

AN INVESTIGATION OF ATTRACTION FACTORS OF REAL ESTATE PROJECT BY USING COMPOSITE INDEX

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ABSTRACT

This research aims to contribute in investigation of factors which attracts real estate projects. Due to rapid urbanization, it become a need to develop new housing projects and housing developments are the outcomes of economic and social activities. Main objective of this study is to identify the factors which attract real estate project. There are number of factors connectivity, land, Economy, Social, Educational, health, gender and existing facilities or existing infrastructure area attracting these growth of these projects near rural areas. To know the impacts of these attraction factors Composite Index Method is used. Results of analysis and ranking of these parameters from developers and expert professionals show that the highest impact factors of attraction of real estate projects are existing road network and connectivity, Availability of cheap land and largest chunks of land. It means presence of existing road network and availability of land both are the important factors than existing infrastructure, economy, female community, educational institutes and health facilities. While choosing the location of new housing projects these two factors should be prioritized.

Keywords: Real estate, Composite index, Urbanization, Pakistan.

1. INTRODUCTION

Housing is one of the basic needs of human life. It is the significant part of social and physical environment and in developing countries housing backlog is a very important issue. Housing is not the basic need, it shows the quality of life and living standard. If housing considered in an investment way it promotes economic activities and employment opportunities (Poon et al., 2016). The relation between housing and poverty is very strong. Good quality housing is always associated with infrastructure like water supply, drainage and sanitation, electricity and waste disposal (Ismail & Mahyideen, 2015). But this infrastructure has been ignored in developing countries. Housing in presence of proper infrastructure can provide a wide range of positive impacts like improved health, safety from hazard, security, privacy and social well-being (Choi, 2019). Preferring individual housing on low-cost land is encouraging these Mega housing projects on peri urban land.

In Pakistan there is a housing backlog of 4.3 million units. There is a need of 300,000 housing units per years in Pakistan (Dowall & Ellis, 2009). This housing unit's deficiency is the biggest outcome of continued urbanization. It is estimated that almost 25 % to 33 % urban dwellers of developing countries are living in poverty and can't afford adequate housing (Sarvari et al., 2021). Due to rapid urbanization, it become a need to develop new housing projects. Lack of appropriate space for these housing projects it usually located at the urban fringe and also have a huge impact on surrounding area

Developers generally agrees that development and growth are influenced by four factors (Asfour, 2017). Human resource, Physical Capital, Natural Resource and Technology. Site selection of these real estate projects is a very crucial decision which involves many factors. Main Objective of this

study to investigate attraction factors of real estate project. For the purpose to know, which indicators are becoming the attraction factor for the new housing development several indicators are being selected. Some big housing project, DHA phase I & II Islamabad, Bahria Town Phase VIII Islamabad, Capital Smart city Islamabad, Mumtaz city Islamabad and their surrounding rural areas were selected for the case study.

2. REVIEW OF LITERATURE

In developing countries including Pakistan, there is a severe problem of housing shortage. Officials estimated growth of the country and according to them the growth rate in Pakistan is quite faster than normal (Adler & Ostrove, 1999). According to United Nations center for Human Settlement urban population in Asia and Pacific region is expected to rise from 991 million to 2.44 billion between the era of 1991- 2020. Due to the more demand of housing and less supply of it created a gap between supply and demand in the big cities. This housing Gap is increasing rapidly and the population, especially the lower- and middle-income groups, are forced to live in poorer housing. The gap between housing supply and demand is covered 25% by Katchi Abadis, 60% (Agnewa & Lyons, 2013) by informal land subdivisions and 15% by the densification of urban centers (Bover & Jimeno, 2017). The population cannot afford decent housing in urban areas due to their limited income and rising prices for land and building materials (D'souza, 2019).

