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Are Urban-Rural Welfare Differences Growing in India?

Mehtabul Azam
Oklahoma State University & IZA

Department of Economics
Oklahoma State University
Stillwater, Oklahoma

339 BUS, Stillwater, OK 74078, Ph 405-744-5110, Fax 405-744-5180

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Mehtabul Azam[1]

Oklahoma State University & IZA

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Abstract

Using data from the large scale consumption expenditure surveys collected by Indian National Sample Survey Organization, we examine the urban-rural welfare gap in India in 1983, 1993-94, 2004-05, and 2011-12 across the entire distribution. Our main measure of welfare is spatially adjusted per capita consumption expenditure. We find that the urban-rural gap increased considerably between 1993-94 and 2004-05, and increase is larger at the higher quantiles. Using the unconditional quantile regression decomposition, we find that majority of the gap is explained by the urban advantage in endowments in all four years. The contribution of the unexplained effect (differences in rewards) in urban advantage was negative in 1983 and 1993-94 across the entire distribution. We find that difference in educational distribution across urban and rural areas is the most important driver of the observed gap. We find similar patterns using income data for 2004-05 and 2011-12 from India Human Development Surveys.

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[1]Department of Economics, Oklahoma State University, Stillwater, Oklahoma 74078. Email: mazam@okstate.edu

1 Introduction

Using data from the large scale consumption expenditure surveys collected by National Sample Survey Organization (NSSO), we examine the urban-rural welfare gap in India in 1983, 1993-94, 2004-05, and 2011-12 across the entire distribution. Since some of the observed differences across urban and rural areas are mere reflections of price differences across urban and rural areas and across states, we account for spatial differences across states and across urban and rural areas.[1] Using the unconditional quantile regression decomposition, we examine how much of the observed urban-rural welfare gap is accounted for by differences in distribution of productive characteristics (e.g., education, land) across the entire distribution. We further decompose the contribution of different characteristics to the gap observed.

Urban-rural welfare gap in India is important as there is a growing concern that the urban India has benefited disproportionately from the high economic growth witnessed since the introduction of market liberalization in 1991. This is partially driven by a slow growth of urban share in total population and a sharp decline of agriculture share in total GDP. The percentage of Indian population residing in urban areas increased slowly from 23.3 percent in 1981 to 25.7 in 1991 to 27.8 in 2001 to 31.2 percent in 2011 (Census of India).[2] At the same time, the share of agriculture in GDP, which has been the main source of livelihood in rural areas, decreased from 34 percent in 1981 to 18 percent in 2011.

An increasing urban–rural welfare gap will accentuate the dichotomy between the two sectors. It potentially leads to migration to the existing urban centers leading to pressure on the infrastructure of the existing urban centers, and growing slums in large urban centers.

[1] Ravallion, Chen, and Sangraula (2007) report that urban poverty lines are frequently 40–50 percent higher than rural poverty lines, with the difference reaching as high as 79 percent. For India, the all India urban poverty line was 23 percent higher than the all India rural poverty line in 2011-12, while 37 percent higher in 1993-94. In addition to urban-rural differences, there is a considerable variation across states. For example, the 2011 rural poverty line for the state of Punjab was 37 percent higher than the 2011 rural poverty line for the state of Uttar Pradesh. If the higher cost of basic needs in urban areas is ignored then it will lead to overestimation of the urban-rural welfare gap.

[2] The urban population shares of China and India were about the same (about 25 percent) in 1988, but the share exceeds 50% in 2011 for China (source: World Development Indicators).

Moreover, it accentuates the already pervasive believe that the growth has been urban biased and may undermine popular support for further reform.[3]

Studying the evolution of urban-rural welfare gap during the past three decades (1983-2012) is quite interesting as considerable economic growth and policy changes took place during this period. While the yearly average GDP growth was 5.8 percent during 1980-1990 and 5.6 percent during 1991-2004 (Kohli, 2006), it accelerated to 8.2 percent during 2003-2011 (Government of India, 2017). In addition to the impressive growth, this period also witnessed considerable policy changes which may have altered the nature of the urban-rural welfare gap. In 1991, India introduced significant set of reforms that completely changed the direction of economic policies.[4] India moved away from a state-led closed economy framework in favor of greater integration with the world economy, lesser controls on private business activity especially in manufacturing, and substantially lower entry barriers to prospective entrants, whether domestic or foreign (Kotwal, Ramaswami and Wadhwa, 2011). Prior to the introduction of this new economic regime in 1991, there was widespread apprehension that liberalization and increasing reliance on market forces would lead to increase in regional, rural-urban and vertical inequalities in India (Pal and Ghosh, 2007). The period 2004–05 to 2009–10 witnessed an increase in social-sector spending both by the state and central governments. The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is one such example. According to the NSS 66th and 61st rounds of data, there was an 8-fold increase in public work participation in 2009-10 from 2004-05 (Himanshu and Sen, 2004).[5]

Importantly, the economic growth witnessed during the last three decades has also been associated with an increasing inequality. Using national accounts and NSS data up to 1999, Chaudhuri and Ravallion (2007) examine the patterns of economic growth in India and China

[3]The urban-rural dichotomy also has been witnessed in the west in recent political events. For example, in 2016 London and many other cities in UK voted to remain in the EU, while Hillary Clinton won most of urban America in 2016 presidential election in the US (source: http://www.bbc.com/news/business-38642302).

[4]For an overview of India's reform agenda since the early 1990s, see Kotwal, Ramaswami and Wadhwa (2011).

[5]The central government launched MGNREGA in 2006 with the objective of "enhancing livelihood security in rural areas by providing at least 100 days of guaranteed wage employment in a financial year, to every household whose adult members volunteer to do unskilled manual work."

and show uneven sectoral growths, with primary sector growth rates lagging behind growth rates in the secondary and tertiary sectors in both China and India, and with relatively slower growth in rural incomes than urban incomes. A number of other studies use the consumption rounds collected by NSSO to document poverty and inequality in India (Deaton and Dreze, 2002; Sen and Himanshu, 2003; Himanshu and Sen, 2004). Deaton and Dreze (2002) find strong evidence of divergence in per capita consumption across states during the 1990s. Their estimates of state-wise per capita expenditure reveal increasing urban-rural inequality in per capita expenditure at all-India level.

Although, a considerable amount of literature exists that document the poverty and inequality in India, comparatively less attention has been paid to the urban-rural welfare gap.[6] Internationally, urban-rural dichotomy has attracted attention since the seminal work of Lewis (1954) that argued that workers in rural areas, in deciding to migrate to urban areas, compared their average product in rural family output (which they shared) with their marginal product in urban output, producing a situation with excess and surplus rural labor. In addition to studies that focus on labor market dichotomy, there also exists an empirical literature studying urban-rural welfare gaps in different countries that relate urban-rural welfare differences to individual and household characteristics. For example, Knight and Song (1999), Yang and Zhou (1999), and Sicular et al. (2007) study the urban-rural welfare gap in China; Nguyen et al. (2007) and Le and Booth (2014) study urban-rural welfare gap in Vietnam; Fang and Sakellariou (2017) examine urban-rural welfare gap in Thailand; and Agyire-Tettey et al. (2017) examine urban-rural welfare gap in Ghana. Young (2013) uses Demographic Health Survey data from 65 countries and find that the urban-rural gap in living standards is a major source of inequality, accounting for 40% of average inequality and much of the cross-country variation in levels of inequality. He also finds that countries

[6]The Indian Finance Minister Arun Jaitley acknowledged a considerable gap in a written reply in 2016. According to the reply the per capita net value added for 2011-12 at current basic prices (base year 2011-12) was Rs 1,01,313 for the urban areas and Rs 40,772 for the rural areas (source: https://timesofindia.indiatimes.com/city/delhi/Big-gap-in-per-capita-income-in-urban-and-rural-areas/articleshow/52207415.cms).

with unusually high levels of inequality are those where the urban-rural gap is unusually large.

For the Indian context, using six rounds of the large scale Employment and Unemployment Surveys collected by NSSO between 1983 and 2009-10, Hnatkovskay and Lahiri (2016) analyze the patterns of educational attainments, occupational choices, and wage earnings of rural and urban full-time workers.[7] They find evidence of a significant convergence between rural and urban workers in terms of their educational attainments, occupation distribution, and wages.[8] They also find that at most 40 percent of the wage convergence between urban and rural workers can be explained by individual characteristics of the workers. Munshi and Rosenzweig (2016) report that the urban-rural wage gap, corrected for cost-of-living differences has remained large for decades. At the same time, the internal migration is very low in India, both in absolute terms as well as relative to other countries of comparable size and level of economic development. They explain the low migration with the possible loss of caste based rural insurance networks and the absence of formal insurance. The closest to our study is Chamarbagwala (2010) who looks at the urban-rural welfare gap in India in 1993-94 and 2004 using the NSS consumption rounds. She uses a quantile regression based decomposition proposed by Machado and Mata (2005) to bifurcate the total difference into aggregated composition and returns effects. She does not further disaggregate the composition and returns effect into contribution of different characteristics. She reports that the

[7]NSSO regularly collects two type of surveys. The Consumer Expenditure Survey (referred as Schedule 1.0) and Employment and Unemployment Survey (referred as Schedule 10). Employment and Unemployment Surveys are labor force surveys, while Consumer Expenditure Surveys capture detailed consumption expenditure. The entire poverty and inequality literature in India is based on Consumer Expenditure Surveys, while Employment and Unemployment Surveys are used to examine labor market aspects including wage inequality.

[8]Hnatkovskay and Lahiri (2016) replace the levels of education of full-time workers with imputed years of education, and find a decline in ratio of urban and rural average years of education for full-time workers. They also use five education categories in an ordered probit model with only rural dummy as explanatory variable. They find that for secondary and above education (the top education category in their re-categorization) where rural workers are under-represented, the rural-dummy became more negative over time suggesting some further divergence at the top end of the education distribution. They also finds that unadjusted urban-rural wage gap declined from 51 log points in 1983 to 27 log points in 2009-10. However, their wage workers sample contains between 57,440 and 67,322 workers in different years (refer to Table 5 of Hnatkovskay and Lahiri, 2016). In contrast, the number of individuals in 16-65 age group in NSS Employment and Unemployment Surveys are between 298,758 and 373,270 in different years.

urban–rural welfare gap was fairly convex across the welfare distribution in 1993–1994, however, it became more concave in 2004, with the gap narrowing for the lowest and highest quintiles and widening for the middle three quintiles.

This paper contributes to the existing literature in the following ways. First, we document the urban-rural gap in welfare, as measured by spatially price adjusted per capita consumption expenditure, across the entire distribution at four points of time roughly separated by a decade. Therefore, we cover both pre- and post-economic reform periods of India. Thus, we provide insights into the changing nature of urban-rural welfare gap across the entire distribution and contrast the trends from pre-economic reforms India to and post-economic reforms India. Second, we assess whether the determinants of household consumption expenditures account for the observed urban-rural gap at the mean and at the selected quantiles. Third, using the unconditional quantile regression decomposition technique, based on the re-centered influence functions proposed by Firpo, Fortin, and Lemieux (2009), we decompose urban-rural welfare gaps at different quantiles. Specifically, we seek to answer the question what fraction of the differences in urban-rural welfare at each quantile are attributable to differences in household characteristics or differences in returns to those characteristics. Fourth, we further decompose the aggregated contribution of household characteristics or returns into contribution of individual household characteristics. Finally, we compare the results of urban-rural welfare gaps from the NSS data with the results from another data source, India Human Development Survey (IHDS) for 2004-05 and 2011-12. Unlike the NSS surveys, IHDS surveys collected data both on household consumption expenditures and incomes. Thus, we estimate urban-rural welfare gaps in 2004-05 and 2011-12 using both per capita consumption expenditure and per capita household income as the measures of welfare, to provide further insights into the robustness of our results to alternative measure of welfare.

The main findings of the paper are following. First, urban-rural welfare gap in India, as measured by the gap in the spatially adjusted monthly per capita consumption expenditure,

has been increasing over time and this increase is observed across the entire distribution. A significant increase in welfare gap is witnessed between 1993-94 and 2004-05. Moreover, the gap is monotonically increasing with the quantiles: higher gap is observed at the higher quantiles. The gaps are considerably larger at the higher quantiles in 2004-5 and 2011-12 compared to the gaps witnessed at the same quantiles in 1983 and 1993-94. This suggests that while the gap has been widening across the entire distribution, it widened more at the higher quantiles. Second, we find that majority of the urban-rural welfare gap, in each of the four years, is explained by differences in households' endowments. The contributions of returns were negative in 1983 and 1993-94 suggesting that the gaps would have been larger in those two years if urban returns were not lower than the rural returns. This is true across the entire distribution. The returns in urban areas, however, catches up with returns in rural areas in 2004 and the effect of returns is positive but small at the mean. In 2011, the returns explain about 24 percent of the total gap at the mean. Third, looking at the household characteristics, we find that difference in educational distributions across urban and rural areas is the most important driver of the endowment effects in each year. Moreover, the difference in education distribution is contributing more to the gap at the higher quantiles. Fourth, we find that the difference in tertiary education achievement between urban and rural areas is responsible for the majority of the contribution of education to the urban-rural gap, and its absolute contribution to the gap increased over time.

The remainder of the paper is organized as follows. The next section describes the data. Section 3 describes the empirical methodology, and Section 4 presents the results. Section 5 presents the results from using an alternative measure of welfare using data from another source, and Section 6 concludes.

2 Data

The analysis is based on household-level data from the Household Consumer Expenditure Survey (Schedule 1.0) collected by the National Sample Survey Organization (NSSO), Government of India. We use four rounds of large scale NSS consumption surveys roughly separated by a decade: round 38, carried out in 1983; round 50, carried out in 1993-94; round 61, carried out in 2004-2005; and round 68 type-1, carried out in 2011-12 (referred as 1983, 1993, 2004, and 2011, respectively in this paper).[9] The sample of households is drawn based on a stratified random sampling procedure and all the analysis is done using survey weights. The monthly per capita expenditure across these rounds are comparable and derived by dividing the total household consumption expenditure with household size. We adjust for differences in prices across rural and urban areas and states using state-wise urban and rural poverty lines in the respective years to bring all prices to urban Maharashtra prices in the referenced year.[10] Our urban-rural classification is based on NSS urban-rural distinction which follows Census of India classification.[11]

All the four surveys collect household main industry and occupation at three digits using the National Industrial Classification (NIC) and National Classification of Occupation (NCO), respectively. The 1983 data use the 1970 NIC, the 1993 data use the 1987 NIC, the 2004 data use the 1998 NIC, and the 2011 data use the 2004 NIC classification to report household main industry. We create 15 uniform industries in each year using concordance tables, and control for 13 industries excluding construction and wholesale and retail trade;

[9] NSSO collects large scale surveys every five year. These large scale surveys are also known as "quinquennial rounds." There are seven large scale consumption surveys that are available: 1983, 1987-88, 1993-94, 1999-00, 2004-05, 2009-10, and 2011-12. There has been a considerable debate about comparability of 1999-00 with the rest of surveys because of change in recall period (see Deaton and Kozel, 2005). Our selection of the four surveys for this analysis divides the period roughly in decades, and consumption data is collected based on same recall period. For the 2011-12, two types of schedule of inquiry were used on separate set of households: Schedule Type 1 and Schedule Type 2. The two types had the same item break-up but differed in reference periods used for collection of consumption data. Schedule Type 1, as far as reference periods were concerned, was a repeat of the schedule used in most quinquennial rounds (NSSO, 2013).

[10] As we compute the urban-rural gap within the same year, temporal adjustment is not needed.

[11] Although we compare urban and rural areas in the same year, it should be noted that when looking at the gap over time, some of the rural areas may have been re-classified as urban areas, however, the extent of this re-classification over a decade should be limited given the slow growth of urban population.

repair of motor vehicles, motorcycles and personal and household goods. The 1983, 1993, and 2004 use the NCO 1968 to report occupation, while the 2011 use the NCO 2004. We re-classify the occupation in three categories: white color jobs, blue color jobs, and agriculture jobs. We control for two occupation indicators using blue color workers as excluded occupation.

Our measure of welfare and dependent variable is log of spatially adjusted monthly per capita consumption expenditure (MPCE). The independent variables (the covariate matrix X) include households' demographic characteristics, human capital, land cultivated, main occupation, main industry, and state of residence. The household demographic characteristics include household head's age, age squared, head's gender, household size, dependency ratio, number of adult (15-64) male members, number of adult female members, and indicators for household belonging to the disadvantaged social groups Scheduled Castes (SCs) or Scheduled Tribes (STs), and Muslim religion.[12] Household human capital is captured by a series of indicator variables for the education levels achieved by the household head. We include indicator variables corresponding to primary, middle, secondary, higher secondary, graduate and postgraduate levels of education (reference group is households whose head is illiterate/below primary).[13] Occupation and industries are captured by a series of indicator variables mentioned in earlier paragraph. We also control for state fixed effects. Appendix Table A1 provides the summary statistics of the main variables. Significantly much larger percentage of rural households heads are illiterate or below primary. A larger percentage of urban households' heads have secondary and above degree. Hence, the advantage of urban areas in education distribution is substantial. Urban population consists less proportion of

[12]SCs and STs are historically disadvantaged castes. At the time of independence, the Indian Constitution identified the disadvantaged caste and tribes in a separate schedule of the constitution as Scheduled Castes and Scheduled Tribes (SC/STs), and extended affirmative action protection to these groups in the form of reserved seats in higher educational institutions, in public sector jobs, and in state legislatures as well as the Indian parliament. Muslims are the largest minority religious group in India, and according to the Government of India (2006), their performance on many economic and education indicators is comparable with that for SC/ST.

