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Spatial Prospects of Commercialization of Samanabad, Lahore

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Abstract

Spatial prospects of land-use commercialization are studied using the method of finding Pearson correlation coefficients. It was discovered that the current layout of Main Road, *Samanabad* carries a spectrum of opportunities if an effective policy is made and implemented, timely. It was concluded that there still exists a significantly large green area which can help alleviate noise and pollution. Service lanes and medians are still not entirely barren and service lanes are still functional. The structure of the Main Market, *Samanabad* along with several half-a-century old houses on Main Road is still intact. Due to the nature of commercialization, the existing buildings still have not risen to heights which require high infrastructural loads (such as electricity and water). Even natural light is still accessible to several single room apartments of originally-designed Main Market. All these factors can be preserved using site-specific planning regulations.

Keywords: spatial, commercialization, Samanabad, Lahore

Introduction

With a growing population and increasing urbanization, there is an ever-greater pressure of land-use conversion on the cities of Pakistan. This fact, along with the lack of an effective mechanism to enforce town planning, has resulted in mushroom growth of haphazard commercial activity penetrating deep into residential areas. Where negative impacts on built environment are usually associated with land-use conversion, the phenomenon keeps on spreading. Therefore, an empirical investigation is needed of how the force of commercialization can be mitigated and/or diverted to the best use for the maximum number of stakeholders of an area.

Main Road, *Samanabad*, Lahore is one of the emerging commercial corridors in Lahore. Its peculiar nature of commercial activity, the history of the town and its linkages with rest of the city, the memory of the people

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along with their aspirations for their future, all of them are intertwined with the process of commercialization.

1.1. Historical Importance of Samanabad

Present-day *Samanabad* is the first post-partition planned society of Lahore and the oldest posh area of the city developed in 1950's. The objective of this housing scheme was to accommodate the enormous influx of refugees (Rehman, 2013). Currently, it is a major residential area near the Central Business District situated in the neighborhood of Multan Road, Mozang, Gulshan-e-Ravi, Islamia Park, Ichra and Iqbal Town. According to Qadeer (1983), *Samanabad* was spread across an area of 2,050 acres with 61 persons per acre density in 1983. It was a planned scheme with bungalows (just like Gulberg) and its subordinate land-use included both commerce and workshops besides the residential area. Furthermore, its water supply and sewerage were ranked 'good' despite having a 'poor' drainage for its natural relative depression in topography.

The first detailed master plan of *Samanabad* was published by LIT along with the master plans of Gulberg and Shadbagh (Please see Map 2). The scheme under the original plan covered an area of 134 acres and targeted at providing middle class housing. There was proposed a central spine with green medians on its both sides and middle-class residential quarters sprouting away from it. The developmental phase is documented below. The images are borrowed from Lahore, Today and Tomorrow, LIT Publication.

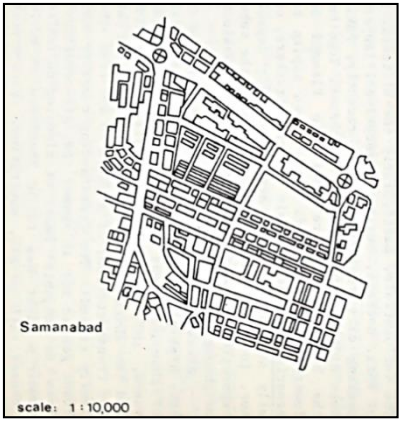

Figure 1. General Planning Layout (Source: Lahore: Urban Development in the Third World.)

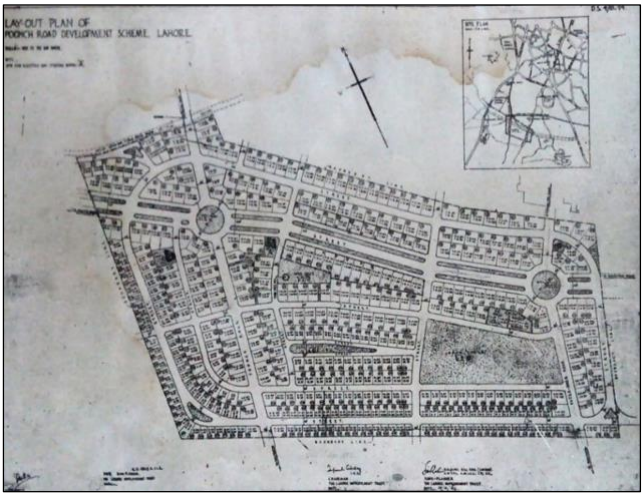

Figure 2. Main road Samanabad, Lahore (Source: Lahore today and tomorrow)

The next important phase was the construction of residential quarters for middle-class income group. Currently converted into N-block housing, the quarters were uniformly spread out in *Samanabad*. All of these quarters have now been converted to private residential and commercial property. Housing infrastructure was laid out for the quarters. It is noticeable that the change in requirement of services from quarters to private housing is different from the change in requirement of services when quarters and/or private housing is converted for commercial use. Residential areas near increased commercial activity therefore suffered more in terms of services and constant need of upgradation.

Figure 3. Trees are being planted along the Roads (Source: LIT)

Currently, *Samanabad* is a major residential area and an administrative subdivision of Lahore housing about 250,000 people and is neighbored by Multan Road, Mozang, Gulshan-e-Ravi, Islamia Park, Ichhra and Iqbal Town (H & PP Department, 1993). Lahore's largest market of second hand/used cars is also in *Samanabad*, which starts from Gulsha-e-Ravi and ends at Mozang. Most of the residential units in the area were built in the 1960-70s. This area is known for small but lush green playgrounds, abundant trees and privately maintained green beds. The locality is also home to *Doongi* Ground Cricket Stadium and *Samanabad* Football club which hosts local matches usually of the *Samanabad* Cricket Club and of *Samanabad* football club. LDA Sports Complex is also situated in *Samanabad*.

1.2. Land-Use Commercialization in Lahore

Unfortunately (unauthorized) land-use commercialization is a common phenomenon in developing world only. Developed world has largely overcome land-use related issues not only through effective town planning but also through its effective implementation. Qadeer (1983) associated this process in the region with colonial era's rigid planning methods. Shahzad (2008) pointed out 'trends of shopping' as one of the causes of commercialization in his research work *Commercialization and Impact on the Built Environment: The Case Study is Main Boulevard Lahore*. Trends take on special importance as an imperative force of commercialization when it comes to more specialized markets like car-sale market in *Samanabad*. However, it is not by chance that this specialized form of commercialization has been gathering momentum in *Samanabad*, Main Road ever since (Khan, 1994).

LDA is the planning and regulatory body in Lahore which addresses the process of commercialization. It was made in 1936 under the title of Lahore Improvement Trust and continues to provide planning and regulatory services to date (HUD & PHED, 2001).

