

Equities

30 March 2012 | 23 pages

India Consumer

3Ds: Demographic Deep Dive – Part 1: Rural India

- What's New?** — We do a deep dive into consumption spends in India – focusing on food and non food as categories. The National Sample Survey Office recently published findings from its 66th Round survey – Household Consumption of Various Goods and Services in India. This report focuses on trends in rural India.
- Around 70% of India lives in its villages** — with around 30% of the population as city dwellers. The rate of urbanization is expected to increase to around 40% by 2025. India's levels of urbanization are similar to those of Vietnam, and lower than China / Indonesia (both in their mid 40s). Among the more populous states, Bihar and Uttar Pradesh have low levels of urbanization (around 11% / 22% respectively).
- Monthly rural household consumption expenditure averages ~Rs1000** — and is skewed towards the lower end. Expenditure rises sharply beyond the 8th decile – the 9th and 10th deciles enjoy expenditure levels of ~Rs1500 / Rs2500 / month respectively.
- Across strata, rural India spends around 54% of income on food** — The range is wide; at the upper most decile, around 38% of consumption expenditure is food related. At the lowest decile, 66% of expenditure is linked to food. Non food spends escalate when consumption expenditure exceeds Rs1500 / month.
- Those milk moustaches** — Food items as an overall category have declined as a share of the wallet. There are some divergent trends, though. Cereals (rice / wheat) decline steadily as % of food consumption, pulses, however, remain relatively stable. Milk shows a sharp and sustained escalation in spends, the only other category to witness such sharp growth is fruits. Vegetables, surprisingly, decline as a share of wallet.
- Have a smoke and a whiskey** — The share of wallet for both alcohol & tobacco is surprisingly low. Cigarette consumption rises gradually upwards from the 6th decile, while bidi consumption dips noticeably in the upper deciles. IMFL begins its upward march from the 7th decile – but surprisingly, country liquor stays fairly stable.
- Steady staples** — The share of wallet depicts a declining trend for both soaps and detergents as income levels rise. Spends on detergents – across deciles – are ~1.5-1.6x that of soaps. The ratio of soaps vs. oral care is ~2-2.4x at the lower deciles, gradually declining to ~1.7-1.9x as absolute spends on oral rise.
- The educated and entertained Indian** — Spends on education show a gradual increase, rising rapidly in the upper most deciles – a very encouraging sign for long-term demographics. Cable TV is very popular too, cinema less so.
- Mr & Mrs Walky Talky** — Indians are walking less, talking more. The penetration of 2 wheelers and cars per 1000 households is 363 / 66 respectively in the uppermost decile – up ~6x and ~16x vs. the 5th decile. Bicycles peak in the 5th decile and then depict a steady downward trend. Cell phone penetration is > 750x / 1000 HH at the upper most end – higher than televisions.

Industry Overview

Jamshed Dadabhoy

+91-22-6631-9883

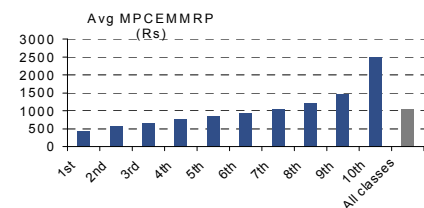
jamshed.dadabhoy@citi.com

Aditya Mathur

+91-22-6631-9841

aditya.mathur@citi.com

Figure 1. Rural India: Decile Classes of Consumption Expenditure



Source: CIRA, MOSPI

See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

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3Ds – The Demographic Deep Dive

The National Sample Survey Office recently published findings from its 66th Round survey – Household Consumption of Various Goods and Services in India.

We find this data interesting from a consumption perspective for the following reasons:

1. The survey is fairly comprehensive – the sample size is around 100,000 households, with around 59,000 in rural India, and around 41,000 in urban India.
2. The survey assesses consumption habits across households and attempts to generate estimates of average household monthly per capita expenditure (MPCE) across national and state wide levels, for different socio – economic groups.
3. What we like is that this round is relatively recent – conducted from July 2009 to June 2010. The previous survey was conducted from July 2004-June 2005.

This note, the first in its series, assesses trends in consumption in households in rural India, both across food and non food categories. The data is typically presented across deciles of consumption expenditure. ***What we've tried to assess for categories is the income elasticity of demand. Essentially, trying to determine answers to the question – What will the Indian consumer of tomorrow consume?***

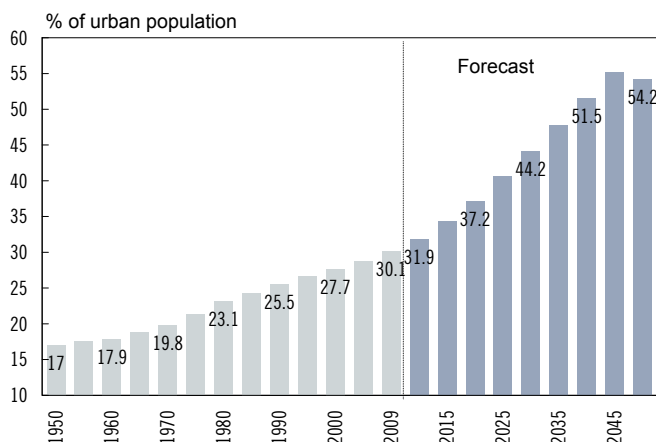
This question can be answered in one of two ways – one way would be to look at the consumption experience in other markets, and as the economies become wealthier, map consumption patterns. But this is fraught with difficulties – tax levels are different, costs of basic needs – food, fuel, lighting, water, et al – are different in different countries, the stimulus a consumer is subjected to differs across time – radio, TV and now the internet influence and mould consumption patterns very differently across time. A deviation in the methodology would be to look at penetration levels of categories and determine the headroom available for growth – comparing penetration levels in different economies at different per capita levels – but here again, there would be issues regarding data, methodology, temporal distortions, etc.

Another way to answer this question would be to assess consumption patterns across different income levels for the same categories and then determine which categories grow at a faster pace as income levels rise – the obvious advantage is that it analyzes the Indian consumer, so it removes inter-country distortions. It also removes temporal distortions as it analyses consumption over the same time period – one can thus argue that the only effect that bears upon consumption is income – and thus income elasticity of demand. There are disadvantages too – the sample size is very small – 100,000 families compared to ~220m present. Timeliness is an issue too, given it occurs every five years. But that said, we think it is better than mere anecdotal checks, wherein the sample size would be even smaller.

This report will focus on consumption habits in rural India. The next part of the series will focus on urban India.

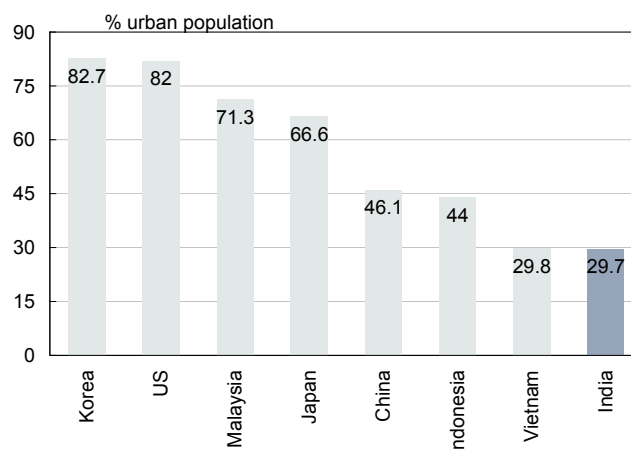
The Great Divide – Rural vs. Urban India

Figure 2. India: Rural / Urban Trends



Source: CSO, Census, NSSO

Figure 3. Urbanization: India in a Global Context



Source: World Bank, CSO, Census, NSSO

Figure 4. Population Distribution – Rural / Urban – All India State wise

Urbanization levels ~30% on an all India basis

Urbanization levels are high in Union Territories and states like Delhi / Goa. Urbanization levels vary significantly in the four southern states

In West India, Maharashtra and Gujarat have much higher levels of urbanization than Rajasthan

In North India, Punjab and Haryana have far higher levels of urbanization than UP, Uttarakhand, West Bengal and Bihar

