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Bangladeshi Workers in New York City's Informal Markets: An Analysis of Remittance Decisions

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Abstract

This paper presents a study profiling low-skill immigrants from Bangladesh who work in informal markets in New York City's largest borough, Queens. It explores their economic circumstances and decisions, against the backdrop of the larger Bangladeshi population in New York City, its fastest growing immigrant group in the last two decades. Drawing on primary data collected through surveys of street vendors, restaurant workers, hawkers, etc., who constitute the lowest economic strata of this group, it examines the remittance-sending behavior of their households and whether or not they perceive microloans as beneficial to their employment prospects in the United States. Survey results suggest a strong incidence of remittances in this population, and the existence of wide familial networks in Bangladesh that benefit from these transfers. A double hurdle model fitted to remittances finds that income, household size in the U.S. and loans taken out in Bangladesh for emigration are important determinants of remitting behavior. As a secondary question, this study considers the familiarity with and demand for microloans in this population, finding a strong incidence of both, making it a prime demographic for Grameen America's operations in New York as it extends its reach in its formative years. Since remittance transfer costs are often regressive and work against poorer migrants, Grameen Bank could play an innovative role in the transfer operations of its Bangladeshi borrowers, an area into which it has made recent inroads for cross-border remittances from India.
Keywords: Migration, Remittances, Bangladesh, New York City, Microloans, Grameen Bank

Introduction

This paper presents a study profiling low-skill immigrants from Bangladesh who live and work, often in informal arrangements, in New York City's largest borough, Queens. It explores their economic circumstances and decisions, against the backdrop of the larger Bangladeshi population in New York City, its fastest growing immigrant group in the last two decades. Drawing on primary data collected through surveys administered to 64 immigrants working as street vendors, restaurant workers, hawkers, etc., many of whom are employed informally, and who constitute the lowest economic strata of this group, we examine the remittance-sending behavior of their households and whether or not they perceive microloans as beneficial to their employment prospects in the United States.

The emerging reality over the last few decades of remittances becoming a vital source of economic development has been especially felt in Bangladesh, which received 11 billion USD in 2010 alone (its record high) making it the seventh largest recipient nation in the world. Naturally, a substantial body of literature has emerged from research undertaken in Bangladesh on the utilization of these remittances at home. While this work is smaller in scope, it hopes to fit a small but significant piece into the broader literature, by looking at the sending perspective of Bangladeshi immigrants from the lowest income groups in the United States. Since poorer migrants have ties to those back home who come from similar socio-economic backgrounds, remittances as a direct source of poverty alleviation can be linked to their behavior. This particular role of remittances is quite significant for Bangladesh; estimates suggest that remittances have lowered the country's poverty headcount ratio by 6 percent points since the late 1990s with a large proportion originating from temporary migrants working in the Middle East. The U.S. is the fourth largest source of remittances to Bangladesh, a fact undoubtedly related to higher average incomes of Bangladeshi emigrants in the West. However, the remittance sending behavior of the least economically advantaged in this group deserves consideration, given that almost 24 percent of Bangladeshi families in the U.S. live below the Federal poverty threshold (ACS estimates, 2010), a rate substantially higher than both the national figure and that for other South Asians. Our study targets immigrants from this economic stratum and empirically studies the determinants of both the decision to remit as well as the amount remitted by a typical household in this group.

As a secondary question, we consider the factors that affect the perception of microloans as a means of bettering the economic prospects of these migrants in the United States. This question is of particular relevance to this case study for two reasons. First, Grameen America, a branch of Grameen Bank, one of the world's premier microfinance institutions that originated in Bangladesh, opened its first office in

Queens, New York, in 2008. While still in its formative phase and serving mainly a low-income, recent-immigrant target group in New York, it has disbursed over 16 million dollars in loans since its inception. If a reasonable demand for microloans exists in the low-income Bangladeshi sub-population (currently, 95 percent of Grameen's borrowers in Queens are women of Hispanic ethnicity), Grameen would find a definite reputational advantage in targeting this group as it extends its reach. Secondly, given the high costs of remittance transfers through official channels (that often turn out to be regressive as they typically include a base fee and hence work against poorer migrants who may remit smaller amounts more frequently), it could possibly play an innovative role in the remittance transfer operations of its Bangladeshi borrowers, an area into which it has made recent inroads (though currently limited in scope to cross-border remittances from India). This role would certainly be consistent with its broader development objectives in Bangladesh. Grameen America is still laying down its roots in the United States and such a role would necessarily entail navigating through complex international banking regulations and developing settlement systems and partnerships between the parties involved. For this reason, this secondary question is intended to be an explorative exercise, a base for future research that would be needed to determine if this role is indeed a viable one for Grameen America to pursue in the coming years.

The paper proceeds by first presenting a discussion of the broader context within which this study is framed, organized in two parts. The first explores the trends in Bangladeshi migration to the city, making it the fastest growing migrant group in the last two decades. The second looks at the labor market profile of Bangladeshi workers, using data from the Current Population Survey and compares the labor market outcomes of this group with other South Asians, and other immigrants in general. The subsequent section presents the results of our survey targeting workers from the lowest income strata of this population and provides an empirical assessment of questions relating to both remittances and microloans. The final section concludes with a summary of our study's main findings.

