The distribution of household income and the middle class in Zambia

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ABSTRACT

The middle class is increasingly becoming a topical issue in Zambia. However, the lack of a definitive measure of the middle class in the country makes it difficult to have targeted policies on this group of people, perceived worldwide to be the drivers of economic growth. With high and rising income inequality in Zambia, we propose two operational definitions of the middle class by exploring the middle class from a median perspective and from a 'relative affluence' perspective. Defining the middle class on the basis of the 'actual middle' versus 'relative affluence' provides vastly different pictures. The results show that individuals and households that fall in the 'relative affluence' group have achieved a modest standard of living and are actually near the top of the country's income ladder while households in the actual middle of the income distribution in Zambia have a standard of living well below what can be perceived as a 'middle-class lifestyle' elsewhere. This requires targeted policy designs when referring to changes in the economic status of the Zambian middle class. We propose a household income distribution framework which combines both the actual middle households and the relatively affluent middle households to create an enabling environment for inclusive growth policies, rather than just pro-poor policies.

CONTENTS

1 INTRODUCTION

The term *middle class* when used in everyday language brings up images of households (or individuals) with a certain lifestyle or level of wealth as evidenced by their relatively high expenditure on food, clothing, furniture, education, holidays, as well as assets such as housing and motor vehicles.

Typically, being middle class is defined as having an income within some interval that includes the median (or the midpoint) and an interval which is symmetric in the income space around the median. In Zambia, thinking about what it means to be middle class is complicated by the low average and median levels of incomes in the country and the very wide distribution of income. This is aggravated by increased income inequality. Latest results from the 2010 Living Conditions Monitoring Survey (LCMS) show that the Gini Coefficient[1], the most popular indicator of the degree of inequality, increased to 0.65 in 2010 from 0.60 in 2006. This implies that there is growing inequality in the distribution of income. In a perfectly equal society, the bottom 20 percent of the population, for example, would earn 20 percent of the total income, and the bottom 50 percent of the population would earn 50 percent of the total income. In 2010, the top 20 percent in terms of earnings accounted for 69.7 percent of the per capita income, while the bottom 50 percent had only 9.1 percent of the per capita income. In 2006, the top 20 percent amassed 68.7 percent of the per capita income, whereas the bottom 50 percent accounted for 7.8 percent of the income (Central Statistical Office, 2012).

It is apparent that defining the middle class by only focusing on households with incomes around the midpoint may not offer the best perspective. How then should we best define the middle class in this economy which is characterised by large inequalities in income? Who really are in the 'middle' and what does it mean for economic policy?

This study attempts to answer these questions and shed some light on what constitutes the middle class in Zambia. The study considers several middle class definitions and settles on two approaches that fit the Zambian context.

In recent years, Government has largely implemented pro-poor policies (social cash transfers, farmer input support programme, minimum wage legislation, increase in tax exemption thresholds, etc.) that are perceived to target low income households only. There has hardly been any interventions targeting the middle class, an offshoot of the much talked about strong economic growth over the last decade. Being the major contributors to personal income tax, and the drivers of consumption demand, they play a big part in driving economic growth. The reason for the skewed policy interventions may partly be explained by the lack of a definitive measure of the middle class; or perhaps the policies are

[1] The Gini Coefficient is a single number that ranges between zero and one. A Gini Coefficient of '0' denotes a perfectly equal distribution while a coefficient of '1' denotes a perfectly unequal distribution (i.e. one individual holds all the income and the rest hold no income). Therefore the closer the Gini coefficient is to '1', the higher the inequality, while the closer it is to '0', the less the inequality.

aimed at moving people out of poverty into the middle class after which, it is hoped, they will become self-sustaining and contribute to economic growth.

This study sheds some light on the middle class by taking into consideration the high levels of inequality. The specific objectives of the study are:

- To define the middle class in the Zambian context;
- To determine the size of the middle class;
- To highlight some characteristics of the middle class; and
- To provide some policy recommendations which will help Government target the middle class more effectively.

It is envisaged that Government will shift from the current pro-poor policies, which only target the poor, to inclusive growth policies targeting all sections of society and the economy. Unlike the pro-poor growth agenda which focuses mainly on the welfare of the poor, inclusive growth is concerned with opportunities for the labour force in the poor and middle-class groups alike. It takes a long-term view and focuses on raising the pace of growth, on productivity growth, and enlarging the size of an economy while levelling the playing field for investment and increasing productive employment opportunities. By contrast, pro-poor growth has traditionally focused on measuring the impact of growth on poverty reduction by tracking various poverty measures (African Development Bank, 2012).

For this empirical study, we applied the methodology by Visagie (2013) to define and estimate the size of the middle class. We employed micro-level data from the nationally representative sample survey, the 2012 Labour Force Survey (LFS), conducted by the Central Statistical Office (CSO). **This study is primarily targeted at those in paid permanent or fixed-term contract employment only**. Thus, the majority of the workers in our sample can be considered to be formally employed. However, if they are not entitled to paid sick or annual leave and do not have employer-funded social security contributions to a pension fund, they are considered informally employed[2]. The issue of informal employment and the informal sector is an important one in Zambia as the majority of the people are either informally employed or work in the informal sector. According to the 2012 Labour Force Survey, out of the 5.5 million employed population, 88.6% were informally employed and 84.6% were in the informal sector (Central Statistical Office, 2013). However, the paid permanent or fixed-term contract employees who are the target of this study are largely among the 15 percent of the total employed population aged 15 years and above who are in the formal sector.

