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Research Article

Sustainable Urban Revitalization within a Historical Urban Neighborhood-A useful Approach to Complete

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I N F O

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A B S T R A C T

The historically important urban neighborhoods are practically a significant entity, a rich reservoir of social and economical milieu and cultural inheritance. Though, it faces many problems due to the rapid growth of population and the steady increases in the new requirements with concern of decompose this historical urban neighborhood. Presently sustainable urban revitalization is a theory to integrate inclusive concept of sustainability into urban revitalization process. Therefore to fix up such theory into true practices, a useful approach of urban revitalization planning should be worked out at the start. To work out how urban design would affect inclusive sustainable theory i.e. economy, environment, social equity and cultural values of urban revitalization schemes within Boro Bazaar Area (Khulna city, Bangladesh), a study investigating this issue is initiated. The paper highlights different approaches and strategies taken by different interview, questionnaire and field survey towards the methodologies of assessing, refurbishing and adding new value to the study areas, in view of increasing not only the quality of economical and social significance but also the quality of public spaces and services, for a better excellence of life of the society and neighbourhood.It is also believed that the research findings of this paper can strengthen the understanding of local developers, urban designers and government officials on how to plan a sustainable urban revitalization scheme afterwards.

Keywords: Sustainability, Revitalization, Boro Bazaar

Introduction

Khulna is often referred to as Industrial City, which is considered as one of the important industrial and commercial areas of the country. The city originated as a market town and array of administration. The city's dense commercial heart has a strong longitudinal direction, parallel to the riverfront. The CBD (Central Business District) of Khulna city was found beside the bank of the river Bhairab since the first master plan worked out in 1961. Now it has been determined "Dak-Bangla more/node". But in accordance with the spatial growth with expanding roads, integration core has been linearly shifted. The shift has been obvious from water to road and community to government. With Calcutta, trade of various goods like sugarcane and tobacco, was developed based on river route during early days. River based trade and commerce shaped the city economy of Khulna and that is why the city evolved around the river bank locally named "Boro Bazaar", the big

market place. Boro Bazaar has established along the river Bhairab during the British colonial regime to operate and control the local retail and wholesale business. Still today, Boro Bazaar is the main economic hub for the city that controls the total retail and wholesale market and plays the most significant role in the economy. The frequent change of the city shaped the area of Boro Bazaar as a mixed use zone rather merely commercial or business zone. For last decade, just to meet the demand of rapid urbanization process the area of Boro Bazaar faced compact unplanned development along with the river side and in a form of mixed commercial and residential zone relates to those commercial occupants. Because of its suitable location, it eventually became the most congested zone in the city.

As a foremost financial center the trade activities in Boro Bazaar produces a huge amount of local exchange each month although without enough facilities. In addition the Boro Bazaar area produces revenue for the local government through income taxes and land taxes and BR (Bangladesh Railway) gets yearly revenue through log-term land leasing for general and trade shops and storage facilities. Once again the local government also leases the river port areas (locally called Ghat) to export and import goods within the country and to the neighboring India and the local and central government earn revenue by long-term leasing policy from these ports (locally called Ghat). But still now Boro Bazaar has been developing in a much compact haphazard unplanned way and it is very difficult to provide any good services as required. Khulna City Corporation (KCC) authority has been implemented different redevelopment actions and planning process to create it easy accessible for business persons and local people and to manage both the national and local returns. Therefore It has become an urban confront to revitalize this area through sustainable design and to make more effective response to the rapid financial development and to ensure better urban environment for the residents and the trade market. Therefore it may be able to feel the profitable activities more efficiently to manage with the city's financial require and future development.

I believe that if there is any route to sustainable development in urban planning and development in Khulna city, and maybe elsewhere, that it should start with the government. In Bangladesh, that has always been driven by strategy development which has been productive in terms of actually developing strategies throughout the last forty seven years of urban development. This, unfortunately, has not been matched with adequate implementation and that has been evident throughout this research. The government has spent genuine resources in developing such strategies, but apparently the implementation phase is challenging, and difficult. It doesn't have to be like that if we follow some basic recommendations as illustrated within this research.

Sustainable Urban Revitalization

Several practitioners have suggested the use of sustainable development as an economic stimulus for neighborhood revitalization (Rudlin D. 1999. Devuyst D., 2001, Chiras D. 2003, Erickson D. 2006, Kemp R.L. 2006). Very few, however, specifically explain how sustainable development is used in revitalization efforts. Roger Kemp is one scholar and practitioner who have provided a little more explanation of sustainable development and revitalization. He has set up ten basic framework principles which serve as the basis for building the urban environment. Those principles include: Evoke a sense of place, Restore and establish the unique urban ecology, Invest in the public realm, Broaden the mix of uses, Improve connectivity, Ensure that buildings support city building goals, Build on existing strengths, Preserve and enhance heritage resources, Provide a balanced network for movement and Foster public safety. According to International Union for Conservation of Nature (UNCN), United Nations Environment Program (UNEP) and World Wildlife Fund (WWF), sustainability consists of "improving the quality of human life while living within the carrying capacity of supporting ecosystem (as cited in Mishra, 2018).

Communities are beginning to realize that the decline of their neighborhoods needs to be addressed in a holistic way, looking at all the issues (environmental, social and economic) involved within the context of the entire local situation. Accordingly, the two different concepts-revitalization and sustainable development is related according to their holistic, comprehensive character. Based on this relation, in order to avoid the degradation, it is necessary to activate an economic and social process, finalized to the environmental and social preservation of historic neighborhoods. This approach is a transposition of the economic definition of sustainable development which conjugates at the same time social equity, environmental preservation (in this case urban environmental preservation) and economic development.

Urban Sustainability and Urban Revitalization

The process of urban revitalization is required when obsolescence is present in the physical, social and/or functional structure of an area. It is assumed that if the urban revitalization process is applied to the aforementioned three systems, healthy and sustainable historic environments will result; sustainable communities in such environments can also be handled with the help of urban revitalization (Oktay, 2005). Bauen et al., gave details (1996, p. 4), sustainability is about meeting basic human needs and wants. People value their health, economic security and happiness and that of their children. These are primary elements in relation to the issue of quality of life. Sustainability refers to "long-term economic, environmental, and community health". Again Oktay (2005) explained that sustainable community

and/or city can be achieved by improving and adapting the economic, social and physical environments of cities in order to achieve the required global standards of the urbanization process. Historic environments, in particular, lose functional and economic viability and their scarcity have obsolescence in their urban fabric and buildings, social polarization and exclusion due to the urbanization. This approach is a transposition of sustainable urban revitalization, which also means preserving, and carrying the social, economic and physical structure for future with dealing with social equity, environmental preservation and economic development In other words, the two different concepts, sustainability and revitalization are directly related. Based on this relationship, the sustainability of the historic urban environments can only be possible with a "sustainable urban revitalization" process. By the above discussion the aims of sustainable urban revitalization can be summarized as follows:

- Maintaining and enhancing the community's cohesion through its neighborhoods.
- The protection of the special physical characteristics that enhance neighborhoods, maintain a sense of place and sustain area identity
- The preservation and rehabilitation of facilities and neighborhoods that are part of a community's diversity.
- The preservation of the community's local historic, archaeological and cultural heritage.
- A commitment to community revitalization to prevent the decline of old, historic areas and to ensure that a variety of living, working and leisure opportunities are provided in these areas.
- The preservation, enhancement and revitalization of the city centre's residential and commercial neighborhoods as the community continue to grow and mature.
- The redevelopment and reinvestment in the community's mature areas, through urban Revitalization, innovative programs, context-appropriate infill development and redevelopment efforts.
- Incentive programmes that encourage context-appropriate infill development in more mature areas of the city.

