

Understanding the Burgeoning Indian Middle Class through its Expenditure and Asset-Ownership Patterns

Sandhya Krishnan and Neeraj Hatekar¹

Abstract

Based on NSS data from 1999-00 to 2011-12, this article analyses expenditure and asset-ownership patterns of the Indian middle class and compares them with those of the other classes. In contrast to the poor, the middle class spends a larger fraction of its income on education, health and durable goods, establishing its role in driving human capital formation and consumer demand. Moreover, there are considerable differences between the poor and the lower-middle class, indicating that income levels above \$2 significantly varies consumption patterns of households. More expensive assets like computers are however primarily owned by the rich. Our findings have vital implications for the developmental role of the middle class and for those looking to target viable consumer markets.

Keywords- middle class, development, expenditure, India

¹ The authors are grateful to Niels Beerepoot for his comments on an earlier version of this article.

This research was funded by the Netherlands Organization for Scientific Research- Science for Global Development (NWO-WOTRO), grant number W.01.65.329.00.

1 Introduction

The Indian middle class has garnered a lot of interest in recent years in both the academic and the media circles (see for example, Ablett, Baijal, Beinhocker, & Bose, 2007; Jodhka & Prakash, 2016; Lahiri, 2014; *The Economist*, 2009; Wilson & Dragusanu, 2008). The reason for this resurgence in the interest in India's middle class is the unprecedented expansion in its size in the recent years as well as its transformation into a consumerist class (see for example, ADB, 2010; Krishnan & Hatekar, 2017; Ravallion, 2010). The significance of a large middle class for the economic, political and social development of a society is well recognized. Easterly (2001) shows how a large and homogenous middle class plays a positive role in higher growth, more education, better health, better infrastructure, more political stability and more social modernisation. According to Doepke & Zilibotti (2008), their emphasis on human capital accumulation and savings makes the middle class central to the process of capitalist accumulation. Banerjee & Duflo (2008) view the middle class as the primary source of vital inputs for the entrepreneurial class.

The focus of many recent studies on India's middle class, however, is on its contribution in driving consumer demand, not only at the national level, but also internationally (see Ablett et al., 2007; ADB, 2010; Wilson & Dragusanu, 2008). Murphy, Shleifer & Vishny (1989) show that unlike the very rich who demand imported luxuries, the middle class, as consumers of mass production of domestic goods promote industrialisation and growth in their own country. Kharas (2010) asserts that elasticity of income of the middle class being greater than one makes them demand a range of consumer goods and services at that level of income. Furthermore, the expansion of world trade has made the consumption role of the middle class even more pronounced as globally more people now have access to a wider variety of consumer goods (Kharas, 2010). In the light of the global economic crisis of 2008, when consumer demand from the western middle classes has become stagnant, middle classes in countries like India are looked upon as the new drivers of global consumption (ADB, 2010; Kharas, 2010; Wilson & Dragusanu, 2008).

A number of existing studies, adopting an income or consumption-based definition of the middle class, have traced the expansion in the size of the class, indirectly examining its potential to drive consumer demand. Ravallion (2010), for instance, shows India's middle class to have expanded from 17.3 per cent of the population (146.8 million people) in 1991 to 24.1 per cent (263.7 million people) in 2005. In our own recent work, we find India's middle class to have expanded from less than 30 per cent to over 50 per cent of the country's population in a span of mere seven years, from 2004-05 to 2011-12 (Krishnan & Hatekar, 2017). Moreover, a number of studies also make optimistic claims about the Indian middle class growing further in the future. Kharas (2010) estimates that between 2015 and 2025, half of India will be in the middle class category and that in the next 30 years the class will dramatically expand to 90 per cent of the country's population. Ablett et al. (2007) predict that as a result of drastic poverty reduction, India's middle class size will swell by over 10 times from 50 million people in 2006 to 583 million people in 2025, making the country the fifth largest consumer market in the world.

A more comprehensive understanding of the Indian middle class and its role as a consumer force can however be gained by examining the actual consumption patterns of the class, which very few

studies have done so far (see for example, Banerjee & Duflo, 2008). This article examines in detail the spending patterns of the Indian middle class and its ownership of different types of assets. It also analyses the differences in these patterns across classes. Such an analysis provides a more nuanced understanding of the potential of the rising Indian middle class as a consumer force. Moreover, it sheds light on the implications of the expansion of the class for the different manufacturing and services sectors, as well as for private firms that want to tap into India's rising consumer market. The study adds to existing literature on the consumption-based developmental role of the Indian middle class.

The following section describes the data used in this study. Section 3 briefly discusses our choice of definition of the middle class and the change in the size of the Indian middle class during the period under analysis. Sections 4 and 5 form the core of this research, which respectively present the spending patterns and distribution of select assets among different classes in India. The final section concludes with a summary of the key findings and their implications for the private and public sectors.

2 Data

This research draws on unit-level data from the Consumer Expenditure Surveys of the National Sample Survey (NSS) of India. The comprehensive data that the NSS surveys provide on household-level expenditures make it a natural data source for our analysis. In this study, we draw on the latest quinquennial NSS surveys conducted during the years 1999-00, 2004-05 and 2011-12, which are respectively the 55th, 61st and 68th rounds of the NSS. 2011-12 is the latest year when the NSS Consumer Expenditure Survey was conducted, making it a natural end-point of our analysis. We refrain from using data from the 2009-10 survey, as 2009-10 was declared a national drought year. The 55th round is used as the starting point because it gives us a time frame that is both recent, to capture the modern consumer trends of classes, as well as far enough to tell us about how consumption patterns in the Indian society have changed over the last decade or so. Also, there are comparability issues with the earlier rounds of the NSS on account of changes in the reference period, the items of consumption included in the survey, etc.

We acknowledge that there are problems associated with the 55th round of the NSS. Sen (2000), for instance, points out at problems of comparability of the 55th round of the NSS survey with both older and later rounds, arising out of a flawed questionnaire design. Unlike the older quinquennial rounds of the NSS that used a uniform recall period of 30 days for all items of consumption, the 55th round questionnaire used a mixed recall period of both 7 days and 30 days for food items, administered to the same sample of households. This has perhaps led to underestimation in some cases and overestimation in others, of the level of consumption expenditure in the 55th round. It is claimed that households that were first asked about their 7-day consumption level, reported their 30-day consumption level by merely multiplying their 7-day consumption by four. In contrast, those households who reported their 30-day level consumption first, reported their 7-day consumption level by dividing the former by 4. Because of this issue, studies based on the NSS often refrain from analysing the 55th round data (see for example, Basole & Basu, 2015; Motiram & Naraparaju, 2015). However, as observed by Deaton & Dreze (2002), for intermediate consumer

goods such as fuel, medical care and miscellaneous goods and services, the 55th round continued to use a uniform recall period of 30 days, and for durable and semi-durable goods such as clothing and bedding the recall period was 365 days, similar to that of the later rounds. Thus, the extent of incorrect estimation of the level of consumption expenditure in the 55th round may not be as high as that claimed by Sen (2000). In the light of this reasoning, we choose to include the 55th round of the NSS in our analysis, with the qualification that it might marginally over-estimate or under-estimate the level of consumption expenditure across households. We however believe that our overall story about India’s middle class and its spending patterns will largely remain concurred, irrespective of the above problems with the 55th round of the survey.