[13]The excluded group in all four years is below primary education. For 2004 and 2011 the tertiary education is further distinguished between a graduate degree and post-graduate degree (the 1983 and 1993 data do not distinguish between graduate postgraduate degrees).

disadvantaged group (SCs and STs) households. Similarly, dependency ratio and household size is lower in urban areas. Not surprisingly, rural households hold more land compared to urban households.

Panel A of Table-1 provides the sample size (number of households surveyed) in each of the four surveys used in the paper. Panel B provides per capita monthly consumption expenditure at current prices and the urban-rural mean consumption ratio in each year. The mean consumption ratio increased from 1.47 in 1983 to 1.88 in 2004, and remained at 1.88 in 2011. Panel C of Table provides spatially adjusted per capita expenditure (reported at Maharashtra urban prices in the referenced years) for each year. Spatial adjustment reduces the urban-rural consumption ratio considerably in each year, however, the upward trend in urban-rural consumption ratio remains. The urban-rural spatially adjusted consumption ratio increased from 1.12 in 1983 to 1.47 in 2004, and further increased to 1.55 in 2011. Thus, a substantial increase in urban-rural consumption ratio is observed between 1993 and 2004.[14]

Figure 1 plots the urban-rural gap in spatially adjusted per capita consumption expenditure for each year across the entire distribution. In 1983, there was a positive gap across the entire distribution, however the magnitude of the gap was small. Importantly, the gap in 1983 was only marginally higher at higher quantiles. In 1993, while the urban-rural welfare gap declined at lower quantiles (and became negative at very bottom end of the distribution), it increased at higher quantiles. A sharp increase in the gap was witnessed between 1993 and 2004. Moreover, the urban-rural gap increased across the entire distribution, and the gap increased more at the higher quantiles.[15] The gap further increased in 2011 compared

[14]The rural real MPCE (not spatially adjusted) increased by 9.6 percent between 1993-94 and 2004-05, and by 25.9 percent between 2004-05 and 2011-12. In contrast, the urban real MPCE increased by 17.5 between 1993-94 and 2004-05 and by 28.7 percent between 2004-05 and 2011-12 (NSSO, 2013, p12, Table T4).

[15]The welfare gap reported in Figure 1 for 2004-05 differs from Chamarbagwala (2011) 2004 urban-rural gap. She reports that the urban–rural welfare gap was fairly convex across the welfare distribution in 1993–1994, it became more concave in 2004, with the gap narrowing for the lowest and highest quintiles and widening for the middle three quintiles. Although 1993-94 data used in Chamarbagwala (2011) is the large scale NSS survey similar to ours, her 2004 data (NSS 60th round) is not the NSS large scale survey consumption survey. Hers 2004 data consist of only 29,631 households compared to more than 100,000

to 2004. Overall, there is a significant increase in urban-rural gap during the 1990s, and it appears that the economic growth has favored the urban population more relative to the rural poor.[16]

3 Empirical framework

Our interest lies in examining the factors responsible for the differences in welfare between urban and rural areas across the entire distribution. The standard Oaxaca-Blinder (OB) decomposition technique is a popular tool for analyzing differences in average. The standard assumption in OB decomposition is that the outcome variable Y is linearly related to the covariates, X, and that the error term ε is conditionally independent of X:

$$Y_{gi} = \beta_{g0} + \sum_{k=1}^{K} \beta_{gk} X_{ki} + \varepsilon_{gi}, \;\; g = rural(r), urban(u) \tag{1}$$

where Y_{gi} is the log of monthly per capita consumption expenditure of household i residing in area g, X is the vector of covariates. The overall difference in average outcomes between

households surveyed in large scale surveys. Moreover, the NSS 60th round employed two variants of Schedule 1.0 inquiry: one variant which was asked to half of the surveyed households used 7-day recall while other variant which was used for other half of households used 30-day recall period for items of food coming under the categories of edible oil, egg, fish and meat, vegetables, fruits, spices, beverages and processed food, as well as for pan, tobacco and intoxicants (NSSO, 2005). In addition, Chamarbagwala (2011) welfare measure MPCE is not adjusted for spatial differences in the cost of living. It is also not clear from the text whether Chamarbagwala (2011) uses surveys weights.

[16] In appendix Figure A1, we present the urban-rural gap in each year using the nominal monthly per capita consumption expenditure that is not adjusted for price differences across urban/rural areas and states. Overall the pattern of the gap is similar except the gap is much larger across the entire distribution. The important departure from Figure 1 is that the urban-rural gap in 2011 is marginally lower than 2004 gap when consumption expenditure is not spatially adjusted. This anomaly arises because of higher price differences between urban and rural areas in 2004 compared to 2011: the all India urban poverty line was 29.5 percent higher than all India rural poverty line in 2004, while it was only 22.5 percent higher in 2011.

urban and rural areas at mean can be written as:

$$\hat{\Delta}_O^{\mu} = \overline{Y}_u - \overline{Y}_r = \left\{ \underbrace{(\beta_{u0} - \beta_{r0}) + \sum_{k=1}^{K} \overline{X}_{uk}(\hat{\beta}_{uk} - \hat{\beta}_{rk})}_{\hat{\Delta}_S^{\mu}(Unexplained)} \right\} + \left\{ \underbrace{\sum_{k=1}^{K} (\overline{X}_{uk} - \overline{X}_{rk})\hat{\beta}_{rk}}_{\hat{\Delta}_X^{\mu}(Explained)} \right\} \qquad (2)$$

where $\hat{\beta}_{g0}$ and $\hat{\beta}_{gk}$ are the estimated intercept and slope coefficients, respectively, of the regression models for groups $g = r, u$. In Eqn. (2), it is straightforward to compute both the overall explained and unexplained effects, and the contribution of each covariate to these two effects.[17] Because regression coefficients are based on partial correlations, an OB decomposition that includes all K explanatory variables of interest satisfies the property of path independence (Fortin, Lemieux, and Firpo, 2011).

To examine the factors responsible for the differences in welfare between urban and rural areas across the entire distribution, we use Recentered Influence Function (RIF) decomposition that is path independent and is close to the original OB decomposition (Fortin, Lemieux, and Firpo, 2011).[18] A RIF-regression (Firpo, Fortin and Lemieux, 2009) is similar to a standard regression, except that the dependent variable, Y, is replaced by the (recentered) influence function of the statistic of interest. Consider $IF(y;\nu)$, the influence function corresponding to an observed per capita expenditure y for the distributional statistic of interest, $\nu(F_Y)$. The recentered influence function (RIF) is defined as $RIF(y;\nu)$=$\nu(F_Y) + IF(y;\nu)$, so that it aggregates back to the statistics of interest ($\nu(F_Y)$). In its simplest form, the approach assumes that the conditional expectation of the $RIF(Y;\nu)$ can be modeled as a linear function of the explanatory variables.

[17] In the literature, the explained effects are also referred as endowment effects, covariate effects, or composition effects. Similarly, the unexplained effects are also referred as coefficient or structural effects.

[18] Although, there exists other alternatives that can be used to bifurcate the total difference into aggregated composition and structural difference (e.g. the inverse probability weight estimator by DiNardo, Fortin, and Lemieux (1996), more parametric approaches proposed by Juhn, Murphy, and Pierce (1993), Donald, Green, and Paarsch (2000), Machado and Mata (2005)), the detailed decomposition using the alternative methods are generally path dependent, that is, the decomposition results depend on the order in which the decomposition is performed (see Fortin, Lemieux, and Firpo (2011) for more details).

$$E[RIF(Y;\nu)|X] = X\gamma \tag{3}$$

where the parameters γ can be estimated by OLS. In the case of quantiles, the influence function $IF(Y;q_\tau)$ is given by $(\tau - I\{Y \leq q_\tau\})/f_Y(q_\tau)$, where $I\{.\}$ is an indicator function, $f_Y()$ is the density of the marginal distribution of Y, and q_τ is the population quantile of the unconditional distribution of Y. As a result, $RIF(Y;q_\tau)$ is equal to $q_\tau + IF(Y,q_\tau)$, and can be rewritten as

$$RIF(y;q_\tau) = q_\tau + \frac{\tau - I\{y \leq q_\tau\}}{f_Y(q_\tau)} \tag{4}$$

RIF is first estimated by computing the sample quantile $\hat{q}_\tau$ and the density $(\hat{f}(\hat{q_\tau}))$ at that point using kernel methods. Then an OLS regression is estimated using the $RIF(Y;q_\tau)$ as dependent variable on the vector of covariates. Letting the coefficients of the unconditional quantile regressions for each group be

$$\widehat{\gamma}_{g,\tau} = \left(\sum_{i\in g}(X_i X^T)\right)^{-1} . \sum_{i\in g} \widehat{RIF}(Y_{gi};q_{g,\tau}).X_i,\ g = r,u \tag{5}$$

Once the RIF regression has been estimated, the estimated coefficients can be used to perform the detailed decomposition in the same way as in the standard OB decomposition.

$$\widehat{\Delta}_O^\tau = \overline{X}_u(\hat{\gamma}_{u,\tau} - \hat{\gamma}_{r,\tau}) + (\overline{X}_u - \overline{X}_r)\hat{\gamma}_{r,\tau} \tag{6}$$

$$\widehat{\Delta}_O^\tau = \widehat{\Delta}_S^\tau + \widehat{\Delta}_X^\tau \tag{7}$$

The second term in Eqn. (6) can be written as

$$\widehat{\Delta}_X^\tau = \sum_{k=1}^{K}(\overline{X}_{ku} - \overline{X}_{kr})\hat{\gamma}_{kr,\tau} \tag{8}$$

Similarly, the detailed elements of the unexplained effects can be computed.

There are two issues with the any decomposition exercise. First, it is well documented in literature that the decomposition results may not be invariant to the choice of the counterfactual. In Eqn (2), one can use $\overline{X}_r\hat{\beta}_u$ as a counterfactual in place $\overline{X}_r\hat{\beta}_u$. To avoid this, we use a vector of coefficients ($\hat{\beta}^*$) that is estimated from the pooled urban and rural sample with other explanatory variables and a urban dummy.[19] The Eqn (2) will become:

$$\hat{\Delta}_O^{\mu} = \overline{Y}_u - \overline{Y}_r = \left\{ \underbrace{\overline{X}_u(\hat{\beta}_u - \hat{\beta}^*) + \overline{X}_r(\hat{\beta}^* - \hat{\beta}_r)}_{\hat{\Delta}_S^{\mu}(Unexplained)} \right\} + \left\{ \underbrace{(\overline{X}_u - \overline{X}_r)\hat{\beta}^*}_{\hat{\Delta}_X^{\mu}(Explained)} \right\} \tag{9}$$

The second issue which is also well known in the literature is that in the presence of categorical variables, the results of a detailed decomposition will be sensitive to the choice of the reference group (Jones, 1983; Oaxaca and Ransom, 1999). While the detailed "explained effects" are not affected by the choice of the reference group, the detailed "unexplained effects" differ by the choice of reference group as different parts of the effects are hidden in the intercept (Fortin, Lemieux, and Firpo, 2011). Some solutions are proposed to solve the problem by imposing additional restrictions to transform the estimated coefficients. However, doing so will lose the simple meaningful interpretations and preclude comparisons across years (Fortin, Lemieux, and Fortin, 2011). To facilitate the interpretation and ensure comparability, we perform all decompositions with the same reference group across the years.

4 Results

We first investigate how log of (spatially adjusted) monthly per capita consumption expenditure differs between urban and rural areas at the mean and at the selected quantiles in each year. Panels A, B, C, and D of Table 2 presents results for 1983, 1993, 2004, 2011, respectively. The first row in each panel of Table 2 presents the urban-rural gap that is esti-

[19] The reason for including the urban dummy as a group indicator in estimating the reference structure is discussed in Fortin (2008) and Jann (2008). If location is related with education or some other variables, not controlling location will lead to biased estimates.

mated from an equation that only includes an urban indicator. The mean gap is estimated using OLS, while the gaps at different quantiles are estimated using RIF-OLS regressions. As evident from the Table, the urban dummy is statistically significant at the mean and at the selected quantiles in each of the four years considered in this paper. The unadjusted gap captured by the urban dummy is larger at the higher quantiles. The unadjusted urban-rural gap at the mean has been increasing over the last three decades. The average gap was 8.4 log points in 1983 and it increased marginally to 10.1 log points in 1993. The average gap further increased to 30 log points in 2004 and to 34.1 log points in 2011. Moreover, the gap has increased at each of the selected quantiles over the last three decades except between 1983 and 1993 for the lower half of the distribution. Importantly, a considerable increase in the gap is witnessed over 1993 and 2004 not only at the mean but across the entire distribution. The urban-rural unadjusted gap at the mean was only 10 log points in 1993 but it increased to 30 log points in 2004. The urban-rural gap was negative in 1993 at the 10th percentile, it turned into a positive 10 log points gap in the 2004. Similarly, the urban-rural gap was only 8 log points at the median in 1993, and it increased to 24.4 log points in 2004. At the 90th percentile the gap was 27 log points in 1993 but it increased to 62 log points in 2004. Thus a larger gap is witnessed in 2004 at higher quantiles compared to the 1993 gap at the same quantiles.

In the second row of each panel of Table 2, we add education indicators as controls. The urban-rural gap in 1983 and 1993 is completely wiped out not only at the mean but also at the selected quantiles. The educationally adjusted gaps are negative in 1983 and 1993 across the entire distribution with the exception of 90th percentile in 1993 where the educationally adjusted gap is statistically indistinguishable from the zero. Although controlling for education reduces the gap considerably in 2004 and 2011 also, the educationally adjusted gap is positive throughout the distribution in 2004 and 2011 and the gap is larger at the higher quantiles. In row (3)-(6) of each panel of Table 2, we sequentially add demographic, state, occupation and industry controls. Thus the last low in each panel controls for all the

characteristics. Controlling for all the characteristics reduces the gap considerably in year 2004 and 2011. For example, the gap at the mean in 2011 is reduced from the 34.1 log points to just 6.8 log points after controlling for all characteristics. Importantly, at the lower end of the distribution, the adjusted (controlling for characteristics) gap is negative in both 2004 and 2011, while at the top end of the distribution, the gap is positive in both 2004 and 2011. In is noteworthy, that the adjusted gap in 2011 at the adjusted top of the distribution is much larger than the adjusted gap at top end of the 2004 distribution.

In Table 2, the returns of the household characteristics that determine consumption expenditure are constrained to be same for both urban and rural areas, which may not be true. To allow for differential returns to all characteristics, we estimate the Eqn (1) for urban and rural samples separately at the mean using OLS and at quantiles=$0.05, 0.10, ..., 0.90, 0.95$ using RIF-OLS. We use these OLS and RIF-OLS coefficients estimated from urban and rural samples to decompose the total gap observed at the mean and at the selected quantiles using Eqn. (9). The results of the OLS and the RIF-regressions at selected quantiles for year 1983, 1993, 2004, and 2011 are reported in appendix Table A2, Table A3, Table A4, Table A5, respectively. For space considerations, we discuss these results only briefly here. What is worth noticing is that the returns to lower levels of education (primary and middle) was higher in rural areas in 1983 and 1993 at the mean. In contrast, the urban returns to primary and middle education at the mean surpassed rural returns at the mean in 2004 and 2011. Moreover, there exists considerable heterogeneity in returns to different levels of education in all the four years. The disadvantaged castes (SCs/STs) consumption is significantly lower than non-disadvantaged group.

