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Poverty in Urban Bangladesh: Trends, Profiles and Spatial Differences

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With rapid urbanisation and concomitant rise in urban poverty, a better understanding of urban poverty and urban income dynamics has become an urgent priority. One in five poor households now live in urban Bangladesh and many more urban households are aspiring to be middle class yet vulnerable to falling back into poverty. Progress in reducing poverty has slowed in urban areas, particularly in larger cities. As a result, there are now more people living in extreme poverty in urban Bangladesh (3.7 million) than in 2010 (3 million). At current rates of urbanisation and poverty reduction, more than half of poor households will live in urban areas by 2030. This paper examines what can be learned about trends and drivers in urban poverty from recent nationally representative surveys. It also analyses additional data sources on the capital city, Dhaka, to shed light on spatial inequality within the city. The paper highlights the need for increased data collection and evidence on urban poverty to inform public policy to address this emerging challenge.

Keywords: Poverty, Urban, Spatial, Slum, Dhaka
JEL Classification: O18, I30, I39, R11, R12

I. INTRODUCTION

With rapid urbanisation and a concomitant rise in urban poverty, a better understanding of urban poverty and urban income dynamics has become an urgent priority. The last census in 2011 counted 28 per cent of the population as urban, with the intercensal change indicating the urban share of the population is increasing by 0.4 percentage point per year. UN population data shows that Bangladesh is urbanising faster than both the southern Asia and all Asia regional averages (UN-DESA 2018). One in five poor households now live in urban Bangladesh (Table I) and many more urban households are aspiring to be middle

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class yet vulnerable to falling back into poverty. The urban share of the population, and of the poor population in particular, has increased.[1] As a result, there are now more people living in extreme poverty in urban Bangladesh (3.7 million) than in 2010 (3 million). At current rates of urbanisation and poverty reduction, more than half of poor households will be urban by 2030.[2]

TABLE I

TRENDS IN URBAN SHARES OF POPULATION AND POVERTY, 2000-2030

	Urban share of population from census data (year) / projections	Urban share of population (per cent)	Urban share of poor (per cent)	Urban share of extreme poor (per cent)
2000	23.8 (2001)	20.1	14.4	11.7
2005		24.7	17.5	14.4
2010	28.0 (2011)	26.3	17.8	11.5
2016		29.1	22.3	18.0
2030	45.6		51.5	

Source: Authors' calculations using HIES 2000, 2005, 2010 and 2016 and UN-DESA 2018.

Yet despite an increasing urbanisation of poverty, nearly all analysis of poverty and income dynamics in Bangladesh has been focused on rural poverty and mobility. This has important policy implications. For example, the graduation approach that was developed in Bangladesh and which has received international recognition, is an approach that was developed in rural Bangladesh based on in-depth analysis of rural poverty. The approach is focused on physical asset transfer (often involving livestock) and livelihood support that is well suited for rural Bangladesh but has little applicability in urban centres.

[1] The definition of urban changed in the 2011 census (which is the sampling frame for the 2016/17 *Household Income and Expenditure Survey* - HIES). The newer definition used a stricter definition of urban area that excluded some areas of statistical metropolitan areas. An expert panel on the census met and advised that the new definition of urban used in the census be modified to include these areas again (BBS 2014). This adjustment was made in the HIES also by reclassifying these EAs as urban accordingly. However, there was an error in classifying 13 urban areas as rural which is why the published share of the urban population in the BBS HIES 2016/17 reports is lower than the share reported here which corrects this mistake (and updates the poverty estimates accordingly).

[2] Urban population projections for 2030 are taken from *UN-DESA World Urbanization Prospects 2018*, and the rate of progress in reducing urban and rural poverty from 2010 to 2016 is projected to continue for 14 years to predict an urban poverty rate of 14 per cent and a rural poverty rate of 11 per cent.

Limited survey data on urban households has hampered our understanding of urban income dynamics and urban poverty. One is the absence of urban panel surveys that follow the same households across time. There are many long-run and well-used rural panel surveys in Bangladesh, but no urban panel survey that follows urban households across time. As a result, it is not clear whether slower progress is a result of poor households migrating from rural to urban areas, and on their way to becoming better off; weak income growth among urban households that have been poor for many years; or poor households doing quite well but being replaced among the ranks of the poor by once non-poor urban residents that have lost their jobs or experienced other setbacks. Likely policy responses to each of these narratives may differ so it is critical to understand which of these prevail and to what degree. In addition, cross-section data that is available for urban areas does not allow for disaggregation within a city to see how dynamics differ in different parts of the city such as the centre and periphery or slum and non-slum areas.

In addition, there are critical knowledge gaps on qualitative understanding of urban poverty dynamics. Issues such as nature of multi-dimensional poverty in large urban centres such as Dhaka, community in fluid urban contexts, urban spaces that may facilitate or hinder entry into labour markets and influence the nature and quality of urban services need research to enable formulation of more effective policies to address urban poverty and inclusive growth.

This paper uses available data to present key facts on who the urban poor are and what is driving or constraining progress for these households. It uses the data that is available, but it also discusses the data that will need to be collected in future years to provide the information for evidence-based urban policy. Given the available data the paper uses specific definitions of urban and poverty, but first it is worth noting the spectrum of urban areas in Bangladesh and factors to take into account when measuring poverty in urban areas.

Defining urban in Bangladesh. At 1,015 people per square kilometre, Bangladesh is one of the most densely populated countries in the world, surpassed only by city-states and small-island countries. Many rural areas in Bangladesh have population densities as high as urban areas in other countries. In fact, when using agglomeration indices rather than official definitions of urban areas, the proportion of people living in urban areas in Bangladesh is much higher than

reflected in Table I.[3] According to these measures, the share of the urban population is as much as 20-36 percentage points higher than official estimates.[4]

The urban spectrum. Within the official definition of urban there is still a large spectrum of urban areas (Rahman 2016). At one end, Dhaka comprises one third of the urban population, making it one of the largest cities in the world. It is also one of the most densely populated cities in the world. It is a primate city in that its population is three times larger than Chittagong, Bangladesh's second-largest city. Secondary cities—Khulna, Rajshahi, Sylhet, Barisal, Comilla and Rangpur—are much smaller. Non-metropolitan municipalities and upazila headquarters comprise the rest of the urban population. Bird, Li, Rahman, Rama, and Venables (2018) show how Dhaka is disproportionately important relative to these much smaller urban areas. Not only is Dhaka large in absolute terms, but secondary cities in Bangladesh are disproportionately small. Within Dhaka there is also considerable variation in urban spaces, something discussed further below.

Measuring poverty in urban areas. The standard measure of consumption poverty (expenditure per capita) is not always a good measure of poverty in urban areas. A larger share of household expenditure (namely rent) is shared among household members making economies of scale more important. Urban poverty has additional dimensions which have not traditionally been well captured in quantitative analyses such as crime and mental health (Rahman 2016). Finally, getting prices right—for both goods and particularly housing—for urban poverty lines can be challenging. This analysis uses the *Households Income and Expenditure Survey* (HIES) collected by the Bangladesh Bureau of Statistics in 2000, 2005, 2010 and 2016/17 (referred to as 2016 throughout) and the national official poverty measurement methodology which is defined as per capita expenditure and deflated using the methodology set out in BBS and World Bank (2017), complementing this measure with indicators of other dimensions of wellbeing as much as possible.

On nearly all measures, wellbeing is better in urban areas. Monetary poverty rates in urban areas are much lower than in rural areas, across the urban spectrum

[3] Agglomeration indices use census data to determine whether an area is sufficiently population dense to be considered an urban area.

[4] Uchida and Nelson (2010) suggest an urban population share that is 20 percentage points higher, whilst Robert *et al.* (2017) show that agglomeration indices predict an urban population share 30-36 percentage points higher and other methods would suggest an even larger divergence.

(Table II).[5] By other dimensions of wellbeing, households also appear better off: children are less likely to be undernourished; adults have more education; and access to electricity, improved water and sanitation is better. However, vulnerability to poverty is higher in some cities than in rural areas, and children are not more likely to be in school.

However, there are three causes for concern.

*Firs*t, urban poverty is relatively high. Almost 1 in 5, 19 per cent, of the urban population lives in poverty, which is high both in absolute terms and in relative terms—in South Asia, only Afghanistan has a higher urban poverty rate (Ellis and Roberts 2015). As is discussed further below, the poverty rates in Dhaka and Chittagong are particularly high given their strong contribution to economic power. Vulnerability to poverty, defined as the population that live between the national upper poverty line and twice the national upper poverty line, is also high in urban Bangladesh with 1 in 2 households, not poor but vulnerable to falling into poverty. And the size of the middle class (defined as living on more than twice the national upper poverty line) is small: across cities, less than a third of the urban population are middle class on average.

Deprivation in other dimensions is also quite high. About a third of household heads have no education, and children are slightly less likely to be in school than in rural areas (76 per cent of children are in school compared to 82 per cent in rural areas). Rates of access to sanitation and water are much higher, but still quite low. Malnutrition in urban areas is lower than in rural areas, but 10 per cent of children suffer from severe stunting and 31 per cent are moderately stunted. Other aspects of deprivation—such as crime, or the need to move repeatedly because of rent increases—that we do not typically measure in household surveys are also present (Rahman 2016). The majority of households in Dhaka rent the property they live in (72 per cent). In Dhaka, 43 per cent of households changed residence in the last three years and for 39 per cent of movers this was due to an increase in rent (Rahman 2016). In Chittagong, fewer households rented (62 per cent) or moved in the previous three years (25 per cent) but increases in rent was still the main reason for moving (34 per cent).

[5] The 2016 HIES was the first HIES to use the City Corporation as a strata rather than the Statistical Metropolitan Area which was used in previous HIES. This allows poverty rates to be defined for four City Corporations of Dhaka (North and South City Corporation combined), Chittagong, Rajshahi and Khulna. When statistics are presented just for 2016 in this paper, statistics are presented for the City Corporations. When statistics are presented across time, the Statistical Metropolitan Area (SMA) is used and the definition of SMA is carried into the HIES 2016 to make the numbers comparable across time.

TABLE II

MONETARY AND NON-MONETARY INDICATORS OF POVERTY: URBAN VS. RURAL

	Rural	Urban	Urban			
			Dhaka CC	Chittagong CC	Other CCs	Other urban areas
Monetary poverty						
Population in poverty	26.7	19.3	9.0	12.1	21.1	22.0
Population in extreme poverty	15.0	8.0	0.5	3.1	8.2	10.0
Non-poor population that are vulnerable to poverty[6]	54.6	50.9	41.9	55.2	55.0	52.2
Middle class[7]	18.7	29.9	49.1	32.7	24.0	25.9
Poverty gap	5.4	4.1	1.3	1.8	3.7	4.9
Non-monetary poverty						
Household head has no education	45.6	32.5	27.6	32.9	25.6	33.8
Household has sanitary toilet	18.9	41.3	63.7	49.3	44.5	35.6
Household has piped water	2.1	35.6	95.5	42.7	11.1	22.4
Household has electricity	68.1	94.2	99.8	98.9	97.2	92.5
Child poverty						
Proportion in school (6-18 years)	82	76.4	77	64.6	83.7	77.2
Moderate to severe stunting	38	31				
Severe stunting	12	10				

Source: Authors' calculations using HIES 2016 (stunting from Govindaraj *et al.* 2018 using BDHS 2014). CC stands for City Corporation. "Other CCs" includes Rajshahi and Khulna City Corporations.

Second, there is considerable spatial disparity within large cities, with some neighbourhoods (slums) having levels of welfare equal to or worse than rural areas. Slums have traditionally been outside of the usual sampling frame used for the HIES, but they were included for the first time in the HIES 2016/17. In addition, for the first time an additional sample of 600 households from slums in Dhaka City Corporations (CCs) were interviewed at the same time as the HIES, and provides a poverty estimate for slums that is comparable to the official poverty estimate for Dhaka CCs. Poverty rates in slum neighbourhoods are two and a half times higher than in Dhaka CC on average and are at the same level as national poverty rates (Figure 1).

Third, progress is slowing in urban areas. It is the slowdown in poverty reduction in urban Bangladesh that has driven the overall slowdown in national

[6] Defined as living above the poverty line but less than twice the official upper poverty line.

