

# ICE 360° Survey, 2016

## 'Household Survey on India's Citizen Environment & Consumer Economy'



### About the Survey

PRICE has completed its latest ICE 360° survey in August, 2016. This survey is larger in scope and size, covering 300,000+ households through a household listing exercise, followed by a more detailed survey of 60,360 households. Geographically, the sample has been drawn from across 216 districts, 1217 villages and 487 towns spread across 25 major states. The survey is designed to be multi-dimensional and goes beyond incomes and savings. It also takes a deeper look at the economic and social well-being of Indian households, provides normative measures of social, political and financial inclusion, degree of access to public goods and infrastructure and welfare measures of the government. Special feature of the survey is that it consists of a panel of 12,000 households which are common in both ICE 360° Survey, 2014 and ICE 360° Survey, 2016, which will facilitate to take a longitudinal view of how the Indian consumption landscape has evolved since the new government came to power.

## Objectives

- To put more and more reliable and insightful people-level information into the public domain that helps in better policy formulation, regulatory response and business strategy development.
- Play a leading role in shining the light on issues that are unknown or blind spots.
- To bring the “human face” or people-centricity into India’s public policy debate and discourse, which today is mostly focused on outlays not outcomes and on macro-economic or supply side variables.
- To make both ECONOMIC and SOCIAL well-being of Indian citizens the end goal of policy and business by encouraging government and corporate India to take note of people level data.
- To synchronise Indian Citizen engagement with public policy.

## Content

The following themes will be explored by the survey:



**Household Characteristics:** Type of dwelling unit and availability and access to basic amenities, ownership of durables, intention to purchase in near future, livelihood linked seasonal migration trends, remittance behaviour, etc.



**Social and Political Inclusion:** Social discrimination, feeling of security within neighbourhood, areas of concern, food security, participation in social activities and political participation, membership in trade bodies, presence and usage of in trade and social networks, etc.



**Access to welfare:** Awareness of and participation in flagship government programs, method use to access information on current trade/occupation and schemes and benefits, degree of dependency on PDS, life cover, employment guarantee, etc.



**Income and consumption:** Volume of earned and unearned income in households from all sources, itemised consumption expenditure covering food and non-food items, utilities, debt servicing, non-routine expenses, etc.



**Debt Situation of Households:** Penetration of formal debt, purpose of debt (including consumption, production, for business expansion/seed capital), preferred source of credit, future intention and purpose for taking loan from formal and informal sources, current debt servicing costs, etc.



**Financial Optimism:** Perception about stability in major source of household income, level of satisfaction regarding financial situation of household, perceived economic class, expected change in household’s economic situation in next 3 years, etc.



**Saving and Investment Behaviour:** Cross market savings portfolios, market penetration (household) of broad investment modes, share of wallet – percentage share of total savings/investments by instruments, short and long term savings motivations, savings/investment plans for 2016-17, retirement outlook, remittances, awareness, understanding, and trust in financial instruments linked to capital markets, etc.



**Labour market participation:** Occupations of all members, sector of employment, job security and nature of contracting, social security and labour rights, disguised employment, etc.



**Financial inclusion measure:** Access to formal finance, sourcing of debt by purpose, debt servicing costs, bank account ownership, life insurance coverage, eligibility for accessing formal loan (proof of address, identity proof, availability of collateral for mortgage - real estate, gold, investments), awareness of prospect of leveraging owned assets for credit from FIs, etc.



**Digital connectivity:** Penetration of smart phones, degree of comfort with using VAS, access to internet and usage of internet to perform basic functions.



**Access to public infrastructure:** Availability and ease of access to public infrastructure, including health, education, judiciary, markets, essential commodities etc.



**Citizen's Report Card:** Public opinion on direction of change of state of the nation, performance of the economy, governance, corruption, law and order, and other contemporary issues of national interest, and priority expectation from current government going forward.



**Demographic Profile of all earners:** Age, gender, education level, occupation of CWE, primary and secondary sources of income, unemployment by duration and profile of unemployed, etc.

## Analysis Outputs

Some of the outputs envisaged from this survey and which are of interest for policy makers have been outlined below. These are by no means comprehensive and it is expected that far more data views will emerge with time.

### Standard of Living and citizen's report card

1. Rating of Indian states by their ability to provide its resident population with access to basic amenities at the household level.
2. Citizen's report card on 'State of the Nation' and 'Quality of Life' based on perceived changes over last 3 years across critical outcomes viz. governance, law and order, economy, cost of living, women's safety, environment and corruption.
3. Estimate and profile of India's low income households which remain vulnerable to exploitation as they resort to risky/distress migration (without job contracts) for livelihood.
4. Whether investment in 2nd and 3rd order towns as growth magnets in last decade is reflected upon in any qualitative change in migration patterns in terms of destination points.

5. Financial outlook of Indian households - how has their family's financial situation has changed over the last 3 years and what they expect in the next 3.

### **Access of public goods and social welfare**

1. Extent of awareness of the Indian citizenry of the flagship welfare schemes of the present government and their reach among eligible populations.
2. Opinion on quality of implementation of welfare schemes and perceived impact on vulnerable households and overall rural transformation.
3. Estimate and profile of India's households who remain food insecure and mapping of the volume of food insecurity by seasonality and geography.
4. Effectiveness of the public distribution system in being able to meet the production-consumption gap and reduce dependency on open market purchase.
5. Availability of LPG/piped gas, cable/dish connection, functional toilet, separate kitchen, drinking water purifier (any variety including candle/gravity filters).
6. Source of drinking water and distance from home, including year round availability.
7. Availability of electricity at home and average hours of supply during night.
8. Distance from residence to key infrastructure, viz. nearest all weather road (AWR), nearest hospital, current place of work, fair price shop, district collectorate, district court, nearest college and nearest bus stand.
9. Measuring household access to infrastructure index based on differential access to tap water within premises, LPG connection, electricity connection, toilet within premises, separate kitchen and presence of AWR within locality.

