exit from poverty.

Luhby and Baker (2017)[2] note that some experts define the middle class by income others by lifestyle while others say it's a state of mind. However, they also point out that economists and other agencies measure and characterise the middle class in five different ways depending on the source. For example, the middle class has been defined either through: income, wealth, consumption, aspiration or through demographics (Figure 1). In some instance, this largely depends on the reliability of data being used to classify the middle class or better still the economy in question. The various definitions limit its use when classifying the middle class especially when income, wealth or consumption indicators are used in the categorisation.

Sociologists and political scientists usually define the middle class in terms of education (for example, above secondary), occupation (typically white collar), or asset ownership (including the ownership of basic consumer

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2   Luhby and Baker (2017). Who is middle class, anyway? http://money.cnn.com/infographic/economy/what-is-middle-class-anyway/index.html CNNMoney

durables or a house). Economists, by contrast, tend to focus on income levels or consumption expenditure patterns. Rose (2016) defines the lower middle class as having size-adjusted annual incomes between $30,000 and $50,000 and for the middle class to range from $50,000 to $100,000 (Table 1). He finds that the proportion of the population in the upper middle class went from under 13 percent in 1979 to over 29 percent in 2014. The effect of this growth was magnified by the greater income differences between this group and the rest of the population.

Table 1:	Defining five social classes by 2014 incomes	
Class	Lower bound	Upper bound
Poor and near poor	$0	$29,999
Lower middle class	$30,000	$49,999
Middle class	$50,000	$99,999
Upper middle class	$100,000	$349,999
Rich	$350,000	None

Source: Rose (2016)[3]

The middle class can also be defined in relative or absolute terms. In relative terms, the middle class refers to households falling between the 20th and 80th percentile of the consumption distribution (Birdsall, Graham and Pettinato, 2000). Using the absolute definition, the middle class usually refers to individuals with an annual income exceeding $3,900 in Purchasing

3   Rose, J. S. (2016). The Growing Size and Incomes of the Upper Middle Class. Research Report, Urban Institute.

Power Parity (PPP) terms (Bhalla, 2009). Banerjee and Duflo (2008) consider two separate groups (i) those with a daily per capita expenditure between $2and $4 and (ii) those with a daily per capita expenditure between $6 and $10. AfDB (2011) defines this category as one whose per capita daily consumption expenditure is $2-$20 in 2005 PPP US dollars. This paper adopts the AfDB (2011) definition.

Furthermore, based on the AFDB (2011) characterization, the current study divides the middle class into three subcategories to understand which of the subclasses drives the entire middle class (Figure 2). The **floating class** (FC) is classified as being between the poor class and the lower-middle class. Hence, this class is vulnerable and unstable. FC has per capita consumption level of $2-$4 per day. Individuals with this level of consumption are only slightly above the developing world poverty threshold of $2 per day. Such people are at risk of relapsing into poverty in the event of exogenous shock (e.g. rise in food prices or loss of income, natural shocks-drought, floods e.t.c.)

Lower middle class has households/individuals with per capita consumption levels of $4-$10 per day. This class lives above the subsistence level and are able to save and consume non-essential goods. The lower middle class (LC) entails households that are in the economy of substance and hence could consume non-essential goods. The third sub-category, the Upper-middle-class (UC) has households whose characteristics are closer to the rich households. Thus, the **Upper middle class has** per capita consumption

Figure 2	Classification of middle class
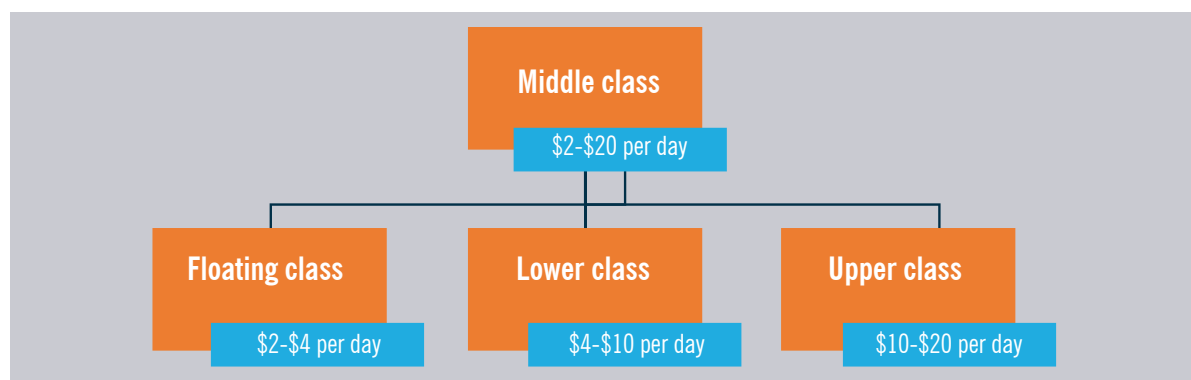
Source: AfDB (2011)

levels of $10-$20 per day.

In addition to the above three sub-categories, this study adopts the AfDB (2011) definition —which considers two additional categorisations i.e. (1) a middle-class without the floating class (MCWFC) and; (2) a middle-class with the floating class (MCWtFC).

Using the consumption or income levels to classify the middle class, other variables such as housing and where it is, how they walk, talk and how they travel, education, employment, aspirations, lifestyles and other physical and financial assets also help to establish who belongs to the middle class (Ncube and Shimeles, 2013; Oduro, Baa-Boateng and Boakye-Yiadom, 2011). Simply put, middle class are more likely to have salaried jobs or to own small businesses, tend not to rely entirely on public health services but seek more expensive medical care when ill, Have smaller families and spend more on the nutrition and schooling of their children and hence middle class are better educated and concentrate in urban areas.

Uganda's middle income status aspiration

Despite sustained GDP growth, changes in per capita income have registered sluggish growth. Figure 3 shows that Uganda's per capita income increased from US$ 734 in 2013/14 to US$ 799 by 2016/17— averaging 2.2% growth per annum. If the above trends are maintained, Uganda is unlikely to meet the target of US$ 1,033 required to achieve a lower middle income status by 2020 as per the NDP II goal and vision

2040 aspiration (Republic of Uganda, 2015). Indeed, this casts doubts on the country's ability to achieve the dream of a lower middle income country by 2020, with just one year left to realize the target. Overall, the slow progress calls for policy actions towards boosting the middle class, such that they can drive the middle income goal. In this regard, analysing the characteristics and/or behaviour of the middle class and their drivers is critical for policy debates on how to achieve both the medium and long term goal of lower and upper middle income statuses.

3. DATA AND METHODS

3.1 Data and source

This paper uses two of the most recently available national household survey datasets gathered by the Uganda Bureau of Statistics (UBOS) - that is the Uganda National Household Survey (UNHS) 2012/13 and 2016/17. The surveys are the latest in a series of datasets and are based on a two-stage stratified random sampling design. In the first stage, Enumeration Areas (EAs) were selected from Uganda's four geographical regions. In the second stage, 10 households were randomly selected from each EA. The 2012/13 UNHS covered 7,500 households which more than doubled in the 2016/17 UNHS which covered about 15,718 households. The two surveys administered similar questionnaires: the household questionnaire, community questionnaire and the agricultural questionnaire. Specifically, collected similar individual and household

| Figure 3 | Trend in per capita income (US$2009/10 prices) |
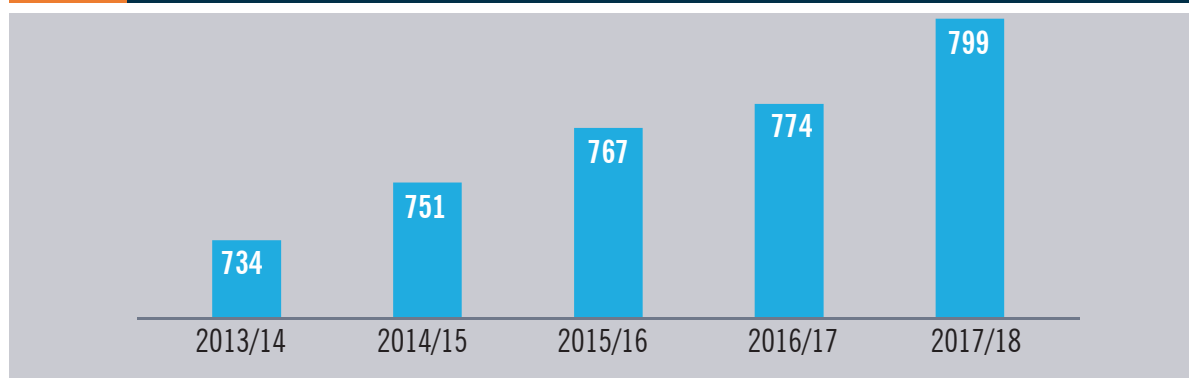
Source: Authors computation using UBOS (2018)

particulars. These surveys primarily provide information on consumption rather than income. The study focuses on consumption as it better captures individual welfare and is less prone to fluctuations caused by negative and positive shocks compared to income in Uganda .The thresholds chosen for daily per capita consumption arise from the analysis of the household survey data and are therefore broadly applicable. Sampling weights are used throughout the analysis to make the estimates nationally representative.

3.2 Probit model specification

Given that our dependent variable is a latent variable and takes on the values of 0 or 1 [i.e. either a person is considered middle class or not depending on the definition], then use of a latent variable model becomes appropriate. This paper therefore utilizes marginal effects analytical framework premised on the probit latent model that takes the following form:

Define a latent variable (z_i) as:

$$z_i = x_i \beta + \varepsilon_i \tag{1}$$

Where x_i is a 1 x K vector of inputs, ε_i is a random error term having a standard normal distribution. The output y_i is linked to the latent variable by the following relationship:

$$y_i = \begin{cases} 1 \\ 0 \end{cases} \text{ if } \begin{array}{l} z_i \geq 0 \\ z_i < 0 \end{array} \tag{2}$$

Where y_i is an output variable that can take only two values, either 1 or 0 (referred to as a Bernoulli random variable). Such that:

$$P\left(y_i = 1 \mid x_i\right) = P\left(z_i \geq 0 \mid x_i\right)$$
$$= P\left(x_i \beta + \varepsilon_i \geq 0 \mid x_i\right)$$
$$= P\left(\varepsilon_i \geq -x_i \beta \mid x_i\right)$$
$$= P\left(\varepsilon_i \leq x_i \beta \mid x_i\right)$$
(by the symmetry of the normal distribution)

$$= F\left(x_i \beta\right) \tag{3}$$

So that the latent variable model specified by (1) and (2) assigns to the inputs the same conditional distributions assigned by the probit model.
Equation (3) is estimated using maximum likelihood.