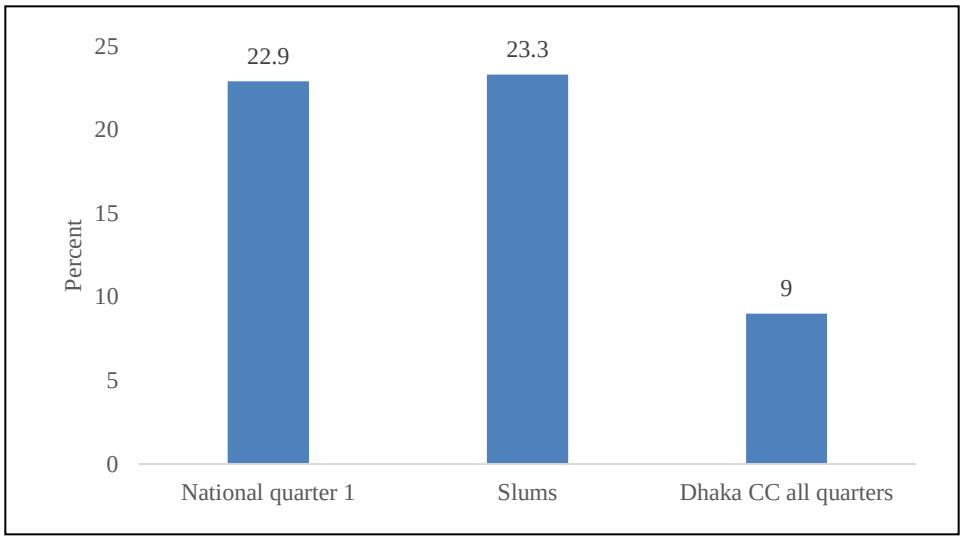
[7] Defined as living on more than twice the official upper poverty line.

poverty reduction. Poverty has been falling in urban areas from 2000 to 2016, but the rate of poverty reduction has been much slower in urban areas since 2010 and there was a small increase in extreme poverty (0.3 per cent point) (Figure 2). The number of extreme poor in urban areas increased from 3 million in 2010 to 3.7 million in 2016. Answering the question of how to increase the pace of progress in reducing poverty in urban areas is essential to increasing the pace of national progress in poverty reduction.

It is worth discussing Bangladesh's urbanisation trends and two important changes that took place in the sampling frame for the household survey between the last two rounds of the HIES. First, the 2011 census provided for a new sampling frame for the 2016 HIES. Secondly, slums were included in the urban sampling frame in the 2016 HIES for the first time. Can either of these changes explain the slowdown in urban poverty reduction? The change in sampling frame is unlikely to cause a change as the same definition of urban that was used previously was used to define urban in the HIES. This definition includes counting urban areas that are defined as being part of statistical metropolitan areas as urban.

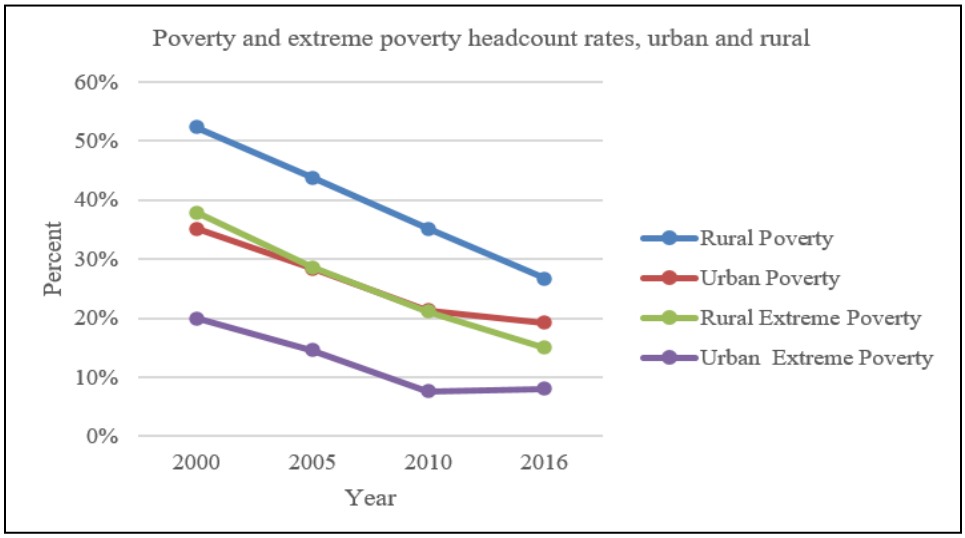
The inclusion of slums in the sampling frame for the first time could at most only explain part of the slowdown. For the first time a separate survey of slums was conducted in Dhaka CC that allows an estimate of poverty rates in Dhaka CC to be estimated. Poverty rates in slums in Dhaka are about three times higher than poverty rates in non-slum areas. The inclusion of slums thus could increase the urban poverty rate. It is unlikely that there is such a divergence between slums and non-slum areas outside of Dhaka CC, but even assuming there were, the non-slum urban poverty rate would still be quite high at 17.3 per cent. Slums were estimated at 2.2 million in 2014 (BBS 2015) compared to a likely urban population of about 45 million that year (assuming the intercensal urban population growth rate continued from 2011 to 2014). This includes some very small slums of less than 5 households that were likely to have been included in the sampling frame of the HIES in previous years. However, if we assume that no slums were included in previous years and that poverty rates in slums are three times the urban average throughout Bangladesh, urban poverty still fell at half the speed as rural poverty and half the speed of urban poverty reduction from 2005 to 2010.

FIGURE 1: **Poverty Rates in Slums in Dhaka, 2016**



Source: *Survey of Slums and Informal Settlements* (2016), *HIES* 2016.

FIGURE 2: **Urban Progress and National Poverty Reduction**



Source: Estimated from HIES data.

The following sections explore the spatial nature of poverty in Dhaka, and trends in urban poverty reduction and employment. First, section II provides a profile of urban poor households. Section III examines trends in urban poverty and employment and use decomposition analysis to point to some of the factors underlying the urban slowdown in poverty reduction. Section IV focuses on poverty in Dhaka given its dominance in the urban spectrum and the evidence that poverty rates are higher than they should be for a city of such economic power. It uses new surveys to examine the spatial nature of poverty in Dhaka highlighting the pockets of extreme poverty that exist in Bangladesh's wealthiest city. In concluding, the paper discusses some of the interventions that may be needed to help them escape poverty.

II. POVERTY PROFILE

Just as in rural areas, urban households are more likely to be poor at certain points in their life-cycle. Larger households and higher dependency ratios are associated with higher poverty, although household size and dependency ratios have been decreasing over time (Table III). Poor urban households are also more likely to have a higher share of adults who are non-earners, increasing the number of people a working adult has to support further. Transfer programmes that help households through times when they have young children or elderly members will help address urban poverty.

The age and gender of a household head does not have a large impact on the likelihood the household will be poor. Household heads in urban areas are slightly younger on average than household heads in rural areas (42 years on average compared to 44 years). This may reflect the fact that household independence occurs at a younger age in urban areas, or retirement of some elderly urban residents to rural areas. The age difference between poor and non-poor household heads is significant in urban areas, but it is small. Households in urban areas are no more likely to be headed by a female than other households. Female headship is also becoming more common over time.

About two fifths of household heads of poor households are engaged in the service sector with the other half being split almost evenly between industry (24 per cent) and urban agriculture (17 per cent). Non-poor households are much more likely to be in services and industry and very few non-poor households are in urban agriculture.

The most important asset of urban households is their education, and this is where the largest differences between poor and non-poor urban households are observed. Land ownership is uncommon among poor urban households, making labour their prime asset. However, education levels are extremely low among the urban poor. Literacy rates among poor urban households have improved across time but are still only 42 per cent. More than half of all household heads living in poverty (55 per cent) have no education. Only 3 per cent of poor household heads had completed secondary education. This was much higher—20 per cent—among the non-poor, although still low.

The low rates of school attendance in urban areas do not bode well for the next generation. Table II highlighted that the share of 6-18 years old children in school is lower in urban areas than in rural areas. More needs to be done to ensure the next generation of urban workers is skilled. Investing in education and skills for poor households is an important part of tackling urban poverty. This will require ensuring children in urban households are in school, but also working with adults with little or no education to increase their skills.

Urban areas comprise a spectrum, and the characteristics of the urban poor vary with the type of city considered. Rahman (2016) identifies four distinct urban areas: Dhaka, Chittagong, the secondary cities comprised the other city corporations, and "mofussil" urban areas—the smaller towns that fall outside the city corporations. Table II indicates that rates of deprivation tend to fall in smaller towns. The characteristics of households also differ with family sizes increasing, educationally attainment falling and service sector employment more common in smaller urban areas.

TABLE III

SECTORAL VARIATION IN URBAN POVERTY RATES, 2010-2016

	2000				2005				2010				2016			
	Mean non-poor	Mean Poor	(1)	(2)	Mean non-poor	Mean Poor	(1)	(2)	Mean non-poor	Mean Poor	(1)	(2)	Mean non-poor	Mean Poor	(1)	(2)
Demographics																
Household size	4.91	5.58	***	***	4.59	5.12	***	***	4.30	4.86	***	***	3.79	4.59	***	***
Household dependency ratio (3)	0.61	1.03	***	***	0.55	0.97	***	***	0.58	0.88	***	***	0.52	0.87	***	***
Age of household head	45	43	***	**	44	42	**	***	45	43	***	**	42	42		**
Household head is female (%)	9.43%	10.28%			9.27%	8.02%			11.65%	9.32%	*		12.26%	13.62%		
Work and income																
Share of adults who are earners		NA			33.37%	29.40%	***		34.11%	31.86%	**		38.22%	30.48%	***	
Household receives:																
International remittances	9.85%	3.64%	***	***	10.41%	3.09%	***	***	9.20%	1.61%	***	***	4.01%	1.72%	***	***
Domestic remittances	18.69%	14.57%	*	**	17.11%	19.22%		***	7.46%	6.94%		*	11.07%	9.93%		*
Social transfers		NA			3.70%	12.25%	***	*	7.26%	18.51%	***	*	6.55%	17.84%	***	*
Household head in agriculture	8.76%	13.62%	**	R	8.31%	19.45%	***	R	7.00%	16.61%	***	R	7.31%	17.38%	***	R
Household head in industry	20.78%	23.99%			21.72%	27.17%	*		26.29%	33.76%	***		28.03%	24.20%	**	
Household head in services	50.32%	45.58%	*		56.63%	45.49%	***		48.64%	37.92%	***	*	44.46%	39.41%	**	*
Asset ownership and services																
Household owns land	14.13%	7.12%	***	***	31.39%	14.92%	***	**	26.40%	11.98%	***	***	24.19%	11.17%	***	***
Household owns a mobile phone					35.35%	2.49%	***	***	89.10%	56.12%	***	***	96.94%	89.44%	***	***
Household has electricity	90.93%	58.29%	***	***	90.46%	60.52%	***	***	94.66%	71.05%	***	***	96.53%	82.60%	***	***
Household has piped water	41.49%	12.28%	***	***	34.62%	11.18%	***		39.33%	19.86%	***		38.83%	17.83%	***	
Household has Sanitary toilet (%)	39.92%	13.85%	***	***	41.56%	20.94%	***	***	34.31%	14.87%	***	***	44.10%	27.19%	***	***
Household has microcredit									21.23%	34.13%	***		20.73%	30.08%	***	

(Contd. Table III)

	2000				2005				2010				2016			
	Mean non-poor	Mean Poor	(1)	(2)	Mean non-poor	Mean Poor	(1)	(2)	Mean non-poor	Mean Poor	(1)	(2)	Mean non-poor	Mean Poor	(1)	(2)
Human capital																
Member with illness / disability	0.30	0.30			0.26	0.24			0.32	0.27	**		0.27	0.21	**	
Household head is literate	75.06%	29.46%	***		75.67%	36.94%	***	***	71.77%	34.28%	***		69.80%	41.93%	***	
Head has no education	25.29%	71.07%	***	R	24.33%	63.06%	***	R	28.23%	65.72%	***	R	30.79%	58.90%	***	R
Head has some primary	4.40%	5.04%			4.91%	6.28%		**	4.80%	7.50%	**		6.87%	10.40%	***	
Head has completed primary	11.14%	8.43%	**		9.26%	11.09%			10.16%	8.50%			10.81%	10.41%		
Household head has at least some secondary education	59.18%	15.46%	***	**	61.34%	19.58%	***	O	56.56%	17.31%	***	*	51.43%	19.99%	***	*

Source: Authors' calculations using HIES 2000, 2005, 2010 and 2016.

Notes: (1) Stars indicate whether mean for non-poor and poor is significantly different using a Wald test. Significance is at the *10%, **5%, and *** 1% level. (2) Significance values are calculated for each year separately including division fixed effects. Significance at the *10%, **5%, and *** 1% level of probit regression correcting for the clustered nature of the errors. (3) Dependency ratio was calculated as the population aged zero to 14 and over the age of 65, to the total population aged 15 to 65. R stands for reference group. O stands for omitted category. Household head sector assigned using hours. The sector shares do not sum to 100 since there are households head where not assigned to any sector due to lack of information.

