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**Estimating the Middle Class
in Pakistan**

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ESTIMATING THE MIDDLE CLASS IN PAKISTAN

The concept 'middle class' is one of the most commonly used terms in the social sciences, including economics, sociology and political science. Despite its frequent use there is, however, no consensus on what the term exactly implies and its meaning remains ambiguous depending primarily on the context in which it is used. It is viewed as the class that is between, and separates, the lower and the upper classes, that is the rich and the poor, but there is no agreement on the exact boundaries that separates them. Most of the definitions and measurements of the middle class continue to be somewhat arbitrary and vague.

Historically, the concept of 'class' has been there for long but the very recent interest in the middle class has stemmed from the emergence of this class in the Asian economies, especially India and China, which continued to grow even during the global recession. Consumer spending in the developing Asia continued to grow during a period when the developed world was struggling to keep their economies afloat at both the national and household levels. It was an important development, as the middle class has always been deemed critical to a country's socio-economic and political growth and ensuing stability. Hence, not surprisingly the middle class has held a centre stage in most economic discourses, and depending on the stage of its development and state of the economy the middle class has been attributed to be, among other things, 'growing' 'stressed', 'shrinking', 'powerful', 'threatened', 'burgeoning', 'mobilised', 'rising', or 'marginalised'. In a world of globalised economies this raises the crucial question, 'who constitutes the middle class'? An Indian schoolteacher with an annual income of \$2,500 is considered middle class but for an American family the amount may have to be around \$200,000 before it considers itself middle class [Aho (2009)] making any income based universal definition meaningless.

The concept 'upper, middle and lower' class was mainly developed in sociology in reaction to the more rigid and deterministic Marxist concept of class but the definition remains ambiguous. For the estimation of middle class, however, it is necessary to first be clear about what exactly constitutes being a middle class. The present paper first briefly describes the different ways of analysing and defining class, followed by exploring the importance of the middle class and the various means of estimating its size. The paper then suggests a refined measure of estimating the middle class in Pakistan, a measure that captures all possible aspects of the class given in its various definitions. Before reaching conclusions, the paper also explores the regional and occupational context of the middle class.

Concept of Class and the Notion of the Middle Class

As very aptly put by Streats (1979: 377), “The concept ‘middle class’ is one of the most enigmatic yet frequent in the social sciences”. Part of this difficulty can be ascribed to the ambiguity regarding the very concept of class. Classical perspective on the concept of class can be traced back to Karl Marx with his classification based on the relationship to the means of production and Max Weber’s categorisation on the basis of wealth, prestige and power.¹ In both Weberian and Marxist traditions there is a rejection of any simplistic gradational definition of class as they link people’s social relations to economic resources of various kinds. These schools view as social relations having an impact on the material interests of people and forming the foundation of conflict and cohesion. Marx and Weber, however, basically differ in their theoretical orientation, reflected in Marxian notion of exploitation and Weberian ‘life-chances’.

There is a vast body of literature on the concept of class having its roots both in the Marxian and Weberian schools of thought with each arguing about inclusion of certain properties in defining classes. For instance, classes have been defined by: position and role [Mosca (1939); Pareto (1963)]; authority relations [Dahrendorf (1959)]; status rank [Warner (1960); Lenski (1966)]; inter-marriage [Schumpeter (1951)]; cross-classification of property and authority [Ossowski (1963); Wright (1979)]; degree of structuration² [Giddens (1973)]; and property, employment and authority relations [Goldthorpe (1987), Erikson and Goldthorpe (1992)]. It would not be wrong to state that all these definitions of class in a broad way follow the Marxian and Weberian concept of class pursuing their respective notion of ‘exploitation’ and ‘life-chances’. That is, intra-class conflict leading to ‘exploitation ‘of one by the other, and class as a source of certain qualities and actions ensuing in the associated ‘life-chances’.

Wright (2003, pp. 1–3) provides a useful summary of the different underlying themes resulting in the variety of class concepts. He divides these themes in five categories which are as follows:

- (1) *Subjective position*—the way people locate themselves and others in a social structure characterised by inequalities.
- (2) *Objective position*—distribution of people objectively on a gradational scale of economic inequality, represented mainly by income or wealth. This results in classes such as upper class, middle class, upper middle class, lower class and underclass.

¹For a useful summary on both schools of thought read Wright (2003).

²Giddens proposed that what humans do is dependent on the pre-existing social structures that are governed by norms. All human actions are restricted by the elements that create the social structures. Giddens believed that structures (traditions, institutions and expectations) are universally steady but could be changed mainly by some unintentional consequences of action, for instance, when people begin to pay no attention to the social norms, replace them, or follow them in a different way.

- (3) *Relational explanation of economic life chance*—also characterising the Marxian and Weberian schools of thought, it explains inequalities in economic life-chances including standards of living. Based on the relationship of people to income-generating resources or assets, class becomes a relational, rather than a gradational concept.
- (4) *Historical variation in systems of inequality*—focussing on the macro-level instead of micro-level, it explains the variation across history in the social organisation of inequalities.
- (5) *Foundation of economic oppression and exploitation* -looks into the nature of changes needed to eliminate economic exploitation within societies.

So where does in the above-mentioned scheme of things fall the middle class? In relating it to the means of production, as done by Marx, we can consider the middle class to be falling somewhere in between those who own the means of production (the *bourgeoisie*) and those who must sell their labour for survival (the *proletariat*). A class that came to be referred to as the *petty bourgeoisie*, includes small producers/proprietors, like shopkeepers and small manufacturers. Similarly, in the Weberian notion of class, middle class can occupy the mid-position on the continuum of wealth, power and prestige. In the *wealth* continuum middle class can be presented by individuals who are neither rentiers nor unskilled labourers. On the *power* continuum they can be the people who are not as weak as to carry out the commands of others but not as influential to achieve their goals despite opposition. Similarly, they cannot be individuals who receive little respectful treatment nor the ones who are entitled to deferential and respectful treatment. The middle class is, thus, on the middle rung of all Weberian continuums.

Sridharan (2004), while analysing the Indian middle class, believes that the classical approach to the middle class is inadequate for analysing contemporary societies, especially those in the developing world. He argues that for over a century the growth of economies, specifically capitalist ones, has relied on advancements in knowledge and improvements in the regulatory state machinery leading to a growth of white-collar occupations, salaried and self-employed, marked by increasing degree of education. The income of this new group of professionals normally falls somewhere between those of the capitalists (the equivalent to Marxian *bourgeoisie*) and the manual workers (the Marxian *proletariat*), and signify the new middle class. The size and influence of this class has increased with time, affecting the political and ideological aspects of society. Their significance also grows as economies move towards the services sector.

This new middle class, however, is not considered a real class by Wright (1985). He considers it a “contradictory location within class relations” (p. 9). Wright considers this new class of professionals and white-collar workers different from the petty bourgeoisie comprised of small independent producers and shopkeepers. Relative autonomy of this new middle class, especially in the developing countries, distinguishes it from other classes—an autonomy that

originates from the possession of skills and say in public affairs. Bradhan (1989, 1994) shares this view and considers professionals, including all white-collar workers, as the “dominant proprietary class” because of the level of human capital manifested in their higher education, technical expertise and possession of scarce skills. The dominant proprietary classes, thus, now comprise industrial capitalists, big farmers and the professionals, both civil and military.

What Makes Middle Class Important

The middle class is increasingly considered a precondition of stability in the social structures, a means of mitigating inequalities in a society, and a pathway to growth and development. This idea has gained strength from the events in China and India where the burgeoning middle class is believed to be holding the future of these countries. It may be mentioned here that the importance attributed to the role of the middle class is not a recent phenomenon. For instance, Landes (1989) talks about England’s early dominance in terms of the English middle class of the 18th and 19th centuries. More recently, Birdsall, Graham and Pettinato (2000) consider middle class the backbone of both market economy and democracy in the face of globalisation. Likewise, Easterly (2001) after analysing a large number of countries concluded that nations with a large middle class tend to grow faster, at least in situations of ethnic homogeneity.

“Thus it is manifest that the best political community is formed by citizens of the middle class, and that those states are likely to be well-administered in which the middleclass is large where the middleclass is large, there are least likely to be factions and dissension”.

