NOPOOR

Enhancing Knowledge for Renewed Policies against Poverty

SP1 Cooperation- Collaborative project- SICA

Grant Agreement no: 290752

FP7-SSH-2011-1

DELIVERABLE 6.4 (WP 6)

Report on urban segregation, violence and poverty: Segregation and violence as dimensions of urban poverty

Project co-funded by the European Commission within the Seventh Framework Programme (2007-2013)			
Dissemination Level			
PU	Public		**X**
PP	Restricted to other programme participants (including the Commission Services)		
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ABSTRACT

Little attention has been given to demographic dynamics and social risks related to the reproduction and consequences of poverty in the economic literature. This is important because demographic dynamics and social risks are keys to understand the intergenerational transmission of poverty and the consolidation of social and economic structures that consent the reproduction of the informal sector and segmented as well as discriminatory labour markets. Also little attention has been paid to the effects of changes in migration patterns in developing countries: urban-urban migration and the emergence of megacities, and the consolidation of intermediate cities as economic dynamic centres for rural dwellers (as well as centres to access secondary and postsecondary education for rural youth). (OECD (2002, 2009), Berdegué et al. (2012, 2010) Rodriguez 2008, Rodriguez, Arriagada 2004).

As a result the demographic transitions can stand as a great opportunity to economic growth, but only if everyone has a fair chance to access markets. If markets are segmented and low labor mobility is feasible, this opportunity may be lost. Instead, social risks as gang behavior and violence, together with low school quality and discrimination in labor markets may lead to worsening socio economic conditions for poor (and non/poor) people. (Lee 2003, Peng 2005, Gros 2005, Komine&Kabe 2005).

At the same time the poverty experience is not the same in megacities as compared to intermediate cities and rural areas. Thus, moving out of poverty seems to be remarkably different in each context. Fighting poverty is not just about improving the quality of dwellings, challenges are different.

It is also important to incorporate other dimensions of the urban experience. In spite of economic linkages between the centers, residential segregation remains and stands out as a key factor in perpetuating intergenerational poverty traps (Rodriguez&Arriagada 2004).Residential segregation makes evident social risk factors such as violence (both at the family and at the community levels), gang behavior in young populations, low school quality

Our academic contributions will also help to address policies in a different way. The policy challenges to improved access and profitable connections to markets are quite different in urban and rural areas.In urban areas, markets are physically close to poor people, but those markets tend to be segmented.Informality prevails in low income metropolitan segments and both segmentation and discrimination in labor markets tend to be the norm (Ñopo&Chong 2010, Moreno et al.2011, Atal et al. 2009, Maloney 1999). In rural areas the primary challenges rest on providing infrastructure and information to the population, as well as skills to reach and interact in such market environments where usually cultural background is different (Berdegué et al. (2011, 2012).

Using different case studies this task 6.4 adresseses all these issues: Rural and urban poverty (India), poverty reduction processes in Brasil as well as the consequences of poverty in urban spatially segregated contexts (Peru and Mexico)

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- **Report 6.4.1** An analysis of earnings inequality of paid workers in rural India from 2004/05 to 2011/12

Authors: Shantanu Khanna, Deepti Goel and Ren*é* Morissette

Introduction

Agriculture is the mainstay of the rural economy in India and it continues to employ the largest share of the Indian workforce. However, its contribution to Gross Value Added (GVA) is much smaller. In 2011, the employment shares of agriculture, industry, and services were 49, 24 and 27 percent respectively, whereas their shares in GVA were 19, 33, and 48 percent respectively. In addition, between 2004/05 and 2011/12, real Gross Domestic Product (GDP) in these sectors grew at 4.2, 8.5 and 9.6 percent per annum, respectively, making agriculture the slowest growing sector of the economy. Given these figures, the concern about whether high overall GDP growth has benefitted those at the bottom, and to what extent they have benefitted compared to those at the top, is extremely pertinent for rural India. As recent events in many industrialized countries show, periods of economic growth that do not lead to gains in living standards for all segments of the population might lead to growing dissatisfaction among some citizens and thus, might jeopardize social cohesion. To inform discussions on these issues, we focus on rural India and examine how real earnings of paid workers (wage earners) evolved over the seven-year period between 2004/05 and 2011/12.

Data and Methodology

Our data comes from the 2004/05 and 2011/12 rounds of the nationally representative Employment Unemployment Survey conducted by the National Sample Survey Organization. We study wage earners between the ages of 15 and 64, living in rural areas of 23 major states of India. In both years, wage earners constituted a quarter of the rural working age population and represented about 104 million paid workers in 2004/05, and 118 million in 2011/12.

We use the Recentered Influence Function (RIF) Decomposition developed by Firpo, Fortin, and Lemieux (2009) to study the evolution of earnings in rural India.

Main Results

Over the seven-year period we find that the earnings distribution shifted to the right and became more peaked (less dispersed). The mean real weekly earnings increased from 391 to about 604 rupees, while median increased from 263 to 457 rupees. For 2004/05, the all-India official rural poverty line (defined in terms of minimum consumption expenditure needed to meet a specified nutritional and living standard) was 447 rupees per capita per month. Thus, the mean (median) real monthly earnings was 3.5 (2.4) times the poverty line, and in 2011/12 it was 5.4 (4.1) times this value.

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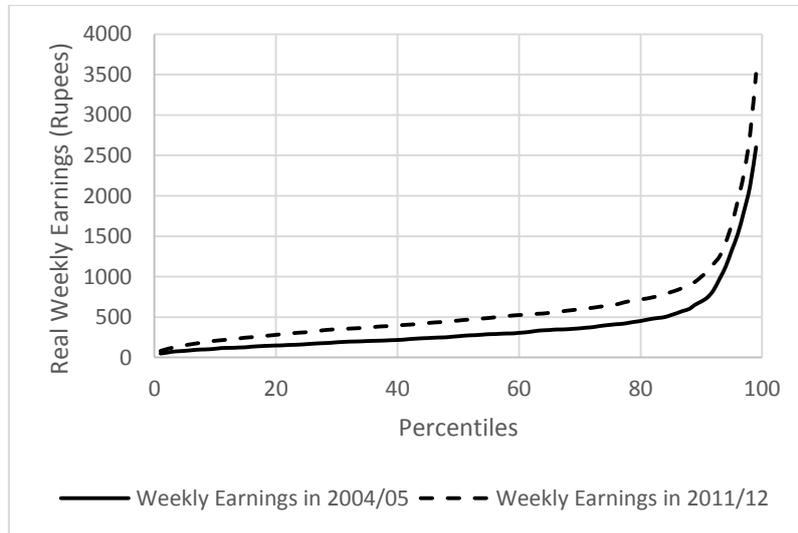**Figure 1: Real Weekly Earnings, by percentile, 2004/05 and 2011/12**

Figure 1 plots the real weekly earnings (in rupees) at each percentile for 2004/05 and 2011/12. At each percentile, earnings were higher in 2011/12 than in 2004/05. The gap between the two curves reveals that the increase in earnings was, in absolute terms (i.e. measured in rupees), greater for higher percentiles. However, as seen in Figure 2, the percentage increase in earnings was greater at the lower end of the distribution. Thus, earnings inequality—defined in relative rather than absolute terms—declined over the seven-year period.

Figure 2: Change in Log Real Weekly Earnings, by percentile, 2004/05 to 2011/2012
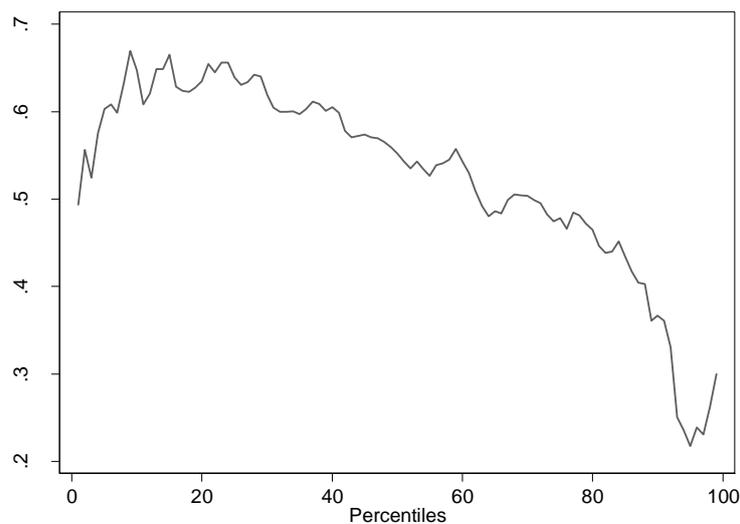
Table 1 supplements the figures 1 and 2 and shows how various summary measures of inequality changed over time. The ratio at the ninetieth to the seventy-fifth percentile fell very sharply from 1.72 to 1.53. Thus, it is clear that the decrease in inequality mainly came from changes at the top and middle of the distribution than from the bottom.