Due to the recall method employed in the survey, the estimates of the incomes are as good as the respondents are able to recall. Most households did not report any income at all. However, no attempt was made to replace the missing data with substituted values.

[2] About 20% of the workers in our sample are informally employed.

We summarise the main contributions of the paper into two parts. Firstly, we replicate the well-known approach of defining the middle class using the median income of households. However, due to the obtaining high income inequalities in Zambia, we also employ an alternative approach that considers those in 'middle class occupations'. Secondly, we contribute to the existing income distribution literature by devising a *household income distribution framework* which would enable Government to come up with inclusive growth policies, as opposed to pro-poor policies, which would target the types of households identified by the two approaches used in the study.

After this introduction, we set up the theoretical framework by considering different approaches used to measure and determine the extent of the middle class. Section 3 explains and contrasts the two approaches used and the criteria followed to determine the income thresholds, as well as the characteristics of the two groups that emerge out of the two approaches. Section 4 proposes strategies to grow the middle class. Finally, Section 5 concludes.

2 DEFINING THE MIDDLE CLASS

Class divisions are based primarily on economics. Where you fit in the class structure depends on the nature of the work you do as well as how much money you earn, how much wealth you have, and how much control you have over other people's labour. Anyone who works for a wage and whose work is closely supervised is considered to belong to the 'working class'. That includes most clerical workers, restaurant and retail workers, and many others. If you run a company you belong to the 'upper class', especially if your position comes with the kind of salary and benefits that put you in the top 1 or 2% for household wealth.

Then there are the in-between – someone who earns a salary and has significant autonomy in the workplace. That would include many mid-level workers in large companies, teachers, some retail managers, and many medical professionals. They are considered to be the 'movers and shakers' of the economy.

However, despite all the talk about the importance of the middle class and its implications on the economy, no single internationally accepted definition of middle class appears in the academic or popular literature. There are therefore various economic approaches to defining and measuring the middle class. We briefly consider some of them here.

Broadly speaking, the middle class is defined in two ways: in absolute income-based terms which identifies the middle class as those households with income or consumption in a specific range of standardised international dollars; and in relative terms (using the middle income range specific to a country).

Ravallion (2009) identifies a person as being in the developing world's middle class if that person lives in a household with consumption per capita between $2 and $13 a day at 2005 purchasing power parity. The lower bound is the median poverty line and a commonly accepted definition of poverty in developing countries while the upper bound is based on

the US poverty line (Ravallion, 2009). So this category might be described as people who are middle-class by developing-country standards but not by American ones.

Kharas (2010) recognises that middle class is as much a social designation as an economic classification, and chooses to measure the middle class in terms of consumption levels. He defines the global middle class as those households with daily expenditures between US$10 and US$100 per person in purchasing power parity terms. He contends that to some extent the choice of a middle class range is rather arbitrary (Kharas, 2010).

The African Development Bank uses consumption expenditure of between $2 and $20 a day to define the middle class (African Development Bank, 2011). Ncube and Shimeles (2012) define the middle class based on an asset index constructed from eleven different types of assets using a comparable set of micro data from the Demographic and Health Surveys (DHS) for forty-two African countries over two decades consisting of over seven hundred thousand household histories (Ncube, 2012). The paper employs an absolute measure of the middle class by defining it as those households that fall within the bounds of 50% to 125% of the median (weighted) asset index for the entire sample. The assets include source of water for the household (such as pipe water, tap water, water kiosk and well, etc.), condition of housing (number of rooms, floor material-perke, cement, ceramic, earth-, roof material-bricks, tin, grass, earth, etc.), ownership of durable assets-radio, television, telephone, refrigerator, car, etc.

In defining the middle class in relative terms, a seminal paper by Thurow (1984) uses the median income in America as the reference point and defines the American middle class as the group with incomes lying between 75% and 125% of the median (Thurow, 1984).

Another study in the United States of America defines the middle class households by their aspirations more than by their income. It is assumed that middle class households aspire to home ownership, a car, college education for their children, health and retirement security and occasional family vacations (Office of the Vice President of the United States - Middle Class Task Force, 2010).

Helen Wang (2010), an expert on China's middle class, contends that "middle class people have available one-third of their income for discretionary spending. This group of people has passed the threshold of survival and does not need to worry about the basics such as food and clothing, and it has some disposable income to buy discretionary goods and services" (Wang, 2010).