Aristotle 306 BC (quoted in Easterly, 2001:1)

The above-stated stabilising role of the middle class originates from the buffer role it seems to play between the polar tendencies of the lower and upper classes. Easterly (2001), for instance, shows that a higher share of income for the middle class is linked with higher growth, more education, better health and less political instability and poverty in a society. These qualities make a decline in the middle class a potential threat to economic growth and political stability. Esteban and Ray (1999), for example, show an occurrence of more frequent societal conflict in the presence of a weaker middle class.

The middle class is increasingly seen as a group gaining political influence that can be associated with the progressively larger role they are playing in the public and services sectors. The middle class is also linked with the nature of government a country has, as shown by Moore (1966) in his classical work associating democracy with the middle class. This idea is supported by Collier (1999) when he studies various democracies finding the middle class to have allied with the lower classes to push for an inclusive political system. On the contrary, however, he also found instances where the middle class formed an alliance with the upper class putting up with a restricted democracy or even a dictatorship. A similar relationship was also

found by Leventouglu (2003) when he observed an ambivalent behaviour of the middle class during political transition. Depending on the situation, the middle class could act as an agent of change or work for maintaining the status quo. If the middle class believed that their children would retain their middle class status then they would not resent semi-democracy or even encourage an autocracy to block any redistribution. On the other hand, if the middle class is not guaranteed their status they would strengthen the lower class so as to push for redistribution under democracy. This ambivalent behaviour makes the role of the middle class even more politically important, and as pointed out by Acemoglu and Robinson (2003, p. 8-1) the “decisive voters in democracy are often from the middle class”.

All other roles of the middle class granted, including those discussed above, the most significant is the one that links it with the growth and development of economy. Bannerjee and Duflo (2007) provide a useful summary of the relationship between the middle class and economy. Theorising back to Weber and using a vast body of literature, they delineate three reasons for considering the middle class vital for economies. These include:

- (1) New entrepreneurs emerge from the middle class who create employment and opportunity of growth for the rest of society.
- (2) The middle class with its strong values stresses on the accumulation of human capital and savings.
- (3) The middle class consumer is willing to pay a little extra for quality, thus, encouraging investment in better quality production and competitive marketing, which spurs higher level of production and leads to increasing income for everyone.

All these aforementioned factors make the middle class vital for any economy. There are, however, words of caution. Nirvikar (2005) and Basu (2003) while commenting on the middle class consumption pattern warn that although consumer spending enhances aggregate demand and stimulates the economy in the short run, it does not necessarily translate into higher sustainable growth. They also voice concern about the sustainability of these high levels of consumption, and the depressing effect they have on savings, and hence consequentially on investment.

Measuring the Middle Class

After studying the middle class in various countries, Stearns concluded, “Recent theory does not even include a satisfactory statement on the size of the middle class, caught as it is between the dazzling power above and massive numbers below” (1979, p. 378). The desire to statistically measure socio-economic phenomenon, like the middle class, believes Cole (1950), originates from the success of such exercises in natural sciences. The task of quantification, however, is much tougher in social sciences due to the complexity and variability of social realities. Unlike facts in natural sciences, with their universal applicability, social realities dealt by social sciences cannot be generalised even at the micro level, leave alone

universally. Despite this handicap extensive literature can be found studying the middle class not just theoretically but empirically as well.

For the identification and measurement of the middle class, mainly two methods are used to define who is included, and who is not, in the middle class. One way to do it is in relative terms and the other one is the absolute way. The second issue is the premise of inclusion, be it in relative or absolute terms. The most commonly used dimension is purely economic in nature as it bases the rationale of inclusion, or exclusion, in the middle class solely on personal income or expenditure. There is however criticism on this over reliance on income and for ignoring other factors, like occupation, wealth and labour market relations [Goldthorpe (2009)].

If we look at the various ways of quantifying the middle class, as presented in Table 1, we find that most of the definitions are absolute in nature using purely economic rationale for inclusion in the middle class. The definitions use intervals of income values, with lower and upper limits, to measure the middle class or define it by using different median values of income. It would not be wrong to re-emphasise here the arbitrary nature of, and the lack of consensus on, the different ways of measuring the middle class, evident in the absence of agreement on the upper and the lower limits demarcating the boundaries for the middle class in the total population.

Table 1

Selected Definitions and Methods of Measuring the Middle Class

No.	Author	Approach	Rationale	Definition
1.	Thurrow (1987); Birdsall, Graham and Pettinato (2000)	Relative	Economic	75% to 125% of the median income
2.	Easterly (2001)	Relative	Economic	Expenditure quintiles two to four
3.	Milanovic and Yitzaki (2001)	Absolute	Economic	Income of PPP \$12-\$50/day/person
4.	Ravallion (2009)	Absolute	Economic	Expenditure of PPP \$2-\$13/person/day
5.	Birdsall (2010)	Absolute	Economic	Income of PPP \$10/ person/day but not in the top 5%
6.	Acs and Loprest (2005)	Absolute	Economic	Double the Poverty Line of PPP \$2/person/day
7.	Wheary (2005)	Absolute	Economic	Double the national poverty line
8.	Nehru (2010), Yuan, <i>et al.</i> (2011)	Absolute	Economic	Income from PPP \$2 to \$20/person/day
9.	Banerjee and Duflo (2007)	Absolute	Economic	Expenditure of PPP \$2-\$10/person/day
10.	Peichl, Shaefer and Schneider (2008)	Relative	Economic	Double the median income
11.	Brezenski (2010)	Relative	Economic	Three times the median income
12.	McKinsy (2010)	Absolute	Economic	Annual household income between PPP \$13,500 to \$113,000
13.	ADB(2010); Bhandari (2010); Chun (2010)	Absolute	Economic	Expenditure from \$2 to \$20/person/day
14.	Gilbert (2003) ¹	Relative	Economic and Occupation	Gradation based on income and nature of occupation
15.	Goldthorpe (1992)	Relative/absolute	Occupation	Three main clusters - the service class, the intermediate class, and the working class.

Source: Found in References.

Note: 1. PPP - Purchasing Power Parity.

2. See Figure A-1 in the Annexure for details.

Estimating the Middle Class in Pakistan

This brings us to the question, “How big is the middle class in Pakistan”? Using the Pakistan Social and Living Measurement Survey (PSLM), conducted in 2007-08, the paper measures the magnitude of the middle class through the definitions given above in Table 1. It may be mentioned here that it is a household, and not an individual, that by all these definitions is categorised as the middle class. Depending on the definition applied, it is found that the size of the middle class ranges drastically in the country, as can be seen from Table 2. Applying the definitions having solely an economic rationale, we find the middle class to range from 60 per cent of the population (Table 2, Definition One) to being totally non-existent (Table 2, Definition Five). Translating it in number of people, using the population base of 187 million as it stands on mid-year 2011 [USCB (2011) and UN (2009)], the size of the middle class ranges from a huge 112 million to no one. This variability, as stressed earlier, reflects the complexities and arbitrariness associated with defining and measuring the middle class.

Among all the definitions given above, Definition Eight and Definition Thirteen, based on gradation of income and expenditure per person per day, respectively, are currently the most extensively used measure employed to estimate the middle class [as also used by Chun (2010) and Bhandari (2010) among others].³ This definition too, however, suffers from the same drawback of relying solely on one criterion. As also pointed out by Eisenhauer (2008), Atkinson and Bourguignon (1982), Kolm (1977), Bourguignon and Chakravarty (2003) and Gilbert (2003), being a part of the middle class should be ascertained by a person’s socio-economic attributes holistically. Income is an important aspect but other qualities like level of health, wealth, education and specialised knowledge are also significant factors for constituting a class.

Technically speaking too, most of the definitions suffer from serious drawbacks. For instance, the ‘quintile approach’ can be useful in measuring or comparing income or expenditure growth but cannot be used as a method to estimate the middle class as the size cannot shrink or expand and by definition would permanently remain at 60 percent. Any denomination of the median income should also be used with caution in low income countries like Pakistan. Taking 75 per cent of the median income might lead to the inclusion of people below the poverty line in countries with very low income levels.

In the above-stated definitions and resulting estimates there are issues with the lower bounds set for inclusion in the middle class. While some of the definitions (like Definition Three and Five) set the limit too high,⁴ resulting in a very small middle class or in the absence of a middle class altogether, there are

³These definitions have been used to estimate the much-quoted Indian middle class to be as big as 250 million. Pakistan’s around 80 million compares well with its neighbour’s middle class.