In doing so, the problem of omitted variables arises due to the omission of some individual characteristics which can cause observations within individuals to be correlated overtime. The omitted variables can bias results of the empirical analysis if not properly solved, implying the usual standard errors may be incorrect. Therefore, the Huber-White estimator is used to correct for individual heterogeneity in standard errors with additional corrections for the effects of clustered data at the household level. In addition, the large sample size ensures that heterogeneity is minimised.

3.3 Spatial Analysis

The analysis makes use of the ArchGIS software to examine spatial distribution of the middle class. Based on the software, the paper draws maps for three different categories of the middle class namely; middle class - with floating; middle class - without floating; and the upper middle class. The disaggregation helps to understand changes in spatial distribution if the definition of the middle class is modified, considering different middle class thresholds. The spatial data analysis involved computation of the population share of the middle class for each district, based on the UNHS (2016/17) data. After the computation, the dataset containing middle class shares was combined with district shape files, and finally, maps were drawn using ArcMap. The colour ramps in the maps show concentration of the middle class at district level based on the population share of the middle class – the darker the colour ramp, the higher the concentration.

4. PROFILING UGANDA'S MIDDLE CLASS

This section presents and discusses results based on the methods discussed in section 3. To provide a better understanding of these different aspects of middle class, the paper first presents a snapshot on the size and growth profile of the middle class (sub-section 4.1.) the different broad characteristics of the middle class classified along three broad themes- lifestyles, geographical location and economic activities- are discussed in sub-section 4.2. The section also presents self-reported perceptions on whether individuals consider themselves poor or not, by middle class category.

4.1 Size, distribution and growth of the middle class

Out of the total population in 2016/17, about 8.3 million Ugandans (almost 22 percent) are in the middle class (without floating) – Table 2. This more than doubled from about 3.7 million in 2012/13, which reflects a rising trend in the country's middle class. The rise in the middle class is an opportunity for increased growth due to market and increased consumption opportunities. When those in the floating class are

considered, then the middle class population rises to 21 million (about 57 percent of the population). The floating class, therefore, constitutes the highest share (61 percent) of the middle class, representing about 13 million people (Table 2). However, the floating class is highly vulnerable or susceptible to any economic shock, and can easily descend into poverty. This makes them to be an unstable sub-group of the middle class that cannot be relied upon for triggering and sustaining economic growth and development. It is those in the middle class, particularly the upper middle class that is a source of firm economic power for the country, and capable of providing a stable ground for sustained growth. Furthermore, our results reveal that more males than females are in the middle class. For example, an overwhelming majority (75 percent) of the middle class without floating comprises men (Table 2). Even the lower and upper middle classes are mainly accounted for by the male population- representing 73 percent and 71 percent respectively. The gender composition of the middle class therefore points to reality in the wider gender related income inequality in the country.

Out of the 8.3 million middle class (without floating) persons, majority (85 percent) are in the lower middle class - the upper middle class represents a small

Table 2	Distribution of Uganda's population by subclass, sex and year							
	Poor	*Middle class*			*Rich*	*Middle class with floating*	*Middle class without floating*	*Total*
Sex	*<$2 person per day*	*Floating $2-<$4 person per day*	*Lower $4-<$10 person per day*	*Upper $10-<$20 person per day*	*>=$20 per person per day*	*$2-<$20 person per day*	*$4-<$20 person per day*	
2012/13								
Female	6,046,080	2,198,480	868,820	85,190	18,730	3,152,488	*954,010*	9,217,300
Male	15,813,510	6,229,720	2,369,06	361,860	46,930	8,960,644	*2,730,920*	24,821,090
Total	21,859,590	8,428,200	3,237,880	447,050	65,665	12,113,130	*3,684,930*	34,038,380
2016/17								
Female	4,108,900	3,586,270	1,717,650	372,000	100,060	5,675,910	2,089,650	9,884,880
Male	11,741,300	9,445,050	5,278,710	894,760	254,040	15,618,520	6,173,470	27,613,900
Total	15,850,200	13,031,300	6,996,360	1,266,750	354,100	21,300,000	8,263,110	37,498,770

Source: Author's computation from UNHS 2012/13 and 2016/17.

| Figure 4 | Growth in middle class: 2012/13 - 2016/17, (%) |
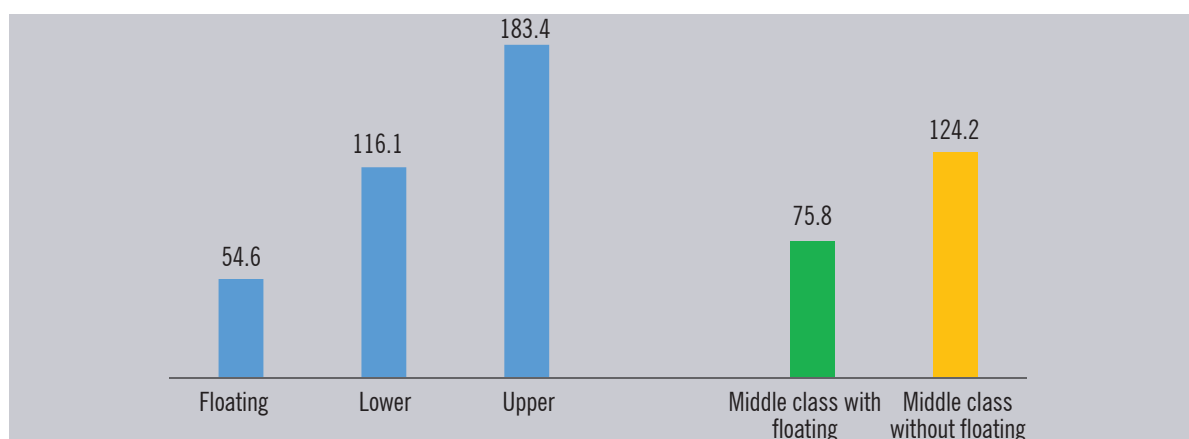
Source: Authors computation from UNHS 2012/13 and 2016/17

share. In terms of growth in the middle class, the upper middle class exhibited the highest growth level, having increased rapidly by 183 percent between 2012/13 and 2016/17, followed by the lower middle class (116 percent) – Figure 4. Those in the floating class increased by 55 percent over the same period (Figure 4). These statistics are corroborated by growth in middle class (without floating) of 124 percent, as compared to 76 percent growth in middle class (with floating). The higher growth in the more stable section of the middle class is a reflection of opportunities for growth of the economy. But this is also a signal that the growth is likely to be skewed to the well-to do, in disfavour of the less well-to do, hence creating possibilities for inequality to be entrenched in the population. In addition, the size of the floating class is too large to drive the country to a sustainable lower middle income as they are susceptible to falling back into poverty. If the poverty line is raised from $1 per day to international standards of $1.9 per day then it's without that that Uganda will only be relying on a narrow shaky segment of the population to attain its aspiration of lower middle income status by 2020 if indeed it is achieved.

Insights in this subsection on size and distribution suggest that the quality of Uganda's middle class is wanting. Simply put, Uganda's middle class is fragile, highly unstable, hence of inferior quality as it is susceptible to being poor if risks and shocks strike and persist. This is due to the fact that the 21 million

middle class, is predominated by the floating and lower middle - close to 95 percent (61 percent floating and 33 percent lower class).

4.2   Middle class characteristics

4.2.1   Lifestyle

Specific lifestyle behaviour of the middle class include their family sizes, headship typologies, feeding patterns, technology usage, education level and health seeking behaviour. Below, these are discussed in detail.

Headship typologies and household size types

Most of the middle class (with and without floating – 66 percent for both) are found in households headed by adults aged 31 – 60 years (Table 3).

By marital status, those in monogamous marriage constitute the largest portion (62 percent) of both the middle class (without floating), and middle class (with floating), compared to those in polygamous marriage, the divorced and never married individuals (Appendix 1). Also, 60 percent of the upper middle class are those in monogamous married, and male household heads dominate the middle class. As Appendix 2 also highlights the middle class sleep in much larger homes and with improved toiled facilities.

Majority (52 percent) of the middle class (without floating) are in relatively smaller households or families

Table 3	Age group of headship by survey period and class status						

	Poor	Middle class			Rich	Middle class with floating	Middle class without floating	Total
Age group (yrs)	<$2 person per day	Floating $2-<$4 person per day	Lower $4-<$10 person per day	Upper $10-<$20 person per day	>=$20 per person per day	$2-<$20 person per day	$4-<$20 person per day	
2012/13								
Children (0-17)	0.2	0.2	0.5	0.1	0.9	0.3	0.5	0.2
Youth (18-30)	18.2	19.9	26.3	26.1	28.9	21.8	26.3	19.5
Adults (31-60)	67.3	64.2	59.3	67.3	61.2	63.0	60.2	65.8
Elderly (61+)	14.2	15.7	13.9	6.5	9.0	14.9	13.0	14.5
2016/17								
Children (0-17)	0.1	0.2	0.2	0.1	0.0	0.2	0.2	0.1
Youth (18-30)	17.6	20.5	21.9	22.0	13.9	21.0	21.9	19.5
Adults (31-60)	69.6	65.4	65.5	69.3	70.8	65.7	66.1	67.4
Elderly(61+)	12.8	13.9	12.4	8.6	15.3	13.1	11.8	13.0

Source: Authors' computation using UNHS 2012/13 − 2016/17

comprised of 1 to 4 people (Table 4). Those in the upper middle class in relatively smaller households are also the majority (64 percent). The distribution is similar over the review period (2012/13 − 2016/17). The proportion of those in lower middle class and floating middle class in smaller households is less than that of upper middle class (50 percent and 35 percent respectively). It is important to note that most (34 percent) of the floating middle class are found in the largest households, which

comprise of seven people or more; and a big fraction (65 percent) are in households comprising of at least 5 people (Table 4). The distribution is also similar over the past 4-5 years (review period). The poor also have a similar distribution by household size, just like the floating middle class.