The nature of vulnerability to poverty is also different for urban households. Households are often small, dependent on one wage and are at risk of losing everything is this job is lost. Housing is insecure for many who lack property rights and the risk of flooding is high, particularly for poorer households who are more likely to live in areas subject to flooding. Sudden increases in food prices are not reflected in immediate increases in wages posing another source of vulnerability to poverty. Crime and violence have also become a source of risk in bigger cities such as Dhaka, affecting in particular the poor and slum areas. A sociological study in Dhaka slums for 2015 shows that child criminalization is high and associated to poverty conditions and bad peers (Kamruzzaman and Hakim 2015).

Moreover, safety nets are incomplete in urban Bangladesh leaving many without anything to fall back on. One in ten poor households receives remittances, often domestically, but non-poor households are more likely to be remittance receivers. Currently, 18 per cent of poor households in urban areas receive social transfers (compared to 35 per cent in rural areas). Government and NGO support is more important in smaller urban centres. Only 1.1 per cent of households in Dhaka CCs receive government or NGO support. This is higher in slums, but still low: 4.6 per cent. Out of those, 50 per cent of the support came from NGOs.

High levels of vulnerability affect households' investment strategies as they choose to underinvest in activities where the returns are particularly uncertain. High levels of environmental pollution, inadequate water and sanitation, overcrowding, fear of eviction and bad quality of housing can also negatively affect the health of slum residents. A 2009 study for slums in Dhaka found that the mental well-being of dwellers is correlated with socio-economic factors such as job satisfaction, income generation ability, and population density, as well as contextual factors such as environmental pollution, lower flood risk, better sanitation and quality, sufficiency and durability of the house (Gruebner *et al.* 2012). Poor health is a source of vulnerability that can lead to negative income shocks due to higher health expenditures or inability to work. In addition, high levels of stress have been shown to affect decision making, making individuals more focused on the present and less focused on longer-run decisions such as investments in education of children ("present bias").

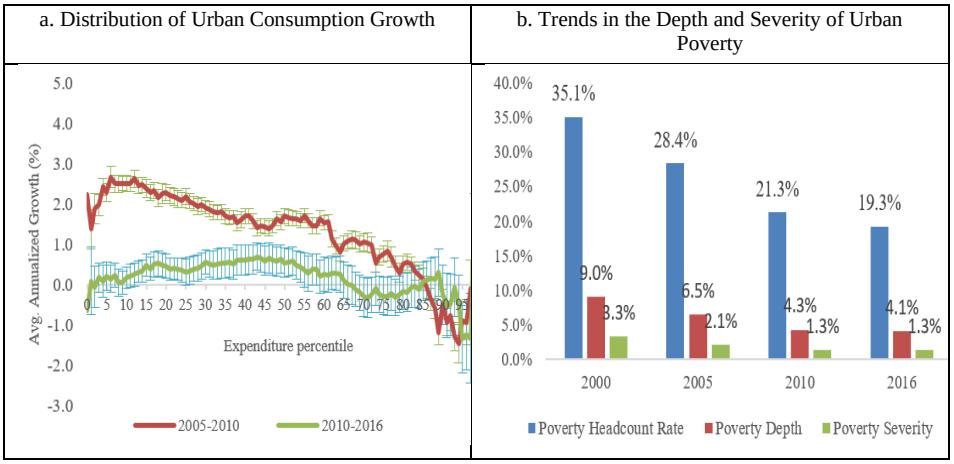
III. TRENDS IN URBAN POVERTY

Consumption growth fell dramatically in urban areas across the consumption distribution, causing the slowdown in national poverty reduction. Figure 3a depicts how household consumption grew across the consumption distribution between

2005 and 2010 and between 2010 and 2016. Except for the top 15 per cent, consumption growth was much higher from 2005-10 than from 2010-16. The difference in consumption growth was particularly large for the poorest half of the distribution, as this was the part of the distribution that did the best during 2005 to 2010. In addition, from 2010 to 2016 the rate of consumption growth was particularly low for households living under the extreme poverty line (the poorest 8 per cent of the urban population) and as a result there was no progress on reducing extreme poverty in urban areas (Figure 2) and the depth and severity of poverty barely decreased (Figure 3b).

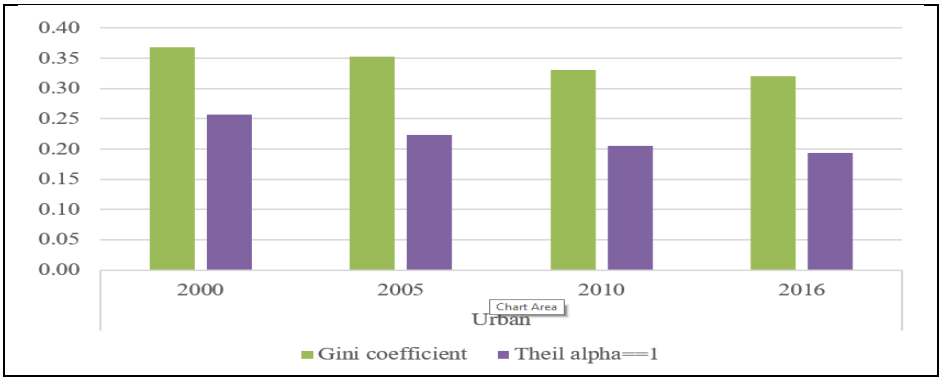
Lower poverty reduction in urban areas was not associated with increasing inequality. Standard summary statistics of the inequality of the consumption distribution suggests that inequality fell in urban areas (the Gini fell from 0.33 in 2010 to 0.32 in 2016, the Theil with alpha=1 fell from 0.21 in 2010 to 0.19 in 2016), most likely because of higher consumption growth in the middle of the consumption distribution. However, inequality did not fall as fast as it had previously (Figure 4).

FIGURE 3: **Urban Growth Incidence Curves and Depth/Severity of Urban Poverty**



Source: Authors' calculations using HIES 2000, 2005, 2010 and 2016.

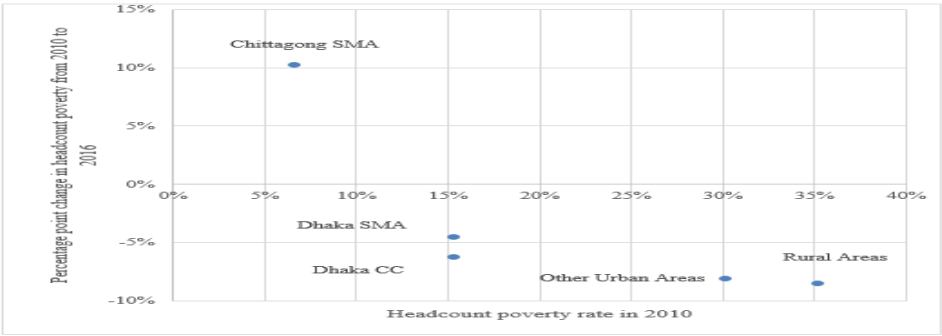
FIGURE 4: **Trends in Urban Inequality**



Source: Authors' calculations using HIES 2000, 2005, 2010 and 2016.

The national urban trends mask a variety of different trends that were experienced across the urban spectrum. The HIES 2016 used different stratum for classifying types of urban areas in 2016 than in 2010 which makes it difficult to follow poverty rates for different cities across time. Reconstructing the old definitions of cities in the HIES 2016 suggests that poverty increased substantially in Chittagong, fell slowly in Dhaka, particularly in Dhaka CC where poverty hardly fell at all and fell at national rates of poverty reduction in other urban centres. However, urban areas have high standard errors in HIES, and, in particular, the surprisingly large jump for Chittagong SMA requires further verification. Increasing the sample size for major cities in the next HIES will be important for generating more accurate city-level poverty estimates.

FIGURE 5: **Spatial Variation in Urban Poverty Trends**



Source: Authors' calculations using HIES 2010 and 2016.

Note: SMA stands for Statistical Metropolitan Area. Dhaka refers to Dhaka SMA (even in 2016, when the SMA was no longer being used, to ensure comparability). Chittagong refers to Chittagong SMA (even in 2016, when the SMA was no longer being used, to ensure comparability). Other urban refers to the rest of urban areas. Dhaka CC refers to Dhaka City Corporation. Given this as not a stratum in 2010, the standard error on this estimate is high. Dhaka CC poverty change in this graph is comparing Dhaka SMA in 2010 with Dhaka CC in 2016. Poverty lines for SMA areas were recalculated entirely after reassigning households accordingly to recover the SMA areas across time, for details refer to Ahmed *et al.*, (2017).

The slower rates of progress in Dhaka mean that although economic density is much higher in Dhaka than in the rest of the country, living standards and poverty rates do not reflect this difference. This is also true for Chittagong. In 2013, Dhaka comprised 10 per cent of the population and 36 per cent of GDP and Chittagong comprised 3 per cent of the population and 11 per cent of GDP (Muzzini and Aparicio 2013). On average, residents of Dhaka and Chittagong are 3.6-3.7 times more productive than the national average. However, the standard of living does not reflect this higher level of productivity. The poverty rate in Dhaka and Chittagong City Corporations is 9 and 12.1 per cent respectively compared with 24.5 per cent nationally. Taking a measure that is closer to greater Dhaka, Dhaka SMA[8], suggests a poverty rate of 10.7 per cent. Ensuring that the benefits of agglomeration benefit poorer residents in Bangladesh's two largest cities is essential.

Poverty reduction has been very uneven across economic sectors in urban areas, with poverty rates in the urban manufacturing sector falling much faster than in the service sector which saw little change in poverty rates. Households in industry were better off in 2016 than households in industry in 2010, but this was not true for households whose primary employment was in services. Poverty rates were still as high for urban households in the service sector in 2016 as in 2010. Poverty rates were much lower for urban households predominantly engaged in the industrial sector (Table IV and Figure 7).

This reflects particularly strong progress in construction and garments sectors. Industry and services are broad categories capturing a number of different sub-sectors. Poverty reduction in industry has been concentrated in garments and (to a lesser extent) construction. The service sector is varied, including everything from rickshaw drivers and street vendors to physicians and those employed in the financial sector. Figure 7 shows that different sectors have fared quite differently, poverty reduction in the transport sector was strong, but this comprises a small share of service sector workers. Progress was very slow in commerce and increasing poverty rates were observed in other services.

Poverty rates among self-employed in the services sector increased the most, and it was this that set back overall progress. Figure 8 decomposes poverty reduction from 2010 to 2016 based on both the main sector and type of work (wage and daily employment or self-employed). The strongest contributor to overall progress was poverty reduction among wage and daily workers in industry. This

[8] Poverty lines for SMA areas were recalculated entirely after reassigning households accordingly to recover the SMA areas across time, for details refer to Ahmed *et al.* (2017).

could in part reflect new minimum wage legislation affecting the larger firms of the garment sector. Good progress was also seen for wage and daily workers in services. However, poverty rates increased among the self-employed in the service sector in urban areas.

TABLE IV

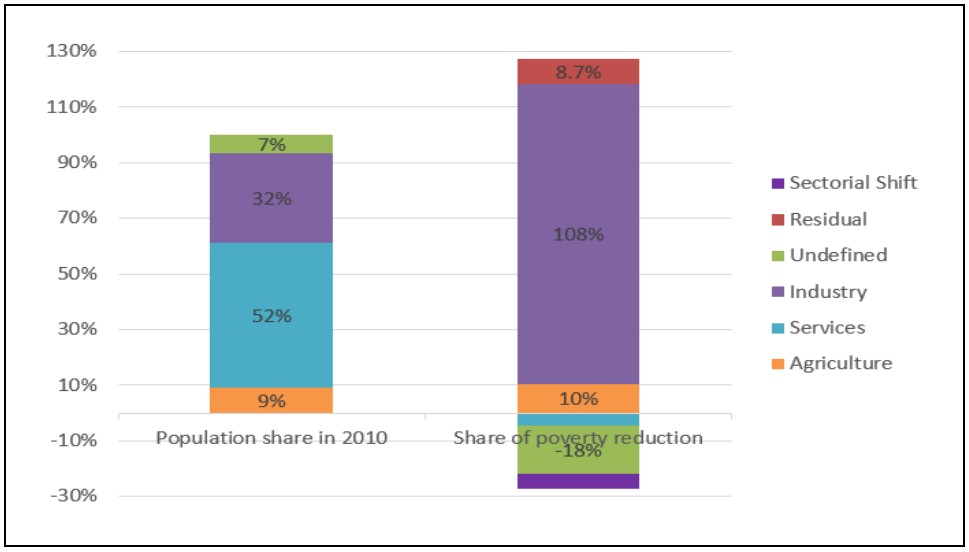
SECTORAL VARIATION IN URBAN POVERTY RATES, 2010-2016

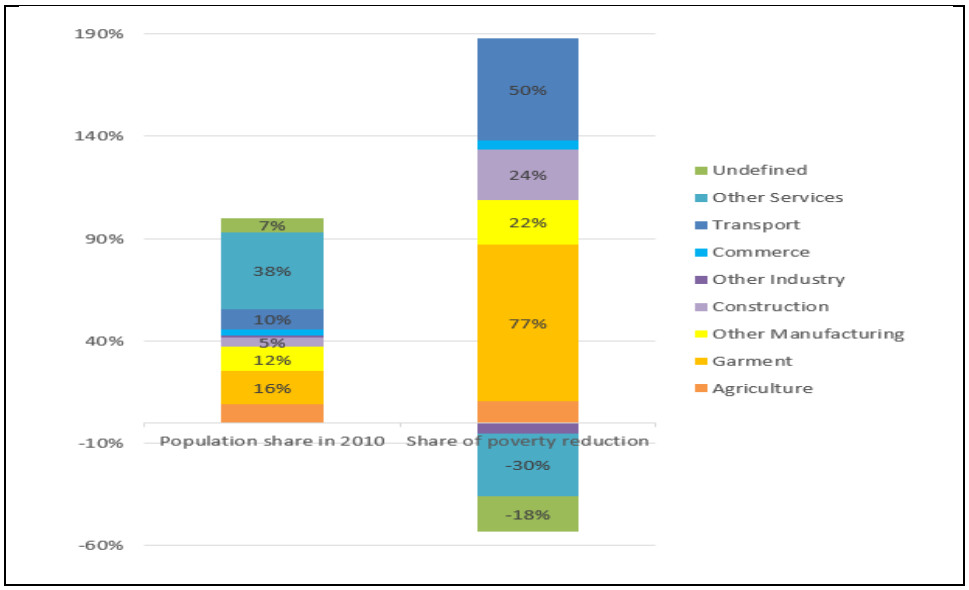
	2010	2016
Per cent of urban population living in poverty with main sector of household work in:		
Industry	26.0	19.0
Garment sector	25.0	16.0
Other manufacturing	2.03	20.0
Construction	41.0	30.0
Services	17.0	17.0
Agriculture	35.0	33.0
Not employed or sector data missing	10.0	15.0