Bihar's level of urbanization is ~10%, in-line with Himachal Pradesh

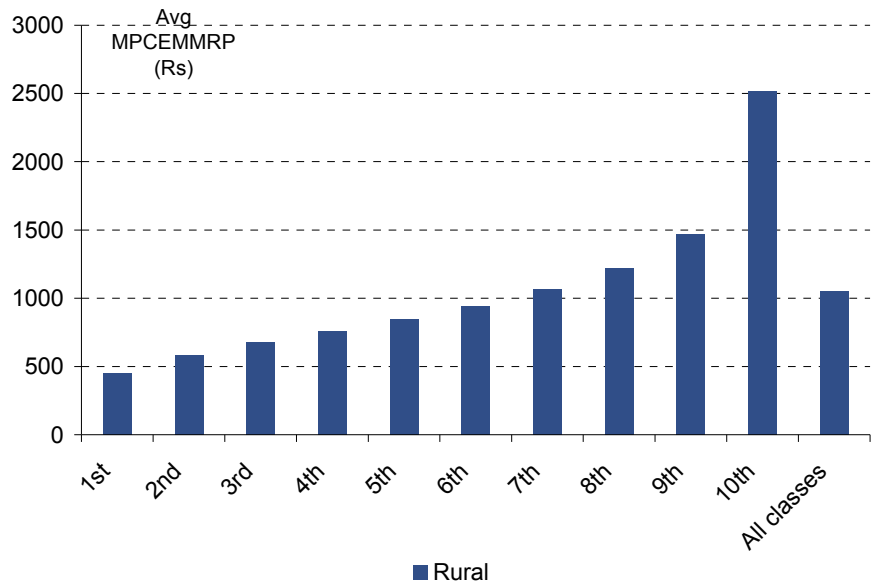
	Rural	Urban	Total	Contribution to Rural Population (%)	Contribution to Urban Population (%)	% urbanization
Andhra Pradesh	60,637	23,196	83,832	7.4%	6.6%	27.7%
Arunachal Pradesh	852	373	1,224	0.1%	0.1%	30.5%
Assam	25,699	4,429	30,128	3.1%	1.3%	14.7%
Bihar	86,051	10,109	96,160	10.4%	2.9%	10.5%
Chhattisgarh	18,450	5,424	23,874	2.2%	1.6%	22.7%
Delhi	855	16,996	17,851	0.1%	4.9%	95.2%
Goa	723	981	1,704	0.1%	0.3%	57.6%
Gujarat	34,871	23,227	58,098	4.2%	6.6%	40.0%
Haryana	16,700	8,249	24,949	2.0%	2.4%	33.1%
Himachal Pradesh	5,986	731	6,717	0.7%	0.2%	10.9%
Jammu & Kashmir	8,474	3,068	11,542	1.0%	0.9%	26.6%
Jharkhand	23,794	7,174	30,968	2.9%	2.1%	23.2%
Karnataka	37,093	21,607	58,700	4.5%	6.2%	36.8%
Kerala	25,505	8,769	34,275	3.1%	2.5%	25.6%
Madhya Pradesh	51,345	19,511	70,857	6.2%	5.6%	27.5%
Maharashtra	60,087	50,768	110,856	7.3%	14.5%	45.8%
Manipur	1,794	622	2,416	0.2%	0.2%	25.7%
Meghalaya	2,055	530	2,586	0.2%	0.2%	20.5%
Mizoram	469	522	991	0.1%	0.1%	52.7%
Nagaland	1,835	383	2,219	0.2%	0.1%	17.3%
Orissa	33,654	6,674	40,328	4.1%	1.9%	16.5%
Punjab	16,926	10,388	27,314	2.1%	3.0%	38.0%
Rajasthan	50,693	15,872	66,565	6.1%	4.5%	23.8%
Sikkim	523	80	604	0.1%	0.0%	13.2%
Tamil Nadu	31,314	35,623	66,937	3.8%	10.2%	53.2%
Tripura	2,898	668	3,567	0.4%	0.2%	18.7%
Uttar Pradesh	153,789	42,893	196,682	18.6%	12.3%	21.8%
Uttarakhand	7,035	2,741	9,776	0.9%	0.8%	28.0%
West Bengal	63,370	25,160	88,530	7.7%	7.2%	28.4%
A&N Islands	294	183	477	0.0%	0.1%	38.4%
Chandigarh	138	1,218	1,356	0.0%	0.3%	89.8%
Dadra & N. Haveli	183	151	334	0.0%	0.0%	45.2%
Daman Diu	186	71	257	0.0%	0.0%	27.6%
Lakshadweep	49	26	75	0.0%	0.0%	34.7%
Puducherry	413	907	1,320	0.1%	0.3%	68.7%
All-India	824,740	349,332	1,174,072	100.0%	100.0%	29.8%

Source: Citi Investment Research and Analysis, MOSPI

Rural India – Decile Classes of MPCE

The average (~Rs1000) is skewed towards the lower end – around Rs450. Between the lowest and the highest classes, there is a 5.5x variation. Expenditure escalates meaningfully beyond the 8th decile – around Rs1200

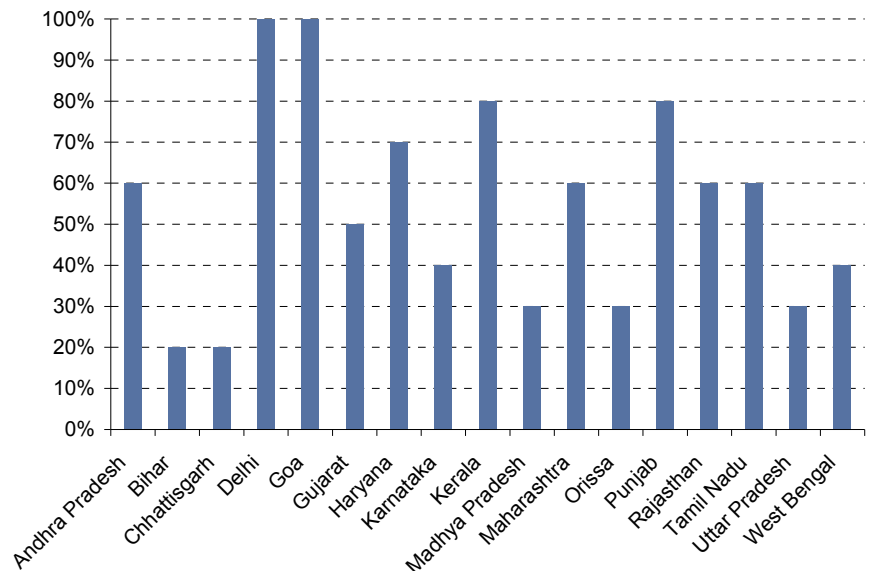
Figure 5. Rural India: Decile Classes of Consumption Expenditure



Source: Citi Investment Research and Analysis, MOSPI

The chart depicts % of rural population that is above the fifth all India decile in terms of consumption – the higher the proportion, the richer the state. Delhi, Goa, Punjab, Kerala rank highly in terms of rural consumption. The laggards in the major states are UP, Orissa, MP, Bihar and Chhattisgarh

Figure 6. State-wise Rural Population Dispersion above All India 5th Decile



Source: Citi Investment Research and Analysis, MOSPI

Changing Composition of Consumption Expenditure

As the following table depicts, the composition of consumption expenditure over time has changed in India. The proportion of food has declined from 64% to around 54%, whilst the proportion of non food consumption has increased commensurately.

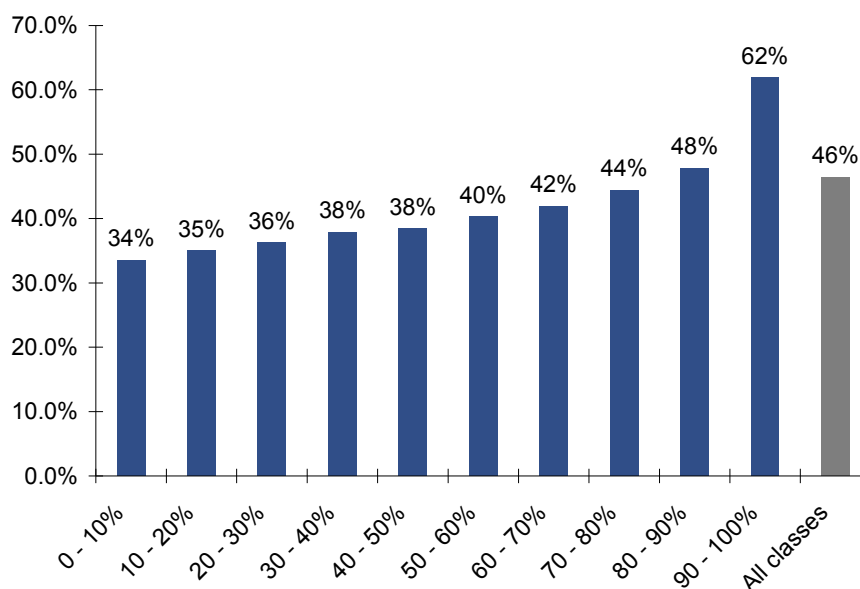
Figure 7. Trends in Percentage Composition of Consumer Expenditure Since 1987-88

