

Unsustainable Livelihoods, Health Shocks and Urban Chronic Poverty: Rickshaw Pullers as a Case Study

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Abstract

Five ideas constitute the central message of this study. First, urban rickshaw pullers come from a *very poor economic background* consistent with the characteristics of chronic poverty. Second, rickshaw pulling provides a route of *modest upward mobility* for those among the rural chronic poor who come to the city for work. Third, the rickshaw pullers are susceptible to systematic health risks. Deteriorating health combined with *health shocks* can impose a significant burden on the urban poor, dragging down the pace of upward mobility during their lifetime. Fourth, the activity of rickshaw pulling represents an *unsustainable livelihood*, as the initial welfare gain tapers off with length of involvement in the sector. As longitudinal data is lacking, this story has emerged through an inductive comparison of younger, recent joiners and long duration, older rickshaw pullers, as well as current and former pullers. Fifth, *intergenerational mobility* of rickshaw puller households is constrained by very limited schooling and the poor range of occupational choices for children. Public policy has an important role to play in mitigating health shocks, as well as supporting targeted education for the urban poor in the informal sector, for sustainable urban poverty reduction.

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I. Introduction

Five key ideas

Five ideas constitute the central message of this study. First, urban rickshaw pullers come from a *very poor economic background* consistent with the characteristics of chronic poverty. Second, rickshaw pulling provides a route of *modest upward mobility* for those among the rural chronic poor who come to the city for work. Third, the rickshaw pullers are susceptible to systematic health risks. Deteriorating health combined with *health shocks* can impose a significant burden on the urban poor, dragging down the pace of upward mobility during their lifetime. Fourth, the activity of rickshaw pulling represents an *unsustainable livelihood*, as the initial welfare gain tapers off with length of involvement in the sector. As longitudinal data is lacking, this story has emerged through an inductive comparison of younger, recent joiners and long duration, older rickshaw pullers, as well as current and former pullers. Fifth, *intergenerational mobility* of rickshaw puller households is constrained by very limited schooling and the poor range of occupational choices for children. Public policy has an important role to play in mitigating health shocks, as well as supporting targeted education for the urban poor in the informal sector, for sustainable urban poverty reduction. The remainder of the paper provides summary evidence for each of these messages.¹

Structure of the paper

The paper is divided into seven sections. The second section discusses the characteristics of the sample of rickshaw pullers, with a sub-section on the characteristics of their living children. The third section describes the major features of rickshaw pulling as an “activity”, providing details of sectoral attributes and dynamics. The fourth section focuses on the well-being enjoyed by the rickshaw pullers, in terms of household income, expenditure and other such indicators. The fifth section draws attention to the crisis aspect of rickshaw puller livelihoods, while the sixth section documents health status and health-related shocks, and their interface with poverty. The seventh section provides the concluding remarks. The complete statistical tables can be found in the Annex.

II. Profile of rickshaw pullers

Sample selection

The study is based on a sample of 402 current rickshaw pullers and 98 former rickshaw pullers. At the time of the survey, all of them were living and pursuing their economic activity in Dhaka. A stratified sample was drawn at random from different points of the city,² ensuring the inclusion of all age groups. Selected rickshaw pullers were interviewed using a more detailed structured questionnaire and were compensated for the time. The sub-sample of former rickshaw pullers (i.e. rickshaw pullers at some stage of their life but now engaged in another activity) were drawn from poor neighbourhoods of Dhaka on the basis of information provided by other individuals including rickshaw puller. They were interviewed with a shorter version of the questionnaire containing select questions. Although both groups represent the sample population, the paper has primarily concentrated on current rickshaw pullers, and

¹ Several previous studies (e.g. Rashid 1978; Masum 1988; Gallagher 1992) of rickshaw pullers have been carried out, but none have focused on long-term health effects and the resultant unsustainability of rickshaw pulling, as the present study does.

² City points covered are Mohammadpur Bery Badh, Mohammadpur Shia Masjid area, Mohammadpur Town Hall, Mohammadpur Krishi Market, Asad Gate, Jigatala, Shamoly Cinema Hall, Shaymoli Ring Road, Sheorapara, Agaragaon Market, Agargaon Planning Commission Office, Manik Mia Avenue, Bijoy Sharani, Dhaka Zoo, Mirpur 1, 2, 10, 11, 13 & 14, Pallabi, College Gate, Farm Gate, Shahabag, Malibag, Elephant Road, New Market, Azimpur, Motijheel, Jatrabari, Lalbagh, Kamrangir Char, Sutrapur, Sadarghat, Khilgaon, Kamalapur Railway Station, Sabujbagh, Gabtali, Kachukhet, Ibrahimpur, Banani, Mahakhali, Bhashantek and other similar places.

evidence from the survey of former rickshaw pullers are brought in only when necessary to substantiate a point about rickshaw pullers or the rickshaw pulling occupation. Data on both groups were collected in April-June 2003.

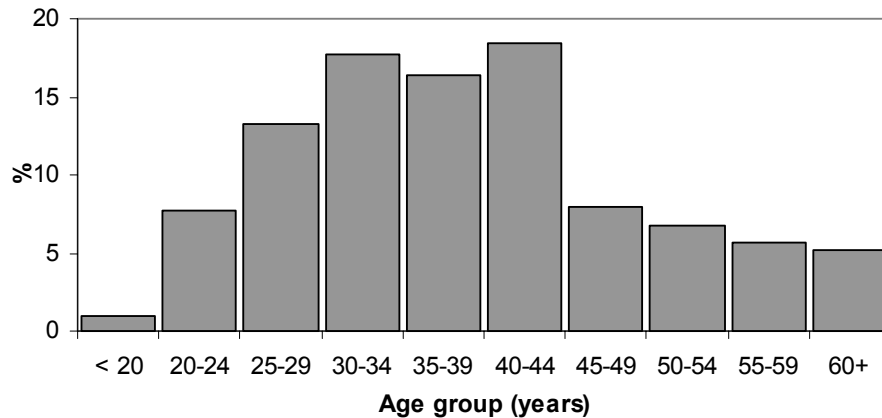
Basic characteristics of rickshaw pullers

The basic characteristics of the sample rickshaw pullers are presented in several sub-sections, such as, age and length of time in occupation, socio-economic background, residential background and present living arrangement, housing, occupational background, and demographic background including the background of their living children.

Age and length of time in occupation

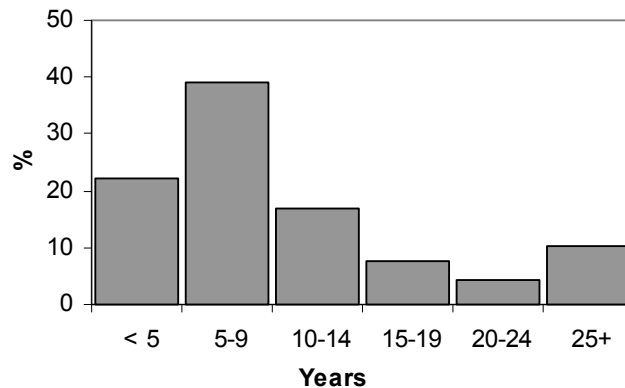
The average age of the sample rickshaw pullers is around 38 years. The age profile (Figure 1) indicates that rickshaw pullers are primarily concentrated in the age interval of 30-44 (53%), dropping sharply after age 45. Yet, about 5% of the sample rickshaw pullers is aged 60 years or above. A negligible proportion of them is below 20 years of age. Thus, although the children and adolescents are sometimes visible as rickshaw pullers, they may not actually make up a large proportion of total rickshaw pullers.

Figure 1 Age profile of rickshaw puller sample



The estimated average duration of rickshaw pulling for the sample rickshaw pullers is 10 years. Of these 10 years, on average 9 years is spent on pulling rickshaw in the Dhaka City and one year in elsewhere. The recent joiners (< 5 years) have been pursuing the occupation, on average, for 2.5 years; middle duration pullers (5-14 years), for an average of 8 years, and long duration rickshaw pullers (15+ years) for nearly 24 years (Annex Table 14). Figure 2 presents the profile of the sample rickshaw pullers in terms of how long they have been pulling rickshaws as an occupation. While some 61% have been pulling for fewer than 10 years, a significant proportion (14%) also pulling rickshaw for more than 20 years.

Figure 2: Profile of sample rickshaw pullers by duration of pulling



Socio-economic background

As expected from the age profile, most of the sample rickshaw pullers are married (87%). Only about 11% are unmarried, and only 2% are widowed or divorced (although this is twice the estimated national figure).³

In general, the rickshaw pullers have come from very poor origins both in terms of household human capital assets and physical capital assets.⁴ In both these respects, rickshaw pullers belong to one of the most deprived social categories. They are mostly uneducated (58%) or semi-educated, having never completed primary level education (17%) (Annex Table 1). Of the remaining 25%, only 2.5% reported to have passed the SSC level; all others either completed primary school but did not continue (9%) or did not complete secondary education (13%).