Source: Authors' calculations using HIES 2010 and 2016.

Note: Sector is defined by main economic activity using hours, but same findings hold when using income worked and report main sector of household head.

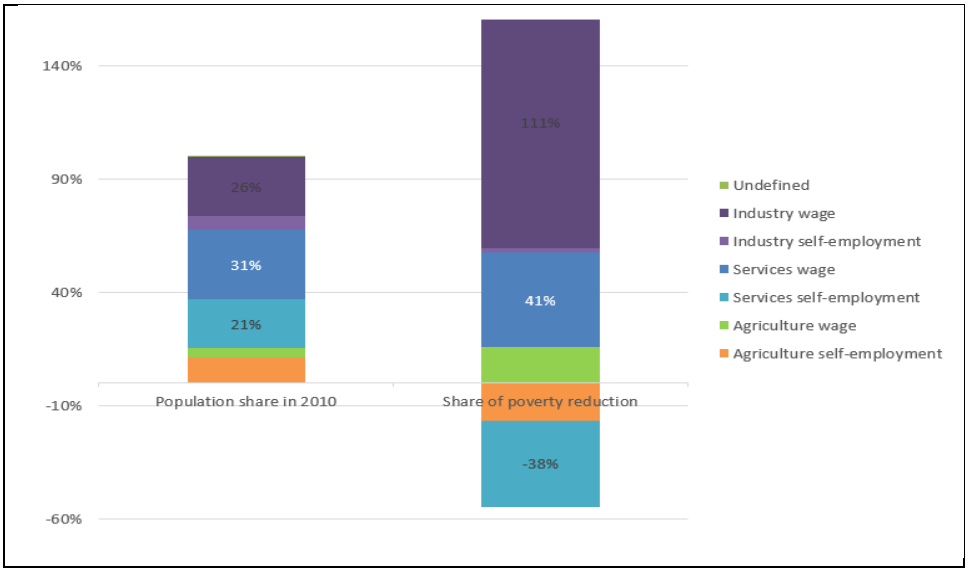
FIGURE 7: **Urban Poverty Reduction by Economic Sectors, 2010-2016**





Source: Authors' calculations using HIES 2010 and 2016. Sector is allocated based on the number of hours worked.

FIGURE 8: **Urban Poverty Reduction by Sector and Mode of Employment, 2010-2016**



Source: Authors' calculations using HIES 2010 and 2016.
Note: Sector is allocated based on the number of hours worked.

Demographic changes have underpinned some of the reductions in poverty observed. Decomposition analysis highlights significant reductions in household size and the number of children and presents evidence that indicates this may have had an important role in reducing poverty (Hill and Endara 2019). These changes have also been present in urban areas. Household size and dependency ratios have fallen across poor and non-poor households alike (Table III). Reflecting this, the share of household members under 18 fell from 42 per cent in 2000 to 36 per cent in 2016. Decomposition analysis suggests that this has been a very important part of explaining reductions in urban poverty rates. It is worth noting that the large contribution of household size and structure to poverty reduction could come in part from the fact that the welfare measure used is total household consumption per capita. This measure does not account for any scale of economies or for the fact that children will consume less than adults. This analysis was repeated using consumption measures that do allow for scale economies and calculate consumption per adult equivalent and even in those cases reductions in household size contributed significantly to poverty reduction, although to a lesser extent.

Unlike in rural areas, increases in individual educational attainment do not appear to have been a strong driver of progress in urban Bangladesh. On average, education levels have increased in urban areas at the bottom of the consumption distribution, but at a slower pace than in rural areas. This could be because of migration, with newer migrants having less education and reducing the overall average growth in education. The absence of migration status in the HIES does not allow this to be assessed. A comparison of the estimated contribution of increases in education to consumption growth at each decile of the consumption distribution for rural and urban areas is presented in Figure 9 and shows that the likely contribution of education to poverty reduction in urban areas has been much lower than in rural areas.[9] Concerningly, the private returns to education have fallen in urban Bangladesh, particularly in the middle of the consumption distribution. The overall contribution of education to poverty reduction has been lower than that shown in Figure 9 because the private returns to education have not been constant in urban areas but have fallen. Figure 10 shows the conditional correlation between years of education in a household and per capita consumption of the household. It

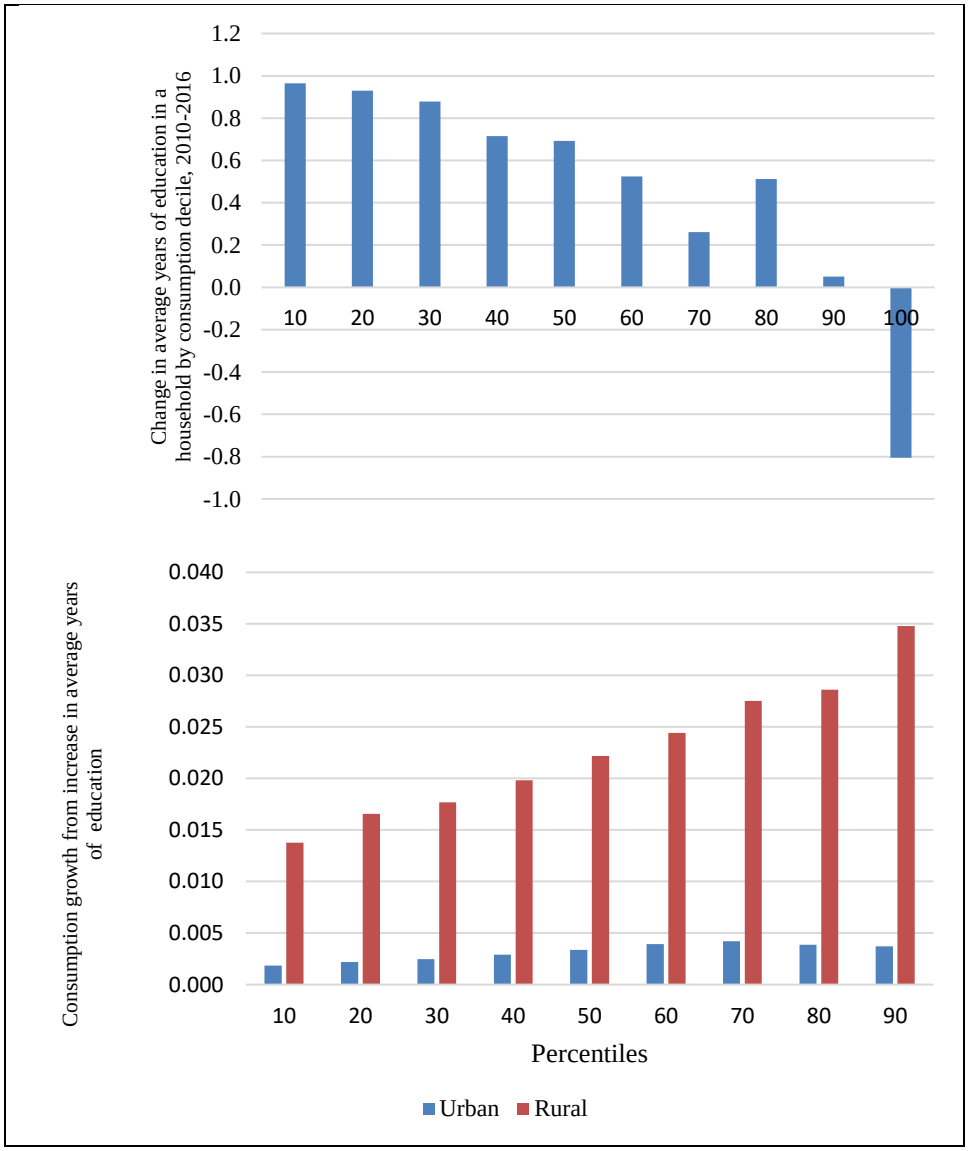
[9] These estimates come from Hill and Endara (2019) and estimate the impact of changes in average years of education in the household on consumption growth by assuming that the relationship between education and consumption has remained unchanged during this time and that it is well-estimated by the coefficient on education in a multivariate regression.

shows that although the returns to education are higher in urban areas than in rural areas, they have fallen significantly since 2010. The fall has been largest in the middle of the consumption distribution where the proportion of households with some secondary education is largest. This is consistent with estimates of the return to education estimated from earnings data in the HIES (Bhatta *et al.* 2019) which shows that the returns to primary and secondary education have fallen from 2010 to 2016, and the returns to education estimated in using LFS data (ADB and ILO 2016) shows higher returns in urban areas than in rural areas.

Although there are important public benefits to education in urban areas, the reduction in private returns is concerning and highlights the challenge of creating an environment in urban areas where investments in human capital are rewarded with more remunerative income-earning opportunities. Some of the return to education in urban areas is not captured privately, but instead have public benefits through human capital spillovers that occur as a result of the concentration of human capital in one location (Moretti 2003). Data that can be disaggregated by more urban neighbourhoods and cities would allow this to be estimated.[10] However, this public benefit notwithstanding the reduction in private returns is concerning and indicates that very real constraints to entrepreneurship and labour productivity may have been present in urban areas in Bangladesh in recent years. ADB and ILO also note that returns to education in Bangladesh were already low by international standards in 2013 (ADB and ILO 2016).

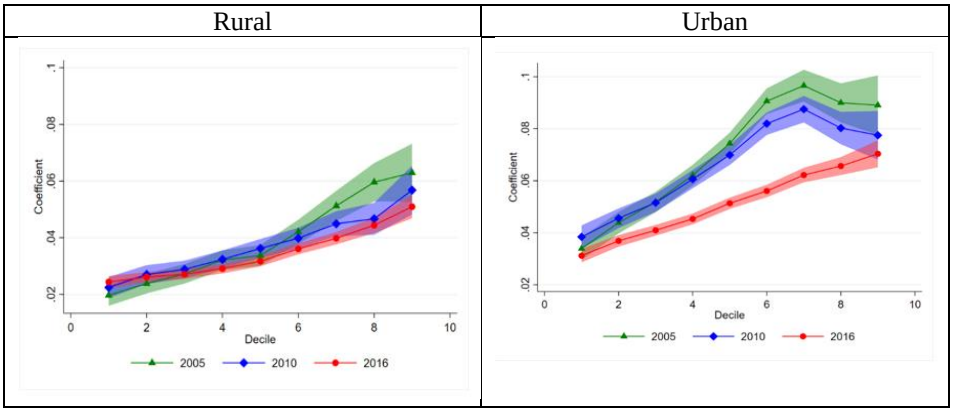
[10] If it were possible to disaggregate the household data by multiple urban cities and neighbourhoods, it would be possible to estimate the size of this public return to average education levels. However, given the HIES is representative of very few cities, and no neighbourhoods within cities, this is not possible to estimate, but it is important to bear in mind that the aggregate return to investing in education is higher than the individual return.

FIGURE 9: **Progress in Education and Consumption Growth between 2010 and 2016 in Urban vs. Rural Areas, by Consumption Percentiles**



Source: Authors' calculations using HIES 2010 and 2016.