Table 1 Inequality Measures for Real Weekly Earnings from Paid Work

Inequality Measure	2004/05	20011/12
25-10	1.52	1.51
60-40	1.41	1.32
90-75	1.72	1.53
Gini	0.462	0.396

The decrease in inequality is also reflected in the Gini coefficients. The Gini of real weekly earnings fell from 0.462 to 0.396. This is in sharp contrast to the picture in urban India where earnings inequality remained virtually unchanged over the period: The Gini of real weekly earnings in urban India was 0.506 in 2004/5 and 0.499 in 2011/12.

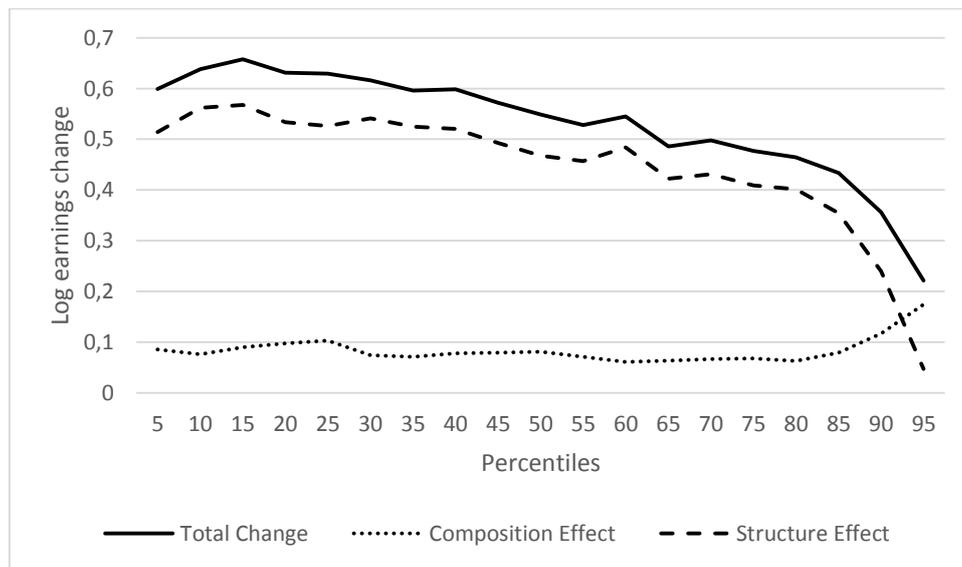**Figure 3: Aggregate Decomposition of Earnings**

Figure 3 shows the results of the aggregate decomposition of the change in the (log) real earnings distribution at different vigintiles (vigintiles refer to the 19 points that divide the wage earners into 20 groups of equal size in ascending order of earnings). The total difference in earnings over the seven-year period is decomposed into the structure (the component due to changes in returns to worker characteristics) and the composition effects (the component due to changes in the distribution of worker characteristics). An important conclusion from the decomposition is that most of the decline in inequality occurred because the returns to characteristics improved a lot more low earners. In fact, it is clear that while changing characteristics did lead to an improvement in real earnings throughout the distribution, it had

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an inequality increasing effect implying that had 'returns to characteristics' been held constant over the period, earnings inequality would have risen.

Detailed decomposition of the composition effect reveals that the inequality increasing effect was mainly driven by changes in the distribution of education wherein education levels improved among paid workers. On the other hand, the change in the industrial composition had a significant inequality decreasing effect. During this period there was a large shift from agriculture to construction which led to decreased earnings inequality. Detailed decomposition of the structure effect reveals that the inequality decreasing effect was driven by lower returns to higher levels of education for workers at the top end of the earnings distribution in 2011/12 compared to 2004/05.

Policy Implications
For wage earners who constituted about a quarter of the rural working age population, we find that their real earnings increased at all percentiles. Using consumption expenditure data that span the entire population, other studies have also documented an improvement in all parts of the distribution. Taken together, there is clear evidence that economic growth in India in the post-reform period (after the early 1990s) has been accompanied by a reduction in poverty. At the same time, according to official estimates, in 2011/12, 25.7 percent of the rural population was below the poverty line. This figure represents about 216.7 million poor persons, a large number of people living below a minimum acceptable standard.

Our analysis also reveals that while the rural Gini fell over this period, it remained virtually unchanged in urban India. This suggests that the dynamics of earnings is different for the two sectors. This could be because the underlying structural characteristics are different across the two sectors. For example, while agriculture is the largest employer in rural India, for urban India it is services. It could also be the result of different redistributive policies followed in the two sectors. These aspects need to be recognized when designing future policies to tackle inequality in the two regions.

Aggregate decompositions of the change in inequality measures reveal that the change in returns to worker characteristics was mainly responsible for the decrease in earning inequality. Further detailed decompositions reveal that higher levels of education in the population contributed to an increase in earnings inequality, while lower returns to higher education for those at the higher end of the earnings distribution contributed to a decrease. Rural India experienced a construction boom during this period that also contributed to the decrease in earnings inequality.

One cannot be certain that this trend of declining earnings inequality will continue into the future. Regardless of the underlying causes of the recent decline in earnings inequality in rural India, volatility in global crop prices and the drought conditions currently experienced by large parts of the country because of two consecutive weak monsoons are important reminders that policies designed to foster employment opportunities and wage growth of unskilled workers outside of agriculture are crucial for improving the economic well-being of the rural workforce in India.

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Finally, we end with the caveat that although India has the lowest Gini value among the BRICS countries, and we find that earnings inequality declined in rural India between 2004/05 and 2011/12, these facts mask extreme deprivations and inequities in access to health care, education and physical infrastructure such as safe water and sanitation. One needs to be cognizant that extreme inequalities prevail in many other dimensions beyond earnings and consumption expenditure.

- **Report 6.4.2 Exploring the dimensions and dynamics of Indian urban poverty: Multidimensional and Political aspects**

Researchers: Sugata Bag (CDE, DSE), Suman Seth (Leeds University Business School & OPHI)

Introduction

Indian society has been witnessing a process of impoverishment and nearly 27.5% of India's citizens live below the income poverty line (GOI, 2007). This number is, however, double (55.4%) by the recent estimates of the UNDP (HDR 2010, UNDP) based on the multidimensional poverty index (MPI). In the Indian context, the issue of poverty has been overtly focused on rural populations rather than urban population (particularly urban slum population); thereby, the knowledge base as well as policy formulation and interventions are highly biased towards the former. Besides this, the prevailing poverty measures carried out on the basis monetary indicators for national level comparisons portray the incidence of poverty at a very low level. However, the urban poverty is directly linked to suboptimal achievements not only monetarily but also in various other aspects of the quality of life - apparent both within housing and living conditions (the urban habitat) - and in the management practices of urban systems. Perhaps in the urban context, non-income deprivations may be more acute than just monetary deprivations. We set our research agenda against this backdrop and aimed to fill the gap in the existing literature as well as in the policy space.

Thus far we have written two papers. In the first paper[1], we have explored various aspects of living in slums, e.g. demographic characteristics, material well-being, monetary achivements in earning and consumption, educational attainment and job profile. In our second paper[2], we address two two question from the policy perspective – how to assess the standard of living (SoL) of slum-dwellers and what are the correlates. Accordingly, SoL in slums is assessed through monetary and non-monetary approaches. Further, we explore which of the slum-level and the household-level characteristics are associated with lower monetary and non-monetary SoL within the slums of each city.

Sampling Design and Data

In the face non-availability of representative data on urban poor, we conducted a multi-thematic primary survey amongst the slum (and resettled slum) households of three largest metropolises in India between 2013-14. We used a two-stage stratified sampling procedure for this purpose. We have also tried to ensure that our sample represents the slum types and land-ownership types of slums. In the first stage of the survey, within each city, the municipal corporation areas were stratified according to the largest possible administrative divisions of each city. The number of households to be interviewed from each stratum was determined through proportional sampling, but with the additional requirement that at least thirty households should be interviewed from each stratum. In the second stage of the survey, a

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[1] Bag, S. , S. Seth and A. Gupta. "A Comparative Study of Living Conditions in Slums of Three Metro Cities in India". CDE Working Paper 253 in February 2016.

[2] Bag, S. and S. Seth. "Understanding Standard of Living and Correlates in Slums: An Analysis using Monetary Versus Multidimensional Approaches in Three Indian Cities". Nopoor Working Paper series, September 2016.

number of slums were randomly selected from each stratum and then from each selected slum, a collection of households were randomly selected to be interviewed.