3 The burgeoning middle class in India

Every study on the middle class is faced with the complex task of defining the middle class. Definitions of the middle class vary, generally depending on the purpose of the study. Taking into account our aim of examining the consumption patterns of the middle class, we make use of a consumption-based definition of the middle class. But even within consumption-based approaches, there are a number of different definitions of the middle class. While some define the middle class as those with a minimum spending power of \$2 a day (see for example, ADB, 2010; Banerjee & Duflo, 2008; Ravallion, 2010), others define the class as those with a minimum spending power as high as \$10 a day (see Kharas, 2010; Kochhar, 2015; Meyer & Birdsall, 2012). The latter definition, with its rather high lower-bound, is generally applicable for western countries, or for studies that equate the middle class in developing countries with that in the developed world. For developing countries, a minimum threshold of \$2 is generally found suitable to define the middle class, as it lies above the global poverty line. In this study, we make use of the middle class definition proposed by Banerjee & Duflo (2008), who define the class as those with a daily per capita consumption expenditure between \$2 and \$10, measured in 1993 PPP terms. Within this, the lower-middle class is defined as those with consumption expenditures between \$2 and \$4 and the upper-middle class as those who spend between \$6 and \$10². The equivalent consumption expenditure range in Indian rupees for the different years under analysis is given in Table 1.

Table 1: Daily Per Capita Consumption Expenditure Range for Different Classes in India Using the Banerjee-Duflo Definition (figures in Indian Rupees)

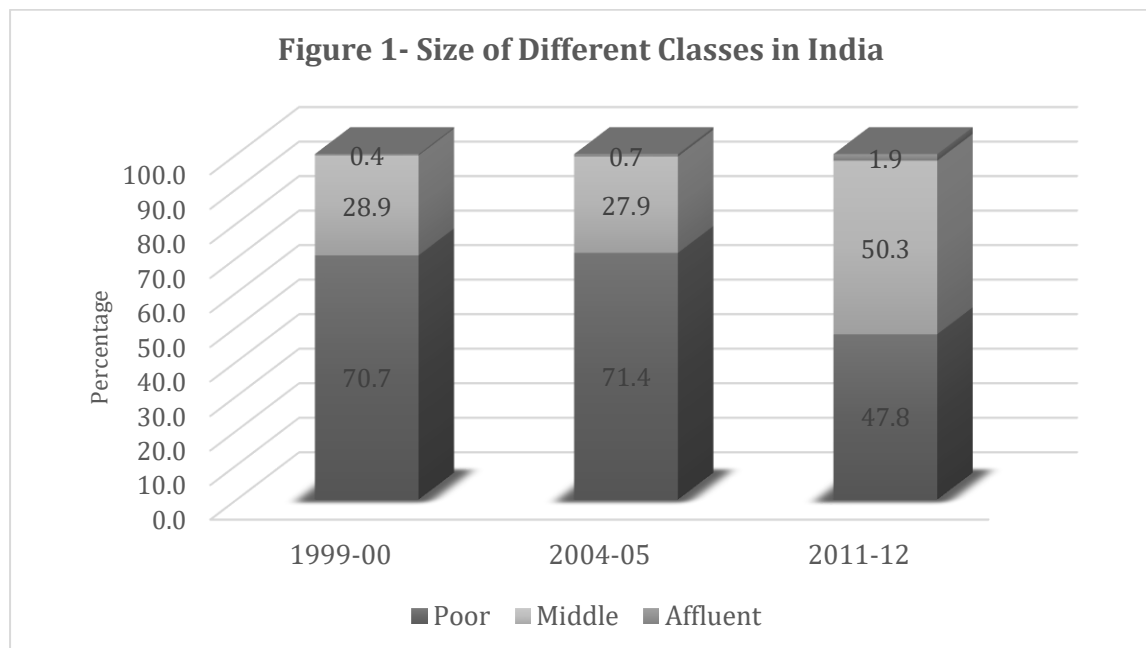
	1999-00	2004-05	2011-12
Poor (<\$2)	<20.3	<24.7	<39.5
Middle class (\$2-\$10)	20.3-101.7	24.7-123.4	39.5-197.3
Lower-middle class (\$2-\$4)	20.3 - 40.7	24.7 - 49.4	39.5 - 78.9
Middle-middle class (\$4-\$6)	40.7-61.0	49.4-74.0	78.9-118.4
Upper-middle class (\$6-\$10)	61.0 - 101.7	74.0 - 123.4	118.4 - 197.3
Affluent (>\$10)	>101.7	>123.4	>197.3

Source: Authors’ calculations based on World Data Bank (PPP rates- private consumption) and Handbook of Statistics on Indian Economy, Reserve Bank of India (GDP deflator)

Before analysing the spending patterns of the middle class in India, it is important to understand how the class has expanded over the recent years. It may be noted that in our earlier work on the rise of the middle class in India, we present a detailed analysis on the expansion of the Indian

² For a more detailed survey of the various definitions of the middle class and our reasons for choosing the Banerjee-Duflo definition, see Krishnan & Hatekar (2017).

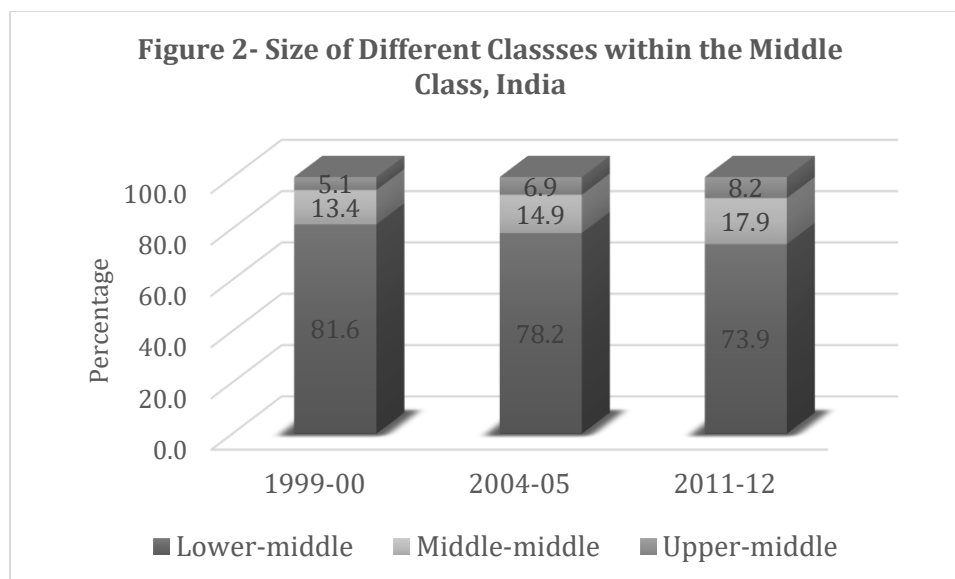
middle class between the years 1999-00 and 2011-12 (see Krishnan & Hatekar, 2017). In the interest of the readers, we briefly present the same results here again. Figure 1 shows that while the size of the Indian middle class remained relatively stable between 1999-00 and 2004-05 (henceforth t_1), it almost doubled in numbers (from 304 million individuals to over 604 million) between 2004-05 and 2011-12 (henceforth t_2), constituting over half of the country's population. Consequently, the proportion of the poor declined from over 70 per cent in t_1 to less than 50 per cent in 2011-12.



Source: Authors' calculations based on NSS Household Consumer Expenditure surveys, 1999-00, 2004-05 and 2011-12.

Note: Expenditure data are calculated using the Mixed Reference Period.

The expansion in India's middle class size in t_2 was thus driven mainly by a fall in the proportion of the poor, who moved up to the lower-middle class category. The majority of the middle class in India in 2011-12, thus belonged to the lower-middle class category. Figure 2 shows that almost three-fourths of the middle class in India spends only between \$2 and \$4 per day, making them very close to poverty and vulnerable to falling back to poverty in case of a negative economic shock.