1.3. Lahore Improvement Trust, 1936

The British established Improvement or Development Trusts in major parts of India during the late colonial era, for example Bombay Improvement Trust (BIT) and Lahore Improvement Trust (LIT) which planned *Samanabad*. These Trusts reflected the modern growth of town planning in Britain with its emphasis on the clearance and redevelopment

of congested inner city areas and the creation of integrated new residential areas (Talbot, 2006). The Lahore Improvement Trust was created in 1936 and continued operation after the independence as Lahore's principal urban development agency (Ezdi, 2007). Qadeer (1983, pg. 86) points out that contrary to Western practice, private agencies leapfrogged to the vacant lands in periphery of planned societies and private builders did the infilling. For example, in case of *Samanabad*, the vacant periphery land was rapidly converted into communities such as *Rasool* Park and *Naya Mozang*. In 1975, the Lahore Development Authority was created under the LDA Act 1975 and replaced LIT. Commercialization process is laid out, carried out and regulated by Lahore Development Authority to date. There have been made several plans, policies and bylaws and this process continues since planning is a continuous process. Following are some important milestones in commercialization policy of Lahore.

1.3.1. 1980 policy. 1980 was an important year in terms of planning regulation because in this year LDA worked out a series of recommendations after consultation from local and foreign professionals. One of the results of this activity was Structural Plan 1980.

1.3.2. 1982 policy. Commercial policy articulated in 1982 study was more focused with respect to actual plot sizes, mix-land use policies, construction and renovation bylaws and tools to administer the grow of commercial policy. It was in this policy that the subdivision of residential plots was allowed in a way that the actual property would not change; only the land-use would.

1.3.3. 1988 policy. 1988 commercial policy pinpointed issues of planning which were inseparable from the process of commercialization. Parking bylaws were articulated and

several fee structures were re-adjusted/introduced to discourage unwanted commercialization.

1.3.4. 1993 policy. LDA often surgically addresses the land-use issues of a given site. However, the next major milestone in the development of commercial policy was 1993 policy. The proceedings of this study formulated infrastructure-related bylaws such as building offsets and road widths. It was decided that in cases where adjacent property owners exploited the commercialization process of a given property, the case would

be analyzed and the administration would intervene in such disputes in order to protect larger public interest.

1.3.5. 2001 policy. Commercialization committees were empowered through this policy and the fee structure for their services was formed. It was decided that No Objection Certificate would only be required from individuals of adjacent property on roads which were not publically declared commercial.

1.3.6. present day policy. Currently, LDA is regulating commercialization process through a holistic approach. List of commercial corridors has been updated and unauthorized commercial activity is regularized through 10% surcharge on given fee structure. Partial Commercialization (not allowed in 2011 Police) has been made easier through a lenient take on acquiring NOC. Where it promises some advantage in given cases, it has also promoted a much more chaotic pattern of commercialization throughout the city.

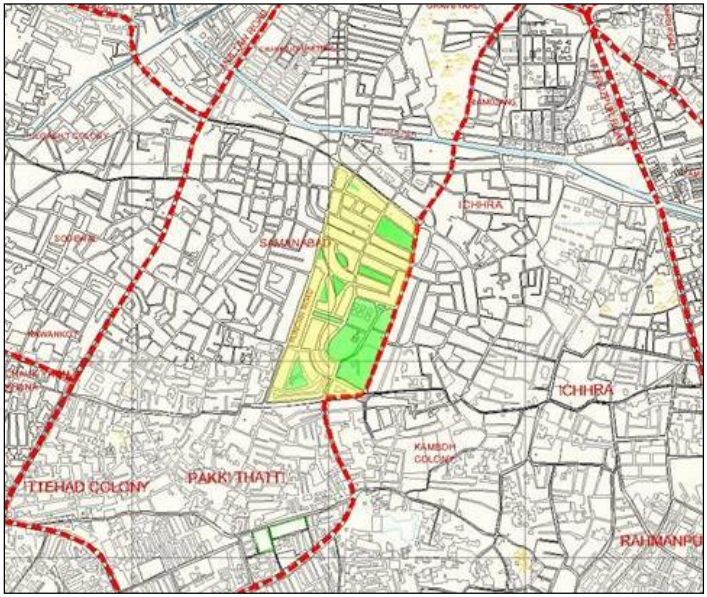

Figure 4. Samanabad highlighted in yellow (residential and commercial) and green (parks and recreational).

1.4. Commercialization in Samanabad

A lot of haphazard commercial activities have mushroomed with the advent of latest LDA Commercialization policies. One of the biggest

problems regarding this issue is the 'nature and type' of commercial activities which are not always compatible with each other in haphazard pattern of growth. Right now there are workshops, banquet halls, general stores and small markets scattered all over the residential area. There are, however, three main corridors in *Samanabad* which have commercialized significantly, Poonch Road, Ghazali Road and the Main Road. Only the Main Market along Main Road, *Samanabad* was 'planned' for commercial activity. All commercial activity on rest of the above mentioned strips was initially illegal. , It is important to understand the relationship of the Main Road with the development around it on the other two commercial corridors because they intersect the Main Road, and the nature of their commercial activity has relevance to the planning policy of Main Road.

There are two important shopping centers in *Samanabad* namely Main Market (between first and second roundabout) at the Main Road and the Mini Market near Central Model School, *Samanabad*. These two markets were planned for commercial activity. However, illegal commercial development sprung up and seeped through into the residential area. *Samanabad* is also known for its roundabouts. The First Roundabout (Pehla Gol Chakkar) is situated on the way from Morrhe *Samanabad.* The Second Roundabout (Doosra Gol Chakkar) is near the Telephone Exchange. The Third Roundabout (Teesra Gol Chakkar/Chaudhry Colony Stop) is located near *Samanabad* Girls College.

Figure 5. (Left): *Samanabad* first round-about, development underway (Right): *Samanabad* first round-about at present

2. Research Methodology

There are five essential components of a commercial space: 1. Showcase Space 2. Storage Space 3. Circulation Space 4. Open space and 5. Parking Space. Twelve spatial parameters have been considered for the purpose of this research. They are electric poles and cables, water and sewerage, air quality, noise, heat, access to natural light, trees and vegetation, condition of roads and pavements, pedestrian accessibility, vehicular accessibility, existing built environment on account of its structure and existing built environment on account of its aesthetics.

2.1. Independent, Dependent and Extraneous Variables

The following three types of variables were deployed in the research.

Independent variables were showcase space, storage space, customer circulation space, parking space, open space

Dependent variables were water and wewerage System, electric poles and cables, roads and pavements, pedestrian movement, vehicular movement, eair pollution, noise pollution, heat, natural light, green and vegetation, existing building structures, existing building aesthetics

Extraneous Variables were price of the plots, climatic anomalies (rain water inundates *Samanabad* quickly as compared to other areas of Lahore. It is because *Mozang* and *Samananabad* are topographically lower areas of the city), crime, real estate politics, time and season.