Our survey collects individual level as well as household level information in greater details compared to what is collected in census and other nationally representative household surveys, such as National Sample Surveys (NSS) and Demographic Health Surveys. We draw the design of the survey questionnaire from the latest round of NSS household questionnaire and slum particulars, and customized to incorporate additional variables capturing further characteristics intrinsic to slums. Our questionnaire captures information both at the household and the individual levels. At the household level, we collected information on religion, caste, various public-assistance-card holding statuses, type of housing, access to basic facilities, access to government schemes, assets, land and house ownership details and related incomes, consumption and expenditure details on basic food items. At the individual level, we collected information on age, gender, marital status, age at marriage, literacy and educational details, migration details, employment details including information of earning and past occupations, savings and insurance details, and some health related information.

Methodology

There are various competing approaches for gauging the standard of living (SoL, hereafter) of any population. We aim to capture the SoL of slum dwellers through both monetary and non-monetary approaches. In the monetary approach, we look into households' per-capita incomes and per-capita consumption expenditures; whereas, our non-monetary analysis is based on a counting approach framework (Atkinson, 2003; Alkire and Foster, 2011).

In order to explore the correlates, we resort to multivariate regression analyses.

Main Results

Our findings reveal that the slum dwellers in Mumbai enjoy a better SoL than those in Kolkata and Delhi in terms of both monetary and non-monetary indicators. Although monetary indicators do not reveal any difference in the SoL between the slum dwellers of Kolkata and Delhi, the slum dwellers in Kolkata suffer a larger number of simultaneous non-monetary deprivations than those in Delhi.

We observe that not only certain characteristics are differently associated with the monetary and the non-monetary SoL across cities, but also they are quite differently associated with monetary vis-à-vis non-monetary SoL within cities. The characteristics that are found to be consistently associated with lower per-capita household income across slums of all three cities are female heads, larger household sizes, higher child dependence, and not having at least one member who is either a government employee/pensioner or have a private contractual job. Similarly, the characteristics that are observed to be associated with lower non-monetary SoL in slums of all three cities are higher child dependence, Scheduled Caste (SC) or Scheduled Tribe (ST) households without any caste reservation certificate and not having at least one member who is either a government employee/pensioner or have a private contractual job.

We also examine the UN's notion of improving the SoL of the slum-dwellers through conferring a secured tenure in Mumbai. Although we observe that the households in slums that are legally protected from eviction earn higher incomes compared to those in non-

protected slums, yet the former households are non-monetarily indifferent to the latter households. This observation questions the UN's prevailing notion of improving living standards in slums through tenure security.

Our approach may be replicated for slums in other countries and regions in order to understand the specific characteristics of these slums for designing better policies to improve the living conditions of slum-dwellers in UN-SDG framework. Even in order to understand the efficacy of various public policies, it is important that the living conditions are not only assessed by monetary indicators but also through a non-monetary approach capturing the joint distribution of achievements in different indicators. We strongly hope our study would stimulate serious academic interest and contribute to the relevant public policy debates.

Tables and Figures
In two panels of Figure 1, we present the empirical cumulative distribution functions (CDF) for two different monetary indicators and in Table 1 we present their averages and standard errors.

Figure 1: Monetary SoL (Per-capita Income and Expenditure) of slum households in three cities
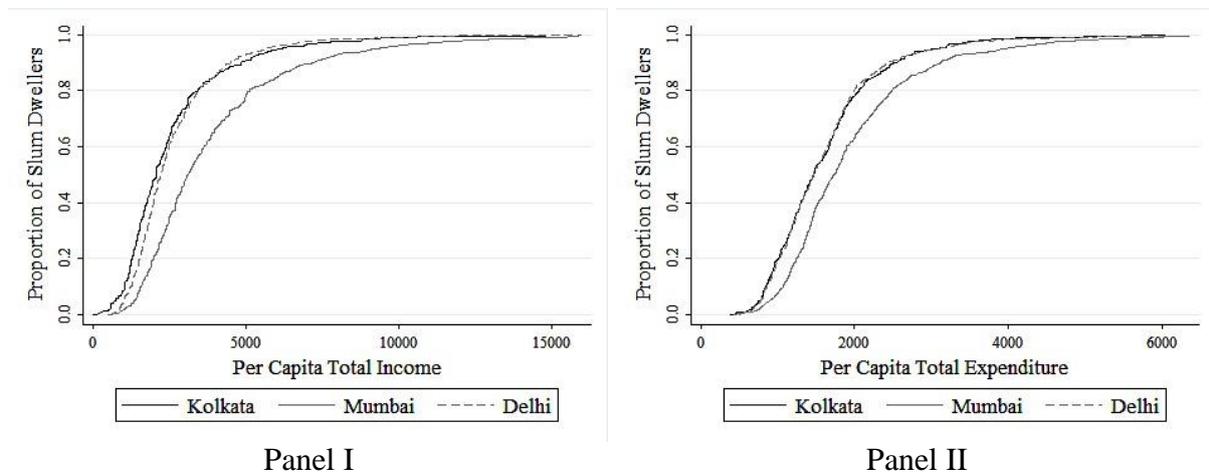

| Panel I | Panel II |

Table 1: Per-capita (PC) Incomes and Expenditures among Slum-dwellers of Three Cities

Per-capita monetary aggregate	Kolkata	Delhi	Mumbai
Total income	2,599.5 (102.9)	2,673.6 (55.3)	3,943.5 (84.2)
Total expenditure	1,107.3 (23.9)	1,089.2 (15.0)	1,151.4 (13.7)

Source: Authors' own computations. Standard errors are reported in the parentheses. CPI adjusted figures.

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The assessment of SoL in slums through non-monetary approach requires defining a list of indicators that are relevant in slum settings, and also their deprivation cut-offs. Our proposed indicators –

Table 2: Non-monetary SoL (Indicators, deprivation cut-offs and the percentages of slum-dwellers residing in deprived households)

Indicator	Deprivation cut-off (A household is deprived …)	Incidence of deprivation (%)		
		Kolkata	Delhi	Mumbai
Water facility	If the water source is non-improved [3] (UN-MDG); **Or,** stand-piped but time to fetch from source is 30 minutes or more; **Or,** stand-piped but access duration is less than two hours per day	21.2 (1.9)	29.7 (1.6)	10.6 (1.0)
Sanitation facility	If there is no personal facility **Or,** the personal facility is shared with others	82.4 (1.8)	80.3 (1.5)	84.4 (1.2)
Type of house	If the wall or the roof or the floor of the house is built with unimproved materials;[4] **Or,** there is no house	74.5 (2.2)	52.6 (1.8)	52.6 (1.6)
Leakage in house	If water enters in the house through roof or ground	62.6 (2.5)	67.1 (1.7)	51.9 (1.7)
Over-crowding	If more than three persons live per bedroom (UN-HABITAT, 2010)	65.0 (2.2)	64.9 (1.7)	63.2 (1.6)
Respiratory health risk	If biomass fuel is used; **Or,** cooking is done inside sleeping room with no smoke outlet	26.8 (2.2)	39.0 (1.8)	19.7 (1.3)
Health insurance	If any member is suffering from chronic disease or there is any disabled member; **And,** no one in the household has any health insurance scheme	42.8 (2.5)	24.3 (1.6)	24.8 (1.5)
Savings instrument	If no member in the household has any instrument for savings[5]	19.4 (2.0)	15.6 (1.4)	15.7 (1.2)
Asset ownership	If the household does not have any of the assets: washing machine, refrigerator, air conditioning machine, computer, four wheeler, and additional rent generating property in city	60.7 (2.6)	44.3 (1.9)	34.5 (1.6)
Information instrument	If the household does not have a land-line phone, **And,** the number of mobile phones is less than the number of adults (15 years or more) in a household	83.0 (1.7)	88.6 (1.1)	64.6 (1.6)

[3] Unimproved water sources include tanker truck, small cart, bottled water (not mineral water), surface water (river/pond/lake) and other sources.
[4] Unimproved floor materials include mud, dung, sand, loose brick, stone slab, bamboo, and raw wood planks; unimproved wall materials include thatch, palm leaf, grass, wood, mud, bamboo, stone slab, rustic mat, tile, un-burnt brick, loosely packed stones, and tin-shed; and unimproved roof materials include thatch, palm leaf, wood, mud, bamboo, stone slab, rustic mat, tile, un-burnt brick, cardboard, and tin.
[5] Savings instruments include savings account or recurring deposit in banks, savings account in post office, life insurance account, private provident fund account or contributory provident fund account.