Among other factors, large household size is a plausible explanation for the floating middle class belonging to

Table 4	Middle class by household size						

	Poor	Middle class			Rich	Middle class with floating	Middle class without floating	Total
Household size (persons)	<$2 person per day	Floating $2-<$4 person per day	Lower $4-<$10 person per day	Upper $10-<$20 person per day	>=$20 per person per day	$2-<$20 person per day	$4-<$20 person per day	
2012/13								
(1-2)	2.4	8.6	24.4	37.7	73.0	13.9	26.0	6.6
(3-4)	15.9	28.3	33.2	40.7	3.2	30.1	34.1	20.9
(5-6)	31.5	28.1	21.7	10.1	23.9	25.7	20.2	29.4
=>7	50.3	35.0	20.7	11.6	0.0	30.3	19.6	43.1
2016/17								
(1-2)	1.9	7.1	19.6	30.3	32.0	12.6	21.3	8.2
(3-4)	18.2	27.7	30.2	33.6	29.1	28.9	30.7	24.4
(5-6)	31.5	31.3	29.0	26.6	12.7	30.2	28.6	30.6
=>7	48.4	34.0	21.2	9.5	26.2	28.3	19.4	36.8

Source: Authors' computation using UNHS 2012/13 − 2016/17

that unstable or vulnerable category of the middle class. This is because larger households aggravate poverty — Meyer and Nishimwe-Niyimbanira (2016) maintain that they are associated with high poverty levels. High dependency ratios in large households may be another factor behind the status of floating middle class. Also, large family sizes have a negative effect on savings and wealth, due to increased burden of additional family members (Kiran and Dhawan, 2015). All these are consistent with the results in Table 2 and Appendix 6 which show that poverty rates increase as household size becomes larger. The results suggest that specific marriage relationships have implications on earnings as well as spending patterns, and bigger family sizes are more likely to keep households in the floating class category.

Feeding patterns among the middle class

Generally, the middle class is associated with consuming more meals in a day — movement from poor to floating, lower and upper sections of middle classes corresponds to consumption of recommended number of meals or more by World Health Organisation (Table 5). This suggests high potential of the middle class to trigger growth in the economy by expanding consumption, including driving the consumer market for businesses. Specifically, results in Table 5 shows that about 67 percent of the middle class without floating take the recommended three meals a day. The middle class with floating who take three meals a day are less than those without floating by 11 percentage points. Three-quarters of the upper middle class take three meals a day, representing the highest proportion of those who take three meals per day compared to the rest. This is followed by the lower middle class (65 percent), and floating middle class (49 percent) — Table 5. Those who take less than three meals in a day among the floating class are more than half (51 percent), and only 32 percent and 19 percent among the lower and upper middle class respectively. These feeding patterns are consistent irrespective of survey period.

Technology usage, health and education seeking behaviour

Technology: Majority of the middle class partakes use of technology such as internet.—Table 6 shows that almost 9 out of 10 in the middle class (with floating) use the internet technology, and of these more than 6 out of 10 are likely to be in the middle class without

Table 5	Number of meals a household consumes							
	Poor	*Middle class*			*Rich*	*Middle class with floating*	*Middle class without floating*	*Total*
Av no. of meals per day	*<$2 person per day*	*Floating $2-<$4 person per day*	*Lower $4-<$10 person per day*	*Upper $10-<$20 person per day*	*>=$20 per person per day*	*$2-<$20 person per day*	*$4-<$20 person per day*	
2012/13								
0	0.1	0.3	0.1	0.4	0.0	0.2	0.1	0.2
1	10.6	4.5	2.2	2.2	0.0	3.8	2.2	8.1
2	64.7	56.3	31.9	33.5	23.9	49.0	32.1	59.0
3	24.4	38.6	62.8	59.5	73.0	45.8	62.4	32.1
4	0.0	0.4	2.7	4.3	3.1	1.1	2.9	0.4
More than 5	0.2	0.0	0.3	0.0	0.0	0.1	0.2	0.1
2016/17								
0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	10.0	3.7	1.5	1.1	1.4	2.8	1.4	5.8
2	64.7	47.2	30.6	17.4	12.6	40.0	28.6	50.2
3	24.9	48.5	65.0	74.8	74.6	55.5	66.5	42.7
4	0.1	0.5	2.7	5.6	9.6	1.5	3.1	1.0
More than 5	0.3	0.1	0.3	1.0	1.8	0.2	0.4	0.2

Source: Authors computation from UNHS 2012/13 and 2016/17.

floating . This partly explains why the quality of the middle class matters in the economy. The results suggest that the middle class is instrumental in supporting application of technological development in the country, which is key for growth and development. The contribution of ICT to GDP in Uganda is at 3 percent (UBOS, 2018). This possibly reflects that government is not fully exploiting opportunities that the ICT sector presents, for maximising output. The results, suggest that government should leverage ICT or digital infrastructure, for example in organizing production since the middle class is highly responsive to technology utilization, in order to boost growth. Simply put, technological packages that drive growth should be created and these should specifically target the various categories of the middle class.

Pertaining *to healthcare access and usage*, the middle class are associated with utilization of health services from higher level public health facilities such as hospitals and private health facilities. In 2016/17, an overwhelming majority of the middle class, represented by 77 percent, 71 percent and 94 percent utilize health services from public hospitals, private hospitals/clinics, and other private medical facilities respectively (Table 6). The results also reveal that the middle class utilize services from private doctors the most (75 percent). Out of those who utilize health services from lower level health facilities such as public health centres and Village Health Teams, majority are the non-middle class section of the population (Table 6).

With regards to *education*, results show that the middle class utilize education services the most, regardless of education facility type. Of those who have access to

Table 6	Internet, health and education seeking behaviour of middle class, 2016/17- %						
	Poor	*Middle class*			*Rich*	*Middle class with floating*	*Middle class without floating*	*Total*
	<$2 person per day	*Floating $2-<$4 person per day*	*Lower $4-<$10 person per day*	*Upper $10-<$20 person per day*	*>=$20 per person per day*	*$2-<$20 person per day*	*$4-<$20 person per day*	
Use the internet	5.0	21.8	46.1	20.6	6.4	88.5	66.7	100
Covered by any health insurance	11.6	23.0	39.0	18.8	7.6	80.8	57.8	100
Health facility access								
Government Hospital	22.2	44.6	28.8	3.5	0.9	76.9	32.3	100
Government Health Centre	50.9	35.5	12.4	0.9	0.2	48.9	13.4	100
Outreach service	57.0	37.8	5.2	0.0	0.0	43.0	5.2	100
Fieldworker/VHT	65.3	34.7	0.0	0.0	0.0	34.7	0.0	100
Other Public Sector	12.4	0.0	87.6	0.0	0.0	87.6	87.6	100
Private Hospital/Clinic	27.2	37.6	28.2	5.4	1.6	71.2	33.6	100
Pharmacy/Drug Shop	51.3	33.8	12.9	1.2	0.9	47.9	14.0	100
Private Doctor	0.9	55.2	18.1	2.1	23.7	75.4	20.2	100
Outreach Service	14.0	86.0	0.0	0.0	0.0	86.0	0.0	100
Other Private Medical Sector	5.6	86.9	7.4	0.0	0.0	94.4	7.4	100
Shop	17.5	24.8	57.8	0.0	0.0	82.5	57.8	100
Traditional Practitioner	35.9	47.8	14.8	1.5	0.0	64.1	16.3	100
Market	49.9	35.5	14.6	0.0	0.0	50.1	14.6	100
Other	20.8	36.5	37.5	5.2	0.0	79.2	42.7	100
Education facility governance type								
Government	6.2	38.7	27.4	24.3	3.4	90.4	51.7	100
Private	3.6	12.6	42.2	31.6	10.0	86.4	73.8	100
Ngo / Religious Organization	0.0	4.4	67.8	27.7	0.0	100.0	95.6	100

Note: VHT-Village Health Team
Source: Author's computation from UNHS 2016/17.

education services from public education facilities, 90 percent are from middle class category. Similarly, 86 percent of those who utilize private education facilities are comprised of the middle class. However, the results reveal that the middle class without floating are predominant in utilization of private education facilities (74 percent). These findings suggest that the middle class are not only important in driving consumption in the country (e.g. consumption of food and non-food items), but are also paramount for supporting human capital development through their efforts to improve education and healthcare.

Education level of household head

Household heads with the highest level of education are likely to be in the upper middle class- for example, at least four in 10 household heads with post-secondary education attainment were in the upper middle class irrespective of survey period (Table 7).

Generally, results in Table 7 further show that the higher

incomes associated with class type are associated with higher education attainment suggesting that better education is capable of substantially growing a steady middle class. Specifically, Table 7 -Panel B, highlights that those who have at least secondary education, completed secondary and post-secondary combined form the majority of the middle class without floating (54.9 percent). Indeed they take the lion share of the upper middle class (69.1 percent – majority of whom post-secondary education level); and a relatively larger fraction of the lower middle class (52.1 percent) compared to those with less than secondary education. This is corroborated by the results which show that majority (66.8 percent) of those in the floating middle class are individuals with less than secondary education (Table 5). Similar insights are observed for 2012/13.

At the micro level, it is clear that education provides a financial return to individual investments. The expansion of education in Africa since independence has done much to lay the foundations for the emergence

| Table 7 | Household head education level by class status, 2012/12 and 2016/17- % |

	Poor	*Middle class*			*Rich*	*Middle class with floating*	*Middle class without floating*	*Total*
	<$2 person per day	*Floating $2- <$4 person per day*	*Lower $4-<$10 person per day*	*Upper $10-<$20 person per day*	*>=$20 per person per day*	*$2-<$20 person per day*	*$4-<$20 person per day*	
Panel A: 2012/13								
No Formal Education	24.0	16.1	7.3	2.8	0.0	13.3	6.8	20.1
Some Primary	50.9	37.6	29.2	20.4	3.8	34.8	28.2	45.1
Completed Primary	8.3	11.3	7.6	5.7	0.0	10.1	7.4	8.9
Some Secondary	11.1	20.4	22.2	20.0	17.4	20.8	21.9	14.6
Completed Secondary	3.0	6.7	11.3	8.5	11.6	8.0	10.9	4.8
Post-Secondary Plus	2.0	7.5	20.9	42.4	67.1	12.3	23.5	5.8
Not Stated	0.7	0.5	1.5	0.2	0.0	0.7	1.3	0.7
Panel B: 2016/17								
No Formal Education	16.9	11.1	6.8	3.3	4.3	9.3	6.3	12.4
Some Primary	51.1	39.1	23.7	12.9	13.6	32.5	22.1	40.2
Completed Primary	13.9	16.6	15.5	9.6	10.2	15.8	14.6	15.0
Some Secondary	11.1	15.5	20.1	17.9	7.5	17.1	19.8	14.5
Completed Secondary	4.3	8.2	11.3	11.0	6.0	9.4	11.2	7.2
Post-Secondary Plus	2.1	8.2	20.7	42.0	55.6	14.3	23.9	9.6
Not Stated	0.6	1.3	2.0	3.2	3.0	1.6	2.2	1.2

Source: Author's computation from UNHS 2012/13 and 2016/17.

of the middle class. The positive correlation between education and individual incomes is one of the most robust findings in social science and in Africa that is no exception. For example, De Vreyer *et al.* (2010) on seven West African countries; Fonkeng and Ntembe (2009) on Cameroon; Kazianga (2004) on Burkina Faso, Siphambe (2000) on Botswana, Soderbom *et al.* (2005) on Kenya and Tanzania, and Uwaifo (2005) on Nigeria; and Appleton *et al.* (2003) on Uganda, Ghana and South Africa.

