Source of Inequality in consumption Expenditure in India: A Regression Based Inequality Decomposition Analysis

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Abstract

Higher economic growth in India has bypassed a major percentage of population, whose share in income and benefits has been low. In recent years, the Central Government has been laying more emphasis on redistributive policies (such as, 'inclusive growth' strategy) in addition to keeping high the growth momentum. However, along with higher economic growth India has also been experiencing the higher level of inequality over the years. Due to lack of officially provided income data, a considerable number of studies have used consumption data to measure the level of inequality in India. However, much less is known about the driving force behind the trend of the increasing inequality and their quantitative contribution.

In this back drop, the present paper estimates the Regression based inequality decomposition (Morduch and Sicular, 2002; Fields, 2003; Fiorio and Jenkins,2007) by considering unit level National Sample Survey data on consumption expenditure for the years 2004-05 and 2011-12 for rural and urban India separately. The main objective behind this exercise is to investigate the relevant household level characteristics which stand as the major source of consumption inequality in India. Regression results show that the estimated regression coefficients match with the expected signs, and most of them are statistically significant at 1 percent level. The decomposition based regression analysis finds that household size is responsible for the maximum share of inequality in the total inequality of the average MPCE and predicted MPCE in the both urban and rural areas in 2004-05 and 2011-12. In addition, factors like higher level of education, share of workers engaged in less productive jobs (such as, casual labour and agricultural worker), regular salary earning member of a household, higher level of land possessed by the households, and households having hired dwelling unit are also contributing to the higher level of inequality in the total inequality of the average MPCE and predicted MPCE. Finally, the paper suggests that in order to avoid the negative consequences of rising inequality in India, government must ensure higher level of education, higher level of employment opportunities, equal land distribution, and housing for all for any meaningful reduction of the level of inequality and for an equal and brighter India tomorrow.

Key Words: Consumption Expenditure, Inequality, Regression Based Inequality, India

JEL Classification: D63, C21, R10

I. Introduction

The rising inequality is a threat to aggregate demand in the global economy as rich spend a smaller portion of their income compared with the poor who spend almost all of their income. Rajan (2010) argued that refusal to tackle growing inequality in the US led federal policymakers to encourage the housing boom which eventually led to the great crash of 2008, with disastrous consequences for both the US and the global economy.

As per the *Forbes* magazine, India had 111 billionaires in 2015 which number is lower than only two countries in the world, i.e., U.S. (536 billionaires) and China (213 billionaires). Given the size of India's economy, the number of billionaires it produced was extraordinary compared with emerging market peers such as Brazil (54 billionaires), or with developed market peers such as Germany (103 billionaires).

However, inequality in India is not much highlighted due to lack of credible data on income in India. On the other hand, it is also the case that since India is one of the fast growing developing countries in the world inequality may increase initially but decline when it becomes rich.[1] Due to lack of income data, consumption expenditure data of NSS has been used to measure the consumption-based inequality in India.[2] The level of inequality in India is moderate given that the Gini coefficient for middle-income developing countries tends to range from 0.400 to 0.500, and exceed 0.500 in some of the most unequal countries of the world, such as those in Latin America.

A widely used estimate of wealth across countries is the one provided by the investment bank Credit Suisse. The Global Wealth Report (2015) found that the top 1% of Indians own more than half of the country's total wealth. The richest 5% own 68.6% of the country's wealth,

[1] This is due to Kuznet's hypothesis (Kuznet, 1955), which argued that high inequality, associated with growth, is a transient phase in development. Gradually, growth will trickle down to the poor and inequality will start declining with more redistributive policies.

[2] The main problem is that consumption-based inequality measures understate income inequality measures as the rich earn more than the poor and are unlikely to spend all of their additional income. However, limited household income data are provided by the India Human Development Survey (IHDS) which estimated income-based Gini coefficient as about 0.52 which is higher than NSSO-based (i.e. consumption based) estimate 0.38 in 2004-05. In fact, Bigotta et al. (2015) and Pal (2013) already have used IHDS data to estimate the Regression based Inequality Decomposition analysis in India.

while the top 10% own 76.3%. At the other end of the pyramid, the poorer half jostles for 4.1% of the nation's wealth.[3]

Ravallion (2014) highlighted the three important points about the consequences of inequality: first, poverty typically declines at a lower rate in countries with high inequality; second, when there is extreme initial inequality, growth alone can't lift all the boats as poverty becomes less responsive to economic growth over time; and third, when there is large volume of rent accruing to a small set of rich elite, they will try to impose barriers on policies that promote innovation and foster market competition. Hirschman and Rothschild (1973) coined the term "tunnel effect" to describe how inequality can lead to conflict. The tunnel effect refers to a parable about multi-lane traffic that the authors used to describe inequality's impact. Ray (2010) presented a modified parable to explain this effect.

In India, the present government at the Centre has been trying to reduce income inequality by eradicating unemployment problem.[4] The initiatives taken by Government for generating employment in India include encouraging private sector of economy, fast tracking various projects involving substantial investment and increasing public expenditure on schemes like Prime Minister's Employment Generation Programme (PMEGP) run by Ministry of Micro, Small & Medium Enterprises, Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGA), Pt. Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) scheme run by Ministry of Rural Development and National Urban Livelihoods Mission (NULM) run by Ministry of Housing & Urban Poverty Alleviation, etc. The target of the National Manufacturing Policy of the Government is to create 10 crore jobs by the year 2022. The 12th Five Year Plan aims to create 5 crore new work opportunities in the non-farm sector and provide skill certification to an equivalent number of persons. In order to improve the employability of youth, skill development schemes are also being introduced.

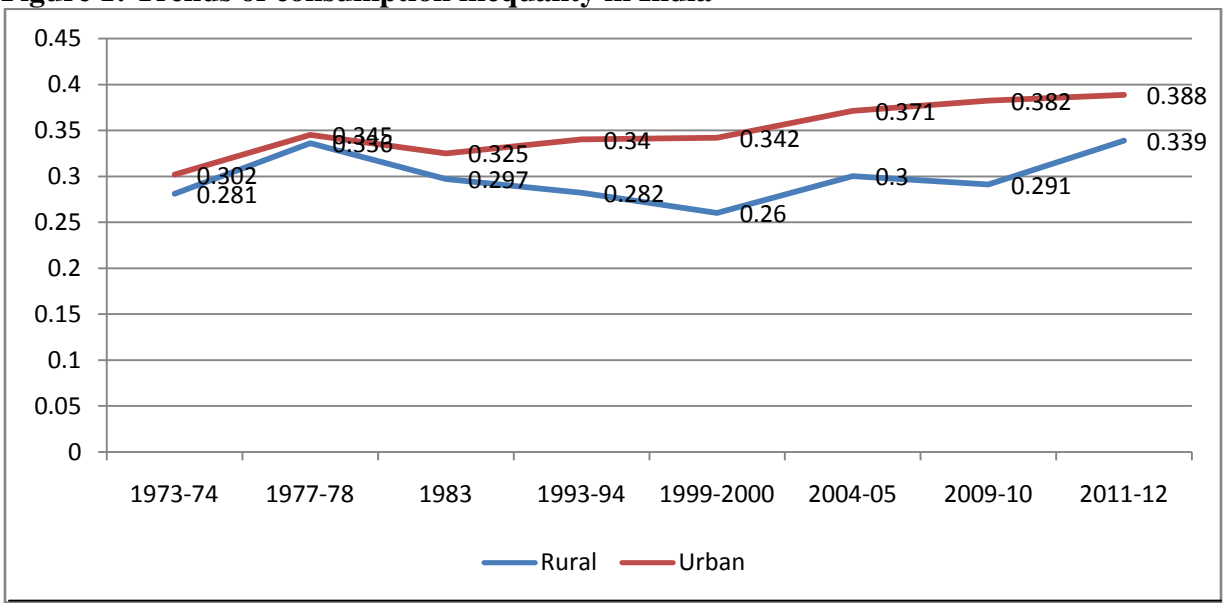
However, inequality is showing an increasing trend in the country. Since, official inequality is based on consumption data in India this paper also uses the consumption expenditure data to estimate the trends of inequality in India. Table 1 shows the increasing trend of consumption inequality in India separately for rural and urban areas for different years, as

[3] Wealth data which incredibly more difficult to obtain compared with income, is based on a large number of imputations and assumptions.

[4] The Central government uses the data on household consumption expenditure collected by the National Sample Survey Office (NSSO) as a proxy to capture economic inequality in terms of consumption expenditure.

calculated from the available NSS data on 'consumption expenditure'. It is seen that urban inequality in India is higher than rural inequality. Urban inequality shows a continuously increasing trend whereas rural inequality shows a decreasing trend for the period 1977-78 to 1999-00 and increasing trends in the years after 1999-00. Most importantly, rural (or urban) inequality increased by about 7 % (or 15%) in the period 1973-74 to 2011-12.

Figure 1: Trends of consumption inequality in India



Source: Planning Commission of India, GOI and author's own estimation.

Many factors are responsible for the spiraling inequality in the country, of which growth factor is found to be more responsible than others. Higher economic growth tends to increase income of the upper-income and middle-income groups than the poorer groups in the early stages of development which is the case in India. This is also aggravated by increased capital intensive activities in India. India also has the problem of highly unequal asset distribution which has helped a few to get higher amount of income from rent, interest and profit. In addition, inadequate employment generation and differential regional growth are the main source of inequality in India. However, without proper statistical measurement it is impossible to know the quantitative contributions of the different sources to inequality in India.

In this backdrop, the present paper tries to find out the source/s of consumption inequality in India through a systematic quantitative analysis. For this purpose we estimate the inequality decomposition based on regression analysis developed by Morduch and Sicular (2002),

Fields (2003) and Fiorio and Jenkins (2007). Further, for this analysis, household (or unit) level consumption expenditure data from National Sample Survey 61st Round in 2004-05 and 68th Round in 2011-12 have been used. As table 1 shows the level of inequality differs for urban and rural areas. Therefore, the entire analysis in this study is done by considering rural and urban areas separately. The decomposition analysis of inequality is done as it is important for understanding the main determinants of inequality as well as for policy analysis. In other words, as inequality has adverse effects on the economy, it is hoped that the findings of this paper will help reduce inequality in India.