Indicator	Deprivation cut-off (A household is deprived …)	Incidence of deprivation (%)		
		Kolkata	Delhi	Mumbai
Education attainment	If no household member has 10 or more years of schooling	41.7 (2.6)	43.4 (1.9)	17.2 (1.2)
	Equally weighted average of all deprivations	52.7 (0.9)	50.0 (0.7)	39.9 (0.6)

Source: Authors' own computations. Standard errors are reported in the parentheses.

In order to reflect the joint distribution of deprivations, we present two diagrams in Figure 2, where the Panel I presents the joint distribution of deprivations using a complementary cumulative distribution of multiple deprivations (CDMD). The horizontal axis denotes the number of multiple deprivations and the vertical axis represents the percentage of population. The height of a CDMD denotes the proportion of slum dwellers who reside in households that face at least a certain number of multiple deprivations. The Panel II of Figure 2 presents the adjusted headcount ratios (Alkire and Foster, 2011) for the corresponding deprivation counts, which is a product of two components: the proportion of slum dwellers facing multiple deprivations in at least a certain number of indicators (*incidence*) and the average share of indicators these multiply deprived slum dwellers are deprived in (*intensity*).

Figure 2: Complementary cumulative distribution of multiple deprivations and the Adjusted Headcount Ratio
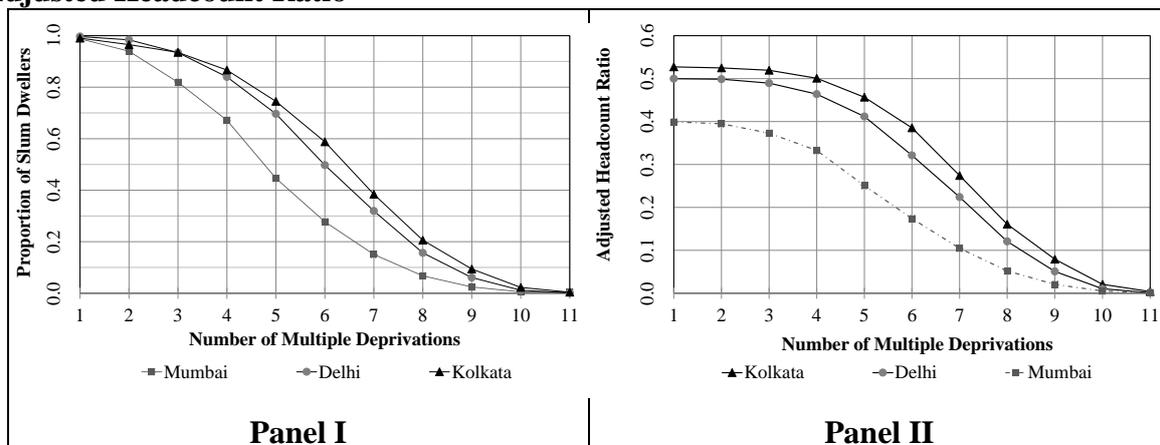
Policy Implications:

To improve monetary and non-monetary living conditions in slums, a set of policies can be construed at three different levels: (a) at the household level, targeting the poor households with specific schemes; (b) at the community level, targeting and improving infrastructural inadequacies (e.g. water, sanitation, drainage, electricity etc.); and (c) dealing with the legal aspects related to tenure security in slums through political will. Detailed discussion on probable public-policy choices will be discussed in a separate paper, but it is worth highlighting certain interesting points from our findings in the Indian context that however may be applicable in the context of other developing countries.

First, we observe that SC/ST households without any caste certificates consistently appear to be non-monetarily less well-off in slums of all three cities. Due to the lack of their identity proofs in cities, which is normally linked to their residency status back in the original state domicile, these SC/ST households in slums are left out of affirmative action initiatives of the local urban governments, which, along with several types of social exclusion, perhaps lead to perpetuating deprivation in non-monetary indicators. This particular finding calls for a review of the strategies relating to the issuing of caste certificates by government agencies in Indian urban areas.

Second, female-headed households – mainly comprising of elderly, widowed, and deserted women, are worse off both monetarily and non-monetarily in Kolkata and Mumbai. Although the local governments have special monetary assistance scheme for women with widowed status, the disbursement of endowments is not only scanty (INR 300-600 or $5-10 per month), but also quite irregular. Moreover, the disbursements are often routed through local councillor's office, which is inherently inefficient – making the entire scheme highly discretionary and prone to corruption and creating the scope for additional delay and undue discrimination. A better scheme may be envisaged through direct cash transfer mechanism by involving self-certification and bypassing the office local representatives. The monetary deprivation of the female-headed households may perhaps be tackled through better financial assistance schemes, but to improve upon their non-monetary deprivation calls for a more holistic approach.

Third, we draw attention to legal factors related to tenancy and slum notification. In Kolkata and Mumbai, we observe that the households in tenements settlements are consistently non-monetarily worse off than those who own their houses. The former continue to remain in a backward state largely due to obsolete land tenure arrangements, institutionalized neglect and discrimination. Adding to their woes, many tenement settlements in Mumbai and Kolkata are recently facing a status quo under different tenancy acts and are also under 'rent control' (owing to property rights disputes). These distresses call for new laws to confer some property rights to those living in tenement settlements. We further observe in Mumbai that the households in the slums that are protected from eviction are non-monetarily no different than those in unrecognised slums. This observation contests the UN notion of improving living standards through tenure security. In India, the Rajiv Awas Yojna (RAY) scheme for assisting the poor households in slums to construct or renovate their houses is in existence for a decade now. This scheme however can be availed only by those with legal ownership status over their dwelling plots, but Indian slum Acts do not confer the ownership right to the slum habitants. Modernisation of slum acts in India by conferring legally recognised foothold of the slum-dwellers may bring stability in their life – securing both their pecuniary and non-pecuniary prosperity.

Finally, there are a number of available national and state government schemes for dealing with monetary and non-monetary deprivations.[6] While the potential accessibility of these

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[6] Various state and central governments' schemes are available at the following sources, accessed in September 2016: http://www.wbdma.gov.in/HTM/MUNI_AtaGlance.htm (tab: programmes)
http://www.mhupa.gov.in/User_Panel/UserView.aspx?TypeID=1405
http://performance.gov.in/?q=flagship-programmes

schemes depends on the identification strategies for targeting beneficiaries, their tangibility depends on the efficient implementation and on the quantum of pecuniary emoluments and profound legal entitlements. For example, restricting various schemes – such as, Pradhan Mantri Ujjwala Yojna (PMUY) for LPG connections and Rashtriya Swasth Bima Yojna (RSBY) for family health insurance, merely to below-the-poverty-line (BPL) households would exclude many other potential beneficiaries in slums, especially when the BPL identification methodologies have been criticized, debated and amended so many times in the last two decades (Alkire and Seth, 2013). It was observed through our survey that the outreach, coverage and service of public distribution system (for food grains) among the three cities was most extensive in Delhi slums and that keeps the expenditure on food at a much lower level for Delhi slum-dwellers compared to others. This strengthens the case for extending the benefits of PDS system to the poor. There is thus serious need for reevaluating and broadening the implementability of the available programs in order to improve the living conditions in slums.

- **Report 6.4.3 The Income Ranking of Indian State and its Pattern of Urbanization**

Researchers : Basudeb Chaudhuri, University of Caen, CNRS
Boishampayan Chatterjee, Institute of Management Technology, Ghaziabad
Mainak Mazumdar, IIT Jodhpur Safayet Karim, Centre de Sciences Humaines

Context and rationale

The vast body of economic literature on urbanization and development, widely known as the New Economic Geography (NEG), underlines the importance of spatial agglomeration of population and economic activities and the development of mega cities for the growth of a country. Empirical evidence however, suggests a different pattern of urbanization in India. It is surprising to note that for more than 20 years the demographic growth of the urban population is not phenomenal and almost 70 percent of the Indian population still reside in rural areas. Indeed, the demographic system of cities characterizing India does not correspond mechanically with the country's economic growth story.

In India, the density of population is very high and the growth is mainly driven by low cost rather than innovation. Therefore, the benefit that originates from greater agglomeration (like increasing returns to scale, knowledge spill-overs, availability of large pool of labour with multiple skills, access to general infrastructure) dissolves easily owing to the cost of congestion, rising land prices, and labour costs in urban areas. Hence, there is an immense scope for small and medium towns with low costs of production and living to be an important hub for economic activity of the country. Consequently, small towns might turn out to be an attractive location for manufacturing activities following the cost reduction strategies of the various productive sectors. They might also play a crucial role for generating employment opportunities.