Closer to home, Visagie (2013) introduces two approaches that he uses to define the middle class in his policy paper titled *"Who are the Middle Class in South Africa? Does it matter for policy?"* One approach, a statistical one, selects households that fall in the 'actual middle' of the spread of household incomes in a country. These households represent the 'average' household in terms of income. This approach is often used in advanced countries. Households which fall within a specified income interval, defined around the middle (or median) household income are defined to be middle class. Due to differences in the size of households and the number of dependants, household income usually is divided by household size to calculate per person – or per capita – household income (Visagie, 2013).

Due to the high income inequality in South Africa, Visagie introduces the second approach which defines the middle class by choosing an interval of per capita household income that indicates some conception of relative affluence (often associated with certain patterns of expenditure and possessions). In order to assess affluence, he considers job quality as it relates to the type of occupation and requisite skill level. Hyunh and Kapsos (2013) contend that high-skilled occupations often entail a significant level of creative, decision-making, technical and communication competencies, and generally earn higher wages and offer better working conditions (Huynh, 2013).

Besides the ones discussed above, there are other definitions of the middle class. In this study, we adopt Visagie's two approaches which look at the actual middle group and the relatively affluent middle group based on occupations. This is due to the similarities in income distribution between Zambia and South Africa. There are several reasons why the middle group of households is of interest. Firstly, evidence suggests that the relative growth of the share of total income of those in the actual middle of the income distribution leads to greater political stability, to a citizenry with higher levels of human development (including better education and health) and even to higher levels of economic growth. Secondly, changes in the middle income interval would help to assess whether growth has benefited the 'average Zambian' or whether, over time, the level and size of those in the middle has evolved.

There are also clear reasons for analysing households who are relatively affluent: this group provides an important base of education and skills, promotes entrepreneurship and investment and is an important source of consumer demand. We adopt the International Standard Classification of Occupations (ISCO) for defining high-skilled, non-manual occupations, namely legislators, senior officials, managers, professionals, technicians and associate professionals as middle class.

These relative definitions of the middle group employed in this study have some limitations when it comes to international comparability. Due to different median incomes and the composition of the 'middle class occupations' in different countries, it will be difficult to definitively compare Zambia's middle class to that of other countries.

3 COMPARING THE TWO APPROACHES

3.1 Median Approach

Our main concern is to define which specific income range the middle class belongs to, using the income distribution function. If m is the middle of the income distribution measured by the median and ε is the proportion of households around m, we could consider that those households with income between $m - \varepsilon$ and $m + \varepsilon$ belong to the middle class and therefore, the proportion of households in the range represent a measure of middle class size. However, this definition depends on the value of ε. The question is: what is the value of ε, the income range that defines the middle class?

The lower bound of the middle of the income distribution has long been a subject of discussion internationally. A range of relative poverty standards are used but there are

three ranges that come out prominently. Internationally, the most commonly used threshold for the lower bound of the middle of the income distribution is 50% of the country's median household income. In the European Union, the European Statistical Office has recommended a standard of 60% of median income for measuring poverty and social exclusion. In the United States, 40% of the median line is used because of its proximity to the U.S. poverty line (Danziger, 2009).

Households with income falling below these thresholds are considered low income households. The upper bound – 40% or 50% or 60% above the median income – is not based on any evident rationale but just the need for symmetry around the median.

Using 40% above and below the median as the threshold, we find that 38.1% of the households fall within the middle group; using 50% as the threshold, 36.5% of the households fall within the middle group, while 30.8% of the households fall within the middle group if we use 60% as the threshold. Table 1 provides more information on the middle group as well as the adjacent lower and upper groups.

Table 1: Distribution of households by income groups and various thresholds, 2012

	Thresholds		
	40% of median	**50% of median**	**60% of median**
Lower group	20.0%	24.6%	31.4%
Middle group	38.1%	36.5%	30.8%
Upper group	41.8%	38.8%	37.9%

Which of these thresholds should we employ in our analysis? Using Analysis of Variance (ANOVA), we test if there are significant differences in the populations of the lower, middle and upper groups for the three specified income thresholds of 40%, 50% and 60% of the median household income at 5% level of significance. The null hypothesis is that there are no significant differences in the share of the population despite using different thresholds around the median. For the null hypothesis to be rejected as false, the result has to be identified as being statistically significant. This is determined by calculating a p-value, which is the probability of observing an effect given that the null hypothesis is true. The null hypothesis is rejected if the p-value is less than the significance or α level, which we have set at 0.05.

After performing the ANOVA, the p-value as shown in the Table 2 is 0.999, which is greater than 0.05. Therefore, there is no reason to reject the null hypothesis and we conclude that, at 0.05 level of significance, there are no significant differences in the groups when the three different income thresholds (40%, 50% or 60%) are employed.

Table 2: ANOVA to test for differences among the income groups

ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	2.22E-07	2	0.00000	0.00002	0.99998	5.14325
Within Groups	0.042047	6	0.00701			
Total	0.042047	8				

Therefore, any of the three thresholds may be applied. In analysing the actual middle of the income distribution in Zambia for 2012, we therefore employ an interval of 50% above and below the median per capita income per month (which was K200 in 2012). This means that the middle group consists of households earning between K100 and K300 per capita per month – in 2012 prices. Using a representative household size of 5.1 (obtained from the data), the per capita amount will then translate into a total household income of between K510[3] and K1, 530 per month for the middle group.