### **Social and financial inclusion**

1. Demand and supply side issues that influence political exclusion – through an understanding of people's inability to exercise their franchise during the last general elections, and their apathy with the electoral process.
2. Sizing our unemployment problem (by education of unemployed) and estimating total value of productive output lost due to unemployment.
3. Measuring digital connectivity by looking at penetration of smart phones and ability to use value added services (VAS); whether having used the internet (from own phone, PC or shared facility) to perform any online transaction or information download; and whether having an account in social media sites and extent of activity.
4. Measuring social inclusion of Indian households on the basis of membership in any trade association or professional body; affiliation to any self help group/thrift and credit group; affiliation to any registered social or religious body; level of affinity with locality and feeling of security within neighbourhood; and availability of proof of citizenry, of local residence.

5. Measuring the proportion of India's households who have experienced some form of discrimination (economic or social) at home or workplace.
6. Ranking of Indian states based on composite social inclusion index.
7. Measuring financial inclusion of households using following indicators:
  - Availability of bank account in his/her name.
  - Proof of local residence via a identity proof issued by government of India or its representative offices.
  - Ownership of credit card issued by a nationalized bank.
  - Whether currently servicing a loan taken through a Whether Chief Wage Earner (CWE) is currently servicing a loan which he/she has taken himself/herself.
  - Proof of employment and wage payment.
  - Access to collateral that can be pledged against credit, including ownership of any real estate with documentary evidence of ownership, investments in term deposits in banks/POs, and in securities and life insurance endowment plans; ownership of gold over and above what on worn on regular basis.
  - Extent of awareness that some forms of investments and family gold can be leveraged for accessing formal loans and attitude towards the same.
8. Estimate and profile of India's earning population who remain ineligible for financial inclusion because of not having a bank account, or their inability to produce the necessary documentation as proof of earning, employment or local residence, or lack of legal ownership of physical or financial collateral.
9. Potential of the underserved population – size of the potential savings pie comprising households belonging to the bottom two income quintiles, and what best way to reach out to this untapped market.
10. Total volume of business opportunity lost by bankers in providing credit to bank account holders who sourced loans from informal sources.
11. Ranking of Indian states based on a financial inclusion index.

### **Debt, financial behaviour and retirement**

1. Estimate and profile of Indian earners who are vulnerable to income instability.
2. Estimate and profile Indian households who are consuming more than what they are earning and those who have discretionary savings after meeting all committed expenditure.
3. Expenditure of healthcare during the last fiscal year (In-patient department and out-patient department) and proportion that had insurance coverage.
4. Estimate and profile of Indian households with outstanding debt and the proportion among those who are likely to be able to repay outstanding debt based on current earnings and savings potential and highly expensive debt servicing costs on outstanding.

5. Proportion of households servicing inherited debt and purpose of borrowing and nature of debt servicing (proxy measure of bonded labour).
6. Estimate and profile of Indian households who have mortgaged collateral against outstanding debt and are at high risk of default and forfeiture owing to their low income.
7. Cross market savings and investment portfolios of Indian households and an estimation of penetration of different financial services.
8. Relative positions of savings flows into different instruments.
9. Nature of long and short term savings motivations of earners and whether current investment choices likely to yield sufficient returns to meet their needs.
10. Proportion of Indian earners with discretionary savings who remain unaware of capital markets linked investment instruments or have yet to participate.
11. Estimate and profile of the Indian working population that have no intention or means of retiring at 60.
12. What proportion of India's earners are planning for retirement and the appropriateness of measures being taken by them to ensure old age financial security.
13. How confident are Indians about their financial security after retirement, including their expectations from their children.

### **Understanding occupation structures and labour market participation**

1. Sizing India's informal sector employment and the share of its output in the national Gross Domestic Product (GDP).
2. Carrying capacity of agriculture – are traditional agrarian households increasingly engaging in non-farm activities as a survival mechanism.
3. Estimate and profile of disguised unemployment in India, especially in the agriculture sector.
4. Estimate and profile of India's formal and informal sector workforce based on social security coverage, availability of job contracts, and workplace benefits including paid leave.
5. The extent of labour rights violations at the workplace that take place in the informal sector.
6. Creation of a labour market inclusion index based on based on size of holdings (for cultivators), extent of specialization required to perform the economic activity (for self employed); grade of employment + extent of availability of job contract, paid leave, social security (for those earning salaries or wages); and based on availability of job contract and/or paid leave (for casual labour).
7. For all CWEs we have included a question on number of days in the past 12 months have they got employment with full wages with those having gotten less than 183 days of full

employment as being excluded from the labour market, and those who did get above the threshold but worked without and benefits and contracts at the lowest level of inclusion.