Figure 2 plots our main results that divide the total gap in consumption expenditure into the aggregated explained and unexplained effects. In Table 3, we also present aggregated decomposition results at the selected quantiles and at the mean.[20] As expected from the

[20]The number of households in decomposition exercises for 1983 and 1993 data differs from what is reported in Table 1. For the 1983 decomposition, about 4,131 households are dropped from the sample because either the household head's information is missing or reported per capita expenditure is zero. For the 1993 decomposition, the survey weight provided in the data gives zero weight for 2,223 households.

results presented in the earlier paragraph, the urban sector advantage in terms of endowments explains the majority of the urban-rural gap witnessed in all the four years. Better households' endowments in urban areas explain more than the observed gap in both 1983 and 1993. In fact, the magnitude of the explained effects is so large that it overexplains the total observed differences in 1983 and 1993 across the entire distribution. This overshooting is to some extent offset by the negative unexplained effect in both the years not only at the mean but also across the entire distribution. There is a significant change in the nature of the unexplained effect in 2004 and 2011 when compared to the unexplained effect in the 1983 and 1993. The aggregated unexplained effect which captures the differences in rewards for different characteristics between urban and rural areas was negative at the mean (see Tables 3) in both 1983 and 1993, while it turns positive but was very small in 2004. In 2011, the unexplained effect at the mean is larger and it explains about 24 percent of the total gap on average. In 2004, the unexplained or coefficient effect is negative in bottom half of the distribution and positive in the upper half of the distribution (Figure 2). In 2011, the coefficient effect is negative only in the bottom part of the distribution, and positive and increases monotonically at the higher quantiles (Figure 2). The large increase in the urban-rural gap between 1993 and 2004 is mainly driven by urban areas catching up with rural areas in terms of rewards to the endowments. The coefficient effect has become an important factor in driving the urban-rural gap in recent years, however, endowment advantage for urban areas remain substantial, and the advantage seems larger at the higher quantiles. In appendix Figure A6 and Figure A7, we plot the aggregate decomposition results that use rural and urban prices, respectively as counterfactual. Overall, the main conclusions remain similar irrespective of the counterfactual used.[21]

Having computed both parts of the total urban-rural welfare gap, we now examine which variable or set of variables explains the composition and the coefficient effects. Instead of reporting the effect of each variable, we aggregate similar variables in groups to provide

[21] Recall that when we use rural [urban] prices as weight, the explained effect is calculated as $(\overline{X}_u - \overline{X}_r)\hat{\beta}_r^\tau$ $[(\overline{X}_u - \overline{X}_r)\hat{\beta}_u^\tau]$. Similarly, the unexplained effect is calculated as $(\hat{\beta}_u^\tau - \hat{\beta}_r^\tau)\overline{X}_r[(\hat{\beta}_u^\tau - \hat{\beta}_r^\tau)\overline{X}_u]$.

the differences explained by differences in education, demographics, states, occupations, industries, and land. The results for 1983, 1993, 2004, and 2005 are reported Table 4, 5, 6, and 7, respectively. For ease, we also plot the contribution of each set of variables in the explained and unexplained effect in Figure 3 and Figure 4, respectively.

For the composition effects, as evident from Figure 3 the differences in educational attainment play a substantial role in explaining the urban-rural welfare differences. Educational differences explain about 150% of the total urban-rural gap in 1983, 130% of the total gap in 1993 at mean (Tables 4, 5). Although, the absolute contribution of education at mean marginally increased in 2004 before marginally declining in 2011, educational differences explain only 46 and 38 percent of the total gap in 2004 and 2011, respectively at the mean (See Tables 6, 7). Importantly, the educational advantage for urban areas is larger at the higher quantiles (Figure 3). The contribution of demographics to urban advantage is positive, however, remains similar across the entire distribution. The contribution of industrial differences is positive and marginally higher at higher quantiles. The contributions of occupational differences and states are small and flat across the distribution. Small contribution of states to the explained effect is not surprising, as our dependent variable is already adjusted for state wise differences in prices.

Figure 4 plots the contribution of different group of variables to the unexplained or coefficient effects. A significant part of the unexplained component lies in the intercept that captures the gap for the excluded group.[22] The gap for the excluded group is considerably larger in 2004 and 2011. It should be worth pointing out that the differences in urban and rural intercepts for excluded group may also capture the unobserved or omitted sector specific effects such as infrastructure, geographic conditions which may favor the urban sector in the latter years.

Given the large contribution of difference in education distributions to urban-rural welfare gap, we further investigate the detailed contribution of different levels of education. The

[22]The excluded group consists of households residing in the state of Maharashtra whose heads have below primary education, household main occupation is blue color job, and industry is either construction or sales.

contribution of different levels of education in the gap is presented in Table 8. Recall that the endowment effect contributed by each level of education is product of difference in percentage of population with that level of education between urban and rural areas and the reference return to that level of education estimated from the pooled sample. As evident from the descriptive statistics presented in appendix Table A2, the urban-rural gap in terms of senior secondary and above education achievement is much larger, and has increased marginally over time. The urban advantages in terms of primary, middle, and secondary education achievements are declining and in 2011, rural area has higher percentage of population with primary education. This is not surprising as education distribution shifts upward in both urban and rural areas.

From Table 8, it is evident that the contribution of difference in tertiary education (graduate and above) achievement between urban and rural area has contributed more to the gap over time at the mean. For example, the endowment effect of graduate and above is 4.8 log points in 1983, 6.9 log points in 1993, 8.7 log points in 2004 and 9.2 log points in 2011 at the mean. This is partly because of increasing gap of percentage of population with graduate and above degree and increasing returns to those degree (as the difference is multiplied by the returns). Not surprisingly, the contributions of difference in tertiary education achievement to the gap at higher quantiles are more in each year.

5 Results from using an alternative measure of welfare

In this section, we present our findings from an alternative data source: India Human Development Survey (IHDS). The NSS data do not collect information on income. IHDS which was collected jointly University of Maryland and National Council of Applied Economic Research (NCAER) in New Delhi, India (See Desai et al. 2010; Desai and Vanneman, 2015 for details) collect both consumption and income information. We use two waves of IHDS collected in 2011-12 and 2004-05 (henceforth, 2011 and 2004, respectively). The 2011 IHDS

surveyed 42,152 households while 2004 IHDS surveyed 41,554 households.[23] A caveat here is that although these two waves are used here as independent cross sections, they are not. The 2012 IHDS resurveys the same households surveyed in 2004 IHDS.[24] Hence, the results from IHDS are only complementary to our results based on the NSS data.

Appendix Figure A2 plots the spatially adjusted urban-rural gap in per capita consumption expenditure in IHDS across the entire distribution. The consumption gap from IHDS presents similar patterns as found in NSS data. The consumption gap has increased between 2004 and 2011, and the gap is larger at the higher quantiles. However, the magnitude of the consumption gap in 2004 and 2011 using the IHDS consumption expenditure is smaller than the magnitude of the gap witnessed using NSS consumption expenditure in 2004 and 2011. At this point, it is worth pointing out that while the NSS consumption survey collect very detailed information on consumption, the IHDS consumption questions are borrowed from the short form of the consumption module developed for NSS Employment and Unemployment Survey.

The rationale for using IHDS is to examine the gap in income. Figure A3 plots the spatially adjusted urban-rural gap in per capita income in IHDS across the entire distribution. The urban-rural welfare gap in both 2004 and 2011 is larger using income as a welfare measure compared to the welfare gap using consumption as welfare measure. This should not be surprising as inequality in income generally tend to be larger than the inequality in consumption. Importantly, the urban-rural gap increased between 2004 and 2011. Figure A4 and Figure A5 presents the decomposition of the consumption and income gap respectively.[25] Endowment differences accounts for majority of the gap in both years and for both measures which is similar to our findings with the NSS consumption expenditure data. Thus, the IHDS

[23] See http://ihds.info/ for more information about IHDS.

[24] They are representative samples in their respective years with individual year survey weights.

[25] The controls in IHDS decomposition exercise differ from used in NSS decomposition exercise. The controls include household demographics—household head age, age squared, gender, household size, dependency ratio, number of adult (15-64) male members, number of adult females, indicator for household belonging to the disadvantaged social group SC or ST, and Muslim religion; indicator variables for household head education; indicators for the main source of household income; state fixed effects.

data corroborate our finding from the NSS data that the urban-rural welfare gap increased between 2004 and 2011, and the majority of the urban-rural welfare gap in each year is explained by the urban advantage in terms of endowments.

6 Conclusion

Using data from the large scale NSS consumption surveys and spatially price adjusted per capita consumption expenditure as a measure of welfare, we find that the urban-rural welfare gap has been increasing in India in the past three decades. The urban-rural welfare gap increased considerably between 1993-94 and 2004-05, and the gap increased further between 2004-05 and 2011-12. Using the unconditional quantile regression (Fipro, Lemieux, and Fortin, 2009) decomposition, we find that the differences in endowments explain the majority of the observed gap. The differences in rewards contributed negatively to the gap in 1983 and 1993-94 across the entire distribution, however, contributed positively to the gap in 2004-05 and 2011-12 at the top end of the distribution. Further decomposing the gap into contribution of individual factors, we find differences in educational distribution across urban and rural areas play a key role in the gap. The differences in educational distribution contributed more than the observed gap in 1983 and 1993-94, and more than a third of the gap in 2004-05 and 2011-12.

The increasing urban-rural gap in India is worrisome. The 2009 World Development Report---Reshaping Economic Geography---argues that urban-rural living standards diverge as countries develop and become more urbanized, converging only once they reach a relatively high development threshold. Specifically, it finds that "urban-to-rural gaps in consumption levels rise until countries reach upper-middle-income levels" (World Bank 2008). But policymakers cannot afford to sit back and wait for their countries to pass a hypothesized development threshold before spatial inequalities begin to converge, especially when that threshold lies far in the future (Dudwick et al., 2011). Importantly, a significant part of

the urban-rural welfare gap is contributed by differences in distribution of education. This suggests putting a high priority on human capital development, which is consistent with the Indian government policy of universal elementary education. The Sarva Shiksha Abhiyan (Education for All Movement) was launched by Indian government in 2000-01 that aimed at the universalization of elementary education "in a time bound manner." Obviously, these policies will take time to bear fruit in terms of reducing the gaps. Importantly, we find that the differences in tertiary education (graduate and above degree) achievement is contributing the most in the gap, and its absolute contribution to the gap has been increasing over time. As educational distributions shift in both urban and rural areas gradually as witnessed, more people in rural areas will achieve primary and middle education while more people in urban areas end up acquiring tertiary education as urban education distribution will shift towards tertiary education. This probably will widen the percentage of population with tertiary education more in favor of urban areas.

Although India has achieved universalization of primary education, access to upper and higher education remains a significant issue in rural India. According to NSSO education survey conducted in 2014, there was no significant difference between rural and urban India in terms of physical access to primary schooling within less than 1 km, but for upper primary and secondary schools the gaps between rural and urban areas are quite prominent. More than 12% of rural households in India did not have any secondary schools within 5 kilometers whereas in urban areas such cases are insignificant (less than 1%) (NSSO, 2015). In Figure 5, we plot the attendance and drop out rates for the age 16-21 (relevant age group for senior secondary and tertiary education) from NSSO education survey conducted in 2014. Within each age group, drop out is significantly higher in rural areas. In addition, there is significant difference in the proportion of age 18-21 (relevant age for tertiary education) attending education between urban and rural areas. Even with quite low rural-urban migration (Munshi and Rosenzweig, 2016), the gaps in attendance in age 16-21 potentially will ensure that the gaps in tertiary education attainment across urban and rural areas will persist for near

foreseeable future unless there is a dramatic catching up from rural areas in attendance for age 16-21. Thus a policy which can potentially reduce the urban-rural welfare gap should address the high drop out gaps after elementary education.

References

[1] Agyire-Tettey, F., Ackah, C. G., and Asuman, D. (2017). An Unconditional Quantile Regression Based Decomposition of Spatial Welfare Inequalities in Ghana. http://dx.doi.org/10.1080/00220388.2017.1296571.

[2] Chamarbagwala, R. (2010). Economic liberalization and urban–rural inequality in India: a quantile regression analysis. Empirical Economics, 39(2), 371-394.

[3] Chaudhuri, S. and Ravallion, M. (2006). Partially awakened giants: uneven growth in China and India, Policy Research Working Paper Series, 4069, The World Bank.

[4] Deaton, A. and Drèze, J. (2002). Poverty and inequality in India: a re-examination. Economic and Political Weekly, 37(36), 3729-48.

[5] Deaton, A. and Kozel, V. (2005). Data and dogma: the great Indian poverty debate. World Bank Research Observer, 20(2), 177–99.

[6] Desai, S., R. Vanneman., and National Council of Applied Economic Research, New Delhi. 2010. India Human Development Survey (IHDS), 2005. ICPSR22626-v8. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2010-06-29. http://doi.org/10.3886/ICPSR22626.v8

[7] Desai, S., and R. Vanneman. 2015. India Human Development Survey-II (IHDS-II), 2011-12. ICPSR36151-v2. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2015-07-31. http://doi.org/10.3886/ICPSR36151.v2.

[8] DiNardo, J., Fortin, N. M., and Lemieux, T. (1996). Labor market institutions and the distribution of wages, 1973-1992: a semiparametric approach. Econometrica, 64, 1001–1044.

[9] Donald, S. G., David, G. A., and Paarsch, H. J. (2000). Differences in wage distributions between Canada and the United States: an application of a flexible estimator of

distribution functions in the presence of covariates. Review of Economic Studies, 67, 609–633.

[10] Dudwick, N., Hull, K., Katayama, R., Shilpi, F. and Simler, K. (2011). From Farm to Firm Rural-Urban Transition in Developing Countries, World Bank.

[11] Fang, Z. and Sakellariou, C. (2013), Evolution of Urban–rural Living Standards Inequality in Thailand: 1990–2006. Asian Economic Journal, 27, 285–306.

[12] Firpo, S., Fortin, N. M., and Lemieux, T. (2009). Unconditional quantile regressions. Econometrica, 77 (3), 953–973.

[13] Government of India (2017). Economic Survey 2016-17, Ministry of Finance.

[14] Government of India. (2006). Social, economic and education status of the Muslim community of India. New Delhi.

[15] Himanshu and Sen, K. (2014). Revisiting the Great Indian Poverty Debate: Measurement, Patterns, and Determinants, Brooks World Poverty Institute Working Paper Series, 20314, The University of Manchester.

[16] Hnatkovskay, V. and Lahiri, A. (2016). Urbanization, Structural Transformation and Rural-Urban Disparities, University of British Columbia, October 2016.

[17] Jann, B. (2008). The Oaxaca-Blinder decomposition for linear regression models. Stata Journal, 8, 435–479.

[18] Jones, F. L. (1983). On decomposing the wage gap: a critical comment on blinder's method. Journal of Human Resources, 18, 126–130.

[19] Juhn, C., Murphy, K. M., and Pierce, B. (1993). Wage inequality and the rise in returns to skill. Journal of Political Economy, 101, 410–442.

[20] Knight, J. and Song, L. (1999). The Urban–Rural Divide: Economic Disparities and Interactions in China. Oxford University Press, New York.

[21] Kohli, A. (2006). Politics of Economic Growth in India, 1980-2005. Economics and Political Weekly, 41(13), Special Articles.

[22] Kotwal, A., Ramaswami, B., and Wadhwa, W. (2011). Economic Liberalization and Indian Economic Growth: What's the Evidence? Journal of Economic Literature, 49(4), 1152-1199.

[23] Le, H. T. and Booth, A. (2014). Inequality in Vietnamese Urban–Rural Living Standards, 1993–2006. Review of Income and Wealth, 60(4), 862-886.

[24] Lewis, W. A. (1954). Economic Development with Unlimited Supplies of Labor, Manchester School of Economic and Social Studies, 22, 139–191.

[25] Machado, J. and Mata, J. (2005). Counterfactual decomposition of changes in wage distributions using quantile regression. Journal of Applied Econometrics, 20, 445–465.

[26] Munshi, K. and Rosenzweig, M. (2016). Networks and Misallocation: Insurance, Migration, and the Rural-Urban Wage Gap. American Economic Review, 106(1), 46-98.

[27] Nguyen, B., Albrecht, J., Vroman, S., and Westbrook, D. (2003). A Quantile Regression Decomposition of Urban-Rural Inequality in Vietnam. Journal of Development Economics, 83(2), 466-490.

[28] NSSO. (2015). Key Indicators of Social Consumption in India: Education. NSS 71st Round, Ministry of Statisticsa and Programme Implementation, National Sample Survey Office.

[29] NSSO. (2013). Key Indicators of Household Consumer Expenditure in India, NSS 68th Round, Ministry of Statistics and Programme Implementation, National Sample Survey Office.

[30] NSSO. (2005). Household Consumer Expenditure in India, 2004, NSS 60th Round (January–June 2004). Report No 505, Ministry of Statistics and Programme Implementation, National Sample Survey Office.

[31] Oaxaca, R. L. and Ransom, M. R. (1999). Identification in detailed wage decompositions. Review of Economics and Statistics, 81, 154–157.

[32] Ravallion, M., Chen, S., and Sangraula, P. (2007). New Evidence on the Urbanization of Global Poverty. Population and Development Review, 33(4), 667-701.

[33] Sen, A. and Himanshu. (2006). Poverty and Inequality in India-II. Economics and Political Weekly, 39.

[34] Sicular, T., Ximing, Y., Gustafsson, B., and Shi, L. (2007). The Urban-Rural Income Gap And Inequality In China. Review of Income and Wealth, 53(1), 93-126.

[35] World Bank (2008). World development report 2009: reshaping economic geography. Washington, DC, World Bank Group.

[36] Yang, D. T. and Zhou, H. (1999). Rural–Urban Disparity and Sectoral Labor Allocation in China. Journal of Development Studies, 35(3), 105–33.