Urban Sustainability and Urban Design

One can possibly find as many definitions for urban design, as the number of writers and practitioners of urban design (for example: Pittas 1980; Floyd 1978; Lynch 1981, 1984; Mackay 1990; Gosling and Maitland 1984; Tibblads 1984; Gosling 1984a, b; Barnet 1982; Colman 1988; Goodey 1988; Levy 1988; Scott Brown 1990; The Pratt Institute Catalogue 1988; Kreditor 1990; Lang 1994, 2005; Relf 1987; Madanipour 1997; Schurch 1999; Marshal 2009; Brown et al. 2009; Mumford 2009). These varieties of definitions, aside from some commonalities, reveal the very complex and multi-dimensional nature of the subject matter of urban design. Schurch, in analyzing some of these definitions, suggests that the fundamental problems with these definitions of urban design are that they lack breadth, cohesion and consistency (Schurch 1999, p. 17).

The concept of sustainability has become integrated with urban design. Today the key task of the urban designer is to delivery sustainable places in terms of the "triple bottom line" that is the three dimensions of life - economic, e.g. well-paid jobs, social e.g. good schools and sports facilities and environmental e.g. clear air, clean rivers, beautiful places to live, work and play and as Ritchie and Thomas (2009) describe sustainable urban design is vital for this century. Achieving sustainability in urban design will provide environmental quality, economic & social benefits. In addition urban beautification was the fundamental purpose of urban design at the time it was introduced as a separate profession. Over time, the scope and objectives of the urban design have changed and currently urban design plays a vital role in city development. Today urban design functions at the crossroads of architecture, landscape architecture and city planning. It has become a collaborative discipline functioning with the other disciplines to create three dimensional forms and spaces for people that function effectively. Therefore urban design seeks to enhance the life of the city and its inhabitants in socioeconomic & environmental terms (Wall & Waterman, 2010). The world is in search of sustainable construction. Even in Nepal a study conducted by Mishra and Rai (2017) to compare performance of eco-friendly as sustainable and the calculation of U-Value of surfaces of eco-friendly buildings were found to be noticeably lesser than that of conventional buildings which means exothermal insulation than conventional ones. Also, 10-15 percent additional building costs was found in eco-friendly buildings whereas the operation and maintenance costs of those buildings were nearly 50percent lesser than the conventional buildings. In terms of various parameters, the results show that the performance of existing Eco-friendly buildings of Kathmandu Valley is better in comparison to the conventional buildings. More eco-friendly building materials are introduced in such buildings producing less harm to environment.

Research Methodology

This research collected the data in the following four methods

1. Interviews with expert groups (Qualitative)
2. Study Area, Quick Surveys and Public Questionnaires (Quantitative)
3. Select the Study Area as a case study
4. Quick Surveys and Public Questionnaires

Interviews with expert groups (Qualitative)

The study initially has selected 13 nos. of experts in different areas for understanding the sustainable urban development initiatives within the Khulna city. However figure 1 shows that the experts were selected in the following four methods and table 1 below illustrates details about different group of expert participants along with their experiences in sustainable urban development of Khulna city. Subsequently table 2 shows that 13 interviews were conducted by the experts in 6 (six) several fields of expertise.

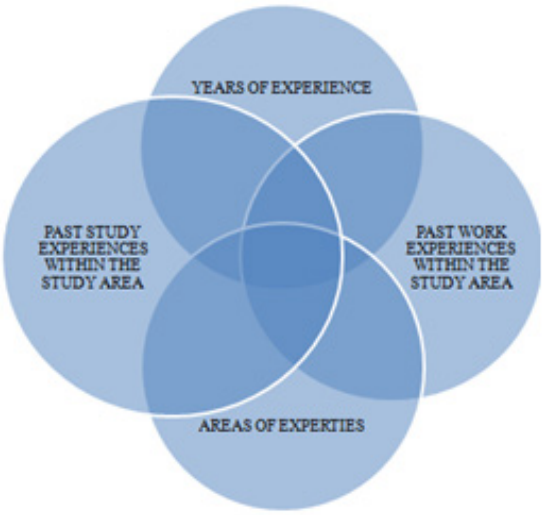

Figure 1.Method of Selecting Experts

Table 1.Expert Participants Selected for Interviews

Group of expert participants	Total interviewed	Years of experience
Khulna City Corporation (KCC)	2	18
Khulna Development Authority (KDA)	3	32
Academic (KU, Urban Planner and Designer)	5	21
Local Consultant	3	14

Table 2.Expert Participants For Sustainable Urban Development and Their Response

Sustainable Urban Development			Definition
1	Urban planning	Morphological Changes/ Settlement Pattern	The spatial distribution and growth of urban functions across a territory at a given moment in time with emphasis on sprawl and the issue of centrality.
		Urban Design	The art of designing places for people which concerns the density, form and functionality of space.
		Land Use	The dominant activity taking place on an area of land and concerning its allocation, distribution and management.
2	Urban Services	Housing	The provision of accommodation and shelter meeting social demands and ensuring adequate housing conditions.
		Water Quality	Provision of water, with the aim of improving its efficiency and conservation
		Drainage System	Provision of Drainage System, with the aim of improving its efficiency and facilities

		City Corporation Services	Provision of basic services such as waste management and sewage
3	Urban Economy	Economic Development	Sustained increase in the economic standard of living of a country's population, with the aim of balanced growth and stability.
4	Urban Environment	Climate Change	The change in global climate patterns with emphasis on its affects such as desertification, soil erosion and flooding
		Environment Protection	The sustainable environment planning and protection that restores spatial ecological quality and diversity
5	Urban Transport	Local Transport Facilities	Provision of various means for public transport and its management
		Road Network	Ensuring efficiency and availability for transport networks that enhance accessibility and connectivity
6	Urban Society	Public Participation	A process involving the public in urban planning, to enhance their self-determination and respect, and capture opportunities for better governance
		Social Equity	Ensuring equal access and benefits to all, and enhancing equality and balance investment among all the geographic regions

Study Area, Quick Surveys and Public Questionnaires (Quantitative)

Questionnaire surveys were used as the primary tool in data collection and focused on organizing responses from the total 143 nos. of local resident and local business-owner populations. The questionnaire comprises face to face several multiple choice questions and they had asked series of questions for at least one interviewing time period took 15 to 20 minutes. Major themes included: "perception of your neighborhood," satisfaction with your neighborhood," "quality of life" (service, recreation, medical facilities, education, etc.) and questions was asking about residency and basic information such as age, income and occupation. The focus was to gather data to aid in measuring the usage and experienced value of the study area.

Study Area

The following figure1 shows the study area and important locations around the study area. The study area is adjacent to the heart of the Khulna city and it is major commercial hub of the city. Historically it is the area - Where Khulna's first settlement grew to dense CBD. It originated many years ago as a trade centre for products from the Sundarbans and was completely dependent on river transport. Situated on a natural levee on Bhairab's riverbank, it was suitable for dense development. This square only shows a small fragment of the now densely developed Boro Bazaar area, which covers a longer strip of land on Khulna's riverfront. This specific square was chosen, because it comprises dense wholesale/retail-tissue, residential neighborhoods and historical remnants. Historically city growth is always parallel to the river and also clearly visible on smaller scale from this square. Figure 2 shows presently the study area has been surrounded by the followings important locations.