The structure of the paper is a follows: The next section presents a review of selected literature. Section 3 details the data and methodological issues. Section 4 presents estimated empirical results of the regression based inequality decomposition. Section 5 discusses the results obtained from decomposition analysis. Finally, section 6 highlights major findings and offers policy prescriptions.

II. Select Review of Literature

In the context of India, there is a vast body of literature that measures poverty and inequality by rural and urban sectors at national and state levels, especially since 1990. In general, these studies highlight the increasing inequality between urban and rural sectors (Deaton and Kozel, 2005; Sen and Himanshu, 2004; Sundaram and Tendulkar, 2003; Kundu, 2006). Using per capita consumption expenditure as a measure of welfare, Deaton and Dreze (2002) find that inter-state inequality increased between 1993-1994 and 1999-2000 and that urban–rural inequality increased not only for the country as a whole but also within states. Jha (2002) finds higher inequality in both urban and rural sectors during the post-reform period as compared to the early 1990s. In the context of city level inequality, Kundu (2006) finds that there is gross inequality with regard to economic base between the million plus cities (with one million or more population), medium towns (with 50,000 to one million population) and small towns (with less than 50,000 population) in terms of employment, consumption, and poverty levels. Pal and Ghosh (2007) analyze the nature and causes of the patterns of inequality and poverty in India.

There are several studies that have attempted decomposition of poverty changes in terms of the growth effect and inequality effect. For instance, following Kakwani (2000) and Mazumdar and Son (2002), Bhanumurthy and Mitra (2004) decomposed changes in poverty

into a growth effect, an inequality effect, and a migration effect for two periods, i.e. 1983-1993/94 and 1993/94-1999/2000 for India.They found that rural-to urban migration contributed to poverty reduction in rural areas by 2.6 per cent between 1983 and 1993-94. Recently, considering Araar and Timothy (2006) framework to decompose the Gini index, Tripathi (2013) found that within group inequality contributes higher than between group inequality to total inequality in urban India. Sarkar and Mehta (2010) found higher level of inequality in India has contributed less decline of poverty, even with a doubling of per capita consumption growth in the post-reform decade.

However, the above studies do not quantitatively assess the sources of inequality in India. In this context, using NSS unit level data, Pandey (2013) estimated the regression based inequality decomposition at household level consumption expenditure in the Indian State of Uttar Pradesh for the period of 2005-06, 2006-07, and 2007-08. The paper also found that education level of the head of household is the main determining factor of inequality, followed by size of household and region (rural or urban) in Uttar Pradesh. Pal (2013) using India Human Development Study (IHDS) dataset for year 2004-05 and applying regression based decomposition analysis found that inequality in mother's education is one of the major contributors to inequality in educational performance. Azam and Bhatt (2016) find that between-state income differences account for the majority of between-district income inequality in rural India in 2011. However, in urban India within-state income differences explain most of the between- district inequality in 2011. Cain et al.(2010) examined the evolution of inequality during 1983-2004.They found that increase of inequality during1993-2004 is an urban phenomenon and can be accounted for by increases in returns to education in the urban sector to a considerable extent, especially among households that rely on income from education-intensive services and/or education-intensive occupations.

III. Data and Methodology for calculating regression based inequality decomposition

3.1 Decomposition of Income inequality[5]

The regression-based decomposition methodology was proposed in the early 1970s (Blinder 1973; Oaxaca 1973) but had not gained much attention until recently (see Juhn et al. 1993;

[5] This part of discussion mainly is taken from Pandey (2013).

Bourguignon et al. 2001). Wan (2002) provides a detailed account on the development of this technique.[6]

The literature expresses household income (or log-income) as:

$$y = X\beta + \epsilon \qquad (1)$$

Where, X is (n×k) matrix of explanatory variables (including a constant), β is (k×1) vector of coefficients, and ϵ is a (n×1) vector of random error terms. Given a vector of consistently estimated coefficients b, income can be expressed as a sum of predicted income and a prediction error as:

$$\hat{y} = x\hat{b} + \hat{\epsilon} \qquad (2)$$

Per capita income of household is represented as (Cowell and Fiorio 2006):

$$y_i = \sum_{m=1}^{M} \hat{b}_m x_i^m + \hat{\epsilon}_i \qquad (3)$$

Shorrocks (1982) suggested that inequality measures can be written as a weighted sum of incomes i.e.

$$I(y) = \sum_{i=1}^{n} a_i\,(y) y_i \qquad (4)$$

where, *ai* are the weights, *yi* is the income of household *i*, and **y** is the vector of household incomes.

Substituting (1) into (4) and dividing by I(y), the share of inequality attributed to explanatory variable *m* is obtained as

$$s_m = b_m \sum_{i=1}^{n} a_i(y)\, x_i^m / \sum_{i=1}^{n} a_i\,(y) y_i \qquad (5)$$

Using the regression coefficients, it is possible to compute the "income shares" of the explanatory variables as

$$a_m = b_m \sum_{i=1}^{n} x_i^m / \sum_{i=1}^{n} y_i\,, \qquad (6)$$

and evaluate the marginal effect of the Gini index of inequality of a uniform increase in an explanatory variable *m*, as in Lerman and Yitzhaki (1985) by computing $s_m - a_m G(Y)$.

[6] For recent empirical applications, see Fields and Yoo (2000), Adams (2002), Morduch and Sicular (2002), Heltberg (2003), Zhang and Zhang (2003), Fields (2003) and Wan (2004).

In the present study, inequality and inequality decomposition of income and household expenditure has been calculated in respect to age, gender , marital status and education level of the head of the household as well as household size, household type, religion, social group, land owned, dwelling unit, type of structure, primary source of energy for cooking, primary source of energy for lighting, sector, etc.

Fiorio and Jenkins (2007) developed Regression-based inequality decomposition (ineqrbd for STATA), by using Fields (2003) and Shorrocks (1982) decomposition rule. According to model, the Y_i and X_i variables based on n observations estimates following relationship as

$$y_i = \beta_0 + \beta_1 X_1 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \ldots\ldots\ldots\ldots\ldots\ldots\ldots + \beta_k X_k + \mu \quad (7)$$

The model can be rewritten as;

$$Y_i = \beta_0 + Z_1 + Z_2 + Z_3 + \ldots\ldots\ldots\ldots\ldots\ldots\ldots + Z_k + \mu_1 \quad (8)$$

Z_1, Z_2, Z_3 and Z_k are composite variables, product of regression coefficient and variables. For inequality decomposition calculations, the value of β_0 is irrelevant as it is constant for every observation. The predicted value $\hat{y}$

$$\hat{y} = \beta_0 + Z_1 + Z_2 + Z_3 + \ldots\ldots\ldots\ldots\ldots\ldots\ldots + Z_k \quad (9)$$

Equations (8) and (9) are of exactly the same as the equation used by Shorrocks (1982) for deriving inequality decomposition by factor components (For example total income is the sum of labour earnings, income from savings and other assets, private and public transfers. Alternatively, one may apply the decomposition rule to the inequality of $\hat{y}$ itself, in which case there is also a decomposition term corresponding to the residual (Cowell and Fiorio, 2006. In STATA, ineqrbd provides a regression-based Shorrocks-type decomposition of a variable labelled "Total", where Total is defined as $\hat{y}$, unless the Fields option is used, in which case Total refers to predicted $\hat{y}$. In either case, the contribution to inequality in Total of each term is labelled "s_f" in the output (From help for ineqrbd in STATA, Carlo V. Fiorio; May 2016).

In ineqrbd modules provide the means, standard deviations, and correlations, of Total, the residual and the composite variables $Z_1 + Z_2 + Z_3 + \ldots\ldots\ldots\ldots\ldots\ldots\ldots + Z_k$. Results of the composite variables are ordered in the same way as the underlying variables are ordered in $Z_1 + Z_2 + Z_3 + \ldots\ldots\ldots\ldots\ldots\ldots\ldots + Z_k$. Also I2 summarizes inequality using half the

squared coefficient of variation (the Generalized Entropy measure I2), rather than the coefficient of variation (CV). Based on various empirical studies it is observed that inequality may be negative, e.g. when the mean of a composite variable is negative.

The decomposition rule is the proportionate contribution of factor f to total inequality (for f=1, 2, ..., 14), s_f: s_f = rho_f * sd(factor_f) / sd(totvar). Where, rho_f is the correlation between factor_f and total variable, and sd(.) is the standard deviation. (Equivalently, s_f is the slope coefficient from the regression of factor_f on totvar).

For each observation, $\sum_i^F (s\_f)=1$, and S_f = s_f*I2(Total), Mean: m_f = mean(f); Standard Deviation: sd(f) = std.dev. of f. The member of the Generalised Entropy class of inequality is measured by $I2\_f = 0.5*[sd(f)/m\_f]^2$.