The relation between housing and poverty is very strong. Good quality housing is always associated with infrastructure like water supply, drainage and sanitation, electricity and waste disposal. But this infrastructure has been ignored in developing countries. Housing in presence of proper infrastructure can provide a wide range of positive impacts like improved health, safety from hazard, security, privacy and social well-being. Preferring individual housing on low-cost land is encouraging these Mega housing projects on peri urban land. Mega projects can be defined as projects those transform landscape directly and intentionally in a clear way and require a large amount human capital, resources, finance and state power along with the usage of heavy equipment and advance technologies. Mega housing projects are carried out with the aim of providing adequate housing facilities. Most of these projects are located on the city countryside or at urban fringe in the presence of main road or highway. The geographic location of the mega housing projects is influencing nearby rural areas directly and indirectly. Everything comes naturally with some impacts it can be positive, negative and both positive and negative. These housing mega projects brings a change in settlement patterns, landscape and land use of that area where these projects are located.

Housing developments are the outcomes of economic and social activities. The status of infrastructure in housing development cannot be surpassed, as it is vital to its success. The infrastructure systems required for the success of the housing development, including their preferred distances with the help of structured interviews. With six developers and four municipal officials in Michigan. Outcome of this study shows that community infrastructure, utilities, education and employment opportunities are the five main priorities of developers. But priorities of Municipal Officials are different from developers. Digital infrastructure, transportation, Waste management, Utilities and education were the priorities of these officials. By combing the developers and official priorities top infrastructural priorities Digital and transportation infrastructure, Education, Utilities and Employment. This study will be useful to know that which infrastructure require of successful residential development (Hardekar et al., 2018).

Location of new housing development is a major component of the process of creating supportive and successful housing project. It is impossible to have permanent financial and neighborhood support until the location is identified and control of site has been secured. In this study many strategies are discussed in the process of site search. Exploring diverse potential sources of sites, the general categories of sites to consider are following:

Privately owned land: These sites are usually found by real estate brokers and available for lease also. These sites are mostly common but not always the best choice because searching of location should not be limited. **Bank foreclosure:** Most non-public banks preserve lists of "Real estate-owned" (REO) houses that they're seeking to promote to get better their mortgage. They have a tendency to promote at marketplace prices, though they will be inclined to cut price income to non-earnings to advantage **Community Reinvestment Act (CRA) credit.**

Religious properties: This type of religious institution's properties can be sold or leased to nonprofit organizations or sponsors. The purpose of giving land for the development is to sponsor some

organization and they sell mostly at the lower price than market price. Due to economic and population growth the demand of housing is increasing in Surabaya. Because of limited space in the city, government prefer horizontal development. It encourages many developers to build apartments. This study will show that which are the important factors need for decision making regarding the selection of site. Study derives the outcomes that there are nine factors zoning, landownership, Strategic and Planning Corporation, Public Utilities, Supply and demand, prices of land, township, document planning and corporation ability are the important factors which attract the developers of apartments toward them (Krisnaputri et al., 2016).

Site of development projects involves wide range of factors which have long term impacts. Some factors which are essential for selecting a site are: Transportation and optimum distance to minimize the travel distance and maximize the coverage of selected area, also access of roads for loading and unloading the construction material. Environmental Risk: Site should be far from disastrous areas, there should be a proper plan for handling construction waste. Cost: Site should be located operational cost is minimum. Market Economy: Site should be near one major market Site area should have a capacity of high purchasing power and Tax on land should be low. Infrastructure: there should be social security of labor and other workers, availability of good public transport, Benefits from industrial estate and free trade zones and Availability of electricity and water. Resources and utilization: Site should be located near the market of cheap raw material. Land Site: Site should be selected where land is comparatively cheap and near to some development area. Policies and regulations: Policies for quick execution of plans, Competition: attractive environment and ideal location with intensity of competition (Joseph et al., 2011).

3. METHODOLOGY

3.1 Study area

Two types of study areas selected: Developed housing schemes and under developing housing Schemes. In developed DHA phase I & II, Bahria Town Phase VIII and in developing housing schemes Capital Smart city and Mumtaz city were selected. Around each of the housing schemes some areas are also selected for the purpose of data collection, these areas include Kotha Kalan near DHA phase I, Chak 30 AC, Chak 30 AD near DHA phase II, Kharakkan, Kanyat, Gurha near Bahria Town Phase VIII, Village Ghurbal, Dhok Dhumman, Pharma near Mumtaz City and Dhok Shahan, Dhok Budha, Maira Sharif are selected near Capital Smart City.