Bangladeshi Emigrants in New York City

New York: The Original Immigrant City

Even as historical patterns of settlement of new immigrants to the United States slowly evolve to become more geographically diffused, New York City remains firmly established as a major gateway for incoming immigrants. Emerging settlement cities such as Atlanta, Dallas, Washington D.C, Phoenix and very recently Raleigh-Durham provide an interesting contrast to the long established receiving centers such as New York, Los Angeles, Miami and Chicago (Singer, 2004). New York City hosts the most diverse immigrant population in the world, a diversity accumulated over waves of immigration from different sending countries over many decades, creating social and economic networks in communities that in turn attract newer immigrants. In contrast to the historically large and varied immigrant population of New York, the emerging gateway cities have experienced a recent and rapid surge in their small immigrant populations, majority of whom are of Mexican and Asian origin. Immigration reform as a polarizing political issue has never emerged in the City; its open cultural attitude to immigration has changed little over the decades and it remains an original "Immigrant City", with first and second generation immigrants making up more than 60 percent of its resident population.

The population of New York City is large and stable compared to many of the nation's rapidly growing metropolitan areas. However, it continuously experiences a significant influx and outflow of people, and large turnovers can considerably alter its internal demographic profile from one decade to the next, without a concomitant variation in aggregate numbers. The City attracts approximately a quarter of a million new residents each year from within the U.S., but loses an even larger number to its suburbs and other states. The net outflow of residents is more than offset by foreign in-migration, so the resulting increase in New York's population is heavily based on inflows from abroad, along with the natural growth rate of the City's population (Rosen et al., 2005). The borough of Queens hosts more than a third of the city's immigrants, making nearly half (48.3 percent) of its population foreign born. The concentration of Bangladeshis is the strongest in this borough, which is home to 53 percent of the population, followed by Brooklyn at 24 percent.

Bangladeshi Emigration to the Industrialized West

The diaspora from the region of present day Bangladesh has a long and intricate past, woven into the history of Bengal, a historically distinct cultural and regional entity in the South Asian subcontinent that can be broadly represented today by Bangladesh and the state of West Bengal in India.[1] Earliest recorded instances of migration from this region to

Table 1. New York City Immigrant Groups, 1997-2009, Current Population Survey

COUNTRY	1997-1999	2007-2009	Percent Change
DOMINICAN REPUBLIC	370,747	361,219	-2.57
CHINA	183,962	293,420	59.50
JAMAICA	162,429	176,178	8.46
MEXICO	133,123	126,012	-5.34
ECUADOR	107,703	123,196	14.39
RUSSIA	129,506	114,882	-11.29
HAITI	89,936	99,793	10.96
POLAND	83,187	96,614	16.14
GUYANA	103,911	91,643	-11.81
COLOMBIA	60,508	86,366	42.73
TRINIDAD TOBAGO	76,637	75,114	-1.99
ITALY	91,040	67,888	-25.43
BANGLADESH	25,938	62,129	139.53
PHILLIPINES	47,172	61,230	29.80
INDIA	51,024	58,958	15.55
KOREA	49,439	49,333	-0.21

the United States and the United Kingdom date back to its colonial past.

In the late 18th century, sailors from the south-eastern region of Bangladesh who had joined the British Merchant Navy sailed from the port of Kolkata in the Bay of Bengal to different parts of the world. Many left their ships to settle in the U.K. (Siddiqui, 2004a). In the 1940s and 1950s, Bangladeshi crews of Merchant Navy ships settled there in larger numbers, this time providing labor in low-skill industries that were suffering from acute labor shortages caused by the war (De Bruyn and Kuddus ,2005). During this time, the British government actively encouraged migration from its erstwhile colonies to meet this shortage, and families of earlier settlers added to the numbers of Bangladeshis in the U.K.

Similarly, literature on Bengali migration to the U.S. references small numbers of migrants who "jumped ship" in Detroit, Michigan in the 1920s and 1930s (Siddiqui, 2004b). A second, larger wave of Bangladeshi migration to the U.S. can be identified in the 1960s, comprising mainly of students and professionals, reflecting the broader pattern of migration from Asia during this time. The institution of the Diversity Visa (DV) in the 1990s by the U.S. Department of State, that permits immigration based on a lottery system, has also allowed thousands of Bangladeshis from a wide range of socio-economic backgrounds to emigrate to the U.S. (Siddiqui, 2004b). Today, the U.S. and the U.K. remain the major emigration destinations in the Industrialized West, each home to approximately half a million people of Bangladeshi origin, followed by Italy, home to 70,000. This category of migration is generally long term and does not reflect the experience of most Bangladeshi migrants, who work on short term employment contracts and are bound for destination countries in the Middle East and South East Asia and make up 63 percent of its total emigrants (Sikder, 2008)[ii]. Temporary migration is particularly difficult to estimate without official numbers for returning migrants, but a rough estimate puts the total emigrant population of Bangladesh at a little over 7 million, with 391,000 migrants leaving in 2010 alone. (IOM, 2011)

Migration to New York City: Recent Trends

Even though the Bangladeshi population is still relatively small (estimated at around 62,000 for a 2007-2009 average) compared to the largest immigrant groups in New York City, its recent growth has been quite remarkable considering the 1990 Census put this population at a mere 5,000. After a 400 percent increase over the 1990s, it then more than doubled over the next decade. For comparison, Table 1 presents the populations of the largest immigrant groups in the City at the end of the last decade and the changes in these numbers from the late nineties.

While the foreign born population of New York has generally grown in relative size, the growth rate for the Bangladeshi population is extraordinarily high, even compared to source countries with similar starting-out populations in the late nineties.