⁴The much talked about Indian middle class also disappears following this definition, indicating the futility of applying it to the developing economies.

Table 2

Class	Size of Classes by Definition Used (%)	
	Proportion (%)	Middle Class in Number (inMillions) ¹
Definition One: 75%-125% of the Median income		
Lower	32.8	
Middle	29.5	55.2
Upper	37.7	
Definition Two: Quintile approach		
Lower	20.0	
Middle	60.0	112.2
Upper	20.0	
Definition Three: Income of PPP \$12- \$50 per person per day		
Lower	98.1	
Middle	1.8	3.4
Upper	0.1	
Definition Four: Expenditure of PPP \$2-\$13 per person per day		
Lower	56.1	
Middle	42.9	80.2
Upper	1.0	
Definition Five: Income of PPP \$10 per person per day but not in the Top 5%		
Lower	97.3	
Middle	0.0	0.0
Upper	2.7	
Definition Six: Double the poverty line of PPP \$2 per person per day		
Lower	87.3	
Middle + Upper	12.7	23.7
Definition Seven: Double the national poverty line		
Lower	80.7	
Middle + Upper	19.3	36.1
Definition Eight: Income from PPP \$2 to \$20 per person per day		
Lower lower (< \$1.25)	30.1	
Lower (<\$1.25- \$2)	28.2	
Lower Middle (\$2-\$4)	28.5	
Middle Middle (\$4-\$10)	10.5	76.7
Upper Middle (\$10-\$20)	2.0	
Upper (>\$20)	0.8	
Definition Nine: Expenditure of PPP \$2- \$10 per person per day		
Lower	56.1	
Middle	42.2	78.9
Upper	1.7	
Definition Ten: Double the median income		
Below	83.5	
Above	16.5	30.9
Definition Eleven: Three times the median income		
Below	92.1	
Above	7.9	14.8
Definition Twelve: Annual HH income between PPP \$13,500 to 113,000		
Lower	93.9	
Middle	6.1	11.4
Upper	0.1	
Definition Thirteen: Expenditure from PPP \$2 to \$20 per person per day		
Lower lower (< \$1.25)	21.3	
Lower (\$ 1.25- \$2)	34.8	
Lower Middle (\$2-\$4)	32.4	
Middle Middle (\$4-\$10)	9.8	81.3
Upper Middle (\$10-\$20)	1.3	
Upper (>\$20)	0.4	

Source: Calculations based on PSLM 2007-2008.

Note: 1. Estimation of the approximate size in numbers is based on using the mid-year population of 187 million in the year 2011. Following these definitions, the size of the middle class in Pakistan has shown a growing trend (see A9) so applying the 2007-2008 estimates to 2011 population can give an under-estimation/minimum size but not an over-estimation.

2. Using PPP (Purchasing Power Parity) of US\$1= Pak Rs 24.47 in 2008.

other definitions that set the limit too low, like those that set the lower bound at \$2 per person per day. Does the middle class begin where poverty ends? Ravallion (2010, p. 446) supports, “the premise that middle class living standards begin when poverty ends”. This paper, however, supports the argument forwarded by Horrigan and Haugen (1988 p. 5) when they posit, “to ensure that the lower endpoint of the middle class represents an income significantly above the poverty line”. The middle class should, hence, include only those households that do not face the risk of experiencing poverty at all, and are not just those who are outside the the realm of poverty at a particular time.

As also pointed out by Tilkidjiev (1998), it is not sufficient to be wealthy to be in the middle class, this paper also premises that ‘middle income’ should not be considered ‘middle class’. The middle class has a multidimensionality attached to it and any useful measure should attempt to capture it. The middle class has certain intellectual, political and social connotations, along with economic ones, that differentiate it from the middle-income. While middle-income is purely an economic term, the middle class falls more in the sociological domain. The concept of class has many dimensions, including: economic, like wealth, income and occupation; political, including status and power; and cultural, such as values, beliefs, lifestyle, and education.

Taking all these factors in consideration, a refined measure of estimating the middle class is proposed using a *weighted composite index*. The suggested measure is a combination of relative and absolute approaches applied to estimate the middle class, and the rationale is not solely economic but a collection of various socio-economic factors. After the formation of the sub-indices, the Principle Component Analysis (PCA) was carried out to calculate the weights given to each component of the composite index. The calculation of these sub-indices followed an absolute approach, while the final gradation of the resulting composite index into different classes was done with a relative approach.

The suggested components of this *composite index*, their rationale and the method used to measure them areas follows:

- (1) *Educational Index*: In today’s world, college education is the minimum for any individual to succeed [Wheary (2010)]. With its low literacy levels, presence of even one person with college education (completed or currently in college) in a household qualifies it to be categorised as middle class.
- (2) Quantification of the index: at least one individual in the household with college education= 1, no one in the house has college education = 0.
- (3) *Income Index*:⁵ Instead of using any upper and lower bounds or any percentage of median income, due to the shortcomings stated above,

⁵*Income Index* was created instead of an *Asset Index*, which by some is considered a better indicator of security against vulnerability [Sorenson (2000); Brandolini, Magri, and Smeeding (2010); and Bradhan (1989)], because of the nature of the topic understudy and inclusion of some of the asset variables in other indices. For instance: ownership of house was part of the Housing Index; possession of movable-durable assets was included in the Lifestyle Index; and non-material assets, like higher education, was a part of the Education Index.

the double the poverty line definition is used to form the Income Index. Being twice as much away from the poverty line, these households are believed to be facing minimised risk of poverty. National poverty line was used for this purpose by inflating the officially accepted available poverty line to the year 2007-2008, which came up to Rs 1084.20 per person per month.

- (4) Quantification of the index: households double the poverty line= 1, households below double the poverty line= 0.
- (5) *Housing Index*: Possession of a house is vital for the middle class status [Brandolini (2010), Banerjee and Duflo (2007), Wheary (2010)]. Considering most of the houses in Pakistan are self-owned, in order to differentiate between the classes the housing index was disaggregated into ownership, persons per room, and availability of water, gas and electricity in the house.
- (6) Quantification of the index: (i) ownership of the house = 0.3, otherwise = 0 (ii) number of persons per room- 1= 0.4, 2= 0.3, 3= 0.2, 4= 0.1, >4= 0 (iii) availability of electricity= 0.1, otherwise= 0 (iv) availability of tapped water in the house= 0.1, otherwise= 0 (v) availability of gas= 0.1, otherwise= 0. All the sub-components adding to a maximum of 1 and a minimum of 0.
- (7) *Lifestyle Index*: the middle class is associated with a certain lifestyle associated with expenditure on consumer durables - one of the primary reasons they are considered a boon for economy. These also form part of the movable assets possessed by the household. The PSLM asks the households about the ownership of twenty-three consumer items and this index includes all of them.
- (8) Quantification of the index: each item owned= 0.435. All the sub-components adding to a maximum of 1 and a minimum of 0.
- (9) *Occupation Index*: after income, occupation is considered as the most important factor affecting any individual's or household's class categorisation. Occupations were divided in two categories in this index, namely, manual occupations and non-manual occupations. A drift away from manual occupations is deemed imperative to be in the middle class in a vast body of literature, including Brandolini (2010), Gagliarano and Mosler (2009), Beteille (2001), Grant (1983) and Cole (1950).

Quantification of the index: if the occupation of the head of the household or the person earning the most in the household is non-manual= 1, otherwise= 0.