	1987-88	1993-94	1999-2000	2004-5	2009-10
cereals	26.3	24.2	22.2	18.0	15.6
gram	0.2	0.2	0.1	0.1	0.2
cereal substitutes	0.1	0.1	0.1	0.1	0.1
pulses & products	4.0	3.8	3.8	3.1	3.7
milk & products	8.6	9.5	8.8	8.5	8.6
edible oil	5.0	4.4	3.7	4.6	3.7
egg, fish & meat	3.3	3.3	3.3	3.3	3.5
vegetables	5.2	6.0	6.2	6.1	6.2
fruits & nuts	1.6	1.7	1.7	1.9	1.6
sugar	2.9	3.1	2.4	2.4	2.4
salt & spices	2.9	2.7	3.0	2.5	2.4
beverages, etc.	3.9	4.2	4.2	4.5	5.6
food total	64.0	63.2	59.4	55.0	53.6
pan, tobacco, intoxicants	3.2	3.2	2.9	2.7	2.2
fuel & light	7.5	7.4	7.5	10.2	9.5
clothing & bedding	6.7	5.4	6.9	4.5	4.9
footwear	1.0	0.9	1.1	0.8	1.0
misc. goods & services	14.5	17.3	19.6	23.4	24.0
durable goods	3.1	2.7	2.6	3.4	4.8
non-food total	36.0	36.8	40.6	45.0	46.4
total expenditure	100.0	100.0	100.0	100.0	100.0

Source: Citi Investment Research and Analysis, MOSPI

Figure 8. Increasing Proportion of Non Food Consumption Expenditure – Rural India

Whilst the all India average of non food consumption is 46%, the range between the highest and lowest decile is 28% - from 34% at the bottom to 62% at the highest decile. Interestingly, non food expenditure escalates meaningfully only in the 9th and 10th deciles (both these are above the all India average)



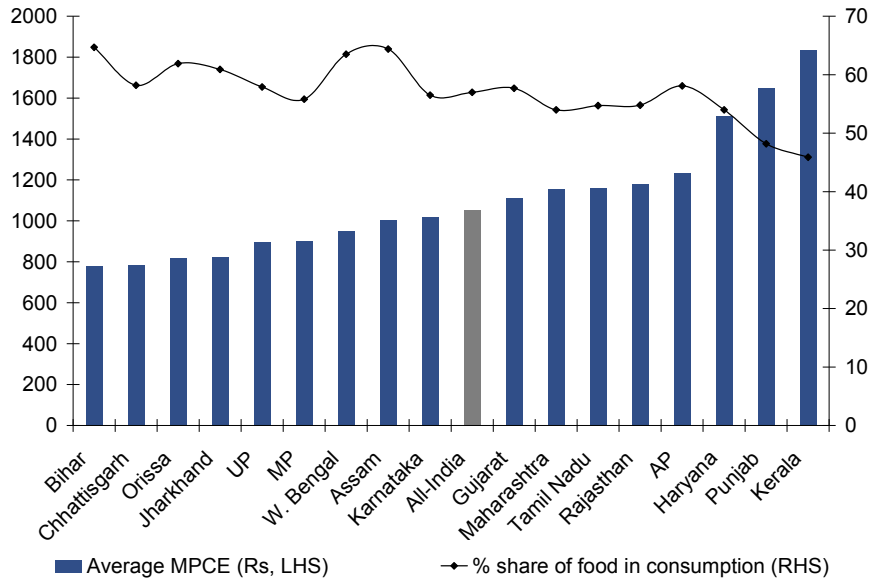
Source: Citi Investment Research and Analysis, MOSPI

State Wise Trends in MPCE in Rural India

Figure 9. State Wise Trends: Rural India - Monthly Per Capita Expenditure

Analyzing the bottom 4 and top 4 states - as income levels approximately double, non food expenditure increases by a 150%

Non food consumption begins to escalate when expenditure crosses the Rs1500 / month threshold – around 50% more than the all India average



Source: MOSPI, Citi Investment Research and Analysis

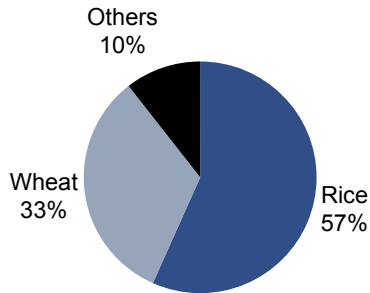
In rural India, the average per capita expenditures is around Rs1000 – states like Bihar / Chhattisgarh are at the lower end at around Rs800, whilst states like Kerala, Punjab are almost 60-80% higher than the all India average. Food as % of consumption is ~57% at the all India average. Food accounts for around 65% of the consumption expenditure at the lower end, and around 45-47% at the upper end. As expenditure levels (and thus income levels by inference) increase 2.3x the proportion of non food expenditure increases 3.6x (Bihar vs. Kerala). If one were to adjust for the outliers and analyze the bottom 4 and top 4 states, then the analysis depicts that as income levels approximately double, the non food expenditure increases by a 150%. Interestingly, non food consumption begins to escalate when expenditure crosses the Rs1500 / month threshold – around 50% more than the all India average.

Consumption Patterns and Changes with Respect to Income Levels

The following section provides insights and some answers to two questions: 1) What are the consumers consuming in Rural India?; and 2) How do these consumption patterns change as income levels rise? We start with food items and then progressively move towards non food items.

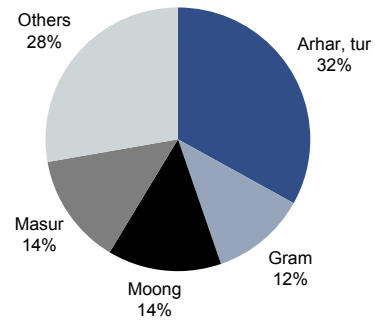
What Food Items Are Rural Consumers Spending Their Income On? Food Grains and Pulses

Figure 10. Cereals Consumption Mix in Rural India (%)



Source: MOSPI, Citi Investment Research and Analysis

Figure 11. Pulses Consumption Mix in Rural India (%)

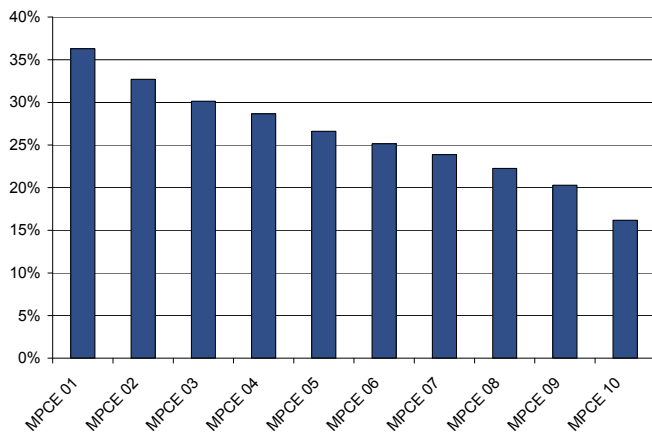


Source: MOSPI, Citi Investment Research and Analysis

Amongst food grains, rice and wheat are the primary grains – accounting for 90% of consumption, even though as a % of the overall crop produced, rice and wheat are lower. We think the variance could be on account of the fact that a large proportion of the grains are for animal feed. An additional point to highlight is that the public distribution system (PDS) accounts for a very modest proportion of the consumption – around 6% for both rice and wheat.

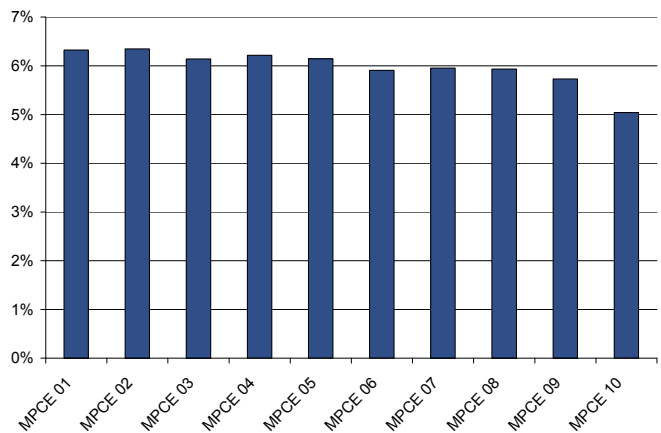
Unlike cereals, the consumption of pulses is relatively more dispersed across various types – regional preferences tend to be more pronounced in pulses consumption.