3.2. Data used

Data used for analysis in this study are drawn from the National Sample Survey unit level data on consumption expenditure for 61st Round in 2004-05 and 68th Round in 2011-12. NSS provides monthly per-capita expenditure data for three reference periods: Uniform Recall Period (URP), Mixed Recall Period (MRP), and Modified Mixed Reference Period (MMRP).[7] The URP or MRP based consumption data are available for 61st Round in 2004-05, 66th Round in 2009-10, and 68th Round in 2011-12. On the other hand, MMRP based consumption data are available only for 66th and 68th NSS Rounds. However, only 61st Round and 68th Round data are considered by taking MRP based consumption expenditure data, as MRP-based estimates capture the household consumption expenditure of the poor households on low-frequency items of purchase more satisfactorily than URP.[8]

National Sample Survey of 61st Round in 2004-05 on 'Consumer Expenditure' (Schedule 1.0) surveyed 1,24,644 (79,298 in rural areas and 45,346 in urban areas) households which

[7] The Uniform Recall Period (URP) refers to consumption expenditure data collected using the 30-day recall or reference period. The Mixed Recall Period (MRP) refers to consumption expenditure data collected using the one-year recall period for five non-food items (i.e., clothing, footwear, durable goods, education and institutional medical expenses) and 30-day recall period for the rest of items. Modified Mixed Reference Period (MMRP) refers to consumption expenditure data collected using the 7-day recall period for edible oil, egg, fish and meat, vegetables, fruits, spices, beverages, refreshments, processed food, pan, tobacco and intoxicants and for all other items, the reference periods used are the same as in case of MRP.

[8] NSS 68th Round in 2011-12 on 'consumption expenditure' conducted as 2009-10 was not a normal year because of a severe drought was witnessed in 37 years. Therefore, NSS Consumption Expenditure survey data for 66th Round in 2009-10 was not considered for the analysis in this study.

represents 6,09,736 (4,03,207 in rural areas and 2,06,529 in urban areas) persons. On the other hand, National Sample Survey of 68th Round in 2011-12 on 'Consumer Expenditure' (Schedule 1.0 Type 1) surveyed 1,01,662 (59,695 in rural areas and 41,967 in urban areas) households and number of persons surveyed was 4,64,960 (285,796 in rural areas and 179,164 in urban areas). The average MPCE of 2004-05 in current prices was Rs. 579 and Rs. 1105 in rural and urban areas, respectively. On the other hand, the average MPCE of 2011-12 in current prices was Rs. 1287 (or Rs. 2477) in rural (or urban) areas.

3.3 Choice of Independent variables

Fiorio and Jenkins's (2007) regression based inequality decomposition is mainly based on income data. However, due to lack of income data, consumption data are proxied in the present analysis. Therefore, independent variables that mainly stand for the source of income which are only spent on consumption expenditure at households' level are considered for the analysis, based on the information available from the National sample Survey at our best.

Wan and Zhou (2005) argued that variables affecting income generation will also determine income (in our case consumption) inequality. Economic theory and common knowledge can be used to identify these variables. The paper argues that land and physical capital in addition to labour are the driving force of the income. Therefore, there is need to consider the human capital theory (emphasizes on education, training and experience) along with production theory for this purpose. Based on literature on development economics, the study has included education level and age of the persons in the analysis. In addition, the amount of land owned by a person is also considered. In this case, following two variables are considered: first, whether a person owns any land or not; second, total land possessed which includes own land, leased-in land, otherwise possessed (neither owned nor leased-in) and leased- out land. Pandey (2013) found that household size has a negative effect on average MPCE. Therefore, household size is also included in the analysis. NSS data considers housing rent also in the part of consumption expenditure; therefore data on dwelling unit are included in the analysis. NSS provides information on four types of dwelling unit which are, owned, hired, no dwelling unit, and others. The study considers all the above information as they are directly linked to consumption expenditure. Also considered for the analysis is information on whether any member of the household is a regular salary earner or not, as salary earning member could be one of the main sources of income of the households.

Further, information on whether the household possess ration card or not is considered as card holders (mostly poor) people use it for purchasing subsidizes food and fuel therefore reduces consumption expenditure of poor households. Most importantly, India's public distribution system (PDS) operates mainly based on the ration card. According to some studies, (Maharana and Ladusingh, 2014), there is a huge gender disparity in food expenditure in India. A recent report based on Pay Net database shows that Women in India earn 18.8 per cent less than men. Therefore, to analyze the impact of the gender differences on consumption expenditure a gender dummy is included in our model. The NSS also provides data about number of free meals is taken by members of the household from school, employer as perquisites or part of wage, and 'others'. These free meals may reduce the consumption expenditure and therefore merits inclusion in the analysis. Finally, we consider the household type which provides information on whether the members of the households are engaged in self employment, regular wage/salary earning, and casual labour by considering rural and urban separately. This information is crucial as it explains the differences in consumption expenditure across different household types in India.

Finally, the dependent variable in logarithmic form is used as the use of the semilog specification is also prompted by the finding that the income (in this case consumption) variable can be approximated well by a lognormal distribution (Shorrocks and Wan 2004).
So, the regression model is on the following lines:

$$\boldsymbol{Ln\,(consumption) = f\,(land,\ labour, \ldots\ldots\ldots\ldots, dummy\ variables)} \quad \text{------- (10)}$$

where f stands for the standard linear function. The following variables are considered for the estimation of equation 10.

Dependent variable:

Log of monthly per capita consumption expenditure (MPCE)

Major Independent/Explanatory variables:

1. Land: (a) whether owns any land (yes =1 and no = 0);
   (b) Total land possessed;
2. Dwelling unit: *owned/ hired/ no dwelling unit/ others;*
3. Education: different level of educations from not literate to post graduate and above;

4. Household type: self employed/ casual worker/ regular wage earner;

5. Sex: Male/Female;

6. Salary earner: whether any member of the household is a regular salary earner (yes =1 and no = 0);

7. Ration card: whether the household possess ration card (yes =1 and no = 0);

8. Age: age of the person;

9. Household size: number of household members

10. Free meals: No. of free meals taken from

(a) school
(b) employer as perquisites or part of wage
(c) any others

III. Empirical results

Table 2 and 3 presents the regression based inequality decomposition results for the NSS 61st Round in 2004-05 and 68th Round in 2011-12, by considering rural and urban separately. The results show that most of the estimated coefficients of the explanatory variables match with the expected signs and are statistically significant at 1 percent level of significance.

Table 2 shows that size of the household and numbers of free meal taken from school, employer as perquisites or part of wage, and any others source had a negatively significant (at 1 % level) effect on monthly per capita consumption expenditure (MPCE) in urban areas in 2004-05. On the other hand, dummy variables on owning land, amount of land possessed, on persons earning regular salary on persons possessing ration card, and on age of persons have a statistically significant effect on MPCE in urban areas. Household type variables i.e., self employed, casual worker, and regular wage earner also have a statistically negative effect on urban MPCE. This indicates that if the persons are working, their MPCE decreases compared to the reference category 'others' (i.e., those are having less income). In other words, this clearly indicates that higher income group people spend lesser on their MPCE than the reference category, i.e. lower income group. This result supports our expected common hypothesis. Persons living in hired dwelling units, also had higher MPCE than the reference category (those do not have any dwelling unit) in urban area in 2004-05. Dummy variable of gender has a negative effect on consumption expenditure, i.e., male spend less on consumption expenditure than the reference category, female. This indicates the gender

disparity in consumption expenditure in 2004-05 for urban persons. Finally, educational dummies also have a positive and significant effect on urban MPCE than the reference category, i.e. not literate. However, the results indicate that the magnitude of the contribution of increased with the higher level of education than the lower level of education for the urban persons in 2004-05. Again this results support our expected hypothesis that income and expenditure increases with level of education of the person/s.

Table 2 also presents the estimated results for rural persons for the year 2004-05. The results are almost similar albeit slight difference. In urban areas land owned by a person has a positive and significant effect on MPCE, while it is not the case for rural persons. This indicates that urban land generates or contributes more income towards consumption expenditure of a person than rural land. Free meals taken by a rural person from other sources (rather than from school or employer) have no effect on MPCE, but the same is not the effect on urban persons. Household type variables impact MPCE; if a rural person is self employed then he/she will have higher MPCE than urban self employed persons. This result is very important as it indicates that urban self employed persons have higher income (or lower consumption expenditure) than rural self employed persons. Also, urban literate persons without formal schooling have higher consumption expenditure than their counterparts in rural.

Table 3 presents identical results for the year of 2011-12 also albeit with some minor differences. The results show that land ownership of rural persons has had a negative and significant (at 5 % level) impact on consumption expenditure in 2011-12 whereas no significant result effect was evident in 2004-05. This clearly indicates that the value (in production or as other source of income) of rural land had increased in 2011-12 compared to 2004-05 and had negatively impacted rural persons' MPCE. On the other hand, while free meals taken from the employer by urban persons had no effect on consumption expenditure in 2004-05 it had reduced the MPCE of the urban persons significantly in the same year. This indicates that number of free meals from the employer is now lesser than earlier. In fact in India, in urban areas worker's wage is paid more in cash than any types of goods than in the past. However, number of free meals from other sources has had a positive and significant effect on MPCE of both the rural and urban persons in 2011-12. The effect was statistically insignificant for rural persons and was negative and statistically significant for urban persons

in 2004-05. This indicates that free meal from other sources do not reduce MPCE any longer as free meals also involve some costs as in providing gifts for attending the marriage party or social gathering. Most importantly, self employed persons (non-agriculture) and regular wage earning rural parsons experienced higher expenditure on MPCE in 2011-12 unlike their negative expenditure on MPCE in 2004-05. This indicates that consumption expenditure in rural areas is higher than what it was earlier. On the other hand, income of the rural worker has not increased in equal proportion to increase in their consumption expenditure. Another explanation is that, when a rural worker gets a little higher income than before, he/she increases his consumption expenditure on luxury goods in addition to essential goods, which then adds to his total consumption expenditure. Finally, the results show that no significant effect of education level (i.e., literate without formal schooling) of worker on the MPCE in both rural and urban areas. This indicates that the threshold level of education for obtaining a job has gone up with a corresponding rise in both income and consumption expenditure.[9] Tables 2 and 3 also provide satisfactory results of the value of R^2, adjusted R^2, and F statistics, and also provide the number of sample persons considered for the analysis.