2.2. Sampling

The following formula was used to calculate sample size n for population N.

$$\mathbf{n = [z2 * (1-p)] / e2 / 1 + [z2 * p (1-p)] / e2 * N]}$$

Where,

z = z-score

e = margin of error

p = standard of deviation

The sample size was calculated to be

n = 281

With stratified proportionate samples of:

n1= 28 (Commercial: Car Showrooms)

n2= 112 (Commercial: Other)

n3= 141 (Residential)

Finally, the K^{th} interval turned out to be 2.2, that is, every alternate sample was considered with ease of accessibility as the criterion for pairs which allowed adjusting the extra fraction.

2.3. Data Collection and Documentation

Only incomplete land-use documentation had been done before this research. Therefore, land-use map for the entire commercial corridor was prepared before conducting the surveys.

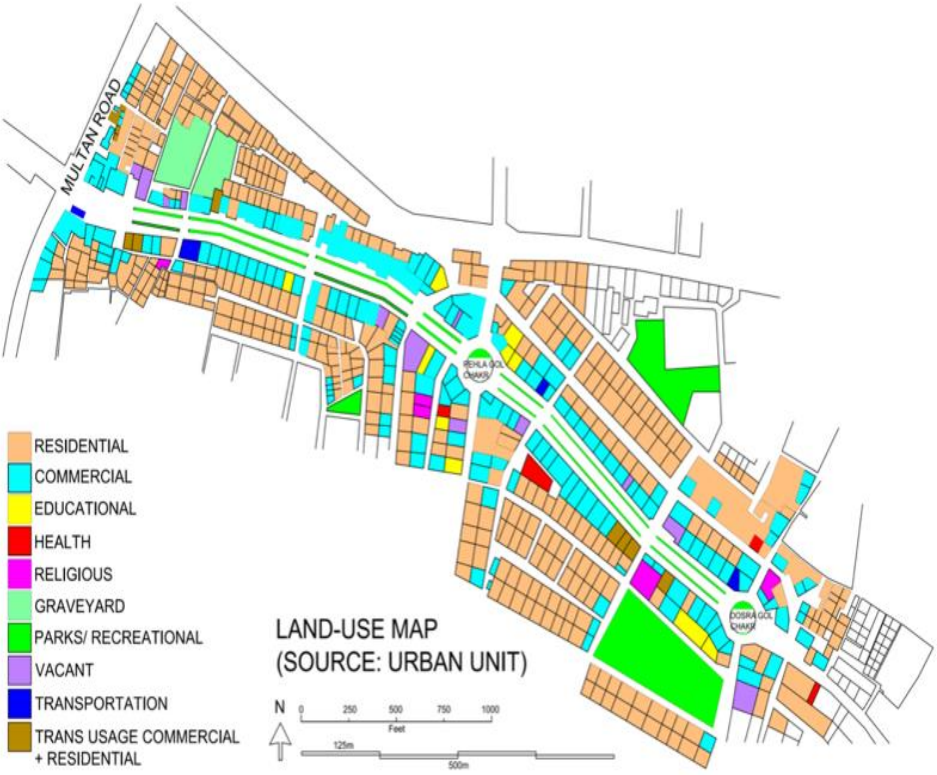

Figure 6. Land-use map of main road, *Samanabad*, Lahore

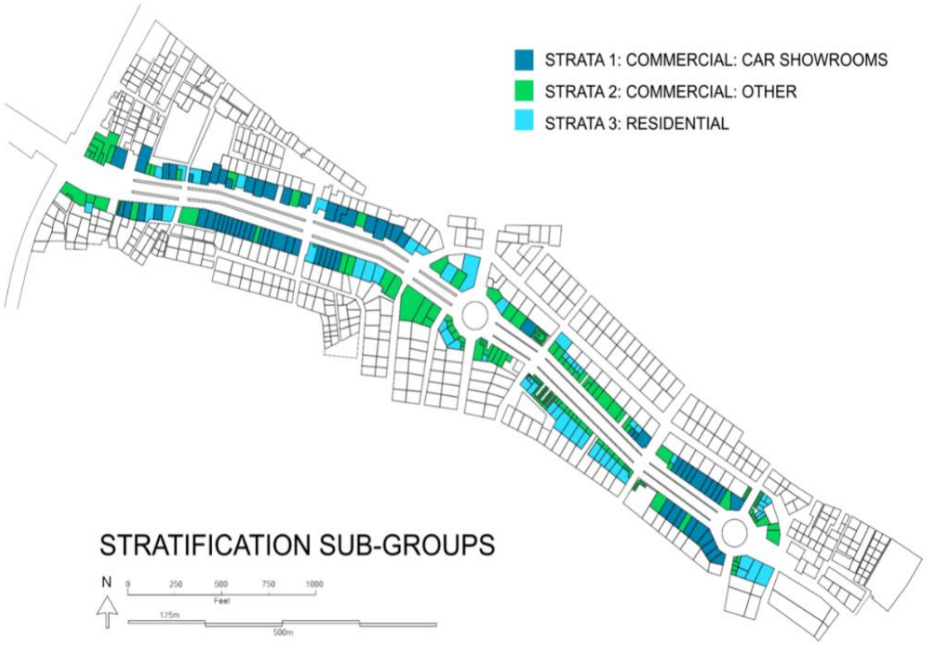

Figure 7. Stratified subgroups at main road, *Samanabad*, Lahore

Following charts illustrate the priorities and proportion of each subgroup.

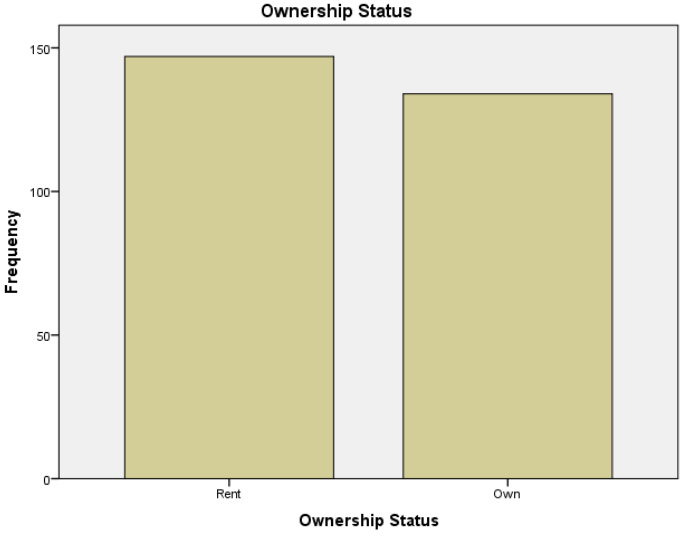

Figure 8. Ownership vs rent, total sample set

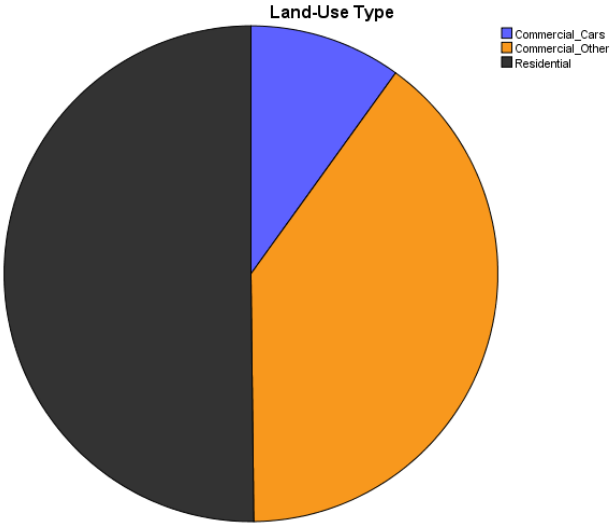

Figure 9. Proportions of land-use type in total sample set

2.4. Desire for Full Commercial Corridor

The total number of responses were split in a considerably balanced fashion with a slight tilt in favor of full commercialization.