The sub-indices, comprising the composite index, were then weighted through the PCA method and their scores were added up to give the total score for the households. The households were then categorised into seven classes based on their total scores on the index. Excluding the top 10 percent of the

population (0.5 points on the composite index, in a maximum total score of 5.0) the remaining index score was divided into six equal classes (of 0.75 points each), to avoid arbitrariness, giving us the following class composition in the population:

(i)	Lower lower class	(LLC)	< 0.75
(ii)	Middle lower class	(MLC)	0.75–1.5
(iii)	Upper lower class	(ULC)	1.5–2.25
(iv)	Lower middle class	(LMC)	2.25–3.0
(v)	Middle middle class	(MMC)	3.0–3.75
(vi)	Upper middle class	(UMC)	3.75–4.5
(vii)	Upper class	(UC)	> 4.5

Table 3 presents the weights assigned to each of the sub-index and the mean score achieved by the different classes on each index, and in total. The Table presents an interesting trend with the ‘Lifestyle Index’, based on a household’s possession of consumer durables carrying the maximum weight, followed by indices of income, education, housing and occupation. Is lifestyle the most distinctive factor in class differentiation? The answer would probably be in the affirmative if we look at the factors differentiating the UMC and UC, where the main difference between the two is for the Lifestyle Index. In this regard, it is also worth noting that housing and lifestyle indices are the ones that carry scores even for the lowest of classes, even when they score poorly on the income, occupation and education indices (see Table 3). Expectedly, as we go up the classes, households begin to score on all indices.⁶ The upper middle class is almost similar to the upper class, as can be seen from the similar mean scores on the indices for income, education and occupation. The differences in the lifestyle and housing indices, however, separate the top two classes, as can be seen in Table 3.

Class structure as calculated by the composite weighted index shows that a large majority of the people in Pakistan falls in the lower classes, be it lower lower class (LLC), middle lower class (MLC) or upper middle class (ULC), as can be seen from Table 4. This trend is mainly due to the rural areas that are predominantly concentrated in the lower classes. A moderate proportion (33 per cent) in the urban areas, however, can be categorised as belonging to the middle class (LMC, MMC and UMC put together). The biggest class, nevertheless, remains the LLC be it the urban or the rural areas (Table 4), and because of the very low index score it would not be inappropriate to label this category as ‘vulnerable’. If we look at the index scores of the MLC, which is the second

⁶See Figure A-2 in the Annexure for the graphic representation of the composite index, and its components, for each class. See also Figure A-3 for the percentage share of each component index in a particular class’s total score on the composite index. Interesting to see in the latter graph is the appearance, and increasing size, of indices, as opposed to a few indices having a major share.

Table 3

Estimation of Middle Class through a Weighted Composite Index

Classes	Indices					Total
	Income	Education	Housing	Occupation	Lifestyle	
	<i>Weights Applied to Each Index¹</i>					
	1.050	1.005	0.955	0.865	1.125	5.000
<i>Mean total for each index¹</i>						
Lower Lower	0.000	0.000	0.267	0.000	0.186	0.453
Middle Lower	0.016	0.014	0.462	0.336	0.268	1.097
Upper Lower	0.329	0.140	0.526	0.483	0.324	1.802
Lower Middle	0.554	0.528	0.496	0.720	0.364	2.662
Middle Middle	0.941	0.564	0.661	0.683	0.451	3.301
Upper Middle	1.050	1.004	0.682	0.862	0.494	4.092
Upper	1.050	1.005	0.870	0.865	0.802	4.592
Total	0.211	0.159	0.417	0.300	0.275	1.361

Source: Calculated from PSLM 2007 -2008.

Note: 1. In order to avoid too many decimals for ease in comprehension, the weights were multiplied by 5 to form the composite index score. The weights used for the various indices as calculated by PCA are: Income 0.210; Education 0.201; Housing 0.191; Occupation 0.173; Lifestyle 0.225; and Total 1.00. The procedure does not in any way affect the classification of the sample.

Table 4

Size of Different Classes through a Weighted Composite Index in Pakistan

Class	Categorisation for Middle Class ¹	Proportion (%)			Numbers (in Millions) ²		
		Total	Urban	Rural	Total	Urban	Rural
Lower Lower (LLC)	<i>Vulnerable</i>	41.9	23.6	55.2	83.7	20.1	63.6
Middle Lower (MLC)	<i>Aspirants</i>	23.0	21.8	23.9	41.9	16.4	25.6
Upper Lower (ULC)	<i>Climbers</i>	15.8	20.8	12.3	28.5	15.9	12.6
Lower Middle (LMC)	<i>Fledgling middle class</i>	8.5	12.5	5.7	16.3	9.4	6.8
Middle Middle (MMC)	<i>Hard-core middleclass</i>	4.3	8.1	1.6	6.7	5.2	1.5
Upper Middle (UMC)	<i>Elite middle class</i>	6.0	12.3	1.3	9.5	8.0	1.5
Upper (UC)	<i>Privileged</i>	0.4	0.9	0.1	0.6	0.6	0.0*
Total		100.0	100.0	100.0	187.2	75.6	111.6

Source: Calculated from PSLM 2007 -2008.

Note: 1. Categories adapted from Sridharan (2004) and Tharoor (2010).

2. For the method employed to calculate these numbers see A-5.

3. * Signifies value less than 0.1.

largest class, in Table 3, we find the households to be scoring on all sub-indices, unlike the LLC. These households can be considered the 'aspirants' for upward mobility. The next class, ULC, shows a marked improvement on all sub-indices (Table 3) and can rightfully be called a class of 'climbers'. They are on the border of the middle class, aiming to get elevated. Even if we look at their total index score, they are found to have crossed the mean score of the sample (1.36) with a score of 1.8 (see Table 3), and with a little arbitrariness in demarcating the class boundaries can be a part of the middle class.

The middle class, as observed earlier, seems to be more of an urban phenomenon (Table 4) which is not surprising in the light of the poor literacy levels and the large association with manual jobs in the rural areas. Even in cases where the households score well on the income and housing indices, their scores go down because they perform badly on the education and occupation indices. Among the middle classes the LMC, termed as the 'Fledgling Middle Class', constitutes the largest share (Table 4). From the urban areas, at least, it appears that once a household enters the middle class category it is more likely to graduate to the UMC, that is the 'Elite Middle Class', than to remain in the 'Hard-core Middle Class' category as reflected by the higher share for the former than the latter. As expected, the size of the UC is small, being even smaller in the rural areas than the urban.

Sridharan (2004) advocates the inclusion of ULC and UC while demarcating the boundaries for what he refers to as the 'Broadest Middle Class'. Considering the stringent measurement method suggested to estimate the middle class in this paper, it makes sense to include at least the ULC in what is referred to as the 'Expanded Middle Class' here (see Table 5). This becomes even more logical for the reason stated above regarding ULC having a composite index score crossing the midline. Using the 'Strict Middle Class' category the middle class is found to be comprising one-fifth of the country, a proportion that increases to one-third if we take into account only the urban areas. Adding the 'Climbers' to this estimate boosts the proportion of those in the middle class to 35 per cent, swelling the urban middle class size to over half the population (54 per cent), as can be seen from Table 5. The 'Broadest Middle Class' shows only a marginal increase in the share of the middle class in the total population as those in the 'Privileged' class comprise a very small proportion (Table 4).

Table 5

	Proportion (%)			Numbers (in Millions) ²		
	Total	Urban	Rural	Total	Urban	Rural
Strict Middle Class						
(LMC + MMC + UMC)	18.8	32.9	8.6	32.5	22.6	9.8
Expanded Middle Class¹						
(LMC + MMC + UMC + ULC)	34.6	53.7	20.9	61.0	38.5	22.4
Broadest Middle Class¹						
(ULC + LMC + MMC + UMC + UC)	35.0	54.6	21.0	61.6	39.1	22.4

Source: Calculated from PSLM 2007-2008.

Note: 1. As categorised by Sridharan (2004).

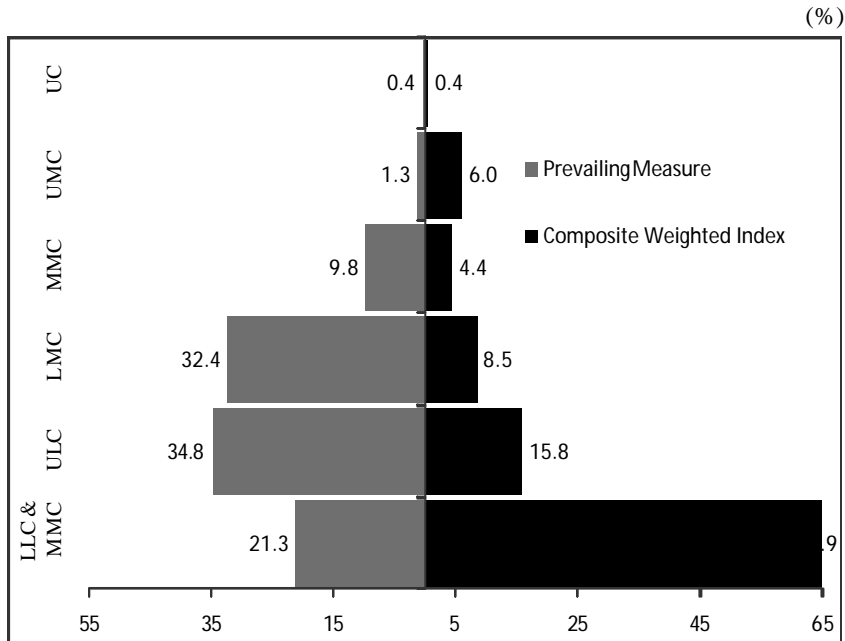
2. For the method employed to calculate these numbers see A-5.

