



ASSESSMENT OF VULNERABILITY AND SUSTAINABLE LIVELIHOOD OF THE URBAN POOR: A STUDY IN KHULNA CITY CORPORATION, SOUTHWEST BANGLADESH

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Abstract: The study aims to understand the nature of vulnerability of the urban poor in Khulna City. Both qualitative (case study, focus group discussion and observation) and quantitative (survey) methods are used in this study. By using Simple Random Sampling 707 household heads were selected as unit of analysis. Cumulative Vulnerability Index (CVI) has been used to assess the vulnerability. Considering the causes of vulnerability of the respondents seven indicators *viz.*, eviction threats, income, food, number of jobless week, literacy situation, access to health and access to household essentials are used to measure the situation of vulnerability. Here the value of R Square is 0.96. That means aforesaid variables have 96 percent effect on vulnerable situation of the respondents. Among them tenure insecurity (48%), number of jobless week (29%) and food insecurity (23%) are colossal responsible factors. Considering Purchasing Power Parity (PPP) the household earning of BDT 6000 per month has considered as under the poverty line 1 and the household of monthly earning not more than BDT 10000 has considered as moderately poor. More than 69 percent respondents were below the poverty line 1. Health situation is not much vulnerable in the study area. More than 85 percent respondents could receive the treatment at the time of illness. The study shows that natural resource (15%) and social resource (11%) contribute to the reduction of vulnerability and enhancement of the sustainability of the urban poor. Through case study and focus group discussion the study also identifies the alternative employments and strategies such as: agriculture, putting more family members into the work force through small scale business, using kinship as social capital, and establishing community relationships. In this regard positive policy approaches by local authorities can diminish the vulnerability of the poor by responding to their need for security of livelihood.

Keywords: Vulnerability, poverty, livelihood, sustainability, natural resource, social resource

Introduction

The study highlighted various points of importance to understand vulnerability in the context of sustainable livelihood. Livelihoods compromise (s) the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and manage to enhance its capabilities and assets both now and in the future, while not undermining the natural resource base (Chambers & Conway, 1991). This study represents the sustainable urban livelihoods in the context of urban vulnerability that illustrates the relationship between key elements; financial, natural and social resources, means of

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livelihood and disaster risk. In an urban setting poor men and women are likely to be vulnerable to certain specific shocks and crises. The main sources of this vulnerability vary from city to city but certain elements appear common to many urban poor residents. These are: the informal legal status of poor men and women in cities (Farrington *et al.*, 2002); poor living environments (Potter & Lloyd-Evans, 2016); and a dependence on the cash economy for basic goods and services (Schütte, 2016). Vulnerability is therefore closely linked to access to and control over assets (Meikle *et al.*, 2001). In the study area major sources of vulnerability were categorized as economic, environmental, human, social, physical and political. Specific vulnerabilities included (amongst others) threat of eviction, insecurity of food, worklessness, water logging, seasonal work and low access to household essentials.

Vulnerability has been defined as the insecurity of the wellbeing of individuals or communities in the face of changing environments (ecological, social, economic, and political) in the form of sudden shock, long terms trends, or seasonal cycles (Moser, 1996). It is generally accepted that vulnerability has two dimensions. Firstly, the scale of the response to external shocks and secondly how quickly each household's system of livelihood tactics recovers from shocks (Chambers, 1995, Moser, 1998).

Vulnerability assessment requires a framework that selects criteria and indicators to characterize the vulnerability of the coupled human-environment system (Nkem *et al.*, 2007). Many studies attempt to do this in the context of human development index to understand the underlying causes of vulnerability and to further strengthen adaptive capacities (World Bank, 2006). Vulnerability assessment offers a framework for policy measures that focus on social aspects, including poverty reduction, diversification of livelihoods, protection of common property resources and strengthening of collective action (O'Brien *et al.*, 2004). Such measures enhance the ability to respond to stress and secure livelihoods under present conditions. Maxwell (1995), in the paper entitled "Measuring Food Insecurity: The Frequency and Severity of Coping Strategies", and measuring it in reliable, valid and cost-effective ways have proven to be stubborn problems facing researchers and programs intended to monitor food security risks. It describes a particular method for distinguishing and measuring short-term food insecurity at the household level, and discusses ways of generalizing the method. An understanding of the existing local knowledge base of indigenous adaptation strategies within a community, as part of the evaluation of adaptive capacity, is also required to assess the vulnerability. Stakeholder interests play important roles in vulnerability assessment system (Nkem *et al.*, 2007). Urban poor pursue their livelihood's objectives within political, social, economic and environmental contexts which make them vulnerable to poverty. Often, vulnerability manifests inform of trends, shocks and seasonality (Department for International Development, 1999). In this regard considering the major causes of vulnerability of the respondents seven indicators *viz.*, tenure security, security of income, food, regularity of work, health, literacy situation and access to household asset are used to measure the vulnerable situation of the urban poor.