In terms of changes in education attainment over time, there was an increase in the floating middle class and a decline in the upper middle class among those with below secondary education by 3 and 2 percentage points respectively (Figure 5). For individuals with secondary education and beyond, the floating class dropped by 3 percentage points and the upper middle class increased by 3 percentage points (Figure 5). Simply put, majority heads with education less than secondary level were in floating class (more than 6 in 10) while more than 7 in 10 household heads in the upper class had at least secondary education. These results suggest that education is a potential factor for driving a stable middle class, by causing movement out of the floating category, and augmenting the upper middle class.

Education can increase earnings through two main channels: either by increasing productivity within a current job or by allowing for the acquisition of a better job. Kuepie *et al.* (2006) have studied the returns to education in West African cities and their findings show significant large returns to individuals who work in the public sector and the formal private sector than in the informal sector. Drawing on data from Ghana and Tanzania, Teal (2010) shows that workers in the public sector and in larger private firms have substantially higher levels of education than those in small-scale private firms or in self-employment. A higher level of education gives individuals the opportunity to move between sectors, as qualifications can provide employers with credible signs of higher productivity.

4.2.2 Geographical location

Of the population in urban and rural areas, 78 percent and 50 percent are in the middle class respectively, and both proportions increased between 2012/13 and 2016/17 (Table 8). Particularly, results in Appendix 3 suggest that the rise or concentration of the middle class (especially the upper class) is associated with urbanization. Of those in the upper middle class, majority (66 percent) are in urban areas. Rural areas have most of the floating middle class (76 percent), as well as the lower middle class (56 percent) individuals compared to urban areas. This is expected given the high level of vulnerability and poverty amongst rural population, due to among other reasons, heavy reliance on subsistence and rain-fed agriculture, and relatively

Figure 5   **Changes in floating and upper middle classes by education level (%)**
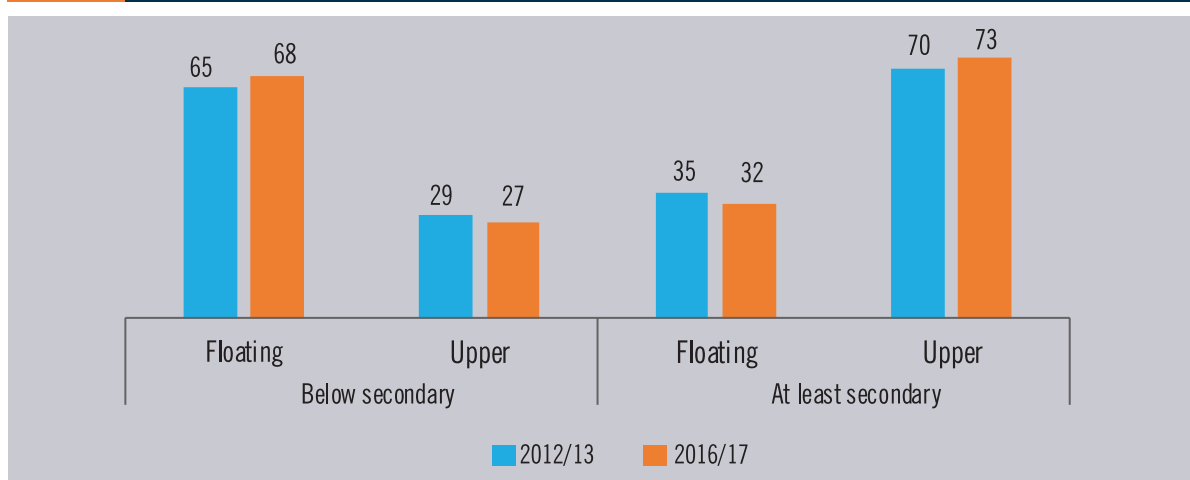
Source: Authors computation using UNHS 2012/13 & 2016/17

lower income.

Generally, there was growth in the size of the middle class across regions between 2012/13 and 2016/17. More specifically, Central region's middle class with floating grew from 59.8 percent to 78.8 percent in 2012/13 and 2016/17 respectively in addition, the western groin's middle class with floating increased by 23.6 percentage points over the same period (Table 8). This is also expected due to the low poverty and high urbanization levels associated with the Central and Western regions, as compared to the Northern and Eastern regions.

Further disaggregation of the data shows that Kampala and Central 1 have the highest proportions of the middle class (Table 8). In Kampala, 88 percent are in middle class, and 78 percent and are in middle class in Central

1. This is followed by Central 2 which has 71 percent of the middle class. However, the driver of middle class in the sub regions differs, while for Kampala it is the lower middle class, for central 1 and Central 2 it is the floating class. This alludes to the fact that urban settlements close to the city harbour households that are vulnerable to poverty amidst shocks.

Spatial distribution of the middle class

Figures 6 (A and B) show how the middle class is spatially distributed. Darker colour ramps in the maps represent higher proportions (concentration) of the middle class. As expected, the figures reveal that Uganda's middle class is more concentrated in the Central and Western parts of the country. Restricting the definition of the middle class (by excluding the floating class) makes the colour gradient relatively

Table 8	Geographical location of population by class type, 2012/12 and 2016/17 (%)							
	Poor	*Middle class*			*Rich*	*Middle class with floating*	*Middle class without floating*	*Total*
	<$2 person per day	*Floating $2-<$4 person per day*	*Lower $4-<$10 person per day*	*Upper $10-<$20 person per day*	*>=$20 per person per day*	*$2-<$20 person per day*	*$4-<$20 person per day*	
Panel A: 2012/13								
Residence								
Rural	72.8	21.5	5.1	0.6	0.0	27.2	5.7	100
Urban	34.7	36.1	24.5	3.9	0.8	64.5	28.5	100
Region								
Central	39.6	35.1	21.0	3.6	0.6	59.8	24.6	100
Eastern	79.5	16.9	3.1	0.4	0.0	20.4	3.5	100
Northern	81.1	15.0	3.4	0.4	0.0	18.9	3.8	100
Western	56.6	32.0	10.5	0.8	0.1	43.3	11.3	100
Sub- Region_city								
Kampala	8.4	35.9	45.4	8.6	1.7	89.9	54.0	100
Central1	35.3	37.9	22.5	3.6	0.7	64.0	26.1	100
Central2	55.4	31.7	10.9	1.8	0.2	44.4	12.7	100
Panel B: 2016/17								
Residence								
Rural	49.6	34.8	13.7	1.5	0.4	50.0	15.2	100
Urban	19.5	34.7	34.2	9.2	2.5	78.0	43.4	100
Region								
Central	21.1	38.6	31.4	6.9	2.1	76.8	38.2	100
Eastern	63.9	27.5	7.6	0.7	0.3	35.8	8.3	100
Northern	55.5	30.2	12.2	1.9	0.2	44.4	14.2	100
Western	32.1	41.8	21.6	3.5	1.0	66.9	25.1	100
Sub- Region city								
Kampala	6.3	23.4	49.4	14.9	6.0	87.7	64.3	100
Central1	19.5	37.5	32.6	8.1	2.3	78.2	40.7	100
Central2	28.8	45.7	22.9	2.3	0.4	70.8	25.1	100

Source: Authors computation from UNHS 2012/13 and 2016/17.

Figure 6 **Spatial distribution of the middle class in Uganda**

Uganda-Districts-2015
mc_wf_percnt
4.672897 - 35.087719
35.087720 - 51.546391
51.546392 - 65.714287
65.714288 - 77.310921
77.310922 - 89.285713

A. Middle class - with floating

Uganda-Districts-2015
mc_woutf_percnt
1.869159 - 12.500000
12.500001 - 20.000000
20.000001 - 28.971962
28.971963 - 41.747574
41.747575 - 68.600250

B. Middle class - without floating
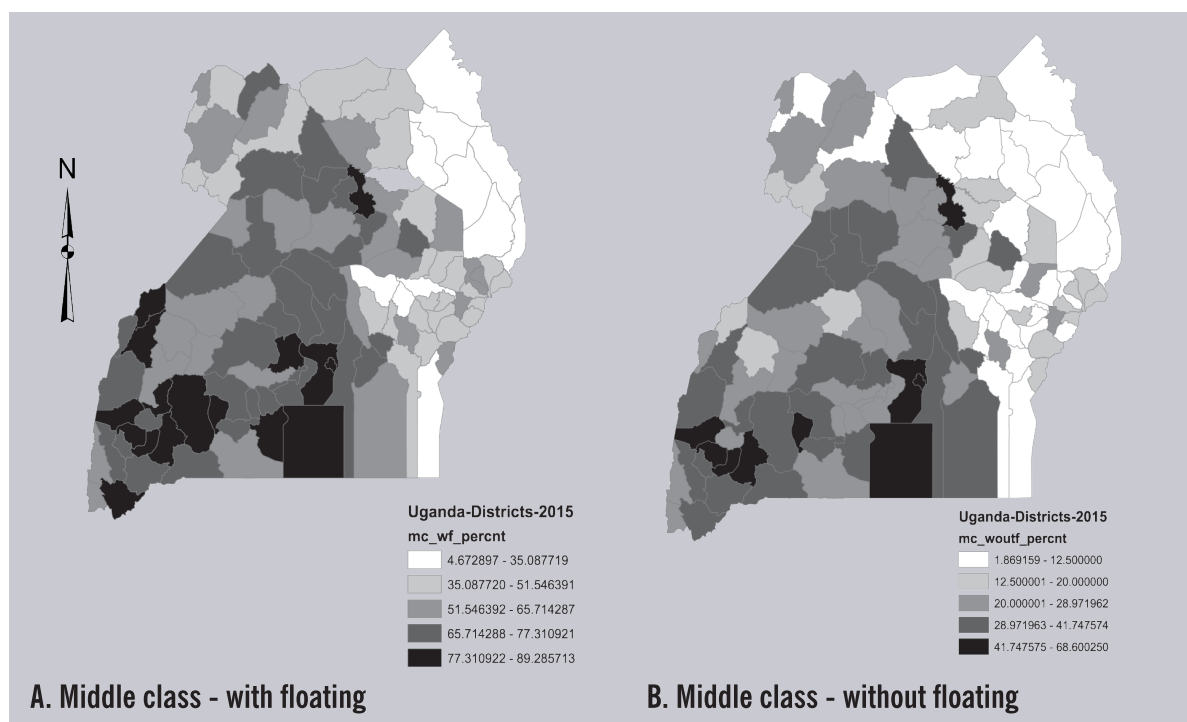
Source: Authors' computation using UNHS 2016/17 and ArcGIS.