It is interesting to note that the rickshaw pullers who have joined the occupation relatively recently (over the last five years) have come from relatively higher educational backgrounds than those who have been pulling rickshaw for 15 years or more, representing two socially distinct waves of migrants. Two-thirds of recent rickshaw pullers are uneducated or semi-educated, compared to 83% among older generation of pullers. This difference is expected, given the rapid expansion of primary education in rural areas during the 1990s (Annex Table 1).

As many as 62% of the rickshaw pullers reported having no cultivable land at all, and another 22% reported having less than 50 decimals – the standard cut-off point in Bangladesh for defining functional landlessness. Housing status also suggests a poor economic background for the rickshaw pullers. Almost none of the pullers own a house in Dhaka while 17% do not own a house even in their home village.

Again, the information on landholding and house ownership also indicates that the younger rickshaw pullers, or those who joined the occupation in recent years, have come from relatively better-off backgrounds than their older counterparts. Pure landlessness (with no cultivable land at all) among them represents only 44%, against 75% for those who joined the occupation more than 15 years ago. Among the recent pullers, 20% have more than 100 decimals of land, compared to 2% of the older generation. All recent rickshaw pullers own a house in the village, while only two-thirds of the older generation do. This phenomenon of younger people from relatively better socio-economic backgrounds migrating to cities and undertaking rickshaw pulling as an economic activity may reflect the growing problem of unemployment among rural youths.

Of married rickshaw pullers, 19% have economically active wives. More than half of these wives work in garment factories, and about one-third work as maidservants. A small proportion is engaged in other activities, such as, in embroidery work, as hospital cleaners, etc.

Residential background and present living arrangements

Men from different areas of the country do not participate equally as rickshaw pullers in the Dhaka City (Annex Table 2). The three largest contributing districts are Mymensingh, Rangpur and Barisal, from which more than half (52%) of the sample rickshaw pullers had come. The next largest contributors are Bogra, Faridpur, Dhaka, Dinajpur and Comilla from which about one-third of the rickshaw pullers have come. Thus, districts having extensive

³ Less than 1% of males aged above 20 years are widowed or divorced (BBS, 1994).

⁴ Multiple asset and process indicators may be considered to ascertain whether a particular social category belongs to the most disadvantaged groups. See Sen and Begum 1998 for an application to Bangladesh data.

severe poverty, depressed areas, river erosion, charlands, and/or underdeveloped areas with limited work opportunities predominate in the sample of rickshaw pullers. In other words, rickshaw pullers come mostly from the country's poverty pockets.

The large majority of the rickshaw pullers of the Dhaka City— more than 90% – have come to the city straight from the village. Only 2% have come from another location in their home upazila, 3.5% from district towns and 4% from other metropolitan cities, including 1% who have always lived in Dhaka (Annex Table 3).

Substantial numbers of long-duration rickshaw pullers have been living in Dhaka City for long periods, while recent rickshaw pullers tend to be recent migrants to the city, and are likely to have made this move in search of a better livelihood. The average duration of living in Dhaka City by the sample rickshaw pullers is 11 years – 22% have lived in Dhaka for fewer than 5 years, 41% for 5-9 years, 19% for 10-19 years, and 18% for more than 20 years (Annex Table 3). Among recent joiners to the occupation (i.e. worked as rickshaw puller for fewer than 5 years), the majority have come to the city only recently (87% migrated to the city during the last five years and 98% arrived over the past 10 years). Among those pulling rickshaws for 5-14 years, two-thirds arrived in the city between 5 to 10 years ago, and another 22% migrated between 10 to 20 years ago. In contrast, more than 60% of those pursuing the occupation for more than 15 years migrated to Dhaka before 20 years ago.

Of the sample married rickshaw pullers about 60% live in Dhaka with their family, i.e. the entire family has migrated to the city. This figure varies positively with duration of rickshaw pulling, ranging from 44% for recent joiners to 85% for long duration pullers (15+).

Housing and consumer durables

Interestingly, although most rickshaw pullers do not own a house in the Dhaka, city not all live in rented accommodation. Of them, 21% live in rent-free accommodation and such accommodation is generally provided by the rickshaw owners and is located in the rickshaw garages (Annex Table 3). Almost all the rickshaw pullers (93%) who live in Dhaka City with family live in one-room house, with an average of 4 persons living in that one room. Among those living collectively, an average of 17 persons sleep in a single room (Annex Table 4).

The quality of rickshaw pullers' houses is very poor. Although the roof material is corrugated tin in 95% of the cases, the wall material is generally of very low quality. More than one-third of houses' walls are made of bamboo, polythene or similar low quality materials (Annex Table 4). In terms of wall material, the recent joiners (<5 years) appear to live in better quality houses than those pursuing the occupation for many years (15+). Only 5% houses of the recent rickshaw pullers' have poor quality wall materials, against 49% of the older generation.

Almost all of the households of the rickshaw pullers who live in Dhaka with family enjoy access to some urban amenities: 90% have electricity, 52% have gas facilities, 62% have access to tap water, 78% enjoy bathroom facilities, 99% have latrine provision, and 61% have a separate kitchen. Most of the facilities, are accessed, however, on a shared basis and are rated as highly inadequate, especially water, sanitation, and kitchen facilities (Annex Table 5).

In terms of consumer durables, about 14% of the rickshaw pullers' houses have an almirah; 36-46% have a table, chair, watch or clock; 87% have bed/cot/chowki; 23% have a working radio; and 15% have a working television (Annex Table 5).

Occupational background

Prior to migration to the Dhaka City, most of the rickshaw pullers (58%) worked as casual day labourers, with largest proportion employed in the agricultural sector (Annex Table 6). Previous studies show that the incidence of extreme poverty is highest among agricultural wage labourers (Sen and Begum 1998), so, a large proportion of the sample rickshaw pullers appear to have come from the rural extreme poor only. The next most common occupation reported by them is 'rickshaw/van/push cart driving' (20%). Few were engaged in farming (10%) or petty business (9.5%). About 5% were children or students before migrating to Dhaka City, and only 4% were unemployed. This suggests a growing social diversity among the rickshaw puller community, especially among recent joiners.

Rickshaw pulling was the first economic activity after migrating to Dhaka for most of the respondents (almost 80%). The remaining 20% were mostly day labourers and workers in the service sector, while a few tried their luck in petty business before starting to pull rickshaws. Thus, rickshaw pulling seems to be the easiest available work option for rural migrants to the Dhaka City.

Demographic

Demographic information like family size, number of children born alive, number of children dead, characteristics of living children etc, being relevant to married rickshaw pullers only the discussion of this section has been kept confined to the ever-married rickshaw pullers only. The average household size of these rickshaw pullers who live in Dhaka with family is 4.5; it is 3.9 for recent joiners (<5), 4.3 for middle duration ones (5-14) and 5.2 for long duration rickshaw pullers (15+) (Annex Table 7). Interestingly, the rickshaw pullers provide support on average to 5 persons including himself; full support is provided to 4.4 persons and part to 0.5. Thus, beyond immediate family members rickshaw pullers bear the burden of an additional half a person on average (Annex Table 7).

93% of the married rickshaw pullers are fathers of at least one living child; 17% has only one living child, 40% has 2-3 living children and 37% reported 4 or more living children.

Characteristics of living children

At the time of the survey, most of the children of the sample ever-married rickshaw pullers were minors (Annex Table 8). Only about 15% were 20 years or older, and another 15% were aged between 15 and 19. Of the remaining 70%, who are unlikely to be economically independent, 20% were under 5 years old, 28% between 5 and 9 years, and 22% between 10 and 14 years. As expected from the age profile, only about 15% of the children were married. In the sample rickshaw puller households, there were slightly more daughters than sons, but the imbalance is not large (52.5% girls, 47.5% boys).⁵

Educational status of the living children

The educational profile of the rickshaw pullers' children is disappointing, and shows very little improvement over that of their fathers. Among children aged 20+, 55% have no formal education at all, and another 16% have only an incomplete primary education. Thus, more than 70% of these adult children are likely to be semi-literate at best (Annex Table 8). The school attendance rate of their children aged between 5 and 15 too is poor. At the time of the survey only about 63% were attending school (Annex Table 9). Thus, it seems likely that this low level of educational attainment will continue for them.

⁵ It was reported that 94% of living children were in good health. The remaining 6% either suffered from a mental or physical impairment, or were severely malnourished, or too sick to lead a 'normal' life.