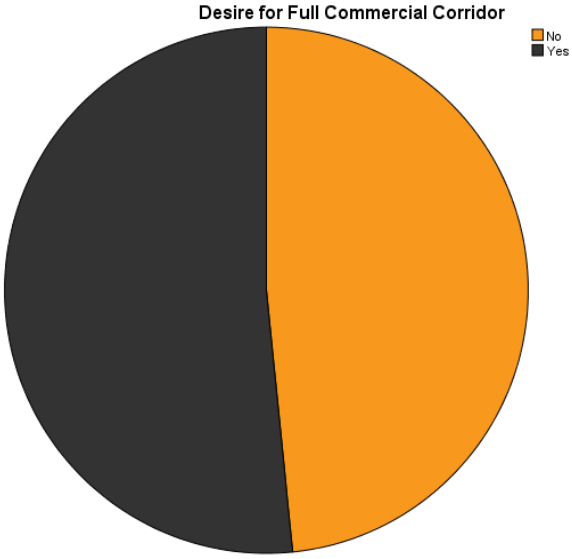

Figure 10. Proportion of respondents in favor of full commercial corridor (grey)

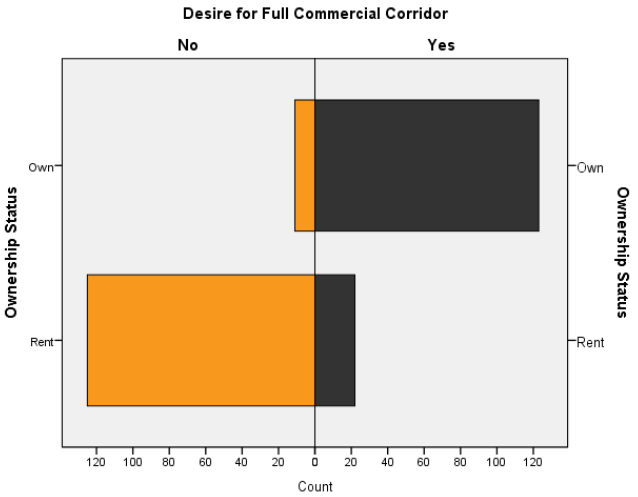

Figure 11. Ownership status vs desire for full commercial corridor

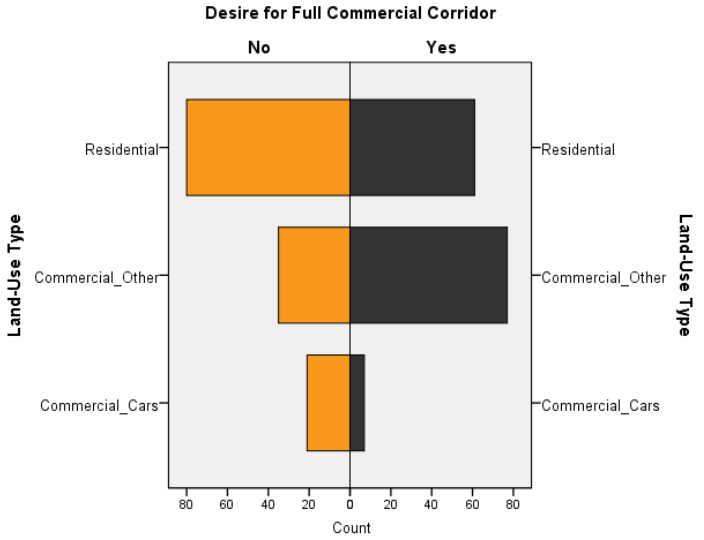

Figure 12. Land-use type and desire for full commercial corridor

3. Research Findings

Following charts illustrate the level of opportunity for commercial activity on Main Road, *Samanabad* as pointed out by each group of respondents. Black line indicates the category of samples who opted in favor of commercialization. Orange line represents the responses of those who are against it. The results open up new doors of understanding.

3.1. Showcase Space

There is a huge opportunity for good showcase space in the existing layout and pattern of commercialization on Main Road. The response primarily refers to the car dealership in area.

The quiet service lanes and the already established reputation of the market along with other parameters imply a good showcase space. The basic structure of Main Market, *Samanabad* is still intact as well and with old businesses moving out there is room for new businesses to showcase their products. Already, a number of new clothing brands have opened up their franchisees in Main Market, *Samanabad*.

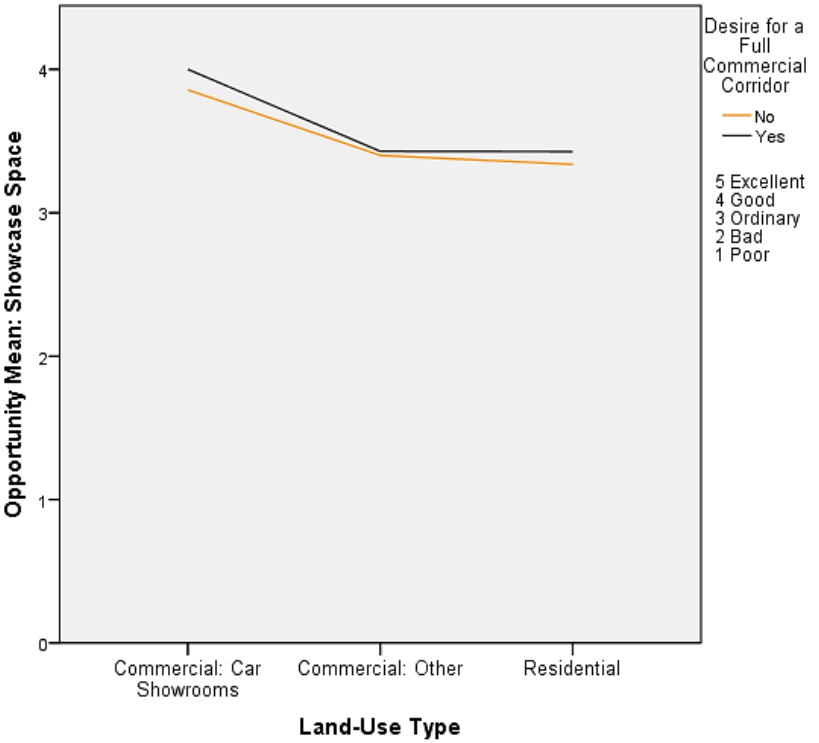

Figure 13. Opportunity (mean) for adequate showcase space on the main road

3.2. Storage Space

Car dealers never lose the appetite for more storage space. Nor do they want their competitors to occupy all the space. But once residents

point out the deficiency in storage space, it gives new insight to the planners. Despite the existing car dealership already causing disturbance in pedestrian and vehicular mobility, there is still room for new businesses to develop. There is an opportunity for car dealers to occupy and merge the two ends of Main Market into a ribbon of showrooms extending from the second round-about at one end and disappearing into Gulshan Ravi at the other. This little opportunity, recognized by those too who are against commercialization, could result in the effacing of Main Market entirely. Hence, it could be a hazard in disguise if not dealt with preemptive measures.