lighter (compare Figures 6 A and B), implying fewer individuals, as expected, fall in the middle class when the floating are excluded. Therefore, those in the floating class make Uganda to seemingly have a high number of middle class individuals, pointing to a high degree of vulnerability of most middle class. A further restriction of the definition, by considering only the upper middle class (after dropping the lower and floating classes), makes the colour gradient more light for most parts of the country (Appendix 10). The results show that the upper middle class are predominantly in the Central and Western regions, most notably in the districts of Kampala, Wakiso, and Mbarara (Appendix 3). The three districts strikingly stand out, with relatively the highest concentration of the upper middle class – Kampala (19 percent), Mbarara (18 percent), and Wakiso (16 percent). The spatial distribution is consistent with the ranking of Kampala, Wakiso and Mukono districts as having the highest per capita incomes.

The spatial distribution pattern of the middle class shown in the maps also points to the high level of inequality that exists, and mirrors poverty patterns

in the country (UBoS, 2016/17). Central and Western Uganda (particularly Kampala, Wakiso, and Mbarara districts) have a relatively stable middle class. Simply put, most of the middle class in the rest of the country (Northern and Eastern regions) is a highly vulnerable category (floating), who are very susceptible to falling into poverty.

4.2.3 Economic activities

Majority of the middle class – both upper and lower-derive their main income from non-agricultural enterprises[4] and wage employment (Figure 7). The trend for major income sources has remained the same over the past 4-5 years (Appendix 4). For the floating middle class, most of them engage in small scale crop farming as their main source of income. Other sources of income for the middle class include; property income, remittances, commercial (including livestock) farming.

Generally, pertaining to status in employment, majority

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4   For example artisan, metalworking, tailoring, repair work, processing and selling outputs from own crops on a regular basis, shop ownership, trading business or profession

| Figure 7 | Middle class main source of household income, 2016/17 (%) |
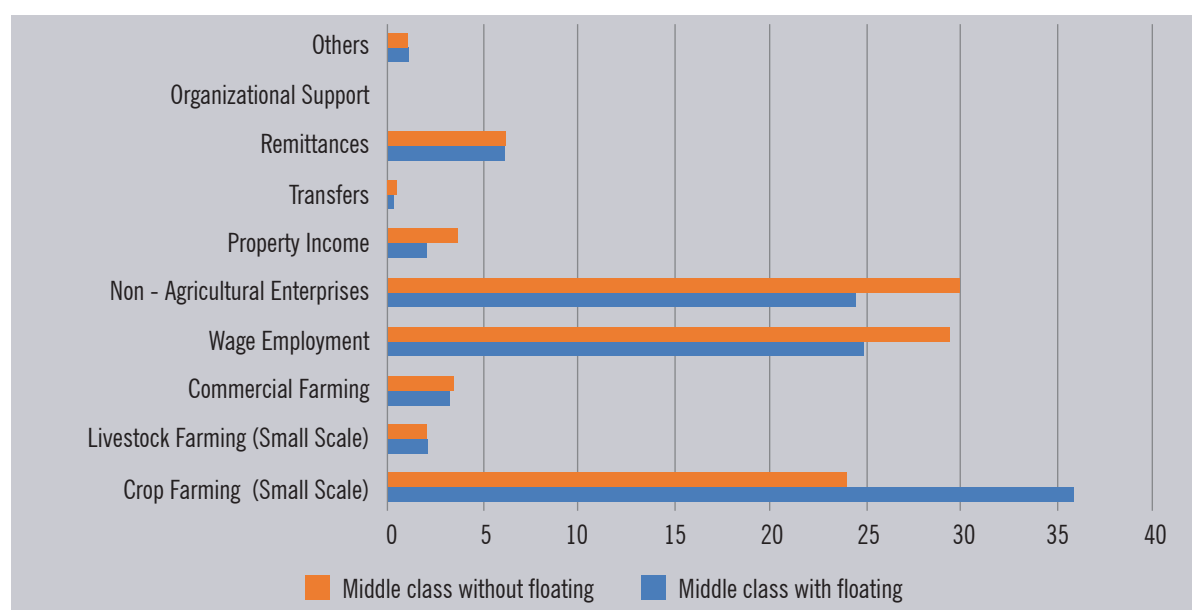
Source: Authors computations using UNHS, 2016/17

of the middle class are in paid employment - not casual labourer in agriculture (Table 9). Most middle class (upper and lower) are found in households whose heads are in paid employment (not casual labourer in agriculture) and self-employment (Table 9). For the upper middle class, 42 percent are in paid employment (not casual labourer in agriculture), and also 42 percent are self-employed. The lower middle class has a similar distribution like the upper class, in relation to household head employment status – about 29 percent and 47 percent are characterized by household heads in paid employment (not casual labourer in agriculture) and self-employment respectively. Unlike the upper and lower middle class, majority of the floating middle class are in households headed by subsistence farmers (26 percent) and self-employed individuals (41 percent). This type of employment, especially subsistence farming exposes them to being vulnerable, hence not being in position to constitute a stable middle class. The distribution for floating middle class is similar to that of the poor in regard to employment status. Majority of the poor - about 39 percent and 34 percent are in households headed by subsistence farmers and those who are self-employed.

Households' perceptions on stability of incomes

and living standards

Table 10 reveals that out of those who reported stability in income, an overwhelming majority is the middle class (74 percent), and the middle class without floating constitutes the largest proportion of this. This suggests that stability in income varies according to the level of the middle class, and also, majority of those in the very unstable income category are below the middle class. These findings are consistent with reported perceptions on poverty status. Those who reported being neither poor nor rich (which are expectedly the middle class), are actually comprised of primarily the middle class (with floating), about 79 percent. Similarly, those who reported being rich are majorly the middle class (83 percent) – with the largest share being the middle class (without floating) category. The results are also comparable to statistics on relative poverty of households to community, in that those who are better-off in relation to the community are mostly in the middle class (77 percent). The findings also correspond well to reported changes in household living standard, whereby of those who reported increase in living standard compared to the previous national household survey, majority (76 percent) are comprised of the middle class

Table 9	Household activity status in employment (%)							
	Poor	*Middle class*			*Rich*	*Middle class with floating*	*Middle class without floating*	*Total*
	<$2 person per day	*Floating $2-<$4 person per day*	*Lower $4-<$10 person per day*	*Upper $10-<$20 person per day*	*>=$20 per person per day*	*$2-<$20 person per day*	*$4-<$20 person per day*	
2012/13								
Paid Employee Not Casual Labourer in Agric	11.5	22.5	34.9	40.9	41.1	26.6	35.7	16.9
Paid Employee Casual Labourer in Agric	18.2	6.5	3.0	0.2	0.0	5.3	2.6	13.5
Self Employed	35.5	49.3	51.1	49.0	56.7	49.8	50.9	40.6
Contributing Family Workers	0.2	0.4	0.5	0.9	0.0	0.4	0.5	0.3
Subsistence Farmer Only	30.1	18.2	5.0	3.8	0.0	14.0	4.9	24.3
Unemployed	1.5	1.1	2.6	1.4	1.2	1.5	2.5	1.5
Not Working And Not Looking For Work	3.0	2.0	2.9	3.8	1.0	2.3	3.0	2.8
2016/17								
Paid Employee Not Casual Labourer in Agric	10.2	18.7	28.6	41.9	36.6	23.3	30.6	17.9
Paid Employee Casual Labourer in Agric	7.0	4.6	1.9	0.2	1.1	3.5	1.6	4.9
Self Employed	34.1	40.6	47.0	41.5	42.9	42.8	46.2	39.1
Contributing Family Workers	0.3	0.9	0.4	0.5	0.6	0.7	0.5	0.5
Subsistence Farmer Only	39.1	26.2	13.6	5.5	3.1	20.8	12.4	28.4
Others	0.1	0.1	0.2	0.0	0.8	0.2	0.2	0.1
Unemployed	2.0	2.1	2.0	2.2	4.5	2.1	2.0	2.1
Not working	7.2	6.7	6.3	8.2	10.4	6.6	6.6	6.9

Source: Authors computation usings UNHS 2012/13 and 2016/17

Table 10	Household perception on chosen living conditions indicators-2016/17, (%)							
	Poor	*Middle class*			*Rich*	*Middle class with floating*	*Middle class without floating*	*Total*
	<$2 person per day	*Floating $2-<$4 person per day*	*Lower $4-<$10 person per day*	*Upper $10-<$20 person per day*	*>=$20 per person per day*	*$2-<$20 person per day*	*$4-<$20 person per day*	
Change in household income								
Very unstable	53.1	32.3	12.8	1.5	0.3	46.6	14.3	100
Somewhat stable	28.1	39.1	26.1	5.3	1.4	70.6	31.4	100
Stable	19.7	30.5	32.5	11.7	5.6	74.7	44.2	100
Household perception on poverty status								
Very Poor	69.6	24.8	5.1	0.4	0.1	30.3	5.5	100
Poor	49.0	35.9	13.4	1.5	0.2	50.8	14.9	100

Neither poor nor rich	19.8	39.4	32.5	6.6	1.7	78.5	39.1	100
Rich	6.4	16.7	43.4	22.4	11.0	82.6	65.8	100
Very rich	0.9	7.1	13.5	39.2	39.3	59.8	52.7	100
Relative poverty of household to community								
Worse Off	54.5	32.3	11.9	1.2	0.2	45.3	13.1	100
Same	41.0	35.3	19.7	3.2	0.8	58.2	22.9	100
Better Off	19.9	38.6	30.2	8.4	2.9	77.2	38.7	100
Change in household standard of living								
Increased	21.9	37.4	30.5	8.1	2.1	76.0	38.6	100
Stayed the same	40.3	35.1	20.1	3.4	1.1	58.6	23.5	100
Decreased	51.4	33.5	13.1	1.6	0.4	48.2	14.7	100

Source: Authors own computation based on UNHS dataset, 2016/2017

5. DETERMINANTS OF UGANDA'S MIDDLE CLASS

The purpose of this section is to understand the socioeconomic determinants of the middle class in Uganda and what this means for the country to attain a middle income status. This analysis is important in the perspective that it enriches the mapping and profiling of the middle class done in the previous section. Many variables have been documented in the literature to potentially determine who can potentially be in the middle class. For this paper, we use some owing to data limitations in the UNHS 2016/17. Any variables that captures aspects of governance and political stability are not included. Variables included are: sources of income, age, marital status of household head, household size, occupation, and education; which are all predictors for wealth attainment.