As a result, the Bangladeshi population has grown as a fraction of the City's foreign born, as can be seen in

Figure 1. Foreign Born Population as Percent of Total and Bangladeshi Population as Percent of Foreign Born, 1996-2009, Current Population Survey

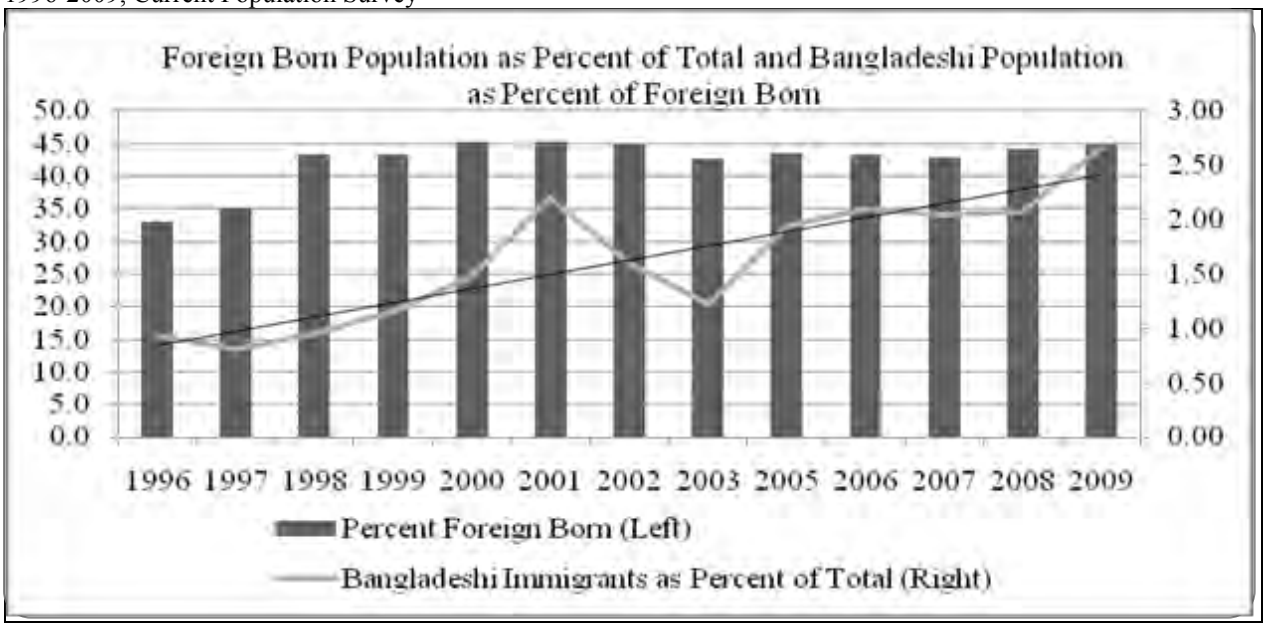


Figure 1, which maps this figure over a fourteen year period.

As noted previously, starting in the 1990s, many Bangladeshis emigrated to the U.S. under the DV lottery system, a program that allowed immigration based on a lottery administered by the Department of State. For many not in favored professions such as engineering and the sciences, new opportunities for migration now arose that were previously available to an elite few and their families. (Siddiqui, 2004b) 50,000 such Visas are allocated by the State Department every year, with countries with significant populations already in the U.S. ineligible for the lottery. In recent years, the DV lottery has had extraordinarily high rates of participation from Bangladesh; in 2010, Bangladeshis comprised more than half of the pool of 14 million lottery entrants representing over 190 countries. (Nigeria and Ukraine were the second and third largest participants, where each represented less than ten percent of total lottery entrants.) In 2011, the State Department announced that Bangladesh would no longer be eligible to participate in the program given the high rates of recent immigration, exceeding 50,000 people over the last five years (coming in through other available immigration channels).

In addition to the clear upward trend, we also see volatility in the Bangladeshi numbers at the beginning of the last decade, with a noticeable drop in the numbers in 2003, presumably as a result of the repercussions of the 9/11 attacks in the U.S. The Migration Policy Institute estimates that non-immigrant admissions from Asian Islamic countries did in fact drop by 37 percent between 2001 and 2002 (MPI, 2003). Non-immigrant admissions from Bangladesh in particular decreased by more than 30 percent from 2001 to 2003. (Yearbook of Immigration Statistics, 2003) While we do not have information on what percent of Bangladeshis in New York may represent non-immigrant visa overstays, the drop in non-immigrant admissions during this time is quite clearly captured in the aggregate population numbers in the CPS. A very rough approximation gleaned from interviews with community leaders in 2002 in New York suggests that of all expatriate Bangladeshis living in the U.S., 60 percent were legal immigrants, 20 percent were those whose papers were under process to change their immigration status, and another 20 percent were undocumented (Siddiqui, 2004b). In the absence of more reliable statistics, these are the only numbers available on the subject of non-immigrant overstays, and are cited with caution.

Labor Market Profile of Bangladeshi Immigrants in NYC

While a substantial body of interdisciplinary research has been devoted to the study of more established immigrant networks in New York City such as its Chinese, Caribbean and Latin American populations (among others), academic work on its Bangladeshi immigrants is scant at best. The profile of the greater Bangladeshi population in the city presented in this

Table 2. Labor Market Profile: Bangladeshis, Other South Asians and Other Immigrants in New York City, 2005-2009 Averages, Outgoing Rotations Group, CPS