Numbers are easier to comprehend than proportions. Hence, if we look at the numbers constituting the middle class in Pakistan we find the numbers to increase from 34 million (Strict Middle Class) to over 61 million (Broadest Middle Class) by widening its scope (Table 5). The middle class being more urban centric, as we saw in Table 4, amounts to nearly 39 million people if we go by the measure provided by the 'Broadest Middle Class' definition in Table 5. The present paper, however, prefers to subscribe to the "Expanded Middle Class" estimate as representing the middle class in Pakistan. The UC has its peculiar characteristics and position in any society and should not be grouped with other classes. On the other hand, inclusion of the 'Climbers' in the 'expanded middle class' is rationalised on the basis of closeness between the two classes. It is from this class that the households make the transition from having a deficit budget to a surplus one, a characteristic deemed essential by many [including, Brandolini (2010); Birdsall, Graham, and Pettinato (2000); Andersen (1992)] to be classified as the middle class.⁷ The size of the middle class in Pakistan, using the 'Expanded Middle Class' categorisation, comes up to a substantial 61 million people.

It would be of interest to note how does the size of the middle class estimated through the composite index compare with the most common prevailing method of measuring it. This is based on the gradation of household's per person per day expenditure (Definition Thirteen in Table 2). As opposed to the latter, the composite index shows a much larger LLC and MLC, as can be seen in Figure 1. The only other class comparatively larger in the composite index is that of the UMC. The size of the UC, interestingly, remains the same in both the measures at a low 0.4 per cent. Despite giving an estimate for the middle class that is much bigger and hence more attractive, this paper argues that measuring the middle class only on the basis of expenditure or income is insufficient as it does not encompass all the factors that contribute towards making a household a 'middle class household'. It is also premised that 'class' is a much more permanent category to be affected by the mere fluctuation of income or expenditure. We would not go to the extreme of subscribing to the notion that 'class is permanent', as class mobility does and should take place, but it is not as transient to be altered by fickle changes in income or expenditure.

⁷For the graphic representation of households' income, expenditure and the balance between two see A-4. As can be seen from the graph, the 'Vulnerable' and the 'Aspirants' have a deficit budget and the trend reverses for the 'Climbers', justifying the inclusion of the latter in the 'Expanded Middle Class'.

Fig. 1. Comparison of the Size of the Classes as Estimated by the Weighted Composite Index and the Prevailing Measure¹



Source: Calculated from PSLM 2007 -2008.

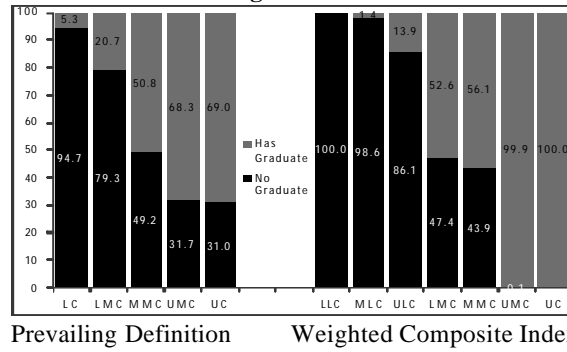
Note: 1. Definition Thirteen in Table 2.

2. Classes: Lower lower (LLC), Middle lower (MLC), Upper lower (ULC), Lower middle (LMC), Middle middle (MMC), Upper middle (UMC), Upper (UC).

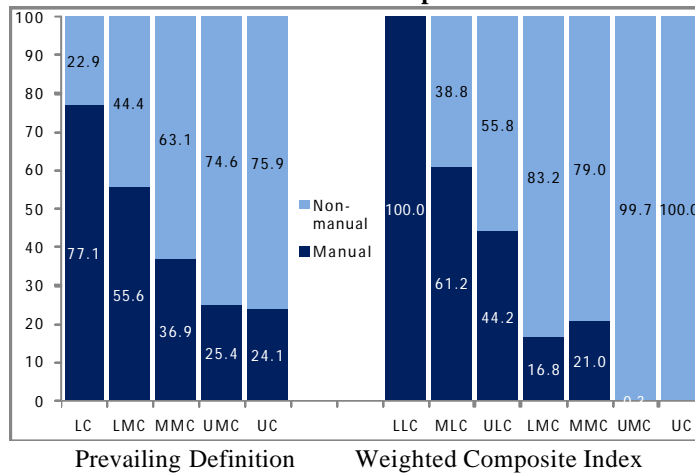
Can we consider a household with only manual workers or with no individual having college education but having over PPP \$2 per person per day income middle class in today's world? Following how the middle class is generally perceived, the answer in all probability would be in the negative. Figure 2 presents the comparison between the two measures, the composite index and the prevailing definition, on the nature of occupation and presence of a college graduate in the households belonging to different classes. The estimate through the weighted composite index appears more appropriate with those in the 'elite middle class' and the 'privileged class' being employed solely in non-manual occupations and having at least one college graduate in the household (Figure 2). On the contrary, the prevailing definition shows a substantial proportion doing manual jobs and having no college graduate in the household, something that cannot be associated with the middle class nowadays. Such a trend is, however, expected when only income or expenditure form the basis of the classification.

Fig. 2. Nature of Occupation and Level of Education by Classes through the Weighted Composite Index and the Prevailing Definition²

A: Presence of a College Graduate in the Household



B: Nature of Occupation



Source: Calculated from PSLM 2007-2008.

Note: 1. Classes: Lower lower (LLC), Middle lower (MLC), Upper lower (ULC), Lower middle (LMC), Middle middle (MMC), Upper middle (UMC), Upper (UC). 2. Definition Thirteen in Table 2.

For the sake of comparison, it would have been an interesting exercise to apply the proposed methodology to estimate the size of the middle class to other countries in the region as well. Lack of access to household level data in these countries, however, hampered this effort at present. Nevertheless, if we compare the size of the middle class in the South Asian region estimated by various current studies using the prevailing definition based on expenditure levels (Definition Thirteen in Table 1) we find the size of the middle class to be the

largest in Pakistan with the exception of Sri Lanka (see A-9). In a comparable year of 2004-05 the size of the middle class in Pakistan was 40 per cent of the total population while that of India was 25 per cent (see A-9).

Where is the Middle Class Present in Pakistan?

Region and Occupation

Once the middle class has been identified, it is of interest to see where those belonging to this class are present, geographically and sectorally. The provinces of Punjab and Sindh, having over 36 per cent middle class households, fare better than the provinces of Khyber Pakhtunkhwa (KP) and Balochistan that marginally lag behind at 32 and 28 per cent, respectively (see Table 6). When we look at the regional trends, we observe the national level pattern to be replicated at the provincial level as well. The size of the middle class is estimated to be much bigger in the urban areas as compared to the rural areas in all four provinces (Table 6), strengthening the argument that the middle class is more of an urban phenomenon. If we look at the inter-provincial differences, we find the size of the middle class to be positively associated with the proportion of the urban population in that province. The province of Sindh has the highest proportion of urban population and that of the middle class (56 per cent) in the urban areas as well, as can be seen in Table 6. The provinces of Punjab, Balochistan and KPK have progressively smaller share of the population living in the urban areas and their size of the middle class reflects it through the estimated measures for the class at 55 per cent, 50 per cent and 49 per cent, respectively. Increasing urban concentration seems to aid the increase in the size of the middle class. On the contrary, the size of the middle class in the rural areas in all four provinces, as shown in Table 6, is much smaller than their urban counterparts.