5.1 Descriptive evidence

Table 11 provides the summary statistics of the variables used in the model for analysing drivers of the middle class. Overall, the average age of household head in completed years is 42, with the youngest aged 11 and eldest aged 110; and the average years of educational attainment is 6.4. The dataset used in the model contains floating middle class, lower middle class, and upper middle class represented by 34 percent, 23 percent, and 5 percent respectively.

5.2 Econometric results of drivers of the middle class

Table 12 presents model results on the key correlates or drivers of the middle class. The results are based on marginal effects model to explain the correlates, and/or likely drivers of the middle class. The first (model 1) examines correlates of floating middle class, the second (model 2) and third (model 3) are for lower and upper middle class respectively. Model 4 and model 5 are for middle class with floating and middle class without floating respectively. Overall, the models have good predictive abilities, as shown by the distribution of the predicted probabilities of the middle class explained by the drivers (predictors) in Figure 7.

According to results from the available data (Table 12), we identify four variables as key drivers of the middle class in Uganda. The first is urbanization, proxied by rural-urban and regional attributes of households and individuals. The results show that urban areas significantly increase possibilities of growing the middle class. The change in the likelihood if households move from rural to urban areas increases by about 3 to more than 90 percentage points. The results are more statistically significant in models 2 to 5. Similarly, being in more urbanized regions such as the central Uganda (compared to Eastern and Northern regions) significantly drives movement into the middle class. Overall, the results suggest that the middle class is likely to rise with increasing share of urban residence. These results are consistent with the descriptive

statistic results earlier discussed. Urbanization is expected to drive the middle class because of the opportunities it presents such as more paying jobs. The urban class are also willing to pay for more premium products, hence increase in consumption spending.

Table 11	Descriptive statistics of variables, 2016/17				
Variable name	Observations	Mean	Std. Dev.	Min	Max
Sex of head	15,707	0.6917	0.4618	0	1
Age of head	15,706	42.6056	15.8012	11	110
Urban/rural	15,707	0.3258	0.4687	0	1
Education years of head	15,515	6.3546	4.3397	0	17
Household head-Elder	15,707	0.1613	0.3678	0	1
Middle class					
Floating class	15,707	0.3428	0.4747	0	1
Lower class	15,707	0.2317	0.4220	0	1
Upper class	15,707	0.0516	0.2213	0	1
Middle class-with floating	15,707	0.6262	0.4838	0	1
Middle class-w/o floating	15,707	0.2834	0.4507	0	1
Education level					
No formal education	15,707	0.1452	0.3523	0	1
Some primary	15,707	0.3721	0.4834	0	1
Completed primary	15,707	0.1373	0.3442	0	1
Some secondary	15,707	0.1521	0.3591	0	1
Completed secondary	15,707	0.0762	0.2653	0	1
Post-secondary plus	15,707	0.1049	0.3064	0	1
Not stated	15,707	0.0122	0.1099	0	1
Household size					
(1-2)	15,707	0.2369	0.4252	0	1
(3-4)	15,707	0.2987	0.4577	0	1
(5-6)	15,707	0.2544	0.4355	0	1
(>=7)	15,707	0.2100	0.4073	0	1
Main source of household income					
Crop farming (small scale)	15,685	0.4336	0.4956	0	1
Livestock farming (Small scale)	15,685	0.0185	0.1347	0	1
Commercial farming	15,685	0.0203	0.1412	0	1
Wage employment	15,685	0.2460	0.4307	0	1
Non-agricultural enterprises	15,685	0.1930	0.3947	0	1
Property income	15,685	0.0113	0.1056	0	1
Transfers(Pension, allowances et	15,685	0.0035	0.0591	0	1
Remittances	15,685	0.0658	0.2479	0	1
Organizational support	15,685	0.0003	0.0160	0	1
Others	15,685	0.0077	0.0875	0	1
Marital status					
Married monogamous	15,707	0.5471	0.4978	0	1
Married polygamous	15,707	0.1458	0.3529	0	1
Divorced/ Separated	15,707	0.1040	0.3052	0	1
Widow/ Widower	15,707	0.1304	0.3367	0	1
Never married	15,707	0.0728	0.2598	0	1
Region					
Central	15,707	0.2395	0.4268	0	1
Eastern	15,707	0.2701	0.4440	0	1
Northern	15,707	0.2446	0.4299	0	1
Western	15,707	0.2458	0.4306	0	1

Source: Authors own compilation based on UNHS, 2016/17

The second driver of the middle class is household size. Smaller household sizes create opportunities for growth in the middle class. For example, results in Table 12 show that if household size rises from 1-2 to 3-4, the change in probability of being or joining middle class decreases by 6 to 20 percentage points (depending on the model). The likely decrease in middle class is more pronounced when household size becomes larger. For example, if household size moves from the smallest (1-2) to 5-6, the decrease is between 7 to 33 percentage points (pp) – see models 2, 3, 4, and 5 in Table 10. A further increase of household size to 7 and above is associated with a decrease of 9 to 40 pp – however, this is only for the lower and upper middle class. From the results, we observe that when household size is too large, the variable reduces possibilities of retaining upper and lower middle class status, but it becomes insignificant in determining or making households attain even just a floating class.

The third key driver is education. Results also show that education is a fundamental tool for boosting the middle class. Movement from lower to higher levels of education increases the probability of becoming middle class by 1 to 34 pp, depending on the model. As expected, movement by a lower margin, for example, from no formal education to completion of primary and secondary education increase the likelihood of becoming a middle class by the smallest proportions of about 1 to 10 percentage points. Meanwhile, a big positive change in educational attainment up to post-secondary level (University or tertiary education) is associated with doubling the likelihood of becoming middle class (i.e. an increase of 8 to 34 percentage points). Accordingly, through investments in education, higher growth in the middle class can be attained. It is interesting to note that according to the results, as educational level advances to higher levels such as University or tertiary (post-secondary), this level of achievement no longer becomes important for attaining floating middle class status. Instead, it is lower levels such as primary and secondary education that significantly drive movement into floating middle class. Higher educational achievement is significant for attaining relatively higher economic statuses such as upper middle and lower middle class.

The fourth key driver of the middle class, based on the available data is the nature of economic (or income generating) activities that households engage in. The results show that when households graduate from engaging in small scale crop farming to commercial farming, the likelihood of attaining lower middle income class increases by 9 pp. The results are only statistically significant for lower middle class but not upper middle class. For the case of middle class with and without floating, the increase is lower for middle class without floating (10 pp) compared to middle class with floating (15 pp). Engaging in non-agricultural enterprises and wage employment (in comparison to small scale crop farming) increases the probability of attaining all middle class statuses (floating, lower, and upper), however, non-agricultural enterprises is a more powerful driver of middle class than wage employment, given observed larger increases associated with it (statistical significance of 1 percent for upper and lower middle class), compared to wage employment (smaller increases, with statistical significance of 10 percent). Further, property income significantly drives households mainly into the lower middle class, as well as middle class without floating (statistically significant at 10 percent), but it is insignificant for upper middle class.

These findings are consistent with evidence elsewhere on the drivers of the middle class. For example, Drabble *et al* (2015)[5] maintain that economic activities are a strong driver of the middle class in Africa – the strong growth of the middle class is found in countries with robust and growing private sector and/or entrepreneurship development. Other drivers include; ability to provide stable and secure employment (jobs), and higher education (*ibid*). Furthermore, diversification of economic activities, sustained economic growth, and movement towards higher value-added products is key for middle class growth and sustainability, as well as avoidance

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5 Drabble, S; Ratzmann, N; Hoorens, S; Khodyakov, D; Yaqub, O. (2015). The rise of a global middle class. Global societal trends towards 2030 thematic report. The Rand Corporation, Cambridge, UK.