	Bangladeshis	Other South Asians	Other Immigrants
Wage and Employment			
Labor force participation rate	57.3	59.8	63.0
Unemployment rate for ages 16-64	8.8	6.6	5.5
Employment rate for ages 16-64	91.2	93.4	94.5
Hourly status (percent employed in hourly work)	41.5	42.1	50.1
Wage for hourly workers (2009 Dollars)	14.0	14.3	14.9
Hourly wage (All workers, 2009 Dollars)	18.5	20.1	19.8
Occupational Distribution			
Management, professional, & related	19.1	34.6	25.0
Service	25.2	16.2	30.8
Sales and office	27.2	26.7	21.0
Construction & maintenance	4.8	6.0	10.3
Production, transportation, material moving	23.1	16.5	12.8
Demographic and Other			
Percent male	56.7	51.4	46.6
Median age	37	36	43
Number of children under 18 (Per Capita)	1.21	1.04	0.87
Median family income (Annual, 2009 Dollars)	34,775	49,500	37,500
Citizenship status (Percent)	46.3	51.7	47.8
Median year of arrival	1996-1997	1996-1997	1990-1991
Educational Attainment (25 and Over)			
Less Than high school diploma	10.2	16.2	24.7
High school graduates, no college	37.0	27.4	32.7
Some college or Associate Degree	6.7	14.8	15.3
Bachelor's Degree or higher	46.1	41.7	27.3

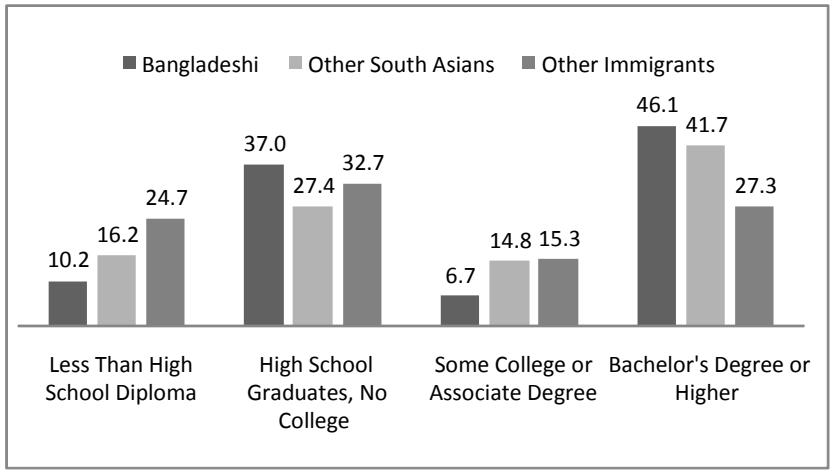
section partly addresses this gap in the literature, by providing a review of the labor market characteristics for this population as compared to other immigrants in the City. Secondly, it serves as a comparative backdrop against which we highlight the economic circumstances of low-skill and mostly informal workers, our chosen sample of study.

To construct the labor market profile of Bangladeshis in New York City, we utilize data from the Outgoing Rotation Group (ORG) files of the Current Population Survey (CPS). The CPS is a monthly survey of about 50,000 households conducted by the Census Bureau for the Bureau of Labor Statistics (BLS) and is the primary source of information on the labor force characteristics of the U.S. population and its sub groups. These data are collected in the two outgoing rotation groups as a part of the basic CPS labor force interview. To increase our sample sizes as well as average out the peak of a business cycle, we use averages for the five years spanning 2005 to 2009.

In exploring the labor market characteristics of Bangladeshi migrants in the City, it is instructive to use as a benchmark, the same aggregates for other South Asians (OSAs) as well as for all other immigrant (OIs) groups (including other South Asians). While many of the measures do not show stark differences across these groups (see Table 2), a few numbers warrant closer scrutiny. The unemployment rate of Bangladeshis was 8.8 percent in the five year period, which is higher than the rates for the other two groups, 6.6 percent and 5.5 percent for OSAs and OIs, respectively. (New York City's unemployment rate averaged 6.1 percent over this period.)

The low representation of Bangladeshis in the Management and professional occupational group (associated with low unemployment and higher wages) partly explains this phenomenon. However, this underrepresentation itself is surprising, given that a remarkably high percent of Bangladeshis are college graduates – 46 percent, compared to 27 percent for OIs. (The latter is comparable to the

Figure 2. Educational Attainment, Bangladeshis, other South Asians and Other Immigrants, 2005-2009, Source: CPS.



national average.) Other South Asians in the City have similar levels of educational attainment but lower unemployment rates for both college and non-college graduates[iii]. The breakdown by level of education for each group is presented in Figure 2 for easier reference.

What may explain the low penetration of Bangladeshis in the "preferred" occupations given their high levels of educational attainment? The economic assimilation of immigrants into the labor markets of the U.S. is among other factors, dependent on the interplay of the amount of time spent in the United States and as well as their proficiency in the English language. The latter is of course related to the former, and to the degree to which English is used in one's native country. While Bangladeshis do account for more recent arrivals as compared to other immigrants, which would account for part of this discrepancy, compared to other South Asians, we see only a slight difference in this regard. (While the median arrival year is the same across these groups, a larger percent of OSAs had arrived in the U.S. prior to 1990, before the distinct wave in Bangladeshi immigration began.) This brings us to the issue of language; the 2010 American Community Survey (ACS) of the nation's Bangladeshi population found that nearly 51 percent spoke the English language "less than very well". This number is considerably larger than comparable figures for Indians (26.8 percent) and Pakistanis (36.6 percent), who make up the bulk of the OSA group.

The possibility that a large number of college graduates may in fact have been educated in Bangladesh is not directly captured in the CPS but is strongly suggested by the estimate of the median arrival age of 25. Similar figures for OSAs again underscores the role of language; the seamless transfer of an education acquired in one's home country to the workforce upon migration, too, depends on the proficiency in the host country's language, along with other factors such as the quality of the education and its recognition upon migration. While the differences in the last two may be approximated to a high level of generality, English language proficiency can be more easily evaluated, as with the ACS estimates. Behind these numbers, broad historical and institutional factors can be identified as explanations; unlike in India, where the institutions of higher education largely use English as the medium of instruction, Bengali predominates in higher learning in Bangladeshi universities, due to government mandated use of Bengali in the nation's State universities (Brown and Ganguly, 2003). Interestingly, a 2005 study finds that even in institutions that instruct in English, Bangladeshi students generally relegate its role to be mostly "functional", or to be used only in situations that require the use of English (Rahman, 2005). The English language is not typically used in interpersonal or inter-institutional communication, (as it is in India) even among the educated elite. For a detailed discussion of the historical underpinnings of this difference, see Rahman (2005).