Decomposition of inequality in average MPCE and predicted average MPCE for the year 2004-05 and 2011-12 is given in Tables 4, 5, 6 and 7 separately for rural and urban. Table 4 presents the estimated results of decomposition of inequality in average MPCE and predicted MPCE for urban persons as of 2004-05. The inequality decomposition for average MPCE maximum value of s_f (= rho_f * sd(f) / sd(total) is for size of the household. Also the above trend is followed for the predicted average urban MPCE for 2004-05. Higher level of (graduate level) educational qualification and household type i.e., urban casual labourer contributed respectively 9.06 (or 23.22) percent and 6.42 (or 16.46) percent to the total inequality average of urban MPCE (or predicted MPCE) in 2004-05. Most importantly, higher level of educational qualification, i.e., secondary, higher secondary, and postgraduate and above have contributed respectively 2.93 (or 7.52) percent, 3.75 (or 9.64) percent, and 4.12 (or 10.56) percent in the total inequality of average urban MPCE (predicted MPCE) in 2004-05. In respect of persons from regular wage/salary earning households and literates but with below primary level educational qualification S_f (=s_f*I2 (Total) the value is negative

[9] Though education code 3 has little difference in the estimated results for 2004-05 compared to 2011-12, still the code is beyond comparison as it signifies different levels of education at two different time periods. See footnotes of Table 2 and 3 for more details.

in inequality decomposition exercise of average MPCE and predicted average MPCE. The ratio of S_f and I2_f for total is 0.0035 for average MPCE, and 0.0014 for predicted average MPCE.

Table 5 presents the estimated results of decomposition of inequality in average MPCE and predicted MPCE for rural persons in 2004-05. Like urban areas, household size of the rural areas contributes the maximum i.e., 5.23 percent in total inequality of average MPCE and 17.72 percent in the average predicted MPCE. Other household characteristic such as persons earning salary, self employed as agricultural labourer, total land possessed by a person, persons having secondary and higher secondary level of education are found contributing 4.17 (or 14.14) percent, 3.49 (or 11.85) percent, 2.93 (or 9.93) percent, 2.36 (or 8.02) percent, 2.04 (or 6.91) percent in the total inequality of the average rural MPCE (or predicted MPCE) in 2004-05.The ratio of S_f and I2_f for total is 0.0027 in average MPCE and 0.0008 in predicted average MPCE.

Table 6 presents the estimated results of decomposition of inequality in average MPCE and predicted MPCE for the urban persons in 2011-12. Again, the variable that contributes the maximum to inequality is household size (i.e., 9.63 percent in average MPCE and 30.19 percent in average predicted MPCE) followed by other variables like being engaged as casual labour, living in hired dwelling unit, having graduate and post graduate level educational qualification, and earning regular salary. Similar is the trend seen for the other measure of inequality decomposition. On the other hand, variables like regular wage/salary earning household type and owning dwelling unit type for S_f (=s_f*I2 (Total)) give negative value in inequality decomposition of average MPCE and predicted average MPCE. The ratio of S_f and I2_f for total is 0.001 in average MPCE and 0.0003 in predicted average MPCE.

Table 7 presents the regression based inequality decomposition for rural India for the year of 2011-12 in terms of average MPCE and predicted MPCE. The results show that variables like total land possessed by a person, household size, persons earning salary, persons are having graduate level education contributed 6.51 (or 23.79) percent, 4.86 (or 17.79) percent, 3.63 (or 13.28) percent, 1.42 (or 5.19) percent in the total inequality of the average rural MPCE (or predicted MPCE) in 2011-12. The ratio of S_f and I2_f for total is 0.0021 in average MPCE and 0.0006 in predicted average MPCE. In addition, Appendix Table 1, 2, 3

and 2 provide summary statistics like mean, standard deviation, minimum and maximum value of the log MPCE and predicted log MPCE.[10]

Our results are significantly differ from the earlier studies (e.g., Cain et al., 2010; Pandey, 2013; Azam and Bhatt, 2016; Bigotta et al., 2015). Cain et al. (2010) and Azam and Bhatt (2016) used the Uniform Recall Period (URP) data for the analysis for the period of 1983 to 2004, whereas our study use the more relevant consumption data on Mixed Recall Period (MRP). Most of the studies have considered old consumption data up to the period of 2004-05 where as our study has used most recent data of 2011-12. The past studies have considered education level for head of the household whereas our study has considered different level of education of different members of the households which is more relevant to explain the consumption inequality across the households. Apart from that our study has considered more relevant variables such as, dwelling unit, number of free meals, ration holding status etc, which are more relevant to explain the recent source of inequality in India by considering rural urban separately. The present study not only has estimated the source of inequality in average MPCE but also in predicted MPCE which is more relevant than only calculating inequality in average MPCE. Finally, from the perspective of policy suggestion our study makes a different by suggesting more recent policies than the other studies. However, some of the estimated results (such as, source of inequality from household size, gender dummy, and age of the sample persons) of this present study support the earlier finding of the past several studies (such as, Cain et al., 2010; Pandey, 2013; Bigotta et al., 2015).

IV. Discussion on the findings of the regression based inequality decomposition results

The study was able to identify the relevant sources of consumption based inequality in India by considering rural and urban data separately for the years 2004-05 and 2011-12. The results show that size of the household is the variable that contributes the highest to total inequality in both average MPCE and predicted MPCE. As per 2011 Census, the average size of household is 4.8 whereas; NSS puts the average size of the household at about 5.53 with maximum 39 family members.A large household would show lower level of average MPCE as large

[10] Correlation coefficients among total, residual and other variables also have been calculated but due to space limit we have not presented here. However, calculated values are available from the author upon request.

household size entails large number of dependent children which increases the level of inequality. Given this context, the results of this study point to the need to lower the size of household or alternatively to reduce the number of dependent members in the household in order to reduce inequality in MPCE.

Higher the level of education of persons higher is the contribution to the level of inequality in the total inequality in India. The contribution of persons having graduate, post graduate or even higher level of education is substantially high in the total inequality in India. The result obviously indicates that people with higher education earn more money than the uneducated persons and also contribute to a more unequal society.Therefore, providing higher level of education to all is essential for reducing inequality in India irrespective whether they are from rural and urban areas.

Two categories, i.e. urban casual labourer and rural agricultural labourer contribute highly to the level inequality in India because both these categories have lower income than others. In 2011-12, the share of casual labourers who sought employment on a daily basis was 30%. A rural casual worker earns less than 7 per cent of the salary of a public-sector employee (IHD, 2014). On Further, during 2011-12, the category of rural agricultural labour earned lower level of income due to use of modern technology in agriculture which reduced demand for labour. Further, the unskilled nature of agricultural labour and consequent lower productivity as resulted in accruing lower level of income. Therefore, improvement of skill levels couple with creation of higher volume of job opportunities for the casual labour and agricultural labour is essential to increase their income and eventual reduction of inequality in India. Therefore, higher level of education and training need to be provided to both agricultural labour and casual labour.

Ownership of land also modifies a person's level of inequality. This indicates that ownership of land tend to make a huge difference in a person's income and corresponding level of inequality compared to a landless person. In fact, in 2011-12, land possessed by the rural persons contributed to a higher share of inequality in total inequality of India. Land ownership in India is highly skewed. The Gini coefficient of inequality in land ownership in rural India was 0.62 in 2002 while the corresponding figure in China was 0.49.This is partly because India has a much larger mass of landless population. Therefore, it is important to emphasize on land

distribution for creating an equal society in India. Households having regular salary earner/s also contribute a higher of inequality in the total inequality in India. This is because a household with a regular salary earning member would have more income than a household without any salary earning member. Therefore, there is a need to increase the share of regular salary earners in a household by increasing job opportunities. It is also clear from evidence that regular wage/salary earners contribute much less to total inequality. This indicates that increasing the number of regular wage/salary earners is essential to reduce inequality level in India.

Finally, the study has revealed that households having hired dwelling unit in urban area are adding more inequality to the total inequality. According to the Ministry of Housing & Urban Poverty Alleviation, housing shortage in the states of Uttar Pradesh, Maharashtra, West Bengal, Andhra Pradesh, Tamil Nadu, Bihar, Rajasthan, Madhya Pradesh, Karnataka and Gujarat account for about 76 per cent of the total housing shortage. It is important to note here that some of these states are more urbanized than other states in India. Despite the housing shortage, around 10.2 million completed housing units are lying vacant across urban India. There is an imperative need therefore to provide housing to urban people who belong to economically weaker sections. Poor urban dwellers pay higher share of their income towards rent which reduces their net income and increases the level of inequality. Therefore, housing for all is essential to have an equal society.

V. Conclusions and Policy Suggestions

The present paper has attempted to estimate the inequality decomposition based on regression analysis developed by Morduch and Sicular (2002), Fields (2003) and Fiorio and Jenkins (2007) in the context of India. Due to lack of officially provided income data, the study employs the unit level data on consumption expenditure sourced from National Sample Survey (NSS) for the year of 2004-05 and 2011-12. Since urban and rural India exhibit different levels of inequality, the estimation is done using data for rural and urban India separately. Selection of independent variables was done mainly by considering standard development economics theory and common knowledge (Wan and Zhou, 2005) and also based on the available information from NSS.

The findings suggest that inequality in India is showing an increasing trend.The decomposition based regression analysis finds that the variable, household size, contributed the maximum inequality in the total inequality in of average MPCE and predicted MPCE in the both urban and rural areas in both 2004-05 and 2011-12. Other variables like level of education (such as, higher secondary, graduate, post graduate and above) of persons, persons working as casual labourer or agriculture labourer, households having regular salary earning member, higher level of land possessed by the households, and households having hired dwelling units, etc are also found to have contributed higher levels of inequality in the total inequality of the average MPCE and predicted MPCE in both urban and rural areas in 2004-05 and 2011-12. In contrast, households with members with regular wage/salary earners contributed negatively to total urban inequality in both 2004-05 and 20011-12.