The school attendance rate was found to be lower among those children living in Dhaka (58%) compared to that among those living in the villages (73%). This rural-urban gap in school attendance exists even controlling for the rickshaw pullers' age and work characteristics, such as hours of rickshaw pulling in a day etc. (Annex Table 9). There may be several factors underlying this outcome. First, in general, there is a lack of targeted education programmes for the urban poor compared to that available to the rural poor. Most human development programmes led by government and NGOs are still concentrated in rural areas. Second, higher cost of living in urban areas, including in Dhaka City, may mean that the children of the urban poor are required to work to supplement household income. In other words, the survival needs of the urban poor may relegate children's education to a secondary concern within the household. There is some indirect evidence of this. The work participation rate of rickshaw pullers' children who live in Dhaka City with family is higher than that for children of the rickshaw pullers who left their family behind in the village (Annex Table 10).

In terms of building human capital – which arguably holds the key to overcoming poverty in the longer run (Sen, 2003) – the rickshaw pullers of the Dhaka City thus do not seem to have any advantage over their rural counterparts. By shifting themselves and their families to urban areas, it seems they can only aspire to maximise their current benefits by availing the opportunities of the large urban informal labour market, in the process dampening the only prospect for escaping poverty in the longer run, as children remain unable to develop their human capital. This intergenerational transfer of poverty can then 'reverse' during the rickshaw pullers' later life, when children who have not escaped poverty remain largely unable to support their ageing parents.

Employment status of living children

About one-third of the sample rickshaw pullers' children aged above 10 are employed in some economic activity on a regular basis, and another 6% on an irregular basis (Annex Table 11). Among boys aged 15-19, about 71% are part of the labour force while nearly 99 percent is so among sons aged 20 years or above. Among daughters of rickshaw pullers', the employment rate is highest for those aged 15-19 (36%), followed by those aged 20 and above (nearly 25%), perhaps reflecting periods before and after marriage.

While the labour force participation of adult (20+) children, particularly that of the sons, is quite satisfactory in the sense that almost all are employed regularly in some economic activity, the sectoral profile suggests poor occupational choice (Annex Table 11). Given the educational background of adult children this is somewhat expected. The major three economic activities, employing more than 80% of the adult sons, are skilled and semi-skilled labour (e.g. masonry and carpentry); wage work in the agricultural and non-agricultural sectors; and occupations such as rickshaw pulling and van/pushcart driving. These occupations neither provide sufficient income nor provide livelihood security. Adult daughters of rickshaw pullers are almost wholly employed in garment factories (92%), with a few (4%) working as domestic help. In short, the occupational profile of the rickshaw pullers' adult children indicates little likelihood of upward mobility.

Child mortality

The death of a child has been experienced by 31% of the rickshaw pullers while among long duration pullers such experience is reported by 43%. Of an average of 3.2 children born alive to them, the number of surviving children is 2.7 – thus 16% of the children are deceased. Child mortality appears to be as widespread among rickshaw pullers as among the poorest

segments of the national population (Annex Table 7).⁶ Further, data reveal that despite much improvement in the overall child mortality situation in Bangladesh (Begum 2000), the child mortality in the rickshaw puller households (and perhaps the households of the urban poor more generally) has remained still high. Of the deceased children of the rickshaw pullers, 43% died before reaching their first birthday, and another 35% died before reaching age 5. Thus, nearly four-fifths of the child deaths fall into the category of 'infant and child death'. Of the remaining 23%, 14% died between 5-14 years and 8% in the ages above 15 (Annex Table 12).

As reported, 65% of the deceased children are boys and 35% girls. This significant imbalance suggests that there may be underreporting of daughters' deaths, often a common phenomenon. The extent of child mortality among rickshaw pullers thus may be even higher than that documented by this study.

Regarding child mortality, it is surprising to note that in Dhaka City, the largest metropolitan centre of the country, a significant proportion of rickshaw pullers are unaware of the cause of their children's death. The cause of death was simply not known in 23% of the cases, and supernatural causes were held responsible in another 19% cases. Another 5% died soon after birth, without a specific cause attributed. In combination, cause for almost half of the child death reported by the sample rickshaw pullers remains unknown, hence, these deaths are likely to have remained outside the purview of health care due to ignorance. The matched figure is higher among infants: cause of death is 'unknown' for two-thirds of the infant deaths.

The children of the poorer households are highly vulnerable to various accidents. Among cited causes of death for the children aged 1-4, accidents or 'unfortunate events' like house fire, drowning, snake bites, etc., as well as colds/fevers/pneumonia, dominate. For children aged above 5, supernatural causes are the most often cited cause of death, along with diarrhoeal diseases, colds/fevers/pneumonia, and accidents and unfortunate events (Annex Table 13).

At the time of a child's death, treatment was sought only in 60% of the time. *Kabiraji*, *hekimi* and *totka*⁷ types of treatment were relied upon in over half of the instances when treatment was sought (Annex Table 11). In about 30% cases only did rickshaw puller households consult private, qualified practitioners or private clinics, and in 15% of cases approach the medical colleges and other hospitals (Annex Table 11). The oft-cited reasons for the *non*-treatment of the children is 'suddenness of death', giving no chance to seek treatment. This may also reflect ignorance among rickshaw pullers' households in terms of ability to identify the symptoms of serious illnesses.

III. Sectoral characteristics of rickshaw pulling

Rickshaw ownership

Of the sample rickshaw pullers, only 13% own a rickshaw themselves. The remainder hire rickshaws to pull. Longer duration pullers are more likely to own their own rickshaw: 18% of them are owner-*cum*-pullers compared to 5% among recent joiners (Annex Table 14). However, large majority of the rickshaw puller who have been pulling rickshaw for more than 15 years still rent a rickshaw. This observation tend to suggest that there are barriers to ownership and/or it is not perceived to be a sensible investment by the rickshaw pullers. As Gallagher (1992) mentions, the unsettled life style, change of jobs, frequent visits to rural

⁶ According to DHS-2000 data, child mortality in households having a chronic food deficit is 16% while the figure is 9% in surplus households.

⁷ Traditional medicine practitioners and spiritual healers

areas can make rickshaw ownership difficult for rural migrants. Also, space to keep a rickshaw is difficult to find in cities, and obtaining a rickshaw license can also pose a formidable problem.

Time spent rickshaw pulling

Of the sample rickshaw pullers, 92% pursue the occupation throughout the year. The seasonal rickshaw pulling is practised by about 7% only concentrating primarily among recent joiners. 95% of the sample pursues the occupation exclusively, i.e. they are not engaged in other economic activity.

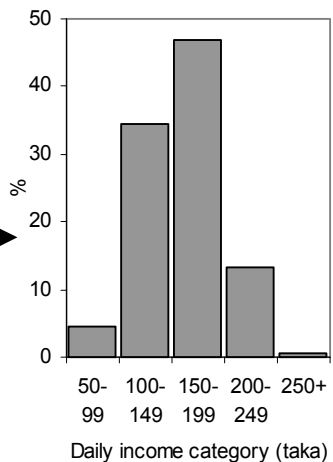
More than 60% of sample rickshaw pullers work every day of the week; 28% take one day off in a week and fewer than 10% take more than one day off from rickshaw pulling during a week. Very few of the rickshaw pullers (about 10%) pull rickshaw on 'whole day' basis, working from early morning to till night. The majority (61%) pulls on 'full day' basis viz., they hire rickshaw in the morning and return it by five or six o'clock in the evening. A smaller group (29%) pulls on a half-day basis (e.g. from morning until two o'clock in the afternoon; Annex Table 14). The amount of rent to be paid to the rickshaw owner generally depends on the duration for which it is hired and the condition of rickshaw. Generally, it costs Tk.50 to rent a rickshaw for the 'whole day', Tk.40 for the 'full day', and Tk.30 for the half-day.

On average, a rickshaw puller works for nearly 9.5 hours a day. About 60% pull rickshaws for more than 10 hours each day, and only 19% pull for fewer than 8 hours. The number of hours spent pulling varies noticeably between those who joined the occupation recently and the long duration pullers. For example, among recent joiners, 88% pull rickshaw for more than 10 hours a day, as opposed to 52% of the middle duration rickshaw pullers and 43% of long duration ones. Presumably the arduousness of the job restricts the number of hours that older, long duration rickshaw pullers can sustain.⁸

Figure 3: Rickshaw pullers' daily income, by years rickshaw pulled

Daily income category (taka)	Duration of rickshaw pulling (years)			Total
	<5	5-14	15+	
50-99	-	4.8	8.0	4.4
100-149	32.6	31.1	45.5	34.6
150-199	66.3	45.3	30.7	46.8
200-249	1.1	18.2	13.6	13.4
250+	-	0.4	2.3	0.7
Average daily income (taka)	142.5	144.6	133.6	142.6
Average monthly income* (taka)	3935	4101	3722	3982

*Obtained through a separate question relating to last month.