Table 12	Marginal effects after Probit estimates by middle class category, 2016/17				
	(1)	(2)	(3)	(4)	(5)
Variable	MCF	MCL	MCU	MC-w F	MC-w/o F
Sex of head (Male=1)	-0.017	0.018	-0.005	-0.017	0.012
	(0.0183)	(0.0125)	(0.0067)	(0.0189)	(0.0123)
Age of head	0.001	0.003***	0.001***	0.004***	0.004***
	(0.0007)	(0.0004)	(0.0002)	(0.0006)	(0.0005)
Household head-Elder	0.020	-0.050**	-0.021**	-0.058*	-0.072***
	(0.0263)	(0.0173)	(0.0079)	(0.0249)	(0.0177)
Urban/rural (Urban=1)	-0.030*	0.067***	0.026***	0.100***	0.094***
	(0.0149)	(0.0113)	(0.0044)	(0.0141)	(0.0124)
Region [Base=Central]					
Eastern	-0.104***	-0.133***	-0.024***	-0.262***	-0.156***
	(0.0205)	(0.0139)	(0.0040)	(0.0187)	(0.0156)
Northern	-0.077***	-0.085***	-0.006	-0.193***	-0.095***
	(0.0202)	(0.0161)	(0.0067)	(0.0182)	(0.0195)
Western	0.042*	0.005	0.007	0.013	0.006
	(0.0177	(0.0147)	(0.0057)	(0.0148)	(0.0175)
Household size [Base=(1-2)]					
(3-4)	0.095***	-0.195***	-0.060***	-0.168***	-0.260***
	(0.0190)	(0.0168)	(0.0089)	(0.0148)	(0.0147)
(5-6)	0.060*	-0.250***	-0.074***	-0.270***	-0.329***
	(0.0237)	(0.0175)	(0.0085)	(0.0155)	(0.0174)
(>=7)	0.030	-0.307***	-0.092***	-0.367***	-0.401***
	(0.0259)	(0.0162)	(0.0081)	(0.0168)	(0.0156)
Education level of head [Base=No formal education]					
Some primary	0.057**	0.031**	0.008*	0.098***	0.040***
	(0.0174)	(0.0110)	(0.0031)	(0.0181)	(0.0106)
Completed primary	0.098***	0.098***	0.017**	0.199***	0.114
	(0.0228	(0.0148)	(0.0080)	(0.0216)	(0.0140)
Some secondary	0.088***	0.139***	0.030***	0.247***	0.167***
	(0.0247)	(0.0167)	(0.0051)	(0.0238)	(0.0165)
Completed secondary	0.108***	0.144***	0.031***	0.285***	0.172***
	(0.0244)	(0.0198)	(0.0064)	(0.0232)	(0.0186)
Post-secondary plus	0.003	0.197***	0.088***	0.345***	0.302***
	(0.0291)	(0.0232)	(0.0119)	(0.0251)	(0.0240)
Not stated	0.075	0.151**	0.059***	0.300***	0.210***
	(0.0701)	(0.0565)	(0.0220)	(0.0453)	(0.0558)
Main source of household income [Base=Crop farming (small scale)]					
Livestock farming (Small scale)	0.037	0.063*	0.019*	0.081	0.072*
	(0.0331)	(0.0326)	(0.0115)	(0.0466)	(0.0345)
Commercial farming	0.064	0.090***	0.018	0.148***	0.098***
	(0.0374)	(0.0288)	(0.0120)	(0.0354)	(0.0275)
Wage employment	0.028*	0.021*	0.010*	0.029*	0.022*
	(0.0141)	(0.0107)	(0.0048)	(0.0125)	(0.0107)
Non-agricultural enterprises	0.050**	0.087***	0.022***	0.149***	0.102***
	(0.0176)	(0.0116)	(0.0050)	(0.0154)	(0.0125)
Property income	-0.101*	0.207***	0.002	0.111	0.192***
	(0.0458)	(0.0486)	(0.0079)	(0.0623)	(0.0446)
Transfers (Pension, allowances etc.)	-0.050	0.2921***	-0.009	0.264***	0.259***
	(0.0822)	(0.0837)	(0.0110)	(0.0430)	(0.0842)
Remittances	0.063*	0.023	0.022**	0.059*	0.033
	(0.0294)	(0.0178)	(0.0102)	(0.0284)	(0.0181)
Organizational support	0.181	-	0.158*	0.232*	-0.021
	(0.2795)	-	(0.1358)	(0.2026)	(0.1160)
Others	0.149	0.094	0.013	0.205*	0.106
	(0.1005)	(0.0653)	(0.0148)	(0.0769)	(0.0708)
Marital status [Base=Married monogamous]					
Married polygamous	-0.011	0.014	-0.00005	0.004	0.014
	(0.0199)	(0.0156)	(0.0055)	(0.0174)	(0.0157)
Divorced/ Separated	0.020	-0.035*	-0.008	-0.041	-0.047**
	(0.0234)	(0.0142)	(0.0069)	(0.0212)	(0.0145)
Widow/ Widower	0.007	-0.016	-0.010	-0.038	-0.027
	(0.0234)	(0.0168)	(0.0072)	(0.0257)	(0.0156)
Never married	-0.041	-0.008	0.015*	0.004	0.018
	(0.0348)	(0.0175)	(0.0074)	(0.0322)	(0.0218)
N	15,636	15,632	15,636	15,636	15,636
Prob>F	0.0000	0.0000	0.0000	0.0000	0.0000
F	7.98	46.54	36.69	69.50	78.95
No. of Strata	4	4	4	4	4
No. of PSUs	155	155	155	155	155

Standard errors in parentheses $^{*} p < 0.05$, $^{**} p < 0.01$, $^{***} p < 0.001$

Source: Author's own computations based on UNHS 2016/17

Figure 7 Predicted probability of the determinants of middle class by type.
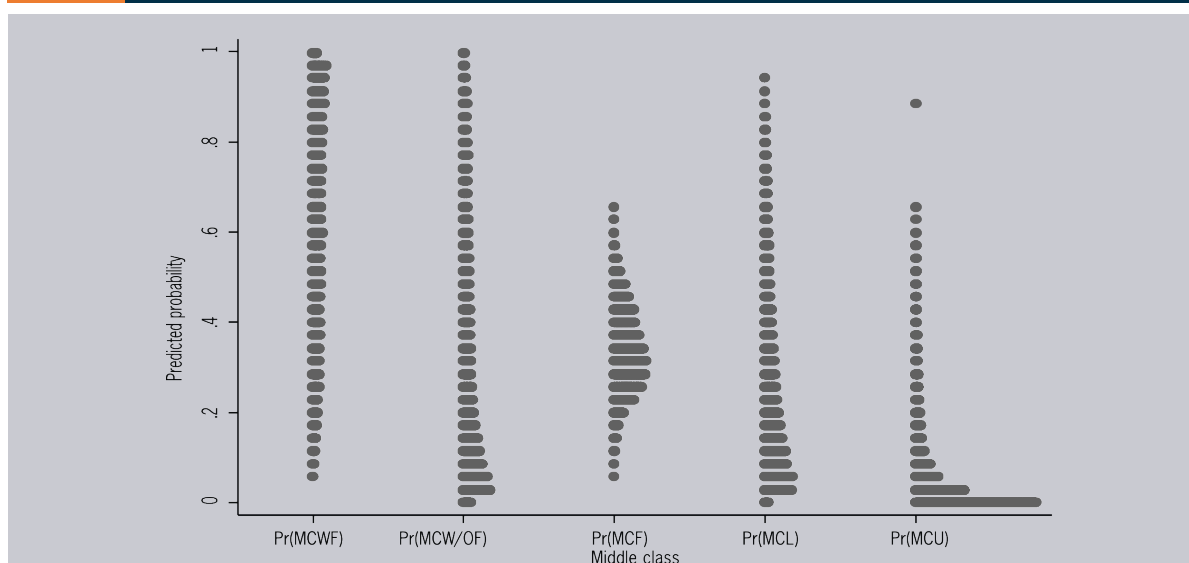
Source: Authors computation based on 2016/17

of "middle class trap" – an economic phenomenon whereby a country grows to middle class level, but subsequently stagnates and fails to achieve advanced country status due to reasons such as; slowdown in growth, increasing cost of wages, and ultimate reduction in competitiveness (*ibid*). The results are also consistent with some country-specific evidence on drivers of the middle class. For example in Ghana, (Luckham *et al*., 2005)[6] maintain that expansion of the education system and state of employment (jobs) are key factors for boosting growth of the middle class. They also identify nature of economic activities that the population undertake as a key driver of the middle class – for example commercial farming of cocoa and development of entrepreneurs.

Figure 7 supports the analysis made that the model (s) estimated is a good predictor of the behaviour of the middle class categories in Uganda. For instance, for the MCU category the predictions are strong at the beginning but the behaviour might change and the determinants might not hold in the future. While for the MCF the predictions are much stronger in the medium term but might not hold in the short and long run. For the other categories, the predictive behaviour of these

classes (McwF, MCw/oF and MCL) are likely to be the same in the future.

6. CONCLUSION AND POLICY IMPLICATION

In 2016/17, about 8.3 million Ugandans (22 percent) were in the middle class (without floating). This had more than doubled from about the 3.7 million in 2012/13, reflecting a rising trend in the middle class. When the floating middle class are included in the definition, in 2016/17 the middle class population becomes 21 million (57 percent of the population). The results show that the floating class constitutes the highest share (61 percent) of the middle class (about 13 million people). This is not a good pointer for robustness of the economy, given that the floating class is highly fragile and vulnerable to economic shocks, and can easily descend into poverty. For any country that aspires to be a middle income, the lower and upper middle classes must be big enough as they are the basis of strong economic power, capable of providing a stable ground for sustained growth. Disaggregation of results by gender reveals that the male dominate the middle class – both the lower and upper class.

6 Luckham, R; Gyimah-Boadi, E; Ahadzie, W; Boateng, N. (2005). The middle classes and their role in national development. CDD/ODI policy brief No. 3, November 2005.

Drawing from the behavioural pattern of the middle class in terms of their lifestyles-eat more number of meals per day, economic activity-work in paid jobs and more involved in non-farm activities, and geographical location-more urbanised. Findings suggest that the middle class plays a critical role in the economy. Given their higher consumption levels, the middle class are driving Uganda's consumer markets for businesses; partaking technological application such as internet, and being an engine for promoting the services sector among others. However, Uganda's middle class is of inferior quality, characterized by high level of fragility.

Finally, from the available data, it is observed that four key drivers of the middle class in Uganda include; urbanization, relatively smaller and manageable household sizes, education, and economic activities (including entrepreneurial development). This evidence suggests that policies that foster strong, sustained, and shared growth, improved infrastructure (e.g. for urbanization), enhanced human capital development (expanding higher level education opportunities), expansion of meaningful employment opportunities, and promotion of private sector growth are a requisite for the growth and sustainability of Uganda's middle class. In addition, diversification of economic activities, for example, through commercialization of agriculture, is crucial for growth of the middle class.

Taking this forward, critical in attainment of national policy goal of lower and upper middle income status by 2040, special focus on the floating class with the mind-set of ensuring that this category graduates to the lower and finally upper middle classes is key. Accordingly, sustainability of the middle class in Uganda will require for example, government to continuously focus on programmes that target the very poor but ensure that those who are fragile to poverty reversal are not ignored.

Policies that leverage on the consumption capacity of the middle class should be promoted such as BUBU and those that ensure that the middle class that is already there (lower and upper) made larger and wealthier for greater economic impacts.

The floating are in subsistence agriculture, this implies that incentives and initiatives that support agricultural expansion sustainably with minimal impact on the environment should be promoted as this will improve the quality of the middle class. To do all these institutional strengthening and maintained peace and security will play a key role.