In consideration of the estimated results explained in the preceding sections, the present paper suggests the following policy changes: First, household size both in rural and urban areas needs to be reduced; alternatively a reduction in the number of dependent members in households is suggested. Second, higher level of education needs to be provided to the entire citizenry in order to reduce inequality. Third, it is inevitable to increase the income of casual and agricultural labourer, which task can be achieved only by imparting higher level skills to them through appropriate training programmes providing higher level of job opportunities. Fourth, to reduce level of inequality, at least one member of the household should be provided with jobs earning regular wage/salary. Fifth, distribution of land needs to be taken up afresh to provide land to landless rural and urban households, which only can reduce inequality level in India. Finally, homeless urban dwellers should be given houses as homelessness leads to urban sprawls (i.e., diseconomies of scale) and comes in the way of creating an unequal society in India. We hope that these policy prescriptions will be useful in revising current policies and formulating the future redistributive policies in India for improving the socio-economic conditions of future generations in India.

Table 2: Regression Based Inequality decomposition: Regression Results for the 61st rounds of NSS unit level data on consumption expenditure in 2004-05

Independent Variables	Urban		Rural	
	Dependent variable: Log MPCE			
	Coefficients	Standard Error	Coefficients	Standard Error
Household size	-0.05699***	0.00095	-0.04124***	0.00056
Dummy if household owns any land	0.075873***	0.009718	-0.0042	0.01173
Total land possessed	4.12E-05***	2.43E-06	0.000032***	6.17E-07
Dummy if any member of the household is a regular salary earner	0.099128***	0.009778	0.243293***	0.004816
Dummy if household possess a ration card	0.013861*	0.006774	0.075197***	0.005723
Age	0.001808***	0.000142	0.002391***	8.58E-05
No. of free meals have taken from school	-0.01079***	0.000925	-0.00512***	0.000323
No. of free meals have taken from employer as perquisites or part of wage	-0.00649***	0.001307	-0.00013	0.000765
No. of free meals have taken from other source	-0.00329***	0.000452	2.65E-05	0.000306
Reference Category: Female				
Sex	-0.03914***	0.004997	-0.03171***	0.003176
Reference Category: Others				
house_type1	-0.07274***	0.011916	0.04038***	0.004569
house_type2	-0.08861***	0.01443	-0.20654***	0.004552
house_type3	-0.42637***	0.013969	-0.1627***	0.004753
Reference category : no dwelling unit				
dwell_unit1	0.089024	0.096171	0.105106	0.072299
dwell_unit2	0.229291**	0.096127	0.345524***	0.073259
dwell_unit4	0.072334	0.096655	0.086636	0.073514
Reference category: not literate				
edu_code2	0.09528***	0.030624	0.01623	0.02055
edu_code3	0.15517***	0.008526	0.096012***	0.004853
edu_code4	0.164205***	0.008145	0.150382***	0.004685
edu_code5	0.233141***	0.008043	0.200652***	0.005127
edu_code6	0.40201***	0.008968	0.321445***	0.007216
edu_code7	0.504159***	0.010391	0.398827***	0.009667
edu_code8	0.766711***	0.024943	0.485119***	0.0321
edu_code10	0.705491***	0.010685	0.436443***	0.014326
edu_code11	0.844654***	0.017748	0.794781***	0.02393
Intercept	6.765414***	0.097011	6.219599***	0.073224
R-squared	0.3901		0.2947	
Adj. R-squared	0.3897		0.2945	
F value	856.09***		1082.95***	
No. of observations	33483		64806	

Notes:

1. Figures in parentheses represent robust standard errors. ***,**, and* indicate statistical significance at 1%, 5%, and 10% levels, respectively.
2. ***Household type***: for rural areas: self-employed in non-agriculture-1, agricultural labour-2, other labour-3, others-9 ; *for urban areas: self-employed-1, regular wage/salary earning-2, casual labour-3, others-9*
3. ***Dwelling unit code***: *owned-1, hired-2, no dwelling unit-3, others-9*
4. ***General educational level:*** *not literate –01, literate without formal schooling –02, literate but below primary –03, primary –04, middle –05, secondary –06, higher secondary –07, diploma/certificate course –08, graduate - 10, postgraduate and above -11*
5. Note: Results are based on STATA 11.2 "ineqrbd" developed by Fiorio and Jenkins (2007).

Table 3: Regression Based Inequality decomposition: Regression Results for the 68th rounds of NSS unit level data on consumption expenditure in 2011-12

	Urban		**Rural**	
	Log MPCE			
Independent Variables	Coefficients	Standard Error	Coefficients	Standard Error
Household size	-0.05773***	0.001221	-0.04568***	0.000839
Dummy if household owns any land	0.076859***	0.012418	-0.0428**	0.019292
Total land possessed	3.15E-05***	1.97E-06	5.77E-05***	1.05E-06
Dummy if any member of the household is a regular salary earner	0.12938***	0.013838	0.224856***	0.011685
Dummy if household possess a ration card	0.05486***	0.007399	0.116818***	0.00645
Age	0.000509***	0.000162	0.001961***	0.000107
No. of free meals have taken from school	-0.01153***	0.000984	-0.00341***	0.000373
No. of free meals have taken from employer as perquisites or part of wage	0.001149	0.001167	-0.00043	0.001662
No. of free meals have taken from other source	0.007798***	0.000472	0.005384***	0.000428
Reference Category: Female				
Sex	-0.01771***	0.005864	-0.0205***	0.004064
Reference Category: Others				
house_type1	-0.09274***	0.014184	0.073729***	0.005079
house_type2	-0.12649***	0.018808	0.197454***	0.006257
house_type3	-0.42558***	0.015907	0.111135***	0.013772
Reference category : no dwelling unit				
dwell_unit1	0.531075***	0.133827	0.022296	0.148217
dwell_unit2	0.700818***	0.13359	0.284418*	0.147754
dwell_unit4	0.567135***	0.135165	-0.08681	0.148231
Reference category: not literate				
edu_code2	-0.01786	0.062703	0.066148*	0.03921
edu_code3	-0.21447	0.14635	-0.07222	0.133113
edu_code4	0.137468***	0.051842	-0.12987***	0.041865
edu_code5	0.053809***	0.009624	0.076962***	0.006022
edu_code6	0.090395***	0.010223	0.101826***	0.006418
edu_code7	0.126751***	0.009929	0.142869***	0.006695
edu_code8	0.20103***	0.010401	0.173193***	0.00843
edu_code10	0.264779***	0.01134	0.261249***	0.010254
edu_code11	0.456483***	0.029648	0.293753***	0.037065
edu_code12	0.446689***	0.01235	0.366492***	0.016028
edu_code13	0.515307***	0.018198	0.493387***	0.027116
Intercept	11.76071***	0.134471	6.97855***	0.147107
R-squared	0.3192		0.2734	
Adj. R-squared	0.3184		0.2729	
F value	423.72***		535.66***	
No. of observations	24434		38464	

Notes:

1. Figures in parentheses represent robust standard errors. ***,**, and* indicate statistical significance at 1%, 5%, and 10% levels, respectively.
2. Household type: for rural areas: self-employed in: agriculture -1, non-agriculture - 2; regular wage/salary earning - 3, others-9
   for urban areas: self-employed-1, regular wage/salary earning-2, casual labour-3, others-9
3. ***Dwelling unit code***: *owned-1, hired-2, no dwelling unit-3, others-9*
4. **General educational level::** not literate -01, literate without formal schooling: through EGS/NFEC/AEC - 02, through TLC -03, others- 04; literate with formal schooling: below primary -05, primary -06, middle -07, secondary -08, higher secondary -10, diploma/certificate course -11, graduate -12, postgraduate and above -13.
5. Note: Results are based on STATA 11.2 "ineqrbd" developed by Fiorio and Jenkins (2007).

Table 4: Regression-based decomposition of inequality in Log MPCE and predicted Log MPCE for the Year of 2004-05: Urban

	For Log MPCE					For predicted MPCE				
	100*s_f	S_f	100*m_f/m	I2_f	I2_f/I2(total)	100*s_f	S_f	100*m_f/m	I2_f	I2_f/I2(total)
Residual	60.9871	0.0022	0	5.85E+30	1.66E+33					
Household size	9.1981	0.0003	-4.7964	0.1116	31.6424	23.5771	0.0003	-4.7964	0.1116	81.1076
Dummy if household owns any land	-0.0709	0	0.878	0.132	37.4268	-0.1816	0	0.878	0.132	95.9342
Total land possessed	0.3841	0	0.1073	16.4174	4654.42	0.9845	0	0.1073	16.4174	1.19E+04
Dummy if any member of the household is a regular salary earner	1.6858	0.0001	0.6161	0.6766	191.8321	4.3212	0.0001	0.6161	0.6766	491.7142
Dummy if household possess a ration card	-0.0158	0	0.163	0.122	34.5759	-0.0405	0	0.163	0.122	88.6267
Age	1.1165	0	0.7237	0.2258	64.0122	2.8618	0	0.7237	0.2258	164.0793
No. of free meals have taken from school	0.5458	0	-0.0524	33.2654	9430.8956	1.3991	0	-0.0524	33.2654	2.42E+04
No. of free meals have taken from employer as perquisites or part of wage	0.0494	0	-0.0085	222.7854	6.32E+04	0.1266	0	-0.0085	222.7854	1.62E+05
No. of free meals have taken from other source	0.0883	0	-0.0429	18.6915	5299.1213	0.2264	0	-0.0429	18.6915	1.36E+04
Reference Category: Female										
Sex	-0.0871	0	-0.3019	0.4483	127.1061	-0.2233	0	-0.3019	0.4483	325.8051
Reference Category: Others										
house_type1	0.3933	0	-0.4851	0.5967	169.1812	1.0082	0	-0.4851	0.5967	433.6543
house_type2	-1.4818	-0.0001	-0.5177	0.7517	213.1184	-3.7982	-0.0001	-0.5177	0.7517	546.2763
house_type3	6.4227	0.0002	-0.596	4.732	1341.5317	16.4629	0.0002	-0.596	4.732	3438.685
Reference category : no dwelling unit										
dwell_unit1	-0.5226	0	0.9778	0.1658	47.0191	-1.3396	0	0.9778	0.1658	120.5218
dwell_unit2	1.7471	0.0001	0.6809	1.9629	556.4859	4.4784	0.0001	0.6809	1.9629	1426.414
dwell_unit4	-0.1224	0	0.048	10.5133	2980.5812	-0.3137	0	0.048	10.5133	7639.983
Reference category: not literate										
edu_code2	-0.0307	0	0.0092	75.0844	2.13E+04	-0.0786	0	0.0092	75.0844	5.46E+04