Table 3 provides more information on the middle group and the adjacent lower and upper groups. It also shows the share of total income received by the respective lower, middle and upper groups.

Table 3: Income intervals and share of households and total income by literal middle income group, 2012

Literal middle			
	Lower group	**Middle group**	Upper group
Income intervals (per capita)	< K100	**K100-K300**	K300+
Income intervals (total household income)	< K510	**K510-K1,530**	K1,500+
Class size (no. of households)	214,602	318,015	338,118
% of households	24.6%	36.5%	38.8%
% of total income	2.4%	12.1%	85.5%

Source: 2012 Labour Force Survey

The middle group accounts for 36.5% of the 870, 735 households who have at least one wage earner in a paid permanent or fixed-term contract job. However, they only accounted for 12.1% of the total income.

3.2 Affluence Approach

In order to measure the middle class in terms of affluence, we determine the income interval to correspond to households in which the highest income earner is in a typically

[3] The lower bound of the income distribution is significantly above the lower bund of the minimum wage threshold of K420.

'middle class' occupation. Middle class occupations include managers, senior officials, legislators, professionals (such as teachers and nurses), associate professionals and technicians[4]. 'Working class' occupations would include plant and machinery operators, craft and related trade workers, skilled agriculture and fishery workers, service and market sales workers and all elementary occupations[5].

Table 4: Mean per capita and total household income by occupation, 2012

Occupation		Mean per capita monthly salary	Mean household size	Total household income
Middle class occupations	Managers	5,281	5	26,231
	Professionals	1,801	3.2	5,766
	Technicians and Associate Professionals	2,068	3.7	7,670
	Other (including armed forces occupations)	2,065	4.3	8,872
Working class occupations	Clerical Support Workers	1,730	3.4	5,887
	Service and Sales Workers	430	4.9	2,125
	Skilled Agricultural, Forestry and Fisheries Workers	189	5.3	1,008
	Craft and Related Trades Workers	383	5.1	1,969
	Plant and Machine Operators, and Assemblers	592	4.9	2,908
	Elementary Occupations	394	4.8	1,899
	Not Stated	616	5.1	3,112

Source: 2012 Labour Force Survey; Note: No imputations were made for unreported wages for some occupations; this may explain the relatively lower values for professionals.

On average, households in which the highest income earner works in a middle-class occupation have income of somewhere between K2, 065 and K5, 281 per person per month (in 2012 monetary terms). Using the respective mean household sizes for the occupations, this translates to incomes ranging between K5, 766 and K26, 231 per household per month.

Table 5 provides more information on the adjacent lower and upper groups. It also shows the share of total income received by the respective lower, middle and upper groups.

[4] Due to its size, we also include the "Other occupations" category which includes armed forces.

[5] These categories are taken from predetermined occupational groups in the International Standard Classification of Occupations (ISCO). Although not explicitly defined as 'middle' or 'working' class categories in the ISCO, theses occupational groupings can be ranked into these two groupings.

Table 5: Income intervals and share of households and total income by relatively affluent middle income group, 2012

Relatively affluent middle			
	Lower group	Middle group	Upper group
Income intervals (per capita)	<K2, 065	K2, 065 – K5, 281	K5, 281+
Income intervals (total household income)	<K5, 766	K5, 766 – K26, 231	K26, 231+
Class size (no. of households)	18,183	41,824	11,430
% of households	25.5%	58.5%	16.0%
% of total income	0.6%	35.9%	63.4%

Source: 2012 Labour Force Survey

There are 71, 438 households in which there are workers employed in the middle class occupations. Of these, 58.5% of the households (or 41, 824 households) fall in the middle group.

These findings show that the 'middle class' (as understood in everyday usage) is not in the middle of the income distribution. The average incomes of those in the middle of the income distribution are within the same range as the legislated minimum wages. This suggests that households in the middle of the income distribution are actually low income earners.

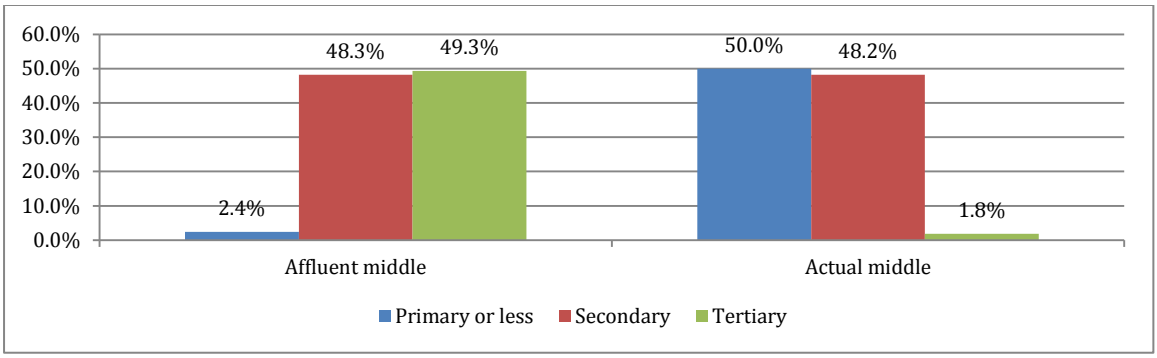
Using the relative affluence approach gives a more realistic picture of who the real middle class are. These households' monthly incomes are above the minimum threshold for personal income tax exemption, therefore making them the main tax payers and therefore drivers of the economy.