### **Income, consumption and discretionary savings**

1. Primary and secondary sources of income for entire household will be captured. This will include income from both earned and unearned sources.
2. We will link income sources linked to occupation classifications for future disaggregated analysis. 17 income sources have been scripted.
3. Under household consumption expenditure, we will be categorising food items on the basis of frequency of purchase, viz.
  - Cereals and pulses (including rice, wheat/flour, other cereals, pulses and pulse products).
  - Non-cereal food items (including milk and milk products, fruits and vegetables, meat, fish and eggs).
  - Other food items (including sugar, salt, spices, edible oils, beverages for home consumption, other occasional food items including packaged foods, alcohol and tobacco).
4. For **consumer services**, the itemised budget heads will include education expenses, outpatient health expenditure, premium for health insurance, telephone bill, electricity and water charges, society maintenance, (charge/salary payment for domestic help/driver/sweeper, etc.), general entertainment (including cost of newsprint, cable/dish, dining out and entertainment), and other services.
5. For **non-food items**, we will include house rent or regularised repayment on mortgage, any regular debt servicing, expenditure of fuel, commuting to work, clothing and footwear, any financial investments, remittances, etc.
6. All **non-routine/unusually large expenditure** during the year, including purchase of consumer durable, any vehicle, any real estate (down payment), upgrades and repairing, one-time payment made as an investment into a financial instrument, social, down payment linked to education of children, hospitalisation expenses (all In-patient department charges) and transport charges due to a medical emergency/medical procedure, expenses incurred for undertaking a holiday, and investment in gold/other precious metals.
7. Households with balance savings after deducting all expenditures from income.

### **Demographic details of Indian households**

1. For each adult member (15 or more) in the household, we will capture age in completed years, gender, marital status, highest completed level of education, whether currently attending school (only for 5 – 18 year olds), principal activity status, regularity of participation in any work that generates income for your family, whether adult members who are engaged in work receive any income for themselves for the work that they do

2. The outputs that can be expected from this segment include the following:

- Dependency ratios of different family structures and economic positions.
- Trends in single, double and more than double earner households across geographic clusters.
- Relationship between number of earners and aggregate household income and per capita income (PCI). The hypothesis is that beyond a point, increasing number of earners in a family is a sign of distress and indicates a survival tactic which leads to nominal increase in household income and a sharp decline in PCI.
- Work force participation rate (WFPR) (in real earner terms) by gender. Incidence of child labour as well as people engaged in economically gainful work post retirement. Incidence of disguised unemployment in the economy (specifically in the farm sector) in the context of feminization of agriculture.

- **Sample Design:** The main objective of this exercise is to undertake a detailed national survey among the rural and urban households across the country to generate reliable estimates of household well-being (such as income, expenditure, savings and related indicators) for all major states and for major town categories. The current round of ICE 360 has an expanded scope in terms of content and coverage. Household is the target unit of the study, with states and urban/rural categories as sub-populations or target groups, for whom representative estimates will be sought. The geographical coverage of the survey includes the entire country comprising of major states and UTs. The survey methodology and sampling design adopted is kept broadly similar to the last round, which was drawn after reviewing best international practices and worked very well.

A three-stage stratified sample design has been adopted for the present survey in which a ready-made frame is used for the first two stages and a sampling frame is developed in the last stage. Districts, villages and households form the first, second and third stages of sampling, respectively for selection of the rural sample while cities/towns, urban blocks and households are the three stages of selection for the urban sample. Sampling for rural as well as urban areas is done independently within each state/UTs. Following the basics of sample survey principle that geographical spread is more important than the sample size, both rural and urban sample is selected from a wide cross-section of the country. The rural sample has been selected from a representative number of districts from across the country, while the urban sample covers a range from big metropolitan cities to small towns with population below 5,000. The sample sizes at first, second and third stages in rural and urban areas are determined on the basis of available resources and the derived level of precision for key estimates from the survey, taking into account the experience in conducting the earlier round of ICE 360 survey.

- **Coverage:** The survey will be carried out in 25 states and Union Territories of the country. Within each state an NSS Region -which is a group of districts within a state similar to each other in respect of agro climatic features- formed the strata for both Urban and Rural Sample. All the 25 States are divided into 50 NSS Regions which form the strata or domain of study below the level of state/UT. Each NSS Region is assigned a 3-digit code where the first two digits indicate state/UT and third indicate region number within a state/UT. The rural and urban areas are taken as defined in the census.
- **Sampling Frame:** The list of 2011 census districts and villages constitute the sampling frame for rural and list of 2011 census cities/towns for urban. In the absence of the definitive list of households (sampling frame), specially designed listing Performa will be used to list households in the selected villages and urban blocks to collect information on various auxiliary variables. In the case of large villages/urban blocks, a fraction of households will be listed based on sampling fraction.
- **Sample size:** A total sample of 60,360 households will be covered in this study. Out of which, 24,340 households spread over 1,217 villages in 165 districts and 50 NSS regions covering the 25 states/UTs will be covered in rural areas. In urban areas, 36,020 households spread over 1,801 urban wards in 450 towns and 50 NSS regions will be covered.
- **Selection of Rural Sample:** In rural, a sample of 165 districts was allocated to the 50 NSS regions within the 25 covered states/UTs in proportion to the total number of districts in an NSS region. From each of the NSS regions, the allocated number of districts was selected, as the first stage sample units, with probability proportional to size and replacement, where rural population of

each district as per Census 2011 was used as size measure. Villages formed the second stage of selection procedure. A total sample of 1,217 villages (second-stage sampling units) was allocated to the selected 165 districts, approximately in proportion to rural population of each selected district. The allocated number of sample villages was chosen with equal probability sampling approach.

In each of the selected villages, approximately 100 households were selected following equal probability sampling approach for listing purpose and preliminary survey. Besides others, the listing performed collected information on household's particulars such as occupation of chief wage earner (CWE), total household income, expenditure, agricultural land, education, occupation, financial inclusion and wellbeing. A total of 305,546 households were listed comprising 123,471 households from entire rural India.