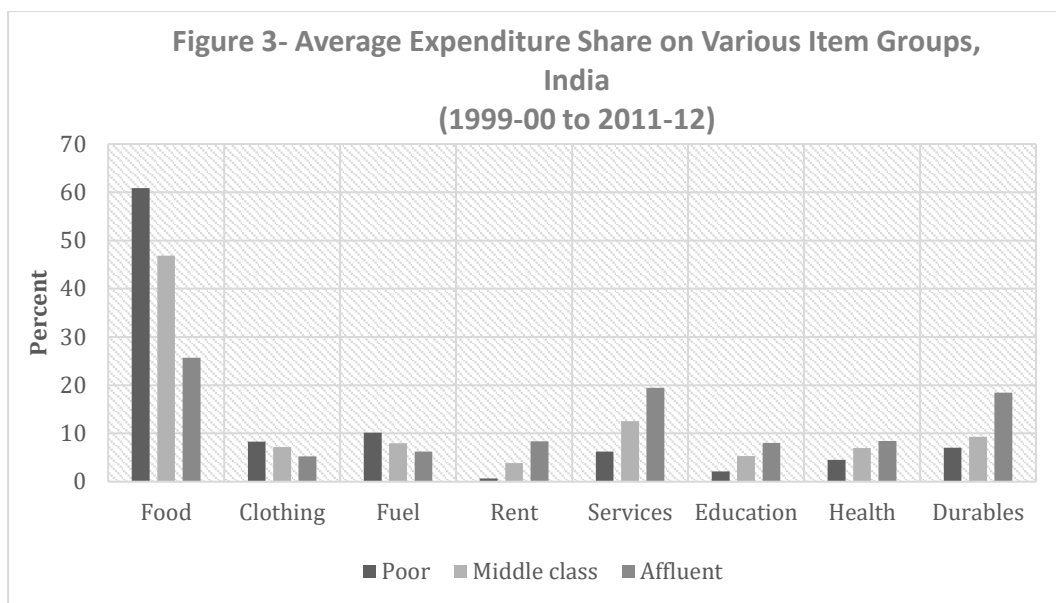
Source: Authors' calculations based on NSS Household Consumer Expenditure surveys, 1999-00, 2004-05 and 2011-12.

Note: Expenditure data are calculated using the Mixed Reference Period.

Given this expansion in India's middle class size in t_2 , it is important to understand its implications on the demand for various goods and services. As pointed out earlier in this study, the middle class is hailed for driving consumption demand. But because the majority of the Indian middle class is in the lower-middle class category and very close to poverty, does the expansion in middle class size have any significant impact on the consumption demand for various goods and services? In other words, how different are the spending patterns of the middle class from that of the poor and those of the affluent? We answer these questions by exploring the spending patterns and asset-ownership of different classes in India between 1999-00 and 2011-12.

4 Changing spending patterns

Given that the middle class in India recorded an unprecedented growth in its size in t_2 , this section examines how spending patterns of households have changed with changes in their level of total consumption expenditure. Figure 3 shows that there are significant differences in spending patterns between classes. The middle class spends about two-thirds of its monthly expenditure on basic necessities of food, clothing, fuel and rent. The affluent spend less than half of their monthly expenditure on basic necessities, while the poor spend close to 80 per cent. The relatively lower share of expenditure spent on food by the middle class and the affluent as compared to the poor frees up resources to be spent on discretionary items such as consumer services, durable goods, health and education.



Source: Authors' calculations based on NSS Household Consumer Expenditure Surveys, 1999-00, 2004-05 and 2011-12.

Note: Expenditure data are calculated using the Mixed Reference Period.

Expenditure on necessities

In accordance with the Engel's law, the proportion of food expenditure to total expenditure diminishes as we move up the consumption expenditure ladder. While on an average the poor spent about 60 per cent of their monthly expenditure on food between 1999-00 and 2011-12, the middle class spent around 45 per cent and the affluent, about 25 per cent. There are considerable differences in expenditure patterns also within the middle class. The lower-middle class spent about half of its total expenditure on food, whereas the upper-middle class spent only about one-third. More importantly, a marginal increase in consumption expenditure from less than \$2 to between \$2 and \$4 substantially lowers the expenditure share on food. Within the food group, expenditure share on staples such as cereals and pulses plummets with an increase in consumption expenditure (Appendix A1a). In contrast, the fraction of expenditure on more expensive sources of calories such as milk, fruits and meat increases as one moves from the category of the poor to the lower-middle class, but steadily declines thereafter. Proportion of expenditure allotted to luxurious foods such as beverages, refreshments and intoxicants increases with the level of consumption expenditure. Thus, as incomes increase and households enter the middle class, they spend a smaller proportion of their total consumption expenditure on basic food items, but increase their share of expenditure on relatively expensive and luxurious food items.

Similar to food, the share of expenditure on clothing, bedding and footwear (labelled 'Clothing' in Figure 3) as well as fuel decreases as households move up the class order. Proportion of spending on rent in contrast, increases considerably with a rise in average expenditure.

Expenditure on discretionary goods

There are significant differences also in spending patterns of discretionary goods between classes. The fraction of expenditure on education is almost three times higher for the middle class and twice for the lower-middle class as compared to the poor. The affluent spend a slightly higher share of their expenditure on education than the upper-middle class. Similarly, expenditure share on health also increases as we move up the class ladder. Share of expenditure on institutional medical care rises as we move up the class structure, whereas that of non-institutional health care falls. Thus, as expenditures rise, people tend to fall ill less often, but spend more on quality health services. The significantly higher spending on education and health by the middle class reflects the class' inclination towards human capital accumulation, which can foster development in the future (see also Banerjee & Duflo, 2008; Doepke & Zilibotti, 2008; Easterly, 2001).

Consumer services such as domestic help, laundry, telephone charges, conveyance and entertainment constitute a large share of discretionary expenditure, which increases significantly as households move up the class order. Fraction of expenditure on durable goods too increases as household expenditure rises. Within durable goods, the share of expenditure on bulky durable items such as furniture, household appliances and personal vehicles increases remarkably as one moves up the class hierarchy, whereas that on small and semi-durable items such as toiletries, small electronic goods like bulbs and tube-lights falls with a rise in consumption expenditure. As Figure 3 shows, consumer services and durable goods together make up over 20 per cent of the share of the middle class' total consumption expenditure, indicating the importance of the middle class as a driver of consumer goods and services (see also Banerjee & Duflo, 2008; Murphy et al., 1989).

While there are considerable differences in spending patterns across classes, their inter-temporal change is ambiguous. The share of expenditure on food and clothing, bedding and footwear declined across all classes in t_1 . But in t_2 , when average consumption expenditure increased at a faster rate than in t_1 , proportion of expenditure on these items remained rather unchanged or even increased, among the middle class and the affluent (see Appendix A1a –A1c). The fraction of expenditure on fuel, in contrast, increased in t_1 , but declined in t_2 . Further, while the share of rent and taxes in total consumption expenditure increased in the first period, its trend in t_2 varied across different classes. One reason for the noticeable difference in distribution of expenditures across commodities over time could be due to the data problems associated with the 55th round of the survey, already mentioned earlier. However, if data deviations are not stark, as we suppose, these differing trends in expenditure shares over time can perhaps be explained by the change in relative prices of these commodities. The increase in the proportion of expenditure on food and clothing in t_2 is possibly due to the relatively large rise in prices of these goods in that period as compared to other commodities, such as fuel. The rise in the share of rent paid by the upper-middle and the affluent classes is perhaps linked to the housing boom in urban India, which largely caters to the upper ranks of the society (see Nijman, 2006). But given the increase in real per capita consumption expenditures in t_2 , we can be assured that in absolute value, the expenditure on consumer durables, education and health has increased with an expansion in the size of the middle class.