⁸ Although long duration pullers' age can act as a barrier to putting more labour into rickshaw pulling, the length of time spent in the occupation also matters. Among rickshaw pullers in the same age group, the daily labour input in terms of *hours* worked declines noticeably with an increase in duration of pulling (Annex Table 15). However, in terms of *weekly* engagement, no decline is noted. Thus a somewhat different dynamic may be at work: when an increase in occupational duration diminishes the physical capacity of rickshaw pullers, which affects work input and income potential adversely, the pressure to work every day to compensate for the daily income loss becomes greater.

Income from rickshaw pulling

It is estimated that the daily average income of a Dhaka City rickshaw puller is Tk.143 (approximately US\$2.38/£1.46 in 2003) with 82% sample rickshaw pullers earning between Tk.100 and Tk.199 (Figure 3). Those earning more than Tk.200 every day are most likely to be 'middle duration' pullers. The average daily income of the rickshaw pullers varies little across duration of occupation until 15 years. It only increases marginally during this period thereafter declines somewhat.

Differences in income among rickshaw pullers are more marked across other occupational features than duration. As expected, the average daily income of the rickshaw pullers who work for entire/full day is more than those who work for half day (although nowhere near twice as much; Figure 4). Similarly, those who work for more than 10 hours a day earn, on average, more than those who work for less than 8 hours a day.

Interestingly, although daily income should not depend on how many days one pulls a rickshaw in a week, those who pull a rickshaw 6-7 days a week earn about 20% more each day than those who work for 5 or fewer days in a week. It seems that those who work for fewer days in a week are also those who work for fewer than 8 hours each day. Presumably, whatever prevents them from working longer hours – poor health, for example – is also what prevents them from working every day in the week.

Figure 4: Sample rickshaw pullers' average daily income (taka), by occupational features



Reasons for entering in rickshaw pulling sector

Why do rural migrants accept rickshaw pulling as an occupation, despite its arduous nature? While a variety of reasons influence this choice, the most common ones, cited by 83% of the sample rickshaw pullers, is 'easy entry' (Annex Table 16), especially for men who are illiterate, unskilled and lack in capital. Other reasons given include that rickshaw pulling provides a *regular* flow of income, possibly not found in previous occupations, and that there is a 'promise of higher income'. For more recent entrants into rickshaw pulling, reasons such as 'to earn more money', 'non-availability of suitable jobs', and 'peer influence' played a

relatively larger role in decision-making, while 'regular flow of income' and 'easy availability of the job' were most important considerations for longer duration pullers.

Reasons for abandoning rickshaw pulling

Why then do men abandon rickshaw pulling, if it is perceived as a regular source of income? The survey of former rickshaw pullers suggests that the main reason is an inability to continue such arduous labour. Nearly 85% of the sample former pullers abandoned the occupation because they found the job excessively tiring, such that they were physically unable to continue (Annex Table 17). A much smaller number left to undertake a more remunerative occupation (16%). Reasons such as sickness (10%), accident (5%) and age (1%) played a role in far fewer pullers' decision-making process. Similarly, in response to a query about the main problems encountered in the rickshaw pulling occupation, three-quarters of current and more than 90% of former rickshaw pullers mentioned physical exhaustion and fatigue (Annex Table 18).

According to engineers, under 'normal conditions' rickshaw pulling is *not* a highly difficult job. An averagely fit man or woman can work for several hours "without suffering fatigue to an extent from which reasonably rapid recovery is possible". But as soon as conditions depart from 'normal', rickshaw pulling becomes something of a feat of endurance. A 10 mph wind doubles the power required to maintain the same speed; a slight gradient of 2% similarly doubles it. Worn tires, rough roads, and repeated stopping and starting in busy traffic each raise the power required by up to 100%. A combination of adverse conditions can therefore raise the power required three- or four-fold. Considering that the maximum power output a person can sustain over several hours is around 0.4 horsepower,⁹ it is clear that in adverse conditions (which are 'normal' for rickshaw pullers in Dhaka), rickshaw pullers have to work nearly as hard as Olympic athletes (Gallagher 1992, p-345-6). Being as physically fit as these athletes is an absurd proposition for rickshaw pullers who are poor, often malnourished, and living in unhealthy environments. Fatigue and exhaustion therefore, are the natural outcome of hours, days and years of rickshaw pulling for these men.

Reasons for variations in time spent in rickshaw pulling

As noted, not all rickshaw pullers work the same number of hours in a day, or days in a week. According to the information collected, those who devote less time and labour to rickshaw pulling do so due to a physical inability to endure the drudgery of rickshaw pulling. More than 80% of the current sample rickshaw pullers who work half the day, and nearly 95% of those who work fewer than 6 days a week, report physical incapacity only as the main reason (Annex Table 16). Other reasons play only minor role in this regard. Hence, as it emerges, the physical exhaustion and fatigue associated with rickshaw pulling restricts the pullers' capacity to pursue the occupation on a sustained basis or in a more remunerative manner.

Set against this backdrop, it is reasonable to conclude that the current rickshaw pullers who work every day do so primarily to satisfy the daily subsistence needs of their families. Indeed, all of these pullers advanced this as the principal reason for such a choice (Annex Table 16). Thus, as it seems, although the rural migrants may have been able to achieve some upward income mobility through taking on rickshaw pulling in the Dhaka City, this enhanced income may not be enough to allow them a comfortable life. Children's education and daughter's marriage both became significantly important reasons for working every day for the longer duration pullers.

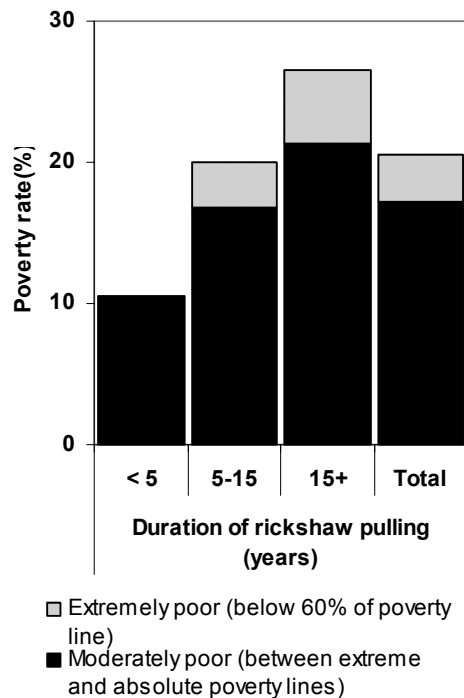
⁹ The British cycling record for 100 miles involved an average output of 0.44 horsepower over 3.75 hours (Gallagher 1992).

IV. Household income and expenditure, and other indicators of well-being

Household income

For the sake of simplicity, the discussion on household income, expenditure and other well-being of the rickshaw pullers is kept confined to those rickshaw pullers who are ever-married and living in Dhaka with their family viz., unmarried rickshaw pullers and those married ones living alone in Dhaka leaving their family behind in the villages have not been considered.

Figure 5: Levels of absolute and extreme poverty of sample current rickshaw pullers, by duration of pulling (ever-married; living in Dhaka with family)



The average monthly household income of these rickshaw pullers, considering *all* sources of income, is estimated at Tk.4591 (Annex Table 19). This rises with the years of pulling rickshaw: The average monthly household income of the recent joiners is Tk.4174, that of the medium-duration pullers is Tk.4711, and of long-duration ones Tk.4822. The estimated monthly *per capita* income of the rickshaw puller households is Tk.1035, with highest per capita amount being noted for the households of medium-duration rickshaw pullers (Tk.1109) and lowest one among the long-duration ones (Tk.920). The per capita income in the latter household is thus 17% lower than that of the former viz., medium-duration pullers.

The incidence of income poverty among ever-married rickshaw pullers who live in Dhaka with family is nearly 18%, with 3% living in extreme poverty (60% of income poverty line; see Figure 5 and Annex Table 23). As expected from per capita income statistics, the incidence of poverty is highest among the long-duration rickshaw pullers. More than one-fourth (27%) among them live in poverty with more than 5% living in extreme poverty. As opposed to this, only 10% among recent joiners live in poverty, with none living in extreme poverty.

As the income-based evidence thus suggests, the level of well-being in general may be lower among long-duration rickshaw pullers compared to that among other pullers. Although we do not have longitudinal data to conclusively prove this point, there is strong evidence that the limited mobility achieved by the young rural migrants through rickshaw pulling tapers off in later years, when they cross a certain period in the occupation, and/or certain age. This cross-sectional contrast between rickshaw pullers over the duration of rickshaw pulling as well as across ages may well be the true reflection of what happens over time to the rickshaw pullers (Annex Tables 19-21). Consideration either across duration of occupation or across age, the income of the current pullers from rickshaw pulling diminishes by 5-10%, and per capita household income by 14-33%.