edu_code3	-1.0493	0	0.3129	3.1265	886.3662	-2.6896	0	0.3129	3.1265	2271.981
edu_code4	-0.7338	0	0.3621	2.8168	798.5628	-1.8809	0	0.3621	2.8168	2046.918
edu_code5	0.0342	0	0.5514	2.5921	734.8858	0.0877	0	0.5514	2.5921	1883.698
edu_code6	2.9334	0.0001	0.6937	3.7385	1059.8719	7.5191	0.0001	0.6937	3.7385	2716.72
edu_code7	3.7596	0.0001	0.565	6.0259	1708.3756	9.6367	0.0001	0.565	6.0259	4378.999
edu_code8	1.5891	0.0001	0.1157	47.9826	1.36E+04	4.0733	0.0001	0.1157	47.9826	3.49E+04
edu_code10	9.0602	0.0003	0.7711	6.1913	1755.2649	23.2236	0.0003	0.7711	6.1913	4499.188
edu_code11	4.1195	0.0001	0.268	22.5461	6391.9309	10.5593	0.0001	0.268	22.5461	1.64E+04
Total	100	0.0035	100	0.0035	1	100	0.0014	100	0.0014	1

Note: Reference categories and details of the variables are mentioned in Table 2; Results are based on STATA 11.0 "ineqrbd" developed by Fiorio and Jenkins (2007); proportionate contribution of composite var f to inequality of Total, s_f = rho_f*sd(f)/sd(Total); S_f = s_f*I2(Total); m_f = mean(f); sd(f) = std.dev. of ;. I2_f = 0.5*[sd(f)/m_f]2; NSSO 61st rounds unit level data has been used. More details of various estimates visit http://www.stata.com/meeting/13uk/fiorio_ineqrbd_UKSUG07.pdf

Table 5: Regression-based decomposition of inequality in Log MPCE and predicted Log MPCE for the Year of 2004-05: Rural

	For Log MPCE					For predicted Log MPCE				
	100*s_f	S_f	100*m_f/m	I2_f	I2_f/I2(total)	100*s_f	S_f	100*m_f/m	I2_f	I2_f/I2(total)
Residual	70.5253	0.0019	0	1.62E+29	5.94E+31					
Household size	5.2256	0.0001	-4.1418	0.1052	38.4976	17.7291	0.0001	-4.1418	0.1052	130.6121
Dummy if household owns any land	0.0129	0	-0.064	0.0207	7.5736	0.0438	0	-0.064	0.0207	25.6953
Total land possessed	2.9264	0.0001	0.7246	1.8326	670.4168	9.9285	0.0001	0.7246	1.8326	2274.546
Dummy if any member of the household is a regular salary earner	4.1691	0.0001	0.5075	3.3065	1209.631	14.1446	0.0001	0.5075	3.3065	4103.956
Dummy if household possess a ration card	0.0292	0	1.0899	0.0478	17.4885	0.099	0	1.0899	0.0478	59.3338
Age	1.4941	0	0.9693	0.2752	100.6769	5.069	0	0.9693	0.2752	341.5702
No. of free meals have taken from school	0.5244	0	-0.1008	8.5759	3137.324	1.7792	0	-0.1008	8.5759	1.06E+04
No. of free meals have taken from employer as	0.0005	0	-0.0002	168.042	6.15E+04	0.0017	0	-0.0002	168.042	2.09E+05

perquisites or part of wage										
No. of free meals have taken from other source	0	0	0.0003	25.0489	9163.601	0.0001	0	0.0003	25.0489	3.11E+04
Reference Category: Female										
Sex	-0.0881	0	-0.2608	0.4652	170.1838	-0.299	0	-0.2608	0.4652	577.3884
Reference Category: Others										
house_type1	0.1847	0	0.1007	2.6851	982.2925	0.6267	0	0.1007	2.6851	3332.658
house_type2	3.4955	0.0001	-0.5497	2.483	908.3511	11.8594	0.0001	-0.5497	2.483	3081.794
house_type3	1.5742	0	-0.3659	3.0301	1108.503	5.3409	0	-0.3659	3.0301	3760.856
Reference category : no dwelling unit										
dwell_unit1	-0.4461	0	1.5962	0.0228	8.3514	-1.5135	0	1.5962	0.0228	28.3339
dwell_unit2	1.5144	0	0.1423	18.7855	6872.269	5.138	0	0.1423	18.7855	2.33E+04
dwell_unit4	-0.0074	0	0.0238	28.4291	1.04E+04	-0.0251	0	0.0238	28.4291	3.53E+04
Reference category: not literate										
edu_code2	-0.0015	0	0.0015	87.737	3.21E+04	-0.0053	0	0.0015	87.737	1.09E+05
edu_code3	-0.4118	0	0.2405	2.6703	976.8724	-1.3972	0	0.2405	2.6703	3314.269
edu_code4	0.4252	0	0.3497	2.9142	1066.093	1.4427	0	0.3497	2.9142	3616.972
edu_code5	1.3908	0	0.3729	3.7727	1380.17	4.7185	0	0.3729	3.7727	4682.549
edu_code6	2.3636	0.0001	0.2679	9.0276	3302.565	8.0191	0.0001	0.2679	9.0276	1.12E+04
edu_code7	2.0357	0.0001	0.1747	17.6226	6446.845	6.9067	0.0001	0.1747	17.6226	2.19E+04
edu_code8	0.3108	0	0.0179	214.9247	7.86E+04	1.0544	0	0.0179	214.9247	2.67E+05
edu_code10	1.2457	0	0.0845	40.4914	1.48E+04	4.2264	0	0.0845	40.4914	5.03E+04
edu_code11	1.5068	0	0.0538	116.6973	4.27E+04	5.1121	0	0.0538	116.6973	1.45E+05
Total	100	0.0027	100	0.0027	1	100	0.0008	100	0.0008	1

Note: Reference categories and details of the variables are mentioned in Table 2; Results are based on STATA 11.0 "ineqrbd" developed by Fiorio and Jenkins (2007); proportionate contribution of composite var f to inequality of Total, s_f = rho_f*sd(f)/sd(Total); S_f = s_f*I2(Total); m_f = mean(f); sd(f) = std.dev. of ;. I2_f = 0.5*[sd(f)/m_f]2; NSSO 61st rounds unit level data has been used. More details of various estimates visit http://www.stata.com/meeting/13uk/fiorio_ineqrbd_UKSUG07.pdf

Table 6: Regression-based decomposition of inequality in Log MPCE and predicted Log MPCE for the Year of 2011-12: Urban

	For Log MPCE					For predicted Log MPCE				
	100*s_f	S_f	100*m_f/m	I2_f	I2_f/I2(total)	100*s_f	S_f	100*m_f/m	I2_f	I2_f/I2(total)
Residual	68.085	0.001	0.000	5.63E+28	5.66E+31					
Household size	9.634	0.000	-2.624	0.1	110.21	30.1864	0.000	-2.6238	0.1097	345.3253
Dummy if household owns any land	-0.481	0.000	0.510	0.1	118.90	-1.5064	0.000	0.51	0.1184	372.5593
Total land possessed	0.525	0.000	0.067	16.2	1.62E+04	1.6438	0.000	0.0672	1.62E+01	5.09E+04
Dummy if any member of the household is a regular salary earner	2.527	0.000	0.470	0.63	631.7715	7.9171	0.000	0.4702	0.629	1979.541
Dummy if household possess a ration card	-0.223	0.000	0.344	0.15	155.554	-0.6989	0.000	0.3437	0.1549	487.4003
Age	0.263	0.000	0.111	0.26	256.6625	0.8250	0.000	0.1112	0.2555	804.2053
No. of free meals have taken from school	0.770	0.000	-0.040	25.89	2.60E+04	2.4126	0.000	-0.0398	2.59E+01	8.15E+04
No. of free meals have taken from employer as perquisites or part of wage	0.018	0.000	0.001	174.94	1.76E+05	0.0572	0.000	0.0013	1.75E+02	5.51E+05
No. of free meals have taken from other source	1.021	0.000	0.078	13.479	1.35E+04	3.1992	0.0000	0.078	1.35E+01	4.24E+04
Reference Category: Female										
Sex	-0.059	0.000	-0.078	0.43	431.8276	-0.1837	0.000	-0.0782	0.4299	1353.053
Reference Category: Others										
house_type1	0.5156	0.000	-0.329	0.656	659.0	1.6156	0.0000	-0.329	0.6561	2064.788
house_type2	-2.4757	0.000	-0.412	0.759	761.9	-7.7572	0.0000	-0.412	0.7586	2387.375
house_type3	7.8852	0.000	-0.423	3.632	3648.5	24.7068	0.0001	-0.423	3.63E+00	1.14E+04
Reference category : no dwelling unit										
dwell_unit1	-5.8726	0.000	3.392	0.143	143.2	-18.4006	-0.0001	3.392	0.1425	448.5483
dwell_unit2	8.2084	0.000	1.163	1.972	1980.7	25.7194	0.0001	1.163	1.9719	6206.17
dwell_unit4	-0.3189	0.000	0.089	25.731	2.58E+04	-0.9992	0.0000	0.089	2.57E+01	8.10E+04
Reference category: not literate										
edu_code2	0.003	0.000	0.000	234.79	2.36E+05	0.0105	0.000	-0.0003	2.35E+02	7.39E+05
edu_code3	0.009	0.000	-0.001	1295.00	1.30E+06	0.0296	0.000	-0.0007	1.29E+03	4.08E+06
edu_code4	-0.016	0.000	0.004	160.02	1.61E+05	-0.0484	0.000	0.0035	1.60E+02	5.04E+05
edu_code5	-0.392	0.000	0.067	2.82	2828.09	-1.2289	0.000	0.0666	2.8155	8861.317
edu_code6	-0.236	0.000	0.092	3.55	3564.00	-0.7397	0.000	0.0916	3.55E+00	1.12E+04
edu_code7	0.031	0.000	0.142	3.15	3166.96	0.0963	0.000	0.1424	3.1529	9923.09
edu_code8	1.059	0.000	0.208	3.48	3491.42	3.3180	0.000	0.2075	3.48E+00	1.09E+04
edu_code10	1.552	0.000	0.206	4.79	4809.37	4.8629	0.000	0.2055	4.79E+00	1.51E+04

edu_code11	0.696	0.000	0.038	48.91	4.91E+04	2.1805	0.000	0.0379	4.89E+01	1.54E+05
edu_code12	4.660	0.000	0.289	5.85	5875.3191	14.5996	0.000	0.2887	5.85E+00	1.84E+04
edu_code13	2.612	0.000	0.125	16.36	1.64E+04	8.1825	0.000	0.1254	1.64E+01	5.15E+04
Total	100	0.001	100	0.001	1	100	0.0003	100	0.0003	1