Table 6

Regional and Provincial Classes Estimated by Weighted Composite Index

Class	Punjab			Sindh			Khyber Pakhtunkhwa			Balochistan		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Lower Lower	38.6	21.2	51.6	45.0	24.7	64.3	41.4	26.4	50.3	47.8	26.1	59.9
Middle Lower	23.7	22.4	24.7	18.4	18.4	18.2	26.5	24.3	27.9	23.3	23.2	23.4
Upper Lower	17.1	20.6	14.5	14.2	20.6	8.1	15.3	20.4	12.2	15.3	22.1	11.5
Lower Middle	8.4	12.6	5.3	9.7	12.3	7.2	8.6	12.2	6.5	6.8	12.6	3.6
Middle Middle	4.9	8.9	1.8	5.3	9.3	1.4	3.0	5.5	1.4	3.0	6.2	1.2
Upper Middle	6.5	12.8	1.9	7.2	14.1	.6	4.9	10.6	1.6	3.6	9.4	0.4
Upper	0.7	1.4	0.1	0.3	0.6	0.1	0.2	0.6	0.1	0.1	0.4	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	<i>Size of Middle Class¹</i>											
	36.9	54.9	23.5	36.4	56.3	17.1	31.8	48.7	21.7	28.7	50.3	16.7

Source: Calculated from PSLM 2007-2008.

Note: Based on the 'Expanded Middle Class'.

Discussion on class is incomplete without investigating the relationship between class and occupation, as also stressed by Banerjee and Duflo (2007), Goldthorpe and McKnight (2006), Wright (1997), Erikson and Goldthorpe (1992). If we look at the nature of occupations within each of the estimated classes, we see that the LLC comprises mostly occupations like agriculture and fishery workers, crafts and related trade workers, plant and machine operators and assemblers and the elementary occupations, as can be seen in Table 7. From the ULC onwards the occupational distribution exhibits a larger spread that tapers again for the highest two classes, the UMC and UC, which are confined to occupation like: armed forces; legislators, senior officials and managers; professionals; technicians and associate professionals; clerks; and service workers and sales workers (Table 7). Thus, as we go up the class ladder the occupational share shifts from manual to non-manual jobs, which to some is the very essence of the middle class.⁸

Table 7

Occupational Distribution within Classes by Weighted Composite Index

Occupation	Classes through Weighted Index (%)						
	Lower			Upper			
	Lower	Middle	Upper	Lower	Middle	Upper	Upper
Armed Forces	0.0	0.8	0.7	1.1	0.6	1.3	3.2
Legislators, Senior Officials and Managers	0.0	0.3	0.9	2.9	8.2	20.7	30.6
Professionals	0.0	2.9	4.6	18.3	15.7	26.4	37.1
Technicians and Associate Professionals	0.0	7.0	10.0	19.3	14.2	21.3	9.7
Clerks	0.0	3.6	7.6	14.5	11.8	12.9	1.6
Service Workers and Shop/Market Sales Workers	0.0	31.0	34.1	30.0	28.9	17.1	17.7
Agriculture and Fishery Workers	33.2	17.0	14.9	5.9	8.6	0.1	0.0
Crafts and Related Trade Workers	9.0	8.5	8.5	2.6	5.0	0.0	0.0
Plant and Machine Operators and Assemblers	11.9	9.2	7.1	2.1	3.1	0.0	0.0
Elementary Occupations	45.9	19.6	11.7	3.3	3.9	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Calculated from PSLM 2007-2008.

Worth noting in Table 7 are the occupational distributions for the ‘elite middle class’ and the ‘privileged’ class that are heavily tilted towards professionals and those associated with services. This trend, observed for the middle class globally, can be best summarised in the words of Banerjee and Duflo (2007, p. 21) when they say,

“Nothing seems more middle class than the fact of having a steady well-paying job. While there are many petty entrepreneurs among the middle

⁸To find how class distribution varies by different occupations see table A-6 in the Annexure. The share of the middle class, specifically the ‘elite middle class’, is much higher among professionals, legislators, senior officials and managers. Elementary occupations and those related to agriculture and crafts are dominated by the lower classes. The UC is almost confined to the armed forces, professionals, legislators, senior officials and managers.

class, most of them do not seem to be capitalists in waiting..... If they could only find the right salaried job, they might be quite content to shut their business down.....Perhaps the sense of control over the future that one gets from knowing that there will be an income coming in every month—and not just the income itself—is what allows the middle class to focus on building their own careers and those of their children.”

Is there any industrial variation *vis-à-vis* distribution of middle class in Pakistan? Table 8 shows that two industries, namely, of wholesale, retail trade, hotel and restaurants, and those comprised of community, social and personal services, have a heavy share of the ‘expanded middle class’. It is interesting to find out that a noticeable share of the ‘elite middle class’ and the ‘privileged’ class is employed in manufacturing, financing, insurance, real estate and business services (Table 8). Not surprisingly, the LLC as a big share employed in agriculture, forestry, hunting and fishing.⁹

Table 8
Industrial Distribution within Classes

Sectors	Classes through Weighted Index (%)						
	Classes through Weighted Index						
	Lower Lower	Middle Lower	Upper Lower	Lower Middle	Middle Middle	Upper Middle	Upper Middle
Agriculture, Forestry, Hunting and Fishing	42.9	19.4	15.5	6.2	8.9	1.4	1.6
Mining and Quarrying	0.8	0.5	0.0	0.8	0.5	0.9	1.6
Manufacturing	9.3	8.8	9.3	7.6	9.7	11.6	12.9
Electricity, Gas and Water	0.6	1.5	2.4	2.6	2.6	2.7	1.6
Construction	19.1	8.3	5.1	2.5	2.7	2.1	1.6
Wholesale and Retail Trade, and Hotel/Restaurants	4.5	24.5	29.4	25.6	27.0	15.5	22.6
Transport, Storage and Communication	12.0	9.1	6.9	4.3	4.8	4.9	1.6
Financing, Insurance, Real Estate and Business Services	0.2	0.8	2.1	3.6	6.9	9.4	14.5
Community, Social and Personal Services	10.5	27.1	29.1	46.8	36.8	51.5	41.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Calculated from PSLM 2007 -2008.

Relationship with the means of production has been a recurrent theme in the literature on class. As discussed earlier, the Marxian tradition considers this as the very foundation of class formation. Table 9 aims at looking into this very relationship and presents the shares of different statuses in employment within different classes. Large shares of paid employees in the ‘expanded middle class’ and the ‘privileged’ class tend to negate the relationship postulated by Marx regarding ownership of the means of production and class. As can be seen from Table 9, paid employees constitute 78 percent of the households in the UC. The

⁹To find out the distribution of classes in each industry see figure A-7 in the Annexure. With a big proportion of the population falling in the LLC it is expected to find them having big shares in almost all of the industries. Worth noticing in this table, however, is the dominance of the ‘expanded middle class’ in the industry comprising financing, insurance, real estate and business services, proving the observation of Banerjee and Duflo (2007), stated above, valid in Pakistan as well.

Table 9
Status of Occupation within Classes

Status of Occupation	Classes estimated by Composite Weighted Index (%)						
	Lower	Middle	Upper	Lower	Middle	Upper	Upper
	Lower	Lower	Lower	Middle	Middle	Middle	
Employer with < 10 Employees	0.2	0.4	0.7	1.1	1.6	1.0	0.0
Employer with > 10 Employees	0.1	0.2	0.2	1.4	3.9	4.0	3.2
Self Employed Non-agriculture	8.7	25.8	28.8	27.5	27.0	16.9	22.6
Paid Employee	59.8	57.6	56.0	64.5	60.1	78.0	74.2
Unpaid Family Worker	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Own Cultivator	18.1	11.9	12.0	4.7	6.3	0.1	0.0
Share Cropper	6.7	1.3	0.4	0.3	0.0	0.0	0.0
Contract Cultivator	2.7	0.8	1.0	0.3	0.6	0.0	0.0
Own Livestock	3.7	1.9	0.9	0.3	0.5	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Calculated from PSLM 2007-2008.