A comparison of the household income of the current rickshaw pullers with that of the former rickshaw pullers further reveals the long-term adverse effects of rickshaw pulling (Annex Tables 19-21). Average household income of the former rickshaw pullers is found to be about 9% lower than that of the current rickshaw pullers. This is also true for per capita income, which is about 8% lower among the former. An exit strategy provides a route for upward mobility only for a few: only about one-third of former rickshaw pullers reported that they could move to more remunerative occupations than rickshaw pulling (Annex Table 22).

Indeed, at the time of the interview, 8 out of 98 former rickshaw pullers had no work, or no regular employment, from which to earn an income.

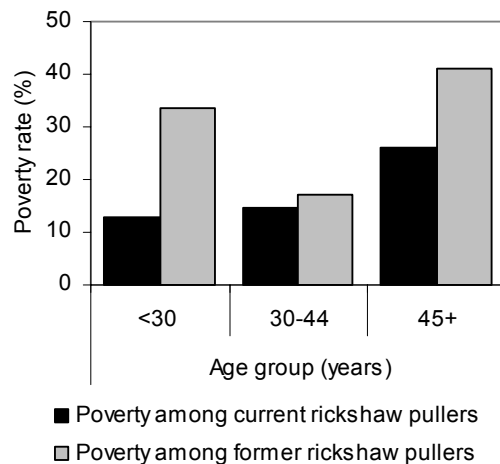
These points support the earlier observation that those who abandoned rickshaw pulling and switched over to another activity did so because they found it physically difficult to continue rickshaw pulling, rather than moving to a higher-paid occupation. Interestingly, notwithstanding the generally lower income, virtually none of the former pullers expressed any desire to go back to rickshaw pulling.

Who are the fortunate few who could leave rickshaw pulling to enter higher income jobs? Income variation across the duration of rickshaw pulling by former rickshaw pullers throws some light on this issue. The average income estimated at the individual level for former rickshaw pullers who left the occupation within 5-9 years of joining is found to be comparable to that of current rickshaw pullers who have been in the job for 5-14 years or with average income of rickshaw puller. The average incomes of the former rickshaw pullers who left occupation before 5 years or after 10 years are, significantly lower than those of the matched current rickshaw pullers (Annex Tables 19 and 21). It can also be observed that there is a negligible difference between per capita and household income of the former rickshaw pullers aged 30-44 and those of current rickshaw pullers in the same age group (Annex Table 20).¹⁰ Similarly, a similar proportion of former rickshaw pullers aged 30-44 live in poverty as current rickshaw pullers in the same age group do (Figure 6). Poverty among older and younger former rickshaw pullers is significantly higher than those still pulling. A similar pattern is observable for rickshaw pullers who left the occupation within 5-9 years as compared to those who abandoned the job earlier or later (Annex Tables 23 and 24).

It seems that many of those who abandon rickshaw pulling relatively early – both in their rickshaw pulling careers and in their lives – are likely to improve their lot through opting for another occupation. There are likely to be multiple reasons why an individual rickshaw puller would leave rickshaw pulling during this period, such as, opportunities, and changes in household needs but these probably combine with the realisation of long-term non-sustainability of rickshaw pulling occupation influences them to take such a decision.

Those who abandoned the occupation relatively late¹¹ are the worst off – even compared to the current rickshaw pullers of the same age group. Presumably they have been compelled to abandon rickshaw pulling under desperate conditions, when it was not only difficult for them to productively engage in rickshaw pulling but in other activities as well. Evidence suggests that a sizeable number of them had left rickshaw pulling when they fell sick, suffered an accident, or became too aged to sustain the drudgery of rickshaw pulling (Annex Tables 17 and 27). Information on the current occupation of former rickshaw pullers aged 45+ reveals that 5 of 26 have no employment while another 3 are engaged in activities ‘not clearly defined’ (Annex Table 26).

Figure 6: Poverty levels among current and former rickshaw pullers, by age group
(ever-married; living in Dhaka with family)



¹⁰ As only 6 former rickshaw pullers are in the under-30 age group, they are excluded from the present analysis.

¹¹ The mean duration elapsed since abandoning rickshaw pulling is 33 months for the 30-44 age group, and 48 months for the 45+ age group. The average duration of rickshaw pulling pursued by former pullers was 7 years for the 30-44 age group, and 12 years for those 45+.

A decomposition of household income reveals that on average a rickshaw puller's income contributes 83% towards the household coffer; a wife's income contributes 7%; children add another 8%; and the remaining amount is attributable to assets owned by the family (e.g. land, rent from rickshaws, etc.; Annex Table 19). Although the rickshaw pullers' own income always plays the dominant role in putting up total household income, its relative importance diminishes over duration of rickshaw pulling. Contributions by children increase with duration of rickshaw pulling (coinciding with an increase in age of the puller and his children). A point to note is that increased children's contribution fully compensates for the declining income of the ageing, long duration rickshaw pullers, but this is not enough to protect the household from diminishing *per capita* income, due to an increase in the family size (Annex Table 19). In other words, rickshaw pullers' children remain unable to compensate for growth in household expenditure due to them.

Household expenditure

The estimated monthly household expenditure of the Dhaka-based ever-married rickshaw puller is Tk.4081, producing a per capita expenditure of Tk.907 (Annex Table 28).¹² A direct comparison of household income with household expenses indicates that a rickshaw puller household in the Dhaka City generates, on average, a surplus of around Tk.500 in a month. As with income, the per capita household expenditure also declines with duration of rickshaw pulling, and is almost 10% lower in the long duration pulling households than in households of recent joiners.

Of total expenses of the rickshaw pullers' household 60% goes to meet food requirements and 22% goes towards the housing. The remaining 18% is divided between clothing, education of children, transport, loan repayment, on rickshaw-related matters (e.g. repair, payment to the police, fine for not obeying traffic rules, compensation for lost rickshaw etc.), and health care (Annex Table 28). Interestingly, even those rickshaw pullers who live in Dhaka with family allocate some money to support other relatives. On average, about 3% of the expenditure is sent to non-immediate family, a similar proportion to that is spent on children's education or clothing. Rickshaw pullers' expenditure on asset acquisition is negligible.

According to rickshaw pullers, they spent negligible amounts on entertainment and recreation, negating the commonly held belief that rickshaw pullers often go to watch movies. Even younger rickshaw pullers report spending almost nothing on entertainment. Accounts of how rickshaw pullers pass their leisure time corroborate this: only 3.5% of them reportedly watch movies (Annex Table 29). Finally, while on average only about 0.4% of the household expenditure is spent on addictive substances, for some rickshaw pullers the practice can become a significant problem. It is important to note that the problems associated with self-reporting are likely to be especially acute when it comes to admitting to spending limited household income on entertainment or drugs. Hence, the amounts given for these types of expenditures may be underestimates of the actual, but it is unclear by how much.

Other indicators of well-being

Other indicators of well-being including household savings, assets, food security status, levels of indebtedness, an ability to generate surplus from income, etc. confirm the two key observations made earlier. First, the aspiring rural poor who migrate to Dhaka and take up rickshaw pulling achieve some upward economic mobility. Second, by opting for such an 'unsustainable livelihood' they remain vulnerable, as the initial benefits gradually taper off with duration of rickshaw pulling. In support of the first point, several indicators of well-being may be summarised here: 79% of the rickshaw pullers' households are able to eat 3 meals a

¹² Information on monthly expenditure relates to the month prior to data collection.

day; 49% are able to generate some surplus from income; 43% have positive savings; and 48% have been able to acquire some assets from income they earned (Annex Table 30).

However, in substantiation of the second point, one may note that the value for all these indicators declines over the duration of rickshaw pulling. For example, while among recent rickshaw pullers' households 82% are able to eat 3 meals a day, the figure is only 72% in case of long duration pullers' households. 66% of the recent rickshaw pullers are able to generate some surplus from income earned, vis-à-vis 39% for long duration pullers; 66% of the former had some positive savings compared with 37% of the latter; and 53% of the former have acquired some assets compared to 43% of the latter (Annex Table 30). Even among those rickshaw pullers *with* savings, the amount of savings held by the long duration pullers is not higher than that of the middle duration ones. Neither, the value of assets acquired by them is higher than that of other two groups of rickshaw pullers (Annex Table 31). Thus, while rickshaw pulling helps the rural migrants to move out of poverty initially, it does not help them to graduate from the poverty in the long run and on durable basis.

It is interesting to note that the most frequently acquired asset by rickshaw pullers is land, not rickshaws. Of those who reported some assets, 40% invested in land and 20% in rickshaws. In monetary terms, half of the money earmarked for acquiring assets is being spent on land, with 10% being spent on rickshaws (Annex Table 32). This suggests that rickshaw pullers do not consider rickshaw pulling (or owning) as a long-term livelihood strategy. Rather, they would prefer to return to land-based livelihoods and village life. It is also possible that they do not find it safe to invest in rickshaws; rickshaw theft was reported by 29% of the current and 42% of former pullers as a major problem in their occupation (Annex Table 18).