An analysis of vulnerability offers scope for addressing the one-dimensional understanding of poverty resulting from the use of poverty lines (Moser *et al.*, 1997). Poverty, now a days, becomes a complex and multidimensional problem, since it is measured from not only income level, but also vulnerability and insecurity, in which poor

people are more socially, economically and environmentally vulnerable (Kameri *et al.*, 2008). According to Sanderson (2000), there is large number of poor people in the city who live in the damaged land; it is vulnerable to flood and landslide, as well as in the crowded area that is vulnerable to fire and natural disaster. Vulnerability of poor people, in a social-ecological system is blipped by the impact of climate change, rapidness of people growth and economy growth enhancement (Adger, 2006). Therefore poverty situation of the respondents has been identified to assess their vulnerable situation.

Absolute poverty is a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. The cost of basic needs approach is most commonly used in measuring poverty situation. In this study on the basis of income and food intake the poverty situation of the respondents has been measured. Moreover the clothing and housing situation are also considered here.

Evictions threatened the livelihoods of many urban residents (Audefroy, 1994), and can have wider ranging livelihood impacts than just the loss of housing. Evicted households may also lose access to key markets or livelihood resources as they are moved to other locations, and the disruption of whole communities poses significant threats to social networks and capital. However, in some cities while official policies often declare slum and squatter settlements to be illegal and potentially subject to eviction without warning, in selected areas governments have given implicit recognition to such communities by providing them with basic services and limited infrastructure (Douglass, 2000). Another factor which has affected vulnerability in many cities has been structural adjustment policies (De Vogli & Birbeck, 2005). These have increased the vulnerability of many poor urban households, through the loss of secure public sector employment, removal of state subsidies on basic goods and services and the effect of free market policies on prices and employment. Those in informal employment generally lack of labour rights are therefore susceptible to sudden unemployment, and the dangers accruing to unprotected working conditions (long hours, poor pay, insanitary or unsafe conditions) (Potter and Lloyd-Evans, 2016). In this context the resources (whether financial, natural, social, or humane) have to be maintained. The sustainability of livelihoods therefore becomes an urgent need to reduce urban vulnerability. As livelihoods compromise (s) the capabilities, assets (including both material and social resources) and activities required for a means of living (Chambers & Conway, 1991). The present study has been made an attempt to construct an index to assess the vulnerable situation of the urban poor in Khulna city and to understand the role of natural, financial and social resources in securing sustainable livelihood and reducing vulnerability of the study population. Therefore the sustainable livelihood has been assessed by using five tools *viz.* household income, access to health, natural resource, social resource and disaster situation.

Materials and Methods

The study has been carried out following both qualitative and quantitative method. The survey, case study and focus group discussion have been used to assess the nature of vulnerability of the respondents. A census has been conducted in October, 2013 which was counted to 1414 as the population of this study. In this context to determine the sample

size, half of the household heads (Total-707; female-143, male-564) were selected by using Simple Random Sampling. The respondents were selected from the poor vulnerable people of Rupsha (352), Khalishpur (156), Tutpara (127), Nirala (44) and Gollamari (28) of Khulna City. The study highlighted the importance of specific areas especially because of closure of many industries in Rupsha and Khalishpur, slum areas are responsible for the vulnerability of large groups of households which had pushed many households into near-destitution. To assess the vulnerability and their sustainable livelihood the household heads were selected as the respondents who have been residing at that area for at least 10 years. For focus group discussion the group of 10 respondents from each area were purposively selected. Moreover to understand the vulnerable situation of the urban poor 20 respondents were considered as cases. In this study five tools *viz.* household income, access to health (medical facilities), available natural resources, social resources and disaster situation are used to understand the sustainability of the livelihood. The study includes 5 types of assets; land, water, sunlight and air quality, trees and opens spaces as natural resource. To assess the social resource five tools such as family relation, relation with the outsider, political involvement, relation with wider institution and participation in community based organization are used.