Table 1 Study area

Sr. no.	Housing projects	Surrounding Areas
1	DHA phase I, Islamabad	Kotha Kalan
2	DHA phase II, Islamabad	Chak 30 AC, Chak 30 AD
3	Bahria Town phase VIII, Islamabad	Kharakkan, Kanyat, Gurha
4	Mumtaz City	Village Ghurbal, Dhok Dhumman, Pharma
5	Capital Smart City	Dhok Shahan, Dhok Budha, Maira Sharif

3.2 Selection of indicators

After interviewing of Senior town Planners, experts and from extensive literature review attraction factors of mega housing projects were shortlisted and grouped into seven factors: Roads and Connectivity, Land, Existing facilities, Economy, Gender, Education and Health as shown in Table 1.

Table 2 Selection of indicators

Sr. no	Parameters	References
1	Roads and Connectivity	(housing, 2013),
2	Land	(Dowall & Ellis, 2009)
3	Existing facilities	(Hardekar et al., 2018).
4	Economy	(housing, 2013)
5	Gender	(Sohail, 2014)
6	Education	(Joseph et al., 2011)
7	Health	(Joseph et al., 2011)

3.3 Data collection and data analysis

Sample Size for data collection was calculated by using Solvin's formula, Sample size was approximately 300 including people of surrounding rural areas, developers and experts. Data was collected by print survey questionnaire form. First part included information regarding to respondent and demography, second part consist on developer's perspective, third and final part of questionnaire was developed to know the opinion of experts. More than 350 questionnaire was distributed and after scrutinizing and eliminating the incomplete questionnaires 251 responses selected for further analysis.

3.4 Construction of Composite index

Composite index is very simple to understand and analyze. Composite index construction includes selection of variables, method of aggregation, normalization and weighting to apply. All indicators were normalized with using the range (0.1- 5.5), using mini, maxi methods, where higher score represent high impact and lower score represent lower impact. Mini maxi method involves taking minimum and maximum values. Experiential form a scale so that they have and identical range. The main advantage of this method is its ability to measure performance based on the higher and lower performance. Concluding Step is weighting and aggregation of the normalization data. Additive aggregation (arithmetic average) by assigning equal weighting to the set of indicators. The robustness of the results is assessed by using alternative weight still, results do not significantly value either in term of values when these are classified according to the value.

4. RESULTS AND DISCUSSIONS

There are number of factors connectivity, land, Economy, Social, Educational, health, gender and existing facilities or existing infrastructure area attracting the growth of Mega Housing project near rural areas.

To know which of these attraction factors have a huge attraction "Composite Index Method" is used. Composite index Method permit us to measure, with a number, the relative varieties inside a gathering of factors after moving stating with one circumstance then onto the next.

4.1 Roads and Connectivity

Roads are prioritizing highest in ranking of any development. Moreover, a good road and connectivity also plays a great role on poverty elimination and creating economic opportunities. Roads open up more areas and stimulate social and economic development.

Data was collected to know the attracting factors the growth of Mega Housing project near rural areas. Some major roads GT road, Main link road, Morgah dha, Link Road Bahria expy, Express Highway, Japan road, Islamabad expressway, Faisal Avenue, Kahuta road, Express way, Bahria expy, Usman Ghani ave, Umer avenue, Rawalpindi jand Mianwali road, M1, Srinagar Highway, Link Road, Chakri road, Chahan road and Lahore Islamabad motorway providing accessibility and connectivity to the selected housing societies. These main roads improve connectivity in a positive manner. Availability of existing major road is a very important factor for attracting the new development. From selected villages, out of 251 respondents 93.6 % respondents said that they have main road near their village, remaining 6.4 % responds have no main road near their village. Majority of respondents shows that main road is exist near their villages. Connectivity to the residential area of people is showing that 88.8 % respondents have access of roads to their houses and 11.2% are little isolated from the community and have no direct access of roads to their dwelling. In every road network accessibility is very important because the success ratio of every road network is dependent on accessibility.