Figure 12. Cereal Consumption As % of Total Food Expenditure Across MPCE Decile Classes



Source: MOSPI, Citi Investment Research and Analysis

Figure 13. Pulses Consumption As % of Total Food Expenditure Across MPCE Decile Classes



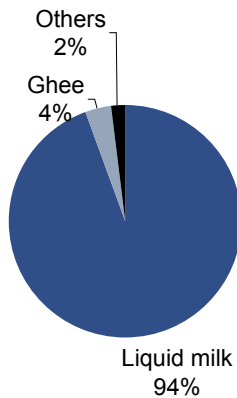
Source: MOSPI, Citi Investment Research and Analysis

As income levels increase, cereal consumption doesn't keep pace – in Rs terms, between the highest and lowest deciles, the consumption increases around 75%, even as the Rs amount on food increases almost 4x. Clearly, income elasticity of demand is very low for cereals. While pulses also falls as a % of income it should be noted that the proportion drops only in the 9th and 10th deciles – wherein average consumption expenditure on food is almost 60-70% more than the all India average.

Between pulses and grains, across decile levels, the ratio of spends on pulses vs. foods remains at around 0.2-0.3x.

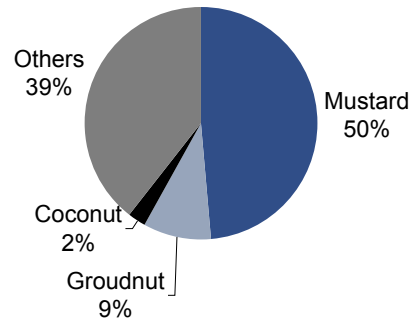
Milk & Dairy and Edible Oils

Figure 14. Milk & Milk Products Consumption Mix in Rural India (%)



Source: MOSPI, Citi Investment Research and Analysis

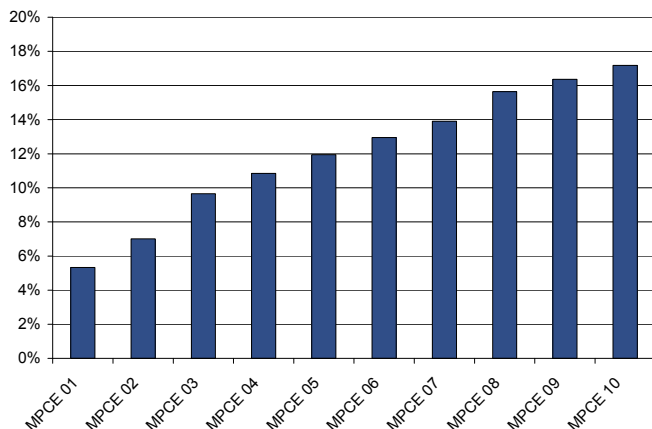
Figure 15. Edible Oils Consumption Mix in Rural India (%)



Source: MOSPI, Citi Investment Research and Analysis

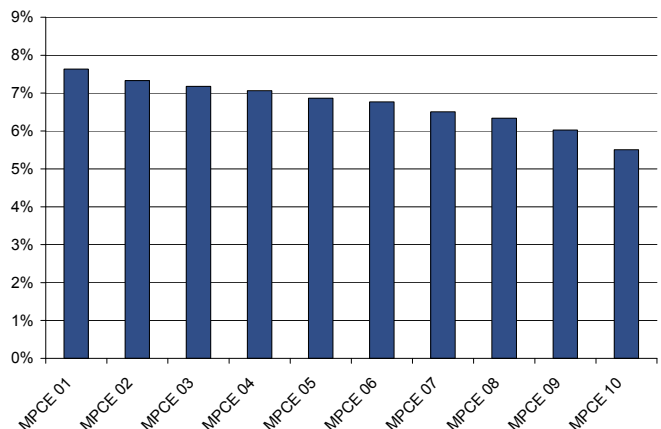
Milk and dairy products – like cereals – are a very homogenous category. Milk – unlike cereals – exhibits very strong income elasticity – increasing almost 4x as % of food consumption expenditure. The elasticity exhibits an increasing function until the 9th decile, upon which it begins to plateau. The absolute Rs amount spent on milk increases almost 13x between the highest /lowest decile – with the growth driven mostly by liquid milk (though consumption of clarified butter – ghee – begins to escalate from the 8th decile onwards).

Figure 16. Milk & Milk Products Consumption As % of Total Food Expenditure Across MPCE Decile Classes



Source: MOSPI, Citi Investment Research and Analysis

Figure 17. Edible Oils Consumption As % of Total Food Expenditure Across MPCE Decile Classes



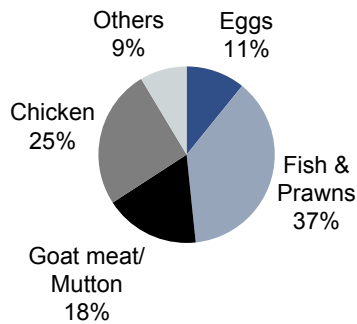
Source: MOSPI, Citi Investment Research and Analysis

Edible oils – like cereals – are a fairly homogenous category, dominated by mustard oil, with groundnut / coconut being a distant 2nd / 3rd respectively. Like cereals, they too decline as % of expenditure as expenditure levels rise. Spends on oil increase 2.8x – between the lowest and highest deciles.

Non Vegetarian Food

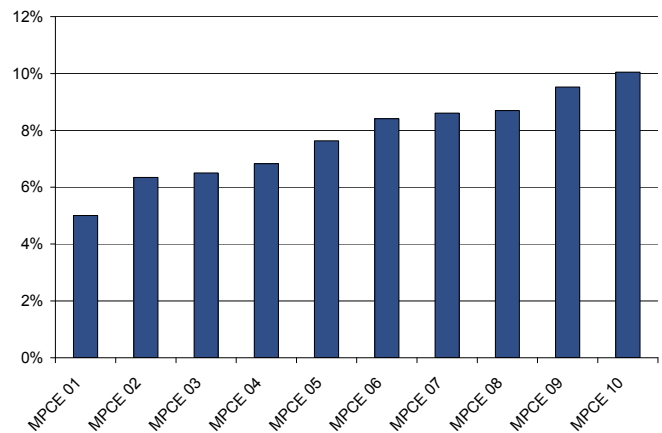
Within the animal proteins complex, Indians clearly like their fish and prawns, followed by chicken (surprising – we would've expected chicken to be higher than fish), and then followed by goat meat and eggs. Again, this is a category where consumers tend to consume more as incomes and expenses increase. Within the categories, the shallowest rate of increase is for eggs, whilst the steepest is for goat meat.

Figure 18. Non Vegetarian Food Consumption Mix in Rural India (%)



Source: MOSPI, Citi Investment Research and Analysis

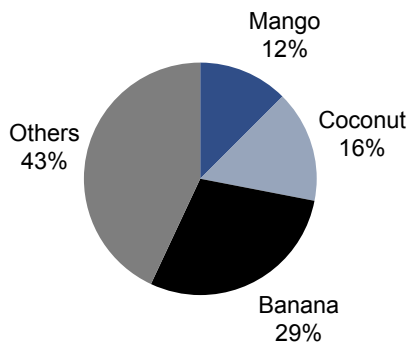
Figure 19. Non Veg Food Consumption As % of Total Food Expenditure Across MPCE Decile Classes



Source: MOSPI, Citi Investment Research and Analysis

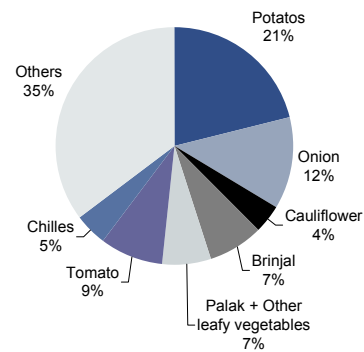
Fruits and Vegetables

Figure 20. Fruits Consumption Mix in Rural India (%)



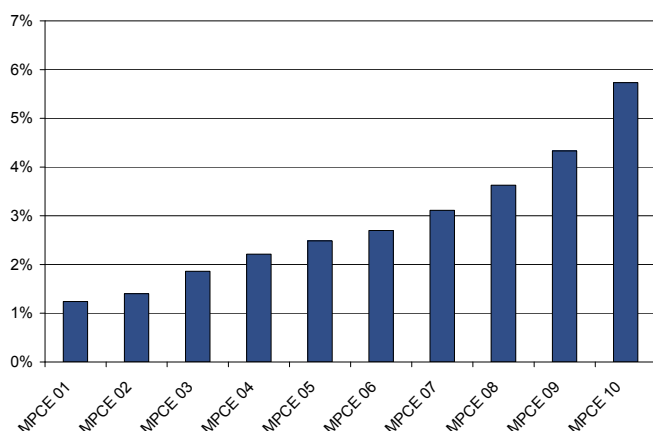
Source: MOSPI, Citi Investment Research and Analysis