These findings are further explored in Section 4 within the proposed household income distribution framework.

3.3 Characteristics of the Two Groups

The differences between the two groups go beyond income and can be expected to reflect aspects of poverty and deprivation. Figure 1 shows that the average educational achievement of the actual middle is far below that of the relatively affluent middle class. While those who have attained secondary school education are the same between the two groupings, less than 2% of the actual middle has tertiary education, compared to 49% for the relatively affluent middle.

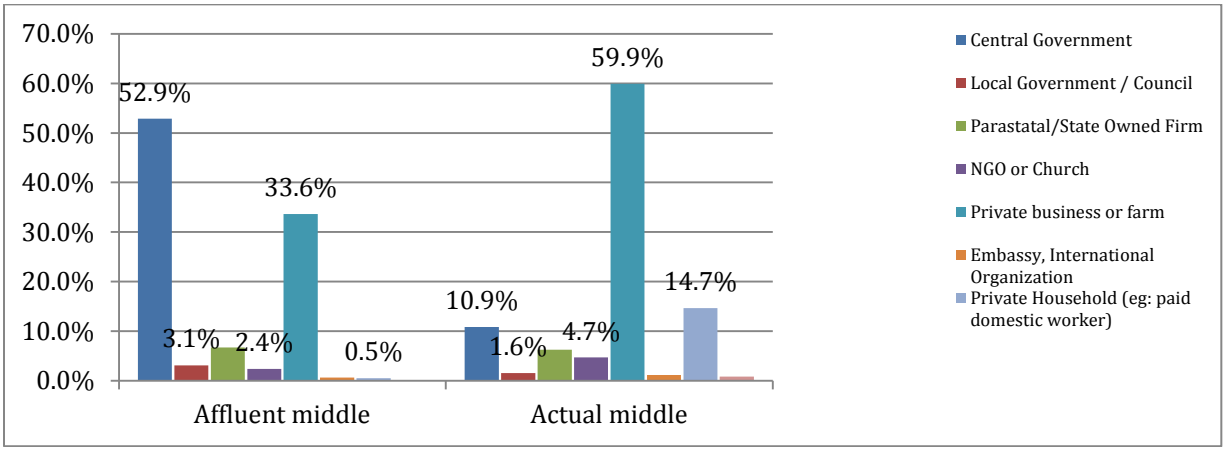
Figure 1: Comparison of educational attainment between the actual middle and the relatively affluent middle group, 2012



Source: 2012 Labour Force Survey

Figure 2 contrasts the two middle groups in terms of the sectors of the economy where the highest income earner in a household works. Just over half of the relatively affluent middle work in Central Government, while 34 % work for the private sector. With regard to the actual middle, about a 60% are employed in private businesses or farms, and about 15% are employed as domestic workers in private households.

Figure 2: Comparison of sectors in which the actual middle and the relatively affluent middle groups work, 2012

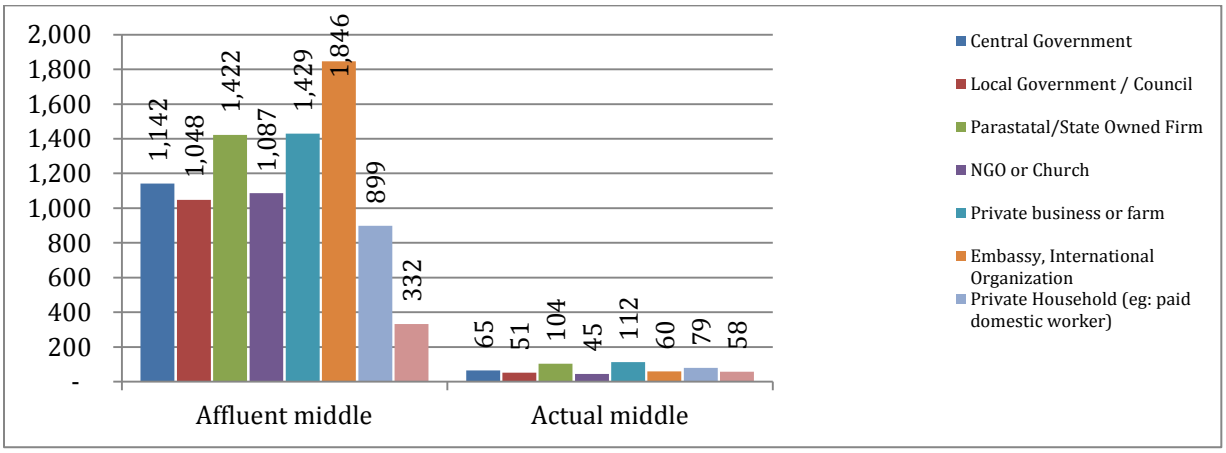


Source: 2012 Labour Force Survey

Figure 3 shows the glaring disparities in per capita average household monthly incomes between the affluent middle and the actual middle whose highest earner is employed in the specified sectors. For the affluent group, those employed in embassies and international organisations had the highest per capita household income, followed by those in the private sector and parastatals firms. Those employed in private households and producer cooperatives had the lowest per capita household incomes.