To identify the poor people the estimates of household income for the typical household is based on family income not more than US \$2 per day (World Bank, 2013). During the field survey from October, 2013 to March, 2015 the conversion rate of US\$ 1 was equivalent to almost Taka 77.63 (Bangladeshi currency). In this regard the household heads having $(78 \times 4 = 312 \times 30 = \text{Taka } 9360)$ not more than Taka 10000 monthly income were considered as the unit of analysis.

Poor and vulnerable people of the study area: To measure the poverty situation standard analysis of urban poverty has been followed. It involves the use of poverty lines based on income or estimates of extreme poverty. It is measured by the proportion of people living on less than US\$ 1.25 per day (World Bank, 2013) and moderate poverty as less than US\$ 2. As the conversion rate of US\$ 1 was equivalent to almost Taka 77.63 during field survey in this study the household earning Taka 6000 per month has been considered as absolutely poor (living on less than US\$ 1.25 per day) and 10000 taka monthly earning household has been considered as moderately poor (living on less than US\$2 per day). Regarding intake of food the study estimates the cost of acquiring enough food for adequate nutrition usually 2,100 kilo calories per person per day where the average calorie per person is estimated at nearly 1452 kilo calories.

The key components of the diet selected by the cost of the diet software are papaya, a green leafy vegetable called pui shak and coconut meat. Cheese has been identified by the software as an expensive source of protein, fat, vitamin A, vitamin B2, niacin, vitamin B12 (providing a 100% of the requirement for this nutrient) and calcium. Green leafy vegetables such as pui and palong shak have been identified as inexpensive sources of vitamin A, soluble B group vitamins, folic acid and iron. Recommended intakes for vitamin C and being provided primarily by pommel (similar to grapefruit) and ripe papaya.

The data indicate (Table 1) that the annual cost of the diet for the typical household is estimated to be 39,720 (BDT). The minimum cost of a diet that meets only a household's energy need has been estimated at between 98 – 122 BDT per day, depending on the season and features found in the markets in the study areas of Khulna City.

Table 1: The cost of household members by season

Age of the household members	Season 1 Winter season	Season 2 Rainy season	Season 3 Summer season	Annual Cost (BDT)
12-23 months old	9	11	11	3720
Rest of household member	89	111	100	36000
Overall	98	122	111	39720

Cumulative Vulnerability Index (CVI): In this study to measure the vulnerability of the respondents the Cumulative Vulnerability Index (CVI) has been constructed following the cumulative food security index of Maxwell (1995) and the cumulative empowerment index of Parveen and Leonhäuser (2004). The quantitative part correspond to five categories e.g., 1 = very low and 5 = very high. Each indicator assigned a quantitative rank from 1 to 5 according to the total score for access to and control over resources based on the field survey. The qualitative dimension is formed to rank the key seven indicators from total scores assigned by the respondents. Table 1 represents the way of constructing the CVI: Measurement of Explained (Dependent) Variables.

CVI varies from 30 to 114 in which 30 denotes the highest level of vulnerability and 114 denotes the lowest level of vulnerability (Table2).

Table 2: Indicators of vulnerability

Indicators	Quantitative Rank	Qualitative Rank	CVI Range 30- 114
Tenure security	1 to 5	7	(1-5).7=7-35
Income security	1 to 5	6	(1-5).6=6-30
Food security	1 to 5	5	(1-5).5=5-25
Number of jobless week	1 to 5	4	(1-5).4=4-20
Literacy situation	1 to 5	3	(1-5).3=3-15
Access to health	1 to 5	2	(1-5).2=2-10
Access to household essentials	1 to 5	1	(1-5).1=1-5

For better understanding about the level of vulnerability attained by the respondents the CVI range is further divided into five categories and labeled as very high vulnerability (30-46), high vulnerability (47-63) moderate vulnerability (64-80), low vulnerability (81-97) and very low vulnerability (98-114).