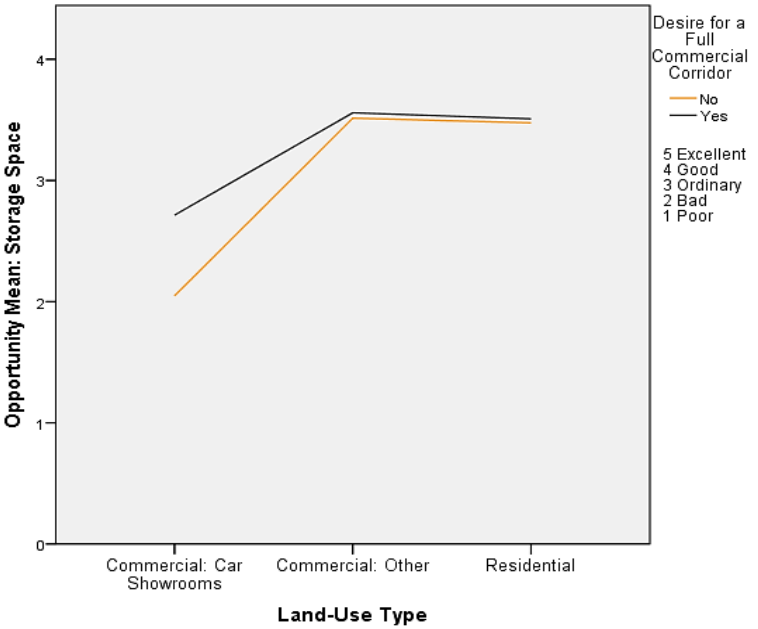

Figure 14. Opportunity (mean) for adequate storage space on the main road

3.3. Circulation Space

According to the car dealers located on Main Road, their workers are often arrested by police for illegally parking cars and blocking roads to the traffic, only to be released over night. Furthermore, they are the ones directly causing this problem. So, the validity of their response that there is a good opportunity for circulation space is questionable. However, residential respondents, being closest to the market, make the maximum number of trips to and fro these streets and roads. So, when they say that

there is an insufficient level of opportunity for good circulation, their outcome is more credible.

Figure 15. Circulation space in main market, Samanabad

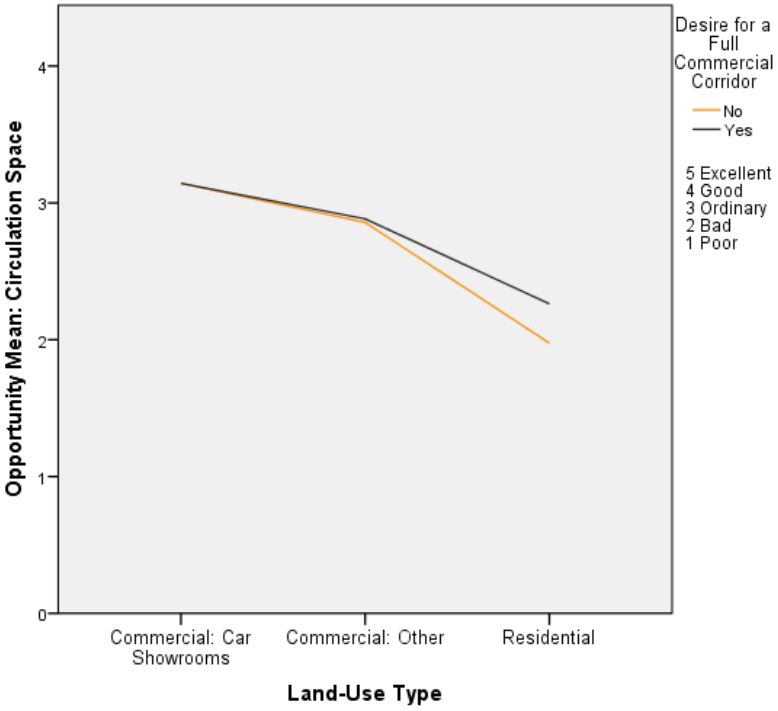

Figure 16. Opportunity (mean) for adequate circulation space on the main road

3.4. Open Space

Although largely taken over by built environment, open space in the form of medians and round-about is still a big prospect for commercialization. Future commercialization, if regulated and supervised, can harness this asset for the benefit of all stakeholders involved. Following is a comparison of how two proprietors' dealt with the same opportunity they had. In the first case, Shekhoo Restaurant owners occupied the median, a public domain, by tying up their animals in vested self-interest. Animals ate up the green and the belt was rendered barren. On the contrary, Al-Baraq Fast Food restaurant did some landscaping inside the belt and consequently has a very nice atmosphere for families to sit and enjoy especially at night. It is not their commercial sitting area, but customers tend to buy something from them in order to experience the ambiance at its fullest.