Methodology

This chapter attempts to look at the contribution of the growth of towns, particularly small and medium towns, toward the urbanization process of India. However, Instead of just looking at the broad Indian macro picture, we undertake a disaggregated analysis of urbanization of the Indian states. Our analysis delivers a more accurate approach of the relation between the demographic change happening in small and medium towns and the economic growth at the scale of the Indian states. For the purpose of our analysis, we have considered the fifteen largest states in India which represent around 90% of India's population and we have further classified those states into rich, middle and poor groups or clubs of states, based on their per capita income level. These classifications of the states into three groups have been achieved by using the non-parametric method of regression tree analysis.[7] After

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7 (see Chaudhuri, Mazumdar, Marimoutou, Teachout (2012) Club Convergence Analysis: Unlike the Solow growth model that predicts that countries with a low level of income will grow faster than the countries with higher income level and will eventually catch up; the club convergence analysis claims that countries may converge in groups to different steady state level depending on the initial level of income with which they start off. Thus the distribution of income of countries may be bimodal or multimodal instead of unimodal each depicting a cluster of countries with different steady state level of income. In our study, we have used a non-parametric approach of GUIDE to classify the Indian states into various income clubs.

classifying the states into various groups we have been able to characterize the urbanization process of these Indian states in terms of population and employment growth and examine more precisely the role that the medium and small towns play in the process. We hypothesize that population and employment growth from manufacturing and related services, is substantially attributable to small and medium towns of Indian states.

In our study, we examine the disaggregated urbanization process in India using the Indiapolis and Census data bases. The Indiapolis data, as a part of the global comparative e-Geopolis project, uses a definition of urban unit harmonized worldwide. A unit called a settlement agglomeration (SA), which is distinct from the "urban agglomeration" (UA), a known concept of the Indian census, is constructed on the basis of contiguous built-up area (Swerts chapter, this volume). A cut-off level of 10,000 is specified for each SA. A SA may consist of multiple census local units, whatever be their status, either urban or rural, according to the Census of India. The Indiapolis dataset, therefore, captures a more dispersed urbanization process and can be insightful in understanding the dynamics of urbanization in the different states of India. Our analysis provides the following results after having described our classification of states and towns (section 1). In the first part (section 2), we demonstrates that the extent (number) and the speed (growth) of urbanization is higher in the richer states which also have a higher per capita National State Domestic Product (NSDP) growth over the analyzed period as compared to the states from the middle and poor groups. However, there is a fair amount of variations in the growth of towns across all categories of States. It is underlined in a second part using the UA dataset. It enables a better understanding of the link between the larger agglomerations' dynamics and the growth of smaller towns. Then, in a third part, a preliminary analysis of the sectoral growth rates of income, employment and productivity by city-size classes and states, notably for the industrial sector, indicates that small and medium towns can play an important role in the growth of the manufacturing activities.

We aim to deliver a descriptive mapping of the evolution of large, medium and small towns in India's states (using Census and Geopolis definitions), their sectoral compositions and their place in the structural transformation of the Indian economy. This description is a necessary step to further research on the causes underlying the main trends outlined here. We show that the size dynamics in terms of population change of different types of towns, *and* the change in the overall number of towns in each category, both contribute to explaining the shifting dynamics of urbanization, rural transformation and employment changes, across the different classes of states, rich, middle and poor. The relative weight of different categories of towns varies across the states, and definitely small and medium towns are playing a new role, as is rural non-farm activity, and rural urban linkages.

We point out that Indian's historically leading states remain dynamic if one looks at the dynamics of large and medium towns in their growth, and at the relative shares of secondary and tertiary activities. However, the other major trend, which also coincides with the opening up of the Indian economy, is the increased role of small and medium towns in India's growth, especially in what we have called the poor and transitory states. All the descriptive statistics that we have used here highlights this increased place of small and medium towns, including

the fact that they are themselves in transition. Over the last 10 to 20 years, the India's experience point to the fact that there is no inevitability about large agglomerations driving growth and inequality, in a globalized and fast growing economy. In large federal systems, small and medium towns, which are well positioned in a role of backward and forward linkages with agricultural (whose transition is a major driver) and larger agglomerations respectively, can play a major role in development, that is in no way subaltern.

Policy Implications

This chapter uses the income ranking of Indian states, which highlights their relative income inequalities, to examine the driving factors behind their growth in terms of demography and sectoral (agriculture, industry, services) growth and structure. The policy conclusions that can be derived are the following :

1) In a federal state, interstate competition is a major driver of growth and can be encouraged in a conducive regulatory climate;
2) megacities and urban agglomerations are not necessarily the only drivers of growth, small and medium town, well connected rural areas, can also play an important role in growth dynamics and in the reduction of poverty and inequality, and they can be encouraged by a mix of national and regional policies;
3) The sectoral balance between agriculture, industry and services is a major element of long term growth dynamics.

- **Report 6.4.4 Poverty Reduction in Brazil: Changes in the Profile and in the**

  Determinants during the Early 2000s

Researchers Valéria Pero (UFRJ), Gabriela Freitas da Cruz (UFRJ)

Context

The database used in this paper was the microdata from the National Household Sample Survey (PNAD/IBGE) for the years 2001, 2005, 2009 and 2013. Brazil's nine main metropolitan regions (Belém, Fortaleza, Recife, Salvador, Belo Horizonte, Rio de Janeiro, São Paulo, Curitiba and Porto Alegre) and the capital Brasília were considered metropolitan areas. The rest of the country was divided according to the household location between non-metropolitan urban and rural areas. With this database we applied two decompositions methods to understand the determinants of changes on poverty in Brazil.

Poverty reduction occurs by means of the increase in income of the poorest people (in absolute or relative terms, depending on the line used). This increase results from both income growth for the whole population and from income redistribution from richer to poorer people. Thus, the first decomposition is into these two factors, as presented in RAVALLION and DATT (1991). Consider a poverty measure $P_t = P(z/\mu_t, L_t)$, where z is the poverty line, μ_t is the average income in period t, and L_t is a vector of parameters that describes the Lorentz

curve (income distribution). By choosing the initial period as reference, we can perform the decomposition based on the following formula:

$$P_{t+n} - P_t = [P(z/\mu_{t+1}, L_t) - P(z/\mu_t, L_t)] + [P(z/\mu_t, L_{t+1}) - P(z/\mu_t, L_t)] + R(t, t+1)$$

The first term between brackets is the effect of growth on changes in poverty; the second is the effect of income redistribution; and the third term is a residual.

The decomposition of changes in poverty into its microeconomic determinants consists in separating the contribution of each component of income to the observed variation in the poverty indicator between two periods or regions. By adapting the methodology presented by AZEVEDO *et al.* (2013) to Brazilian data, we can define per capita household income in the following manner:

$$y_{dompc} = \frac{n_{adu}}{n}\left[\frac{n_{ocup}}{n_{adu}}\left(\frac{\sum y_i^{trab}}{\sum horas_i^{trab}} \times \frac{\sum horas_i^{trab}}{n_{ocup}}\right) + \frac{\sum y_i^{apos}}{n_{adu}} + \frac{\sum y_i^{alug}}{n_{adu}} + \frac{\sum y_i^{\tilde{n}mor}}{n_{adu}}\right.$$
$$\left. + \frac{\sum y_i^{outras}}{n_{adu}}\right]$$

where y_{dompc} is per capita household income; n is the number of residents; n_{adu} is the number of adults in the household (15 years or older); n_{ocup} is the number of employed adults; $\sum y_i^{trab}$ and $\sum horas_i^{trab}$ are the sums of the work revenues and of the hours worked, respectively, of all those employed in the household; and $\sum y_i^{apos}$, $\sum y_i^{alug}$, $\sum y_i^{\tilde{n}mor}$ and $\sum y_i^{outras}$ are the sums of the revenues from retirement, rent, donations from non-residents, and other incomes (government transfers and interest, in general), in this order, of all adults in the household. The decomposition requires the construction of counterfactuals in which only one of these factors varies and the others remain constant over time.