Even though the middle class in India spends a higher proportion of its expenditure on non-food items as compared to the poor, the share is quite meagre when compared to middle classes in the West. For instance, in 2012, even the bottom 20 per cent of the population of the United States spent as low as 16.1 per cent of its income on food³, compared to 44.5 per cent and 23.5 per cent in case of the Indian middle class and the affluent, respectively. There are thus enormous differences in spending habits of the Indian middle class and that of the middle classes in the West. These differences in spending habits can partly be attributed to the fact that the Indian middle class is much poorer as compared to its American counterpart. Besides, greater productivity in Western agriculture as compared to Indian agriculture will have implications on food prices, resulting in the Indian middle class spending a lot more on food than the American middle class.

Since there is enough evidence that proportionate consumption of durable goods increases as households enter the middle class, it is useful to explore the type of durable goods that middle class households consume. The sale of modern consumer goods such as mobile-phones or luxury goods such as passenger cars are generally taken as indicators of the larger consumer sentiment and the consuming power of the middle class. Is the Indian middle class really a market for these consumer goods? How does the change in the size of the middle class alter the demand for these consumer goods? The following section examines these important questions.

5 Asset ownership of the middle class

Expansion in the sale of consumer durables such as refrigerators, mobile phones and so on is symbolic of a burgeoning middle class (ADB, 2010). Murphy et al. (1989) assert that the middle classes are the natural consumers of manufactured goods. While the poor lack the spending power to create demand for consumer goods, the rich will demand more of hand-made and imported luxuries than domestic manufactures. Thus, the distinguishing factor between the middle class on the one hand, and the affluent and poor on the other, is the former's ownership of consumer goods produced on a large scale. We consider three groups of durable items- personal vehicles, household appliances and modern, technology-driven goods. Ownership of some of these goods, especially the modern consumer goods such as mobile phones, personal computer, cars and air-conditioners is associated with a 'new' middle class status (Fernandes, 2006). These groups of assets are not only status markers, but also affect one's capability to access and succeed in the contemporary age of service-sector globalisation and digitisation. Because NSS data on ownership of assets is available only for 2004-05 and 2011-12, the analysis here is restricted to these two years.

Figure 4 shows that there are considerable differences in the ownership of type of personal vehicles between different classes. As we move up the class hierarchy, ownership of bicycles becomes less common while that of cars and motor-cycles becomes more common. The differentiating factor between the poor and the middle class lies in the ownership of motor-cycles, whereas car ownership differentiates the affluent from the middle class. It is worth noting that the popular association between increase in car sales and growth of the middle class is misplaced as only a negligible proportion of the middle class owns cars. Even within the middle class, there is a stark difference in the structure of ownership of vehicles, with the lower-middle class primarily owning

³ Consumer Expenditure Survey, US Bureau of Labor Statistics, September 2012.

bicycles and motor-cycles and the upper-middle class owning motor-cycles and cars (see Appendix A2a). Across rural and urban areas as well as over time, this class-wise distribution of ownership of personal vehicles shows little change (see Appendix A2b and A2c). These findings also show if we are to understand the ‘new’ middle class as owners of the more expensive consumer goods such as cars, then the class turns out to be a small segment, most of which actually are not middle class, but the affluent.

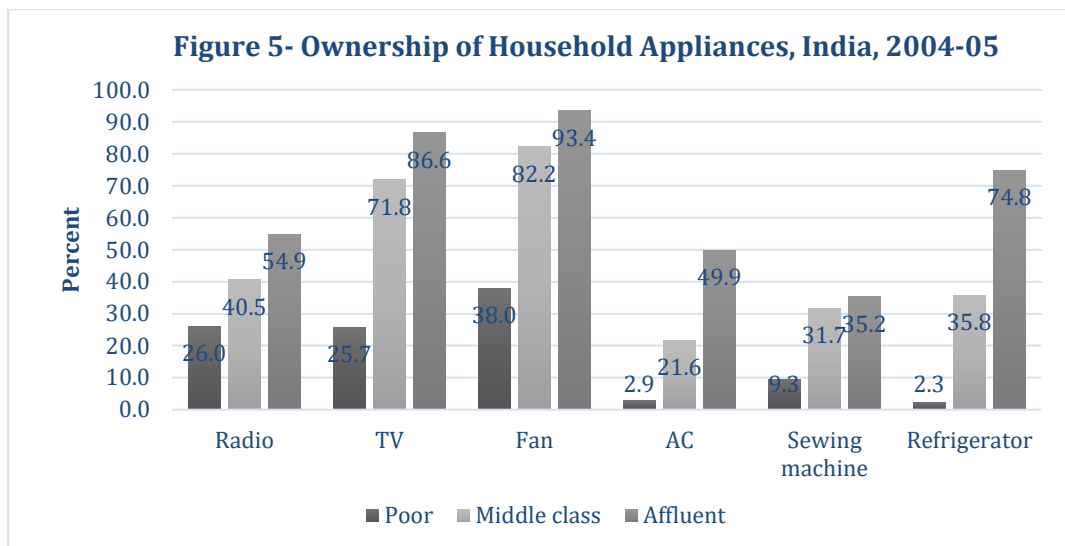
Figure 4: Ownership of Personal Vehicles, India



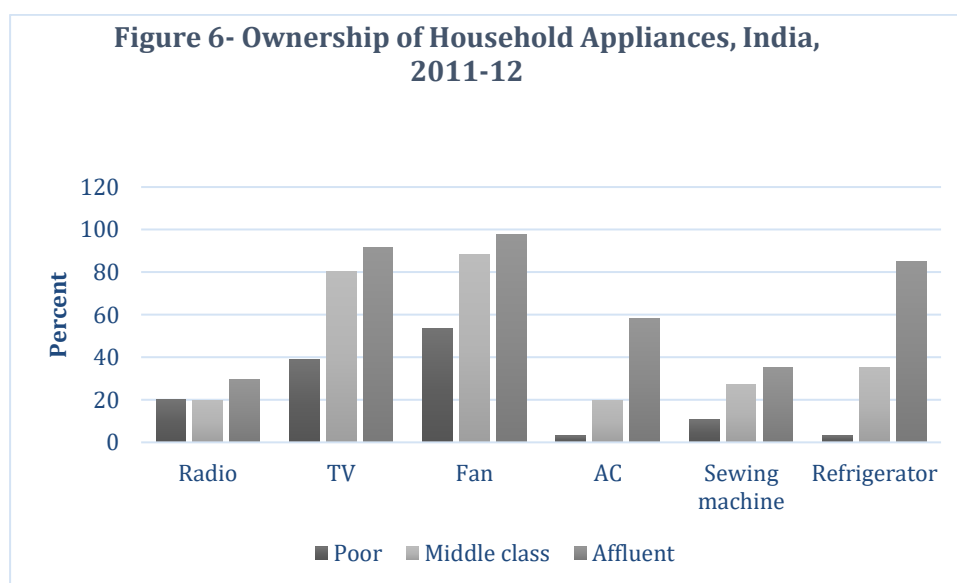
Source: Authors' calculations based on NSS Household Consumer Expenditure Surveys, 2004-05 and 2011-12.