Results showed that 90.8 % respondents have access to the main road and only 9.2 % respondents have low accessibility to the main road. Availability of public transport is not only important for the resident of that area but also its surrounding area too. In our research area 77.7 % respondent said that they have a public transport in their area and 22.3 % people have no access to the public transport because of the transport fixed routes. Affordability of public transport have an important role in the usage of public transport, 86.1 % respondents can afford the available public transport and 13.9 % people said that available public transport is not affordable for them. Existing roads network within the villages shows the chances of mobility within the rural areas. 66.5 % people are satisfied from existing road network of their villages and 33.5 % respondents said that the condition of their village's road is not very well. To know the impact of roads and connectivity composite index and cross tabulation method was used. (fig. 1) is depicting the impacts of roads and connectivity of each selected rural area. Mega housing projects are the results of economic and social activities. The presence of roads can't be overemphasized as this connectivity is crucial for its success.

■ Roads and Connectivity
 ■ Land
 ■ Existing facilities
 ■ Economy
 ■ Gender
 ■ Education
 ■ Health

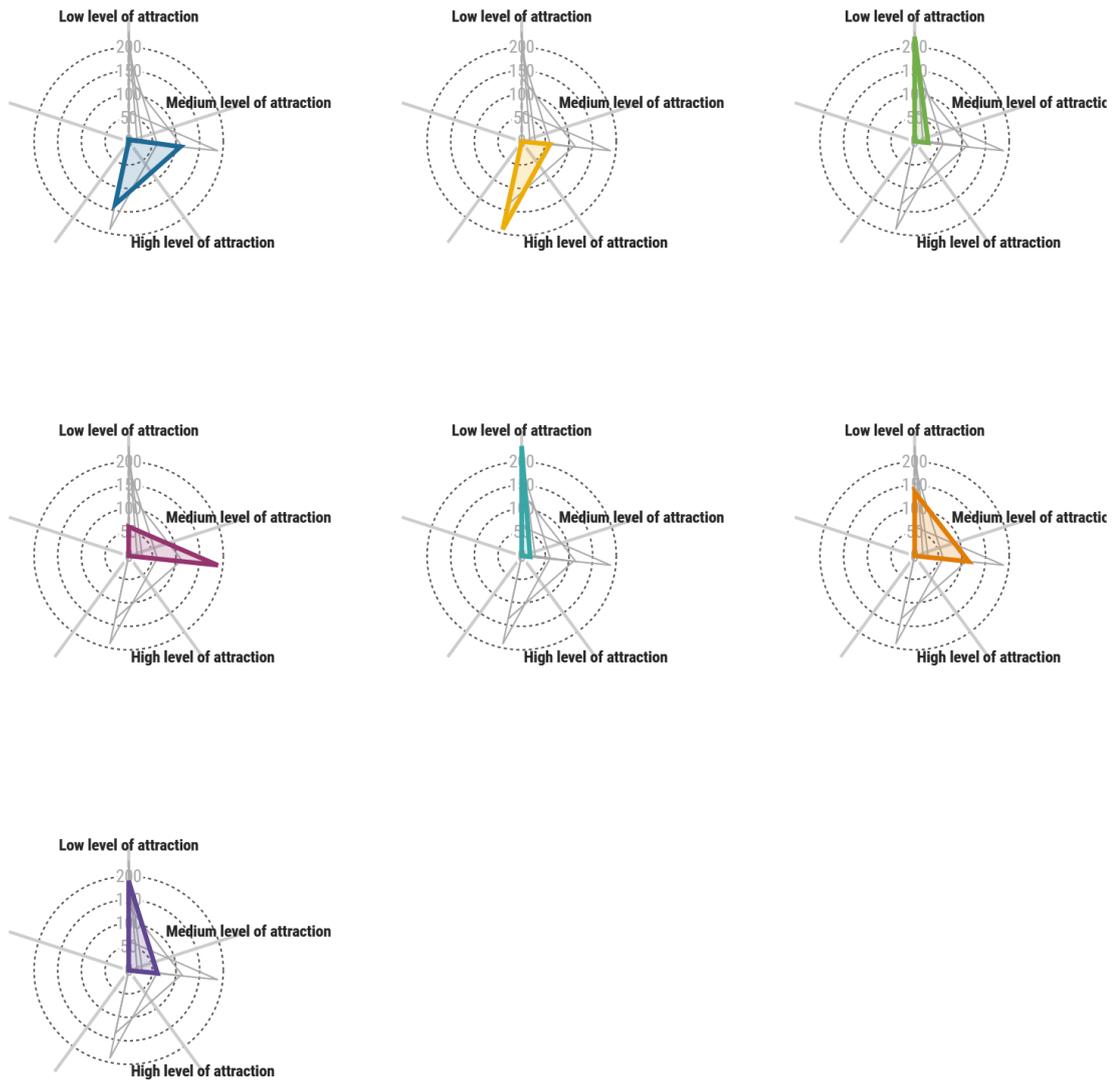


Figure 1 Composite index result of each indicator

Table 3Attraction of Roads and connectivity

Sr.no	Indicators	Codes	Response	Frequency	Percentage	Means
1	You have any main road near your village?	R1	Yes	235	93.6	1.06
			No	16	6.4	
2	Is main road near to your house?	R2	Yes	223	88.8	1.11
			No	28	11.2	
3	Is main road easily accessible to you?	R3	Yes	228	90.8	1.09
			No	23	9.2	
4	Any public transport is available?	R4	Yes	195	77.7	1.22
			No	56	22.3	
5	Is this Public transport being affordable for you?	R5	Yes	216	86.1	1.14
			No	35	13.9	
6		R6	Yes	167	66.5	

	Condition of roads and street in your village is good?	No	84	33.5	1.33
7	These roads reduce your commuting cost?	R7	Yes	181	72.1
			No	70	27.9
8	The main road improves the connectivity of your village?	R8	Yes	180	71.7
			No	71	28.3

The analysis was so valuable to know the attraction factors of these mega housing projects. Above fig.1 and table 4 is clearly showing that the high impact result of roads and connectivity more than the medium and low impacts. As our selected housing projects were also near some major roads to provide accessibility to these residential projects. Adequate connectivity serves as a backbone for the success of such Mega Housing Projects. These Road networks also attracts economic development and commercial activities along it. Accessibility and connectivity of these Mega housing projects effects the price of housing. Location of project have also a huge impact on housing price. The price of housing is increased in the presence of such facilities. On the other hand, along with residential activities these roads are becoming the cause of economic growth and increase in commercial activities have attracted migrants from all over the city which make these housing project successful