Figure 2.Study Area

- It is the major transition hub of Khulna city-railway station, BIWTA Ghat, Bus terminal. BIWTA Ghat plays an important role to transmit goods to Khulna city.
- 5 minutes distance to city launch terminal, 10 minute's distances to New Market and *Sib Bari* node and 20 minutes distances to Hadis Park, Sonadanga bus stand.

Quick Surveys and Public Questionnaires

The public questionnaire survey instruments were divided into seven (7) parts, table: socio demographic profile, perception and satisfaction of their neighborhood for residents and businessmen, quality of life and sustainable neighborhood. Data compilation intended for the present research began in September 2017 and was completed in October 2017. The questions have been prepared in 6 interrelated categories: Socio–Demographic, Perception and Satisfaction with your neighborhood both to residents and businessmen, Quality of life and About Sustainable Neighborhood. Finally the following details illustrate the analysis of the characteristics of the participants in the public questionnaires as obtained from Microsoft Office Excel and SPSS.

Socio demographic profile of the local respondents and explanation of neighborhood perceptions

Socio demographic characteristics of the respondents are presented in the following Tables. This study also collects the data about their occupation, income which shows subsequently. Among 143 respondents, it is not surprising to notice that male respondents were highest in number and most of them were married within 30 years to 45 years of age. The survey has found two types of residents in this study area (table 7) temporary (who has rentable house) and permanent (who has own house). The numbers of temporary residents were more than permanent residents and most of them were interrelated with business (table 9).

Table 3.Statistical Details of Public Questionnaire Participant's- Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	17	11.9	11.9	11.9
	Male	126	88.1	88.1	100.0
	Total	143	100.0	100.0	

Table 4.Statistical Details of Public Questionnaire Participant's- Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-30	12	8.4	8.4	8.4
	30-45	96	67.1	67.1	75.5
	45-65	35	24.5	24.5	100.0
	Total	143	100.0	100.0	

Table 5.Statistical Details of Public Questionnaire Participant's- Civil Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Married	122	85.3	85.3	85.3
	Unmarried	21	14.7	14.7	100.0
	Total	143	100.0	100.0	

Table 6.Statistical Details of Public Questionnaire Participant's- Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Daily Market	20	14.0	14.0	14.0
	Garments	62	43.4	43.4	57.3
	House Wife	9	6.3	6.3	63.6
	Service	5	3.5	3.5	67.1
	Street Vendor	6	4.2	4.2	71.3
	Student	10	7.0	7.0	78.3
	Wholesale	31	21.7	21.7	100.0
	Total	143	100.0	100.0	

Table 7.Statistical Details of Public Questionnaire Participant's- Residence

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Permanent	31	21.7	21.7	21.7
	Temporary	112	78.3	78.3	100.0
	Total	143	100.0	100.0	

Table 8.Statistical Details of Public Questionnaire Participant's- Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-30	45	31.5	31.5	31.5
	30-45	23	16.1	16.1	47.6
	45-60	51	35.7	35.7	83.2
	60-80	5	3.5	3.5	86.7
	House Wife	9	6.3	6.3	93.0
	Student	10	7.0	7.0	100.0
	Total	143	100.0	100.0	

Table 9.Statistical Details of Public Questionnaire Participant's- Relation with Neighborhood

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Both	14	9.8	9.8	9.8
	Business	105	73.4	73.4	83.2
	Resident	24	16.8	16.8	100.0
	Total	143	100.0	100.0	

Next figures 3 and 4, respectively shows the results of the respondents respond regarding "quality of life," "about sustainable environment" within the study area. It shows the local respondents responses concerning "quality of life - When they thought about their overall quality of life, what are the three main things that contribute most to their quality of life?" and their opinions concerning sustainable neighborhood. The participants explain that income, community, health-work was the three main considerations for living in this area. Again most of the participants explain that present area is unsustainable though they agree to introduce sustainable development within this area. Although financial and political-management are the main problems to introduce sustainable development within this neighborhood.