Figure 1: Difference in log of urban and rural per capita consumption expenditure

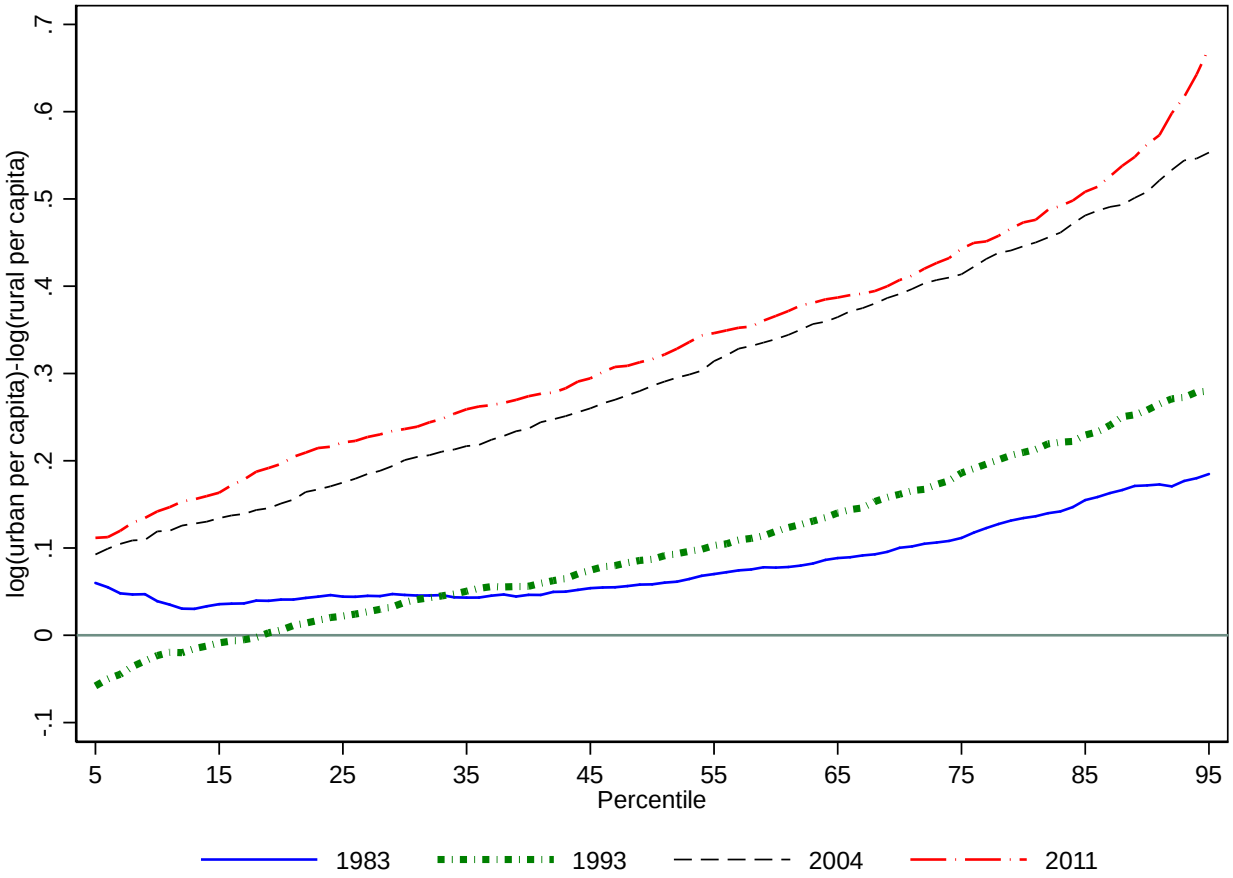
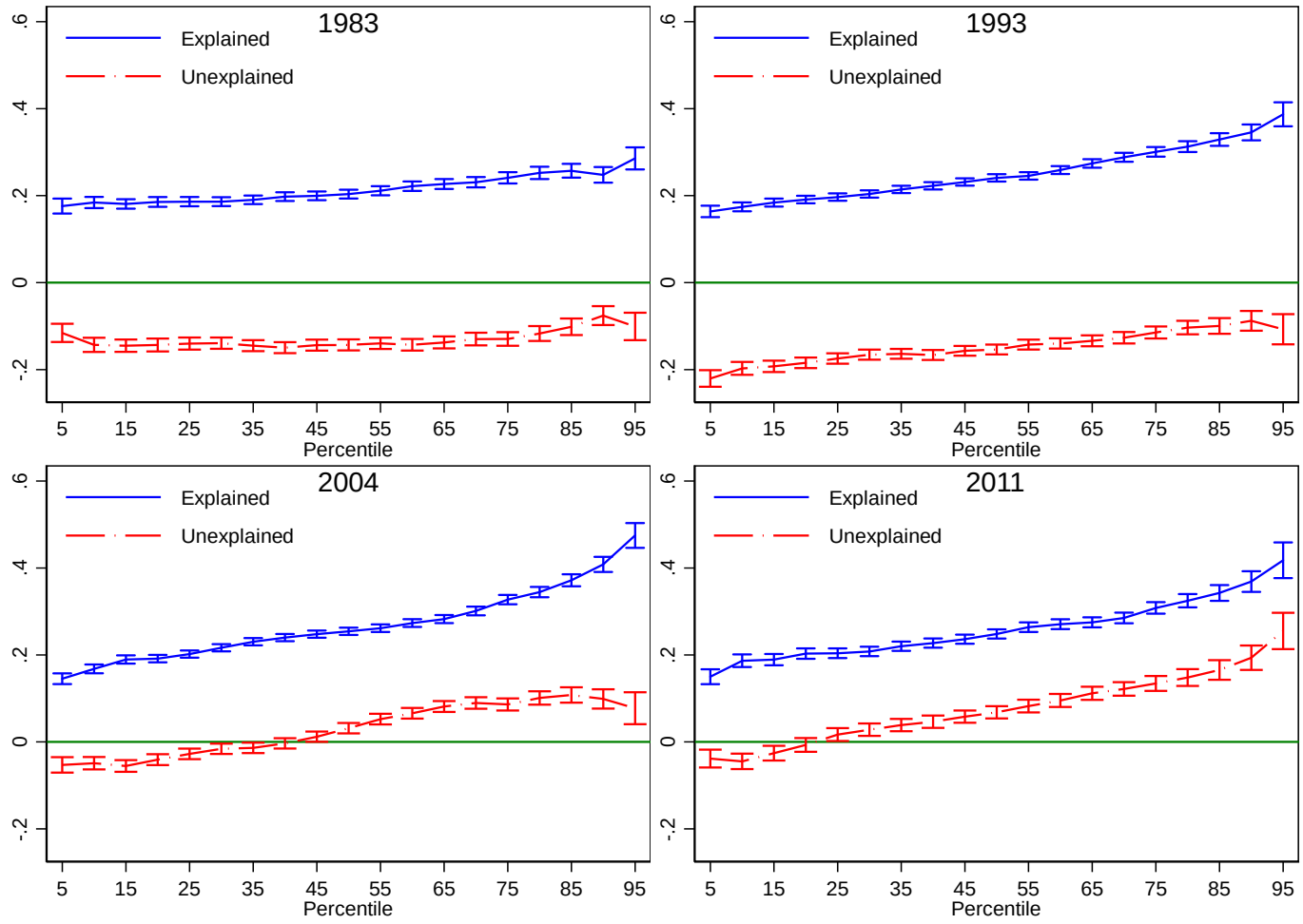
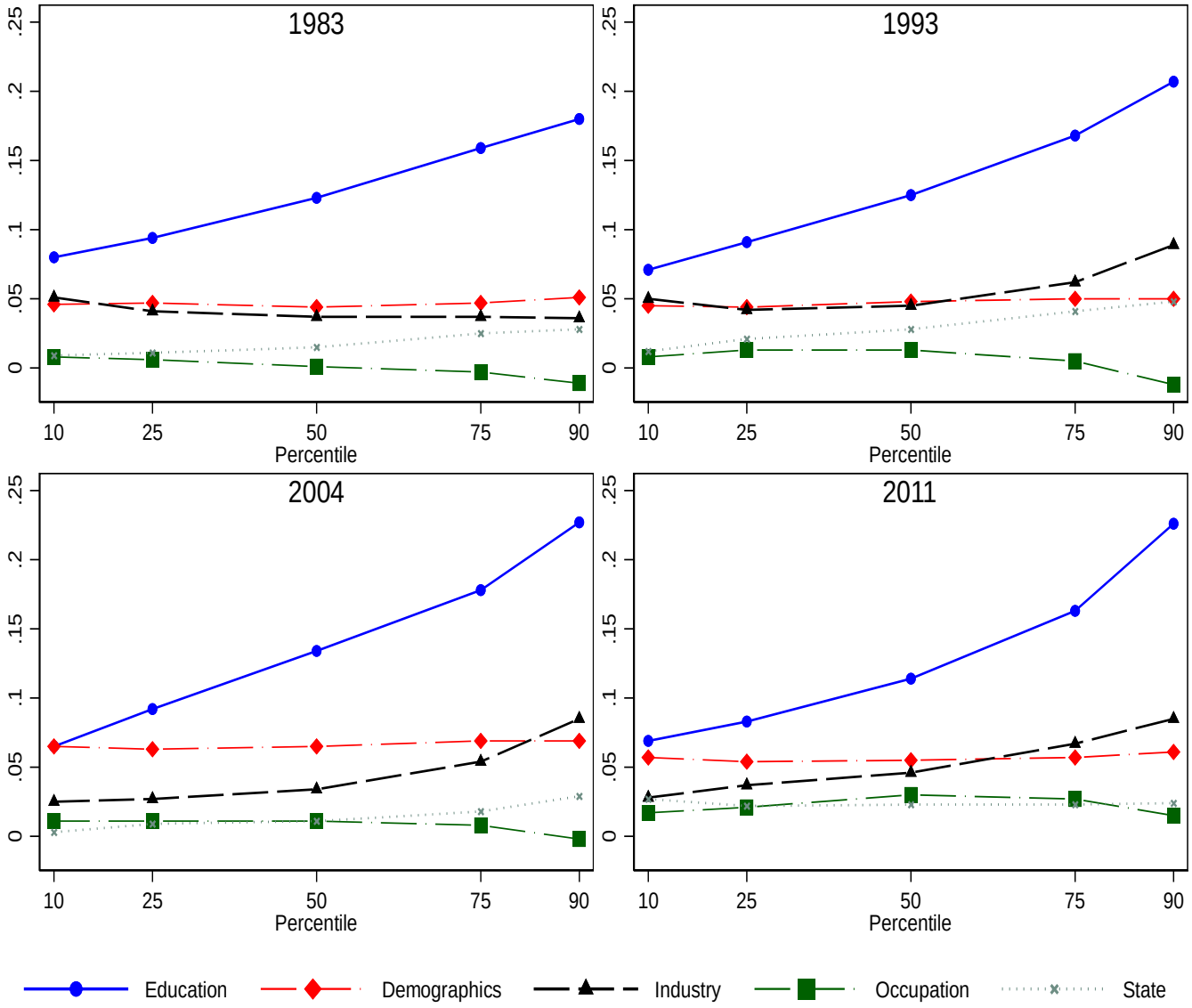


Figure 2: Decomposition of urban-rural consumption expenditure gap, at different percentiles



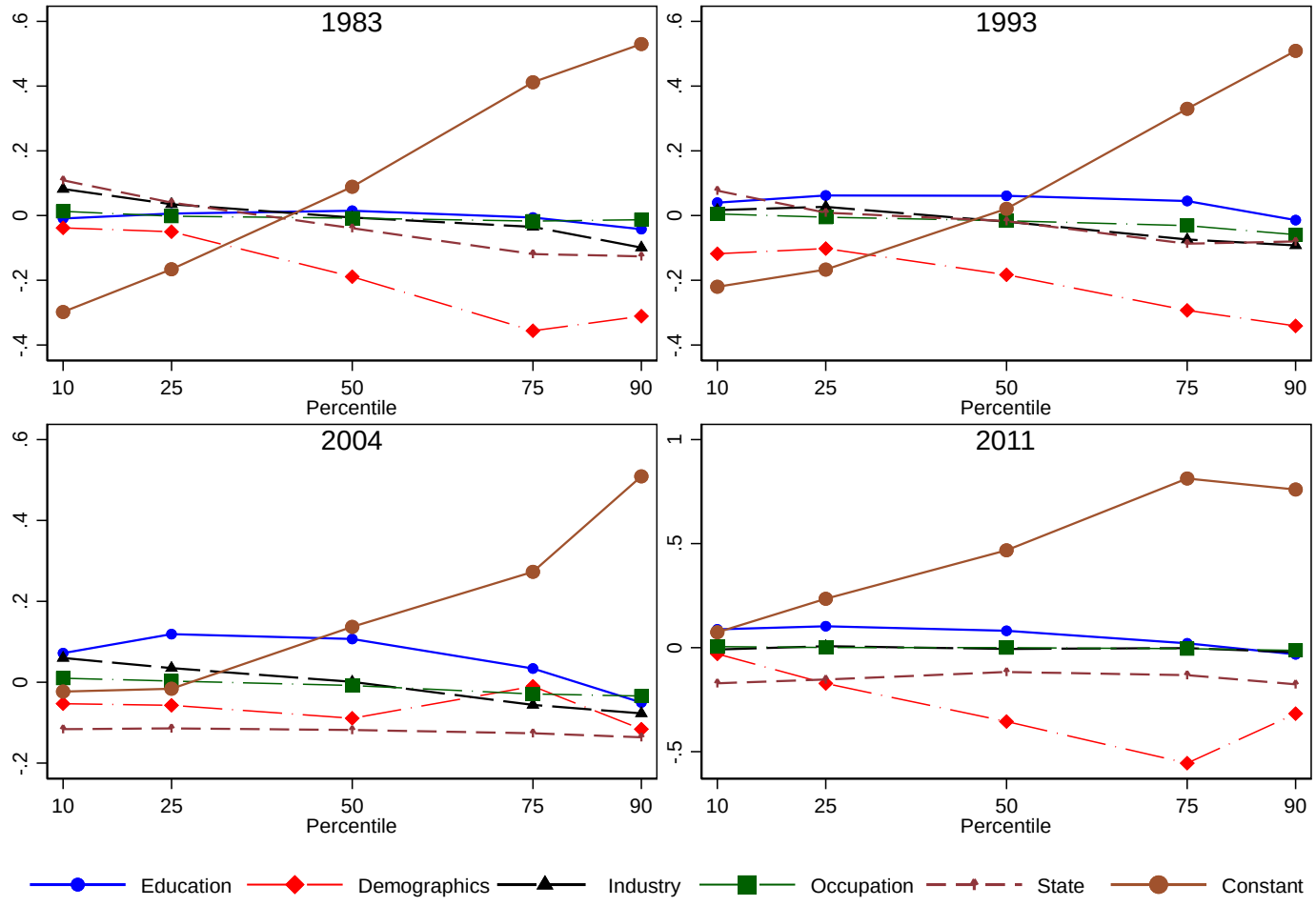
Note: The figure plots the aggregate explained and unexplained effect. The caps are 95% confidence interval. The pooled coefficient is used as counterfactual.

Figure 3: Contribution to explained effect, urban-rural consumption expenditure gap



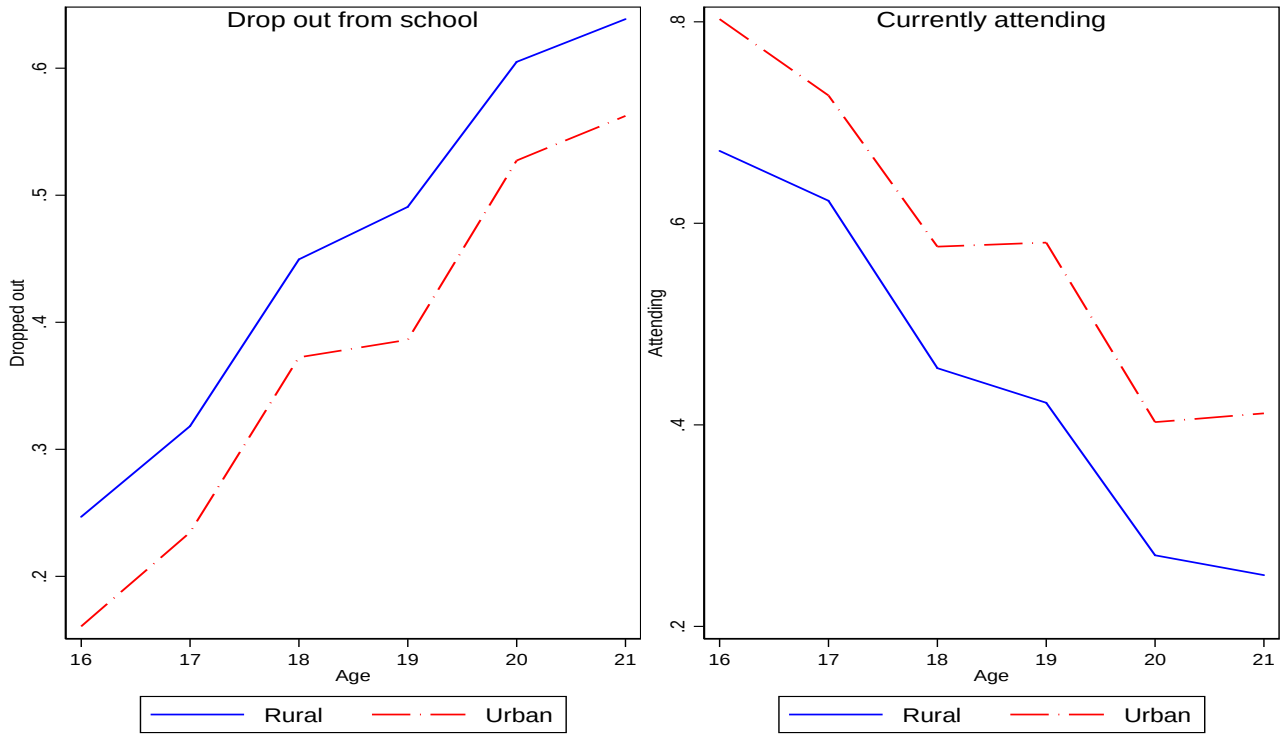
Note: The figure plots the contribution of factors to explained effect reported in Table 4 to Table 7. Contribution of Land is not plotted as it is very small.