Information on well-being of the households and land possessed was used to create the total score of each household. All the listed households were stratified on the basis of score generated for each sample unit separately and occupation of chief wage earner (CWE) into 10 strata as follows:

Stratum 1: Occupation of CWE was self-employment in agriculture and score value up to 50 per cent;

Stratum 2: Occupation of CWE was self-employment in agriculture and score value 50 to 75 per cent;

Stratum 3: Occupation of CWE was self-employment in agriculture and score value above 75 per cent;

Stratum 4: Occupation of CWE was self-employment in non-agriculture and score value up to 50 per cent;

Stratum 5: Occupation of CWE was self-employment in non-agriculture and score value above 50 per cent;

Stratum 6: Occupation of CWE was Agriculture - labour;

Stratum 7: Occupation of CWE was Casual - labour;

Stratum 8: Occupation of CWE was regular salary/wages and other sources and score value up to 25 per cent;

Stratum 9: Occupation of CWE was regular salary/wages and other sources and score value 25-75 per cent and

Stratum 10: Occupation of CWE was regular salary/wages and other sources and score value above 50 per cent.

From each of the above 10 strata, 2 households were selected by following equal probability sampling approach. In case, any of the strata was found to be missing (no household), then households from previous stratum, where additional households were available, were selected so as to get 20 sample households in a selected village.

Following the above sampling design in rural areas, the realised sample of 24,340 households out of preliminary listed sample of 123,471 households was spread over 1,217 villages in 165 districts and 50 NSS regions covering the 25 States/UTs.

- **Selection of Urban Sample:** In the urban, within the 25 covered States/UTs, the 50 NSS regions were again treated as the main strata and a sample of 450 towns (first stage units) were selected covering all sample states. All the cities/towns of varying sizes (less than 5,000 to over 10 million populations) in sample districts were grouped into nine categories based on the population. Those cities/towns having population over 200,000 that formed first five groups were selected with a probability one. The remaining four town groups were considered as separate strata on

the basis of their population size and from each stratum a sample of towns was selected independently. These town groups may be called sub-strata which are formed within the main strata of NSS regions in each State.

A progressively increasing sampling fraction with increasing town population class was used for determining the number of towns to be selected from each stratum. Allocation of the towns were done keeping in mind that atleast one town should be selected from each sample district. Out of 450 sample towns, 38 cities and towns were selected by equal probability sampling approach from remaining four towns groups.

A total sample size of 1,801 urban wards was allocated among the sample towns more or less in proportion to the number of wards in the respective towns, maintaining an equal number of wards allocated to each selected town in a town group. The number of towns and wards in respective town group is given as follows:

**Sample sizes of towns and wards in the city/town groups**

Town class	Town population ('000)	Total towns in sample districts	Sample towns	Sampling fraction
I	> 10000	3	3	1.00
II	5000-10000	2	2	1.00
III	1000-5000	33	33	1.00
IV	500-1000	24	21	0.88
V	200-500	61	52	0.85
VI	100-200	83	45	0.54
VII	50-100	195	66	0.34
VIII	20-50	629	97	0.15
IX	< 20	1710	131	0.08
<b>Total</b>		2740	450	0.16

The allocated number of wards was selected from each sample town, following equal probability sampling approach. Thus, towns and wards formed the first and second-stage sample units in the urban sample design. Like in the rural sample design, within a selected ward, a sample of about 100-125 households were selected for listing and preliminary survey, following equal probability sampling approach. Following the above sampling design in urban areas, the realised sample of 36,020 households, out of preliminary listed sample of 182,075 households, was spread over 1,801 urban wards in 450 towns and 50 NSS regions covering the 25 States/UTs.

## Survey Features and Allocation

Feature	ICE 360° Survey, 2014	ICE 360° Survey, 2016
Survey type	Cross section	Best mix of Baseline-Panel-Longitudinal and Cross-sectional
Sample design	Three-stage stratified random sampling <b>Rural:</b> District-Villages-Households <b>Urban:</b> Towns-UFS blocks-Households	Same as ICE360° Survey, 2014
Coverage	21 Indian states	25 major states
Unit of selection and data collection	Households	Households
Sampling frame	101,534 households	300,000 households
Sample size	20,195 households	61,000 (20,000 panel)
Method of data collection	Face-to-face interview	Face-to-face interview and focus groups
Respondents	Chief Wage Earner	Chief Wage Earner (CWE), House wife, Youth
Collection of primary data	September-November , 2014	Listing of households (November 2015-January 2016); Main survey (March-August 2016)

## Sample summary

Location	Sampling Units	ICE 360° Survey, 2014	ICE 360° Survey, 2016
Rural	Districts	72	165
	Villages	300	1,217
	Sampling Frame -Households	30,048	120,000
	<b>Main Survey -Households</b>	<b>5,997</b>	<b>25,000</b>
Urban	Districts	81	487
	Urban Blocks	710	1,801
	Sampling Frame -Households	71,486	1,80,000
	<b>Main Survey -Households</b>	<b>14,198</b>	<b>36,000</b>
ALL INDIA	Districts	110	216
	Villages/ Urban Blocks	1,010	3,018
	Sampling Frame -Households	10,1534	300,000
	<b>Main Survey -Households</b>	<b>20,195</b>	<b>61,000</b>

## Representativeness of sample and analysis on the national macro-economic scenario:

The data will be weighted to allow reporting at the following levels of disaggregation:

- State-wise, rural/urban, independent estimates for 25 clusters (group of homogeneous districts) separately for rural & urban
- Independent estimates for over 50 major cities.
- Independent estimates for 5 sizes of town categories within each state.
- Independent estimates for by size of villages within each state and clusters.
- Many more.....

## Data Validation and Reliability of Estimates

Income and expenditure surveys often tend to bring to fore certain stark trends and statistics. And invariably doubts are raised over the reliability of such data. It should be admitted that there is no full proof method by which one can establish the reliability of all the survey results. There are, however, certain procedures by which it is possible to make assessment of the degree of confidence that can be placed on the findings of the survey. The most widely used and fruitful procedure is to compare the survey estimates with the estimates generated by other reliable sources despite the difficulty to obtain estimates which are comparable from the point of view of concepts, coverage of population and period to which data refer. However, such comparison provides some basis for judging the degree of reliability and hence an attempt is made to compare the survey results with the available external data.