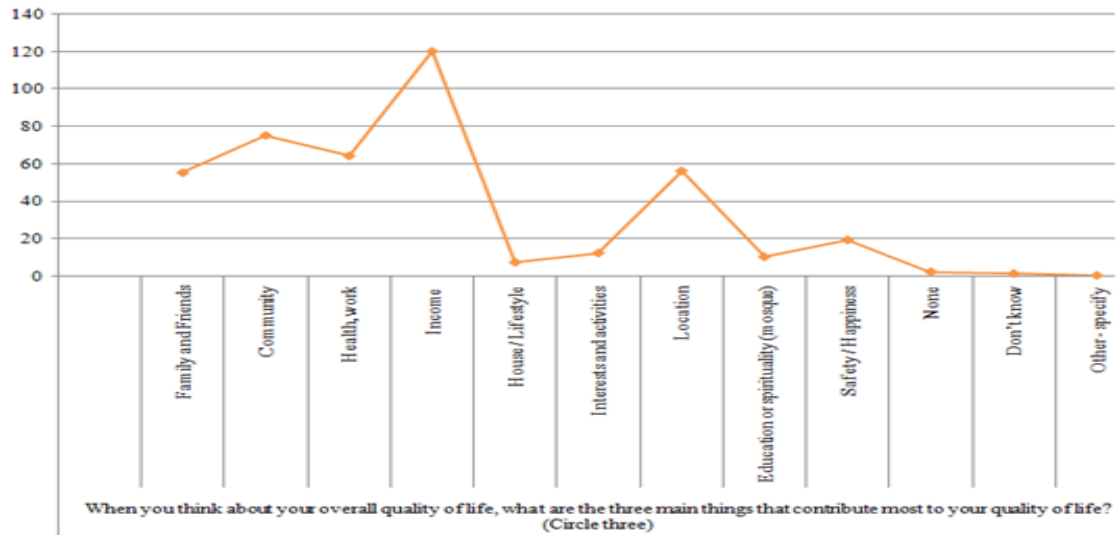

Figure 3.Respondents Respond Regarding Quality of Life

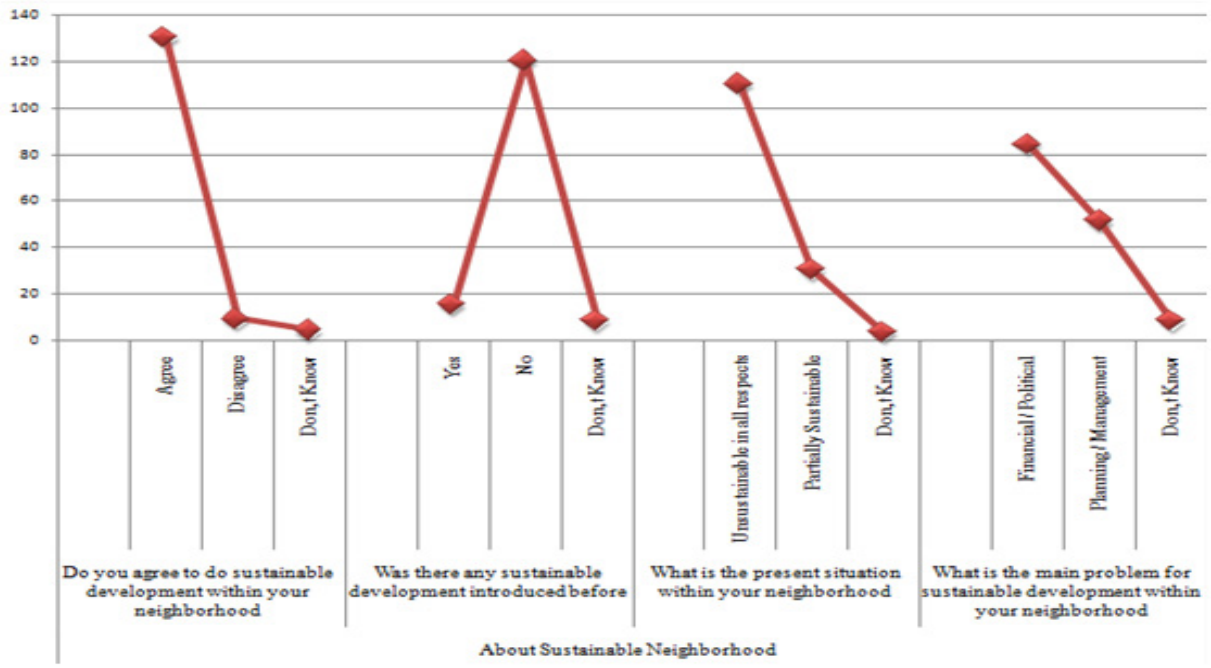

Figure 4.Respondents Respond Regarding Sustainable Environment

Analysis Reporting and Configuration

This section will turn around the following four selected components associated with the problems, difficulties, challenges and present situations analysis phase allowing for the rapid and questionnaire survey. Then next table10below summarizes the 9 (nine) different areas –(1) Employment/ Job (2) Recreation Facilities and Public spaces(3)Shopping Facilities(4) Transportation(5) Riverside area (6) Road network and Side walk(7) Noise pollution(8) Drainage system(9) Accessibilities – hospitals, bazaar, services, schools/ college, under discussion regarding sustainable urban revitalization which was concern within the study area.

Table 10.Explanations by Experts Associated with 9 Areas and Four Selected Components

Areas	Problems	Difficulties	Challenges
Employment / Job	1. Good working conditions 2. Safety – security	1. Neighborhood socio-economic status	1. Location of job area 2. New business center with better service 3. Need better exposure
Recreation Facilities and Public spaces	1. Not enough recreational and 2. public places and public 3. recreation amenities 4. Lack of good public service No 5. good management 6. Policy and financial 7. problemsPoor Organization	1. Neighborhood socio-economic status	1. Lack of coordination 2. Urbanization 3. Illegal development
Shopping Facilities	1. Require of better shopping facilities 2. Better shopping environment	1. Safety – security	1. Better exposure

Transportation	1. Car parking	1. Difficulty to expand infrastructure 2. Difficulty to resolve traffic jam 3. Transport projects are not regular concern for local authority 4. Difficult to introduce new type of transports	1. Finding alternatives for public mass transport 2. New roads free traffic but create new traffic jam 3. Reconfiguring the existing infrastructure for future alternatives of public transport
Road network	1. Not maintaining urban design slandered for road width and sidewalk 2. Proper maintenance of sidewalk	1. Public transportation stops and stations 2. Loading – Unloading zones	1. Sidewalks are belongs to street vendors 2. Introduce of universal design 3. Enhanced sidewalk pavement treatments 4. No provision for street furniture
Drainage system	1. Proper planning and development 2. Waste material	1. Gutters to overflow	1. Manage to surface water runoff 2. Proper coordination with KDA and KCC
Riverside area	1. Illegal Development 2. Proper coordination 3. Lack of Planning and design considering the city center 4. Proper management and service	1. Political wiliness 2. Riverside Economic Development 3. Provide housing for low-income community besides river side	1. Creating vibrant waterfront districts and neighborhood. 2. Strengthen the centre of the city by focusing in the provision of active connection between the centre and riverside. 3. Establishing prominent Greenways with public spaces and natural places. 4. Enhancing the recreation functions. 5. Programming new functions on the riverside. 6. Encouraging water based mobility system.
Noise pollution	1. Over crowded 2. Public transport 3. Not enough open spaces	1. Installation of noise control equipments 2. Keep away from the public transport 3. Manage to over-crowded situations 4. Supervise to loading-unloading of goods	1. Create separate neighborhood for public – private, walking and public transport area
Accessibilities	1. Financial and political problems 2. Finding suitable and affordable facilities	1. Awareness of social responsibility 2. Neighborhood stability	1. Needs more Public Private Cooperation 2. Accrue new areas

Subsequently above first three components – problems, difficulties, and challenges were mostly selected from the 13 number of expert participants (table 1) and from field survey 143 nos. of local people explained mainly about the fourth components – "present situations" of the study area. Afterward the statistical results of "present situations "of 9 (nine) different areas have been shown in appendix 1with different tables (11 to 19) and bar charts (figure 7 to 15).

Perception of neighborhood (residents and businessmen)

Yet again the study shows the following (figures 5 and6) results regarding "perception of neighborhood" both from residence and businessmen of the local people within the study area by face to face questionnaires survey. Figure 5shows that most residents in the study area are living here because of the following three main reasons –

1. Living cost is cheaper than other neighborhoods
2. Neighborhood relation is better between each other
3. No other options to live

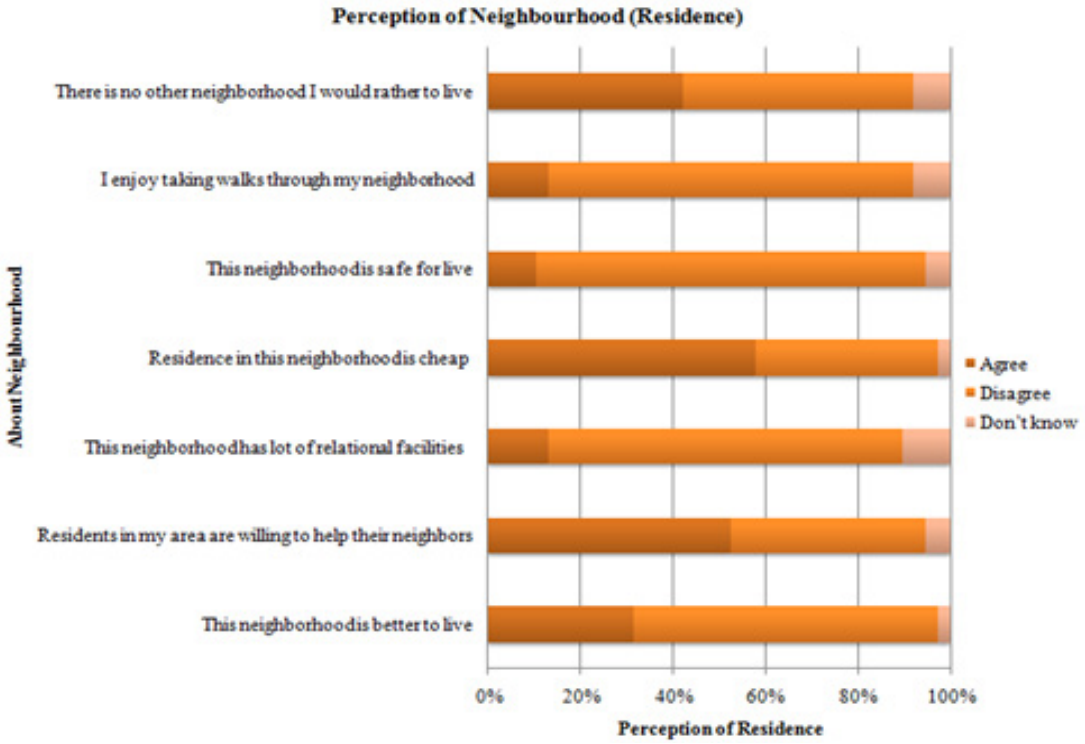

Figure 5.Perception of Neighborhood (Residents)