Main results

In the beginning of the 2000s Brazil was very successful in tackling poverty. We analyzed three poverty rates and observed that there was a generalized reduction of poverty considering the period from 2001 to 2013. However, the intensity varies according to the measure and to the area of residence. The greatest poverty rate reduction in Brazil occurred on the basis of the Federal Government's official poverty line. When the relative poverty rate (60% of median income) is considered, we observe a much lesser performance than that observed based on absolute poverty lines. Meanwhile, as can be seen in Figure 1, using the poverty line differentiated according to the cost of living between country's regions, it is worth highlighting that the poverty rate in 2013 in metropolises comes to be greater than in rural areas, where the cost of living is lower, and consequently, the poverty line as well. We use this line as the reference for decompositions made in the paper.
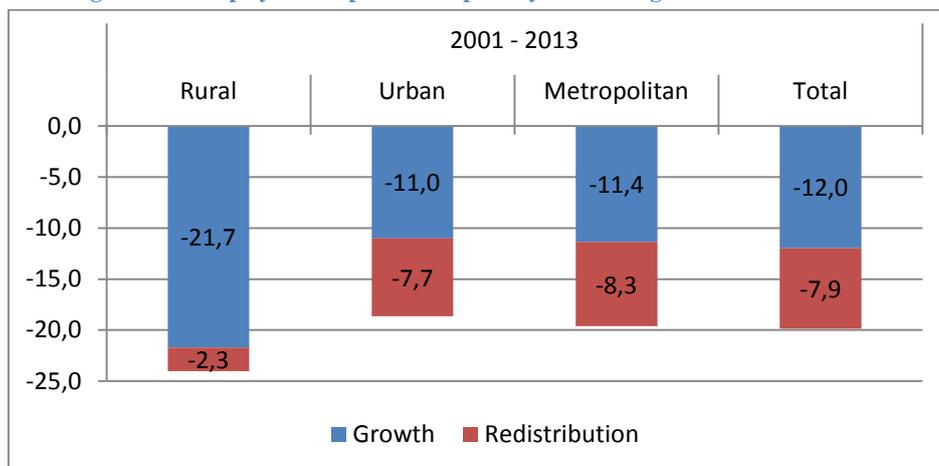
Figure 3 - Poverty headcount rates in Brazil: 2001 - 2013
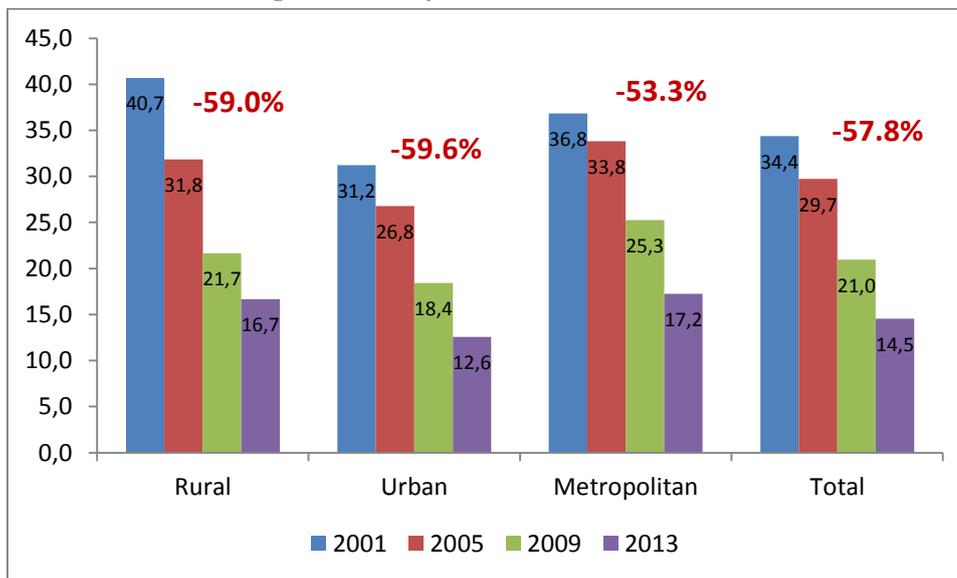
Source: Pesquisa Nacional por Amostra de Domicílios (PNAD/IBGE – National Household Survey).

Figure 2 shows the results for the decomposition of changes in poverty into its macro determinants – economic growth and income redistribution. Between 2001 and 2013, both growth and income redistribution contributed to poverty reduction. The former, however, was more important, especially in rural areas, where it was responsible for 90% of the drop observed in the poverty rate. In metropolitan regions, income redistribution was more important than in other locations, accounting for 42% of the poverty reduction. This is a result that points toward the necessity of persisting on the path of inequality reduction, since there is stillroom to redistribute income, in order to strengthen the effects of growth in favorable moments and keep fighting poverty even in periods of economic deceleration.
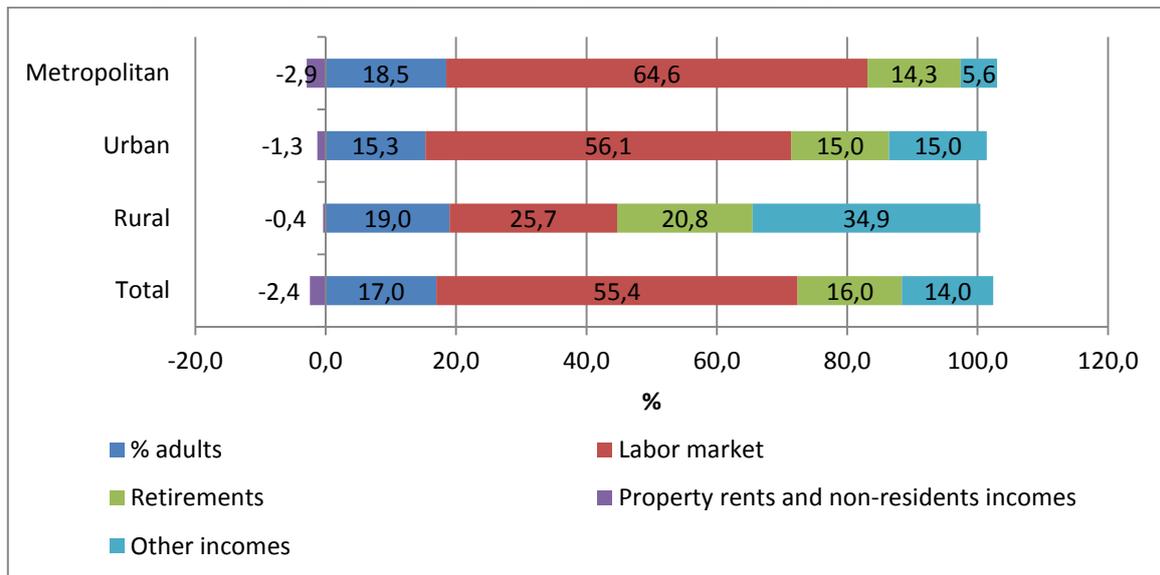
Figure 4 – Sharpley Decomposition of poverty decrease: growth x redistribution

Source: Pesquisa Nacional por Amostra de Domicílios (PNAD/IBGE – Nacional Household Survey).

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Results from the decomposition of poverty changes into its microeconomic determinants are presented in Figure 3, which shows the contribution of adults' share on households and of each income source for the poverty reduction between 2001 and 2013.

Figure 5 – Sharpley decomposition of poverty decrease: demography and income sources

We observe the importance of the increase of real wages (it explains 55% of the poverty reduction between 2001 and 2013). Only on the rural areas this contribution is less relevant (25.7%). In these areas, retirement revenues (21%) and other revenues (35%) were much more relevant for poverty reduction than in the rest of the country, demonstrating the dependence of these areas in relation to social benefits. In metropolises, other revenues account for only 5.6% of decrease in poverty along the period. These results suggests that cash transfers, like the *Bolsa Família* program, are not enough to overcome poverty in these areas, because the benefits are very low to meet basic needs in locations with higher living costs.

Policy implications

The analysis showed that economic growth was the main determinant of poverty reduction in Brazil between 2001 and 2013, when poverty felt almost 60%. The improvements related to income distribution during these years were important, but lesser comparing to the size and the fact that its inequalities are structural. This is especially worrying considering the perspectives of low economic growth, which tends to slow down the ongoing process of fighting poverty. In this context, it seems to be indispensable to keep and to deepen inequality reduction through more structural measures.

A progressive tax reform is one of the measures related to this aspect. The Brazilian Gini Index falls slightly comparing the income distribution before and after the incidence of taxes and government transfers, unlike what happens in European countries, for example.

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However, this type of reform meets a great resistance in the Nacional Congress, and it may be very difficult to advance in this topic in the actual politic moment.

We also verified that the positive effects of Bolsa Familia program are high in rural areas, and very small in metropolises. In these areas, the benefits are important to diminish the poverty intensity, but they are not enough to overcome the poverty line, which is higher there, because of the higher living costs.

It seems fundamental to improve the progressivity of public spending. One way in this direction is to increase spending with Bolsa Família, by widening the target group and increasing the benefits' amounts. At least, they have to be enough to meet a basic consumption pattern, even in more expensive cities. Moreover, it would improve its distributive potential, in this sense, we suggest to turn *Bolsa Família* into a right, not subject to economic and politic cycles; and to establish a clear rule for monetary adjustments, at least, to preserve its real values.