Figure 4: Contribution to unexplained effect, urban-rural consumption expenditure gap



Note: Y-axis scales differ across the graphs. The figure plots the contribution of factors to unexplained effect reported in Table 4 to Table 7. Contribution of Land is not plotted as it is very small.

Figure 5: Drop out and attendance rates at different ages



Note: Authors calculations from NSS 71st round, Social Consumption - Education Survey 2014. Drop out is individual who has ever attended school but currently not attending at the time of survey. Attending is individual who is attending at the time of survey. Attending and drop out at any age will not add to 1, as they don't account for individuals who never attended school.

Table 1: Descriptive Stats

Panel A: Sample Size (Number of households)			
Year	**Rural**	**Urban**	**Total**
1983	77,337	40,127	117,464
1993	69,206	46,148	115,354
2004	79,298	45,346	124,644
2011	59,695	41,967	101,662
Panel B: Monthly per capita at current prices			
	Rural	**Urban**	**Urban/Rural**
1983	111.20	163.07	1.47
1993	281.40	458.04	1.63
2004	558.80	1,052.35	1.88
2011	1,278.94	2,399.24	1.88
Panel C: Spatially adjusted monthly per capita at current prices*			
	Rural	**Urban**	**Urban/Rural**
1983	159.27	178.50	1.12
1993	450.99	528.42	1.17
2004	774.95	1,137.32	1.47
2011	1,690.33	2,625.45	1.55

Note: *The prices are expressed at Maharashtra urban prices.

Table 2: Urban-rural gap in log of monthly per capita expenditure

Controls	OLS	Q 10	Q 25	Q 50	Q 75	Q 90
Panel A			**Year= 1983**			
None	0.084***	0.043***	0.045***	0.061***	0.111***	0.181***
Add education indicators	-0.064***	-0.052***	-0.065***	-0.075***	-0.065***	-0.043***
Add demographic variable	-0.076***	-0.073***	-0.085***	-0.088***	-0.074***	-0.046***
Add state indicators	-0.123***	-0.098***	-0.118***	-0.130***	-0.134***	-0.122***
Add occupation indicators	-0.124***	-0.105***	-0.123***	-0.132***	-0.133***	-0.114***
Add industry indicators	-0.140***	-0.140***	-0.148***	-0.148***	-0.139***	-0.106***
Panel B			**Year= 1993**			
None	0.101***	-0.024***	0.020***	0.080***	0.172***	0.270***
Add education indicators	-0.060***	-0.115***	-0.090***	-0.064***	-0.021***	0.010
Add demographic variable	-0.074***	-0.135***	-0.105***	-0.077***	-0.031***	0.000
Add state indicators	-0.129***	-0.161***	-0.148***	-0.132***	-0.101***	-0.084***
Add occupation indicators	-0.136***	-0.168***	-0.157***	-0.143***	-0.109***	-0.084***
Add industry indicators	-0.167***	-0.202***	-0.183***	-0.168***	-0.145***	-0.123***
Panel C			**Year= 2004**			
None	0.300***	0.098***	0.147***	0.244***	0.436***	0.622***
Add education indicators	0.129***	0.021***	0.043***	0.101***	0.216***	0.312***
Add demographic variable	0.074***	-0.031***	-0.009	0.046***	0.158***	0.250***
Add state indicators	0.064***	-0.032***	-0.015**	0.037***	0.142***	0.232***
Add occupation indicators	0.057***	-0.039***	-0.022***	0.027***	0.130***	0.227***
Add industry indicators	0.027***	-0.061***	-0.043***	0.004	0.092***	0.173***
Panel D			**Year= 2011**			
None	0.341***	0.111***	0.177***	0.287***	0.467***	0.640***
Add education indicators	0.175***	0.034***	0.082***	0.151***	0.261***	0.340***
Add demographic variable	0.149***	-0.001	0.052***	0.127***	0.239***	0.319***
Add state indicators	0.106***	-0.033***	0.016**	0.082***	0.186***	0.262***
Add occupation indicators	0.091***	-0.041***	0.005	0.064***	0.165***	0.240***
Add industry indicators	0.068***	-0.057***	-0.014*	0.040***	0.140***	0.210***

Note: The Table contains the coefficient of an urban indicator from a regression that adds a set of controls sequentially. The dependent variable is log of spatially price adjusted per capita consumption expenditure. Land variable is included in the demographic variables.
*** p<0.01, ** p<0.05, * p<0.1

Table 3: Urban-rural consumption expenditure gap, aggregate decomposition results

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	**Q 10**	**Q 25**	**Q 50**	**Q 75**	**Q 90**
Panel A: 1983						
Difference	0.084***	0.041***	0.046***	0.060***	0.111***	0.172***
	(0.004)	(0.007)	(0.005)	(0.005)	(0.006)	(0.008)
Explained	0.214***	0.184***	0.186***	0.204***	0.241***	0.248***
	(0.005)	(0.007)	(0.005)	(0.005)	(0.007)	(0.009)
Unexplained	-0.130***	-0.143***	-0.140***	-0.143***	-0.130***	-0.076***
	(0.005)	(0.008)	(0.007)	(0.006)	(0.008)	(0.011)
Observations	113,333	113,333	113,333	113,333	113,333	113,333
Panel B: 1993						
Difference	0.101***	-0.023***	0.022***	0.087***	0.186***	0.258***
	(0.004)	(0.006)	(0.005)	(0.005)	(0.005)	(0.008)
Explained	0.255***	0.174***	0.197***	0.241***	0.301***	0.346***
	(0.004)	(0.005)	(0.004)	(0.004)	(0.006)	(0.009)
Unexplained	-0.154***	-0.197***	-0.174***	-0.154***	-0.115***	-0.088***
	(0.005)	(0.008)	(0.006)	(0.006)	(0.007)	(0.012)
Observations	112,976	112,976	112,976	112,976	112,976	112,976
Panel C: 2004						
Difference	0.300***	0.119***	0.175***	0.286***	0.413***	0.507***
	(0.004)	(0.006)	(0.005)	(0.006)	(0.007)	(0.009)
Explained	0.273***	0.168***	0.202***	0.254***	0.327***	0.408***
	(0.004)	(0.005)	(0.004)	(0.004)	(0.005)	(0.009)
Unexplained	0.027***	-0.049***	-0.027***	0.032***	0.086***	0.099***
	(0.005)	(0.007)	(0.006)	(0.006)	(0.007)	(0.011)
Observations	124,587	124,587	124,587	124,587	124,587	124,587
Panel D: 2011						
Difference	0.341***	0.142***	0.221***	0.316***	0.443***	0.562***
	(0.006)	(0.009)	(0.007)	(0.007)	(0.008)	(0.012)
Explained	0.261***	0.187***	0.204***	0.248***	0.308***	0.369***
	(0.005)	(0.007)	(0.006)	(0.005)	(0.007)	(0.012)
Unexplained	0.081***	-0.045***	0.017**	0.068***	0.135***	0.194***
	(0.006)	(0.009)	(0.008)	(0.007)	(0.009)	(0.014)
Observations	101,655	101,655	101,655	101,655	101,655	101,655

*** p<0.01, ** p<0.05, * p<0.1

Table 4: Urban-rural per capita expenditure gap decomposition results, 1983

	1983					
	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	Q 10	Q25	Q 50	Q 75	Q 90
Difference	0.084***	0.041***	0.046***	0.060***	0.111***	0.172***
	(0.004)	(0.007)	(0.005)	(0.005)	(0.006)	(0.008)
Total explained	**0.214*** **	**0.184*** **	**0.186*** **	**0.204*** **	**0.241*** **	**0.248*** **
	(0.005)	(0.007)	(0.005)	(0.005)	(0.007)	(0.009)
Explained effect attributable to:						
Education	0.129***	0.080***	0.094***	0.123***	0.159***	0.180***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.006)
Demographics	0.047***	0.046***	0.047***	0.044***	0.047***	0.051***
	(0.001)	(0.002)	(0.002)	(0.001)	(0.002)	(0.002)
Industry	0.043***	0.051***	0.041***	0.037***	0.037***	0.036***
	(0.006)	(0.007)	(0.006)	(0.006)	(0.008)	(0.011)
Occupation	-0.001	0.008***	0.006**	0.001	-0.003	-0.011**
	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.005)
State	0.017***	0.009***	0.011***	0.015***	0.025***	0.028***
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)
LAND	-0.021***	-0.010***	-0.012***	-0.016***	-0.025***	-0.037***
	(0.005)	(0.003)	(0.003)	(0.005)	(0.007)	(0.009)
Total unexplained	**-0.130*** **	**-0.143*** **	**-0.140*** **	**-0.143*** **	**-0.130*** **	**-0.076*** **
	(0.005)	(0.008)	(0.007)	(0.006)	(0.008)	(0.011)
Unexplained effect attributable to:						
Education	-0.007	-0.009	0.006	0.015***	-0.006	-0.042***
	(0.005)	(0.007)	(0.005)	(0.005)	(0.007)	(0.010)
Demographics	-0.160***	-0.038	-0.050	-0.189***	-0.356***	-0.311***
	(0.038)	(0.059)	(0.044)	(0.043)	(0.054)	(0.074)
Industry	-0.002	0.082***	0.035*	-0.006	-0.035*	-0.099***
	(0.015)	(0.027)	(0.020)	(0.018)	(0.021)	(0.027)
Occupation	-0.006*	0.013***	-0.002	-0.008**	-0.017***	-0.013**
	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.007)
State	-0.024**	0.109***	0.040***	-0.039***	-0.119***	-0.126***
	(0.011)	(0.017)	(0.013)	(0.013)	(0.016)	(0.023)
LAND	-0.007	-0.002	-0.003	-0.005	-0.009	-0.013
	(0.005)	(0.003)	(0.004)	(0.005)	(0.008)	(0.010)
Constant	0.074*	-0.298***	-0.166***	0.089*	0.412***	0.530***
	(0.043)	(0.069)	(0.052)	(0.050)	(0.062)	(0.085)
Observations	113,333	113,333	113,333	113,333	113,333	113,333

*** p<0.01, ** p<0.05, * p<0.1

Table 5: Urban-rural per capita expenditure gap decomposition results, 1993

	1993					
	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	Q 10	Q25	Q 50	Q 75	Q 90
Difference	0.101***	-0.023***	0.022***	0.087***	0.186***	0.258***
	(0.004)	(0.006)	(0.005)	(0.005)	(0.005)	(0.008)
Total explained	0.255***	0.174***	0.197***	0.241***	0.301***	0.346***
	(0.004)	(0.005)	(0.004)	(0.004)	(0.006)	(0.009)
Explained effect attributable to:						
Education	0.133***	0.071***	0.091***	0.125***	0.168***	0.207***
	(0.002)	(0.003)	(0.002)	(0.002)	(0.003)	(0.005)
Demographics	0.048***	0.045***	0.044***	0.048***	0.050***	0.050***
	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)
Industry	0.059***	0.050***	0.042***	0.045***	0.062***	0.089***
	(0.004)	(0.005)	(0.004)	(0.004)	(0.005)	(0.008)
Occupation	0.005***	0.008***	0.013***	0.013***	0.005*	-0.012***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.004)
State	0.030***	0.012***	0.021***	0.028***	0.041***	0.048***
	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)	(0.003)
LAND	-0.021***	-0.011***	-0.014***	-0.018***	-0.024***	-0.036***
	(0.003)	(0.002)	(0.002)	(0.002)	(0.003)	(0.005)
Total unexplained	-0.154***	-0.197***	-0.174***	-0.154***	-0.115***	-0.088***
	(0.005)	(0.008)	(0.006)	(0.006)	(0.007)	(0.012)
Unexplained effect attributable to:						
Education	0.034***	0.040***	0.062***	0.061***	0.045***	-0.014
	(0.004)	(0.007)	(0.005)	(0.005)	(0.006)	(0.009)
Demographics	-0.143***	-0.118**	-0.102**	-0.183***	-0.293***	-0.341***
	(0.037)	(0.057)	(0.047)	(0.044)	(0.052)	(0.076)
Industry	-0.032***	0.017	0.027	-0.019	-0.074***	-0.092***
	(0.012)	(0.023)	(0.017)	(0.015)	(0.019)	(0.024)
Occupation	-0.019***	0.005	-0.005	-0.016***	-0.031***	-0.059***
	(0.003)	(0.004)	(0.003)	(0.003)	(0.004)	(0.007)
State	-0.022**	0.077***	0.009	-0.017	-0.087***	-0.080***
	(0.011)	(0.018)	(0.013)	(0.012)	(0.015)	(0.021)
LAND	-0.003	0.001	0.001	-0.002	-0.005*	-0.011***
	(0.002)	(0.001)	(0.001)	(0.002)	(0.003)	(0.004)
Constant	0.031	-0.220***	-0.167***	0.021	0.330***	0.509***
	(0.041)	(0.065)	(0.053)	(0.050)	(0.059)	(0.084)
Observations	112,976	112,976	112,976	112,976	112,976	112,976

*** p<0.01, ** p<0.05, * p<0.1

Table 6: Urban-rural per capita expenditure gap decomposition results, 2004

	2004					
	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	Q 10	Q25	Q 50	Q 75	Q 90
Difference	0.300***	0.119***	0.175***	0.286***	0.413***	0.507***
	(0.004)	(0.006)	(0.005)	(0.006)	(0.007)	(0.009)
Total explained	0.273***	0.168***	0.202***	0.254***	0.327***	0.408***
	(0.004)	(0.005)	(0.004)	(0.004)	(0.005)	(0.009)
Explained effect attributable to:						
Education	0.140***	0.065***	0.092***	0.134***	0.178***	0.227***
	(0.002)	(0.002)	(0.002)	(0.003)	(0.004)	(0.006)
Demographics	0.067***	0.065***	0.063***	0.065***	0.069***	0.069***
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Industry	0.045***	0.025***	0.027***	0.034***	0.054***	0.085***
	(0.003)	(0.005)	(0.004)	(0.004)	(0.005)	(0.007)
Occupation	0.007***	0.011***	0.011***	0.011***	0.008***	-0.002
	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.005)
State	0.013***	0.003	0.009***	0.011***	0.018***	0.029***
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)
LAND	-0.000	-0.000***	0.000	0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Total unexplained	0.027***	-0.049***	-0.027***	0.032***	0.086***	0.099***
	(0.005)	(0.007)	(0.006)	(0.006)	(0.007)	(0.011)
Unexplained effect attributable to:						
Education	0.058***	0.072***	0.119***	0.107***	0.034***	-0.050***
	(0.006)	(0.010)	(0.008)	(0.008)	(0.008)	(0.011)
Demographics	-0.081*	-0.053	-0.057	-0.089	-0.010	-0.116
	(0.045)	(0.065)	(0.055)	(0.057)	(0.071)	(0.102)
Industry	-0.005	0.060***	0.035***	0.001	-0.056***	-0.077***
	(0.008)	(0.015)	(0.012)	(0.011)	(0.013)	(0.018)
Occupation	-0.009***	0.010***	0.003	-0.008***	-0.029***	-0.034***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.006)
State	-0.118***	-0.116***	-0.114***	-0.118***	-0.126***	-0.136***
	(0.011)	(0.021)	(0.015)	(0.014)	(0.016)	(0.024)
LAND	0.001**	0.000*	0.001*	0.001*	0.001*	0.002*
	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)
Constant	0.181***	-0.023	-0.016	0.137**	0.273***	0.509***
	(0.048)	(0.070)	(0.059)	(0.060)	(0.074)	(0.107)
Observations	124,587	124,587	124,587	124,587	124,587	124,587