**Demographic characteristics:** Information relating to key demographic characteristics of the Indian households is available from various rounds of National Sample Surveys and Census', with which the present survey (ICE 360° Survey, 2016) results can be compared. According to the ICE 360° Survey, there are 280.6 million households in the country, of which 34.3 per cent (96.2 million) live in urban areas and the rest (184.3 million) in rural areas. Estimate of average household size from ICE 360° Survey, 2016 (4.7 members) appears consistent with the estimates obtained from NSS 68th round, 2011-12 (4.4 members) and Census 2011 (4.9 members).

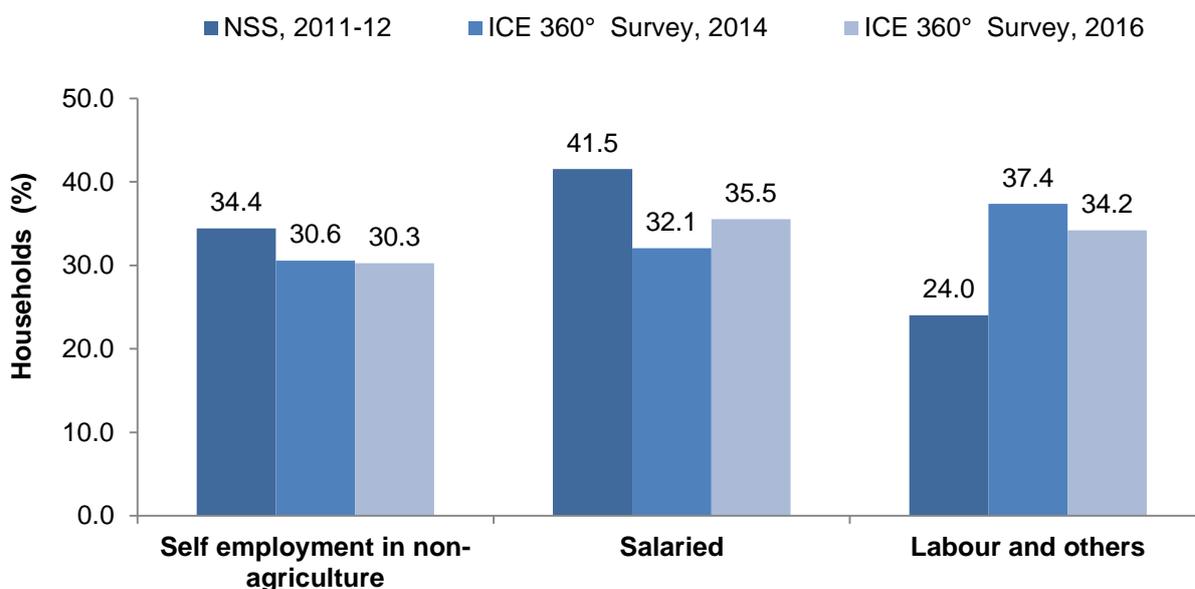
All the three data sources are also fairly comparable on some other parameters, such as the distribution of households by socio-religious groups. It is to be noted that the share of households across different socio-religious groups in rural India as observed in ICE 360° Survey, 2016 appears to be very similar to those obtained from NSS, 2014 (Education Survey) and Census, 2011 estimates. However, in case of urban India, ICE 360° Survey has covered a slightly higher share of hindus relative to other religions.

### Demographics profile of Indian households

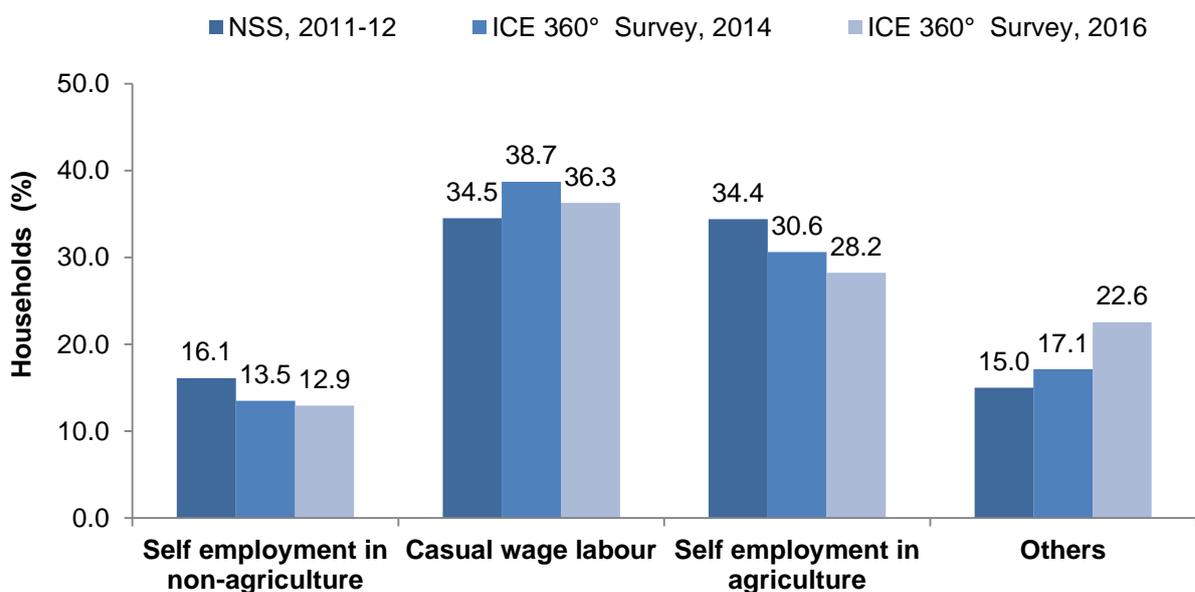
	Census, 2011	NSS, 2011-12	ICE 360° Survey, 2014	ICE 360° Survey, 2016
<b>Rural</b>				
Estimated households (Million)	168.6	172.1	179.5	184.3
Estimated population (Million)	833.7	792.1	845.0	889.5
Household size	4.94	4.60	4.71	4.83
<b>Urban</b>				
Estimated households (Million)	80.9	78.2	90.6	96.2
Estimated population (Million)	377.1	316.9	419.9	440.3
Household size	4.66	4.05	4.63	4.58
<b>All India</b>				
Estimated households (Million)	249.5	250.3	270.1	280.6
Estimated population (Million)	1210.8	1109.0	1264.9	1329.8
Household size	4.85	4.43	4.68	4.74