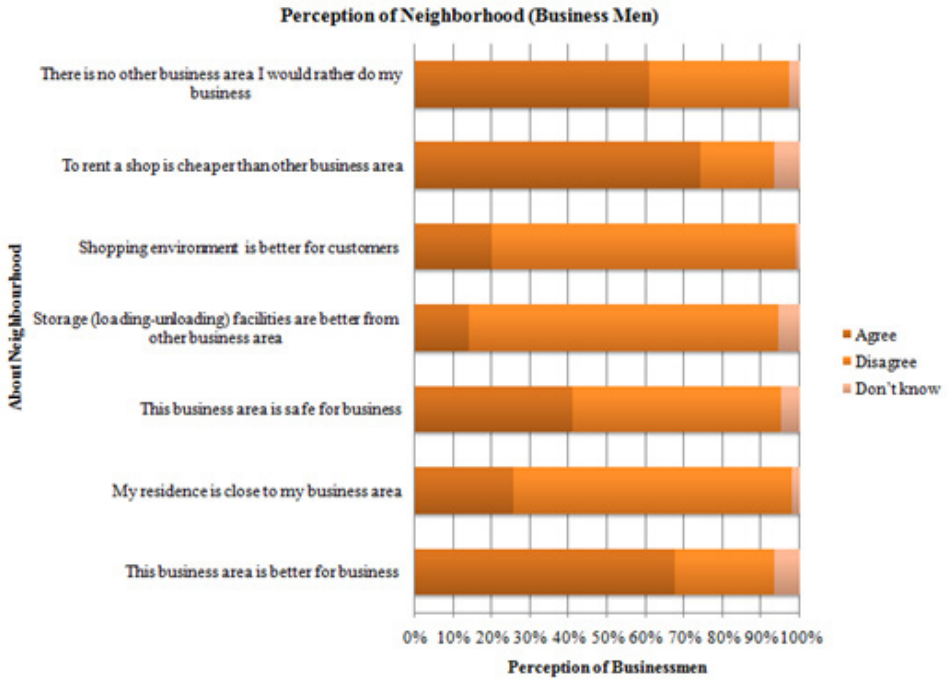

Figure 6.Perception of Neighborhood (Businessmen)

In addition figure 6 shows that most businessmen in the study area continued their business because of the following three main reasons:

1. Rentable space is cheaper than other location
2. Better area to do business
3. No other options to do business

Summary of Problem Analysis and Present Situation Phase

Following Table 20 summarizes the quantitative outcome of this problems and present situation analysis phase for the selected sustainable urban revitalization concerns. It tabulates the results obtained for 3 research methods: interviews, experts and public questionnaires. Among 143 participants from questionnaires survey, following table excluded the participants who didn't know the present situation and final position is considered from the total percentage of "not satisfaction" group. Finally it is clear that the emphasis amongst the participants to certain sustainable urban revitalization concerns gave way the following positioning of importance:

- **Interviews with experts:** first was riverside area; second were recreation facilities and public spaces; and third were transpiration system, road network and side walk and noise. In total, there were 23 problems, 27 challenges and 19 difficulties that were conveyed by the expertise participants.
- **Public questionnaire:** first was riverside area; second was drainage system; and third was noise pollution.

Gap between Expert's and Local Public's Explanations

As illustrated in table 19 above, (Problem analysis and Present Situation Phase – Results Comparison) identified a different set of factors that influence urban expansion which may be viewed here in contrast to those suggested by the participants in the interviews and focus groups. In the following summarizes the 6 (six) key reasons of gap between two groups of participants explanations about - problems, challenges, difficulties, present situations and perceptions, satisfactions of present study area.

- **Gap of public participants:** No actual opportunities for public participation in urban planning and development process. Most of the participants confirmed that they do not believe there was any public participation in urban planning so far and not even today.
- **Gap of public awareness towards planning:** Again most experts explained that they were not optimistic about the benefit of public participation due to - the level of awareness amongst the public is not that high where they can contribute positively to any proposed development and so on with their vision, views, or inputs or whatever.
- **Gap of urban design understanding:** Experts argued that there is a critical question to ask in this regards: before saying that urban design should come from the society, "does the local authority have the quality people to implement this type of planning that the neighborhood demands?"

Table 20.Problem analysis and Present Situation Phase – Results Comparison

Serial No	Satisfactions and Perfections	Interview from Expertise						Public (Local) Questionnaires			
		Problems	Difficulties	Challenges	Total	%	Position	Participants	Satisfaction (%)	Not Satisfaction (%)	Position
1	Employment/ Job	2	1	3	6	8.7	4th	132	60.8	31.5	8th
2	Recreation Facilities and Public spaces	5	1	3	9	13	2nd	136	14.7	80.4	4th
3	Shopping Facilities	2	1	3	6	8.7	4th	129	72.7	24.5	9th
4	Transportation	1	4	3	8	11.6	3rd	130	38.5	52.4	6th
5	Riverside area	4	3	6	13	18.8	1st	140	9.8	88.1	1st
6	Road network and Side walk	2	2	4	8	11.6	3rd	129	23.1	67.1	5th
7	Noise pollution	3	4	1	8	11.6	3rd	133	10.5	82.5	3rd
8	Drainage system	2	1	2	5	7.2	5th	137	11.9	83.9	2nd
9	Accessibilities – hospitals, bazaar, services, schools/ college	2	2	2	6	8.7	4th	139	53.1	44.1	7th
Total		**23**	**19**	**27**	**69**	**100**					

- **Gap of proper coordination:** A very important question by everyone -"who will be the responsible authority for planning process?"Because there is no proper coordination between KCC, KDA and local private agencies / consultants to any planning process to develop this area. Therefore the result shows many gaps between their explanations.
- **Gap of understanding between permanent-temporary inhabitants and businessmen-residents:** In the proposed study area, temporary and businessmen are more than permanent and residents. Therefore before saying that this neighborhood should in innovative urban planning process, does it require for your healthy living or business conditions? The explanations between these two groups and experts group were not comparable in most cases.
- **Gap of decision makers:** Experts explained that - some decision makers are apart from the real process of urban design and planning: long term, vision, target and strategy for the implementation process -Which create a gap between user groups and planning groups.

Limitations of the Study

I must confess that there are some limitations in this research methodology in the following aspects:

- **Duration of survey time:** The total survey time within the study area was August 2017 to September 2017. Therefore it was very difficult to find out all information concerning the study within this time frame.
- **Lack of female representation:** This is applicable to both questionnaires survey and expert participants. For the interviews, less than 11.9% of the interviewees were female and this may be attributed to the fact that females are less dominant in this neighborhood. The impact of this on the results or its interpretation is difficult to identify or to provide for.