*** p<0.01, ** p<0.05, * p<0.1

Table 7: Urban-rural per capita expenditure gap decomposition results, 2011

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	Q 10	Q25	Q 50	Q 75	Q 90
Difference	0.341***	0.142***	0.221***	0.316***	0.443***	0.562***
	(0.006)	(0.009)	(0.007)	(0.007)	(0.008)	(0.012)
Total explained	0.261***	0.187***	0.204***	0.248***	0.308***	0.369***
	(0.005)	(0.007)	(0.006)	(0.005)	(0.007)	(0.012)
Explained effect attributable to:						
Education	0.129***	0.069***	0.083***	0.114***	0.163***	0.226***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.008)
Demographics	0.057***	0.057***	0.054***	0.055***	0.057***	0.061***
	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.003)
Industry	0.056***	0.028***	0.037***	0.046***	0.067***	0.085***
	(0.004)	(0.006)	(0.005)	(0.005)	(0.006)	(0.009)
Occupation	0.022***	0.017***	0.021***	0.030***	0.027***	0.015***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.005)
State	0.022***	0.027***	0.022***	0.023***	0.023***	0.024***
	(0.002)	(0.003)	(0.003)	(0.002)	(0.003)	(0.004)
LAND	-0.024***	-0.011***	-0.013***	-0.019***	-0.030***	-0.041***
	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)	(0.005)
Total unexplained	0.081***	-0.045***	0.017**	0.068***	0.135***	0.194***
	(0.006)	(0.009)	(0.008)	(0.007)	(0.009)	(0.014)
Unexplained effect attributable to:						
Education	0.048***	0.088***	0.103***	0.081***	0.021**	-0.032**
	(0.007)	(0.013)	(0.010)	(0.010)	(0.010)	(0.015)
Demographics	-0.265***	-0.030	-0.172**	-0.355***	-0.555***	-0.317**
	(0.066)	(0.094)	(0.087)	(0.079)	(0.091)	(0.153)
Industry	-0.006	-0.009	0.007	-0.006	-0.002	-0.022
	(0.008)	(0.013)	(0.011)	(0.010)	(0.011)	(0.018)
Occupation	-0.005**	0.005**	0.001	-0.000	-0.005	-0.013**
	(0.002)	(0.003)	(0.002)	(0.003)	(0.004)	(0.006)
State	-0.144***	-0.171***	-0.153***	-0.117***	-0.132***	-0.176***
	(0.016)	(0.025)	(0.021)	(0.019)	(0.022)	(0.034)
LAND	-0.005**	-0.002	-0.003*	-0.003	-0.004	-0.007
	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.005)
Constant	0.457***	0.074	0.235***	0.468***	0.813***	0.760***
	(0.069)	(0.100)	(0.091)	(0.083)	(0.096)	(0.160)
Observations	101,655	101,655	101,655	101,655	101,655	101,655

*** p<0.01, ** p<0.05, * p<0.1

Table 8: Detailed contribution of education in urban-rural consumption expenditure gap

	OLS		Q10		Q 25		Q 50		Q 75		Q 90	
	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)	(5a)	(5b)	(6a)	(6b)
	explained	*unexplained*	*explained*	*unexplained*	*explained*	*unexplained*	*explained*	*unexplained*	*explained*	*unexplained*	*explained*	*unexplained*
Panel A: 1983												
Education	**0.129*** **	**-0.007**	**0.080*** **	**-0.009**	**0.094*** **	**0.006**	**0.123*** **	**0.015*** **	**0.159*** **	**-0.006**	**0.180*** **	**-0.042*** **
Primary	0.005***	-0.010***	0.006***	-0.006**	0.005***	-0.003	0.005***	-0.006***	0.006***	-0.016***	0.005***	-0.019***
	(0.000)	(0.002)	(0.001)	(0.003)	(0.000)	(0.002)	(0.000)	(0.002)	(0.000)	(0.003)	(0.001)	(0.003)
Middle	0.019***	-0.007***	0.017***	-0.002	0.018***	-0.001	0.019***	-0.001	0.020***	-0.010***	0.021***	-0.023***
	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.003)	(0.001)	(0.004)
Secondary	0.057***	0.003*	0.036***	-0.001	0.043***	0.008***	0.056***	0.014***	0.071***	0.008***	0.073***	-0.012***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.005)
Graduate & above	0.048***	0.007***	0.022***	-0.000	0.027***	0.002**	0.042***	0.008***	0.063***	0.011***	0.081***	0.012***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.003)	(0.003)
Panel B: 1993												
Education	**0.133*** **	**0.034*** **	**0.071*** **	**0.040*** **	**0.091*** **	**0.062*** **	**0.125*** **	**0.061*** **	**0.168*** **	**0.045*** **	**0.207*** **	**-0.014**
Primary	0.001***	-0.001	0.001***	0.005*	0.001***	0.008***	0.001***	-0.000	0.001***	-0.003*	0.001***	-0.009***
	(0.000)	(0.001)	(0.000)	(0.002)	(0.000)	(0.002)	(0.000)	(0.002)	(0.000)	(0.002)	(0.000)	(0.003)
Middle	0.010***	0.002	0.008***	0.009***	0.009***	0.013***	0.010***	0.008***	0.010***	-0.004*	0.011***	-0.015***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.003)
Secondary	0.030***	0.010***	0.019***	0.014***	0.024***	0.020***	0.029***	0.020***	0.034***	0.011***	0.040***	-0.006*
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.004)
Sr. Secondary	0.023***	0.007***	0.014***	0.006***	0.017***	0.009***	0.023***	0.012***	0.028***	0.012***	0.034***	-0.000
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)
Graduate & above	0.069***	0.016***	0.029***	0.007***	0.040***	0.013***	0.062***	0.021***	0.094***	0.029***	0.120***	0.017***
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.004)	(0.004)

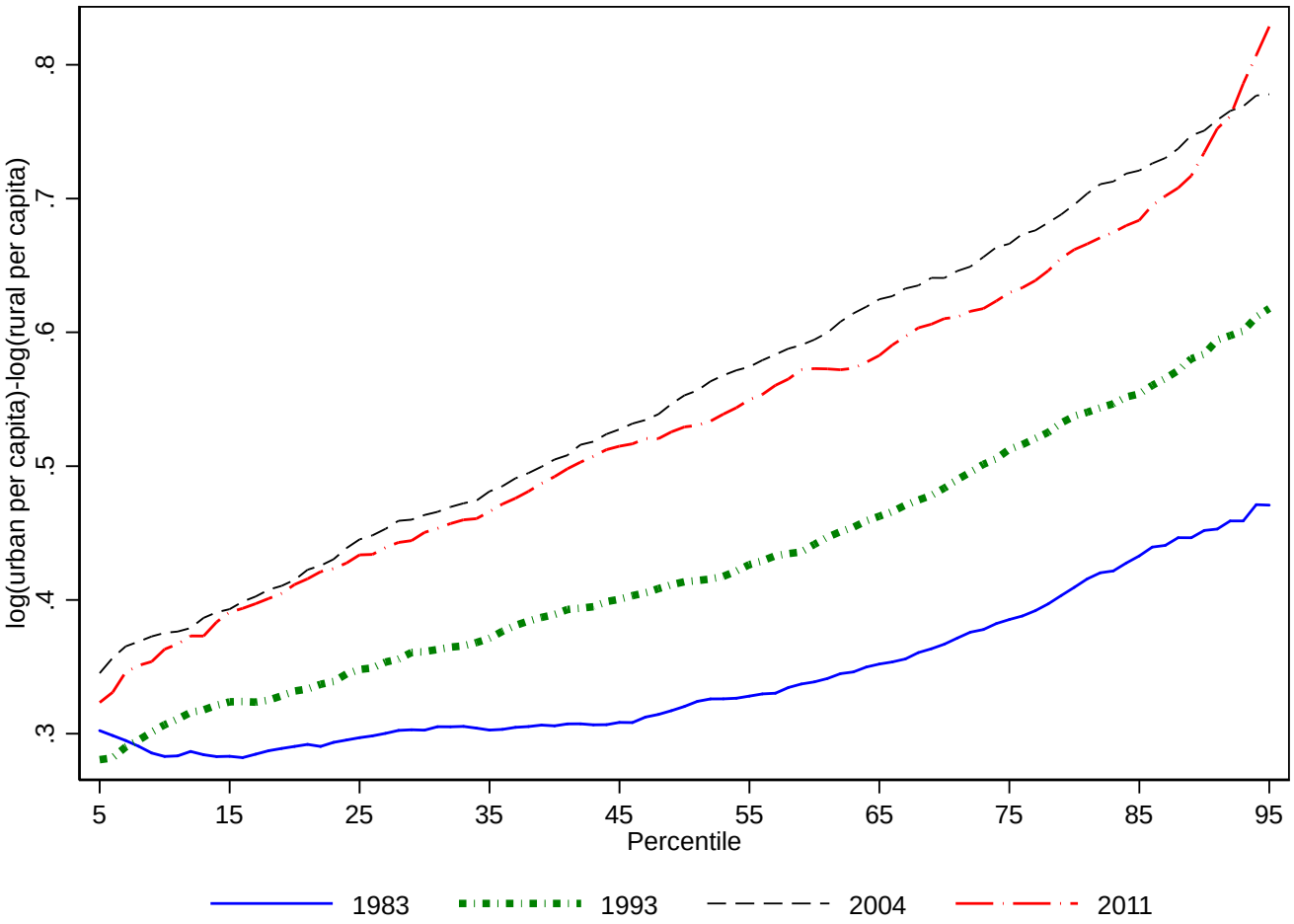
*** p<0.01, ** p<0.05, * p<0.1

Table 8 continued next page….

Table 8 continued…

	OLS		Q10		Q 25		Q 50		Q 75		Q 90	
	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)	(5a)	(5b)	(6a)	(6b)
	explained	*unexplained*	*explained*	*unexplained*	*explained*	*unexplained*	*explained*	*unexplained*	*explained*	*unexplained*	*explained*	*unexplained*
Panel C: 2004												
Education	**0.140*** **	**0.058*** **	**0.065*** **	**0.072*** **	**0.092*** **	**0.119*** **	**0.134*** **	**0.107*** **	**0.178*** **	**0.034*** **	**0.227*** **	**-0.050*** **
Primary	-0.001***	0.000	-0.001***	0.008***	-0.002***	0.012***	-0.001***	-0.001	-0.001***	-0.010***	-0.001***	-0.011***
	(0.000)	(0.002)	(0.000)	(0.003)	(0.000)	(0.003)	(0.000)	(0.002)	(0.000)	(0.002)	(0.000)	(0.003)
Middle	0.006***	0.008***	0.005***	0.021***	0.006***	0.031***	0.007***	0.017***	0.007***	-0.009***	0.007***	-0.023***
	(0.000)	(0.002)	(0.000)	(0.003)	(0.000)	(0.003)	(0.001)	(0.003)	(0.001)	(0.003)	(0.001)	(0.004)
Secondary	0.024***	0.015***	0.015***	0.018***	0.020***	0.031***	0.026***	0.033***	0.028***	0.008***	0.027***	-0.021***
	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.003)	(0.001)	(0.004)
Sr. Secondary	0.026***	0.013***	0.014***	0.012***	0.019***	0.020***	0.027***	0.024***	0.032***	0.012***	0.036***	-0.007**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.003)
Graduate	0.060***	0.016***	0.024***	0.010***	0.036***	0.019***	0.054***	0.025***	0.079***	0.023***	0.108***	0.009**
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.004)	(0.004)
Post Graduate	0.027***	0.005***	0.008***	0.004***	0.013***	0.007***	0.022***	0.010***	0.034***	0.009***	0.050***	0.003
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.003)	(0.002)
Panel D: 2011												
Education	**0.129*** **	**0.048*** **	**0.069*** **	**0.088*** **	**0.083*** **	**0.103*** **	**0.114*** **	**0.081*** **	**0.163*** **	**0.021** **	**0.226*** **	**-0.032** **
Primary	-0.002***	0.003*	-0.003***	0.012***	-0.002***	0.014***	-0.002***	0.009***	-0.002***	-0.006**	-0.001***	-0.014***
	(0.000)	(0.002)	(0.000)	(0.003)	(0.000)	(0.003)	(0.000)	(0.003)	(0.000)	(0.003)	(0.000)	(0.003)
Middle	-0.000	0.000	-0.000	0.016***	-0.000	0.012***	-0.000	0.003	-0.000	-0.009***	-0.000	-0.014***
	(0.000)	(0.002)	(0.000)	(0.004)	(0.000)	(0.003)	(0.000)	(0.003)	(0.000)	(0.003)	(0.000)	(0.004)
Secondary	0.015***	0.007***	0.014***	0.024***	0.014***	0.028***	0.015***	0.016***	0.016***	-0.005	0.017***	-0.028***
	(0.001)	(0.002)	(0.001)	(0.004)	(0.001)	(0.003)	(0.001)	(0.003)	(0.001)	(0.004)	(0.002)	(0.006)
Sr. Secondary	0.024***	0.012***	0.018***	0.016***	0.020***	0.021***	0.023***	0.022***	0.029***	0.011***	0.034***	-0.006
	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.003)	(0.002)	(0.005)
Graduate	0.052***	0.017***	0.026***	0.015***	0.033***	0.020***	0.047***	0.022***	0.069***	0.018***	0.090***	0.015***
	(0.002)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.004)	(0.005)
Post Graduate	0.040***	0.009***	0.015***	0.006***	0.019***	0.008***	0.031***	0.009***	0.051***	0.012***	0.086***	0.015***
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.005)	(0.003)

Figure A1: Difference in log of urban and rural nominal per capita consumption expenditure



Note: The per capita consumption expenditure is not adjusted for prices differences across states and rural/urban.

Figure A2: Difference in log of urban and rural per capita consumption expenditure (IHDS)

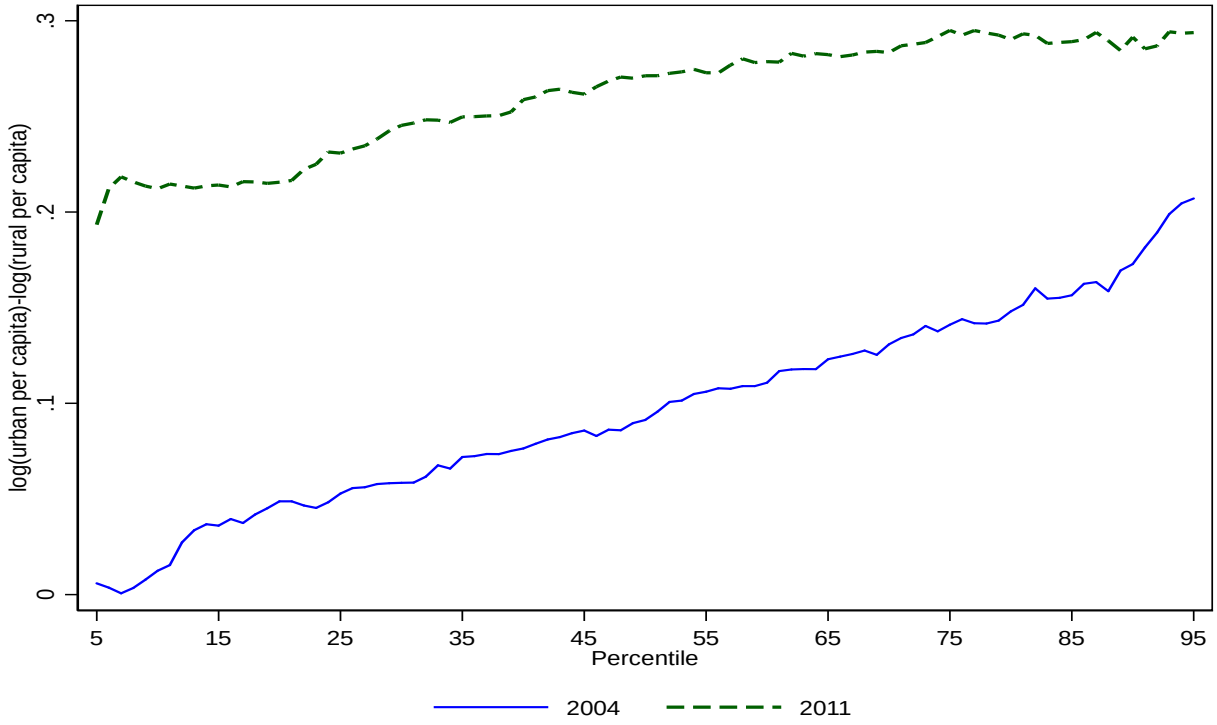


Figure A3: Difference in log of urban and rural log of per capita income (IHDS)

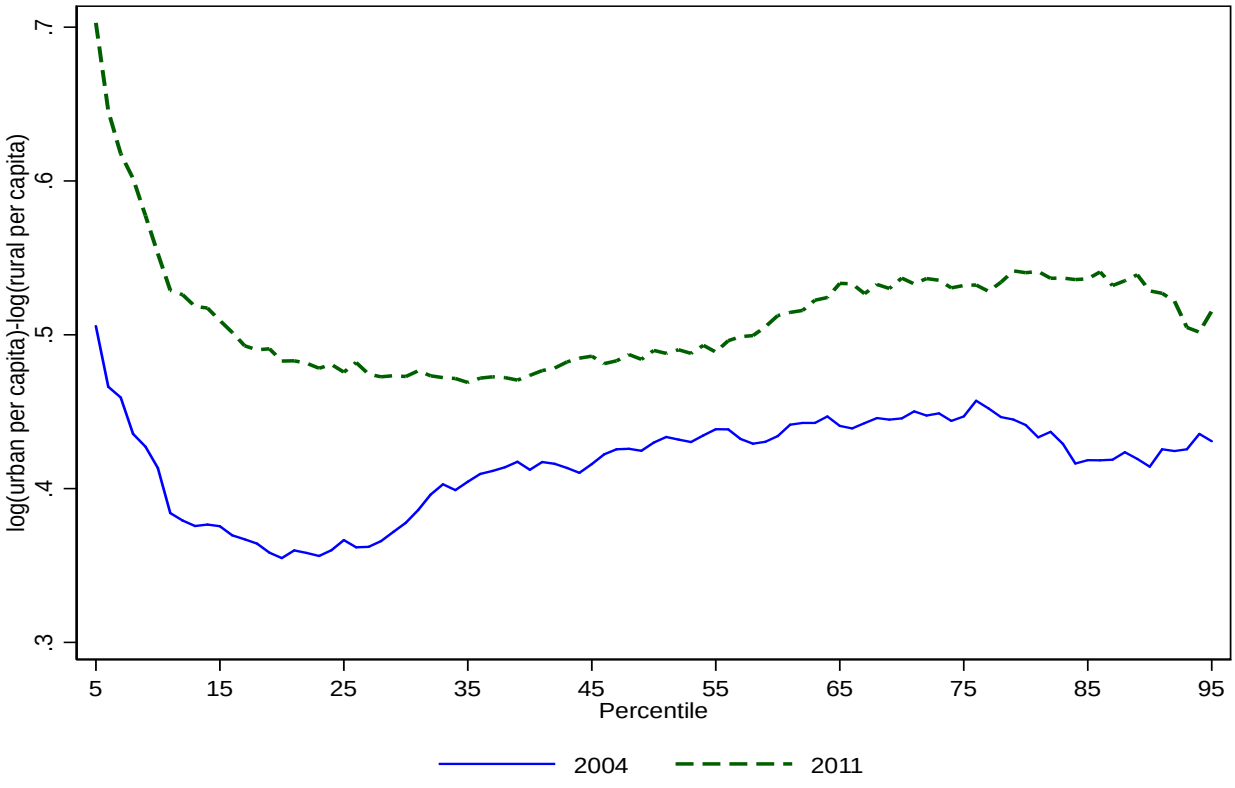


Figure A4: Decomposition of urban-rural differences in log of per capita consumption expenditure (IHDS)