Ownership of all household appliances increases as we move up the class order (Figures 5 and 6), but the incidence of ownership varies between commodities. Televisions and fans are largely owned by the middle class and the affluent whereas air-conditioners (labelled AC in Figures 5 and 6) and refrigerators are primarily owned by the upper-middle class and the affluent (Appendix A2a). Radios and sewing machines, in contrast, are owned by all classes. The low rate of ownership

of electronic appliances among the poor is not only because of their monetary incapacity to purchase them, but perhaps also because of their lack of access to electricity. The lower-middle class, in contrast, probably has access to electricity, which enables it to own at least the relatively inexpensive electronic goods such as fans and televisions. Nevertheless, there is a noticeable improvement in the ownership of these relatively inexpensive goods among the poor over time, which probably reflects their improved access to electricity. Ownership of radios and sewing machines in turn has declined across all classes, showing their dwindling relevance over time. Similar to personal vehicles, the distribution of ownership of household appliances also point that the class segments owning the most expensive consumer durables such as air-conditioners and refrigerators mainly come from the upper-middle and affluent groups, which constitute a very small segment of the Indian population. Also, only the affluent recorded an increase in the rate of ownership of these two commodities over time, the fraction of poor and the middle class owning these goods dwindling in 2011-12 as compared to 2004-05.



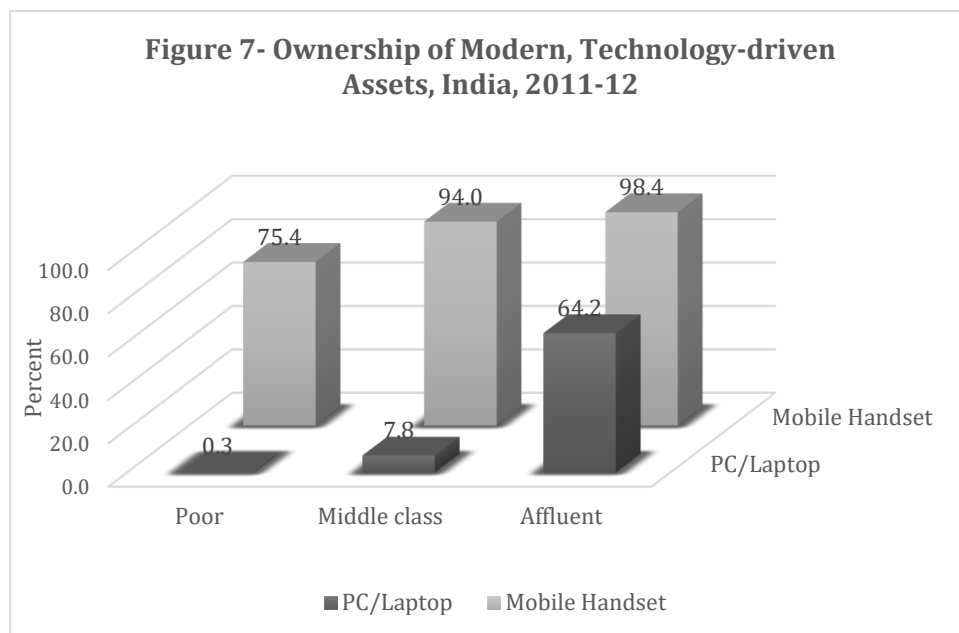
Source: Authors' calculations based on NSS Household Consumer Expenditure Survey, 2004-05.



Source: Authors' calculations based on NSS Household Consumer Expenditure Survey, 2011-12.

While some assets such as radios and sewing machines have lost relevance with time, technological developments have introduced new goods in the market. The onset of digitisation in recent years has made goods such as mobile phones and personal computers easily accessible to consumers. The rather recent significance of these goods is reflected in the NSS surveys themselves, wherein they were incorporated only in the survey schedule of 2011-12. The data presented in Figure 7 hence pertains to 2011-12 alone. A striking finding of our analysis is the widespread ownership of mobile phones across all classes, in both rural and urban areas (Appendix A2a – A2c). The popular association of increase in the sale of mobile phones with a burgeoning middle class is thus flawed, as they have penetrated even among the poor. The wide-spread ownership of mobile phones across all classes is perhaps a reflection of the decreasing cost of mobile handsets in India as well as minimal usage charges. Moreover, mobile phones have penetrated across all classes even though there remains a large gap between classes in the case of penetration of fixed telephone lines (only 1 per cent of the poor and 8.4 per cent of the middle class had a fixed telephone line connection in 2011-12, compared to 43 per cent of the affluent). The Indian society appears to have leapfrogged a generation of the communication revolution.

Ownership of personal computers (PC/ laptop in Figure 7), unlike mobile phones, differs substantially across classes. While less than three per cent of the lower-middle class own personal computers, more than 64 per cent of the affluent own them (Appendix A2a – A2c). Further, households in urban areas are far more likely to own a personal computer than in rural areas. The sharp difference in the ownership of personal computers between classes and between rural and urban areas is not a reflection of differences in income or expenditure alone. Class-wise differences in ownership of other consumer durables such as televisions, air-conditioners and refrigerators are less conspicuous, although they are as expensive as personal computers. The glaring difference in ownership of personal computers hints towards a stark digital divide, where large numbers of the population perhaps lack computer literacy.



Source: Authors' calculations based on NSS Household Consumer Expenditure Survey, 2011-12.

6 Conclusion

The analysis of class-wise consumption patterns in this study reveals substantial differences in spending patterns between classes. In accordance with the Engel's law, it was found that the fraction of expenditure spent on food declines as one moves up the income/consumption expenditure distribution and that on discretionary goods and services rises. Middle-class households in general spend a substantially larger share of their expenditure on consumer services, education, health, durable goods and house-rent (items that are traditionally considered fundamental to middle class status, see for example, Bergeron et al., 2014; Kochhar, 2015) as compared to the poor. There are considerable differences in spending patterns within the middle class, with the lower-middle class spending a much larger share of its expenditure on food than the upper-middle class. Nevertheless, there are just as substantial differences in spending patterns between the poor and the lower-middle class, indicating that daily per capita expenditure just a little above \$2 makes a noticeable difference in the budgetary allocation of households. This also shows that the lower-limit of \$2 to define the middle class is not as arbitrary as Banerjee & Duflo (2008: 4) themselves confess it to be. The lower-limit of \$2 in fact provides a base amount of consumption that can contribute economically to growth by allowing households to spend a fair share of their expenditure on discretionary goods (Chun, Hasan, & Ulubasoglu, 2011). Because this definition also fits other relative definitions of the middle class (for example, that of Easterly, 2001), it shows that economic definitions of the middle class are after all not as ad hoc as they are sometimes perceived to be (see for example, Research Unit in Political Economy, 2014). Economic definitions of class, however, differ from country to country, and ought to be applied only after a careful analysis of the social and economic structure of the society under study.

The level of consumption expenditure is also reflected in the possession of the kind of consumer goods owned. Ownership of type of household appliances, personal vehicles as well as the more modern technology-based goods differs considerably across classes. Luxurious goods such as air-conditioners, refrigerators, personal computers and cars, whose ownership is generally associated with the rise of a 'new' middle class, are possessed largely by the upper-middle and affluent classes, who constitute a small proportion of the country's population. The larger segment of the lower-middle class mostly owns goods such as motor-bikes and television sets. Mobile-phones, a modern consumer good, are owned by a large number of households across all classes, indicating its affordability and its importance as a necessity in the current times of information technology and high-speed communication.

The spending patterns of the middle class and its possession of different types of consumer goods have important implications for stakeholders in both the public and private sectors. The rise of a consumerist middle class in India is vital for multi-nationals and other private firms, especially at a time when consumption demand from the western middle class is bleak. The expansion in the size of the middle class shows that India is indeed a promising market for the private sector. Generally, these firms target the urban upper-middle and affluent classes to sell their consumer products. Even though these classes constitute only a small proportion of the country's population, given India's total population size, in absolute numbers, these classes are an attractive consumer market for luxurious goods. However, this research shows that the largest consumer market lies in

the lower-middle class category, which includes both urban and rural markets, of which the latter remains under-served. These classes of consumers demand more of the small consumer durable goods rather than luxurious products. India thus has a huge market for producers of not only luxurious goods but also of existing products that with simpler modifications will attract consumers with less spending power. The most important lesson for private firms from this research thus lies in realising the size of different markets and their diverse consumption demand; and accordingly targeting them.