Regression model: The multiple regression model for vulnerability measurement is:

$$CVI = b_0 + b_1 \text{tenure security} + b_2 \text{income security} + b_3 \text{number of jobless weeks} + b_4 \text{food security} + b_5 \text{access to health} + b_6 \text{sex} + b_7 \text{number of household members} + u$$

Where

CVI= Cumulative Vulnerability Index; b_0 = intercept term; $b_1, b_2, b_3, b_4, b_5, b_6, b_7$ =

regression co- efficient; u = stochastic disturbance term

Results

Poverty situation of the respondents: The poverty situation of the respondents is presented in the Table 3. In the study area 69.3 percent households were under the poverty line that means family income is not more than Taka 6000. The respondents who receive

less than 2100 kilo calories were 98.0 percent. Poverty situation then adds the cost of other essentials such as clothing and shelter. Among the respondents 39.9 percent respondents reported that they have two cloths for normal weather and more than 81 percent respondents were without pair of shoes. More than half of the respondents were resided at rent free houses but they have to give one type of rent to the local leaders.

Table 3: Poverty situation of the respondents

Measuring tools of poverty	Percentage distribution of the respondents		
Poverty level by household income (BDT)	Under poverty line- 1 (family earning not more than BDT 6000) (69.3)	Under poverty line- 2 (family earning not more than BDT 10000) (30.7)	- - -
Calorie intake (Mean-1451.63)	Intake less than 2100 Kilo Calories (98.0)	Intake 2100 Kilo Calories or more (2.0)	- - -
Having minimum two cloths in normal season	Yes (39.9)	No (60.1)	- - -
Having minimum two cloths in winter season	Yes (49.2)	No (50.8)	- - -
Having a pair of shoes	Yes (18.7)	No (81.3)	- - -

Major vulnerabilities of the respondents: The study highlighted various points of importance to understand vulnerability in the context of sustainable livelihood. The major causes identified by the respondents in the study settlements, is presented in the Table 4. To assess the vulnerability of the respondents seven indicators are used.

Table 4: Indicators of vulnerability

Indicators of Vulnerability	Percentage distribution of the respondents with level of vulnerability					Total
	1	2	3	4	5	
Tenure security (Eviction threat)	Threatened at present (32.2)	Threatened for more than three times (19.2)	Threatened for more than two times (28.7)	Threatened once (10.7)	No threat (9.1)	100.0
Income security	0-2000 (8.3)	2001-4000 (21.6)	4001-6000 (39.3)	6001-8000 (20.7)	8001-10000 (10.0)	100.0
Food Security	Frequently hungry in whole day (14.7)	Having meal for one time in a day (38.3)	Having meal for two times in a day (36.5)	Having meal for three times in a day (8.5)	Having meal for three times with extra food in a day (2.0)	100.0
Jobless week	37-48 (13.0)	25-36 (28.7)	13-24 (33.2)	1-12 (16.4)	Never for a week (8.6)	100.0
Literacy situation	No formal schooling (20.7)	Completion of primary education (38.3)	Completion of class eight (34.1)	SSC pass (5.1)	HSC pass (1.8)	100.0
Access to health	Never go to doctor (12.4)	Natural ingredients (24.6)	Quack (37.3)	Paramedic (17.0)	Registered doctor (8.6)	100.0
Access to household essentials	Highly dissatisfied (60.4)	Dissatisfied (15.7)	Moderately satisfied (19.4)	Satisfied (3.3)	Highly satisfied (1.3)	100.0

Among the respondents 32.2 percent were always threatened, 19.2 percent were threatened for more than three times and only 9.1 percent respondents had never been threatened. From the table it is observed that more than two thirds of the respondents were under the poverty line¹ that is family earning is not more than BDT 6000 and nearly one third of the respondent's family earning is BDT 6001-10000. The data indicate that nearly 90 percent respondents experienced food shortage for a day with 14.7 percent considering themselves severely food insecurity, 36.5 percent respondents had the access to food for two times in a day and 8.5 percent respondents could have the meal for three times in a day. Male headed households were better off than female headed households. From the focus group discussions it is observed that polygamy adversely affects to increase vulnerability. In the study area housing, basic infrastructure and other needs, such as food and clothing, are less accessible and many migrants experience the burdens as well as the rewards of the city life.

The baseline data indicate that about 21 percent of household heads did not go to school. Although 38.3 percent had completed study up to primary level, 34.1 percent had completed junior secondary school (up to grade eight). Only 5.1 percent had completed secondary school (grades 9-10) and 1.8 percent had completed their Higher Secondary School. Health situation is not much vulnerable where 12.4 percent respondents never used to go to doctor but 8.6 percent respondents could receive medical facility from registered doctor. Government effective initiative and the urban primary health care centers contribute to improving the health status of the respondents.