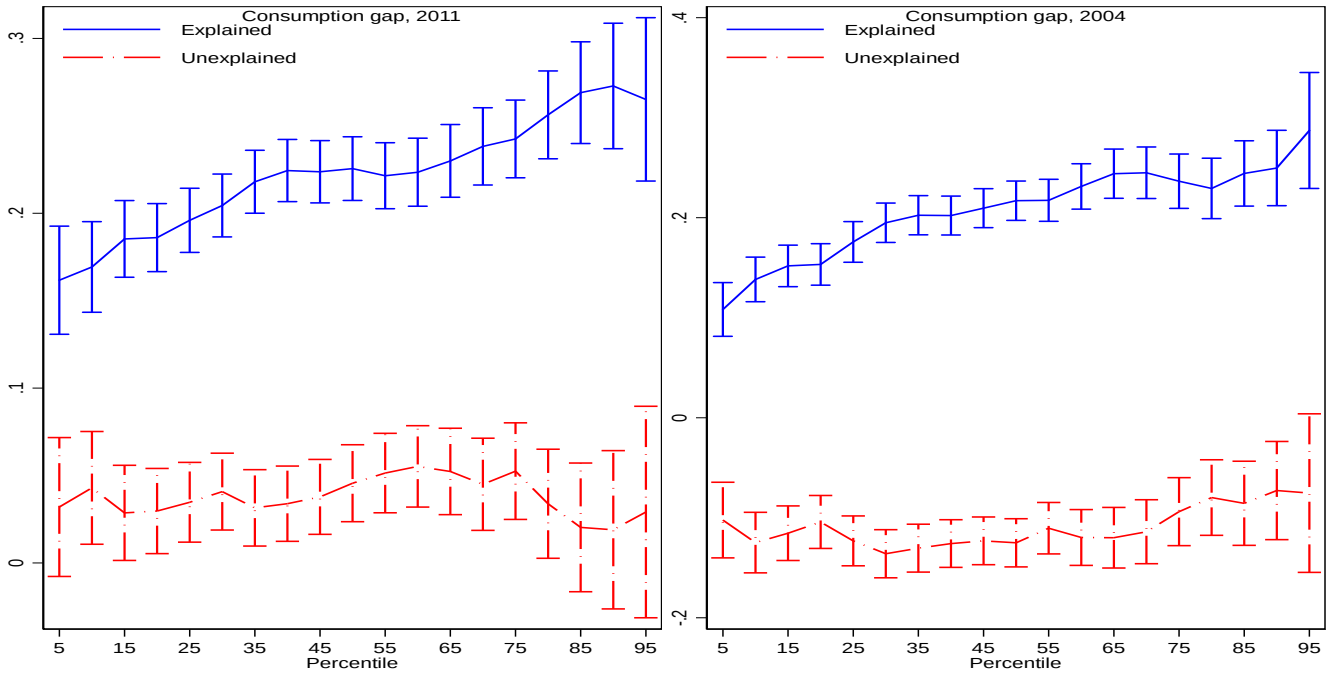


Figure A5: Decomposition of urban-rural differences in log of per capita income expenditure (IHDS)

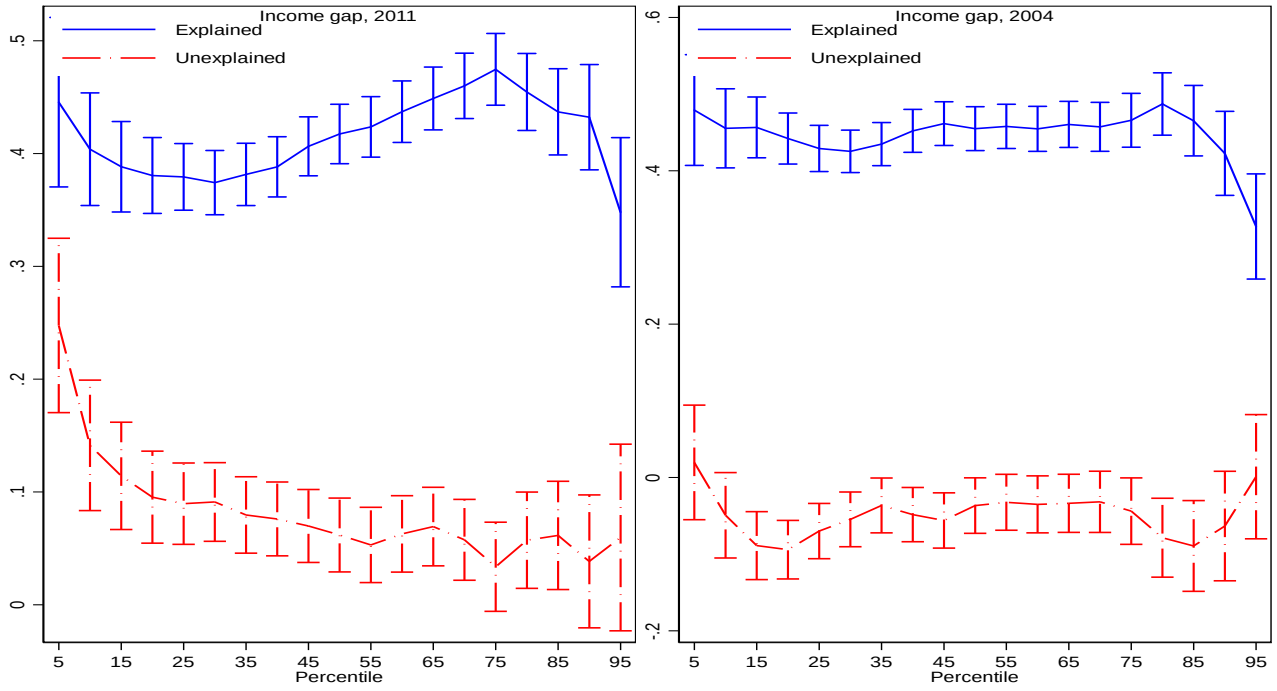


Figure A6: Decomposition results using rural price as counterfactual

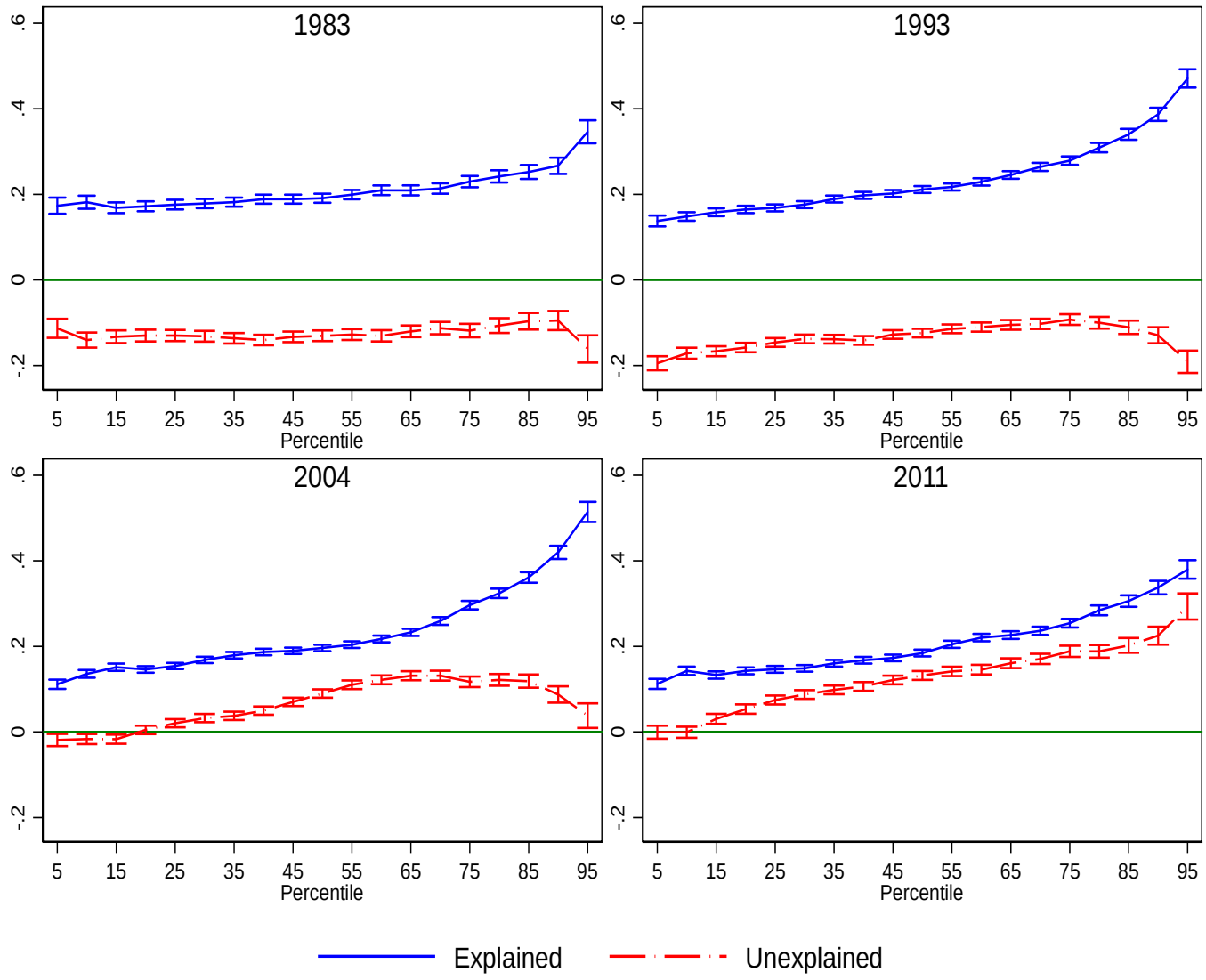
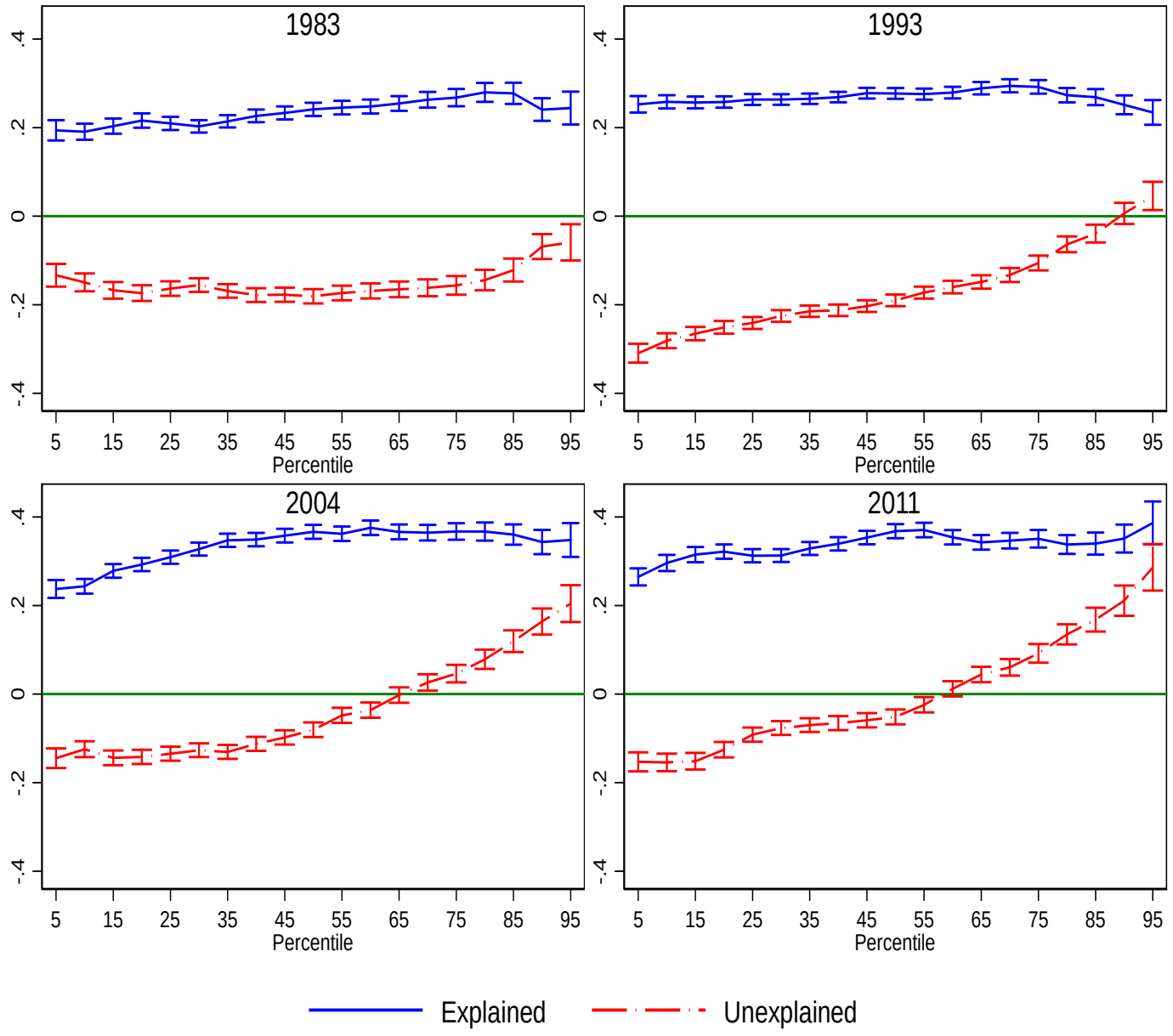


Figure A7: Decomposition results using urban price as counterfactual



Appendix Table A1: Descriptive statistics

	1983		1993		2004		2011	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
log(per capita expenditure)	5.00	4.91	6.08	5.97	6.81	6.51	7.63	7.29
Scheduled Tribes	0.03	0.10	0.03	0.11	0.03	0.11	0.03	0.11
Scheduled Castes	0.12	0.18	0.14	0.21	0.16	0.21	0.15	0.21
Others	0.85	0.72	0.83	0.68	0.81	0.68	0.82	0.68
Muslim	0.16	0.10	0.15	0.10	0.16	0.11	0.17	0.12
HH head-female	0.07	0.07	0.08	0.06	0.08	0.08	0.09	0.09
HH head-married	0.89	0.89	0.89	0.90	0.88	0.90	0.87	0.90
HH head-age	43.93	45.10	44.18	44.95	46.15	46.06	46.53	46.75
HH head age square	2099	2220	2117	2199	2302	2296	2340	2353
Dependency ratio	0.40	0.45	0.37	0.41	0.33	0.40	0.30	0.36
Number of adult males	1.89	1.76	1.78	1.74	1.86	1.77	1.80	1.77
Number of adult females	1.75	1.73	1.66	1.68	1.75	1.73	1.71	1.71
HH size	6.34	6.58	5.69	6.08	5.59	6.09	5.23	5.66
Land in acres	0.11	0.59	0.09	0.51	0.10	0.61	0.08	0.36
Education								
Below Primary	0.41	0.74	0.36	0.68	0.28	0.56	0.27	0.53
Primary	0.17	0.13	0.13	0.12	0.14	0.15	0.11	0.13
Middle	0.15	0.08	0.15	0.10	0.18	0.15	0.15	0.15
Secondary	0.18	0.04	0.15	0.05	0.15	0.07	0.17	0.10
Senior Secondary			0.08	0.02	0.10	0.04	0.12	0.05
Graduate	0.09	0.01	0.13	0.02	0.12	0.02	0.13	0.03
Post Graduate					0.04	0.01	0.06	0.01
Number of households	38,274	75066	46,074	69,120	45,321	79,268	41,964	59,691

Note: Survey weights are used. The 1983 data do not distinguish between secondary and senior secondary. The 1983 and 1993 data do not distinguish between graduate and post graduate degrees.