Finally, it is important to notice that the labor income was the main determinant of poverty reduction between 2001 and 2013, mainly in metropolitan regions. The employment formalization, which followed the economic growth, and the minimum wage appreciation contributed for it. To maintain the process of reducing poverty and including more people on labor market, it seems to be crucial to preserve these trajectories.

Considering the job creation, public employment is a key source of new opportunities. The government can employ poor people in local activities, as community kitchens, urban infrastructure works and constructions of houses for poor people. Moreover, encouraging entrepreneurship should be considered to income generation. The government has made a lot of progress in terms of differentiated tax regimes for small business and access to credit, although interest rates are still very high in Brazil. However, it is possible to move in other directions, by means of buying goods and services from microentrepreneurs related to areas of social interest, like creative economics and family farming.

Access to information about job opportunities is also a part of this strategy. We highlight the operation of the *Sistema Nacional de Emprego* (SINE – Nacional Employment System), which acts as an intermediary for the workforce, and the *Portal Mais Emprego*, which allows employers and workers to disclose jobs and know about jobs on the internet. Both must be always updated to meet its objectives. The government has also to secure that poor people have basic conditions to enjoy new opportunities. Besides a basic income to poor families, through *Bolsa Família*, a transport subsidy for the poor is also necessary, mainly in big cities, where these people usually live on far suburbs and the public transport is expensive.

Finally, a more inclusive growth requires better jobs opportunities to the poor, which involves more qualification for these workers. On this aspect, we call attention to Programa Nacional de Acesso ao Ensino Técnico e Emprego (PRONATEC - National Program for Access to Technical Education and Employment), created in 2011, which includes job training and technical education targeting to *Bolsa Familia's* beneficiaries.

In short, considering the political and economic crisis in this moment and the perspectives of low economic growth rates in the next years, the process of fighting poverty is threatened. We need to redirect efforts and resources to redistribute income in Brazil. This can contribute to reduce poverty for itself, but it also can improve the positive effect on growth, which should be higher in more equal societies. According to the international literature and

to the recent Brazilian experience, there is no trade-off between growth and distribution, and advances on the latter are fundamental in the Brazilian case.

- **Report 6.4.5 Spatial Poverty Traps and Genre-Based Violence in Mexican Municipalities: A Spatio-Temporal Analysis**

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Context

In Mexico, and around the world, spatial poverty traps (geographic concentrations of poverty) are mainly found in isolated, remote, rural areas, and also in the burgeoning slums of cities. The contextual socio-economic characteristics of these areas display disadvantages when compared to other areas of the country. Furthermore, women from these poor and marginalized areas are often constrained by local and traditional attitudes, which may subordinate them within the family and limit their mobility, which also make them a vulnerable population group for some types of violence.

In a context where the country has, during the last years, experienced an increase in the rates of violence, the results are needed to explore the extent to which genre-based violence (GBV) has suffered substantial changes, particularly in those areas with high poverty rates. The main objective of the study is to spatially relate geographic pockets of poverty (spatial poverty traps) with genre-based violence in Mexican municipalities. The interest resides in disentangling patterns of violence levels by sex, arising from the identification of spatial poverty traps within the country. The role of geography is then a crucial aspect when analyzing the spatial distribution of poverty and violence levels in the country. This is because of well-defined patterns across high levels of poverty having longstanding roots. The research questions aimed to answer are: How does the spatial distribution of poverty depict significant concentration areas of high genre-based violence levels across the country? What is the role of poverty traps and other contextual factors on explaining genre based violence in the country?

The contribution of this study is twofold:
a. The identification of spatio-temporal spatial poverty traps across Mexican geography.
b. The identification of spatio-temporal concentration of genre-based violence levels.

The use of different data sources at the local level provide further insights in the understanding of poverty and its contextual factors. The integration of spatial and spatio- methods represents a novel approach in empirical research for Mexico. The findings described here would serve as assets for regional planning efforts and focalized local policies interventions.

Data Sources and Methodology

This study uses estimates of poverty rates produced by the Consejo Nacional de Evaluacion de la Politica de Desarrollo Social (CONEVAL) for each Mexican municipality for the years 1990, 2000, and 2010. The methodology followed by CONEVAL consists of estimating poverty based on income levels, which in turn defines three alternative measures of poverty: food-based poverty, capabilities-based poverty, and assets-based poverty (which are equivalent to extreme poverty, poverty, and moderate poverty). The information for homicides comes from the vital statistics of the Instituto Nacional de Estadistica y Geografia (INEGI). These data consider all types of female homicides (ICD-10: X85-Y09) that occurred during the years 1990, 2000, and 2010. Even though we analyzed other databases that are currently available in Mexico, the final set of results is based on female homicide data from the official vital statistics reported by INEGI. This is the only source of information that allows comparability across periods and to a lesser extent, undercounts of homicides deaths. The population at risk, or total population count for each municipality, comes from the corresponding Population Census 1990, 200 and 201

The main interest of this study is to examine the spatial distribution of poverty in Mexico, and the geographical relation with gender-based violence. The analysis employs several spatial and spatio-temporal methods aiming to identify, across municipalities, significant concentrations of high poverty rates, as well as high incidences of female homicides.

Although global spatial measures help to assess the strength of spatial autocorrelation across all spatial units, generating one global statistic, local spatial variations may also exist in the degree of spatial dependency. The latter can be tackled through the computation of local measures of spatial autocorrelation. The use of local statistics can inform us about spatial nonstationarity or spatially varying relationships in our variable of interest, thus identifying statistically significant clusters.

In order to analyze the nature of the local distribution of poverty and female homicides, a local version of Moran's I or LISA is employed. This statistic assesses a null hypothesis of spatial randomness by comparing the values of local pairs, i.e. the values of each specific location with the values in neighboring locations. The LISA is particularly useful as it allows the decomposition of spatial association into four categories: when a location with an above average value is surrounded by neighbors whose values are also above average (high-high, HH) or when a location with a below average value is surrounded by neighbors with below average values (low-low, LL). This may also be the case where spatial association is implied when a location with an above average value is surrounded by low neighbors with a below average value (high-low, HL), and vice versa (low-high, LH).

Given that our interest is to correlate the incidence of homicides with local socioeconomic characteristics, incidence of poverty for example, an additional spatial statictics is employed. The Bivariate Moran's I statistic indicates the spatial correlation of two variables. A nice feature of this is that it would be possible to generate a map showing the strength and significance of the relationship between the variables across space.

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There are several reasons to believe that high incidence of socioeconomic variables, such as poverty and homicides, not only cluster in space, but can be also are associated in time. For example, a high incidence of violence in one location may diffuse through neighboring communities in a contagion-like process. On the other hand, a high incidence in a particular period of time is likely to influence its incidence in the next period. Both effects, and given the context of this study, may be contingent to local socioeconomic and institutional characteristics. These are regions specially characterized by poverty or other unfavorable conditions.

The spatio-temporal analysis is carried out through a retrospective space-time scan statistic based on the discrete Poisson model. In doing this, high risk space-time clusters of cases of homicides in Mexican municipalities are identified according to the underlying population at risk. The spatio-temporal cluster analysis was conducted by using SaTScan software. The SaTScan has been used in many health studies as a surveillance tool to explore clusters of disease in space, time, and space-time as well as in a considerable number of studies aiming to explore crime clusters, including spatio-temporal clusters of homicide in different countries. The expected number of cases in each municipality is then calculated as:

Main Results

The results were indicate that southern Mexico accounts for a greater proportion of the area in which significant spatial clusters are identified. The total numbers of municipalities having significant H-H spatial cluster in 1990 correspond to 382 municipalities. In the year 2000, this number rose up to 458 municipios, while decreased in 2010 to approximately 407. What appears to resemble geographic corridors of significant clustering of high poverty are present primarily in the municipalities that create the bordering states of Guerrero, Oaxaca, Chiapas, parts of Veracruz, Yucatan, and Hidalgo, as well as few spots in Chihuahua.

With regards the spatial distribution of female homicides, the results point to the appearance of spatial clusters with high incidence for the different periods of study. These are mainly located in the north zone of Mexico (Sinaloa, Durango, Chihuahua, Nuevo Leon, and Tamaulipas); some in the center, Edo de Mexico, Puebla, Tlaxcala and DF; and southern states of the country (Guerrero and Oaxaca). These results also suggest that while the number of municipalities that make up every spatial cluster has gradually decreased from 116, 118, to 102; Figure 5 suggests a geographic diffusion of this phenomenon, mainly for the year 2010, which is the last period of study. The fact that current and past violence levels, in this case the distribution of homicides across municipalities, have persistently been higher in some regions of the country, indicates distinctive geographic patterns that may cast evidence to a persistent formation of geographic clustering.