Outstanding loans

As detailed in the Annex Table 33, about 60% of the sample rickshaw pullers reported that they are able to secure a loan at times of urgency, 34% are uncertain about this prospect, and 5% believe that they have no access to emergency credit.

At the time of interview, 46% of the ever-married rickshaw pullers living in Dhaka with their families¹³ had an outstanding loan. The estimated average amount of outstanding loan is Tk.5535 for those who are actually in debt. This is, on average, two-thirds of their savings. The debt: savings ratio is lowest among middle duration rickshaw pullers i.e. 45% compared to 89% and 130% for long duration and recent pullers respectively. However, in absolute figure the debt burden is highest for the long duration pullers. It is about 38% higher than that of the recent joiners and 88% higher than that of the middle duration pullers. Detailed reports of indebtedness among those with an outstanding loan reveal that 38% of the rickshaw pullers have an unpaid loan of more than Tk.5000, with 17% bearing a burden of more than Tk.10000 and 2% more than Tk.25000.

The rickshaw pullers generally borrow money from informal sources. In two-thirds of the cases they received loans from friends, relatives and neighbours, including rickshaw owners, and in one-third cases from formal sources like banks, NGOs, samity etc. Among formal sources NGOs appear to be the most prominent source alone supplying in 21% cases and in remaining 13% cases bank and samities provide it. Also, as the information gathered revealed in about one-third cases rickshaw pullers secure credits without any interest and in remaining two-third cases interest is associated. In case of informal loans that are not interest-free, the estimated average monthly interest rate is about 12%,¹⁴ although in some

¹³ Analysis in this section has been confined to ever-married rickshaw pullers who live in Dhaka with their family, to allow comparison.

¹⁴ Estimated from information given by the rickshaw pullers.

cases it can go as high as 20%. NGOs accept repayment in weekly instalments. The interest for informal loans is collected mostly on a monthly basis.

The major reasons for which rickshaw pullers borrow are asset acquisition, meeting daily needs, and health care costs – in 85% cases loans are taken for these purposes. For recent joiners and middle duration pullers, loans are more often taken for the health care of the family members than for themselves; for long duration pullers, the situation is markedly reversed, indicating their high burden of ill health.

V. Crises

Crises typically trigger downward movements of poor households and individuals into further poverty. Information on crisis events has been collected with reference to the five-year period prior to the survey. The sample rickshaw pullers on average experienced 2 crises during the last five years (Annex Table 34). Three-fourths of the pullers have experienced at least one crisis during the reference period.¹⁵ Recent joiners are less likely to have experienced a crisis in the last five years compared to long duration pullers: representing respectively 64% and 85% in each group.

Health crises, affecting both the rickshaw puller's own health and that of the family members, were the most frequently encountered type of crisis. Of the 75% of rickshaw pullers who experienced any crisis, 67% encountered a health-related crisis. The next most frequent type of crisis experienced by 52% of pullers, were those relating to personal insecurity. This refers to an array of incidents including mugging, theft and robbery; eviction from house; humiliation; involvement with the police or courts; physical violence including rape; abduction; and threats. The most frequent of this type of crisis are rickshaw theft and 'hazards relating to police or court'.

Financial crises that arise out of the marriage of a daughter or sister (including the provision of a dowry) and other social events, and maltreatment by in-laws leading to divorce have been experienced by about 16% of the rickshaw puller households. 'Misfortunes' such as a house fire, damage to a rickshaw because of an accident, or an accidental death of a household member, were experienced by 9% of the rickshaw pullers' households, while natural disasters were experienced by only 3%.

Except for natural disasters, incidence of all other types of crises is highest among long duration rickshaw pullers. More than three-fourths of them reported a health-related crisis, and 59% encountered a crisis related to personal insecurity. A considerable proportion (23%) faced crises relating to 'idiosyncratic' social events (Annex Table 34).

Costs of crises

On average, a rickshaw puller is required to spend more than Tk.6000 to mitigate a crisis. The costs are highest for the long duration rickshaw pullers: Tk.7667 for them compared to Tk.4429 for the recent joiners and Tk.6087 for the middle duration pullers. This is due to the different costs of different crises, as well as for the distribution of crises among those who have pulled rickshaws for varying numbers of years. Of the different types of crisis events, the 'unit cost' is highest for the social ceremonies and 'idiosyncratic' events, which the long duration rickshaw pullers face most, as a result of life-cycle effects. The average cost estimated for these types of crises is about Tk.13000. The next most costly crisis natural disasters, the average cost being about Tk.10000. In contrast, the health shocks cost, on average, around Tk.6000, and crises of personal insecurity cost around Tk.5000 (Annex Table 34).

¹⁵ The figure may be even higher depending on the extent of recall lapse.

As mentioned, the total financial costs imposed by a particular type of crisis depend not only on the unit cost per occurrence, but also on the frequency or overall prevalence of a particular crisis-type. Health-related crises account for the largest proportion of all crisis-related expenses. About 43% is due to them only while 27% of total crisis-triggered costs are due to personal insecurity-related crises; 23% are attributable to the social and idiosyncratic events; 3% to natural disasters; and another 3% to various misfortunes. Hence, in overall consideration, it is health shocks – and not the social ceremonies and dowries – that cost the rickshaw pullers most. This leads to severe resource depletion in the short-term, with potentially extremely adverse long-term consequences for escaping the poverty trap.

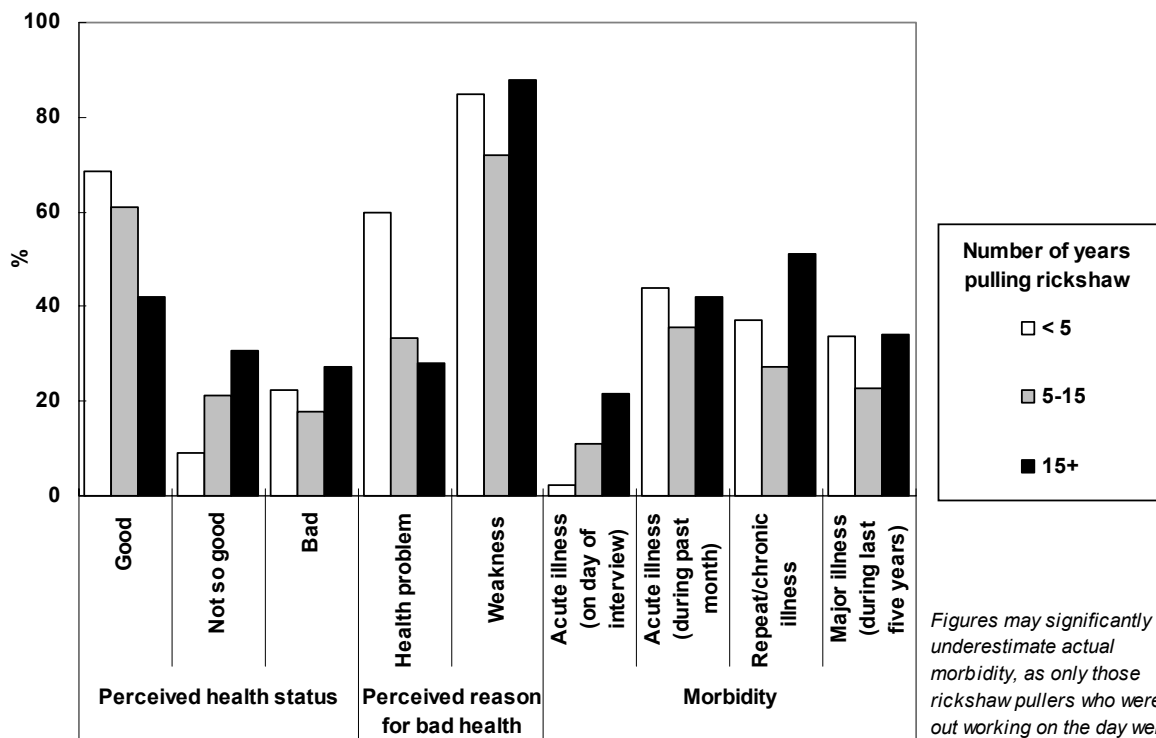
VI. Health status of rickshaw pullers

It was noted in the previous section that the rickshaw pullers spend a sizable amount of their incomes to mitigate health shocks, indicating for them a high level of health vulnerability. This section deals with the health status of the pullers.

Perceived health status

Subjective perceptions about feeling healthy are an important ingredient in both human well-being and behaviour. Data reveal that, on average, only about 60% of the sample rickshaw pullers ‘feel good’ about their current health status; 20% feel ‘not so good’ and another 20% feels outright ‘bad’. Positive perceptions about health vary negatively with duration of rickshaw pulling (Figure 7). Nearly 70% of the recent joiners feel ‘good’ compared with 42% of long duration pullers. Among the latter, the proportion feeling outright ‘bad’ is 27%, while another 31% self-rated themselves as being ‘not so good’ in health. These variations in feelings about their own health status is, perhaps, the outcome of the combined effects of age and the drudgery of rickshaw pulling for years, and is linked also to the practice of work for fewer hours a day and/or fewer days in a week by them viz. older and long duration pullers.