Note: Reference categories are mentioned in Table 3, Results are based on STATA 11.0 "ineqrbd" developed by Fiorio and Jenkins (2007); proportionate contribution of composite var f to inequality of Total, s_f = rho_f*sd(f)/sd(Total); S_f = s_f*I2(Total); m_f = mean(f); sd(f) = std.dev. of ;. I2_f = 0.5*[sd(f)/m_f]2; NSSO 61st rounds unit level data has been used. More details of various estimates visit http://www.stata.com/meeting/13uk/fiorio_ineqrbd_UKSUG07.pdf

Table 7: Regression-based decomposition of inequality in Log MPCE and predicted Log MPCE for the Year of 2011-12: Rural

	For log MPCE					For Predicted MPCE				
	100*s_f	S_f	100*m_f/m	I2_f	I2_f/I2(total)	100*s_f	S_f	100*m_f/m	I2_f	I2_f/I2(total)
Residual	72.6594	0.0015	0	3.03E+29	1.46E+32					
Household size	4.8634	0.0001	-3.8138	0.0889	42.8397	17.7883	0.0001	-3.8138	0.0889	156.6889
Dummy if household owns any land	0.0944	0	-0.5886	0.0137	6.6028	0.3451	0	-0.5886	0.0137	24.1504
Total land possessed	6.5054	0.0001	0.9734	1.5911	766.6662	23.7938	0.0001	0.9734	1.5911	2804.132
Dummy if any member of the household is a regular salary earner	3.6309	0.0001	0.3717	3.7732	1818.042	13.2801	0.0001	0.3717	3.7732	6649.607
Dummy if household possess a ration card	0.5223	0	1.4572	0.0663	31.9572	1.9102	0	1.4572	0.0663	116.8857
Age	1.3416	0	0.6892	0.3117	150.1865	4.9071	0	0.6892	0.3117	549.3169
No. of free meals have taken from school	0.4401	0	-0.0938	4.7772	2301.81	1.6095	0	-0.0938	4.7772	8419.021
No. of free meals have taken from employer as perquisites or part of wage	-0.0002	0	-0.0003	296.3723	1.43E+05	-0.0007	0	-0.0003	296.3723	5.22E+05
No. of free meals have taken from other source	0.4645	0	0.053	22.322	1.08E+04	1.6988	0	0.053	22.322	3.93E+04
Reference Category: Female										
Sex	-0.0312	0	-0.1511	0.4587	220.9937	-0.1143	0	-0.1511	0.4587	808.2988
Reference Category: Others										
house_type1	0.3831	0	0.4637	0.6232	300.295	1.4011	0	0.4637	0.6232	1098.349
house_type2	1.1139	0	0.4342	2.7126	1307.008	4.074	0	0.4342	2.7126	4780.468
house_type3	1.3803	0	0.136	5.2741	2541.245	5.0486	0	0.136	5.2741	9294.77
Reference category : no dwelling unit										
dwell_unit1	-0.0885	0	0.3032	0.0195	9.3746	-0.3236	0	0.3032	0.0195	34.2883
dwell_unit2	1.3136	0	0.1044	18.7498	9034.256	4.8047	0	0.1044	18.7498	3.30E+04

dwell_unit4	0.0552	0	-0.0139	43.7616	2.11E+04	0.2018	0	-0.0139	43.7616	7.71E+04
Reference category: not literate										
edu_code2	0.0005	0	0.0024	193.4623	9.32E+04	0.0018	0	0.0024	193.4623	3.41E+05
edu_code3	0.0007	0	-0.0002	2251.582	1.08E+06	0.0025	0	-0.0002	2251.582	3.97E+06
edu_code4	0.0443	0	-0.0042	218.9915	1.06E+05	0.162	0	-0.0042	218.9915	3.86E+05
edu_code5	-0.3404	0	0.2018	2.1945	1057.39	-1.245	0	0.2018	2.1945	3867.474
edu_code6	0.0926	0	0.1909	3.2675	1574.398	0.3387	0	0.1909	3.2675	5758.465
edu_code7	0.7092	0	0.2306	3.8773	1868.22	2.5941	0	0.2306	3.8773	6833.139
edu_code8	0.8878	0	0.1619	7.0595	3401.496	3.2472	0	0.1619	7.0595	1.24E+04
edu_code10	1.5198	0	0.1572	11.2431	5417.282	5.5586	0	0.1572	11.2431	1.98E+04
edu_code11	0.1639	0	0.0121	171.2493	8.25E+04	0.5996	0	0.0121	171.2493	3.02E+05
edu_code12	1.4208	0	0.0856	29.7566	1.43E+04	5.1966	0	0.0856	29.7566	5.24E+04
edu_code13	0.8528	0	0.0385	89.9451	4.33E+04	3.1192	0	0.0385	89.9451	1.59E+05
Total	100	0.0021	100	0.0021	1	100	0.0006	100	0.0006	1

Note: Reference categories are mentioned in Table 3; Results are based on STATA 11.0 "ineqrbd" developed by Fiorio and Jenkins (2007); proportionate contribution of composite var f to inequality of Total, s_f = rho_f*sd(f)/sd(Total); S_f = s_f*I2(Total); m_f = mean(f); sd(f) = std.dev. of ;. I2_f = 0.5*[sd(f)/m_f]2; NSSO 61st rounds unit level data has been used. More details of various estimates visit http://www.stata.com/meeting/13uk/fiorio_ineqrbd_UKSUG07.pdf

Appendix 1: Summary statistics for Log MPCE in 2004-05

	Urban				Rural			
Variable	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max
Y	6.836739	0.574227	4.209457	9.869025	6.297342	0.465622	4.483116	9.852103
resid	1.32E-16	0.448438	-2.76616	2.804241	6.87E-16	0.391026	-2.02234	3.096326
b1xZ1	-0.32792	0.154931	-1.48166	-0.05699	-0.26082	0.119657	-1.27837	-0.04124
b2xZ2	-0.03316	0.036229	-0.07274	0	0.006339	0.01469	0	0.04038
b3xZ3	-0.0354	0.043402	-0.08861	0	-0.03462	0.077148	-0.20654	0
b4xZ4	-0.04075	0.125354	-0.42637	0	-0.02304	0.056731	-0.1627	0
b5xZ5	0.060025	0.030843	0	0.075873	-0.00403	0.000821	-0.0042	0
b6xZ6	0.007338	0.042048	0	1.980246	0.045633	0.087363	0	1.63304
b7xZ7	0.066851	0.038502	0	0.089024	0.100517	0.021478	0	0.105106
b8xZ8	0.046551	0.092233	0	0.229291	0.008958	0.05491	0	0.345524
b9xZ9	0.003284	0.015059	0	0.072334	0.001497	0.011291	0	0.086636
b10xZ10	0.042124	0.049003	0	0.099128	0.031958	0.082182	0	0.243293
b11xZ11	0.011143	0.005503	0	0.013861	0.068635	0.021223	0	0.075197
b12xZ12	-0.02064	0.019542	-0.03914	0	-0.01642	0.015843	-0.03171	0
b13xZ13	0.04948	0.033251	0	0.182644	0.061041	0.045286	0	0.263041
b14xZ14	0.00063	0.007724	0	0.09528	0.000092	0.001218	0	0.01623
b15xZ15	0.021395	0.053499	0	0.15517	0.015143	0.034994	0	0.096012
b16xZ16	0.024754	0.058755	0	0.164205	0.022023	0.053169	0	0.150382
b17xZ17	0.0377	0.085839	0	0.233141	0.023481	0.0645	0	0.200652
b18xZ18	0.047425	0.12968	0	0.40201	0.016869	0.07168	0	0.321445
b19xZ19	0.038629	0.134102	0	0.504159	0.011004	0.065327	0	0.398827
b20xZ20	0.007907	0.077461	0	0.766711	0.001126	0.023345	0	0.485119
b21xZ21	0.052718	0.185511	0	0.705491	0.005324	0.047908	0	0.436443
b22xZ22	0.018326	0.123059	0	0.844654	0.003391	0.051803	0	0.794781
b23xZ23	-0.00358	0.02922	-0.64742	0	-0.00635	0.026285	-0.46049	0
b24xZ24	-0.00058	0.012229	-0.58441	0	-1.5E-05	0.000267	-0.01193	0
b25xZ25	-0.00293	0.01792	-0.29602	0	1.88E-05	0.000133	0	0.002381

Note: Results are based on STATA 11.0 "ineqrbd" developed by Fiorio and Jenkins (2007), calculated on the basis of coefficient from regression coefficient given in Table 4, 5 and exogenous variables used in regression.