Marxian notion can be seen to play some role in the increasing share of those who are self-employed in the non-agricultural sector in the 'expanded middle class' and those who employ more than 10 employees in the hard-core middle class, the elite middle class and the privileged class.¹⁰

CONCLUSIONS

Social realities are difficult to define, even tougher to measure and quantify, and the term 'middle class' is no exception. Just like 'poverty', it is variously defined in different countries at different levels of development. The definitions differ with the variance in approach and rationale applied in addressing the concept, thus leading to a lack of consensus in what the term actually means. The only agreement regarding the term 'middle class' is that it is the class between the lower and the upper class but where are these lines demarcated among them remain a debatable issue. Classifications made on cut-off lines based on income or expenditure continue to be the most commonly used way of measuring classes, and arbitrariness remains the hallmark of all these definitions. This arbitrariness is reflected in the range of estimates given for the middle class, varying from zero per cent to 60 per cent. The present paper, however, considers these definitions inadequate to capture the whole concept of the middle class, and suggests a weighted composite index to estimate its size.

The suggested measure is a composite of five weighted sub-indices of factors believed to be important for being part of the middle class, namely,

¹⁰For distribution of classes by status of occupation, see figure A-8. It would not be wrong to infer from the table that the expanded middle classes and the privileged class are mainly found among: paid employees; self-employed in the non-agricultural sector; and employer with more than ten employees. The last two statuses in this regard justify the Marxian stance regarding class and relationship with the means of production.

education, occupation, income, lifestyle and housing. Using the 'expanded middle class' concept, Pakistan is estimated to have a middle class that is around 35 per cent of the total population, which approximates to a substantial 61 million. The middle class is found to be more of an urban phenomenon with its size being much larger in the urban areas at both the national and the provincial levels. A striking feature, however, is the association found between the professional occupations and the upper middle and upper classes. This fits in well with the general belief that professional occupations constitute, what in this paper has been referred to as, the elite middle class. Other white-collar occupations are taken up by the hard-core and fledgling middle class, and the manual occupations comprise the 'vulnerable' and the 'aspirants'. Likewise, the middle class is expected to have sufficient resources to fulfil all their needs and at least some of their wants, and have a surplus to save for themselves. This criterion works for the estimated middle class in this paper as well and provides the very rationale of including 'climbers', who show a surplus/saving trend, in the 'expanded middle class' category.

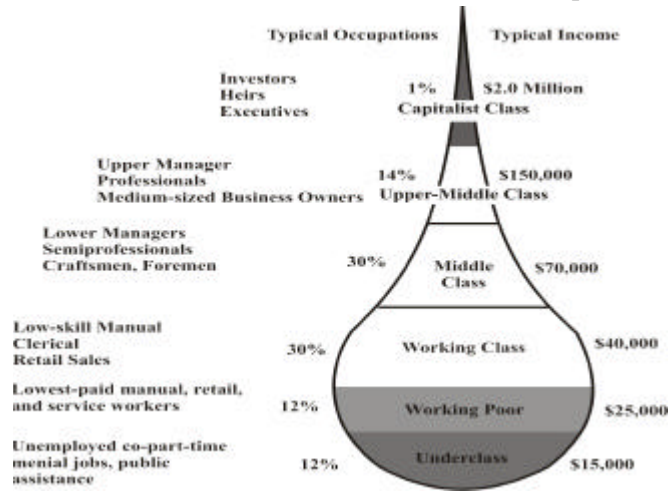
It would be of interest to carry out a comparative study in the South Asian region using the proposed multidimensional approach to gauge the actual size of the middle class. However, using the existing definitions, when compared to its neighbours, barring Sri Lanka, Pakistan has a bigger middle class than all other countries including India. Of course, the Indian middle class would be bigger in numbers given its much larger population size but it comprises a smaller proportion that falls in the middle class category. Hence, harnessing the gains that are associated with having a big middle class are potentially available to the country. Is the middle class shrinking in Pakistan? Due to the recent inflationary trends, it is a fear that is much voiced in Pakistan, as in many other countries. For the period covered, however, applying the most commonly used existing definitions, the answer to this question is in the negative. The middle class in Pakistan has actually grown over time (see A-9). Likewise, the multidimensional definition of class proposed in this paper has a sense of stability linked to it, making the middle class less susceptible to fluctuations in income or expenditure. By differentiating between the concept of 'middle class' from that of 'middle income', we can understand why the inflationary trends do not have an immediate effect on class structure, and hence the middle class. Otherwise as well, since all the factors linked to being a part of the middle class, reflected in their inclusion in the proposed weighted composite index, show an increasing trend over time in Pakistan, the size of the middle class is bound to increase in the country. The scenario cannot be better described than in the words of Burke (2010) when he uses the analogy of the car Suzuki Mehran for the middle class in Pakistan and says,

“In Pakistan, the hierarchy on the roads reflects that of society. If you are poor, you use the overcrowded buses or a bicycle. Small shopkeepers,

rural teachers and better-off farmers are likely to have a \$1,500 Chinese or Japanese motorbike.... Then come the Mehran drivers. A rank above them, in air-conditioned Toyota Corolla saloons, are the small businessmen, smaller landlords, more senior army officers and bureaucrats. Finally, there are the luxury four-wheel drives of 'feudal' landlords, big businessmen, expats, drug dealers, generals, ministers and elite bureaucrats. The latter may be superior in status, power and wealth, but it is the Mehrans which, by dint of numbers, dominate the roads."

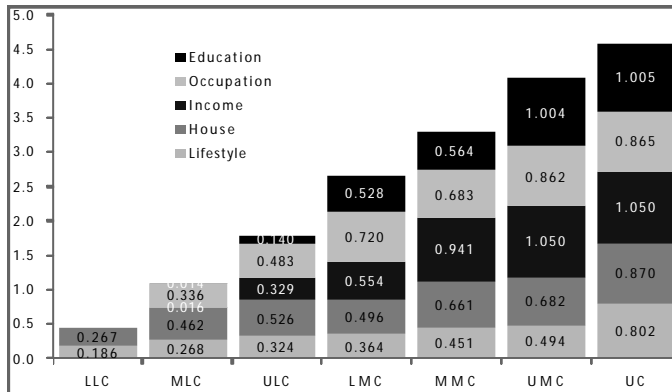
ANNEXURE

A-1: Class Structure Based on Income and Occupation



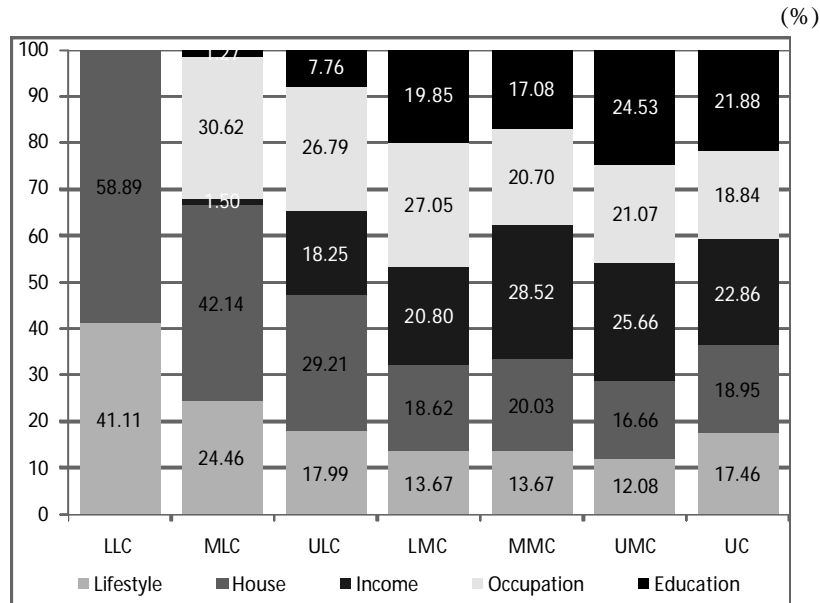
Source: Gilbert (2003, p. 8).