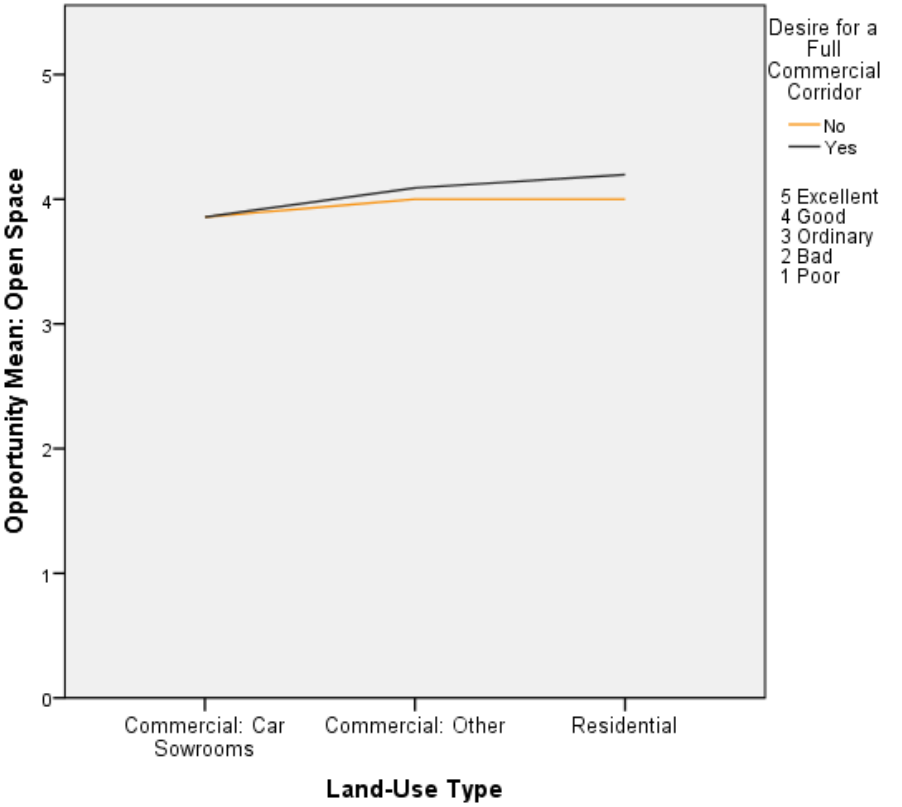

Figure 17. Opportunity (mean) for adequate open space on the main road

Figure 18. Condition of median in front of Sheikhoo Restaurant, main market, Samanabad

Figure 19. (Left) and (Right): Condition of median in Front of Al-Baraq Restaurant, main market, Samanabad during the day (Left) and night (Right)

3.5. Parking Space

Residents believe there is a poor opportunity for residents to park their cars outside their property. Car dealers, being accused of occupying public property, state that there is an ample space to park cars.

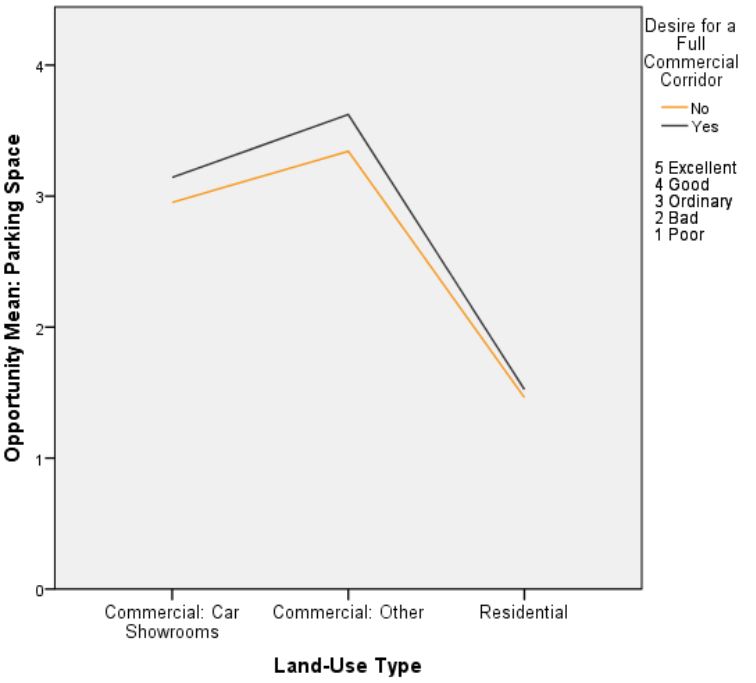

Figure 20. Opportunity (mean) for adequate parking space on the main road

Figure 21. A resident's car parked at main road, Samanabad

4. Conclusion and Recommendations

Table 1

The conclusions and recommendations were drawn with the help of following co-relation matrix.

		Showcase Space	Storage Space	Circulation Space	Open Public Space	Parking Space	Infrastructure: Water and Sewerage	Infrastructure: Electric Poles and Cables	Environment: Green and Vegetation	Environment: Natural Light	Environment: Heat	Environment: Air Pollution	Environment: Noise Pollution	Infrastructure: Roads and Pavements	Accessibility: Pedestrian Movement	Accessibility: Vehicular Movement	Existing Building Structures	Existing Building Aesthetics
Showcase Space	Pearson Correlation	1	-.102	.060	-.038	.065	.032	-.087	-.020	.016	-.023	-.043	.032	-.070	-.044	-.066	-.039	-.119*
	Sig. (2-tailed)		.087	.314	.528	.278	.596	.145	.741	.793	.702	.474	.591	.243	.463	.271	.514	.047
	N	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281
Storage Space	Pearson Correlation	-.102	1	-.008	-.009	-.059	.034	.136*	.048	.072	-.021	.128*	.062	.188**	.064	.150*	.150*	.130*
	Sig. (2-tailed)	.087		.899	.879	.320	.574	.023	.426	.229	.731	.032	.297	.002	.286	.012	.012	.029
	N	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281
Circulation Space	Pearson Correlation	.060	-.008	1	.028	.285**	.029	-.048	-.191**	-.051	-.031	-.101	-.080	-.065	-.040	-.116	-.193**	-.152*
	Sig. (2-tailed)	.314	.899		.645	.000	.623	.423	.001	.395	.599	.092	.181	.279	.500	.052	.001	.011
	N	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281
Open Public Space	Pearson Correlation	-.038	-.009	.028	1	.033	.008	-.021	.108	-.023	.025	.042	.020	-.005	.066	.129*	.056	.097
	Sig. (2-tailed)	.528	.879	.645		.580	.895	.724	.070	.703	.673	.486	.740	.936	.270	.030	.350	.104
	N	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281
Parking Space	Pearson Correlation	.065	-.059	.285**	.033	1	-.043	-.088	-.443**	-.034	-.096	-.083	-.075	-.159**	-.133*	-.321**	-.491**	-.070
	Sig. (2-tailed)	.278	.320	.000	.580		.475	.143	.000	.568	.107	.166	.208	.008	.026	.000	.000	.244
	N	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281
Infrastructure: Water and Sewerage	Pearson Correlation	.032	.034	.029	.008	-.043	1	-.121*	.015	.030	.062	-.029	.032	.008	-.032	.027	.099	-.068
	Sig. (2-tailed)	.596	.574	.623	.895	.475		.043	.800	.615	.299	.631	.596	.894	.596	.647	.099	.255
	N	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281
Infrastructure: Electric Poles and Cables	Pearson Correlation	-.087	.136*	-.048	-.021	-.088	-.121*	1	.045	-.121*	-.080	.077	.080	.159**	.107	.086	.107	.233**
	Sig. (2-tailed)	.145	.023	.423	.724	.143	.043		.455	.042	.183	.198	.179	.007	.073	.152	.074	.000
	N	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281
Environment: Green and Vegetation	Pearson Correlation	-.020	.048	-.191**	.108	-.443**	.015	.045	1	.045	-.007	.093	.010	.102	.189**	.259**	.390**	.098
	Sig. (2-tailed)	.741	.426	.001	.070	.000	.800	.455		.450	.906	.120	.871	.087	.001	.000	.000	.142
	N	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281
Environment: Natural Light	Pearson Correlation	.016	.072	-.051	-.023	-.034	.030	-.121*	.045	1	.062	.044	-.042	-.032	-.038	.007	.072	.042
	Sig. (2-tailed)	.793	.229	.395	.703	.568	.615	.042	.450		.302	.464	.488	.597	.526	.904	.230	.483
	N	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281
Environment: Heat	Pearson Correlation	-.023	-.021	-.031	.025	-.096	.062	-.080	-.007	.062	1	-.043	-.001	.002	-.085	.007	-.021	.092
	Sig. (2-tailed)	.702	.731	.599	.673	.107	.299	.183	.906	.302		.470	.984	.969	.155	.912	.731	.124
	N	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281
Environment: Air Pollution	Pearson Correlation	-.043	.128*	-.101	.042	-.083	-.029	.077	.093	.044	-.043	1	.156**	.314**	.006	.112	.129*	.136*
	Sig. (2-tailed)	.474	.032	.092	.486	.166	.631	.198	.120	.464	.470		.009	.000	.919	.060	.031	.023
	N	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281
Environment: Noise Pollution	Pearson Correlation	.032	.062	-.080	.020	-.075	.032	.080	.010	-.042	-.001	.156**	1	.130*	.067	.113	.149*	.046
	Sig. (2-tailed)	.591	.297	.181	.740	.208	.596	.179	.871	.486	.984	.009		.030	.145	.058	.012	.447
	N	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281
Infrastructure: Roads and Pavements	Pearson Correlation	-.070	.188**	-.065	-.005	-.159**	.008	.159**	.102	-.032	.002	.314**	.130*	1	-.005	.167**	.144*	.160**
	Sig. (2-tailed)	.243	.002	.279	.936	.008	.894	.007	.087	.597	.969	.000	.030		.927	.005	.016	.007
	N	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281
Accessibility: Pedestrian Movement	Pearson Correlation	-.044	.064	-.040	.066	-.133*	-.032	.107	.189**	-.038	-.085	.006	.087	-.005	1	.038	.097	.053
	Sig. (2-tailed)	.463	.286	.500	.270	.026	.596	.073	.001	.526	.155	.919	.145	.927		.528	.105	.380
	N	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281
Accessibility: Vehicular Movement	Pearson Correlation	-.066	.150*	-.116	.129*	-.321**	.027	.086	.259**	.007	.007	.112	.113	.167**	.038	1	.387**	.167**
	Sig. (2-tailed)	.271	.012	.052	.030	.000	.647	.152	.000	.904	.912	.060	.058	.005	.528		.000	.005
	N	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281
Existing Building Structures	Pearson Correlation	-.039	.150*	-.193**	.056	-.491**	.099	.107	.390**	.072	-.021	.129*	.149*	.144*	.097	.387**	1	.071
	Sig. (2-tailed)	.514	.012	.001	.350	.000	.099	.074	.000	.230	.731	.031	.012	.016	.105	.000		.236
	N	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281
Existing Building Aesthetics	Pearson Correlation	-.119*	.130*	-.152**	.097	-.070	-.068	.233**	.088	.042	.092	.136*	.046	.160**	.053	.167**	.071	1
	Sig. (2-tailed)	.047	.029	.011	.104	.244	.255	.000	.142	.483	.124	.023	.447	.007	.380	.005	.236	
	N	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