FIGURE 10: **Conditional Correlation between the Average Years of Education and Per Capita Consumption during 2005-2016, by Consumption Deciles**



Source: Authors' calculations using HIES 2005, 2010 and 2016.

IV. SPATIAL INEQUALITY, SLUMS AND ACCESS TO WORK: DHAKA

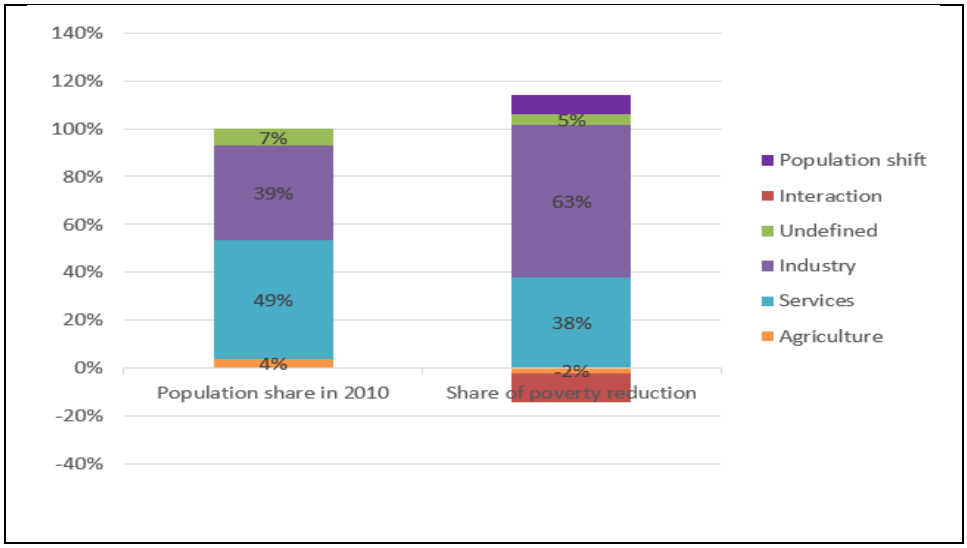
Dhaka has been characterised as being disproportionately important in the urban spectrum in Bangladesh (Bird *et al* 2018). Some of this reflects its strategic location, its role as Bangladesh's administrative centre, and the power of agglomeration economies that have attracted high rates of migration to Dhaka over the last decades. It also reflects the inability of secondary cities to take advantage of their location and agglomeration economies. Using a definition of greater Dhaka, Bird *et al*. (2018) show that 10 per cent of population of Bangladesh lives in greater Dhaka, which amounts to 36 per cent of Bangladesh's urban population. Given the important role of Dhaka, this section examines poverty in Dhaka more closely, and particularly examines spatial differences in wellbeing across the city. A full treatment of poverty in Dhaka was previously given in World Bank (2007) and another background paper for the Bangladesh Poverty Assessment 2019 focuses specifically on female labour force participation and welfare in Dhaka City Corporation (Kotikula, Hill and Raza 2019).

Dhaka is de facto a city of migrants. Data on migration is not available in the HIES, but data collected by PPRC in 2012 that is representative of Dhaka CCs shows that 80 per cent of the city's households are headed by individuals that were not born in Dhaka (Rahman 2016). A staggering 47 per cent had migrated in the last 10 years and nearly a quarter (23.8 per cent) in the five years prior to the survey. These rates of migration are consistent with those collected in slums in Dhaka that are presented below. The migration rates in slums reported below are

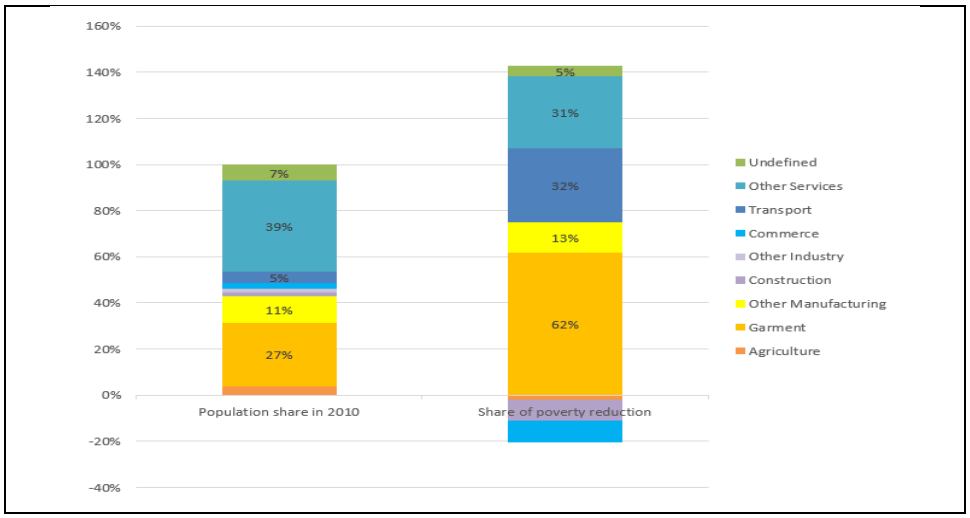
higher, but for many migrants this may be the first place of residence in the city. Eight per cent of migrants cited work as one of the reasons for migrating to Dhaka.

Industrial growth has contributed to poverty reduction in Dhaka, but service sector growth less so. Bird *et al*. (2018) show that greater Dhaka accounts for 44 per cent of the country's formal jobs and that 80 per cent of export-oriented garment firms are located in greater Dhaka. Figure 11 shows that growth in industrial wages and incomes has been an important driver of poverty reduction in Dhaka SMA from 2010 to 2016. About a third of the population of Dhaka SMA (39 per cent) was engaged in industrial sector in 2010, yet this sector accounted for 63 per cent of the poverty reduction that took place from 2010 to 2016. In contrast, the service sector which engages 49 per cent of Dhaka's population in 2010, accounted for 38 per cent of poverty reduction. However, there has not been much growth in the share of the labour force engaged in industry and this has limited the amount of poverty reduction that has occurred from rapid industrial growth. For those able to get jobs in this sector, progress was good but too few households were benefit.

FIGURE 11: **Sectoral Sources of Poverty Reduction in Dhaka SMA**



(Contd. Figure 11)



Source: Authors' calculations using HIES 2010 and 2016.
Note: Sector is allocated based on the number of hours worked. Poverty lines for Dhaka SMA were recalculated entirely after reassigning households accordingly to recover the SMA areas across time, for details refer to Ahmed *et al.* (2017).

There is substantial variation in poverty rates within Dhaka which requires using different sources of data to analyse. Existing household survey data does not allow analysis of variation in welfare outcomes within cities, thereby providing no insight on this important reality of urban poverty. To understand the level of spatial inequality within greater Dhaka, this paper uses four additional sources of information: (i) a slum survey undertaken at the same time as the first quarter of the HIES 2016/17, (ii) the 2013 Economic Census conducted by BBS which provides information on formal employment opportunities, (iii) a survey of commuting patterns of households funded by JICA as part of the Revised Strategic Transport Plan (DevConsultants Limited 2014), and (iv) poverty and other wellbeing maps generated over the last six years (Annex 1 provides more details on the sources of data used in these maps).

Poverty rates are lower in the centre of Dhaka city corporations and along a north-eastern corridor out of the city corporations. The last official poverty map is from 2010/11 and shows that poverty rates are lower in the centre, and much higher in the periphery (Figure 12). The southern periphery records a particularly high concentration of poverty. Looking more closely within the North and South Dhaka City Corporations highlights that although there are pockets of poverty in central Dhaka, the same pattern holds of a richer centre and poorer periphery (Figure 12a).

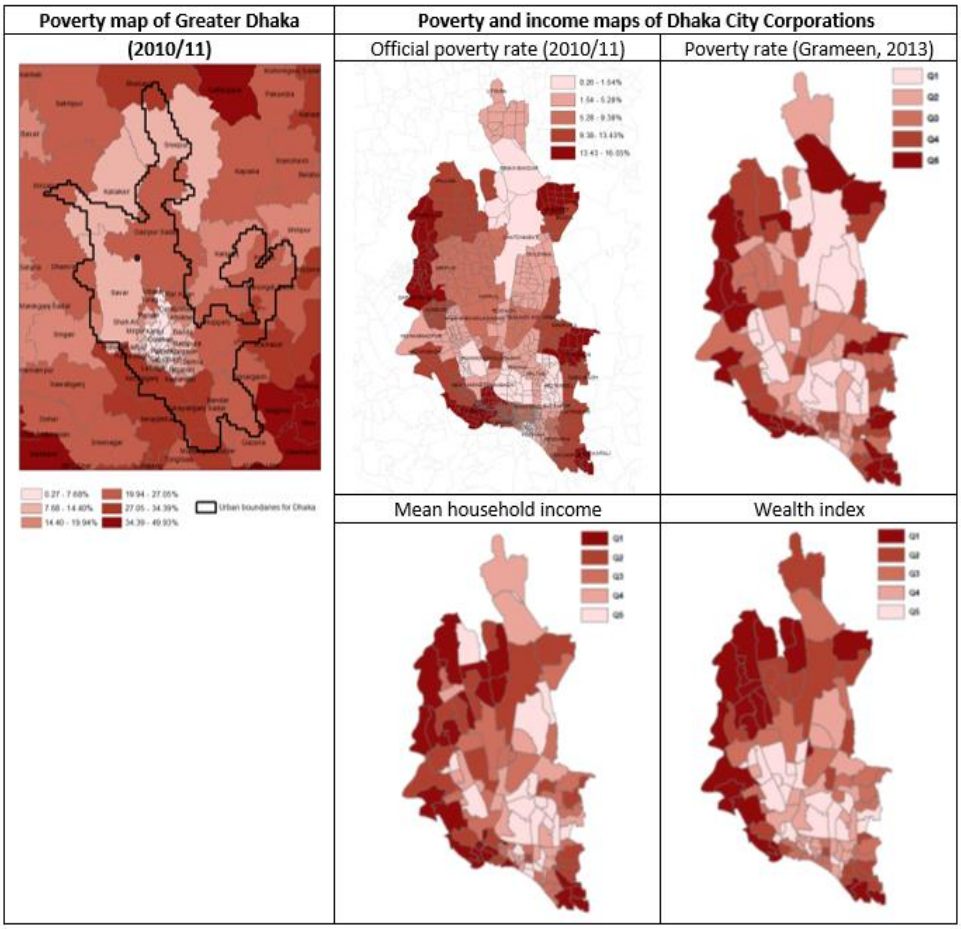
There is also a corridor of lower poverty going North out of the city and much higher poverty in the North west of the city. A more recent poverty map estimated by Steele *et al.* (2017) suggests that the spatial distribution has not changed much in recent years (Figure 12b). This later map uses a different measure of poverty (see Annex 1) so is not directly comparable to the official poverty map, but with some notable exceptions (such as in the North of Dhaka) shows a similar spatial distribution. Maps of income and assets also suggest poorer welfare outcomes in northern Dhaka than the official poverty map (Figures 12c-d).

The correlation across indicators is high, suggesting considerable stability in the spatial distribution of economic wealth and deprivation across the city.[11] Further work is needed to compare like indicators across time, but if this pattern holds it highlights that failures of infrastructure and land use planning can be hard to overcome once in place, and points to failures of urban governance of continued disparities in the provision of public goods across the city.

Slums are located throughout the city, but the larger slums are concentrated in the north west. There is considerable variation in what is referred to as a slum. The 2014 census of slum settlements recorded 14,000 slums in urban areas (Bangladesh Bureau of Statistics 2015), many of which were in the Dhaka City Corporations. Three categories of slum were identified in the census of slums and informal settlements. Small slums of 5-10 households are a collection of informal houses on the edge of other neighbourhoods rather than forming a neighbourhood themselves. Medium-sized slums of 11-200 households and large slums of 200 plus households. Small slums comprise 2 per cent of the estimated population living in slums, medium-sized slums comprise 40 per cent of the slum population and 58 per cent of the slum population lives in large slums.

[11] In the Annex a map of zila level changes in poverty rates for the zilas that greater Dhaka encompasses are shown: this does suggest different trends, but these differences could be spurious, the result of going from a poverty map estimate in 2010 to a survey estimate in 2016. A map of changes in literacy rates suggest the indicated poverty changes may have some underpinning.