Figure 7: Health status of sample rickshaw pullers



Two proximate factors underlie subjective perceptions about health and well-being. One is the presence of some recognized health problem, and the other relates to the general signs of “physical weakness”. The latter is most frequently cited. About 80% mentioned physical weakness as a reason for feeling ‘bad’, while ‘health problems’ are mentioned only by 38%. Even among recent joiners, 85% noted ‘physical weakness’ as a reason for ‘feeling bad’. This supports the conclusion that irrespective of duration, rickshaw pulling is physically exhausting work. The situation worsens in combination with the depletion of energy linked to the ageing process and aggravates with duration. As shown by the data, 71.8% of the sample rickshaw pullers aged 45+ feel ‘bad’ or ‘not so good’, and 98% of those who feel ‘bad’ blame it on physical weakness (Annex Table 35).

Morbidity

Before discussing morbidity, it is important to note that the data may underestimate the actual morbidity for rickshaw pullers significantly, as only those rickshaw pullers who were out to working were included in the survey. Rickshaw pullers who were at home due to illness or fatigue were excluded.

Current morbidity rates with reference to the day of the survey are estimated to be 11.4% for the rickshaw pullers. The figure rises to 39% when the reference period is widened to past one month. Both these rates are higher than those documented for the rural poor (Begum, 1996; Ahmed, 1997). Yet, as noted above, may be underestimates also. Of sample rickshaw pullers 28% suffered from a major illness during the past 5 years, and about 40% suffered ill-health chronically and/or intermittently (Figure 7).

As expected, the burden of ill-health among long duration rickshaw pullers is substantially higher than among recent joiners. On the survey day, about 22% of long duration pullers were unwell compared to 2% of the recent joiners. About half of the former are vulnerable to frequent sickness, compared with 37% among latter and 23% among middle duration rickshaw pullers (Figure 7).

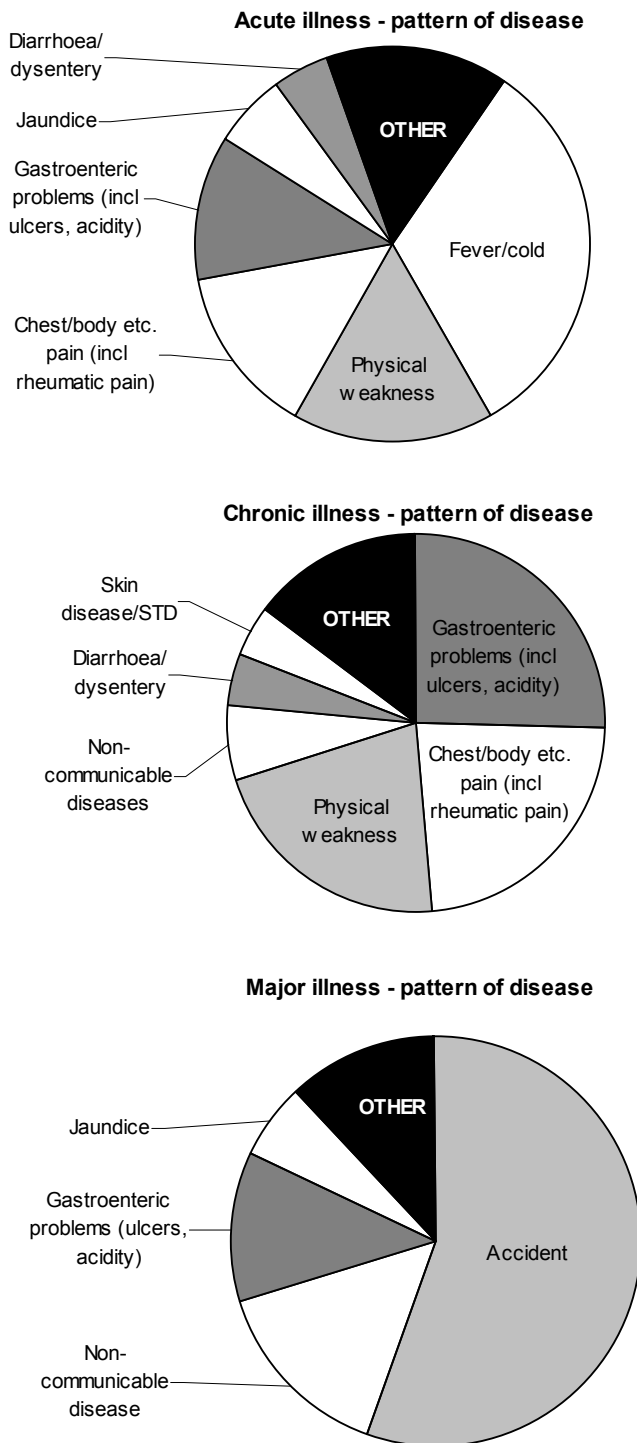
Pattern of disease

Among sample rickshaw pullers, acute health problems arise primarily from few conditions: colds and fevers; gastroenteric problems including acidity and ulcers; aches and pains/aches; and physical weakness. These problems account for 71% of the acute ailments of the rickshaw pullers (Figure 8 and Annex Table 36).

Chronic illness of the rickshaw pullers are also linked primarily to gastroenteric problems, aches and pains, and physical weakness. The latter two make up 43% of all chronic ailments, and are likely to be associated with rickshaw pulling itself. Hence, a significant part of the health vulnerability of the pullers may be classified as occupational hazards. Annex Table 37 details the prevalence of various chronic health problems among the sample rickshaw pullers, and reveals that 10% suffer from gastroenteric problems, 9% from aches and pains, and 8% from physical weakness.

In terms of major illnesses and injuries, 55% are accounted for by the accidents. Rickshaw pullers consider their occupation as largely responsible for their continued health problems. According to their perceptions, 78% of the acute illnesses, 67% of repeat illnesses, and 70% of the major health hazards are directly or indirectly connected to rickshaw pulling itself. While road accidents and injuries are straightforward examples, other possible job-related hazards pointed out by the rickshaw pullers are: eating unhygienic food from roadside stalls, eating irregularly, rickshaw pulling in adverse weather conditions like scorching heat or incessant rains, and, of course, physical exhaustion.

Figure 8: Patterns of disease among sample rickshaw pullers (% of total illness)



Treatment

At first sight, access to health care by the rickshaw pullers seems to be quite high. For 88% of the acute illnesses and almost all major illnesses of them access some form of health care. However, only in 77% of the cases treatment received for acute illness was perceived to be adequate (Annex Table 38). Access to health care and perceived health care quality are not the same for all categories of rickshaw pullers. Among recent joiners, 100% of acute illnesses received treatment, and treatment was perceived to be adequate in 95% of the time. For medium and long duration pullers, on the other hand, 80-90% of the acute illness receives treatment and this judged to be adequate only in about 70% cases. For those that are unable to access adequate health care (or any health care at all), financial reasons are mentioned to be the main obstacle (Annex Table 39).

The Dhaka City rickshaw pullers depend primarily on the private sector for health care. This may be an outcome of the lack of primary health care network in urban areas. Sources of treatment of them vary markedly depending on whether the illness is acute or major (Annex Table 38). For acute illness, private allopathic practitioners practicing in the neighbourhood and pharmacies are equally prevalent as the main source of treatment, accounting for over three-quarters of the treatment. Interestingly, the Dhaka City rickshaw pullers' reliance on pharmacies for health care is much higher than that among rural poor (Begum 1996, Rabbani et. al, 1997). This suggests that the treatment often remains inadequate for the rickshaw pullers. Only 6% of the treatment for acute illnesses is received from government institutions and medical colleges. NGOs play even a more minor role, accounting for only 2% of the treatment received, in sharp contrast to their role in providing institutional credit to the pullers. Government institutional facilities are

relied much more in case of major illnesses and injuries, with almost half of the treatments provided by them, and private allopathic practitioners provide another 31%.

Interface between ill-health and poverty

As well known, ill-health can impose a significant economic burden on individuals and households in several ways, with especially adverse consequences for the poor. The

pathways from ill-health to poverty operate through the direct costs of treatment and non-medical care, and indirect costs of lost income (due to days missed and/or diminished productivity) of the affected person and carers. Psychological costs on breadwinners and their family members, though unquantifiable, can also be significant. Often other well-being loss at individual and household levels associated with illness also may be noticeable.