Conclusion

This study area has a huge financial significance from earlier period, Khulna City Corporation (KCC) authority has been implemented different redevelopment actions and planning process to create it easy accessible for business persons and local people and to manage both the national and local returns. Although from the beginning this area underwent rapid developments in various aspects e.g. physical, political, financial and social dimensions. As a result of limited land supply, changing economy and population needs, high-density urban form of development is adopted here. Such development forms not only creates crowded living environment, traffic congestion and incompatible land uses but also poses constraints on sustainable urban development. In order to cope with changes in various aspects and address different urban problems, more and more urban planning and development schemes are undertaken nowadays. The questionnaire survey conducted in this study has confirmed that urban development and planning had significant impacts on 3 foremost sustainable values i.e. economy, environment, social equity and cultural values.

Someone may disagree that it is preferable to incorporate the selected four components "problems, difficulties, challenges and present situations" under each of 4 categories in an urban revitalization project. Nevertheless, it is impossible as the projects often deserve financial and site constraints. Therefore, the policymakers have to make a trade-off among options. To ensure that right decision can be made, the characteristics of the region undergoing urban revitalization, site constraints and preference of affected residents and business area should be well known. The ideal will be to have an urban revitalization proposal that is capable to achieve possible economic growth without sacrificing environmental, cultural and social needs for the benefits of current and future generations.

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Appendix I

Table 11.Statistical results from questionnaires associated of Relation with Neighborhood and Employment/ Job Cross tabulation

Don't know Not Satisfied			Employment / Job			Total
			Satisfied			
Rel. with Nei.	Both	Count	0	8	6	14
		% within Rel. with Nei.	0.0%	57.1%	42.9%	100.0%
	Business	Count	9	25	71	105
		% within Rel. with Nei.	8.6%	23.8%	67.6%	100.0%
	Resident	Count	2	12	10	24
		% within Rel. with Nei.	8.3%	50.0%	41.7%	100.0%
Total		Count	11	45	87	143
% within Rel. with Nei.		7.7%	31.5%	60.8%	100.0%	

Table 12.Statistical results from questionnaires associated of Relation with Neighborhood and Recreation Facilities and Public spaces Cross tabulation

Don't know Not Satisfied			Recreation Facilities and Public spaces			Total
			Satisfied			
Rel. with Nei.	Both	Count	2	10	2	14
		% within Rel. with Nei.	14.3%	71.4%	14.3%	100.0%
	Business	Count	3	86	16	105
		% within Rel. with Nei.	2.9%	81.9%	15.2%	100.0%
	Resident	Count	2	19	3	24
		% within Rel. with Nei.	8.3%	79.2%	12.5%	100.0%
Total		Count	7	115	21	143
% within Rel. with Nei.		4.9%	80.4%	14.7%	100.0%	

Table 13.Statistical results from questionnaires associated of Relation with Neighborhood vs. Shopping Facilities Cross tabulation

Don't know Not Satisfied			Shopping Facilities			Total
			Satisfied			
Rel. with Nei.	Both	Count	1	1	12	14
		% within Rel. with Nei.	7.1%	7.1%	85.7%	100.0%
	Business	Count	1	27	77	105
		% within Rel. with Nei.	1.0%	25.7%	73.3%	100.0%
	Resident	Count	2	7	15	24
		% within Rel. with Nei.	8.3%	29.2%	62.5%	100.0%
Total		Count	4	35	104	143
% within Rel. with Nei.		2.8%	24.5%	72.7%	100.0%	

Table 14. Statistical results from question naires of Relation. with Neighborhood vs.Transportation Crosstabulation

Don't know Not Satisfied			Transportation			Total
			Satisfied			
Rel.with Nei.	Both	Count	1	9	4	14
		%withinRel.withNei.	7.1%	64.3%	28.6%	100.0%
	Business	Count	8	52	45	105
		%withinRel.withNei.	7.6%	49.5%	42.9%	100.0%
	Resident	Count	4	14	6	24
		%withinRel.withNei.	16.7%	58.3%	25.0%	100.0%
Total %with in Rel. with Nei.		Count	13	75	55	143
		9.1%	52.4%	38.5%	100.0%	

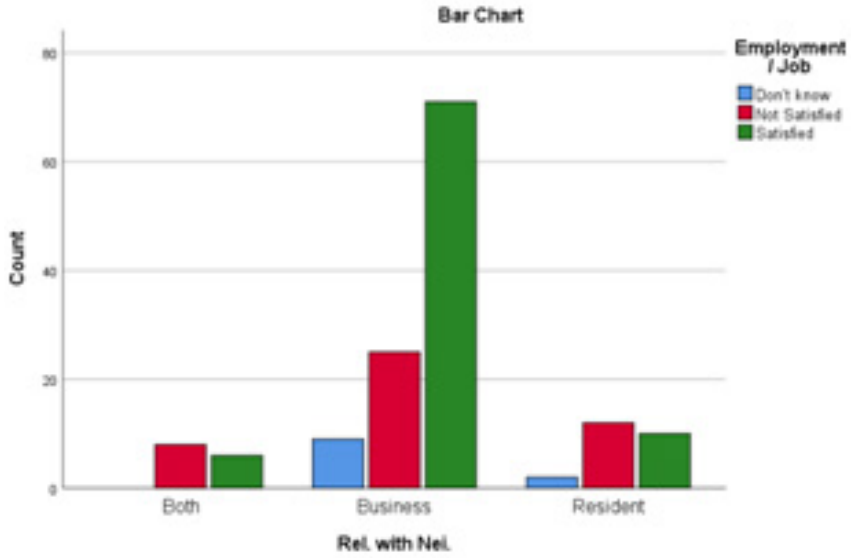

Figure 7.Bar Chart of Relation with Neighborhood vs. Employment / Job

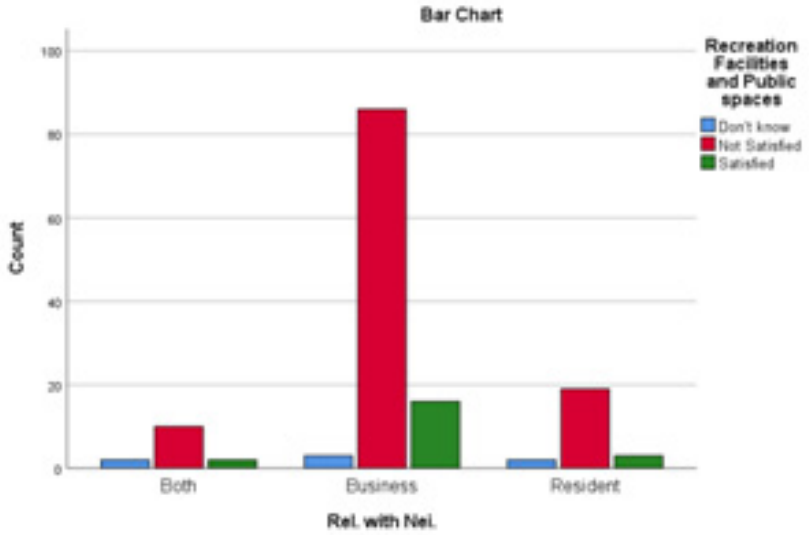

Figure 8.Bar Chart of Relation with Neighborhoods vs. Recreation Facilities and Public Spaces

Table 15.Statistical Results From Questionnaires Associated of Relation with Neighborhood and Riverside area Cross Tabulation