The southwest coastal region is extremely vulnerable to natural and climate change related disaster. People in this area are vulnerable to cyclones, tidal surges, riverbank erosion and salinized water and soil. Extremely poor people tend to suffer disproportionately because they tend to live in more exposed places and depend on natural and common property resources for survival. Among the respondents 60.4 percent were highly dissatisfied with no household essentials at all. Whereas, nearly 5 percent respondents were satisfied with necessary household essentials.

Dependence on the cash economy: In the study area frequently dependence on the cash economy means that poor households are vulnerable to debt (especially where they cannot rely on informal social networks for loans). The Table 5 indicates that 23.6 percent respondents had received loan with 10 percent interest and 15 percent respondents received loan with 15 percent interest rate. Borrowing, normally at usurious rates, may lead to long term indebtedness with disastrous results such as bonded child labour.

Table 5: Condition of debtiness of the respondents

Condition of Debtiness	Number	Percent
Receiving loan from more than one source	123	17.4
Receiving loan with 15 % interest rate	106	15.0
Receiving loan with 10% interest rate	167	23.6
Receiving interest free loan from relatives	261	36.9
No loan at all	50	7.1
Total	707	100.0

Result of multiple linear regression analysis: The regression analysis (Table 6) indicates that income (34%), eviction threat (48%), number of jobless week (29%) and food security (23%), presents positive and highly statistically significant effect on vulnerability of the urban poor. Here the value of R Square is 0.96. That means aforesaid variables have 96 percent effect on vulnerable situation of the respondents.

Table 6: Coefficients of regression

Independent variables	Dependent variable: Cumulative Vulnerability Index (CVI)		
	Coefficients	t (Significance level-0.000)	Standard Error
(Constant)	6.267	11.169	0.561
Eviction threat	0.482	68.189	0.015
Income security	0.342	31.539	0.031
Number of jobless week	0.294	28.073	0.043
Food security	0.232	26.256	0.035
Access to health	0.144	19.221	0.062
Sex	-0.016	-1.983	0.374
Number of Family Members	0.026	3.333	0.104
N= 707; Adjusted R square = 0.966; F= 2824.425 (Significance Level: 0.000)			

On the basis of seven indicators the level of vulnerability has been measured and the area wise distribution of the vulnerable people is presented in the Table 7.

Table 7: Level of vulnerability

Level of Vulnerability	Rupsha	Khalishpur	Tutpara	Nirala	Gollamari
Very high (30-46)	6.0	12.8	-	2.3	-
High(47-63)	37.2	41.7	14.2	20.5	25.0
Moderate (64-80)	39.5	34.0	33.1	38.6	39.3
Low (81-97)	16.5	10.3	36.2	31.8	32.1
Very low (98-114)	0.9	1.3	16.5	6.8	3.6
Total (mean-72.95, Standard Deviation-18.49)	100.00 N-352	100.00 N-156	100.00 N-127	100.00 N-44	100.00 N-28

From the Table 7 it is found that because of living in slum area the respondents residing at Rupsha and Khalishpur are more vulnerable than the respondents of Tutpara, Nirala and Gollamari.

The role of sustainable livelihood in reducing vulnerability: In this study to understand the sustainability of the livelihood five tools are used *viz.* household income, access to health, natural resource, social resource and disaster situation. However, as noted by Farrington *et al.* (2002), natural capital and services are becoming important to urban poor's livelihood. Sustainable cities depend on a healthy ecosystem that influences both human well-being and numerous economic activities. Carney (1998), states that natural capital is sometimes referred to as environmental resources, with the components thought of as jointly comprising 'the environment'. In this context the study comprises five assets; land, water, sunlight and air quality, trees and opens spaces as natural resources. Among all, the respondents having free access to land can earn more from land related business like

grocery shop, kitchen market, fish business and agricultural activities. To assess the social resource the study includes five tools such as family relation, relation with the outsider, political involvement, relation with wider institution and participation in community based organization. The Table 8 highlights that access to health (19%), social resource (11%), natural resource (15%), and household income (53%) has its contribution to the reduction of vulnerability of the urban poor. Vulnerable situation also affected (10%) by disaster situation. The value of Chi-Square test (220.463) and Fisher's Exact Test also support (0.000) with the theme of 16 degree of freedom at 2 sided significant tests. Women producers who participated in the focus group explicitly highlighted this value.