Figure 21. Vegetables Consumption Mix in Rural India (%)



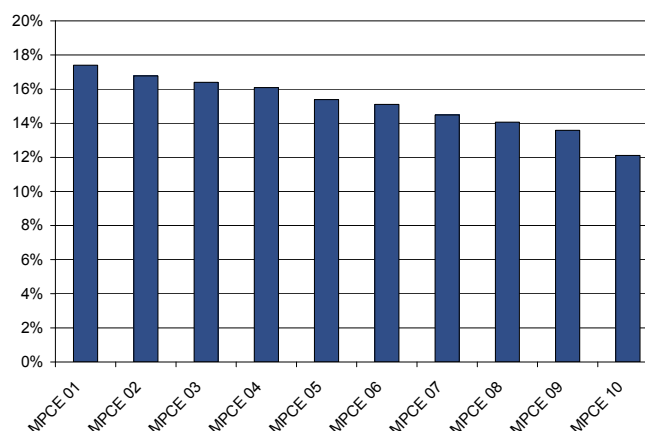
Source: MOSPI, Citi Investment Research and Analysis

Figure 22. Fruits Consumption As % of Total Food Expenditure Across MPCE Decile Classes



Source: MOSPI, Citi Investment Research and Analysis

Figure 23. Vegetable Consumption As % of Total Food Expenditure Across MPCE Decile Classes



Source: MOSPI, Citi Investment Research and Analysis

Bananas, coconuts and mangoes are the most popular fruits, constituting around 57% of the rural basket. For vegetables, potatoes, tomatoes and onions dominate the mix. Whilst it is said that an onion shortage is capable of toppling the government, consumers in rural India appear to be spending more on their 'taters'.

Fruits exhibit an increasing trend – especially from the 7th decile onward. Vegetables, in contrast, come off a high base – and thus dip from ~18% of expenditure to around 12% - while the trend is similar to cereals, we note that the key difference is that cereals as a % of expenditure more than halve, whilst vegetables drop ~1/3rd.

Beverages, Biscuits, Prepared Foods

Figure 24. Consumption of Other Items in Rural India, Deciles, % of Food Consumption

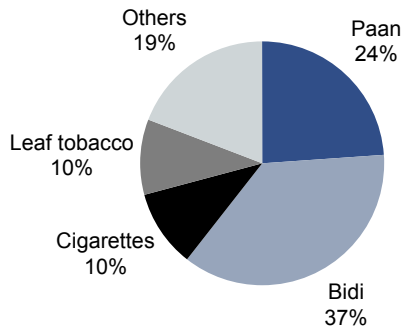
	MPCE 01	MPCE 02	MPCE 03	MPCE 04	MPCE 05	MPCE 06	MPCE 07	MPCE 08	MPCE 09	MPCE 10	MPCE 10/5 (x)	MPCE 5/1 (x)
Beverages and processed foods	10%	11%	11%	11%	12%	12%	12%	12%	13%	18%	3.3	2.1
Tea (Cups + leaf)	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	2.5	2.2
Coffee	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4.6	18.7
Biscuits	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2.4	1.9
Prepared sweets	0%	0%	1%	1%	1%	1%	1%	1%	1%	2%	4.8	4.1
Cooked meals received as assistance	3%	3%	3%	3%	3%	3%	3%	2%	2%	1%	1.0	1.7
Purchased cooked meals	0%	0%	0%	0%	0%	0%	1%	1%	1%	4%	21.9	5.2
Salted refreshments	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	3.6	2.6
Others	1%	1%	1%	1%	1%	2%	2%	2%	2%	3%	5.0	2.2

Source: Citi Investment Research and Analysis, MOSPI

The table above depicts consumer spends on tea / coffee, biscuits, cooked meals, purchased meals, etc. The last two columns on the extreme right indicate the ratio of spends between the 5th and 10th decile, vs. the ratio between the 1st and 5th deciles. In general, for this entire category, as incomes rise, so do spends – the category's share rises from 10% of food expenditure to 18% - with most of the growth in the 10th decile itself. Else, growth is fairly moderate between deciles 1-9. Tea is the beverage of choice in rural India – it is around 4% compared to coffee that is <1%. Biscuits surprisingly remain only 2% - we would've expected this to increase, given trends in snacking. Across deciles, trends don't meaningfully change – except in the 10th decile, when consumption increases meaningfully for sweets and also cooked meals purchased externally.

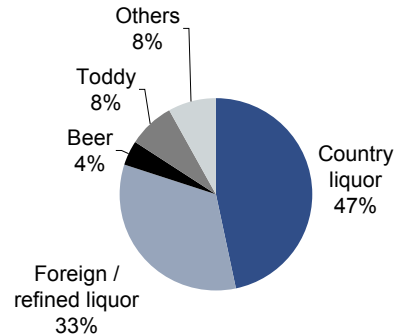
Non Food Items Alcohol and Tobacco

Figure 25. Paan & Tobacco Consumption Mix in Rural India (%)



Source: MOSPI, Citi Investment Research and Analysis

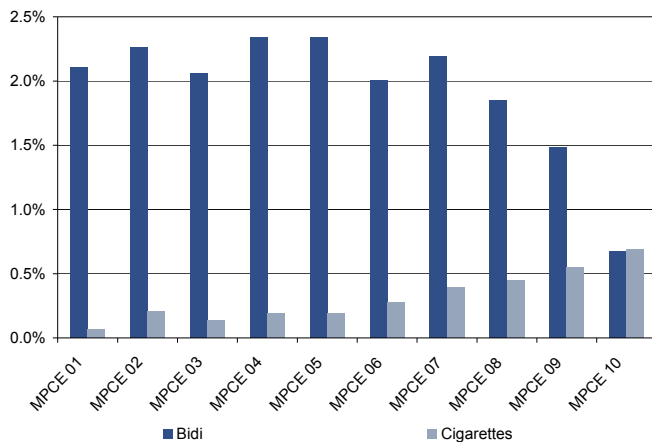
Figure 26. Alcohol Consumption Mix in Rural India (%)



Source: MOSPI, Citi Investment Research and Analysis

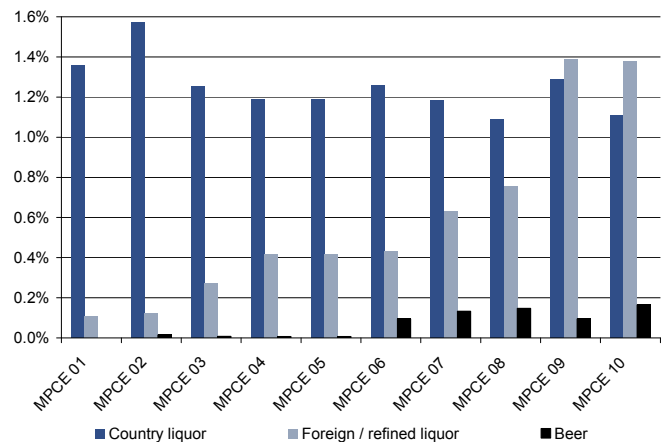
Intoxicants – liquor, tobacco, etc are classified under non food. The consumption of bidis to cigarettes outweighs 3:1 – though this is on Rs spent. On a volume basis, it is probable that the skew is far more pronounced towards bidis. If one includes leaf tobacco and paan, then cigarettes constitute only 10% of the wallet. Within alcohol, country liquor is around 47% of total consumption, with IMFL at around 33%. The scope for uptrading for cigarettes is thus more vis-à-vis alcoholic beverages, if one compares the ‘sin sectors’ together.

Figure 27. Bidi & Cigarette Consumption As % of Total Non- Food Expenditure Across MPCE Decile Classes



Source: MOSPI, Citi Investment Research and Analysis

Figure 28. Alcohol Consumption As % of Total Non- Food Expenditure Across MPCE Decile Classes



Source: MOSPI, Citi Investment Research and Analysis

As income levels rise, bidi consumption declines dramatically, and cigarette consumption escalates – typically from the 7th decile onwards, bidi consumption as a % declines - in the 10th decile, spends on bidis drop vs. the 9th decile. For cigarettes, consumer spends start increasing from the 6th decile – between the 6th and 10th deciles, consumer spends increase 9x (aided by low base). For bidis, in contrast, consumer spends rise 20%. There is thus a conversion opportunity that will slow occur from bidis to cigarettes.