A-2: Contribution of Each Sub-index in the Total Weighted Composite Index for Each Class



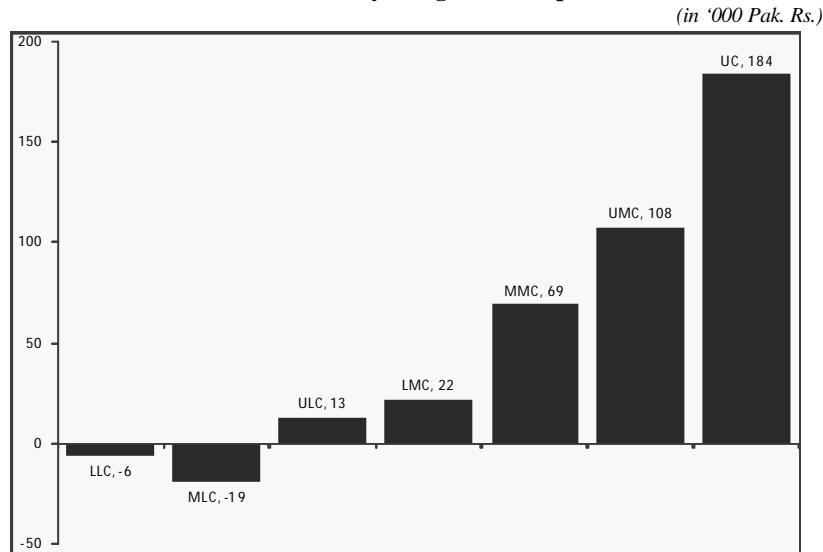
Source: Calculated from PSLM 2007 -2008.

A-3: Share of the Sub-indices in the Total Score for Each Class Estimated by Weighted Composite Index



Source: Calculated from PSLM 2007 -2008.

A-4: Mean Annual Household Income -Expenditure Balance by Different Classes as Estimated by Weighted Composite Index



Source: Calculated from PSLM 2007 -2008.

**A-5: Method to Calculate Numbers in Each Class from the Proportions
Achieved from Weighted Composite Index**

The middle class status is assigned to a household and not an individual. Hence, the proportion estimated to be in each class is in fact proportion of households and not the number of persons in a population belonging to any particular class. Instead of a crude estimation of numbers from the calculated proportions in all classes, size of every class was measured according to the respective mean household size found in each class. The mid-year population of 187.2 million in 2011 was used as the base year for estimating the size of the middle class. The rural-urban ratio found in the sample, and applied in this calculation, was 60:40. The size of the middle class in Pakistan has generally shown a growing trend (see A-9) so applying the 2007-2008 estimates to 2011 population can give an under-estimation/minimum size but not an over-estimation. Otherwise too, the composite index would be only marginally affected by short run changes in income or expenditure.

The mean household size for each class used to calculate the numbers in different classes, by region, is as follows:

Class	Mean Household Size		
	Total	Urban	Rural
Lower Lower (LLC)	7.43	7.53	7.40
Middle Lower (MLC)	6.80	6.66	6.90
Upper Lower (ULC)	6.69	6.75	6.62
Lower Middle (LMC)	7.08	6.66	7.76
Middle Middle (MMC)	5.72	5.65	5.99
Upper Middle (UMC)	5.94	5.75	7.19
Upper (UC)	5.60	5.49	6.80
Total	6.97	6.68	7.18

Source: Calculated from PSLM 2007-2008.

A-6 Class Distribution within Occupations (%)

Occupations	Classes Estimated by Composite Weighted Index							
	Lower		Upper	Lower		Upper		Total
	Lower	Lower	Lower	Middle	Middle	Middle	Upper	
Armed Forces	0.0	34.8	21.7	18.8	5.8	15.6	2.9	100.0
Legislators, Senior Officials and Managers	0.0	2.6	6.4	11.3	16.4	57.2	6.1	100.0
Professionals	0.0	11.1	13.7	29.2	12.9	30.1	3.1	100.0
Technicians and Associate Professionals	0.0	21.4	24.1	24.8	9.5	19.7	0.6	100.0
Clerks	0.0	16.5	26.7	27.5	12.3	17.6	0.2	100.0
Service Workers and Shop/Market Sales Workers	0.0	37.8	32.5	15.4	7.6	6.3	0.5	100.0
Skilled Agriculture and Fishery Workers	67.0	17.0	11.7	2.5	1.9	0.0	0.0	100.0
Crafts and Related Trade Workers	51.2	24.0	18.7	3.0	3.0	0.0	0.0	100.0
Plant and Machine Operators and Assemblers	59.5	22.8	13.7	2.2	1.6	0.2	0.0	100.0
Elementary Occupations	75.0	15.8	7.4	1.1	0.0	0.0	0.0	100.0

Source: Calculated from PSLM 2007-2008.

A-7: Class Distribution within Industries

(%)

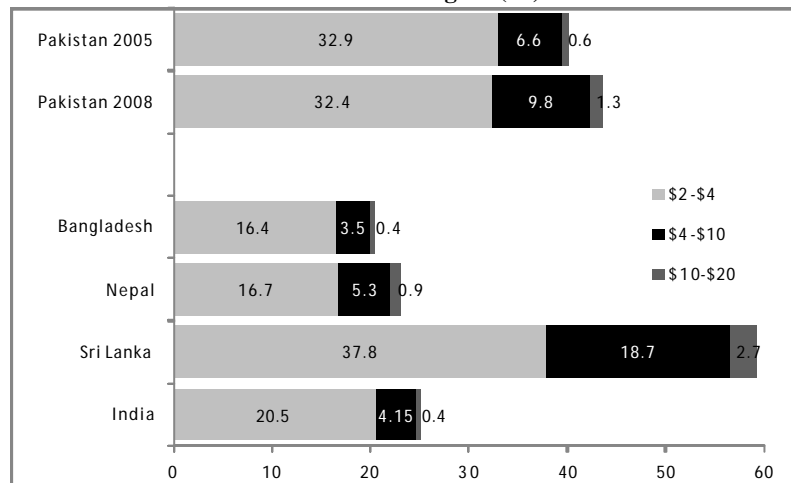
Occupations	Classes Estimated by Composite Weighted Index								Total
	Lower	Middle	Upper	Lower	Middle	Upper	Upper	Total	
	Lower	Lower	Lower	Middle	Middle	Middle	Upper		
Agriculture, Forestry, Hunting and Fishing	70.4	15.7	9.9	2.1	1.6	0.3	0.0	100.0	
Mining and Quarrying	56.3	17.2	1.1	11.5	3.4	9.2	1.1	100.0	
Manufacturing	42.7	20.1	16.5	7.3	4.8	8.0	0.6	100.0	
Electricity, Gas and Water	17.6	21.1	26.5	15.2	7.8	11.3	0.5	100.0	
Construction	72.5	15.5	7.6	2.0	1.1	1.2	0.1	100.0	
Wholesale and Retail Trade, and Hotel/Restaurants	11.7	31.2	29.4	13.7	7.5	5.9	0.6	100.0	
Transport, Storage and Communication	56.1	21.1	12.6	4.2	2.4	3.4	0.1	100.0	
Financing, Insurance, Real Estate and Business Services	5.4	8.8	18.4	16.5	16.5	31.0	3.4	100.0	
Community, Social and Personal Services	18.5	23.5	19.7	17.0	6.9	13.5	0.8	100.0	

Source: Calculated from PSLM 2007-2008.

A-8: Classes Distribution by Status of Occupation (%)

Status of Occupation	Classes Estimated by Weighted Composite Index								Total
	Lower	Middle	Upper	Lower	Middle	Upper	Upper	Total	
	Lower	Lower	Lower	Middle	Middle	Middle	Upper		
Employer with < 10 employees	13.6	15.2	22.7	19.7	15.2	13.6	0.0	100.0	
Employer with > 10 employees	8.4	6.3	4.2	17.9	25.3	35.8	2.1	100.0	
Self employed non-agriculture	19.8	29.0	25.3	13.0	6.6	5.7	0.6	100.0	
Paid Employee	42.0	20.0	15.2	9.4	4.5	8.2	0.6	100.0	
Unpaid Family Worker	57.1	42.9	0.0	0.0	0.0	0.0	0.0	100.0	
Own Cultivator	59.7	19.5	15.3	3.2	2.2	0.1	0.0	100.0	
Share Cropper	88.6	8.4	2.3	0.7	0.0	0.0	0.0	100.0	
Contract Cultivator	74.3	10.7	11.2	1.9	1.9	0.0	0.0	100.0	
Own Livestock	72.4	18.7	6.8	1.0	1.0	0.0	0.0	100.0	

Source: Calculated from PSLM 2007-2008.

A-9: Size and Composition of the 'Strict Middle Class' in the South Asian Region (%)

Source: Chun (2010) except for Pakistan 2008, which was calculated from PSLM 2007-2008.

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