**Sources of Household Income:** In case of urban India, while NSSO 68th round reported a considerably higher share of salaried (41.5 per cent) as compared to labourers (24 per cent), ICE 360° Survey observed almost similar shares of households with these two sources as the principal sources of income. Share of urban households who are self-employed in non-agriculture activities are not very different across these two sources, although NSS reported a slightly higher share in 2011-12. In rural India, ICE 360° Survey has captured relatively lower shares of self-employed households as compared to NSS. However, share of casual labour households covered is similar in both the surveys.

Distribution of URBAN households by source of income

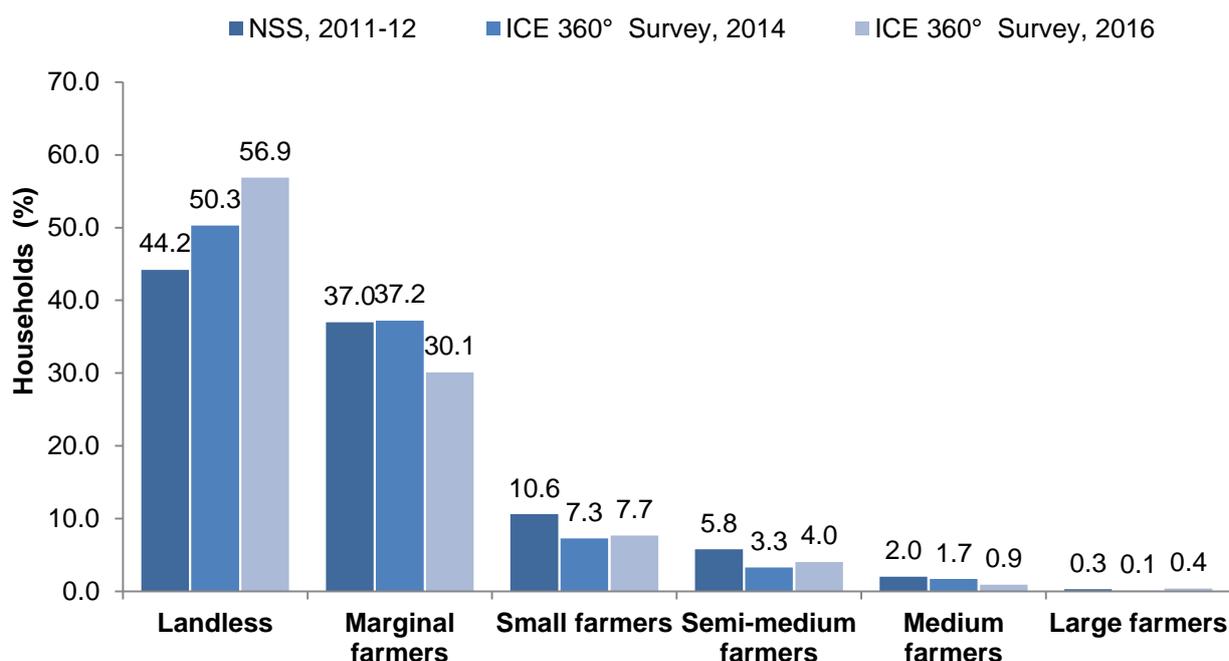


Distribution of RURAL households by source of income



The size of cultivable land owned by a household is an important indicator of the economic status of the household which is certainly more relevant in the context of rural areas as compared to urban. As per ICE 360° Survey 2016, while nearly 57 per cent of rural households in India do not possess any cultivable land, another 30 per cent are marginal farmers (0-1 hectare of land). Since share of landless households have increased over the years, we can see the proportional adjustment in distribution of households across the other land categories between 2011-12 and 2015-16.