Another implication of this research lies in the area of public policy. With expansion in the size of the middle class, there is an increase in the demand for education, health, transport and other public services. This study showed that as households enter the lower-middle class, their spending on services such as education and health increases significantly. The government and the private sector should strive to meet the rising demand in these sectors. Furthermore, as the middle class invests in human capital accumulation and produces a large pool of educated workforce in the near future, there will be further demand for skilled jobs. Quality jobs thus need to be created in education-intensive sectors. The recent employment data released by the NSS however show record levels of unemployment in the country, especially among the educated youth (NSSO, 2019). Given the rate of expansion of the middle class and its investment in education, failure to create high-skill jobs so will not only result in further increase in under-employment or unemployment, but may also have negative social consequences such as social unrest.

It is however also important to note that much of the growth in the middle class in India between 2004-05 and 2011-12 has happened because of strong economic growth in the country as well as across the world during this period. With both global and domestic economic growth having slowed down in the recent years, it is possible that the growth of the middle class has moderated after 2011-12. Some estimates already show how slow growth has adversely affected employment creation especially in major non-farm sectors (NSSO, 2019; Varma, 2017). Lack of creation of skilled jobs will further adversely affect the growth in incomes and spending power of the middle class. A comprehensive understanding of the trend in the growth of the Indian middle class and its spending patterns after 2011-12 can be gained as the data from the NSS survey on household consumer expenditure for 2016-17 becomes available.

References

- Ablett, J., Baijal, A., Beinhocker, E., & Bose, A. (2007). *The "Bird of Gold": The Rise of India's Consumer Market*. McKinsey Global Institute, San Francisco.
- ADB. (2010). *Special Chapter: The Rise of Asia's Middle Class in Key Indicators for Asia and the Pacific*. Manila. Retrieved from <http://www.adb.org/sites/default/files/publication/27726/ki2010-special-chapter.pdf>
- Banerjee, A. V, & Duflo, E. (2008). What is Middle Class about the Middle Classes Around the World? *The Journal of Economic Perspectives: A Journal of the American Economic Association*, 22(2), 3.
- Basole, A., & Basu, D. (2015). Non-Food Expenditures and Consumption Inequality in India. *Economic and Political Weekly*, 50(36), 43–53.
- Bergeron, D., Duke, B., Erickson, J., Gordon, J., Hamm, K., Madowitz, M., & Miller, K. (2014). *The Middle-Class Squeeze: A Picture of Stagnant Incomes, Rising Costs, and What We Can Do to Strengthen America's Middle Class*. Center for American Progress. Washington DC. Retrieved from <https://www.americanprogress.org/issues/economy/reports/2014/09/24/96903/the-middle-class-squeeze/>
- Chun, N., Hasan, R., & Ulubasoglu, M. (2011). *The Role of the Middle Class in Economic Development: What Do Cross-Country Data Show?* (ADB Economics Working Paper Series No. 245).
- Deaton, A., & Dreze, J. (2002). Poverty and Inequality in India: A Re-Examination. *Economic and Political Weekly*, 3729–3748. <http://doi.org/10.1080/13547860008540785>
- Doepke, M., & Zilibotti, F. (2008). Occupational Choice and the Spirit of Capitalism. *Quarterly Journal of Economics*, 123(2), 747–793.
- Easterly, W. (2001). The Middle Class Consensus and Economic Development. *Journal of Economic Growth*, 6(4), 317–335.
- Fernandes, L. (2006). *India's New Middle Class: Democratic Politics in an Era of Economic Reform*. Minneapolis: University of Minnesota Press.
- Jodhka, S. S., & Prakash, A. (2016). *The Indian Middle Class*. New Delhi: Oxford University Press.
- Kharas, H. (2010). *The Emerging Middle Class in Developing Countries*. *Global Development Outlook*.
- Kochhar, R. (2015). *A Global Middle Class is more Promise than Reality: From 2001 to 2011, Nearly 700 million Step out of Poverty, but Most Only Barely*. Pew Research Center. Washington DC. Retrieved from http://www.pewglobal.org/files/2015/07/Global-Middle-Class-Report_FINAL_7-8-15.pdf
- Krishnan, S., & Hatekar, N. (2017). Rise of the New Middle Class in India and Its Changing Structure. *Economic and Political Weekly*, 52(22), 40–48.
- Lahiri, A. K. (2014). The Middle Class and Economic Reforms. *Economic And Political Weekly*, 49(11), 37–44.
- Meyer, C., & Birdsall, N. (2012). *New Estimates of India's Middle Class: Technical Note*. Center for Global Development.

- Motiram, S., & Naraparaju, K. (2015). Growth and Deprivation in India: What does Recent Evidence Suggest on “Inclusiveness”? *Oxford Development Studies*, 43(2), 145–164. <http://doi.org/10.1080/13600818.2014.988693>
- Murphy, K. M., Shleifer, A., & Vishny, R. (1989). Income Distribution, Market Size, and Industrialization. *The Quarterly Journal of Economics*, 104(3), 537–564. Retrieved from <http://www.jstor.org/stable/2937810> .
- Nijman, J. (2006). Mumbai’s Mysterious Middle Class. *International Journal of Urban and Regional Research*, 30(4), 758–775. <http://doi.org/10.1111/j.1468-2427.2006.00694.x>
- NSSO (2019). Annual Report of the Periodic Labour Force Survey for July 2017-June 2018, National Statistical Office, Ministry of Statistics and Programme Implementation, India. Retrieved from http://www.mospi.gov.in/sites/default/files/publication_reports/Annual%20Report%2C%20PLFS%202017-18_31052019.pdf
- Ravallion, M. (2010). The Developing World’s Bulging (but Vulnerable) Middle Class. *World Development*, 38(4), 445–454. <http://doi.org/10.1016/j.worlddev.2009.11.007>
- Research Unit in Political Economy. (2014). *Aspects of India’s Economy- A Middle Class India?* No. 58, September.
- Sen, A. (2000). Estimates of Consumer Expenditure and its Distribution: Statistical Priorities after NSS 55th Round. *Economic and Political Weekly*, 35(51), 4499–4518.
- The Economist. (2009, February 12). Burgeoning bourgeoisie. Retrieved from <http://www.economist.com/node/13063298>
- Varma, S. (2017, March 30). Only 0.5% jobs added in 8 key non-farm sectors from April to September last year. *The Times of India*. Mumbai. Retrieved from timesofindia.indiatimes.com/india/only-0-5-jobs-added-in-8-key-non-farm-sectors-from-april-to-september-last-year/articleshow/57903552.cms
- Wilson, D., & Dragusanu, R. (2008). *The Expanding Middle: The Exploding World Middle Class and Falling Global Inequality* (Global Economics Paper No. 170).