FIGURE 12: **Poverty and Wealth Maps Dhaka**

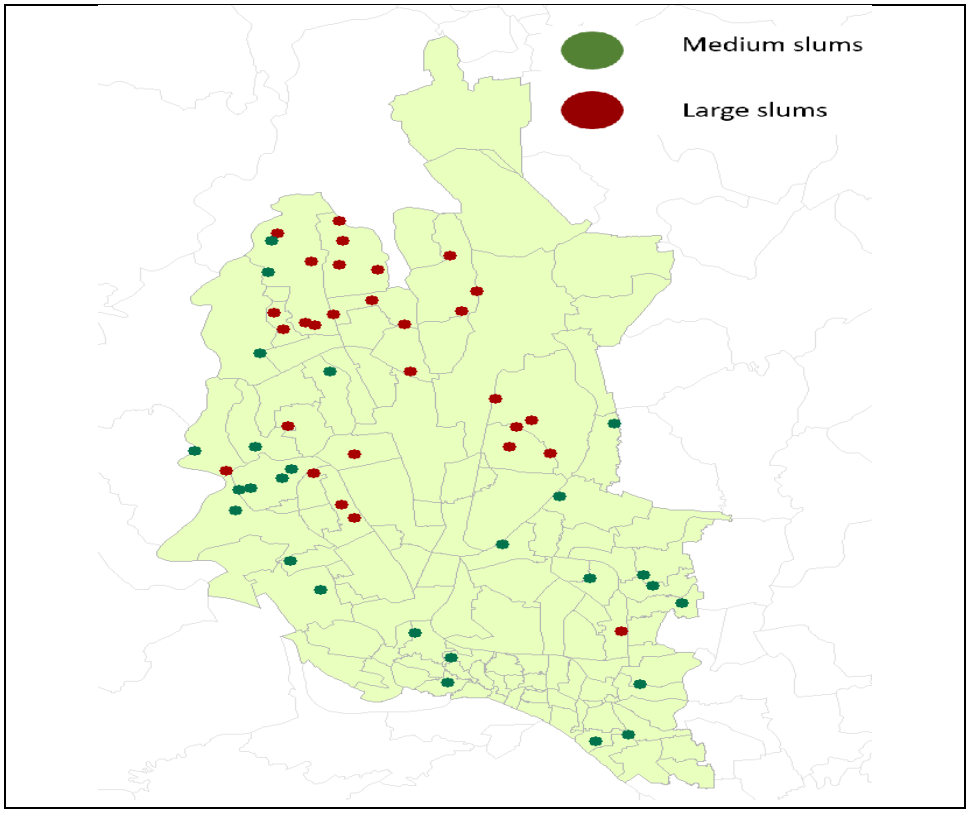


Note: For details on the data underpinning these maps, see Annex 1.

The *Bangladesh Urban Informal Settlements Baseline Survey* (BUISBS) was conducted by the World Bank and BBS in 2016 to provide the first poverty estimates for slums in Dhaka. The main objective of BUISBS was to collect detailed consumption data from urban slums households following the same methodology used by the Bangladesh Bureau of Statistics (BBS) to collect household consumption data to construct official poverty estimates using the *Household Income and Expenditure Survey* (HIES). Data on WASH indicators was also collected to inform the World Bank WASH Poverty Diagnostic undertaken in 2017. The BUISBS collected data from a total of 600 urban slum

households in the Dhaka City Corporation –10 slum households from 57 medium and large size slum communities, and 5 slum households from a total of 6 small size slum communities. The sampling frame came from the 2014 BBS Census of Slums and Floating Population.12 The slums surveyed are indicated in Figure 13.

FIGURE 13: **Location of Slums in the Survey of Slums and Informal Settlements 2016**



Source: Authors' estimates using BUISBS 2016.

[12] In the BBS *2014 Census of Slums and Floating Population*, slums are defined as compact settlements of 5 or more households, which generally grow very unsystematically and haphazardly in an unhealthy condition and atmosphere on government and private vacant land. Slums are defined by six characteristics including structure of dwelling, density, ownership of land, water supply and sanitation, lighting and road facilities, and socio-economic conditions.

Slums have much higher levels of monetary poverty, more children out of school, lower levels of access to water and sanitation services. Table V compares outcomes for slum households from the BUISBS and non-slum households from Dhaka City Corporation surveyed in HIES 2016. Stunting outcomes are also much higher in slum areas as indicated in Table IV. Malnutrition rates recorded in slums in city corporations are higher than stunting rates in rural areas.

Many poor households in Dhaka locate in slums in order to access affordable housing, trading poor housing conditions, insecurity and overcrowding for affordability. Even then, the cost of living in Dhaka is high for poor households. Households in slums are much more likely to share amenities with other households (Figure 14) and Table V indicates that access to water and sanitation services is lower for households in slums. Insecurity of tenure is very high: almost half (49 per cent) of slum residents fear eviction.

However, within slums there is a wide variety of housing experiences. In general, rental rates are lower in slums (72 per cent) than in Dhaka on average (90 per cent). Renters in slums have particularly poor housing conditions. Households that have located in the slum areas of Dhaka City Corporation for longer periods of time have higher tenure security, better housing conditions and lower poverty. This suggests that gradual upgrading of housing is a common strategy for slum residents. Housing structure is particularly poor in slums that are located on government land and household heads are more likely to fear eviction in slums on government land. Even tenant units in privately owned land are better than owner-occupied units on government land. Previous studies on slums in Bangladesh emphasize the role of local politicians and leaders who informally govern slums, which powerfully controls the levels of tenure security and access to various resources among slum residents.

TABLE V

POVERTY, EDUCATION AND WASH INDICATORS IN SLUMS AND NON-SLUMS, DHAKA

	Dhaka city corporation	Slums
Poverty rate	9.0	23.3
Can write a letter	76	47
Has no schooling	24	42
Some primary schooling	16	41
Some secondary schooling	37	14
Some post-secondary	25	3
Years of education	6.4	3.1

(Contd. Table V)

	Dhaka city corporation	Slums
School attendance: overall (6-18 years)	77	57
School attendance: primary (6-10 years)	96	85
School attendance: secondary (11-15 years)	80	60
School attendance: high secondary (16-18 years)	44	20
Percentage of male adults who are earners (18 plus)	86	93
Percentage of female adults who are earners (18 plus)	28	49
Dependency ratio	0.51	0.62
Water is piped into dwelling	96	76
Share a toilet	62	91

Source: HIES 2016 and BUISBS 2016.

TABLE VI

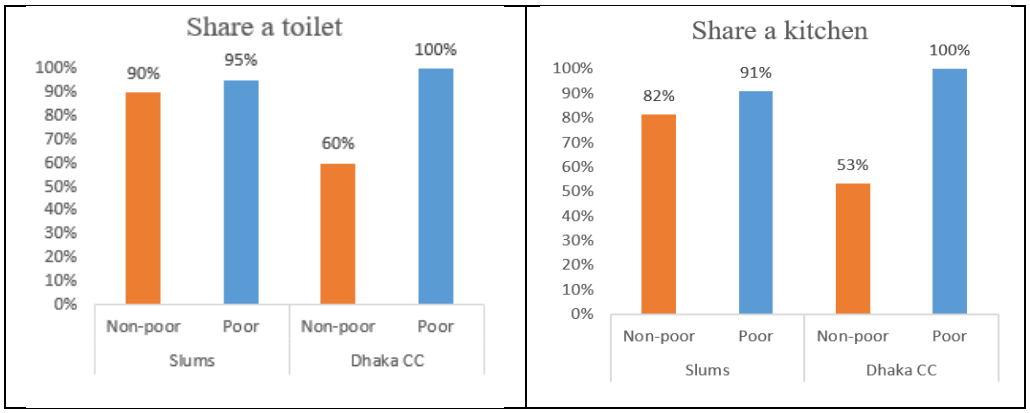
AVERAGE HAZ SCORES AND STUNTING RATES

	City corporations				2014 DHS	
	Full	Slum	Non Slum	Slum-Non slum	Rural	Urban
HAZ scores	–1.69	–1.88	–1.30	–0.58***	–1.60	–1.30
Moderate-to-severe stunting	0.42	0.48	0.31	0.16***	0.38	0.31
Severe stunting	0.20	0.23	0.13	0.10***	0.12	0.10

Source: Govindaraj, Raju, Secci, Chowdhury and Frere (2018).

Note: Estimates are adjusted for sampling weights. Inference is based on robust standard errors, clustered at the neighbourhood level. *** p<0.01, ** p<0.05, and * p<0.1.

FIGURE 14: **Prevalence of "Sharing of Amenities" in Slums**



Source: HIES 2016 and BUISBS 2016.

Slums combine transient and well-established populations. A third of slum households had been there for year or less, but a quarter (26 per cent) have been there for more than 10 years. A key question that emerges when comparing outcomes across slums and non-slums is whether neighbourhood effects trap slum residents in poverty or whether slums are stepping stones for households (perhaps new migrants arriving in Dhaka) as they find their way to better living conditions. Whilst panel data is needed to answer this question, survey data on households in slums provides evidence that suggests both might be true.

The most-recent and the most-established residents are the poorest. Households that just got there and households that have been resident in slums for longer than 20 years are the poorest. Poverty rates are 27.8 per cent for those who have been there for a year or less compared to 18.1 per cent for those who have been there for 1 to 20 years. A quarter of those who have been resident in their slum for more than 20 years live in poverty. This relationship does not appear to be driven by life-cycle effects as the difference in poverty rates remains even when controlling for age of household head and household size.

Work was the most-common reason households in slums gave for moving to their current residence. People often move to slums from other slums (39 per cent) and work was their main reason for moving (59 per cent). This was more often the case for female respondents. Those who arrived to the slum most recently are the ones most likely to be working. New arrivals are more likely to be rickshaw drivers, garment sector employees, or employed as day labourers, and they are less likely to be self-employed.

Why is work such a common reason given for residence in a slum? This question is considered by using commuting patterns of 16,000 households in Greater Dhaka. Data on income, employment and transport collected for 16,000 households in Dhaka by JICA in 2014 (RSTP Household Survey) is used to determine how far people travel for work, school and other activities. Data was collected on trips undertaken by households interviewed, and the distribution of the time taken to travel is shown in Figure 15, for all households in total then by income quintile (using self-reporting income per capita). The length of work commutes varies, but the average is 56 minutes for the poorest quintile of households increasing to 77 minutes for the richest quintile. The average is skewed by some very long commutes undertaken and the median commute is 40 minutes for the poorest quintile and 60 minutes for the richest quintile.

The poorest households predominantly commute on foot which means they only have access to jobs within a 4-5 km radius from where they live. However,

there is considerable variation in the type of transport used by the poorest and richest households. Half of all trip undertaken by the poorest quintile are on foot, whilst this is true of only 16 per cent of trips undertaken by the richest quintile (Figure 16). This means that a 40-minute commute for the poorest household gives them access to jobs within a 4-5 km radius from where they live, whilst richer households can access 10-15 km. This suggests that poorer households have access to fewer jobs or are required to move residence much more frequently to access work than better off households.

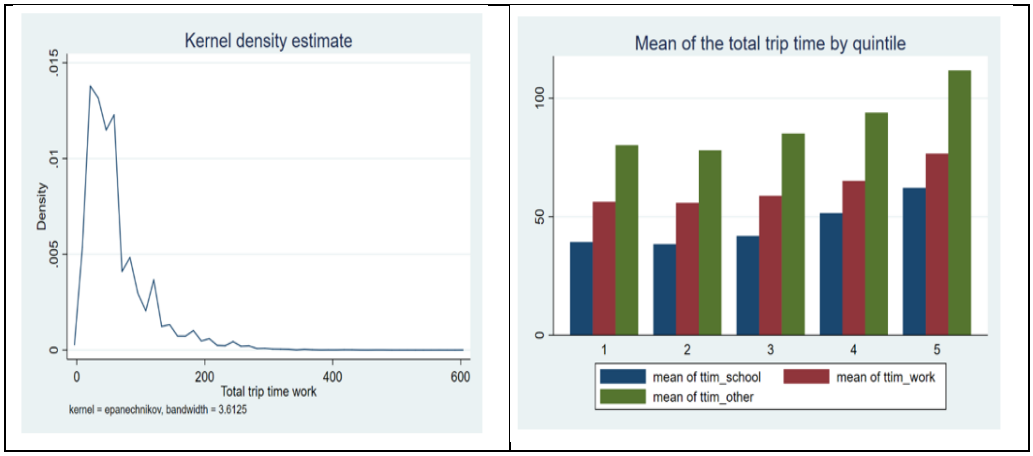
Location of residence thus determines the jobs that are available for a typical poor household. This is seen when comparing employment outcomes in the HIES 2016 with access to jobs in the Economic Census 2013. Figure 17 orders neighbourhoods (unions) by the number of garment jobs per capita within 10km.[13] In unions where the number of garment jobs available is low (in the bottom quintile), 26 per cent of households report a member working in the garment industry. In unions where the number of garment jobs available is high (in the top quintile), 61 per cent of households report a member working in the garment industry. Without access to garment jobs, the probability of being employed in services is much higher. The probability of being employed in the service sector is twice as high for households in unions with the lowest number of garment jobs per capita compared with households in unions with the highest number of garment jobs per capita.