4.2 Land

Mega housing projects are carried out with the aim of providing adequate housing facilities. Most of these projects are located on the city countryside or at urban fringe in the presence of main road or highway but also availability of land on comparatively low price.

Table 4 Attraction of Land

Sr.no	Indicators	Codes	Response	Frequency	Percentage	Means
1	Do you own any agricultural land?	L1	Yes	89	33.5	1.35
			No	162	64.5	
2	Your land price is equivalent to the surrounding areas?	L2	Yes	91	36.3	1.64
			No	160	63.7	
3	Any vacant land available in your village?	L3	Yes	174	69.3	1.31
			No	77	30.7	
4	Are you willing to sale your land?	L4	Yes	174	69.3	1.32
			No	77	30.7	
5	Slums around your village?	L5	Yes	146	58.2	1.42
			No	105	41.8	
6	Your Village's land price is increasing	L6	Yes	136	54.2	1.46
			No	115	45.8	

In the study area result showed that there is more vacant land than agricultural land because only 33.5 % people own agricultural land and their land prices are lower than the city and surrounding urban areas. Only 36.3 % people said that their land price is same as the surrounding areas. According to the responses availability of vacant land is 69.3 % and remaining 30.7 % people said that they have no vacant land around their houses and areas. Mostly people said if their land can be sold out on a good price, they are willing to sale it and results showed that 69.3 % people are willing to sale their land but on good price. The factor slums around their villages and increase in village's land price is had a response of almost same. Half of the respondents said that their land price is increasing and according to almost half of them land price is not increasing.

Pakistan is transforming from agricultural economy to manufacturing and service-based economy leading to massive urbanization. And due to urbanization urban areas has more housing demand. To fulfill this demand more housing projects has been started. And these housing projects needs more land. Land is mostly available on peri-urban areas, which attracts these real estate market towards it. Land is the critical factor for selecting the site for housing developments. Results in above

fig. 1 and literature shows us the impact of land on attracting the development of mega housing project is higher than the road and connectivity. These projects mostly use the peripheral land. The reason of choosing this land is, the price of land is lower than the surrounding urban areas. Along with reasonable prices there are big chunks of land, vacant and agricultural both are available. Another reason, people are easily willing to sale their land. 69.3% respondents were willing to sale their land, if good price is offered.