Appendix 2: Summary statistics for predicted Log MPCE in 2004-05

	Urban				Rural			
Variable	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max
Yhat	6.836739	0.358664	5.198643	9.054083	6.297342	0.252789	5.353115	8.107771
b1xZ1	-0.32792	0.154931	-1.481659	-0.05699	-0.26082	0.119657	-1.27837	-0.04124
b2xZ2	-0.03316	0.036229	-0.07274	0	0.006339	0.01469	0	0.04038
b3xZ3	-0.0354	0.043402	-0.088612	0	-0.03462	0.077148	-0.20654	0
b4xZ4	-0.04075	0.125354	-0.426368	0	-0.02304	0.056731	-0.1627	0
b5xZ5	0.060025	0.030843	0	0.075873	-0.00403	0.000821	-0.0042	0
b6xZ6	0.007338	0.042048	0	1.980246	0.045633	0.087363	0	1.63304
b7xZ7	0.066851	0.038502	0	0.089024	0.100517	0.021478	0	0.105106
b8xZ8	0.046551	0.092233	0	0.229291	0.008958	0.05491	0	0.345524
b9xZ9	0.003284	0.015059	0	0.072334	0.001497	0.011291	0	0.086636
b10xZ10	0.042124	0.049003	0	0.099128	0.031958	0.082182	0	0.243293
b11xZ11	0.011143	0.005503	0	0.013861	0.068635	0.021223	0	0.075197
b12xZ12	-0.02064	0.019542	-0.039141	0	-0.01642	0.015843	-0.03171	0
b13xZ13	0.04948	0.033251	0	0.182644	0.061041	0.045286	0	0.263041
b14xZ14	0.00063	0.007724	0	0.09528	0.000092	0.001218	0	0.01623
b15xZ15	0.021395	0.053499	0	0.15517	0.015143	0.034994	0	0.096012
b16xZ16	0.024754	0.058755	0	0.164205	0.022023	0.053169	0	0.150382
b17xZ17	0.0377	0.085839	0	0.233141	0.023481	0.0645	0	0.200652
b18xZ18	0.047425	0.12968	0	0.40201	0.016869	0.07168	0	0.321445
b19xZ19	0.038629	0.134102	0	0.504159	0.011004	0.065327	0	0.398827
b20xZ20	0.007907	0.077461	0	0.766711	0.001126	0.023345	0	0.485119
b21xZ21	0.052718	0.185511	0	0.705491	0.005324	0.047908	0	0.436443
b22xZ22	0.018326	0.123059	0	0.844654	0.003391	0.051803	0	0.794781
b23xZ23	-0.00358	0.02922	-0.647423	0	-0.00635	0.026285	-0.46049	0
b24xZ24	-0.00058	0.012229	-0.58441	0	-1.5E-05	0.000267	-0.01193	0
b25xZ25	-0.00293	0.01792	-0.296016	0	1.88E-05	0.000133	0	0.002381

Note: Results are based on STATA 11.0 "ineqrbd" developed by Fiorio and Jenkins (2007), calculated on the basis of coefficient from regression coefficient given in Table 4, 5 and exogenous variables used in regression.

Appendix 3: Summary statistics for Log MPCE in 2011-12

	Urban				Rural			
Variable	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max
Y	12.18564	0.543748	9.920738	14.87423	7.077725	0.455995	3.786686	10.62958
resid	-1.34E-15	0.448666	-1.97004	2.876975	4.99E-16	0.388693	-4.81178	2.999443
b1xZ1	-0.31972	0.149775	-1.55869	-0.05773	-0.26993	0.113825	-1.78154	-0.04568
b2xZ2	-0.04011	0.045946	-0.09274	0	0.032821	0.036643	0	0.073729
b3xZ3	-0.05025	0.061898	-0.12649	0	0.030732	0.071581	0	0.197454
b4xZ4	-0.0515	0.138797	-0.42558	0	0.009624	0.031256	0	0.111135
b5xZ5	0.062147	0.030239	0	0.076859	-0.04166	0.006897	-0.0428	0
b6xZ6	0.008184	0.046535	0	1.91609	0.068897	0.122906	0	6.964272
b7xZ7	0.413279	0.220646	0	0.531075	0.021461	0.004233	0	0.022296
b8xZ8	0.141761	0.281524	0	0.700818	0.007388	0.04524	0	0.284418
b9xZ9	0.010811	0.077553	0	0.567135	-0.00098	0.009175	-0.08681	0
b10xZ10	0.057302	0.064268	0	0.12938	0.026311	0.072277	0	0.224856
b11xZ11	0.041887	0.023312	0	0.05486	0.103137	0.037564	0	0.116818
b12xZ12	-0.00952	0.008831	-0.01771	0	-0.01069	0.01024	-0.0205	0
b13xZ13	0.013555	0.00969	0	0.054942	0.048781	0.038515	0	0.235287
b14xZ14	-3.8E-05	0.000823	-0.01786	0	0.000171	0.003354	0	0.066148
b15xZ15	-8.3E-05	0.004213	-0.21447	0	-1.6E-05	0.001076	-0.07222	0
b16xZ16	0.000428	0.007661	0	0.137468	-0.0003	0.006192	-0.12987	0
b17xZ17	0.008115	0.019257	0	0.053809	0.014282	0.02992	0	0.076962
b18xZ18	0.011165	0.029743	0	0.090395	0.013514	0.034547	0	0.101826
b19xZ19	0.01735	0.043568	0	0.126751	0.01632	0.045446	0	0.142869
b20xZ20	0.025282	0.066659	0	0.20103	0.011456	0.043045	0	0.173193
b21xZ21	0.025037	0.077476	0	0.264779	0.011124	0.052749	0	0.261249
b22xZ22	0.00462	0.04569	0	0.456483	0.000855	0.015827	0	0.293753
b23xZ23	0.035178	0.120319	0	0.446689	0.006057	0.046723	0	0.366492
b24xZ24	0.015282	0.087417	0	0.515307	0.002728	0.036584	0	0.493387
b25xZ25	-0.00485	0.034876	-0.64572	0	-0.00664	0.020513	-0.30685	0
b26xZ26	0.000153	0.00286	0	0.103402	-2.1E-05	0.000518	-0.03891	0
b27xZ27	0.009475	0.049194	0	0.701814	0.003753	0.025073	0	0.484536

Note: Results are based on STATA 11.0 "ineqrbd" developed by Fiorio and Jenkins (2007), calculated on the basis of coefficient from regression coefficient given in Table 4, 5 and exogenous variables used in regression.

Appendix 4: Summary statistics for predicted Log MPCE in 2011-12

	Urban				Rural			
Variable	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max
Yhat	12.18564	0.307182	10.77229	14.01732	7.077725	0.238432	5.468053	13.7726
b1xZ1	-0.31972	0.149775	-1.55869	-0.05773	-0.26993	0.113825	-1.78154	-0.04568
b2xZ2	-0.04011	0.045946	-0.09274	0	0.032821	0.036643	0	0.073729
b3xZ3	-0.05025	0.061898	-0.12649	0	0.030732	0.071581	0	0.197454
b4xZ4	-0.0515	0.138797	-0.42558	0	0.009624	0.031256	0	0.111135
b5xZ5	0.062147	0.030239	0	0.076859	-0.04166	0.006897	-0.0428	0
b6xZ6	0.008184	0.046535	0	1.91609	0.068897	0.122906	0	6.964272
b7xZ7	0.413279	0.220646	0	0.531075	0.021461	0.004233	0	0.022296
b8xZ8	0.141761	0.281524	0	0.700818	0.007388	0.04524	0	0.284418
b9xZ9	0.010811	0.077553	0	0.567135	-0.00098	0.009175	-0.08681	0
b10xZ10	0.057302	0.064268	0	0.12938	0.026311	0.072277	0	0.224856
b11xZ11	0.041887	0.023312	0	0.05486	0.103137	0.037564	0	0.116818
b12xZ12	-0.00952	0.008831	-0.01771	0	-0.01069	0.01024	-0.0205	0
b13xZ13	0.013555	0.00969	0	0.054942	0.048781	0.038515	0	0.235287
b14xZ14	-3.80E-05	0.000823	-0.01786	0	0.000171	0.003354	0	0.066148
b15xZ15	-8.30E-05	0.004213	-0.21447	0	-1.60E-05	0.001076	-0.07222	0
b16xZ16	0.000428	0.007661	0	0.137468	-0.0003	0.006192	-0.12987	0
b17xZ17	0.008115	0.019257	0	0.053809	0.014282	0.02992	0	0.076962
b18xZ18	0.011165	0.029743	0	0.090395	0.013514	0.034547	0	0.101826
b19xZ19	0.01735	0.043568	0	0.126751	0.01632	0.045446	0	0.142869
b20xZ20	0.025282	0.066659	0	0.20103	0.011456	0.043045	0	0.173193
b21xZ21	0.025037	0.077476	0	0.264779	0.011124	0.052749	0	0.261249
b22xZ22	0.00462	0.04569	0	0.456483	0.000855	0.015827	0	0.293753
b23xZ23	0.035178	0.120319	0	0.446689	0.006057	0.046723	0	0.366492
b24xZ24	0.015282	0.087417	0	0.515307	0.002728	0.036584	0	0.493387
b25xZ25	-0.00485	0.034876	-0.64572	0	-0.00664	0.020513	-0.30685	0
b26xZ26	0.000153	0.00286	0	0.103402	-2.10E-05	0.000518	-0.03891	0
b27xZ27	0.009475	0.049194	0	0.701814	0.003753	0.025073	0	0.484536

Note: Results are based on STATA 11.0 "ineqrbd" developed by Fiorio and Jenkins (2007), calculated on the basis of coefficient from regression coefficient given in Table 6, 7 and exogenous variables used in regression.

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