The relationship between the following pairs of variables indicate spatial prospects of commercialization in the highest degree.

4.1. Between "Opportunity for Providing Parking Space" and "Bad Effect on Structure of Existing Buildings" (-.491**)

Despite having a large number of car dealers, there is no shortage of space for providing car parking space on Main Road, *Samanabad*. The removal of buildings which have become a structural liability and need to be brought down can provide room for multistoried buildings, There already exists a trend of reaching high with new structures coming up, such as Suzuki Motors franchise building.

It is imperative to provide adequate parking space in the basements of upcoming multistoried structures through preemptive assessment of future development. There is still a possibility that Main Road, *Samanabad* can be kept from chocking in future if parking space is made a priority right now.

Figure 22. (Left) and (Right): A commercial plaza being raised during the course of documentation on main road, Samanabad

4.2. Between "Opportunity for Providing Parking Space" and "Bad Effect on Trees and Greenery" (-.443**)

Businesses, especially car dealership needs shaded parking. Trees planted inside the medians provide shade to the cars parked inside service lane. If this parking space is regulated and a nominal fee is charged, the money can be spent on maintaining the greenery and trees. It forms a closed loop system of mutual interest.

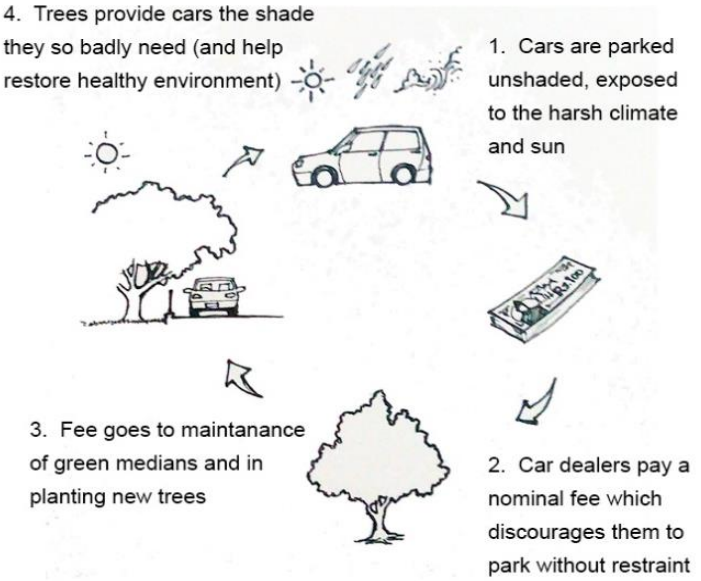

Figure 23. Closed Loop System for Sustainable Car Display (Researcher's Illustration)

The following closed loop system based on the triangulation of the prospect for parking space, green medians and trees facilitates most stakeholders involved**.**

4.3. Between "Opportunity for Providing Parking Space" and "Bad Effect on Vehicular Accessibility" (-.321**)

Car dealers tend to park their cars perpendicular to the property line inside the service lane. It showcases the cars better and allows the dealers to park larger number of cars. However, it restricts vehicular circulation to a considerable degree.

A policy simply restricting the showrooms to parallel parking only can balance commercial activity and residents' mobility/general traffic.

4.4. Between "Opportunity for Providing Circulation Space" and "Bad Effect on Building Structure" (-.193**)

Samanabad Main Market already carries a circulation space for customers. Other-than-car related businesses are consistently moving away (especially on the southern side of the market). Where there is a larger number of empty shops and damaged structures, there is still a great potential in the circulation space to be fully utilized.

Car showrooms should be strictly restricted from penetrating into the Main Market. The main market should be revived through subsidizing other businesses. Once re-developed and fully flourished, and sandwiched between kilometer-long strips of car dealership on either side, the Market will become a magnet for car customers' retreat. Its benefits will not be restricted to market customers only. The presence of adequate circulation space for customers ensures that no major change is required by the structure.