Since we see other South Asians faring much better in terms of securing employment in the high-wage "Management and Professional" sector, the high rates of college graduation in the Bangladeshi population are not reflected in earnings, and its average wage is the lowest in the three groups. The last dimension

along which Bangladeshis differ significantly from other South Asians in the City is in terms of median family income - OSA family incomes are more than 40 percent higher. (We also find that the distribution of family incomes to be more skewed for Bangladeshis than the other groups.) While wage data is only calculated for working adults, (where we do not see a large difference across groups) the strikingly lower family incomes reflect high dependency ratios in Bangladeshi families.

In concluding this section, we suggest that the observed contrasts in labor market outcomes for Bangladeshis and other South Asians in the City, the two groups that represent relatively recent immigrant cohorts with similar educational profiles, is indicative of different degrees of economic assimilation caused by a complex interplay of possible factors. Of these, we can address what is observable in aggregate statistics, namely, the difference in English language proficiency between these populations.

Survey Results

The sample of study consists of Bangladeshi workers in the informal labor markets of Queens, New York. The field work for this study was conducted primarily in the neighborhoods of Jackson Heights and Jamaica in Queens that have densely populated pockets of Bangladeshi immigrants with a vibrant street life. Surveys were administered to street vendors of many varieties of goods, from those selling prepared foods, or those operating fruit and vegetable carts, to those hawking books and maps, religious paraphernalia and so forth. Hawkers who pass out flyers on crowded streets for established stores or restaurants as well a few restaurant workers were also surveyed. These surveys were carried out in the months of June to August, 2010, and total 64. The administered questionnaires were designed to elicit information at the individual and household level on an array of socio-economic variables, including income, employment, migration related issues, remitting behavior (addressing incidence, amount, frequency and purpose) as well as respondents' familiarity with and demand for microloans. The summary statistics of variables of interest are presented in Table 3. Since the object of this survey was to look at the remittance sending patterns of immigrants from the lowest economic strata in the city, (as well as explore their perceptions of the benefits of microloans) we outline how our sample of study differs in important respects from the general Bangladeshi population. Table 3 provides comparable figures (based on availability) from the ACS/CPS for the total Bangladeshi population in the U.S.

First, the households in our sample make less than half as much income per annum, and their median income falls below the Federal poverty threshold (for any number of children, and the mean household size). Second, the household sizes in our survey are significantly larger (4.93 members over 3.87). Third, home ownership is non-existent in our sample, with a hundred percent of those surveyed reporting a renter status for their home, while the comparable aggregate figure for all Bangladeshis is 48 percent. Finally, the percentage of those with education beyond high school is substantially lower in our sample. Variables for which we do not have aggregate numbers for comparison but are of interest to this study, are information on migration, remittances, and the demand for small loans. We consider each in turn.

Migration Variables

The median year of arrival into the U.S. in the sample (of the first household member) is 1997, so our sample represents relatively recent arrivals. The overwhelming majority of respondents report no intent to leave New York in the near future, a finding that is reflective of relatively new immigrant cohorts in gateway cities as being heavily dependent on the social capital offered by the dense immigrant networks prevailing in these areas. The lower levels of educational attainment of respondents imply somewhat restricted occupational and geographic mobility, and underscore the importance of such networks in achieving economic outcomes.

Return migration is often considered in the remittance literature as a non-altruistic motivation for remittances, as they can act as an insurance mechanism against future uncertainty, (Galor and Stark, 1990; Merkle and Zimmermann, 1992) which explains why temporary migrants tend to send larger portions of their income home. To account for this possibility, the survey asked respondents of their intentions to return to Bangladesh in the future; the vast majority responded in the negative, signaling a permanent migration decision. We also find that a remarkably high percentage of the respondents came from a household with a member who immigrated under the diversity visa (comprising 40 percent of all respondents). The lower education levels in the sample (compared to the greater Bangladeshi population) would corroborate the notion that workers from a broad class of socio-economic backgrounds do enter the U.S. under this scheme.

Table 3. Survey Results

Variable	Survey	ACS/CPS
Household Variables		
Household size	4.93	3.87
Children under 18 in household (Yes=1)	0.67	0.63
Working adults in household	2.00	
Education, Employment and Income		
Education beyond high school	0.23	0.53
Any household member self employed (Yes=1)	0.33	
Annual household income in the U.S. (Mean)	19,500	
Annual household income in the U.S. (Median)	16,500	34,775
Home Ownership		
Rent or Own home (Rent=1)	1	0.52
Migration Variables		
Median year of arrival of first household member	1997	1994-1997
Any household member arrived under Diversity Visa (Yes=1)	0.41	
Majority of dependents in Bangladesh (Yes=1)	0.55	
Took out a loan in Bangladesh to emigrate (Yes=1)	0.70	
Amount of loan in U.S. Dollars (2010 dollars)	4,510	
Visits per year to Bangladesh	0.48	
Intent to return to Bangladesh (Yes=1)	0.03	
Intent to migrate away from New York City (Yes=1)	0.03	
Remittances		
Remit income to Bangladesh (Yes=1)	0.77	
Frequency of remittances per year	7.57	
Amount remitted per year (U.S. Dollars)	2,951	
Remittance Use in Bangladesh (Multiple Response Variable)		
Education of a family member	0.37	
Buying/maintaining property	0.14	
Day-to-day expenses of family members	0.89	
Paying back loans	0.14	
Microloans		
Knowledge of Grameen Bank in Bangladesh (Yes=1)	1.00	
Knowledge of Grameen's operations in New York City (Yes=1)	0.02	
Demand small loan of 3,000-5,000 USD (Yes=1)	0.61	