Don't know Not Satisfied			Riverside area			Total
			Satisfied			
Rel. with Nei.	Both	Count	1	12	1	14
		% within Rel. with Nei.	7.1%	85.7%	7.1%	100.0%
	Business	Count	0	92	13	105
		% within Rel. with Nei.	0.0%	87.6%	12.4%	100.0%
	Resident	Count	2	22	0	24
		% within Rel. with Nei.	8.3%	91.7%	0.0%	100.0%
Total		Count	3	126	14	143
% within Rel. with Nei.		2.1%	88.1%	9.8%	100.0%	

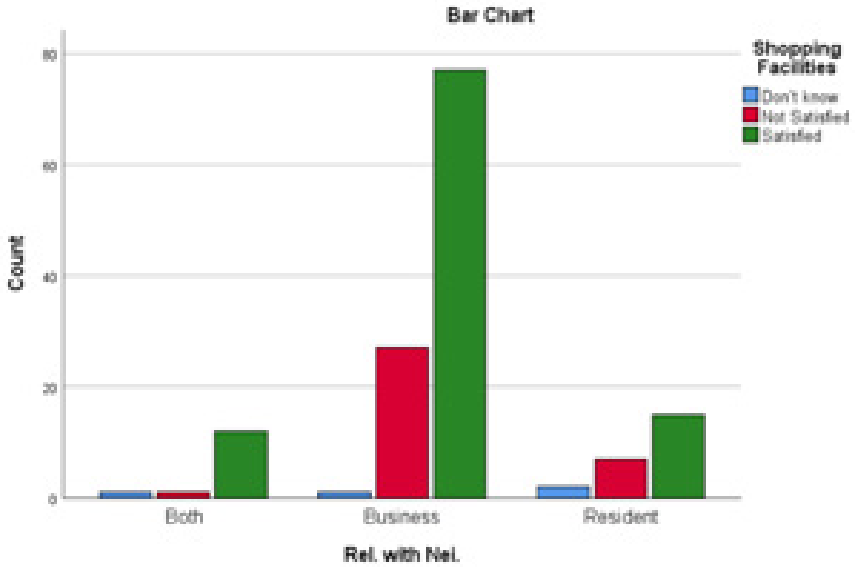

Figure 9.Bar Chart of Relation with Neighborhoods vs. Shopping Facilities

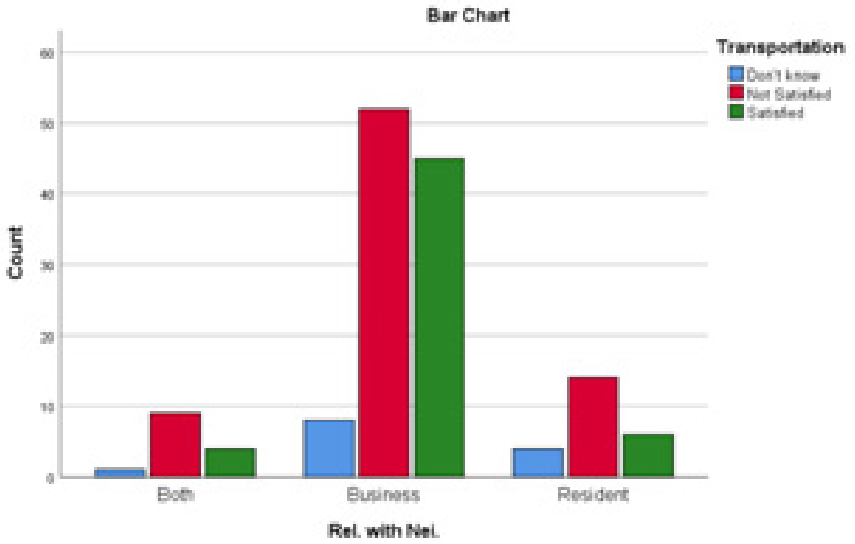

Figure 10.Bar Chart of Relation with Neighborhood vs. Transportation

Table 16.Statistical Results From Questionnaires Associated of Relation with Neighborhood and Road Network Cross Tabulation

Don't know Not Satisfied			Road network			Total
			Satisfied			
Rel. with Nei.	Both	Count	1	10	3	14
		% within Rel. with Nei.	7.1%	71.4%	21.4%	100.0%
	Business	Count	10	71	24	105
		% within Rel. with Nei.	9.5%	67.6%	22.9%	100.0%
	Resident	Count	3	15	6	24
		% within Rel. with Nei.	12.5%	62.5%	25.0%	100.0%
Total		Count	14	96	33	143
% within Rel. with Nei.		9.8%	67.1%	23.1%	100.0%	

Table 17.Statistical Results From Questionnaires Associated of Relation with Neighborhood Cross Tabulation

Don't know Not Satisfied			Noise pollution			Total
			Satisfied			
Rel. with Nei.	Both	Count	0	14	0	14
		% within Rel. with Nei.	0.0%	100.0%	0.0%	100.0%
	Business	Count	8	84	13	105
		% within Rel. with Nei.	7.6%	80.0%	12.4%	100.0%
	Resident	Count	2	20	2	24
		% within Rel. with Nei.	8.3%	83.3%	8.3%	100.0%
Total		Count	10	118	15	143
% within Rel. with Nei.		7.0%	82.5%	10.5%	100.0%	