APPENDIX

A1a Table: Average Share of Consumption Expenditure on Different Item Groups, India (%)

Item group	Poor (<\$2)			Middle (\$2-\$10)			Lower-middle (\$2-\$4)			Middle-middle (\$4-\$6)			Upper-middle (\$6-\$10)			Affluent (>\$10)		
	99-00	04-05	11-12	99-00	04-05	11-12	99-00	04-05	11-12	99-00	04-05	11-12	99-00	04-05	11-12	99-00	04-05	11-12
Cereals, pulses, etc. (i)	40.0	33.8	30.0	22.6	18.1	17.8	26.0	21.4	21.3	17.0	14.3	14.7	12.1	10.2	10.5	10.0	6.1	5.4
Fruits, vegetables, milk, egg, meat and fish (ii)	18.9	19.2	18.8	21.3	18.6	18.8	22.2	20.1	20.3	20.3	17.0	18.1	17.3	14.5	15.1	10.2	9.4	9.3
Beverages, refreshments and intoxicants (iii)	6.8	6.8	8.4	8.0	7.4	8.0	7.8	7.4	8.0	8.5	7.5	7.8	9.0	7.2	8.3	9.7	8.4	8.8
Food (i+ii+iii)	65.7	59.8	57.1	51.9	44.1	44.6	56.0	48.9	49.6	45.8	38.9	40.6	38.4	31.9	33.8	29.8	23.8	23.5
Clothing, bedding and footwear	8.1	8.2	8.7	7.4	6.7	7.4	7.6	7.1	7.8	7.1	6.3	7.0	6.6	5.7	6.4	5.9	4.7	5.2
Fuel	8.2	11.1	11.3	6.9	8.9	7.9	7.4	9.5	9.0	6.2	8.2	7.1	5.5	7.3	6.0	9.6	5.1	4.2
Education	1.6	2.4	2.5	3.9	6.1	6.1	3.3	4.8	4.6	4.9	7.4	7.5	5.6	8.6	9.0	4.5	9.7	9.8
Health	4.5	4.4	4.7	6.8	6.9	7.3	6.5	6.7	6.6	7.0	7.3	8.1	7.7	7.3	8.2	8.1	8.4	8.8
Consumer services	5.0	6.0	7.6	10.8	13.7	13.2	8.7	11.2	11.5	13.8	16.4	14.4	18.0	20.2	16.9	16.7	21.8	19.7
Rent and taxes	0.5	0.8	0.6	3.6	4.1	3.8	2.7	3.1	2.3	5.2	5.5	5.0	6.5	6.7	7.1	5.5	8.8	10.8
Small durables (iv)	4.9	5.3	5.2	5.0	4.8	4.9	5.1	5.1	5.2	5.0	4.6	4.7	4.7	4.1	4.3	6.6	3.1	3.2
Bulky durables (v)	1.5	2.0	2.3	3.7	4.7	4.8	2.7	3.6	3.4	5.1	5.5	5.6	7.0	8.2	8.3	13.3	14.6	14.8
Durables (iv+v)	6.4	7.3	7.5	8.7	9.5	9.7	7.8	8.7	8.6	10.1	10.1	10.3	11.7	12.3	12.6	19.9	17.7	18.0

Note: Column totals may not sum to 100 because of rounding off.

Source: Authors' calculations based on NSS Household Consumer Expenditure Surveys, 55th, 61st and 68th rounds.

A1b Table: Average Share of Consumption Expenditure on Different Item Groups, Rural India (%)																		
Item group	Poor (<\$2)			Middle (\$2-\$10)			Lower-middle (\$2-\$4)			Middle-middle (\$4-\$6)			Upper-middle (\$6-\$10)			Affluent (>\$10)		
	99-00	04-05	11-12	99-00	04-05	11-12	99-00	04-05	11-12	99-00	04-05	11-12	99-00	04-05	11-12	99-00	04-05	11-12
Cereals, pulses, etc. (i)	41.0	34.6	30.3	25.6	20.8	19.6	27.5	22.6	21.9	18.3	15.8	14.8	14.1	12.1	10.7	22.5	8.1	5.9
Fruits, vegetables, milk, egg, meat and fish (ii)	18.7	19.2	18.7	22.5	20.4	20.2	22.9	21.4	20.9	21.7	18.1	19.5	16.8	14.7	16.3	8.3	10.0	8.5
Beverages, refreshments and intoxicants (iii)	6.7	6.8	8.5	7.7	7.3	7.9	7.6	7.3	8.1	7.8	7.5	7.2	9.9	6.9	8.6	9.2	7.5	6.8
Food (i+ii+iii)	66.4	60.6	57.5	55.8	48.5	47.7	58.0	51.3	50.8	47.8	41.5	41.5	40.8	33.7	35.7	39.8	25.6	21.2
Clothing, bedding and footwear	8.1	8.3	8.7	7.6	6.9	7.6	7.7	7.3	7.9	7.0	6.1	6.8	6.0	5.0	6.0	10.2	4.5	3.5
Fuel	8.0	10.8	11.3	6.8	8.4	8.2	7.2	8.9	9.1	5.5	7.1	6.6	4.1	5.5	5.2	1.9	3.6	2.6
Education	1.4	2.2	2.3	2.8	4.3	4.8	2.6	3.9	4.0	3.3	5.8	6.7	4.1	5.8	7.3	2.5	10.7	7.1
Health	4.6	4.5	4.8	8.5	9.2	8.5	7.8	8.4	7.4	10.9	10.9	11.1	13.2	13.8	12.5	15.2	11.5	17.9
Consumer services	4.8	5.9	7.6	8.8	11.1	12.0	8.1	10.1	11.3	12.1	14.0	13.7	14.2	16.1	14.3	8.2	15.3	11.1
Rent and taxes	0.3	0.3	0.3	1.0	1.1	1.0	0.8	0.9	0.7	1.5	1.6	1.6	3.1	1.5	2.1	0.9	5.1	2.2
Small durables (iv)	4.8	5.3	5.1	4.7	4.7	4.9	4.8	4.9	5.1	4.4	4.2	4.5	3.7	3.4	3.8	2.1	2.5	2.0
Bulky durables (v)	1.6	2.1	2.4	4.0	5.8	5.3	3.0	4.3	3.7	7.5	8.8	7.5	10.8	15.2	13.1	19.2	21.2	32.4
Durables (iv+v)	6.4	7.4	7.5	8.7	10.5	10.2	7.8	9.2	8.8	11.9	13.0	12.0	14.5	18.6	16.9	21.3	23.7	34.4

Note: Column totals may not sum to 100 because of rounding off.
Source: Authors' calculations based on NSS Household Consumer Expenditure Surveys, 55th, 61st and 68th rounds.

A1c Table: Average Share of Consumption Expenditure on Different Item Groups, Urban India (%)

Item group	Poor (<\$2)			Middle (\$2-\$10)			Lower-middle (\$2-\$4)			Middle-middle (\$4-\$6)			Upper-middle (\$6-\$10)			Affluent (>\$10)		
	99-00	04-05	11-12	99-00	04-05	11-12	99-00	04-05	11-12	99-00	04-05	11-12	99-00	04-05	11-12	99-00	04-05	11-12
Cereals, pulses, etc. (i)	35.2	30.1	28.3	19.9	16.1	15.9	24.0	20.0	20.3	16.5	13.7	14.6	11.6	9.7	10.4	7.7	5.4	5.3
Fruits, vegetables, milk, egg, meat and fish (ii)	19.8	19.0	15.1	20.2	17.2	17.3	21.3	18.7	19.1	19.6	16.6	17.3	17.5	14.5	14.6	10.6	9.2	9.4
Beverages, refreshments and intoxicants (iii)	7.4	7.0	7.6	8.3	7.4	8.0	8.0	7.4	7.8	8.8	7.5	8.1	8.7	7.3	8.2	9.7	8.6	9.2
Food (i+ii+iii)	62.3	56.2	54.7	48.3	40.8	41.2	53.3	46.2	47.2	44.9	37.8	40.0	37.8	31.5	33.2	28.0	23.3	24.0
Clothing, bedding and footwear	7.8	7.7	8.3	7.3	6.6	7.2	7.5	7.0	7.7	7.1	6.4	7.1	6.8	5.9	6.6	5.1	4.7	5.4
Fuel	8.8	12.0	11.5	7.1	9.3	7.8	7.7	10.3	9.0	6.6	8.7	7.5	5.8	7.9	6.2	11.0	5.5	4.5
Education	2.4	3.2	3.4	4.9	7.2	7.5	4.2	5.9	5.8	5.6	8.1	8.0	6.0	9.3	9.7	4.9	9.5	10.4
Health	4.0	4.0	4.3	5.2	5.2	5.9	4.9	4.8	5.4	5.2	5.7	6.1	6.3	5.5	6.7	6.7	7.4	7.2
Consumer services	5.5	6.8	8.2	12.6	15.6	14.4	9.6	12.4	11.9	14.6	17.3	14.9	19.0	21.3	17.8	18.3	24.0	21.2
Rent and taxes	2.5	3.1	2.4	5.9	6.5	6.8	5.0	5.5	5.1	6.8	7.1	7.3	7.4	8.0	8.8	6.4	9.9	12.4
Small durables (iv)	5.4	5.5	5.3	5.3	4.9	4.9	5.5	5.2	5.2	5.3	4.7	4.9	4.9	4.2	4.4	7.4	3.2	3.4
Bulky durables (v)	1.3	1.5	1.9	3.4	3.9	4.3	2.3	2.7	2.7	4.0	4.1	4.4	6.0	6.4	6.6	12.2	12.5	11.5
Durables (iv+v)	6.7	7.0	7.2	8.7	8.8	9.2	7.8	7.9	7.9	9.3	8.8	9.3	10.9	10.6	11.0	19.6	15.7	14.9