Table A2: Determinants of consumption, 1983

	OLS		Q 10		Q 50		Q 90	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Primary	0.106***	0.167***	0.131***	0.163***	0.121***	0.160***	0.046***	0.162***
	(0.007)	(0.005)	(0.022)	(0.011)	(0.014)	(0.009)	(0.016)	(0.016)
Middle	0.220***	0.275***	0.220***	0.221***	0.255***	0.271***	0.158***	0.331***
	(0.008)	(0.007)	(0.018)	(0.012)	(0.016)	(0.011)	(0.020)	(0.026)
Secondary	0.416***	0.372***	0.255***	0.241***	0.464***	0.337***	0.468***	0.540***
	(0.008)	(0.009)	(0.016)	(0.014)	(0.015)	(0.016)	(0.027)	(0.035)
Graduate and above	0.660***	0.436***	0.268***	0.221***	0.602***	0.380***	1.158***	0.746***
	(0.010)	(0.018)	(0.017)	(0.026)	(0.017)	(0.026)	(0.047)	(0.071)
Scheduled Tribes	-0.145***	-0.244***	-0.193***	-0.300***	-0.128***	-0.236***	-0.069**	-0.207***
	(0.015)	(0.006)	(0.046)	(0.016)	(0.025)	(0.009)	(0.031)	(0.012)
Scheduled Castes	-0.124***	-0.172***	-0.132***	-0.175***	-0.131***	-0.170***	-0.099***	-0.191***
	(0.008)	(0.005)	(0.022)	(0.013)	(0.015)	(0.009)	(0.018)	(0.013)
Muslim	-0.065***	-0.032***	-0.110***	-0.071***	-0.076***	-0.042***	-0.002	-0.032**
	(0.007)	(0.006)	(0.021)	(0.018)	(0.014)	(0.010)	(0.017)	(0.015)
Head-Female	0.022*	0.056***	0.013	0.007	0.077***	0.050***	-0.053	0.085***
	(0.012)	(0.008)	(0.032)	(0.021)	(0.022)	(0.012)	(0.038)	(0.020)
Head-Married	0.047***	0.032***	0.080***	0.019	0.071***	0.028***	-0.051	0.043***
	(0.010)	(0.006)	(0.025)	(0.013)	(0.019)	(0.009)	(0.039)	(0.016)
Head Age	-0.001	-0.003***	-0.005*	-0.003*	-0.004*	-0.003***	0.006*	-0.002
	(0.001)	(0.001)	(0.003)	(0.002)	(0.002)	(0.001)	(0.003)	(0.002)
Head Age squared	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	-0.000	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Dependency ratio	-0.565***	-0.364***	-0.057	-0.224***	-0.472***	-0.358***	-1.217***	-0.487***
	(0.021)	(0.016)	(0.051)	(0.039)	(0.043)	(0.024)	(0.083)	(0.055)
Number of adult male	0.009**	0.035***	0.078***	0.050***	0.028***	0.029***	-0.095***	0.025**
	(0.004)	(0.003)	(0.011)	(0.008)	(0.009)	(0.005)	(0.016)	(0.011)
Number of adult female	-0.035***	-0.004	0.045***	0.018*	-0.024**	-0.003	-0.147***	-0.028**
	(0.004)	(0.003)	(0.013)	(0.009)	(0.010)	(0.006)	(0.017)	(0.012)
Household Size	-0.035***	-0.025***	-0.062***	-0.028***	-0.045***	-0.021***	0.014*	-0.030***
	(0.002)	(0.002)	(0.008)	(0.005)	(0.006)	(0.003)	(0.008)	(0.006)
Constant	5.154***	5.080***	4.183***	4.474***	5.123***	5.037***	6.227***	5.688***
	(0.028)	(0.022)	(0.063)	(0.046)	(0.050)	(0.033)	(0.077)	(0.059)
Observations	38,274	75,059	38,274	75,059	38,274	75,059	38,274	75,059
R-squared	0.349	0.275	0.101	0.093	0.250	0.188	0.175	0.116

Note: All the models include controls for land, states, occupation, and industries. *** p<0.01, ** p<0.05, * p<0.1

Table A3: Determinants of consumption, 1993

VARIABLES	OLS		Q 10		Q 50		Q 90	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Primary	0.118***	0.124***	0.126***	0.092***	0.129***	0.134***	0.084***	0.152***
	(0.007)	(0.005)	(0.021)	(0.010)	(0.014)	(0.008)	(0.015)	(0.014)
Middle	0.208***	0.194***	0.199***	0.139***	0.249***	0.192***	0.141***	0.246***
	(0.007)	(0.005)	(0.019)	(0.011)	(0.015)	(0.009)	(0.018)	(0.017)
Secondary	0.375***	0.282***	0.285***	0.165***	0.433***	0.252***	0.392***	0.430***
	(0.007)	(0.007)	(0.016)	(0.011)	(0.016)	(0.011)	(0.024)	(0.027)
Senior Secondary	0.488***	0.356***	0.306***	0.209***	0.533***	0.319***	0.594***	0.576***
	(0.009)	(0.011)	(0.017)	(0.014)	(0.018)	(0.016)	(0.035)	(0.042)
Graduate and above	0.715***	0.443***	0.301***	0.177***	0.689***	0.345***	1.170***	0.866***
	(0.008)	(0.012)	(0.017)	(0.017)	(0.015)	(0.017)	(0.038)	(0.053)
Scheduled Tribes	-0.119***	-0.177***	-0.158***	-0.171***	-0.111***	-0.194***	-0.052	-0.152***
	(0.012)	(0.005)	(0.038)	(0.012)	(0.021)	(0.009)	(0.037)	(0.016)
Scheduled Castes	-0.162***	-0.158***	-0.171***	-0.139***	-0.186***	-0.164***	-0.128***	-0.171***
	(0.007)	(0.004)	(0.021)	(0.010)	(0.013)	(0.007)	(0.016)	(0.010)
Muslim	-0.052***	-0.039***	-0.029	-0.037***	-0.087***	-0.045***	-0.038**	-0.040***
	(0.006)	(0.006)	(0.021)	(0.014)	(0.014)	(0.009)	(0.015)	(0.014)
Head-Female	0.081***	0.087***	0.033	0.025*	0.093***	0.078***	0.100***	0.151***
	(0.011)	(0.008)	(0.029)	(0.015)	(0.021)	(0.011)	(0.032)	(0.020)
Head-Married	0.057***	0.043***	0.055**	0.039***	0.041**	0.033***	0.019	0.054***
	(0.009)	(0.006)	(0.023)	(0.013)	(0.018)	(0.010)	(0.025)	(0.016)
Head Age	-0.003***	-0.005***	-0.008***	-0.005***	-0.006***	-0.006***	-0.004	-0.004*
	(0.001)	(0.001)	(0.003)	(0.001)	(0.002)	(0.001)	(0.003)	(0.002)
Head Age squared	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Dependency ratio	-0.743***	-0.519***	-0.028	-0.219***	-0.574***	-0.469***	-1.393***	-0.829***
	(0.021)	(0.017)	(0.076)	(0.034)	(0.053)	(0.025)	(0.067)	(0.044)
Number of adult male	-0.054***	-0.002	0.096***	0.047***	-0.018	0.004	-0.195***	-0.058***
	(0.004)	(0.003)	(0.017)	(0.008)	(0.011)	(0.005)	(0.013)	(0.009)
Number of adult female	-0.079***	-0.035***	0.070***	0.030***	-0.050***	-0.022***	-0.226***	-0.106***
	(0.004)	(0.004)	(0.018)	(0.009)	(0.012)	(0.006)	(0.014)	(0.010)
Household Size	-0.010***	-0.012***	-0.088***	-0.034***	-0.029***	-0.016***	0.060***	0.011**
	(0.003)	(0.002)	(0.012)	(0.005)	(0.008)	(0.003)	(0.007)	(0.005)
Constant	6.246***	6.215***	5.351***	5.570***	6.209***	6.193***	7.426***	6.914***
	(0.025)	(0.020)	(0.062)	(0.042)	(0.050)	(0.032)	(0.074)	(0.055)
Observations	43,856	69,120	43,856	69,120	43,856	69,120	43,856	69,120
R-squared	0.424	0.294	0.133	0.084	0.307	0.207	0.199	0.136

Note: All the models include controls for land, states, occupation, and industries. *** p<0.01, ** p<0.05, * p<0.1

Table A4: Determinants of consumption, 2004

VARIABLES	OLS		Q 10		Q 50		Q 90	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Primary	0.112***	0.110***	0.162***	0.102***	0.111***	0.122***	0.032	0.111***
	(0.007)	(0.004)	(0.025)	(0.010)	(0.020)	(0.008)	(0.019)	(0.013)
Middle	0.239***	0.194***	0.258***	0.136***	0.297***	0.208***	0.094***	0.227***
	(0.007)	(0.004)	(0.021)	(0.010)	(0.019)	(0.008)	(0.020)	(0.015)
Secondary	0.389***	0.269***	0.295***	0.151***	0.518***	0.269***	0.235***	0.395***
	(0.007)	(0.006)	(0.020)	(0.011)	(0.022)	(0.010)	(0.027)	(0.022)
Senior Secondary	0.519***	0.350***	0.332***	0.185***	0.630***	0.330***	0.522***	0.590***
	(0.009)	(0.008)	(0.019)	(0.012)	(0.022)	(0.013)	(0.039)	(0.034)
Graduate	0.740***	0.465***	0.327***	0.184***	0.750***	0.364***	1.178***	0.947***
	(0.009)	(0.011)	(0.019)	(0.014)	(0.022)	(0.016)	(0.058)	(0.052)
Post Graduate	0.900***	0.638***	0.313***	0.164***	0.842***	0.393***	1.536***	1.328***
	(0.013)	(0.018)	(0.021)	(0.026)	(0.025)	(0.027)	(0.093)	(0.106)
Scheduled Tribes	-0.133***	-0.209***	-0.202***	-0.259***	-0.064**	-0.198***	-0.086**	-0.172***
	(0.014)	(0.005)	(0.036)	(0.016)	(0.031)	(0.009)	(0.039)	(0.011)
Scheduled Castes	-0.193***	-0.161***	-0.193***	-0.126***	-0.211***	-0.168***	-0.155***	-0.189***
	(0.006)	(0.004)	(0.022)	(0.011)	(0.018)	(0.007)	(0.020)	(0.011)
Muslim	-0.075***	-0.046***	-0.099***	-0.025**	-0.109***	-0.052***	-0.029	-0.045***
	(0.006)	(0.005)	(0.021)	(0.013)	(0.019)	(0.010)	(0.023)	(0.016)
Head-Female	0.052***	0.061***	0.031	-0.007	0.065**	0.055***	0.051	0.087***
	(0.011)	(0.007)	(0.031)	(0.018)	(0.028)	(0.012)	(0.050)	(0.023)
Head-Married	0.018**	0.052***	0.033	0.043***	0.011	0.036***	0.001	0.035
	(0.009)	(0.006)	(0.026)	(0.015)	(0.025)	(0.011)	(0.041)	(0.021)
Head Age	-0.001	-0.004***	-0.004	-0.004***	-0.002	-0.007***	-0.002	-0.005*
	(0.001)	(0.001)	(0.003)	(0.002)	(0.003)	(0.001)	(0.006)	(0.002)
Head Age squared	0.000***	0.000***	0.000**	0.000***	0.000***	0.000***	0.000*	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Dependency ratio	-0.590***	-0.510***	0.003	-0.199***	-0.587***	-0.426***	-1.134***	-0.849***
	(0.022)	(0.015)	(0.067)	(0.035)	(0.064)	(0.029)	(0.159)	(0.048)
Number of adult male	-0.036***	-0.007**	0.095***	0.041***	-0.026	0.011*	-0.165***	-0.068***
	(0.005)	(0.003)	(0.016)	(0.008)	(0.016)	(0.006)	(0.037)	(0.010)
Number of adult female	-0.055***	-0.029***	0.064***	0.025***	-0.044***	-0.012*	-0.188***	-0.089***
	(0.005)	(0.003)	(0.017)	(0.009)	(0.017)	(0.007)	(0.041)	(0.011)
Household Size	-0.023***	-0.017***	-0.085***	-0.040***	-0.033***	-0.025***	0.052***	0.009*
	(0.003)	(0.002)	(0.011)	(0.005)	(0.009)	(0.004)	(0.018)	(0.005)
Constant	6.810***	6.629***	5.941***	5.965***	6.755***	6.624***	7.892***	7.382***
	(0.027)	(0.019)	(0.069)	(0.044)	(0.066)	(0.035)	(0.107)	(0.064)
Observations	45,320	79,267	45,320	79,267	45,320	79,267	45,320	79,267
R-squared	0.446	0.292	0.143	0.107	0.331	0.206	0.211	0.141

Note: All the models include controls for land, states, occupation, and industries. *** p<0.01, ** p<0.05, * p<0.1

Table A5: Determinants of consumption, 2011

VARIABLES	OLS		Q 10		Q 50		Q 90	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Primary	0.102***	0.073***	0.216***	0.111***	0.141***	0.066***	-0.047**	0.075***
	(0.009)	(0.005)	(0.028)	(0.016)	(0.023)	(0.013)	(0.020)	(0.018)
Middle	0.157***	0.155***	0.232***	0.124***	0.181***	0.164***	0.067***	0.156***
	(0.008)	(0.005)	(0.028)	(0.016)	(0.021)	(0.013)	(0.023)	(0.019)
Secondary	0.260***	0.210***	0.319***	0.156***	0.308***	0.209***	0.118***	0.304***
	(0.008)	(0.006)	(0.023)	(0.016)	(0.021)	(0.014)	(0.026)	(0.030)
Senior Secondary	0.412***	0.285***	0.359***	0.192***	0.460***	0.233***	0.430***	0.465***
	(0.009)	(0.008)	(0.024)	(0.015)	(0.023)	(0.018)	(0.042)	(0.039)
Graduate	0.618***	0.358***	0.360***	0.163***	0.608***	0.288***	0.966***	0.678***
	(0.009)	(0.011)	(0.022)	(0.017)	(0.021)	(0.021)	(0.051)	(0.062)
Post Graduate	0.913***	0.475***	0.379***	0.156***	0.728***	0.350***	1.864***	1.031***
	(0.012)	(0.020)	(0.025)	(0.023)	(0.027)	(0.030)	(0.113)	(0.100)
Scheduled Tribes	-0.164***	-0.209***	-0.268***	-0.267***	-0.125***	-0.210***	-0.141***	-0.149***
	(0.013)	(0.006)	(0.043)	(0.023)	(0.031)	(0.013)	(0.041)	(0.017)
Scheduled Castes	-0.160***	-0.108***	-0.145***	-0.102***	-0.157***	-0.122***	-0.193***	-0.110***
	(0.007)	(0.004)	(0.023)	(0.016)	(0.017)	(0.011)	(0.025)	(0.016)
Muslim	-0.075***	0.005	-0.062**	0.032*	-0.080***	-0.007	-0.062**	0.027
	(0.007)	(0.006)	(0.024)	(0.019)	(0.018)	(0.015)	(0.026)	(0.023)
Head-Female	0.048***	0.012	0.064**	0.020	0.052*	0.012	0.001	0.026
	(0.012)	(0.008)	(0.030)	(0.025)	(0.027)	(0.020)	(0.051)	(0.030)
Head-Married	0.031***	-0.001	0.031	0.024	0.038	0.005	-0.008	0.009
	(0.010)	(0.007)	(0.026)	(0.022)	(0.024)	(0.017)	(0.046)	(0.026)
Head Age	-0.010***	-0.005***	-0.004	-0.006**	-0.008**	-0.002	-0.019***	-0.009**
	(0.001)	(0.001)	(0.003)	(0.003)	(0.003)	(0.002)	(0.006)	(0.004)
Head Age squared	0.000***	0.000***	0.000*	0.000***	0.000***	0.000**	0.000***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Dependency ratio	-0.666***	-0.469***	0.047	-0.150**	-0.778***	-0.434***	-0.921***	-0.880***
	(0.024)	(0.017)	(0.075)	(0.064)	(0.058)	(0.064)	(0.108)	(0.070)
Number of adult male	-0.061***	-0.032***	0.074***	0.017	-0.080***	-0.023	-0.113***	-0.105***
	(0.005)	(0.003)	(0.021)	(0.016)	(0.014)	(0.015)	(0.024)	(0.012)
Number of adult female	-0.087***	-0.036***	0.064***	0.027	-0.113***	-0.032**	-0.159***	-0.120***
	(0.005)	(0.004)	(0.022)	(0.017)	(0.015)	(0.013)	(0.022)	(0.016)
Household Size	-0.006*	-0.012***	-0.091***	-0.037***	0.001	-0.015	0.027**	0.024***
	(0.003)	(0.002)	(0.015)	(0.011)	(0.010)	(0.010)	(0.013)	(0.008)
Constant	7.969***	7.512***	6.965***	6.888***	7.865***	7.403***	9.052***	8.290***
	(0.028)	(0.024)	(0.071)	(0.069)	(0.075)	(0.056)	(0.151)	(0.096)
Observations	41,964	59,691	41,964	59,691	41,964	59,691	41,964	59,691
R-squared	0.426	0.282	0.146	0.090	0.308	0.196	0.200	0.134

Note: All the models include controls for land, states, occupation, and industries. *** p<0.01, ** p<0.05, * p<0.1