In contrast to tobacco, in alcoholic beverages there isn't such a sharp and pronounced decline in country liquor. IMFL consumption escalates from the 7th decile – very similar to cigarettes. Beer consumption is surprisingly stagnant – at less than 0.2% of overall expenditure on non food consumption – we surmise this might be on account of limited distribution opportunities.

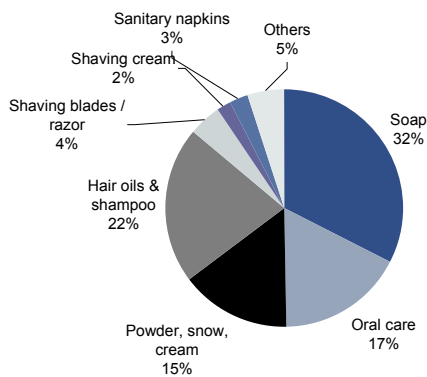
In general, the ratio of spends on intoxicants is around 0.3-0.5x that on cigarettes / bidis, except in the 10th decile, when spends on alcohol (both IMFL and country liquor), rise substantially – exceeding those of tobacco based products by around 20% or so.

Home and Personal Care

Within the personal care space, soaps is the biggest constituent followed by hair care (including hair oil), followed by oral and skin. Within home care, detergents are the single largest category, followed by agarbattis / room fresheners and then insecticides. From an expenditure perspective, soaps as a % of expenditure appears to decline – even though consumer spends on soap from deciles 6-10 increase by 80% (with most of this increase occurring in the 10th decile itself). For oral care, across the same deciles, spends increase ~2x. For creams / powder the spends rise ~2.5x.

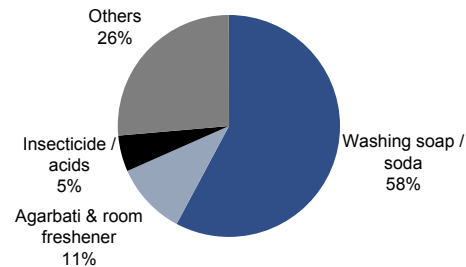
Detergents / washing soap appear to exhibit the same characteristics as soap for bathing, declining from around 3.5% to around 1.5% of expenditure. Another interesting trend is the absolute spend on detergents vs. soaps – the broad ratio across deciles is around 1.5-1.6x that of soaps. If one analyses the expenditure trends of soaps vs. oral care, then the ratio is ~2-2.4x at the lower deciles, but then gradually declines to around 1.7-1.9x – implying that as the propensity to consume increases, the spends increase on oral care (the denominator), due to which the ratio declines.

Figure 29. Personal Care Consumption Mix in Rural India (%)



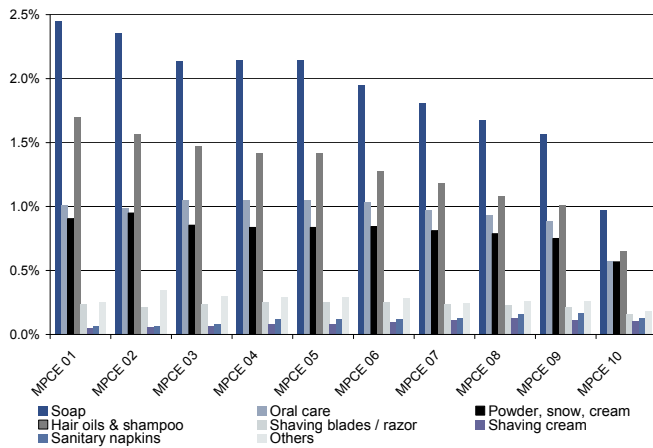
Source: MOSPI, Citi Investment Research and Analysis

Figure 30. Sundry Articles Consumption Mix in Rural India (%)



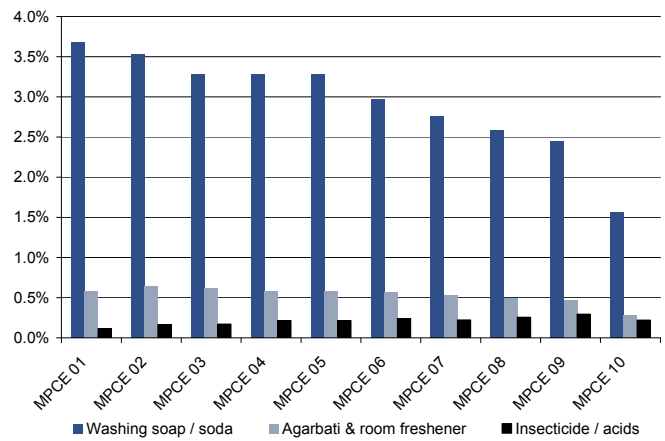
Source: MOSPI, Citi Investment Research and Analysis

Figure 31. Toiletries Consumption As % of Total Non- Food Expenditure Across MPCE Decile Classes



Source: MOSPI, Citi Investment Research and Analysis

Figure 32. Sundry Articles Consumption As % of Total Non- Food Expenditure Across MPCE Decile Classes

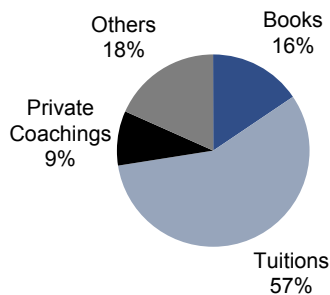


Source: MOSPI, Citi Investment Research and Analysis

Education and Entertainment

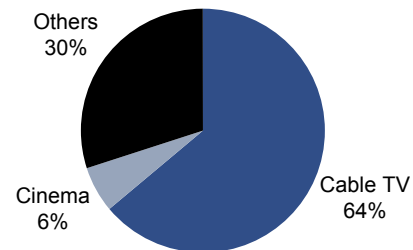
Within the more discretionary categories like education and entertainment, the trends are interesting. In education, spends are primarily on tuition and books (as expected), but private coaching constitutes around 10% of the overall spends. Within entertainment, cable television outweighs spends on cinema by ~10x.

Figure 33. Education Consumption Mix in Rural India (%)



Source: MOSPI, Citi Investment Research and Analysis

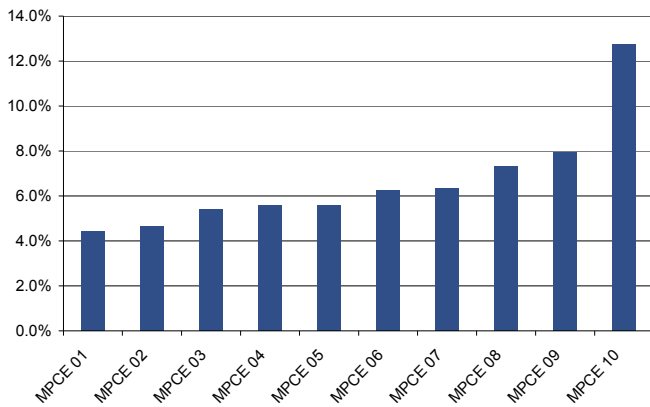
Figure 34. Entertainment Consumption Mix in Rural India (%)



Source: MOSPI, Citi Investment Research and Analysis

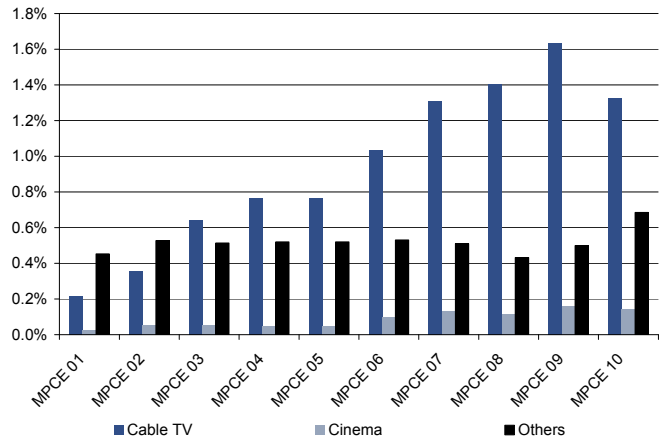
The 'J' curve on education related spends is experienced between the 9th and 10th deciles in rural India. In absolute terms, spends on education increase almost 5x between the 9th and 10th deciles – faster than the growth in spends on medical treatment and even ahead of spends on mobile telephony and personal transport equipment (2 wheelers). The only category where spends in rural India record a higher % jump between the 9th and 10th decile is purchase of 4 wheeler vehicles and purchase of gold jewellery.