Siddiqui (2004b) suggests that remittance rates are higher among this group than white-collar workers that dominated the Bangladeshi immigrant community up to the 1990s. On the earlier, more educated cohorts, she writes, "It is understood that these immigrants usually spend a major share of their earnings in the host country. Whereas those who migrated under the OP1 and Diversity Visa send a significant share of their earnings to Bangladesh, thus contributing in a major way to the remittance flow from the US."

Considering that our sample was drawn from permanent migrants, we find there to be substantial ties to Bangladesh in this group. On average, at least one member of the sample household visits Bangladesh once every two years, and a little over half of the households of those surveyed support more dependents in Bangladesh than within their own household in the U.S. Given the large household sizes (in the U.S.) in the study, this finding suggests the existence of extensive familial networks in

Bangladesh who benefit from the remittances of this population.

Finally, 70 percent of the respondents reported taking out a loan in Bangladesh to emigrate to the U.S. (where the average loan amount was 4,500 USD), which is suggestive of a low economic status prior to arrival, with inadequate savings or income to finance emigration. Since immigrants generally remit income to those sharing their socio-economic background, the remitting behavior of their households is of direct consequence for the poverty alleviation role of remittances. We next turn to the incidence and extent of remittances in this group.

An Empirical Analysis of Remittances and the Demand for Small Loans

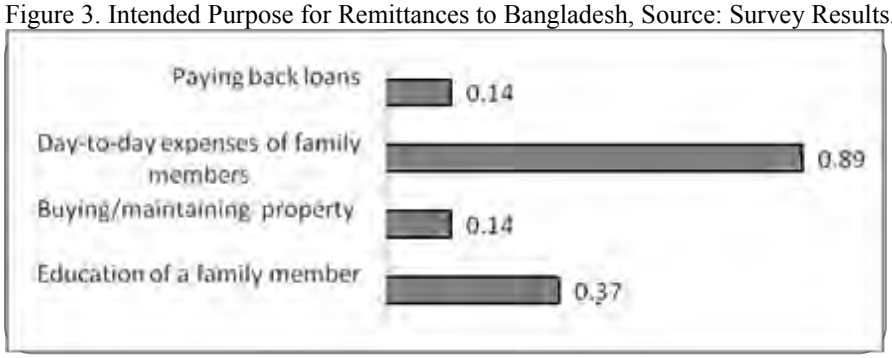
As compared to private capital flows, migrant remittances to the developing world (as percent of GDP) show remarkably less variation, both across countries[1] (as percent of GDP) and in their aggregate growth over time, an observation well documented in the literature. This stable financial flow has been increasingly important for Bangladesh, which has become the seventh largest recipient of remittances in the world, receiving over 11 billion dollars in 2010. The United States was the fourth largest remitting country to Bangladesh, behind India, Saudi Arabia and U.K., sending close to a billion dollars to Bangladesh over the year. Furthermore, these total remittance figures merely reflect money sent through official channels, which by some estimates comprises little more than half of all remittances. Informal channels known as "Hundi", legally prohibited in Bangladesh, make up another 40 percent (See Siddiqui, 2004, Siddiqui and Abrar, 2003 and Haque and Bashar, 2005). While the Hundi system is well researched at the micro-economic level for sending countries in the Middle East and South East Asia, informal remittance channels in the industrialized West are not as well documented. However, the macro evidence on the existence of such transfers, at least till the beginning of the last decade, is overwhelming. After the attacks of September 11th, the U.S. government put in place more stringent regulations on international money transfers, causing a significant redirection from informal to formal modes of remitting. Data maintained by the Bangladesh Bank (BB), the central bank of Bangladesh, on official remittance flows show that remittances from the U.S. that had grown annually at rates between 4 and 6 percent in the late 1990s dramatically increased by 48 percent from 2001 to 2002 (Siddiqui, 2004).

Remittances to Bangladesh (which have more than tripled since 2006) have also had a significant impact on poverty reduction; household survey data show that remittances reduced the poverty headcount ratio by 6 percentage points in Bangladesh from the mid-nineties (Ratha, 2007). When looking at these poverty alleviation effects, it is also important to account for the counter- effect of lost income from out-migration. These losses are of course smaller for low-skill workers with fewer opportunities and lower incomes at home, our chosen sample of study. We briefly discuss the incidence, extent, frequency and use of these remittances before presenting the empirical estimation of remitting behavior.

The incidence of remittances is quite high in this group, with 77 percent of all respondents reporting remitting income to Bangladesh in the last year. Households that did remit income, sent home on average, more than 20 percent of their annual income. Respondents also provided information on the intended use of these remittances, (as a multiple response variable) that are reproduced in Figure 2 for easier reference. Most households that remitted money did so to help with day-to-day expenses of family members. The second most common use of remittances was towards contributing to the education of a family member, while 14 percent of the sample reported sending money to buy/maintain property, and another 14 percent remitted to pay back loans incurred in emigrating to the U.S. A last category, "Other" with an open ended answer did not elicit enough responses to be re-categorized into different sub-uses. Our study did not attempt to break down the *amount* of remittances intended for each purpose, since actual utilization may differ from intent, and the exact allocation across uses is not directly controlled by the remitter. However, there is a broad agreement between our findings and those from household-level surveys undertaken in Bangladesh on the primary use of remittances. Most find the majority of remittance transfers to finance consumption (though exact measures of consumption differ across studies, see Siddiqui and Abrar, 2001; Afsar, 2003). Notably, more than twice the households in our sample cited investment in human capital over investments in property as an intended use of income sent to Bangladesh. This finding is not entirely consistent with remittance use allocations reported by households in Bangladesh; an extensive

[1] For instance, while India, China and Mexico were the largest remittance receivers in 2010, as a percentage of GDP, countries such Guyana, Tajikistan, Haiti, and Tonga topped the list.