For the actual middle, those in the private sector and those in parastatals had the highest per capita household income. The differences in wages between the affluent middle and the actual middle are as high as 30 times when those employed in embassies and international organisations are compared.

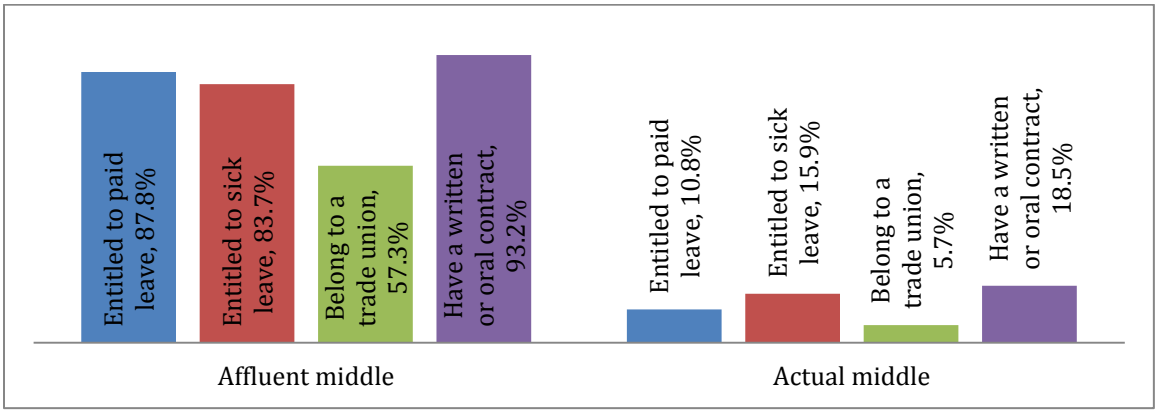
Figure 3: Comparison of per capita household incomes by sectors in which the actual middle and the relatively affluent middle groups work, 2012



Source: 2012 Labour Force Survey

Figure 4 shows a comparison of selected decent work indicators between the relatively affluent middle and the actual middle. These indicators are entitlement to paid and sick leave, belonging to a labour union and having an employment contract. The results show that the relatively affluent middle by far outscores the actual middle in the selected decent work indicators.

Figure 4: Comparison of selected decent work indicators between the actual middle and the relatively affluent middle groups, 2012



Source: 2012 Labour Force Survey

4 STRATEGIES TO GROW THE MIDDLE CLASS

Before measures and strategies can be devised to grow the middle class, the distribution of household income has to be brought into perspective in order to have a definitive measure of the middle class. The literal middle in Table 3 and the relatively affluent middle in Table

5 can be used to develop an income policy tool for targeting Government interventions aimed at alleviating poverty and growing the middle class. There are many strategies for growing the middle class. However, we only focus on one short term measure (enforcing the decent work agenda) and one long term measure (investing in public education and skills training), both of which are key in growing the middle class.

4.1 Development of a household income distribution framework

To start with, paid employees in permanent or fixed term contracts either get a monthly wage that is below or higher than the PAYE exempt threshold. Government uses the PAYE exempt threshold to give relief to what they consider low income households. We therefore use the PAYE exempt threshold as the basis for developing the household income framework. We therefore define **low income households as those whose total household income from wage earnings is less than the PAYE exempt threshold**. The literal middle in Table 3 fall below the PAYE exempt threshold and can therefore be considered to be low income households, going by this definition. Additionally, the middle group falls around the *minimum wage range* which is defined, according to Statutory Instruments 45, 46 and 47 of 2012[6], as monthly wages between K420.00 (for a domestic worker) and K1, 653.94 (for a book keeper or accountant).