As stated earlier, one of the interests to spatially relate poverty with female homicides is to identify specific locations where the incidence of high values of these two variables correlate in space. Two main results arise. First, four southern states concentrate the greater number of municipalities: Guerrero, Oaxaca, Chiapas and Puebla. Second, the results suggest a slight decrease in the number of municipalities involved in these Bi-LISA clusters across periods.

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For example, in 1990 there were identified 130 municipalities, while 83 for the last period were considered.

Interesting results are obtained when adding two dimensions, space and time, into the spatial cluster identification analysis. Firstly, a purely spatial significant cluster was found when considering poverty rates as the relevant variable. This suggests that poverty is not a variant over time, but is otherwise significant only across space. This results support the argument of spatial poverty traps or geographic areas with persistent high incidence of poverty.

One the contrary, female homicides do exhibit statistical significant spatio-temporal clusters. These results clearly display spatial differences between various populations at risk while also assisting in locating those municipalities exhibiting much higher relative risk than would be expected. These are 21 municipalities located mainly in states bordering the USA. However, gender-based violence spatio-temporal clusters are also present in areas of the country where spatial poverty traps have been previously identified; specifically, the southern area of Mexico, particularly Oaxaca, as well as the Tarahumara area in the state of Chihuahua.

Policy Implications

While the geographic distribution of high poverty rates exhibit a persistent and stable spatial pattern across periods, gender based homicides do vary, not only across space, but also in time. This latter finding suggests that a greater number of spatial units or municipios that are closely location one to another have also been involved in experiencing high incidences of gender-based violence. The findings described here would serve as asset for regional planning efforts and focalized local policies interventions, for example:

- Contextual conditions matter. Evaluate whether individual antipoverty based policies are more effective than improving contextual factors. It would be convenient to undertake serious and formal program evaluation research considering local public policy programs as well as those that are related to individual basis programs.

- The study has identified possible areas for immediate public policies intervention particularly in rural and remote areas of the country. This would lead to devote resources via social development programs and police intervention specifically in those municipios with high poverty and high GBV.

- Public policies aiming preventing GBV by increasing standards for accountability against all types of violence. One way is strengthening legal and policy frameworks at all levels, local, state, and national, and improve the coordination of response services in cases of GBV.

- **Report 6.4.6: Gender norms, social capital and the reproduction of violence in contexts of poverty and segregation**

Researchers: Martín Benavides, Juan Leon, Manuel Etesse Lucia Espezua

Context

The concept of segregation is one of the most commonly used by the research trying to analyze inequality in urban contexts. As Sabatini (2003) points out, segregation should not be considered only as a problem since there are potential positive impacts of segregation such as the consolidation of greater social cohesion through grassroots solidarity mechanisms and the formation of a collective identity among the inhabitants at the neighborhood level because of a number of shared common features as well as the same ethnicity or similar migrant status (Lobo, 1984; Martin, 2000).

However, most of the literature stresses its negative impacts on anomic and criminal behavior, adolescent sexuality and early pregnancy (Crane, 1991; Duncan and Raudenbush, 1991, 2001; Sampson, Morenoff and Gannon-Rowely, 2002). In addition, significant, albeit minor, effects of a segregated and poor context have been shown on educational paths (Jencks and Mayer, 1990; Duncan, Connell and Klebanov, 1997; Laventhal and Brooks-Gunn, 2000; Ludwig, Ladd and Duncan, 2001). For Latin America, Katzman has also looked at the relationship between the level of homogeneity in the social composition of poor neighborhoods and the educational achievement and behavior of youngsters.

In this paper we want to analyze how the context of segregation impact domestic violence. Violence against women represents one of the most systematic and prevalent human rights abuses in the world (UN, 2007). This phenomenon is found in every country and also transcends differences in culture, class, education, income, ethnicity and age (UNICEF, 2000).

In Peru, there is currently a high rate of women experiencing violence by their intimate partners. According to the 2012 Demographic and Health Survey (DHS), 45.4% of Peruvian women have been subjected at least once to some type of violence – psychological, physical or sexual – by their spouses or intimate partners. This means that approximately 4 out of 10 women experience violence by their partners.

For doing this we will explore two mechanims: Gender norms and social capital. The research question is the following: in contexts of segregation and poverty, how are gender norms and social capital associated with domestic violence?

Gender Norms. In areas of segregation, general norms could be replaced by social norms in many cases opposed to the former (Wacquant 2008, Wilson 1987). Thus the likelihood of disseminating more easily cultural norms that tolerate and support violence as a form of solving problems and punishment is greater (Koenig et al. 2006, Barker 2010, Morrison et al. 2007).

Such contextual dynamics could also encourage the development of social norms that foster, for instance, the control of men over women. It can also be argued that the existence of sexist prejudices in the police and judicial institutions in these areas, which results in the authorities intervening only in those cases where women are willing to report and leaning towards conditional law enforcement (Menendez et al. 2013).

The two sides of the social capital coin. Wacquant's thesis (2008) that highlights the role and significance that the ghetto can represent for those who are part of it, which would be "the other side of the coin". Because the ghetto can be "*an inclusive and protective instrument inasmuch as it relieves their members of having contact with the dominant group and encourages partnership and community-building within the limited sphere of relationships that it creates. The isolation imposed from outside leads to the intensification of social contact and sharing culture within.*" (Wacquant, 2008, 12 6, 128).

In short, the segregation of these people also means some consolidation in terms of group identity, perhaps ethnically, while allowing them for cultural autonomy and fosters the creation of close networks of collective solidarity. This positive thesis of social capital has been accepted earlier by studies such as those of Aldo Panfichi (2013) who questioned the conventional trend of the studies on poor neighborhoods, which view them as decayed spaces riddled with crime and lacking all forms of collective solidarity.

Data sources and methodology

The sample used in this study was obtained from a stratified random design carried out in five districts of Metropolitan Lima with different levels of segregation according to the 2007 census: *Carabayllo, El Agustino, Chorrillos, San Juan de Lurigancho and Villa el Salvador.* The number of households interviewed in the sample was 2,813 and the fieldwork took place in July, August and September 2013. The selected households were located in specific areas of the aforementioned five districts, which showed different patterns of segregation.

Given that within each previously established area there was still a great heterogeneity of neighborhoods, we did etnographic research that help us to find more neighborhoods within the 5 areas. This post-categorization resulted in the existence of 39 neighborhoods within all areas of the NOPOOR survey, with a minimum of 20 households per neighborhood.

To estimate the likelihood that a woman will experience violence or not, a logistic regression model was applied in order to identify which variables are associated with the likelihood that the event being analyzed will occur.

On the other hand, since the literature identifies that the effect of segregation acts through different mechanisms on violence against women, simultaneous equation models will be used

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as these models take into account the endogeneity that exist when using the segregation variable as a predictor for the model of violence against women.

Main Results

The results show that the percentage of women who have ever experienced some type of violence, in contexts of poverty and segregation, is higher than the national average, and even the average for Metropolitan Lima. At individual level there is an intergenerational transmission of violence from mothers to daughters, with this results being similar to that found by Mora (2013) and Benavides and Leon (2014). Firstly, it was found that those women who experienced violence as children are more likely to be subjected to violence by their spouses or intimate partners; and secondly, those women whose mothers were subjected to domestic violence are more likely to be subjected to violence by their spouses or partners. It can be observed that women would be accepting that violence is a natural thing and allow their spouses or partners to use violence against them. This issue opens up the space for the development of information strategies that will allow the women's imaginaries to be modified so that they will not consider violence as normal at home or in a relationship.

Our central result, supported also by our ethnographic research, is that the impact of segregation occurs clearly on the basis of two mechanisms. The first one is based on the reproduction and legitimacy of gender norms favorable to male control and dominance over women. Segregation impacts positively on that factor and this in turn increases the likelihood of violence. The second one, more complex in its dynamics, is related to the social capital. In the contexts of segregation, a higher intensity of social ties are often developed through support networks. These networks in turn help reduce violence.

Policy Implications

This finding is an important element for public policy. In those communities where violence is normalized and justified as part of the couple's relationship, complaints are considered shameful because they bring private problems out into the open, and thus they are less likely to seek help in the formal system (Alvidrez, 1999; Bauer et al., 2000; Morrison et al., 2006; Mujica et al., 2013; Petersen et al., 2004; Benavides et al., 2014). In Peru, as found by another **NOPOOR** study less than one quarter of women report violence.

One of the reason why violence is not reported is the lack of confidence in public institutions as many of them reproduce gender stereotypes. To develop those support networks in other contexts can help solve that problem, delegitimizing negative social norms against women where they are widespread and bringing public institutions closer to the people.