Note: Column totals may not sum to 100 because of rounding off.

Source: Authors' calculations based on NSS Household Consumer Expenditure Surveys, 55th, 61st and 68th rounds.

A2a Table: Ownership of Consumer Assets across Classes, India (%)

Asset type	Poor (<\$2)		Middle (\$2-\$10)		Lower-middle (\$2-\$4)		Middle-middle (\$4-\$6)		Upper-middle (\$6-\$10)		Affluent (>\$10)	
	04-05	11-12	04-05	11-12	04-05	11-12	04-05	11-12	04-05	11-12	04-05	11-12
Personal Vehicles												
Bicycle	52.6	66.1	51.7	52.0	53.7	55.1	46.8	45.3	40.0	38.9	27.6	31.1
Motor cycle/ Scooter	5.2	10.2	36.9	42.3	31.0	35.6	55.8	59.0	62.9	66.4	50.0	58.4
Car	0.4	0.6	5.0	6.4	2.5	3.2	9.1	10.5	25.0	25.7	45.1	50.8
Household Appliances												
Radio	26.0	20.0	40.5	19.7	38.3	18.8	46.3	19.9	53.2	26.6	54.9	29.5
Television	25.7	38.7	71.8	80.4	67.9	77.0	85.1	89.1	87.5	92.1	86.6	91.7
Fan	38.0	53.7	82.2	88.2	79.4	85.6	91.5	95.1	94.3	97.4	93.4	97.8
Air-conditioner/ Air cooler	2.9	3.2	21.6	19.9	17.4	15.1	33.3	29.4	44.5	42.1	49.9	58.0
Sewing machine	9.3	10.6	31.7	27.1	29.4	24.6	39.6	34.3	41.2	34.3	35.2	35.1
Refrigerator	2.3	3.3	35.8	35.2	27.1	25.0	62.9	58.9	76.0	75.7	74.8	84.8
Communication Based Goods												
PC/ Laptop	NA	0.3	NA	7.8	NA	2.8	NA	15.1	NA	36.9	NA	64.2
Mobile handset	NA	75.4	NA	94.0	NA	92.8	NA	97.3	NA	98.0	NA	98.4

Source: Authors' calculations based on NSS survey on household consumption expenditure, 61st and 68th rounds.

A2b Table: Ownership of Consumer Assets across Classes, Rural India (%)

Asset type	Poor (<\$2)		Middle (\$2-\$10)		Lower-middle (\$2-\$4)		Middle-middle (\$4-\$6)		Upper-middle (\$6-\$10)		Affluent (>\$10)	
	04-05	11-12	04-05	11-12	04-05	11-12	04-05	11-12	04-05	11-12	04-05	11-12
Personal Vehicles												
Bicycle	52.9	67.1	56.3	57.8	56.8	58.5	55.2	55.7	46.7	47.6	42.9	42.8
Motor cycle/ Scooter	4.6	9.5	29.8	37.1	27.1	33.2	49.7	57.4	51.2	58.6	46.6	61.6
Car	0.4	0.6	3.2	5.0	2.1	3.4	8.7	10.8	17.5	23.8	38.6	34.0
Household Appliances												
Radio	26.2	20.9	40.4	20.3	39.6	20.1	46.7	20.4	47.3	24.3	40.7	23.5
Television	20.8	34.2	59.2	73.0	56.9	70.7	75.2	84.3	77.7	87.0	75.8	87.7
Fan	31.9	48.9	71.5	82.5	69.6	80.7	84.6	91.3	88.9	95.3	88.7	93.5
Air-conditioner/ Air cooler	1.7	2.2	12.5	13.8	11.0	11.2	23.3	26.6	23.8	30.4	32.7	27.5
Sewing machine	7.7	8.9	28.1	25.2	26.8	22.9	37.3	36.5	37.6	40.8	34.3	35.1
Refrigerator	1.2	2.0	19.5	21.8	15.9	16.8	43.9	46.1	51.5	56.6	57.4	68.0
Communication Based Goods												
PC/ Laptop	NA	0.2	NA	3.0	NA	1.4	NA	9.1	NA	19.6	NA	26.4
Mobile handset	NA	74.0	NA	91.8	NA	91.1	NA	95.3	NA	95.9	NA	98.4

Source: Authors' calculations based on NSS survey on household consumption expenditure, 61st and 68th rounds.

A2c Table: Ownership of Consumer Assets across Classes, Urban India (%)												
Asset type	Poor (<\$2)		Middle (\$2-\$10)		Lower-middle (\$2-\$4)		Middle-middle (\$4-\$6)		Upper-middle (\$6-\$10)		Affluent (>\$10)	
	04-05	11-12	04-05	11-12	04-05	11-12	04-05	11-12	04-05	11-12	04-05	11-12
Personal Vehicles												
Bicycle	50.6	59.9	47.3	43.8	49.9	48.2	43.2	38.5	38.2	35.7	22.7	29.1
Motor cycle/ Scooter	8.2	14.8	43.8	49.8	35.9	40.5	58.5	60.1	66.1	69.2	51.0	57.8
Car	0.5	0.5	6.8	8.3	3.0	3.0	9.3	10.3	27.0	26.4	47.1	53.8
Household Appliances												
Radio	25.0	14.4	40.6	18.8	36.8	16.4	46.1	19.5	54.7	27.4	59.4	30.5
Television	53.6	68.3	84.0	91.0	81.5	89.6	89.3	92.3	90.1	94.0	90.1	92.4
Fan	72.8	85.0	92.5	96.4	91.4	95.4	94.4	97.6	95.7	98.1	94.9	98.5
Air-conditioner/ Air cooler	10.3	10.4	30.5	28.6	25.3	23.0	37.6	31.3	50.0	46.4	55.4	63.4
Sewing machine	18.7	21.6	35.2	29.9	32.5	28.1	40.6	32.9	42.2	32.0	35.5	35.1
Refrigerator	8.8	12.4	51.6	54.4	40.9	41.7	71.2	67.4	82.6	82.6	80.3	87.8
Communication Based Goods												
PC/ Laptop	NA	0.9	NA	14.7	NA	5.8	NA	19.1	NA	43.2	NA	71.0
Mobile handset	NA	84.8	NA	97.2	NA	96.2	NA	98.6	NA	98.8	NA	98.4

Source: Authors' calculations based on NSS survey on household consumption expenditure, 61st and 68th rounds.