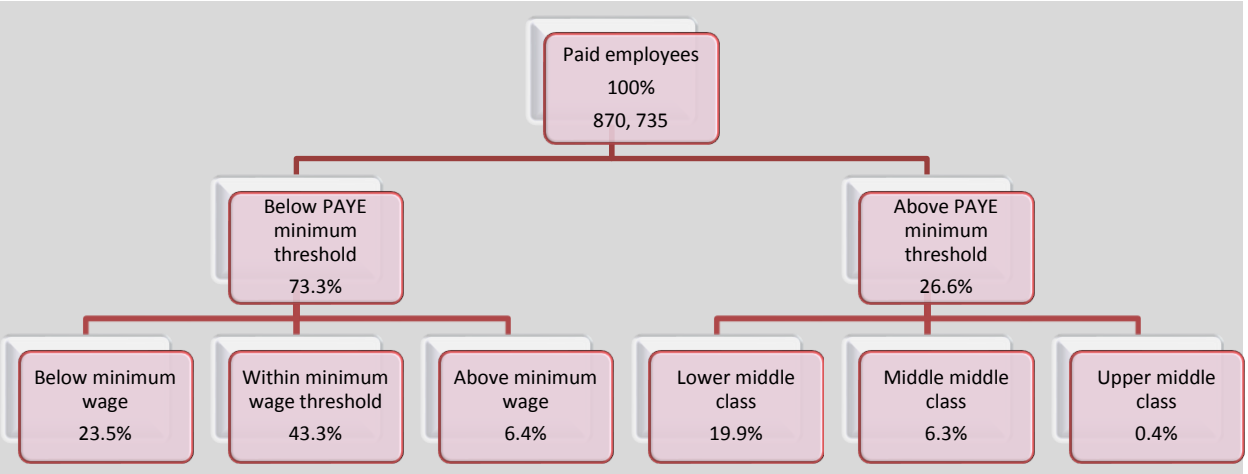
Therefore, the low income households can be further broken down into three categories: (i) those above the upper bound of the minimum wage threshold (but below the PAYE threshold); (ii) those between the upper and lower bounds of the minimum wage thresholds; and (iii) those below the lower bound of the minimum wage threshold.

Table 5 for the relatively affluent middle group has households whose monthly wages are above the PAYE tax exempt threshold. These can equally be broken down into three distinct groups: (i) the lower relatively affluent middle group (those above the PAYE threshold but below the relatively affluent middle group); (ii) the relatively affluent middle; and (iii) the upper middle group[7]. Chart 1 shows the household income framework developed for this study.

[6] Government announced an increase in the minimum wage for domestic workers, shop workers and general workers who have no labour union representation and are not covered by collective bargaining agreements. The new minimum wages were announced in July 2012 through Statutory Instruments 45, 46 and 47.

[7] We do not consider an upper limit for the upper middle to distinguish it from the upper class due to the relatively small number of households, income under-reporting by rich households and the well-known problem of survey non-compliance at the top-end of the distribution. This could perhaps be pursued in a future study

Chart 1: Proposed household income distribution framework



Based on this framework, it can be shown that only 26.6% of the working households are above the PAYE exempt threshold. The results also show that the relatively affluent middle only accounts for 6.3% of the households of paid permanent or fixed term contract workers. Those in the minimum wage threshold account for 43.4% of the households. Those below the minimum wage threshold constitute 23.5% of the households, while the upper middle class accounts for 0.4% of the households.

4.2 Guaranteeing Decent Work for Low Income Households

Using this proposed framework, Government can have more targeted interventions focussing on households below the PAYE exempt threshold to improve their living standards to decent levels, as it has done with social cash transfers, farmer input support programme, revision of the minimum wage legislation, etc.

What would happen to the level of income if every worker in both the actual middle and the relatively affluent middle worked under decent conditions (i.e. has an employment contract, are entitled to paid and sick leave, belong to a trade union, etc.)? To answer this question, we simulate the data using Ordinary Least Squares regression analysis to impute average monthly earnings.

Specifically we model logged monthly earnings as a linear function of social security schemes, union representation, formal job contract, paid and sick leave and a series of educational attainment and skills training, sex and region as control variables. The model is estimated on all the working age population who have positive earnings. This model assumes that the potential earnings of middle workers are, conditional on the observed characteristics we control for in the regressions, comparable to the observed earnings of all working age adults who worked in 2012.

Table 6: OLS regression model for workers in decent work, Zambia, 2012

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	11.541	.004		2,779.81	0.000
Education Attainment	.265	.001	.277	325.91	0.000
Skills training	.301	.003	.098	115.90	0.000
Region (urban =1, rural =0)	.417	.002	.153	182.43	0.000
Age last birthday	.025	.000	.240	282.13	0.000
Written contract or an oral agreement	.064	.001	.067	75.24	0.000
Member of any trade union	.013	.001	.018	19.11	.000
Paid sick leave in case of illness or injury	.050	.001	.061	57.20	0.000
Paid leave in his/her main job	.063	.001	.070	63.48	0.000
Employer contribute to any social security scheme	.045	.001	.058	61.70	0.000
Sex	.116	.002	.045	53.61	0.000
a. Dependent Variable: log_income					

After ensuring that all the model fitting diagnostics are met, the OLS model is expressed as:

$$\text{Log Income} = 11.541 + 0.265 \times \text{education} + 0.301 \times \text{skills training} + 0.417 \times \text{region} + 0.025 \times \text{age} + 0.064 \times \text{contract} + 0.013 \times \text{union} + 0.013 \times \text{sick leave} + 0.063 \times \text{paid leave} + 0.045 \times \text{social security} + 0.116 \times \text{sex}$$

Using this OLS regression model and applying it on the data for the actual middle workers, having union representation, a formal contract, entitlements to paid leave and paid sick leave, and social security scheme (controlled for by educational attainment, skills training, sex, age and residence) would substantially boost the per capita median incomes of actual middle group from K200 per month to K693.50. Employing an interval of 50% to 150% of the median per capita income per month will make the median per capita income range between K346.75 and K1, 040.25 per month. This translates to household income of between K1, 803.10 and K5, 409.30 per month (in 2012 prices).