**Distribution of RURAL households by size of cultivable land category<sup>1</sup>**



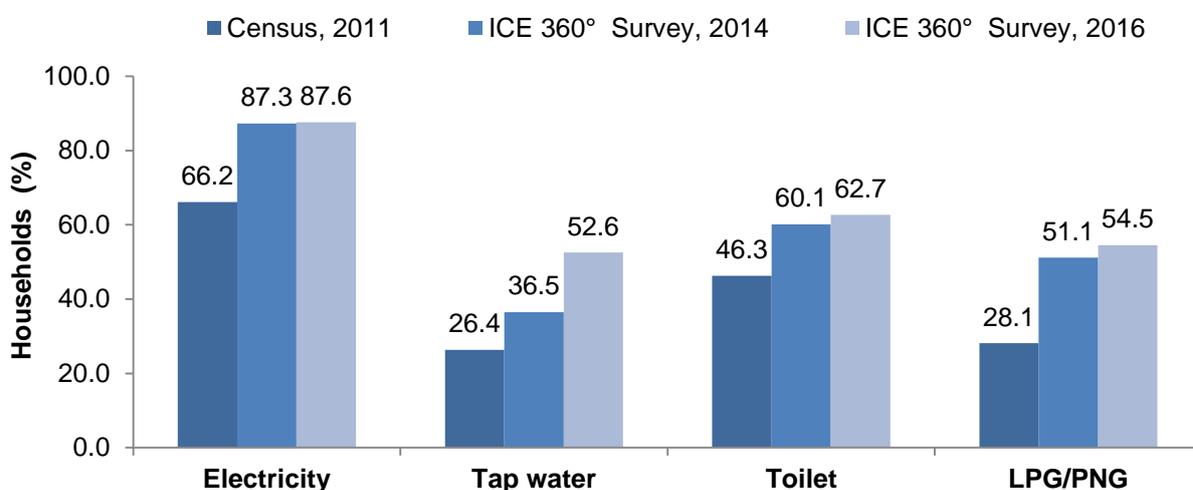
**Estimates of Income, Expenditure and Saving:** An average household in India had an annual income of ₹202,076 in 2015-16, and an expenditure of ₹133,208, leaving it with a surplus of ₹688,67 to save and invest.

A common problem faced in such surveys is the under-statement of economic data (income, expenditure and savings) by the respondents. The adopted concept of income in ICE 360° Survey, 2016 includes wages, salaries, bonus, business, profession, farm income and other forms of labour income, pensions, rent, interest, and dividend, the aggregate income of Indian households is estimated to be ₹56,697 billion, which is 56.9% of the household disposable income (HDI) estimated from National Accounts Statistics for the twelve-month period, April 2015-March 2016. An estimate of surplus income (as an indicator of savings) is arrived at by subtracting the total household expenditure from the total household income. Through this method, this survey found estimates of savings as a proportion of disposable income to be 34.1 per cent.

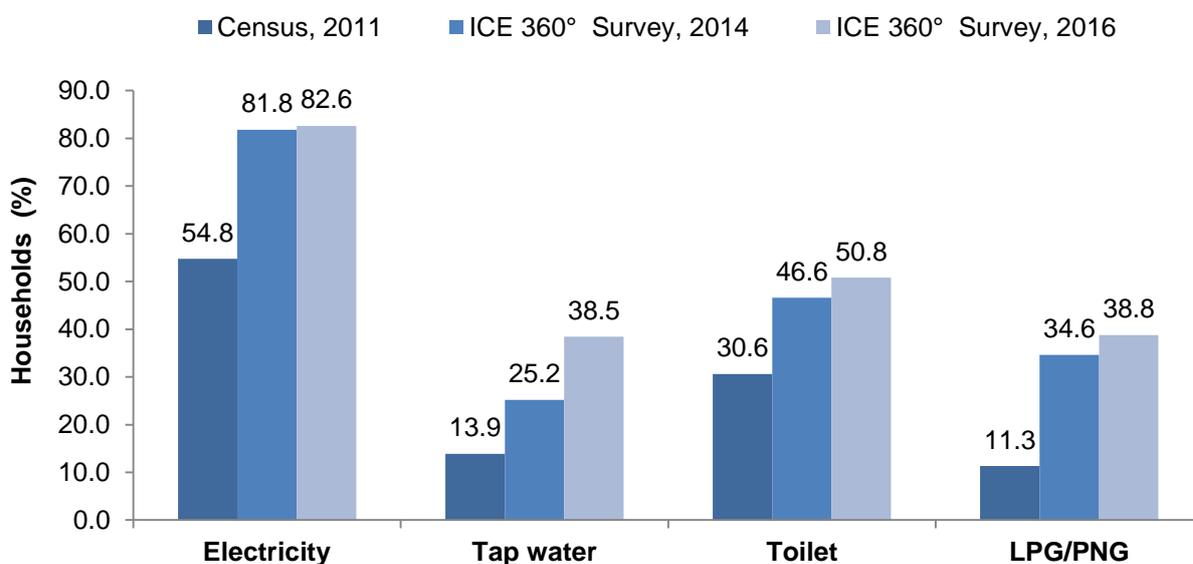
<sup>1</sup> Landless: 0 hectares; Marginal farmers: 0-1 hectares; Small farmers: 1-2 hectares; Semi-medium farmers: 2-4 hectares; Medium farmers: 4-10 hectares; Large farmers: more than 10 hectares  
(c) People Research on India's Consumer Economy (PRICE), 2016

**Ownership of Basic Amenities:** At the all India level, the proportion of households owning different types of basic amenities such as electricity, tap water, toilet and LPG/PNG has improved significantly between 2011 and 2016. In almost all the categories the ownership increased in the range of 20 to 30 percentage points at the all India level. Among these four amenities, improvement in ownership between 2011 and 2016 has been relatively lower in case of ownership of toilet facilities within premises. Again, improvement in ownership of these amenities is higher in rural India as compared to urban, except for tap water where progress in almost similar in rural and urban areas. However, if we compare the estimates between the last 2 years from the ICE 360 surveys of 2014 and 2016, there is no noticeable improvement in ownership of these amenities except for ownership of tap water facility within the household, which is improved by 16 percentage points.