Figure 3. Intended Purpose for Remittances to Bangladesh, Source: Survey Results.



compilation of micro-level studies by Bruyn and Kuddus (2005) suggests that less than five percent of households cited using remittances towards education. Since the compilation included many studies of households of temporary workers in the Middle East, that may be even more economically disadvantaged than of those of migrants from the lowest economic groups in the U.S., this difference may arise from broader social attitudes to education.

Estimation Results from a Double Hurdle Model of Remittances

Since remittance information includes the presence of zeros for families that do not remit income home, the Tobit model is widely used to model remittances as a statistically censored regression. This model assumes that the incidence of zero remittances is a corner solution, with the same variables that affect the amount of remittances determining whether or not a household chooses to remit at all. However, the participation decision - whether to remit, may be determined by factors different than those that determine the amount, and non-participation decisions need to be considered in addition to corner solution outcomes. The double-hurdle model, a generalization of the Tobit model that considers the participation and amount decisions uniquely under a less restrictive specification, is increasingly being used in the remittance literature as an alternative. (Cox et al. (1998), Sinning (2011) and Bettin et. al (2011)). The original formulation of this model as presented by Cragg (1971) postulates the following structure for the two decisions:

$$y_i^* = x_i'\beta + \varepsilon_i \qquad (1)$$

$$s_i^* = z_i^*\gamma + u_i \qquad (2)$$

$$y_i = \begin{cases} y_i^* \; if \; y_i^* > 0 \; and \; s_i^* > 0; \\ 0 \; otherwise \end{cases} \qquad (3)$$

The error terms from the selection equation (participation decision) and level equation (amount decision) may be correlated, and their distribution under the dependent double-hurdle model is represented as the following:

$$\begin{pmatrix} \varepsilon_i \\ u_i \end{pmatrix} \sim N\left[0, \begin{pmatrix} \sigma_u^2 & \rho\sigma_u \\ \rho\sigma_u & 1 \end{pmatrix}\right] \qquad (4)$$

The estimation of the joint decisions of the incidence and extent of remittances in the double hurdle model is undertaken through Maximum Likelihood, and the results robust to different specifications are presented in Table 4. We find that both the decision to remit as well as the amount remitted by a typical household in our sample are positively associated with household income, with an additional dollar of income increasing remittances by 12 cents. Interestingly, while the household size in the U.S. is not a significant determinant of the choice of whether or not to remit, an additional member in the household decreases annual remittances by to Bangladesh by 560 dollars. A higher frequency of visits to Bangladesh, that one would expect to proxy ties to family members at home, decreases the likelihood of remitting, but does not affect the remittance amounts for families that do remit. This curious result may be explained by the possibility of substitutability between visiting Bangladesh and remitting income, or that remittances are *only* made in person by some families. If substitutability between the amounts remitted through remote transfers and those made during family visits was strong, we would expect this variable to also affect the extent of remittances, and not just its incidence. Finally, we find larger amounts borrowed in Bangladesh to emigrate increases the likelihood of remitting, an intuitively reasonable result.

Table 4. Estimation Results

Double Hurdle Model Results: **Dependent Variable: Annual Remittances to Bangladesh in USD**	Decision to Remit (Yes = 1)	Amount Remitted (Annually in USD)
Annual Household Income (USD)	0.07**	0.12**
Majority of Dependents in Bangladesh (Yes=1)	0.05	733.30
Household size in the U.S.	-0.75	-560.57***
Amount of loan taken out in Bangladesh to emigrate (USD)	0.53***	0.21
Years since first household member arrived in the U.S.	0.04	190.07**
Intent to return to Bangladesh (Yes=1)	0.42	-81.17
Member of household immigrated under DV	2.24**	
Frequency of visits to Bangladesh (estimated per year)	-5.27**	1538.39
Constant	1.95***	3262.34***
Logistic Regression Results **Dependent Variable: Demand for Small Loan (Yes=1)**		
Annual Household Income (USD)	-0.13**	
Household member self employed	-0.39	
Member of household immigrated under DV	-1.43**	
Amount of Loan taken out in Bangladesh to Emigrate (USD)	0.06	
Constant	3.32	