Women's mobility for work is even more constrained. Women are 3-4 times less likely to work than men. Those who do work are more likely to walk, and commute shorter distances compared to men (Figure 18). Their commutes from home are also about an hour earlier than men's. In low-income communities, women are discouraged from taking jobs outside of the neighborhood because of concerns for safety and norms around women's work and mobility (Kotikula, Hill and Raza 2018).

The predominance of female workers in the garment sector means there is a distinct spatial pattern to where women work. Women are much less likely than men to work, but they are more likely to be working in the areas where manufacturing jobs are high (center, north west and south east). Given women commute shorter distances, these are the places where female workers are more likely to live (Figure 19).

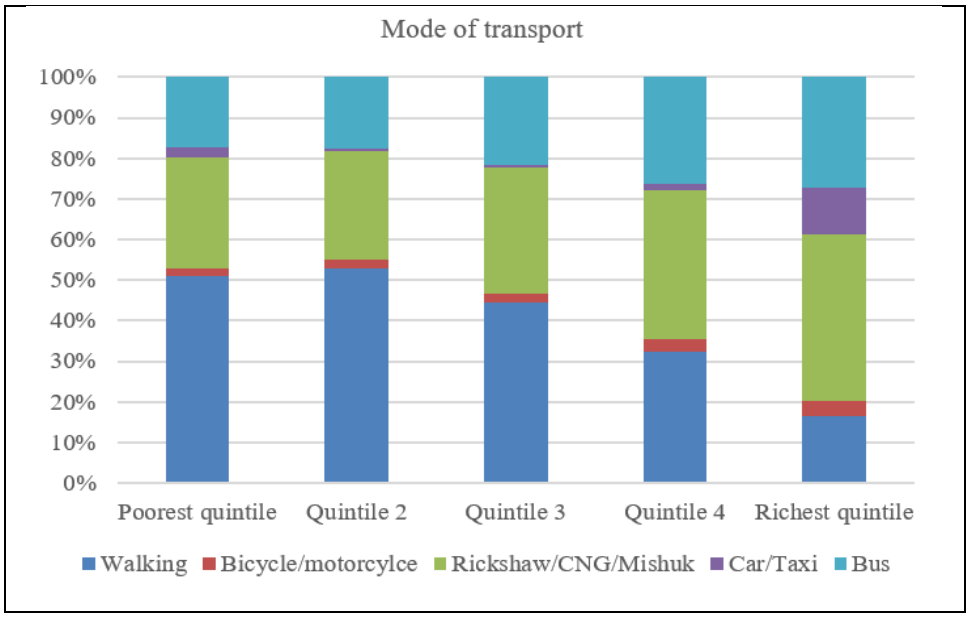
[13] This is assessed, by taking the centre point of the union recorded in the HIES and including all unions from the Economic Census that have their centre-point within 10 kms.

FIGURE 15: **Time Spent Commuting, by Quintile**



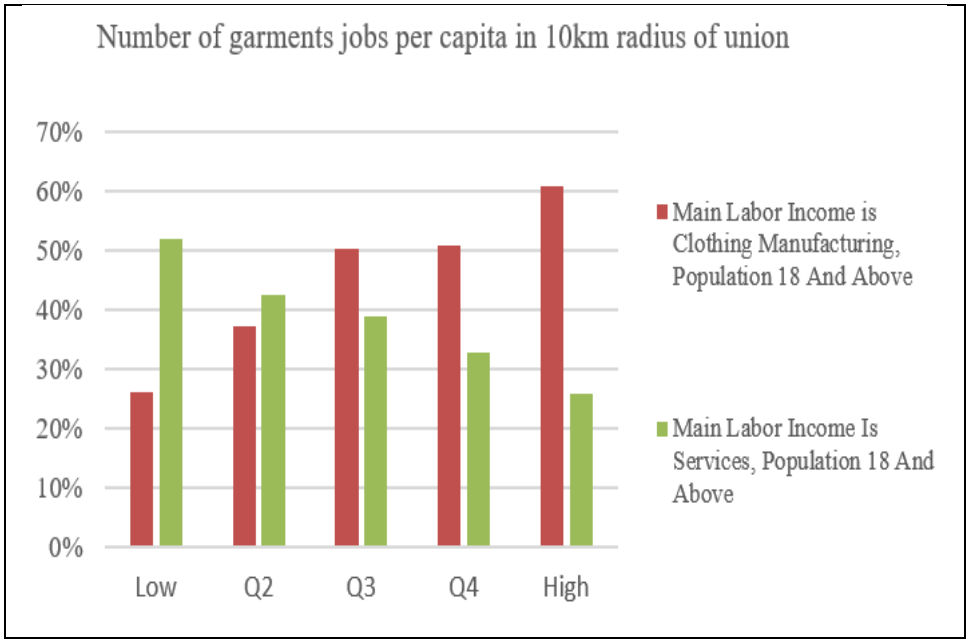
Source: Authors' calculations using *RSTP Household Survey 2014*.

FIGURE 16: **Mode of Transport by Quintile**



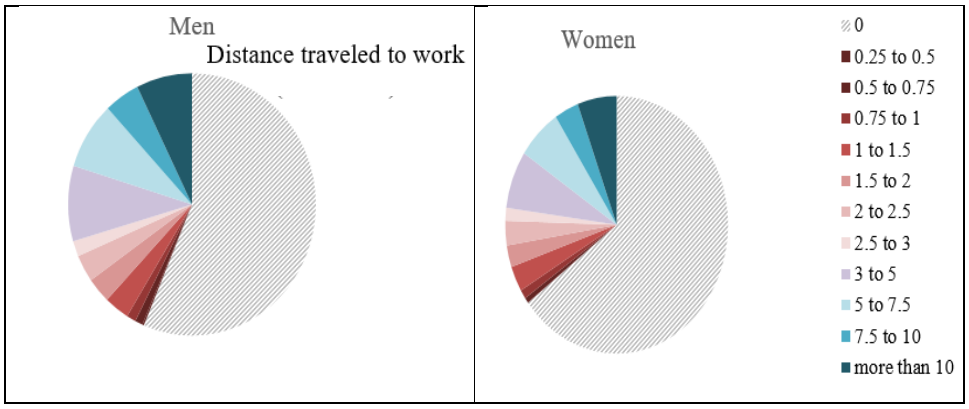
Source: Authors' calculations using *RSTP Household Survey 2014*.

Figure 17: **Proximity to Garment Jobs and Employment Outcomes**



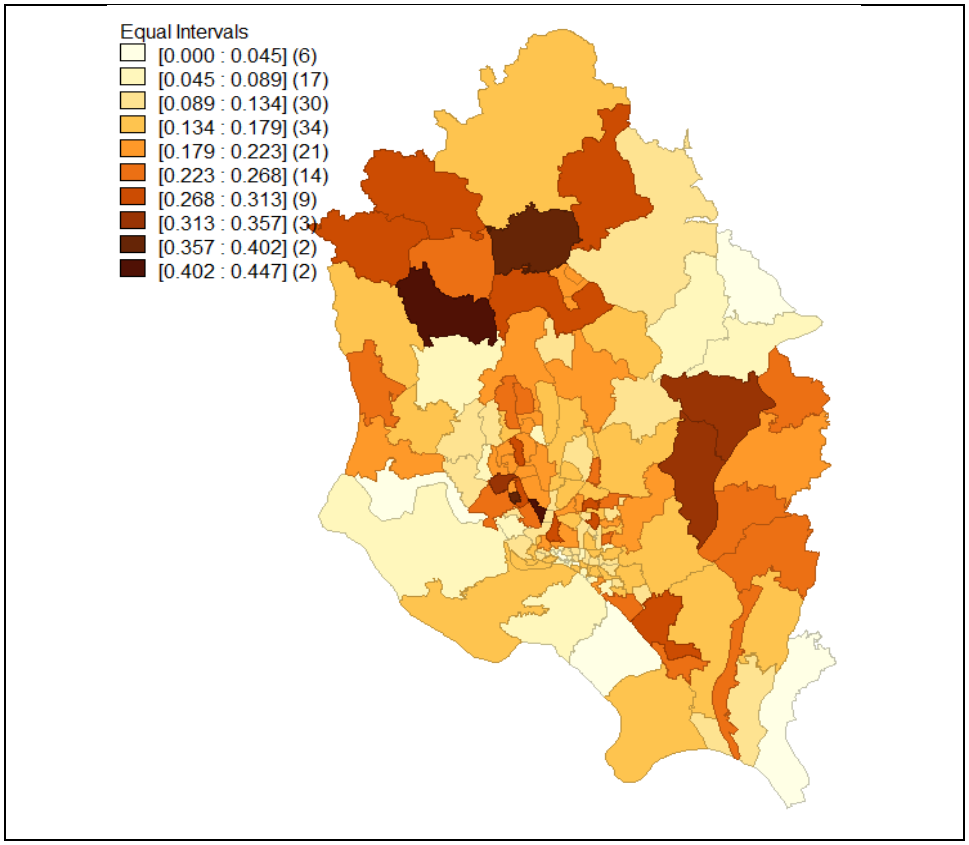
Source: Authors' calculations using *HIES 2016* and *Economic Census 2013*.

FIGURE 18: **Distance from Workplace (in Kilometers), by Gender**



Source: Authors' calculations using *RSTP Household Survey 2014*.

FIGURE 19: **Ratio of Female to Male Employment**



Source: *RSTP Household Survey 2014*.

Proximity to jobs is an important determinant of the spatial patterns of poverty observed in Dhaka. Section II highlighted the importance of sector of employment in explaining poverty trends. So where are the jobs located, particularly in the garment sector that employs low-skill workers and has driven poverty reduction?

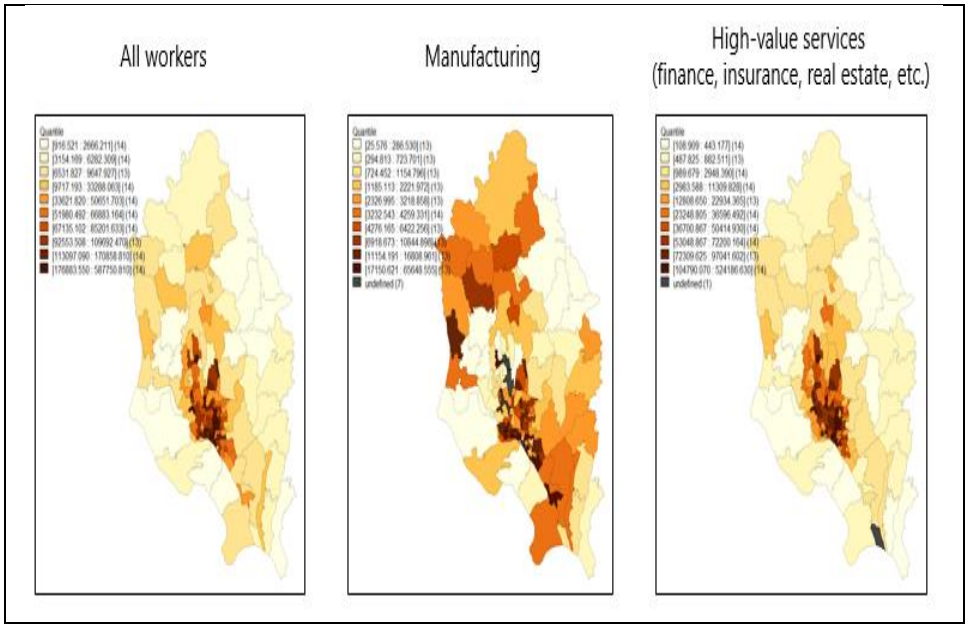
Job density is highest in central Dhaka, with higher rates of manufacturing jobs also in the north west and higher rates of high value services along the north-eastern edge of North Dhaka City Corporation. The jobs that are important for raising incomes of low-skilled workers are those in the manufacturing sector in the centre and north west (Figures 20 and 21). Job growth has been strongest in the north western periphery of the district (Figure 22).

There is some evidence that lack of affordable living options for poor households is more constrained in some parts of the city, particularly the east.

Figure 23 indicates the average distance travelled to work by workers in zones across greater Dhaka. The left-hand map shows this for all households and the right-hand map shows this for all households in the bottom quintile of reported income. Poor households are more likely to travel further to jobs in the east of Dhaka than the average worker in the east of Dhaka. This may indicate a lack of affordable housing for low-income workers in eastern Dhaka.