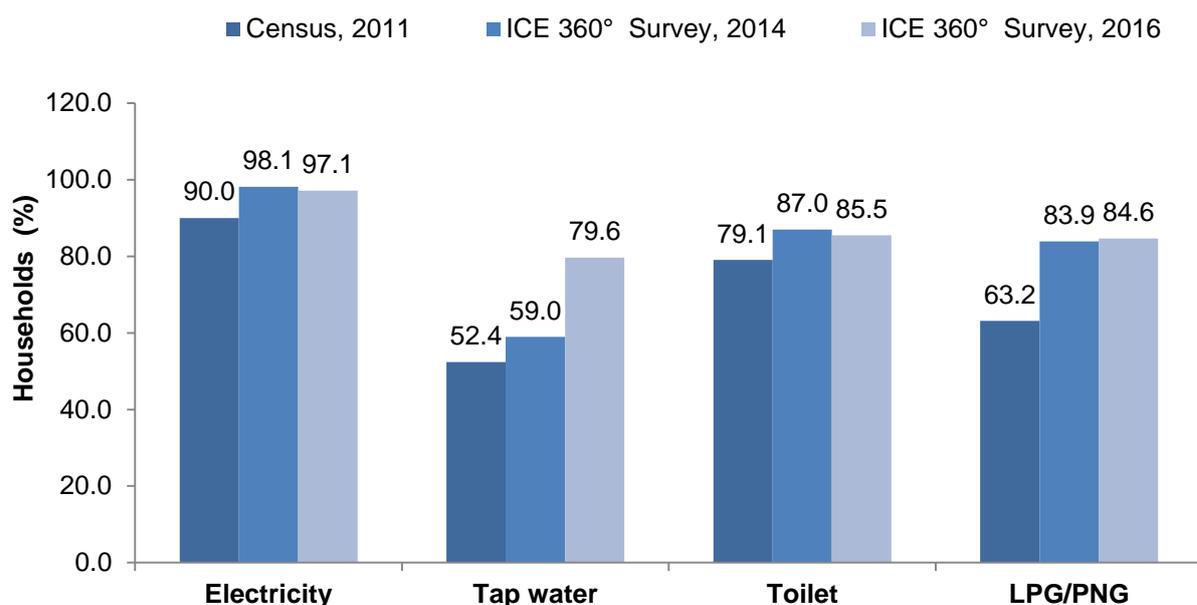
**Distribution of ALL INDIA households by basic amenities**



**Distribution of RURAL households by basic amenities**



### Distribution of URBAN households by basic amenities



**Primary source of energy used for cooking:** Compared to 2011-12 estimates from NSS, the proportion of households using LPG/Piped Gas as cooking fuel in the year 2016, as estimated from ICE 360 Survey, 2016, has increased by 17 percentage points and 9 percentage points respectively in rural and urban India. Specifically in rural India, proportion of households using firewood and dung cakes for cooking has come down significantly.

### Distribution of households by primary source of energy for cooking (%)

	Rural		Urban		All India	
	NSS, 2011-12	ICE 360° Survey, 2016	NSS, 2011-12	ICE 360° Survey, 2016	NSS, 2011-12	ICE 360° Survey, 2016
LPG	15.2	32.5	73.0	81.7	32.5	49.4
Firewood/dung cake	77.9	63.7	16.8	13.6	59.6	46.5
Others	6.8	3.8	10.2	4.6	7.9	4.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Ownership status of house:** Ownership status of houses in India is generally observed to be quite different in rural areas as compared to urban. In rural India, the distribution of households across ownership status of their houses as estimated from ICE 360° Survey has been observed to be very similar to what was observed in 2011-12 as per NSS survey. However, in urban India it is observed

that that has been a rise of around 8 percentage points in proportion of households staying in owned houses and a similar decline in the share staying in rented houses between 2011-12 and 2015-16.

#### Distribution of households by ownership status of house (%)

	Rural		Urban		All India	
	Census, 2011	ICE 360° Survey, 2016	Census, 2011	ICE 360° Survey, 2016	Census, 2011	ICE 360° Survey, 2016
Owned	94.7	95.6	69.2	77.4	86.6	89.3
Rented	3.4	3.2	27.5	20.6	11.1	9.2
Any other	1.9	1.2	3.3	2.0	2.4	1.5
<b>All Households</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Estimates of Sampling Error:** To check the data reliability, a variety of methods are used. The most common amongst them are evaluation of sampling and non-sampling errors. Sampling errors are measurable within the framework of the sample design and are also controllable by varying the size of the sample. For instance, the average per capita income is ₹42,635 and coefficient of variation of the estimated per capita household income for various income quintiles is consistent and within permissible limits. This generates a fair degree of confidence in the ICE 360° survey estimates.

#### Estimates of standard errors

Per capita income quintile	% share in households	% share in total income	Per capita income (Rs. Per annum)	Coefficient of variation (%)
Q1 – (Bottom 20%)	15.2	7.0	14,850	46.6
Q2	17.5	10.8	23,128	42.7
Q3	20.1	15.2	32,373	44.6
Q4	21.9	22.1	47,123	45.0
Q5 – (Top 20%)	25.4	44.9	95,694	71.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>42,635</b>	<b>85.1</b>

Another important source of error, which can vitiate the estimates, is the non-response rate. In the case of this survey, it was around 3 per cent and largely due to unanticipated reasons such as the psychology of the respondent. Non-sampling errors arise mainly from three sources. **One**, respondents refuse to cooperate and deny information; they supply partial information that may not be usable; or they deliberately provide false information. **Two**, the interviewers are also prone to have some preconceived notions whereby some biases creep into the schedules. **Three**, respondents may not remember all the relevant numbers sought by the interviewers. And this tends to considerably increase the margin of error in the data collected. There is no satisfactory procedure for a precise measurement of non-sampling errors. A team of trained interviewers (200), supervisors (52) and PRICE professionals (10) from different language groups were engaged for about three months to undertake the task of primary data collection. The field team was thoroughly trained through all the phases of the surveys. Every care was taken to implement maximum possible quality control in recording of the answers of the respondents.