Estimation Results from a Logistic Regression of the Demand for Small Loans

We also provide in Table 4, the results of a logistic regression, where the dependent variable takes the value 1 if the respondent perceived a microloan to be beneficial for their employment prospects in New York. The loan amount qualified to reflect a "small loan" was approximated from Grameen Bank's operations in New York, where loans of approximately three thousand USD are made to borrowers, and we use this number as the lower benchmark for defining a microloan. Interestingly, while a hundred percent of the sample had heard of Grameen Bank in Bangladesh, none of our respondents had heard of any Bangladeshis who may have availed of such loans in the U.S. Considering that Grameen America is still in its years of infancy, and has so far reached low-income women from other immigrant groups in New York, this finding was not surprising: 61 percent of those surveyed answered in the affirmative when asked about their demand for microloans in the range of what Grameen America provides. Across a wide range of specifications with varying sets of regressors, only two variables were significant in the logistic regressions; a higher annual household income, and belonging to the DV classification of immigrants, both increased the likelihood of answering in the negative to the question on microloans. The former is an unsurprising finding, but the reason for the latter is more difficult to ascertain. While the survey did not pose questions about the legal status of respondents and their families, as discussed previously, informal estimates indicate that a large sub-population of Bangladeshis in the City is undocumented. It is likely that the DV variable may be a rough marker for documented immigrants in our sample, who would have easier access to credit markets and other opportunities for economic advancement. Even though the sample collectively reflects low income migrants, within this group, a statistically significant difference between incomes of DV and non-DV households can be found, with average incomes in the former at 22,590 dollars, over 17,578 dollars in the latter. In conclusion, we find there to be a substantial demand for small loans in this population, and familiarity with the micro-lending practices of Grameen Bank (though not in the U.S.) is strong in this group.

Conclusion

This study presents a case-study of low-skill immigrants from Bangladesh, most of who work in informal arrangements on the streets of Queens, New York City, and profiles their remittance sending behavior as well as their perceptions of microloans as a means of bettering their employment prospects in the U.S. While small in scope, these issues lie at the confluence of several notable trends. The Bangladeshi population has been New York's fastest growing immigrant group in the last two decades, increasing by more than ten-fold over this time. However, unlike the case of larger and more established immigrant networks in the City, little to no academic work on this population exists. This paper addresses part of this gap in the literature, by

presenting a labor market profile of this population constructed from the Current Population Survey, and compares its labor market outcomes with other South Asians and other immigrants in the City. We find that in spite of the high college graduation rates in this population, its penetration in the "Management and Professional" occupations in the City remain significantly low in comparison to other South Asians, and both higher unemployment rates and lower wages prevail in this demographic. The observed contrasts in labor market outcomes for these two groups, both of which represent relatively recent immigrant cohorts with similar educational profiles, is indicative of different degrees of economic assimilation into the labor markets of the City, caused by a complex interplay of possible factors; of these, directly observable in aggregate statistics are the differences in English language proficiency between these two populations.

Secondly, while the emerging reality of remittances becoming a vital source for development in Bangladesh (the seventh highest remittance recipient in the world) has resulted in a substantial body of work on the utilization of these remittances at home, the sending perspective of the poorest migrants in the U.S., (which is the fourth largest source of remittances) has yet to be adequately explored. As more than 24 percent of Bangladeshis in the U.S. live under the Federal poverty threshold, a rate substantially higher than both the national average and that for other South Asians, the emphasis on remitting behavior of poorer migrants remains a valid avenue for research. Since poorer migrants have ties to those back home who come from similar socio-economic backgrounds, remittances as a direct source of poverty alleviation can be linked to their behavior. Drawing on primary data collected by surveys of 64 immigrants, eliciting information at the individual and household level, we first explore the incidence, amount, frequency and intended use of these remittances. We find that the incidence of remittances to be quite high in this group, with 77 percent of respondents reporting remitting income to Bangladesh over the last year, sending over 20 percent of their annual income home. Our survey results suggest the presence of wide familial networks in Bangladesh that benefit from these remittances, using this income primarily to cover day-to-day expenses, a finding consistent with micro-level studies of remittance utilization in Bangladesh. Human capital investment is the second most common intended use of income sent to Bangladesh, followed by repayment of loans taken out to emigrate and investments in buying and maintaining property. A double hurdle model estimated for remittances suggests household income, loans taken out in Bangladesh to emigrate, and household size in the U.S. are all important determinants of remitting behavior of households in this group.

As an explorative exercise, we also consider the demand for small loans in this population. This question is of particular relevance to this case study for two reasons. First, Grameen America, a branch of Grameen Bank, one of the world's premier microfinance institutions that originated in Bangladesh, opened its first office in Queens, New York, in 2008. If a reasonable demand for microloans exists in the low-income Bangladeshi sub-population (currently, 95 percent of Grameen's borrowers in Queens are women of Hispanic ethnicity), Grameen could benefit from its natural advantage in targeting this group as it extends its reach. Secondly, given the high costs of remittance transfers through official channels, that often turn out to be regressive as they typically include a base fee and hence work against poorer migrants who may remit smaller amounts more frequently, it could possibly play an innovative role in the remittance transfer operations of its Bangladeshi borrowers, an area into which it has made recent inroads (though currently limited in scope to cross-border remittances from India). This secondary role would be consistent with its broader development objectives in Bangladesh. We find that more than 60 percent of respondents answered in the affirmative on the question of small loans, with lower income respondents more likely to do so. Our findings suggest that a demand for micro-loans does exist in this sub-population, and Grameen America would have little difficulty in reaching this group in which it enjoys a clear reputational advantage due to its expansive micro-lending operations in Bangladesh.

End Notes

1. A large part of this history significantly predates the formation of the current geographical borders of the countries in South Asia, and one can find references to Bengali migration dating as far back as 4th century BCE in the ancient Sri-Lankan texts of the Mahavamsa.

2. More than 875,000 workers left Bangladesh for these destinations on temporary employment contracts in 2008, with the vast majority going to Saudi Arabia and the U.A.E. (63 percent). Malaysia and Singapore were the most popular destinations in South East Asia, providing 21 percent of the total employment contracts.

3. It should be noted that the education profile of South Asians in New York City does not mirror the rest of the country - the percent of college graduates in this group is much higher in the national figures. The same is not true for Bangladeshis, which is unsurprising given the high concentration of Bangladeshis in the City. Gateway cities often reflect this trend, as better skills in the labor market are rewarded with more mobility.

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