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APPENDIX

Appendix 1: Distribution of subclass by marital status and year, %

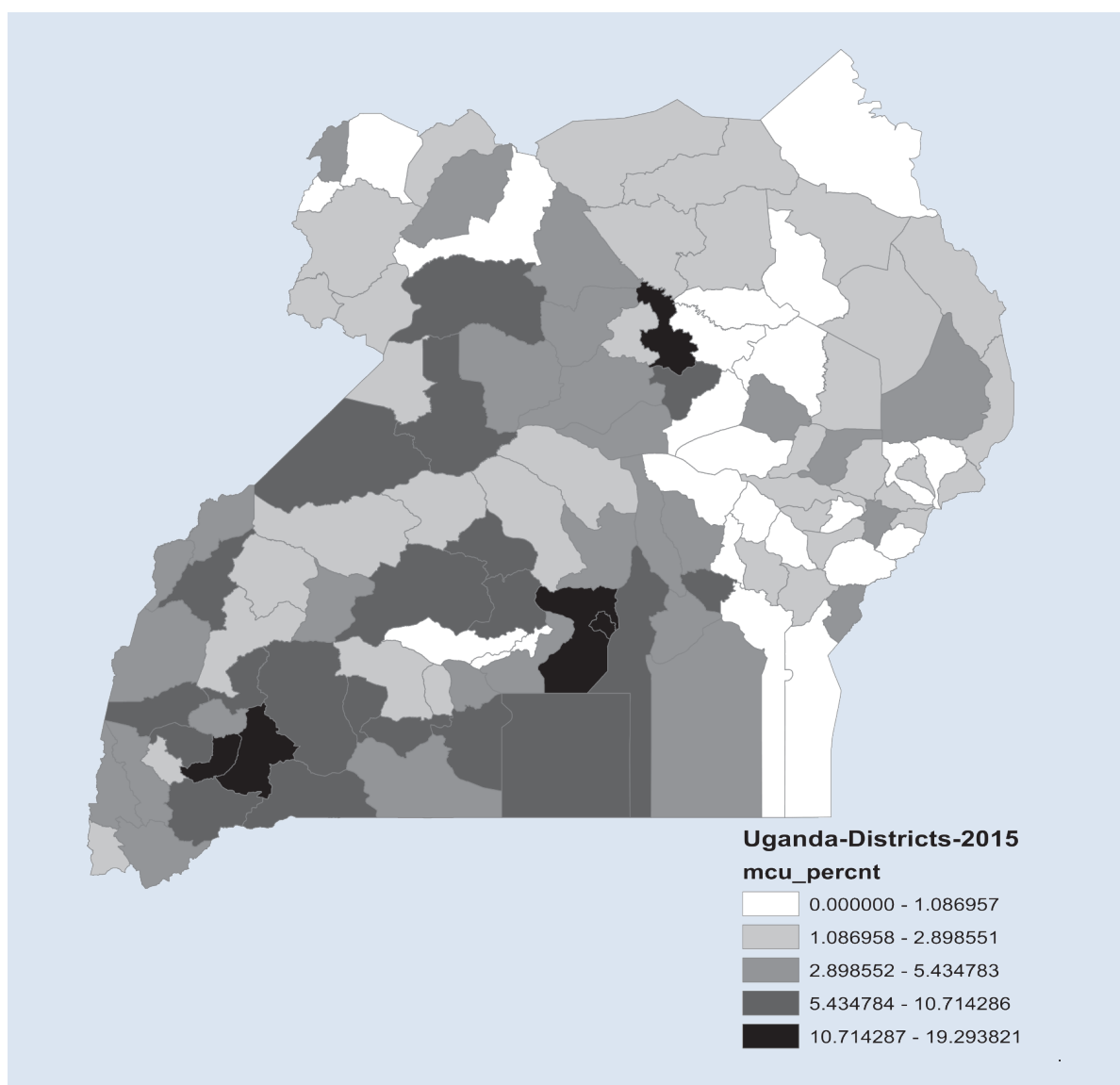|	*Poor*	*Middle class*			*Rich*	*Middle class with floating*	*Middle class without floating*	**Total**
	<$2 person per day	*Floating $2-<$4 person per day*	*Lower $4-<$10 person per day*	*Upper $10-<$20 person per day*	*>=$20 per person per day*	*$2-<$20 person per day*	*$4-<$20 person per day*	
2012/13								
Marital status of hh member								
Married Monogamous	61.7	60.9	59.2	55.8	40.6	60.3	58.8	61.1
Married Polygamous	20.2	18.5	15.9	19.5	3.1	17.9	16.4	19.4
Divorced/Separated	6.6	6.9	6.9	5.5	10.6	6.8	6.7	6.7
Widow/Widower	10.6	11.2	8.4	4.3	18.8	10.2	7.9	10.5
Never Married	0.9	2.5	9.6	14.9	27.0	4.8	10.2	2.4
Marital status by Headship								
Unmarried Female Head	0.4	0.9	3.0	4.3	6.4	1.6	3.2	0.8
Married Female Head	11.9	10.0	12.0	7.5	7.8	10.4	11.4	11.4
Divorced Female Head	5.5	4.8	4.3	4.0	8.8	4.7	4.2	5.2
Widow	9.8	10.4	7.6	3.2	5.6	9.3	7.0	9.7
Male Head	72.4	73.9	73.2	80.9	71.5	74.0	74.1	73.0
2016/17								
Marital status of hh member								
Married Monogamous	61.3	61.6	62.0	59.6	57.4	61.6	61.6	61.5
Married Polygamous	19.6	16.2	14.5	11.0	17.1	15.3	14.0	17.1
Divorced/ Separated	6.4	8.1	8.2	9.5	9.6	8.2	8.4	7.5
Widow/ Widower	11.0	11.0	9.0	7.6	6.0	10.2	8.8	10.5
Never Married	1.7	3.1	6.3	12.2	9.8	4.7	7.2	3.5
Marital status by Headship								
Unmarried Female Head	0.7	1.3	2.2	4.4	2.2	1.8	2.5	1.3
Married Female Head	9.5	9.7	8.6	11.6	13.7	9.5	9.1	9.5
Divorced Female Head	5.4	6.3	5.5	6.4	7.2	6.0	5.6	5.8
Widow	10.3	10.3	8.3	7.0	5.3	9.4	8.1	9.7
Male Head	74.1	72.5	75.4	70.6	71.7	73.3	74.7	73.6

Source: Authors' computation using UNHS 2012/2013; 20162017

Appendix 2: Housing conditions for select charateristics-2012/13 and 2016/17, %

	Poor	*Middle class*			*Rich*	*Middle class with floating*	*Middle class without floating*	
	<$2 person per day	*Floating $2-<$4 person per day*	*Lower $4-<$10 person per day*	*Upper $10-<$20 person per day*	*>=$20 per person per day*	*$2-<$20 person per day*	*$4-<$20 person per day*	**Total**
Panel A: 2012/13								
Rooms used for sleeping								
1	63.1	24.2	11.1	1.5	0.2	36.7	12.6	100
2	68.0	23.8	7.1	1.0	0.1	31.9	8.1	100
3	63.5	25.5	9.9	1.0	0.2	36.3	10.8	100
4	63.0	26.8	8.1	1.9	0.2	36.8	10.1	100
5	53.8	31.4	12.0	2.9	0.0	46.2	14.8	100
6	39.8	23.9	29.56	4.4	2.5	57.7	33.8	100
Type of toilet facility								
Improved	37.6	33.0	24.2	4.4	0.8	61.6	28.6	100
Un improved	70.3	23.8	5.5	0.4	0.0	29.7	5.9	100
No Toilet Facility	86.9	11.3	1.5	0.3	0.0	13.1	1.8	100
Panel B: 2016/17								
Rooms used for sleeping								
1	42.3	33.6	20.3	3.40	0.4	57.3	23.7	100
2	48.9	32.7	15.4	2.4	0.6	50.5	17.8	100
3	39.1	37.3	18.8	3.6	1.1	59.8	22.5	100
4	33.7	40.1	20.7	4.2	1.3	65.0	24.9	100
5	30.9	34.6	21.0	8.3	5.3	63.9	29.3	100
6	8.4	38.7	42.4	4.2	6.3	85.3	46.6	100
Type of toilet facility								
Improved	5.4	21.4	39.5	22.9	10.8	83.7	62.3	100
Un improved	44.3	35.5	17.5	2.3	0.4	55.3	19.8	100
No Toilet Facility	76.3	19.2	4.0	0.6	0.0	23.7	4.6	100

Source: Authors' computation using UNHS 2012/2013; 20162017

Appendix 3: Spatial distribution of the upper middle class

Uganda-Districts-2015
mcu_percnt

	0.000000 - 1.086957
	1.086958 - 2.898551
	2.898552 - 5.434783
	5.434784 - 10.714286
	10.714287 - 19.293821

Source: Authors' computation using UNHS 2016/17 and ArcGIS

Appendix 4: Most important source of income for the household

	Poor	Middle class			Rich	Middle class with floating	Middle class without floating	Total
	<$2 person per day	Floating $2-<$4 person per day	Lower $4-<$10 person per day	Upper $10-<$20 person per day	>=$20 per person per day	$2-<$20 person per day	$4-<$20 person per day	
2012/13								
Subsistence Farming	55.9	40.0	18.3	9.9	2.5	33.1	17.3	47.7
Commercial Farming	1.1	3.8	3.2	3.3	0.0	3.6	3.2	2.0
Wage Employment	18.6	22.0	32.2	37.2	29.2	25.3	32.8	21.0
Non-Agricultural Enterprises	19.4	27.7	36.8	38.4	54.9	30.5	37.0	23.4
Property Income	0.2	0.6	1.5	2.9	5.8	0.9	1.7	0.5
Transfers	0.2	0.4	0.8	0.3	0.0	0.5	0.7	0.3
Remittances	4.2	5.3	7.0	7.9	7.6	5.8	7.1	4.8
Organizational Support	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Other (Specify)	0.2	0.3	0.4	0.0	0.0	0.3	0.3	0.2
2016/17								
Crop Farming (Small Scale)	62.3	43.4	26.1	12.6	8.7	35.9	24.0	46.8
Livestock Farming (Small Scale)	1.7	2.2	2.1	1.5	8.9	2.1	2.0	2.0
Commercial Farming	1.7	3.0	3.6	2.6	2.0	3.2	3.4	2.5
Wage Employment	17.2	22.0	27.8	37.8	35.5	24.9	29.4	21.7
Non-Agricultural Enterprises	12.2	21.1	29.4	32.8	22.4	24.5	29.9	19.3
Property Income	0.4	0.9	3.8	2.3	7.9	2.0	3.6	1.4
Transfers	0.1	0.1	0.6	0.2	0.2	0.3	0.5	0.2
Remittances	3.9	6.0	5.7	9.1	8.1	6.1	6.2	5.2
Organizational Support	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0
Others	0.6	1.2	1.0	0.8	6.2	1.1	1.0	0.9

Notes: Transfers include (Pension, Allowances, Social Security Benefits,)

Organisational support includes: (E.g. Food Aid, WFP, NGOs etc.)

Source: Authors' computation using UNHS 2012/13 and 2016/17

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