The partial information that is available shows the extent to which ill-health affects the households of rickshaw pullers. First, the average cost of treatment for an episode of illness is estimated to be Tk.263 for acute illness and Tk.5453 for major illness. A rickshaw puller has to stop work, on average, for 4 days per episode of acute illness, and for 44 days per episode of major illness (Annex Table 40). If this income loss is taken into consideration then the aggregate costs for an episode of acute illness would be about Tk.863, equivalent to six days' of income. For a major illness it would be close to Tk.12000, equivalent to 3 months' of income.

Given the monthly savings potential of an average rickshaw puller household, a major sickness is able to wipe out two years of savings. But, to recall, more than half of pullers have no savings at all; one-fifth are unable to secure 3 meals a day; more than half have not been able to acquire any assets; half cannot generate any surplus from income; and a similar proportion has outstanding debt (Annex Table 30). Set against this, the average economic burden of ill-health is considerable.

The distribution of illness according to treatment costs reveals considerable variation (Annex Table 41). Just over one-quarter of the acute illnesses cost less than Tk.100 for treatment, and only 8% cost more than Tk.1000. In the case of a major illness, however, only 15% cost less than Tk.1000, while 40% cost more than Tk.5000 and 12% cost more than Tk.15000. Again, this only includes the *direct* costs of treatment.

Rickshaw pullers generally meet the treatment costs for acute illness from current household income. Only in 6% cases they are forced to incur debt. As expected, the situation is different for major illness or injury. To meet these costs, 30% of the sample rickshaw pullers liquidated their savings, 16% disposed off assets, and 27% incurred debt (Annex Table 40). Thus, a major illness can act as a source of major resource depletion, indicating a significant possibility of long term adverse effects on household well-being.

In about 70% cases of major illness, an adverse impact on the rickshaw puller himself was reported, and in 80% cases an adverse effect on the household was reported. Reduced physical capacity to work, and the resulting negative effects on the income and non-income well-being of the household, are the most often mentioned effects. In total, it is estimated that *almost one-fifth of all rickshaw pullers in every five year or 4 percent in every year* may face reduced productivity after a major illness.¹⁶

Combined with large-scale resource depletion due to a health crisis, a decreasing productivity means an even greater chance that a rickshaw puller household will become trapped in a downward spiral. This can also have significant negative effects on children's education and health and nutrition status, negatively affecting the intergenerational development of human capital within rickshaw pullers' households. Thus, the actual impact of a given health crisis can be much larger than is immediately measurable.

¹⁶ Estimate arrived at based on the figures that 27.8% of sample rickshaw pullers suffered from a major health problem during the five year period, and of them 70% reported diminished physical capacity to work. As noted before, this is likely to underestimate the actual statistics, as the sample rickshaw pullers are those who are presently pulling a rickshaw.

VII. Concluding Remarks

The study has pointed out evidence for several key concerns, as broadly summarized below.

Rickshaw pulling: an exit route from rural poverty?

The evidence suggests that most of the rickshaw pullers originally came from very poor rural backgrounds, and that they have found rickshaw pulling to be somewhat effective as a route out of poverty. Upon entering the city, rickshaw pulling appears to be a relatively easy livelihood option. Analysis of changing household fortunes over time (gathered through qualitative and quantitative recall methods) suggests that those who remain in the occupation for a few years do attain a degree of modest upward mobility. Initially, the incidence of food poverty appears to be much less prominent among rickshaw pullers than among the rural extreme poor. The main advantage that a rickshaw puller has over an agricultural labourer is not so much a higher income, but the regularity of income flows, missing for rural labourers working in an environment marked with high seasonality. Further, in consideration of capacity to save, to access credit and to acquire assets, the average rickshaw puller does appear to have a much better chance to escape poverty than their rural counterparts.

III-health as a driver of downward mobility

However, although rickshaw pulling may provide an escape from the clutches of extreme rural poverty, the high degree of susceptibility to crisis appears to be a serious obstacle to sustained upward mobility. An extraordinarily high proportion (75%) reported having encountered at least one crisis over the last five years, with an average incidence of 2 major crises per household. Of these, an average of two-thirds of the crises and almost half of the crisis-related expenses are related to health shocks. Health-related shocks persist as the single most important factor of downward mobility, and often originate from the nature of rickshaw pulling itself. The level of morbidity, and the associated declines in the days and hours worked, increase with years of rickshaw pulling as well as with age.

The average financial loss per health crisis is more than the average monthly household income. As a result, many liquidate savings and/or assets, and/or enter debt, especially in order to mitigate major illnesses and injuries related to road accidents. Child mortality rates are also very high in rickshaw pullers' households, with almost one-third experiencing the death of a child, further exacerbating the economic and psychological costs of ill-health. There is a very strong case for health interventions to assist rickshaw pullers and their households to cope with health shocks.

Rickshaw pulling as an unsustainable livelihood

Thus, the initial trend of 'modest upward mobility' seems not to be sustainable in the long run. Almost all economic and social indicators – including income poverty – appear to deteriorate with the length of involvement in rickshaw pulling. This is not just because of pullers' vulnerability to health shocks. The unsustainability of rickshaw pulling as a livelihood is reflected in several dimensions.

First, the effort that pullers are able to put into pulling, in terms of time spent in working, declines with the length of involvement in the occupation. As a result, rickshaw pullers' own, household and particularly per capita income decline. Capacity to generate a surplus income for savings and asset acquisition decline, indebtedness rises, and both food and income poverty rise. These results were also confirmed through interviewing former rickshaw pullers about why they abandoned the occupation: a large proportion felt they were no longer able to continue due to health reasons, particularly physical weakness and exhaustion. Indeed, 'normal' circumstances for a Dhaka City rickshaw puller means having to work nearly as hard

as an Olympic athlete, but in the context of poverty and malnutrition. This suggests that it is not only health *shocks*, or even ageing, that create the conditions of unsustainability, but rather how shocks and demography combine with a more gradual process of diminishing levels of energy and general well-being.

Policy interventions should focus on encouraging exit from rickshaw pulling at a relatively early stage of involvement, through programmes that, for example, provide credit, training and information.¹⁷ The data suggests that it is those 'early-middle duration' rickshaw pullers (i.e. in the occupation for 5-9 years, aged between 30-44 years) have the best chance to succeed in finding alternative jobs that are more remunerative. Further, rickshaw pullers who have recently migrated from rural areas appear to have slightly better socio-economic backgrounds and higher human capital than their older counterparts, suggesting that they may be better able to succeed in alternative livelihoods.

Implications for health policy

If savings and asset accumulation of rickshaw pullers could be raised while they were in their prime, at the peak of their energy, by reducing both health risks and associated costs, then rickshaw pulling as a longer-term escape from poverty can become a more realistic prospect. Public health measures appropriate to rickshaw pullers may range from enforcement of road safety, improved public provisioning of emergency health care, and better coverage of urban primary health care systems, such that rickshaw puller households are able to access affordable treatment. Improved access to flexible credit, as well as some forms of health insurance, may also improve the pace of capital accumulation among this group of urban poor.

Implications for understanding 'pro-poor growth'

This case study of rickshaw pullers carries wider implications around issues of 'pro-poor growth'. As an ideological formulation, pro-poor growth can vary from 'anything that is good for growth must be pro-poor' to 'anything that is good for the poor here and now must be good for growth'. Hence, there has traditionally been an emphasis on growth acceleration by any means, with an emphasis on labour-intensity whenever possible. The present study, however, suggests that an analysis of the dynamic effects of labour intensity is crucial to understanding the actual pro-poorness of a growth process and designing a better policy environment for the poor.

In the early 1990s, according to one estimate, the rickshaw sub-sector accounted for 34% of total value-added in the transport sector, and about 4.5% of the national workforce depended on this sector for subsistence (Gallagher 1992). The importance of rickshaw pulling as a livelihood activity has increased over the past decade. In traditional informal sector literature, this process of rickshaw sub-sector growth would have been considered as a mass-example of pro-poor growth, at least in the early stages of development in low-income countries. However, as has been implicitly argued throughout this study, such an assessment does not take into account the absence of a future market for long duration pullers who have to either abandon the activity for health reasons or persist on the margins of the sub-sector as part-time pullers.

Paradoxically, easy entry and exit, labour intensity and intense competition – all the 'positive' characteristics of the rickshaw market – lead to sub-optimal welfare outcomes from the

¹⁷ Exit programmes may also include measures that create disincentives for involvement in rickshaw pulling as a long-term occupational choice. This is, however, easier said than done. Recent restrictions on the movement of rickshaws on several streets of Dhaka are a case in point. Many pullers have voiced their resentment, citing a loss of income as a result of this measure. In terms of sequencing of measures, creating viable alternatives must precede disincentive measures.

perspective of private returns to labour invested in rickshaw pulling. In terms of social return, promotion of such activities beyond a point in time represents a colossal loss, with immense human social suffering and perpetuation of poverty.

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