4.5. Between "Opportunity for Providing Circulation Space" and "Bad Effect on Trees and Greenery" (-.191**)

Cars are often parked without any regard to the pedestrian entrance into the green median. These medians run all along the both edges of Main Market. They can still can be revived as they provide a great opportunity of circulation space of car customers.

Cars should not be allowed to block out entrance into the median. Instead, the space should be used by customers and dealers to do paperwork

inside it instead of blocking the road. Furthermore, it should also allow customers on foot to move freely and safely inside it.

4.6. Between "Opportunity for Providing Parking Space" and "Bad Effect on "Roads and Pavements" (-.159**)

Cars are washed continuously 24/7 and the water is drained into the medians. It kills the grass and is not properly drained either because it accumulates on the road causing road damage. A simple water drain would largely keep the roads safer and greenery will be sustained.

There should be water drains running all along the medians so that no water remains standing on the road and/or is disposed of in the median. A simple intervention in this regard can have major consequences.

4.7. Between "Opportunity for Providing Parking Space" and "Bad Effect on Pedestrian Accessibility" (-.133**)

Most buyers visit *Samanabad* car showrooms on foot. They either park their car at one end or don't bring their cars at all. The dealers therefore tend to clock away their mobility so that they (customers) are forced to spend more time in the showrooms. The pattern is more obvious on Sundays when pedestrian flow is large. In this act of self-interest, however, each dealer forgets that every other dealer is also trying to do exactly that. Hence, it affects the whole pedestrian circulation. If cars (and chairs etc.) are not allowed to encroach onto the road, it will benefit all dealers. A policy that forbids dealers to encroach the road in any form is good for all of them.

Relationships between the following pairs of variables indicate spatial prospects of commercialization at lesser degree of priority.

4.8. Between "Opportunity for Providing Circulation Space" and "Bad Effect on Building Aesthetics" (-.152*)

The architecture of detail is best experienced on foot. If building aesthetics are given due diligence in design and preservation, it will enhance the pleasure of the walk. Most of the business done on Main Road, *Samanabad* (including car business) is done by people who walk down the market or service lane full of cars. Building aesthetics and customers' circulation space share a strong mutual interest in this regard.

If buildings of some architectural significance are preserved and advertisements/hoardings are made to follow certain criteria consistently,

the restoration of building aesthetics will positively influence customers' circulation and possibly make them spend more time in the market which is good for dealers and shopkeepers.

4.9. Between "Opportunity for Providing Parking Space" and "Bad Effect on Pedestrian Accessibility" (-.133*)

There is a good opportunity to utilize inbuilt segregation in the layout of Main Road on account of circulation and parking space in both car-related and non-car-related businesses.

Human violations of the laws and regulations need to be restricted, since the existing layout already encourages distinction between parking and circulation space.

4.10. Between "Bad Effect on Water and Sewerage System" and "Bad Effect on "Electric Poles and Cables" (-.121*)

Increased commercialization generally puts on an increased load on electrical and water infrastructure. In case of *Samanabad* Main Market, multi-storied plazas have been coming up only recently. A specialized car market with horizontally spread out goods poses little demand for extra electrical and water supply.

Time is of essence because it wouldn't be like this for long. We need to learn from past experiences and plan ahead of time to protect and flourish good commercial spaces. It will incur minimum damage to build environment if preemptive studies are done for potential (and inevitable) future increase in commercialization. Infrastructure or at least a comprehensive strategy needs to be laid out beforehand.

4.11. Between "Opportunity for Providing Showcase Space" and "Bad Effect on "Existing Building Aesthetics" (-.119*)

There are car dealerships in *Samanabad* which have used the building backdrop to project their businesses magnificently and there are those which have shown complete disregard to what exists beyond their advertisement panel. A customer's experience of the former can largely help the dealer get a better price compared to the later even for the plot of the same size.

Preserving/renovating existing architecture of some aesthetic value, and making new architecture of some visual interest with respect to the context

will help shopkeepers and car dealers showcase their goods better (and consequently to sell them at better price).

5. General Conclusion and Recommendations

Following are some general conclusions drawn from the research.

5.1. Nature of Commercialization

Building regulation and bylaws should address the nature of commercialization in unique instances, like the car showrooms studied in research. Policies should include the unique context and original layout of the site in consideration. For example, byelaws for car-related commercial activity on Jail Road may vary from the byelaws for car-related commercial on Main Road, *Samanabad*.

5.2. Open Space is good for Commerce

Open space in commercial area is good for environment, good for consumers and also good for the sellers. The more time consumers spend in commercial area and the more informal sittings they enjoy there, the greater are the chances for increased sales. It has been discovered in the previous researches that local business owners and residents develop a strong mental image of a place. A good open space in this regard is a platform where people can spend time together and foster an affiliation with the place over a long period of time. It is imperative in order to establish a sense of ownership of a place in the minds of consumers and sellers alike. Particularly, in the case of small markets, where open space is more than often ignored entirely, a healthy, environment friendly open space could turn out to be its most critical spatial aspect in the long run. The odds of sellers (and buyers) beginning to respect the character of a place are better if they are able to develop a sense of ownership and belonging to it in its entirety and not just with their own shops. Where every other shop is naturally a competitor, an open space serves as a knot which binds them all.

5.3. Natural Environment Effects Built Environment

The highest level of damage done by commercialization in the context of Main Road was to the natural environment. However, an insightful outcome in this regard is that business owners seconded residents' opinion on this matter just as strongly. It seemingly justifies from corporate point of view, to cut down trees in order to obtain visual access to building façades or street corners where advertisement boards and hoardings can be

displayed. However, it affects the markets where buyers ought to spend more time. Trees, birds and other features of natural ecology engage human beings. The respondents' feedback suggests contrary to the outrageous corporate intention. It suggests that in areas where people have memories associated with it, built environment should also adjust to trees and natural ecology and should not expand ruthlessly.

5.4. Inter-Departmental Co-operation

One of the biggest reasons why benefits of building bylaws and regulations fail to come through is that there is an apparent inconsistency and/or lack of integration among associated developmental departments. Administrative departments like LESCO, TEPA and PHA should be on the same page about commercialization policy making process at LDA. Furthermore, the departments should fully co-operate for the implementation of these policies and bylaws in order to ensure a sustainable and profitable system for most stakeholders and not just few of them.

5.5. Citizens' Memory and Emotional Association with a Place

One of the major findings of this study is not limited to a qualitative cause-effect relationship but extends beyond tangible data. It is an immeasurable association of people's memory with the place. Although it depends on several other variables beyond the scope of this research, it appears to be one of the strongest generators of their logical opinions. Respondents seemingly recognize themselves with respect to their context and rapid changes in their architectural and social context tends to dissociate them with the place. Car market approaching from both ends of Main Market shows a trend ready to engulf the market in itself very soon. It will not only diminish one of the first planned markets of Lahore but will also devoid people of their memories which trigger emotions and aspirations in them.

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