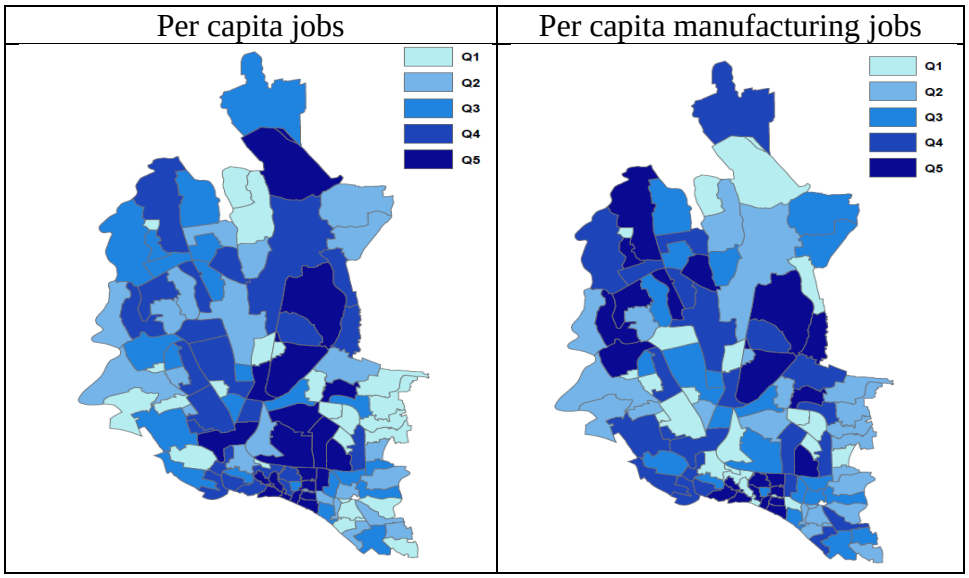
Taken together the spatial analysis and the sectoral analysis suggest four priorities: (i) increasing the ability of poor households to commute to the manufacturing jobs in the centre and north west of the city that are helping reduce poverty; (ii) encouraging productivity growth in urban informal services across the city, but particularly in areas of the city where access to garment sector jobs is low; (iii) increasing access to affordable housing in the east or affordable and safe public transportation to take low-income workers there; and (iv) improving the quality of services in slums that are located close to employment hubs so that they can provide quality housing at affordable prices to employees.

FIGURE 20: **Job Density (Workers per Square Kilometre) in Greater Dhaka**



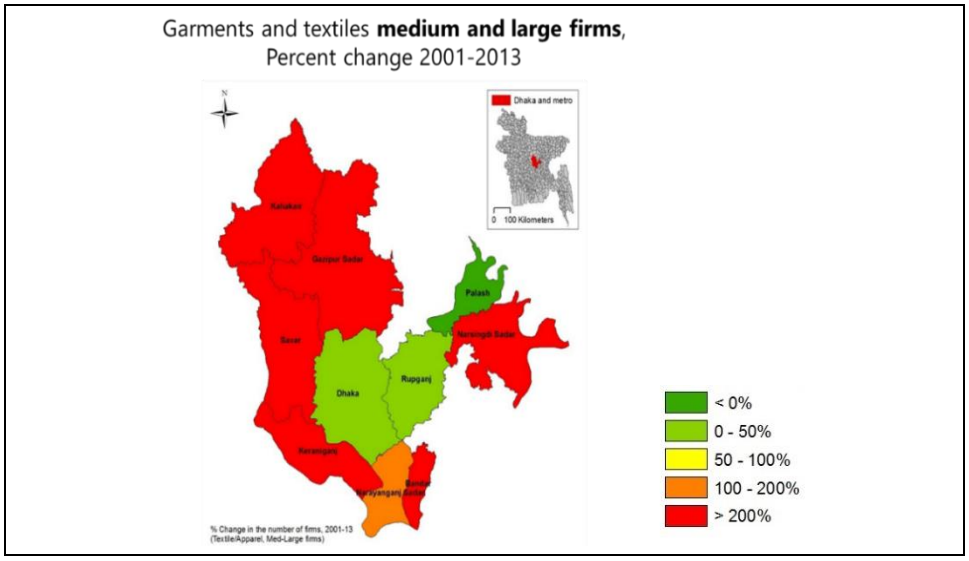
Source: *RSTP Household Survey 2014*.

FIGURE 21: **Spatial Distribution of Jobs (wage employment) per Capita in Dhaka CCs**



Source: *Economic Census 2013, Population and Housing Census 2010/11*.

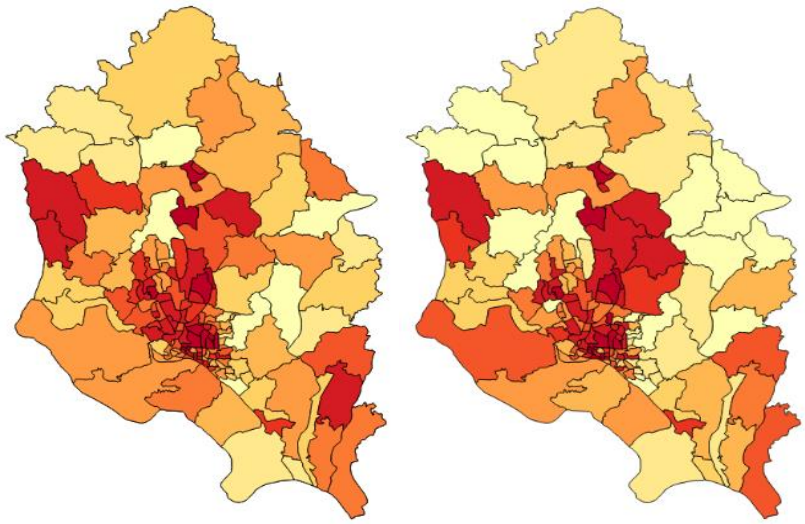
FIGURE 22: **Spatial Variation in Growth in Large Manufacturing Firms within Dhaka District**



Source: World Bank Jobs Team Analysis of the *Economic Census 2001-2013*.

FIGURE 23: **Average Distance Travelled to Work (km) by Place of Employment**

All workers (left) and poor workers (right)



Source: *RSTP Household Survey 2014.*

V. CONCLUSION

Making urbanisation work for poverty reduction in Bangladesh will require ensuring the agglomeration externalities of larger cities work more in favour of poor households and that the costs of congestion, crime and access to housing and services that the poor face are reduced. Economies of scale and agglomeration effects in large cities often provide poor households with more labour market opportunities and access to services than in rural areas, which strengthens their capacity to generate income. However, life in cities can also entail challenges related to congestion, crime, unemployment, and high living costs and this can constrain and even halt progress for many households.

This paper has highlighted the need for a much stronger data and evidence base in order to answer the question of how best to do this and to monitor progressive towards inclusive cities.

From the data that is available, some key lessons can be drawn:

1. There is a role for urban safety nets for families with young children and elderly: There is a natural life cycle to poverty in urban areas that can be reduced through well-designed safety nets that target support to

households when they most need it: when children are young and for the elderly.

2. Investments in human capital of the next generation is an urgent priority: The main asset of poor households is their labour, yet this is often unskilled. There is a need for programmes to improve the skills of working-age adults in urban Bangladesh, but there is also a need for addressing the deficiencies in human capital investments in the next generation that are also worryingly prevalent. Too many urban children are out of school and malnutrition rates of young children in urban areas are too high. Addressing this is an urgent priority.
3. More focus on increasing productivity in the informal service sector needs to complement a drive for job creation in manufacturing: Access to manufacturing jobs has been an important driver of poverty reduction, but there needs to be more manufacturing jobs created and a greater focus on increasing productivity growth in informal services, particularly in areas of cities where access to manufacturing jobs is low. Policy experimentation on how best to do this is essential for hastening urban poverty reduction.
4. Better public transportation and better housing close to employment hubs can help reduce stubborn spatial disparities in Dhaka. Spatial disparities are significant in Dhaka and the cost of getting to work is an important driver of this. Increasing the ability of poor households to commute to the manufacturing jobs in the center and north west of the city that are helping reduce poverty is essential as is increasing access to affordable housing in the east and improving the quality of services in slums that are located close to employment hubs so that they can provide quality housing at affordable prices to employees.

REFERENCES

ADB and ILO. 2016. *Bangladesh Looking Beyond Garments: Employment Diagnostic Study.* Asian Development Bank and International Labour Organization.

Ahmed F., Y. Arias-Granada, M. E. Genoni, M. Yanez-Pagans, N. Yoshida, D. Roy, and A. Latif. 2017. "Description of the Official Methodology Used for Poverty Estimation in Bangladesh for 2016/17." World Bank. Washington, DC.

BBS (Bangladesh Bureau of Statistics). 2014. *Population and Housing Census 2011, National Volume 3: Urban Area Report.* Bangladesh Bureau of Statistics, Ministry of Planning, Bangladesh.

_____2015. *Preliminary Report on Census of Slums and Floating Population 2014*. Dhaka: BBS.

_____various years. *Household Income and Expenditure Survey 2000, 2005, 2010 and 2016*. Dhaka: BBS.

Bhatta, Saurav Dev, Maria Eugenia Genoni, Uttam Sharma, Buyant Erdene Khaltarkhuu, Laura Maratou-Kolias and T. M. Asaduzzaman. 2019. *Bangladesh Education Sector Public Expenditure Review*. World Bank.

Bird, J. Y. Li, H.Z. Rahman, M. Rama and T. Venables. 2018. *Towards Greater Dhaka*. World Bank.

DevConsultants. Household Interview Survey (HIS) for the Project on Revision and Updating of the Strategic Transport Plan (RSTP) for Dhaka. (August 2014-November 2014).

Ellis, P., and M. Roberts. 2015. Leveraging Urbanization in South Asia: Managing Spatial Transformation for Prosperity and Livability. Washington, DC: World Bank.

Govindaraj, Ramesh Dhushyanth Raju, Federica Secci, Sadia Chowdhury and Jean-Jacques Frere. 2018. "Health and Nutrition in Urban Bangladesh: Social Determinants and Governance".

Gruebner, Oliver, et al. 2012. "Mental Health in the Slums of Dhaka-a Geoepidemiological Study." *BMC Public Health*, 12.1 (2012): 177.

Hill, R., and J. Endara. 2019. "Understanding Poverty Trends in Bangladesh: Insights from Decomposition Analysis." Background paper for the Bangladesh Poverty Assessment 2010-2016/17, World Bank, Washington, DC.

Kamruzzaman, Md., and Md Abdul Hakim. 2015. "Child Criminalization at Slum Areas in Dhaka City." *American Journal of Psychology and Cognitive Science*, 1.4: 107-111.

Kotikula, A., R. V. Hill, and W. Raza. 2019. "What World for Working Women? Understanding Female Labour Force Participation and Incomes in Urban Bangladesh." Background paper prepared for the Bangladesh Poverty Assessment.

Monica Yanez-Pagans. *Urban Informal Settlements Survey 2016*.The World Bank.

Moretti, Enrico. 2003. "Human Capital Externalities in Cities." *NBER Working Paper*, No. 9641, April.

Muzzini, Elisa and Gabriela Aparicio. 2013. *Urban Growth and Spatial Transition in Nepal: An Initial Assessment. Directions in Development: Countries and Regions.* Washington, DC: World Bank.

National Institute of Population Research and Training (NIPORT), Mitra and Associates, and ICF International. 2016. *Bangladesh Demographic and Health Survey 2014*. Dhaka, Bangladesh, and Rockville, Maryland, USA: NIPORT, Mitra and Associates, and ICF International.

Rahman, Hossain Zillur. 2016. *The Urban Spectrum: Metropolitan to Mofussil*. PPRC.

Roberts, Mark, Brian Blankespoor, Deuskar and Stewart. 2017. "Urbanization and Development: Is Latin America and the Caribbean Different from the Rest of the World?" *Policy Research WP 8019*.

Steele, J. E. et al. 2017. "Mapping Poverty Using Mobile Phone and Satellite Data." *J. R. Soc. Interface*, 14(127).

Uchida, Hirotsuga and Andrew Nelson. 2010. "Agglomeration Index: Towards a New Measure of Urban Concentration." UN WIDER Working Paper No. 2010/29.

UN-DESA.2018. *World Urbanization Prospects*. United Nations Department of Economic and Social Affairs, Population Division.

World Bank. 2007. "Dhaka: Improving Living Conditions for the Urban Poor." *Bangladesh Development Serie*s. Paper No. 17. The World Bank Office, Dhaka, June.

ANNEX

Definitions of Indicators used in Poverty Maps

Indicator	Underlying data	Year
Poverty and income indicators		
Poverty rate	Population Census 2011 and HIES 2010/11	2011
Average DHS wealth index	DHS 2011, mobile phone data from 11/13 to 3/14, and remote sensing data	2011-2014
Probability of being poor (poverty is measured by the progress out of poverty index)	FII nationally representative survey of 6,000 Bangladeshi adults undertaken in 2014, mobile phone data from 11/13 to 3/14, and remote sensing data	2013-2014
Average reported household income (from categories that households selected)	National household surveys conducted by Grameen phone from 11/13 to 3/14, mobile phone data from 11/13 to 3/14, and remote sensing data	2013-2014