Figure 35. Education Consumption As % of Total Non- Food Expenditure Across MPCE Decile Classes



Source: MOSPI, Citi Investment Research and Analysis

Figure 36. Entertainment Consumption As % of Total Non- Food Expenditure Across MPCE Decile Classes

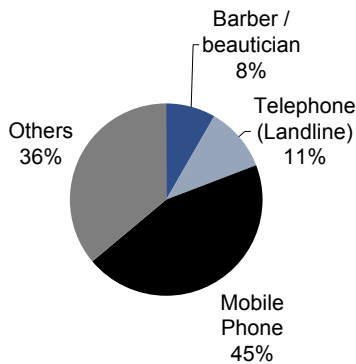


Source: MOSPI, Citi Investment Research and Analysis

On a more facetious note, rural India doesn't like to go to the cinema (apparently) – as depicted above. Cable TV spends also are fairly insignificant as % of overall non food spends. These drop in the 10th decile – even though the Rs quantum increases by ~70% – as the overall base of non food consumption expenditure rises at a much faster clip. The ratio of monthly spends on cable TV vs. cinema averages around 11x across deciles.

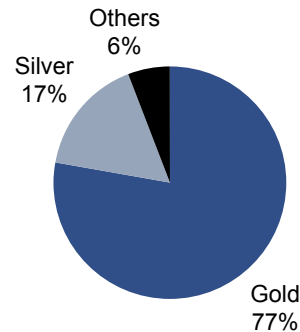
Other Consumer Services and Jewellery

Figure 37. Other Consumer Services Consumption Mix in Rural India (%)



Source: MOSPI, Citi Investment Research and Analysis

Figure 38. Jewellery Consumption Mix in Rural India (%)

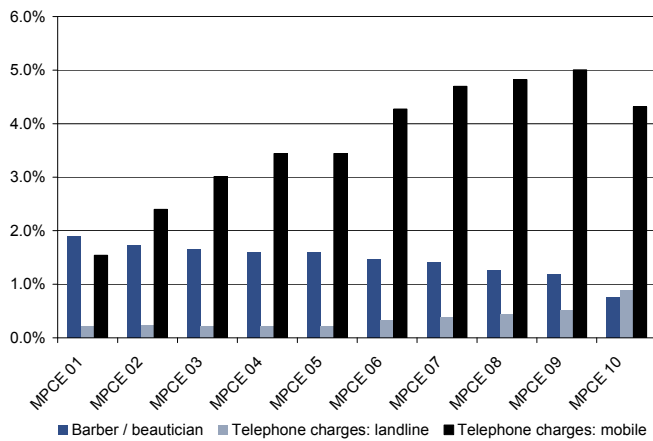


Source: MOSPI, Citi Investment Research and Analysis

Mobile telephony has touched the lives of even those in the lowest decile in rural India. Indeed, spends on mobile telephony average 10x-15x spends on wire line services – spends on wire line services gather pace only in the 10th decile.

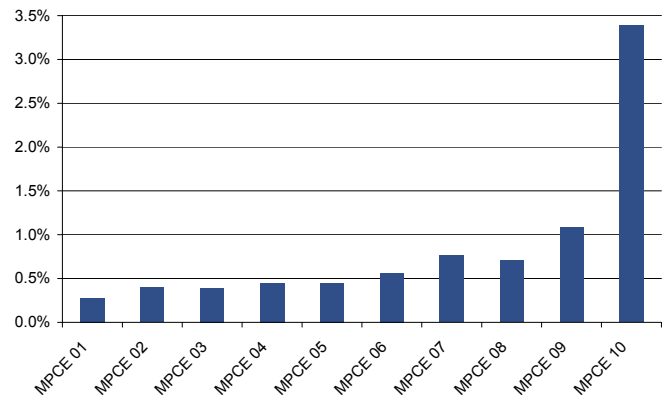
Within jewellery, gold accounts for the major share, followed by silver and finally diamonds / other gem stones.

Figure 39. Other Services Consumption As % of Total Non- Food Expenditure Across MPCE Decile Classes



Source: MOSPI, Citi Investment Research and Analysis

Figure 40. Jewellery Consumption As % of Total Non- Food Expenditure Across MPCE Decile Classes



Source: MOSPI, Citi Investment Research and Analysis

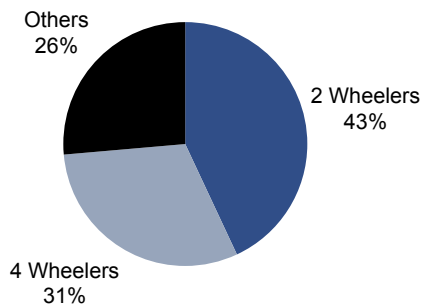
From a decile perspective, cellular services exhibit a smooth J curve, but dip in the 10th decile, despite an 80% increase in spends (again, similar to cable TV). Jewellery consumption exhibits a very sedate trend until the 9th / 10th deciles – once non food expenditure exceeds Rs500 / month (8th decile) – consumer spends rise – spends on gold rise >8x (10th vs. 9th decile). Interestingly, spends on silver rise only ~2.5x (10th vs. 9th decile).

Personal Transport and Conveyance

Personal transport consumption – for 2 wheelers, the J curve is fairly smooth – for 4 wheelers, the curve is flat across deciles, and then spikes in the 10th decile, exceeding spends even on 2 wheelers.

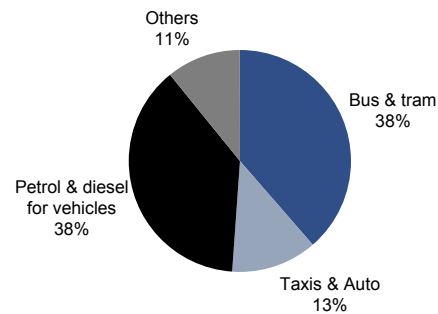
Spends on conveyance are polarized towards public transport and spends on fuel for personal vehicles. From the 6th decile onwards, the spends on fuel for personal vehicles tends to rise fairly sharply (as % of consumption expenditure) – while spends on public transport tend to flat line and then decline.

Figure 41. Personal Transport Consumption Mix in Rural India (%)



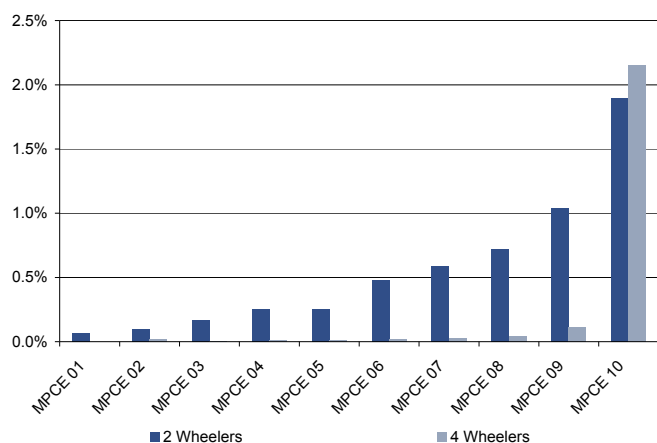
Source: MOSPI, Citi Investment Research and Analysis

Figure 42. Conveyance Consumption Mix in Rural India (%)



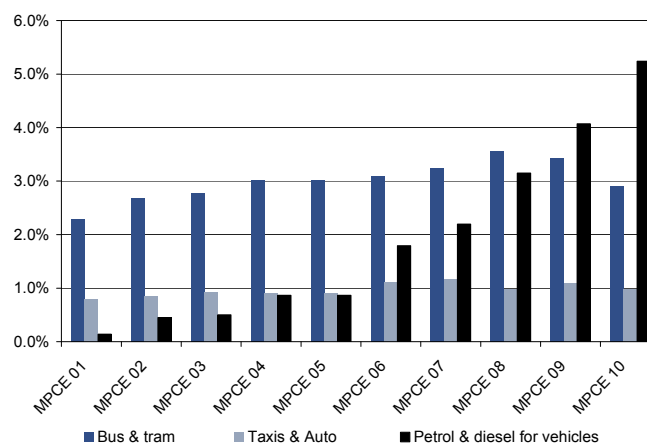
Source: MOSPI, Citi Investment Research and Analysis

Figure 43. Spends on Personal Transport As % of Total Non- Food Expenditure Across MPCE Decile Classes



Source: MOSPI, Citi Investment Research and Analysis

Figure 44. Spends on Conveyance As % of Total Non- Food Expenditure Across MPCE Decile Classes