Table 8: Regression coefficients

Independent variables	Dependent variable: Cumulative Vulnerability Index (CVI)			
	Coefficients	t	Standard Error	Significance level
Constant)	16.423	8.575	1.915	0.000
Household income	0.0537	18.818	0.000	0.000
Access to health	0.192	8.175	0.196	0.000
Natural resource	0.152	5.606	0.066	0.000
Social asset	0.110	4.282	0.441	0.000
Disaster	0.101	3.207	0.049	0.001

N= 707; Adjusted R square =0 .671; F= 288.366 (Significance Level: 0.000), Chi-square: 220.463, Fisher's exact test. 0.000

Discussion

The study highlighted various points of importance to understand vulnerability in the context of sustainable livelihood. The major causes identified by the respondents in the study settlements, is presented in the Table 4.

In the study area eviction threatened the livelihoods of the respondents ((90.9%) and causes not only the loss of housing but are responsible for insecurity of income, joblessness, insecurity of food, lack of medical facilities, low literacy situation and low access to household essentials which are the major causes of vulnerability. Mst. Piara Begum is a 40 years old woman lives in the railway slum of Khalishpur, informed that eviction forced them to move out from home in many times. Even at the time of cooking they are evicted. But they were living at that place for having no alternative place of residence.

Free goods and services, such as common land, clean water and fuel, are scarce in cities. Most of the basic living needs of urban residents must be paid for in cash-making the urban poor particularly vulnerable to market vagaries such as inflation, and the removal of government's subsidies (Moser, 1998). Thus the respondents who have higher access to basic needs services are relatively in lower level of vulnerability than the respondents having less or no access to basic need services. The mean value (72.95) indicates that majority of the respondents are in moderate level of vulnerability (Table 7).

Natural resources, particularly land, water, urban agriculture, tree, urban open spaces are very important assets for the sustainable livelihood of the people living in the urban areas. Although the land, water, tree couldn't contribute directly toward their cash income,

the (indirect) benefits are for example the establishment of grocery shop, tea stall, kitchen market the use of wood for heating and cooking and construction. Timber and urban agriculture directly enable local people to spend their money in other ways such as food, education and medical facilities. Rafiqul (46) in Tutpara argued that “urban forestry program can help to strengthen urban community-building. But community-based efforts are hampered for the lack of well-organized groups and lack of participation. There is also almost absence of participation of women and children in decision-making, planning and management of urban trees. In this regard, from the choice of tree species to actual planting, tending and (where appropriate) harvesting of tree products, urban dwellers should be able, and actively encouraged, to participate in decision-making and implementation as soon as possible”. Another man (Atiar, 47), during the focus group discussion stated that “if people do not have secure tenure they are less likely to invest time and resources in planting trees that may only start to provide material benefits after a number of years. To them land ownership is unclear but people actually plant trees to claim ownership of land themselves”.

The women who were interviewed were single mothers, divorcees or widows, and were heads of households. The political and economic crises in Khulna City have brought about many changes in social organization. The female-headed households are being hit by chronic poverty more often than male-headed households.

Social resource can also reduce insecurity and vulnerability in the relationship of different actors. Local people have a high degree of trust and better relationships with the local institutions, neighbors and relatives; whereas they showed very squat trust towards state institutions such as police, courts and forest department. One woman named Amena (63) argued that “through the empowerment of women agricultural activity establish and strengthen social networks particularly the strong bond and trust acted as a catalysts for the community taking action against rape, violence and child abuse in the community”. Some easily identifiable groups were particularly vulnerable, e.g. women who had lost their productive assets like handcars, sewing machines were forced to move into less profitable areas of work that did not require these equipments. Many coping strategies employed by vulnerable households in response to debt, such as withdrawing children from school and marrying off daughters early help to assuage the crisis in the short term, but increase vulnerability in the longer term.

Conclusion

The concept of vulnerability is complex and a realistic determination of people’s vulnerability. Some indicators have chosen for vulnerability determination and show high correlation with one another. As noted in the study the urban poor of Khulna City invariably live below the poverty line and have little access to formal employment. They are also vulnerable in terms of their natural and social capital. They have failed to secure a sustainable livelihood in the city despite living for a long period of time. Feasible policy should be adapted to take account of this and to promote the secure access of the poor to livelihoods. Therefore, this study suggests that poverty alleviation should be based on a policy framework that, guarantees inclusive provision of livelihood assets, reduces vulnerability and enables institutions.

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