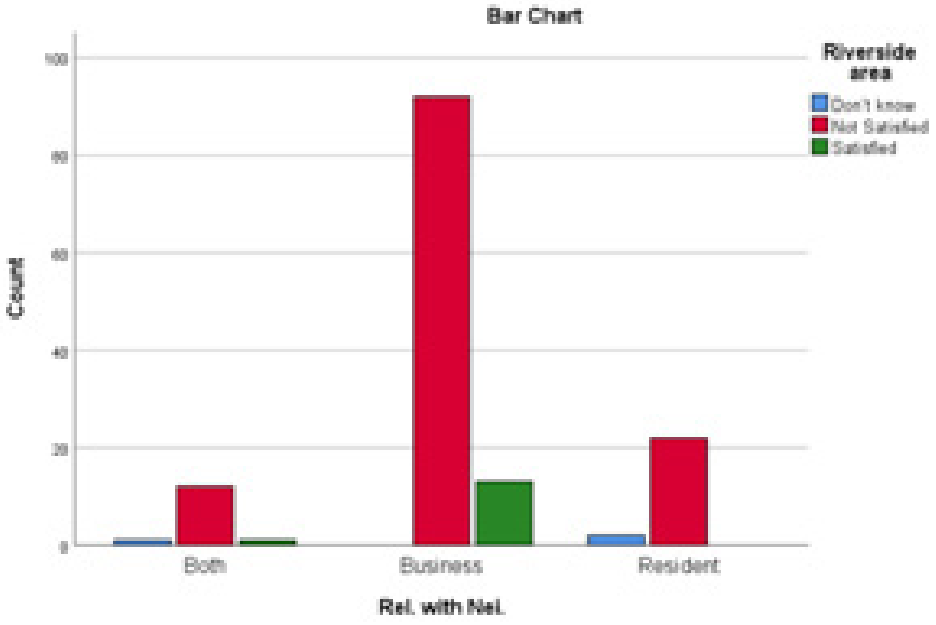

Figure 11.Bar Chart of Relation with Neighborhood vs. River Side Area

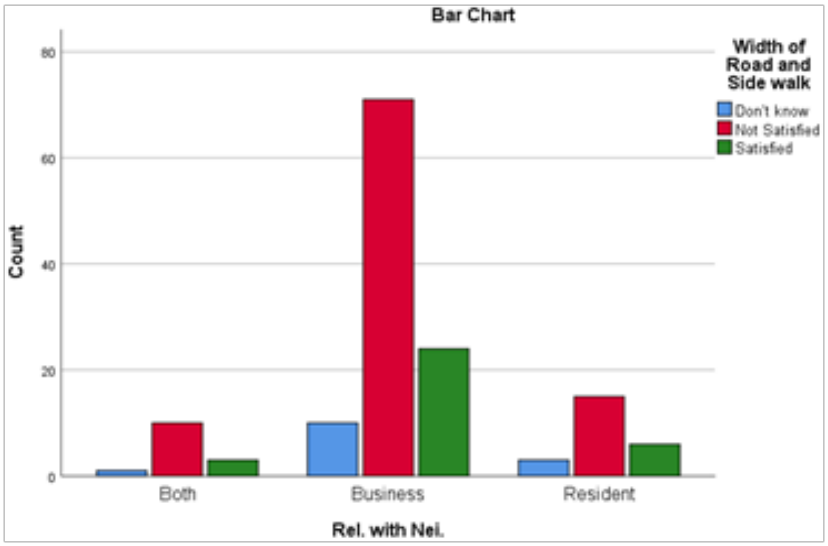

Figure 12.Bar Chart of Relation with Neighborhood vs. Road Network

Table 18.Statistical Results From Questionnaires Associated of Relation with Neighborhood and Drainage System Cross Tabulation

Don't know Not Satisfied			Drainage system			Total
			Satisfied			
Rel. with Nei.	Both	Count	0	12	2	14
		% within Rel. with Nei.	0.0%	85.7%	14.3%	100.0%
	Business	Count	6	89	10	105
		% within Rel. with Nei.	5.7%	84.8%	9.5%	100.0%
	Resident	Count	0	19	5	24
		% within Rel. with Nei.	0.0%	79.2%	20.8%	100.0%
Total		Count	6	120	17	143
% within Rel. with Nei.			4.2%	83.9%	11.9%	100.0%

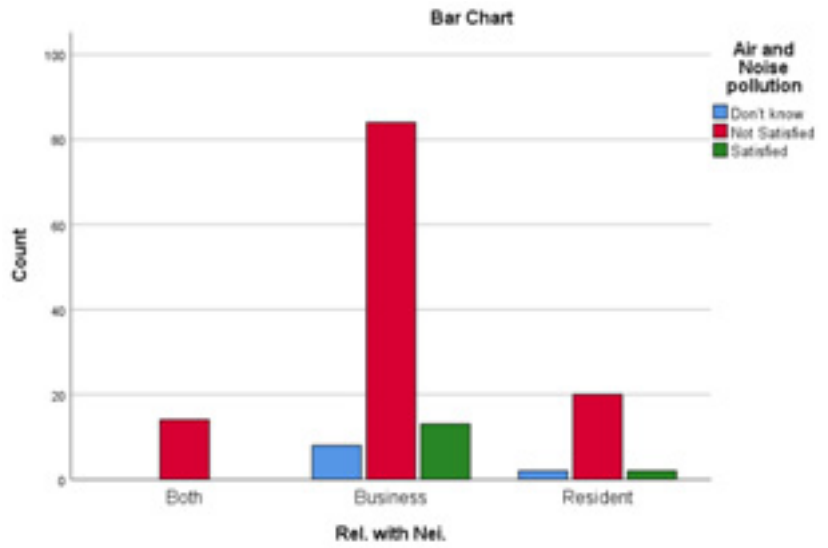

Figure 13.Bar Chart of Relation with Neighborhood Vs. Noise Pollution

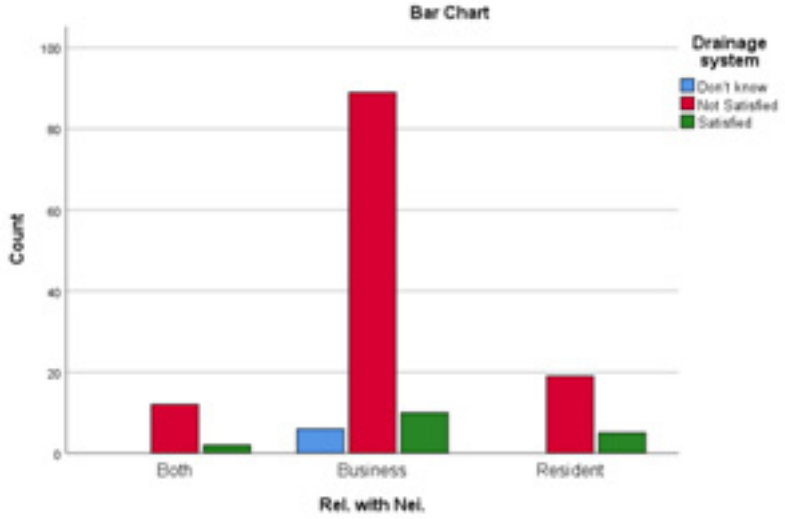

Figure 14.Bar Chart of Relation with Neighborhood Vs. Drainage System

Table 19.Statistical Results From Questionnaires Associated of Relation with Neighborhoods and Accessibilities Cross Tabulation

Don't know Not Satisfied			Accessibilities – hospitals, bazaar, services, schools / college			Total
			Satisfied			
Rel. with Nei.	Both	Count	0	5	9	14
		% within Rel. with Nei.	0.0%	35.7%	64.3%	100.0%
	Business	Count	3	48	54	105
		% within Rel. with Nei.	2.9%	45.7%	51.4%	100.0%
	Resident	Count	1	10	13	24
		% within Rel. with Nei.	4.2%	41.7%	54.2%	100.0%
Total		Count	4	63	76	143
% within Rel. with Nei.			2.8%	44.1%	53.1%	100.0%

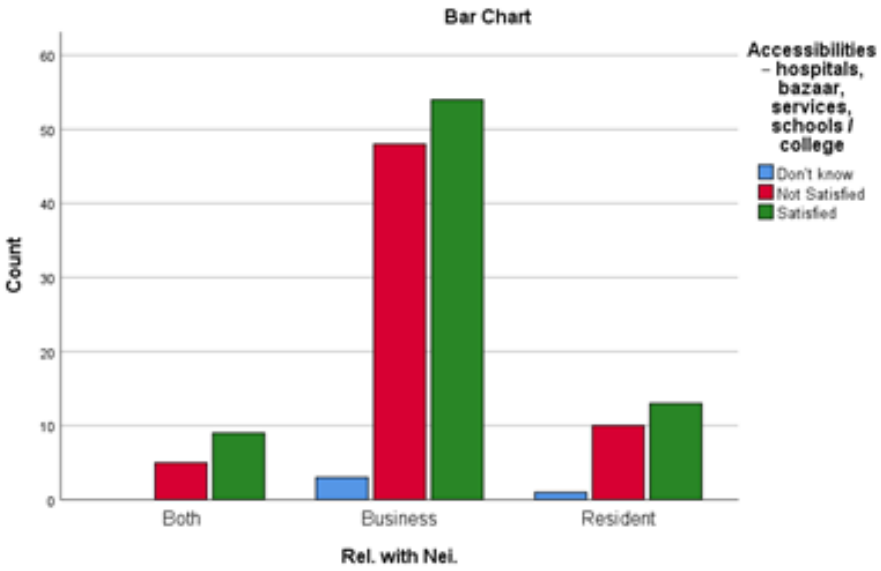

Figure 15.Bar Chart of Relation with Neighborhood vs. Accessibilities