Source: MOSPI, Citi Investment Research and Analysis

Ownership of Consumer Durables

Figure 45. Rural India: No. of Households / 1000 that possess non durable items

Item	Decile class of MPCE										all India
	1	2	3	4	5	6	7	8	9	10	
bedstead	823	874	870	874	884	896	911	915	920	932	894
almirah, dressing table	126	175	224	286	374	386	450	534	586	709	413
chair, bench, table etc.	368	483	554	593	655	680	736	751	783	849	666
radio, 2-in-1	183	220	253	269	283	270	287	279	275	291	265
television	94	160	235	294	353	398	471	565	612	702	417
VCR/VCP/DVD player	13	18	36	44	54	68	75	119	146	254	94
camera & photo equip.	0	0	2	5	4	6	6	15	26	69	16
audio/video disc/cassette	9	15	25	38	51	58	62	97	123	229	81
electric fan	205	289	357	440	511	550	629	684	737	825	552
air conditioner, cooler	6	15	12	19	30	31	36	52	79	152	50
sewing machine	21	33	47	62	69	96	120	140	162	237	109
washing machine	0	1	2	1	2	5	5	10	22	90	18
refrigerator	1	3	4	7	12	25	34	72	122	292	71
water purifier	1	1	3	4	5	10	13	19	34	60	18
bicycle	514	568	585	584	591	574	591	550	537	446	549
motor cycle scooter	7	22	28	50	64	104	126	188	256	363	139
motor car jeep	1	3	0	2	4	3	5	10	16	66	14
PC/laptop incl. software	3	1	1	1	1	3	2	6	7	47	9
mobile phone handset	167	245	336	382	475	516	582	628	683	764	506

Source: Citi Investment Research and Analysis, MOSPI

The above table depicts ownership / 1000 households in rural India – across various deciles of consumption expenditure. Even within durables, there are the products that are more desirable, and those that are less desirable.

For instance, the ownership of a radio 2-in-1 vs. a television indicates depicts an interesting trend – at the lower income levels, the penetration of the radio exceeds that of the television meaningfully, but from the 3rd decile onwards, the penetration of the television more or less equalizes with that of the radio and then far exceeds it by the 5th decile.

Surprisingly, the penetration of VCRs appears to be more than that of cameras even at the lowest deciles.

The ownership of the electric fan appears to move lock step with that of the cupboard.

Within transport equipment, bicycles depict an upward trend in terms of ownership until the 7th decile, and then start declining – at which point the ownership of 2 bikes / scooters begins to accelerate. Car ownership begins to rise only in the 10th decile.

The ubiquitous mobile handset manages to achieve penetration levels equivalent to those of cupboards and televisions.

Assessing Propensity to Consume:

A) Food Items

The following table summarizes spends on various items of food consumption, across deciles. We've segregated the deciles into 3 groups, 1-4, 4-7 and 7-10, and measured the nominal % increase in spends across each category. An income elastic category is one which depicts a steady increase in spends across all 3 classes – essentially indicating that as overall income / expenditure increases, the propensity to consume also increases.

Foods as a category tend to decline as % of share of wallet. Positive surprises – where we've been surprised by the elasticity / propensity to consume is for milk / dairy products, followed by proteins and fruit. Other minor sub segments which have surprised positively are coffee and tea (to a certain extent). Sectors where growth spends lag are cereals and biscuits.

Figure 46. Food Categories – Change in Spends Across Deciles

Item	$\Delta 4 / \Delta 1$	$\Delta 7 / \Delta 4$	$\Delta 10 / \Delta 7$	Comments
Cereal	29%	10%	23%	Growth for cereals is generally less than that of entire foods category – relatively income inelastic
Rice	20%	12%	25%	General preference among cereals appears to be for wheat / rice. Broad trends for rice / wheat appear similar
Wheat	38%	4%	22%	
Others	65%	23%	17%	
Pulses	60%	27%	54%	Growth on spends in pulses generally outstrips spends on cereals
Arhar, tur	111%	30%	52%	
Moong	109%	54%	70%	
Milk & milk products	232%	70%	125%	Surprisingly robust growth across deciles – even higher than vegetables. Among most elastic categories, especially the major categories
Sugar	90%	34%	70%	Greater preference vis-à-vis pulses and cereals
Edible Oil	51%	22%	54%	Trends similar to those exhibited by pulses, slightly lower than sugar
Egg, fish, meat	123%	67%	112%	Proteins fairly elastic – though not as much as one might have expected
Eggs	87%	42%	70%	
Fish & Prawns	92%	51%	119%	
Goat meat/ Mutton	329%	138%	143%	
Vegetables	51%	19%	52%	
Potatoes	24%	5%	9%	Growth rate of spends on potatoes come off sharply, onion and tomato appear to have greater preference
Onion	48%	24%	56%	
Cauliflower	69%	13%	79%	
Tomato	67%	38%	79%	
Fruits	191%	86%	235%	Fruits far more elastic than vegetables, even the humble banana
Mango	125%	57%	150%	
Coconut	141%	123%	207%	
Banana	265%	71%	182%	
Beverages and processed foods	80%	49%	160%	
Tea (Cups + leaf)	101%	43%	93%	
Coffee	700%	217%	241%	Spends on coffee consumption far outstrip those on tea
Biscuits	79%	34%	89%	Biscuits elasticity only marginally higher than that of general foods – surprisingly counter intuitive
Prepared sweets	254%	70%	227%	
Purchased cooked meals	189%	208%	1180%	Very high elasticity – exacerbated by very modest base
Total Food	63%	32%	82%	In general, expenses on foods rise, then plateau, before rising again

Source: Citi Investment Research and Analysis, MOSPI

B) Non Foods Items

The share of wallet for both alcohol and tobacco is surprisingly low – cigarettes consumption rises, displacing bidis. Share of wallet for the staples like soaps and detergents depicts a declining trend as income levels rise – growth in middle (decile 4-7) is relatively modest. Encouragingly, spends on education witness a sharp rise in the upper most deciles.

Figure 47. Non-Food Categories – Change in Spends Across Deciles

Item	Δ4 / Δ1	Δ7 / Δ4	Δ10 / Δ7	Comments
Paan & Tobacco	86%	34%	50%	Cigarette consumption gradually increases in the upper deciles; bidis come off
Paan	174%	29%	62%	
Bidi	96%	42%	-2%	
Cigarettes	391%	211%	455%	
Intoxicants	69%	70%	297%	IMFL sees a sharp increase from the 7th decile, surprisingly though country liquor remains relatively stable
Country liquor	54%	52%	199%	
Foreign / refined liquor	582%	133%	594%	
Beer		2750%	293%	
Fuel & Light	44%	29%	58%	
LPG	1450%	360%	444%	
Clothing	51%	31%	80%	
Ready made garments	40%	33%	98%	
Education	122%	73%	542%	Spends on education seem to be disproportionately higher than most other categories – especially at the higher end
Books	101%	64%	179%	
Tuitions	132%	101%	1032%	
Private Coachings	225%	75%	166%	
Medical	140%	84%	364%	
Entertainment	240%	123%	252%	Entertainment spends are typically higher than overall non food expenditure
Cable TV	529%	161%	223%	Cable TV is very popular, compared to cinema
Cinema	250%	300%	250%	Cinema growth is relatively stable across deciles
Toiletries	64%	35%	93%	
Soap	54%	28%	71%	Ratio of soaps vs. oral care is ~2-2.4x at the lower deciles, gradually declining to ~1.7-1.9x as absolute spends on oral rise.
Oral care	83%	41%	87%	
Powder, snow, cream	63%	48%	123%	
Hair oils & shampoo	47%	28%	74%	
Shaving blades / razor	87%	44%	113%	
Shaving cream	188%	104%	198%	
Sanitary napkins	230%	70%	216%	Spends on relatively low penetration categories like sanitary napkins and shaving creams outstrip those on soaps, detergents, powder and hair care
Sundry articles	73%	36%	106%	
Washing soap / soda	57%	28%	80%	While spends on detergents are ~1.5-1.6x that of soaps; growth rates across deciles are similar
Agarbati & room freshener	79%	39%	69%	
Insecticide / acids	233%	58%	215%	
Other Consumer Services	112%	72%	206%	
Telephone (Landline)	85%	156%	650%	
Mobile Phone	294%	108%	193%	
Conveyance	163%	102%	359%	
Bus & tram	133%	63%	186%	
Taxis & Auto	101%	96%	166%	
Petrol & diesel for vehicles	1005%	286%	660%	
Personal transport equipment	104%	84%	1018%	
2 Wheelers	610%	255%	925%	
4 Wheelers		333%	22462%	
Jewellery / ornaments	186%	158%	1317%	Fairly high elasticity – rises sharply in the upper deciles; gold trumps everything else
Total Non-food	77%	52%	219%	Like foods, even non foods generally rise, then plateau, before rising again sharply

Source: Citi Investment Research and Analysis, MOSPI

Appendix A-1

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	45%	41%	40%	49%	43%	41%

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