Considering that the relatively affluent middle had a major proportion of its workforce already working under decent conditions, the enforcement of decent working conditions would benefit the actual middle a lot more than the relatively affluent middle.

4.3 Public investment in education and skills training

It has often been said that societies with a strong middle class make greater investments in public goods such as education and skills training, which helps fuel their future economic success. Zambia's future economic success depends in large part on the middle class who also depend on the quality of the country's public education. Education increases productivity, sparks innovation, and boosts economic competitiveness. In a globally competitive environment, we cannot afford to have a poorly educated workforce.

Higher educational attainment such as college or university leads not only to higher rate of returns but also higher average wages and salaries. However, out of our sample of people aged 15 and above who had permanent or fixed-term contract jobs, only 2.7 percent reported having achieved tertiary education. With regard to skills training, only 6.7 percent reported having skills training.

The median per capita income for household whose highest earner has tertiary education is 7 times higher than those with primary education, i.e. the median per capita income for highest earners with primary school education is K117, while for tertiary education it is K800. The trends are similar for the various income groups within the framework.

Table 7: Comparison of per capita household median income for household heads, 2012 (ZMW)

		Income distribution framework						
		Below minimum wage	Within minimum wage	Above minimum wage	Lower affluent middle	Affluent middle	Upper affluent middle	Total
		Median	Median	Median	Median	Median	Median	Median
Level of education	Primary or less	44	143	333	440	1,667	7,500	117
	Secondary	63	200	400	632	1,500	9,167	300
	Tertiary	76	250	400	733	2,200	10,800	800
	Total	50	167	360	617	1,667	9,167	200

Source: 2012 Labour Force Survey

It should be noted, however, that having similar levels of education is no guarantee that the incomes will be in the same range. As shown in Table 7, household heads with tertiary education have a median per capita household income ranging from K76 to K10, 800 per month. Thus, policy interventions would have to take into consideration the disparities within and across the educational levels.

5 CONCLUSIONS

In this study, we have considered defining the middle class based on the median income and based on the relatively affluent workforce. We find that households in the 'middle of the pack' fall below the PAYE tax exempt threshold and generally work in low-earning occupations. The middle group accounts for 36.5% of the 870, 735 households who have at

least one wage earner in a paid permanent or fixed-term contract job. However, they only accounted for 12.1% of the total income.

In contrast, those in relatively affluent occupations have incomes above the tax exempt threshold and are actually near the top of the country's income ladder. The contrast in the nature of the 'middle' across the two approaches has important ramifications for policymakers who seek to promote the size and living standards of the middle class. There are 71, 438 households in which there are workers employed in the middle class occupations. Of these, 58.5% of the households (or 41, 824 households) fall in the middle group.

If the middle class is conceptualised in terms of relative affluence, growing the relative size of the middle class would amount to supporting economic policies which would favour the relatively affluent and leave the more than 70% lower income households behind, thereby increasing income inequality and income polarisation. Nevertheless, this would have economic benefits such as growing the pool of people with skilled occupations and raising consumer demand within the domestic economy, which could lead to higher economic growth.

In contrast, if the middle class is defined as the actual middle group, then increasing the relative size of the middle class – many of whom are quite poor – would imply supporting economic policies that favour the poor and non-affluent and thus decrease the polarisation and inequality of income. This view of the middle class provides an important tool for understanding the status of the 'average' Zambian and provides policy makers with a more balanced assessment of development in the country.

Both definitions of the middle class are useful as analytical tools, but they need to be understood as distinct categories. It is exactly because of high inequality in incomes in Zambia that the two conceptualisations provide such different pictures of the middle class. This necessitates great care in using these concepts, especially in policy design and when referring to changes in the economic status of the Zambian middle class.

We have therefore proposed a household income distribution framework which combines the two distinct categories to help Government devise inclusive growth policies, as opposed to pro-poor growth policies only. Based on this framework, it can be shown that only 26.6% of the working households are above the PAYE exempt threshold. The results also show that the relatively affluent middle only accounts for 6.3% of the households of paid permanent or fixed term contract workers, while those in the minimum wage threshold, which correspond to the actual middle group, account for 43.4% of the households.

We use the household income distribution framework to devise targeted inclusive policies by considering the enforcement of the decent work agenda and investing in public education. We demonstrate that enforcing the decent work agenda can substantially improve the standard of living of especially the median income workers; having bargaining power, through union representation, insisting of formal verifiable contracts as well as

other decent work entitlements would help improve their working conditions and thereby improve their incomes. This is actually akin to formalising informal employment. The investment in public education, though long term, leads to higher economic returns. However, in bridging the wage gaps, consideration has to be made to take care of the huge disparities in income both within and across educational levels.

Implementing such inclusive measures would not only reduce the income gap between the relatively affluent middle class and the actual middle group but bring some of these workers into the PAYE tax bracket, which would boost Government's revenue required for public investments such as education.

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