4.3 Existing facilities

The development of mega housing projects on the outskirts of cities provides housing but this new development the relationship in rural and urban is changing not only in Pakistan but all over the world. New developments are unthinkable if the rural areas are socially, physically and environmentally isolated places. So, the existing features and facilities of rural areas are very important. If these facilities like water, Electricity, Gas, sewerage & drainage system and availability of water for irrigation are available they attract new developments a lot. Following table 6 is showing the frequencies of the availability of these facilities.

Table 5 Attraction of Existing facilities

Sr.no	Indicators	Codes	Response	Frequency	Percentage	Means
1	Availability of water in your village?	EF1	Yes	174	69.3	1.31
			No	77	30.7	
2	Water quality is good?	EF2	Yes	157	62.5	1.37
			No	94	37.5	
3	Availability of electricity?	EF3	Yes	224	89.2	1.11
			No	27	10.8	
4	Availability of Gas?	EF4	Yes	149	59.4	1.41
			No	102	40.6	
5	Have sewerage or drainage system in your village?	EF5	Yes	183	72.9	1.27
			No	68	27.1	
6	Water available for irrigation?	EF6	Yes	118	47.0	1.53
			No	133	53.0	

The ratio 69.3 and 30.7 is showing that the water is available to 69.3 % respondents from any resource. It includes boring water, tank system, public supply of water and very few hand pumps and tube wells and remaining 30.7 % people mostly were from Chak 30 AD and village Gurha said that there is no adequate water for their community. They were complaining about low water table and poor water quality. But out of these 69.3 respondents 62.5 % people were not satisfied from the quality of water. Availability of water for irrigation system, 47.0 % said that water for irrigation is available from the sources of existing Nallas and canal. Fewer people use tube wells for irrigation. Remaining 53 % said water is mostly available in the season of Monsoon. Most important factor “electricity” is available in and around most of the villages. Almost 90% people said that the electricity is available only 10 % people have no access to electricity mostly were living in slums or isolated from village community where electricity line was not existing.

Availability of natural Gas has a huge impact on land price. In selected villages 59.4 % respondent had that facility and 40.6 % people are using alternate resources because of non-availability of Gas. Sewerage and drainage system plays a crucial role in any infrastructure and development. Collected data shows that 72.9 % respondents said that they have proper sewerage and drainage system but it needs to be maintained but 27.1 % people still have old sewerage and drainage system like open drainage system. Infrastructure can affect human lives hugely. Adequate infrastructure and services fill in as spine for development and are fundamental for local area wellbeing, security, and personal satisfaction. Developing a residential neighborhood is a long-term investment for any community. “For most developers, this involves taking a step back and reassessing the objective of the finished product. Presence of the infrastructure necessary to serve the proposed development is essential for the growth of a new community. Rural Areas selected around mega housing projects; results are showing that 30.7 % respondents have no access to water but water is available to 69.3 % respondents. 37.5 % of respondents were not satisfied from the quality of available water. Major facilities like electricity and gas, in most of the area’s electricity was available but supply of Gas was available to only 40.6 % respondents. Remaining respondent use gas cylinders, Bio gas, firewood and saw dust for their domestic

use. All the given percentages are showing that the reason of why the existing facilities and infrastructure has a low impact in this study.

4.4 Economy

Economic factors are usually determining the economic condition of some area. To know about the economic condition of rural area before stating the new development is very important because it is necessary to know how the new development can attract the rural areas and make its economy better. Second the economy of both new development and rural area can be interdepend on each other in a way to purchase raw material from rural areas, to provide employment opportunities to people, the need of labor can be fulfilled from nearby rural area, so it can provide work opportunity for labor and new development can get labor from nearby areas easily. Following table 7 is showing the responses of residents for the economic condition.

Table 6 Attraction of Employment Opportunities

Sr.no	Indicators	Codes	Response	Frequency	Percentage	Means
1	Any employment opportunities in your village?	EC1	Yes	93	37.1	1.63
			No	158	62.9	
2	Investment opportunities in your village?	EC2	Yes	78	31.1	1.69
			No	173	68.9	
3	provide labor to nearby area?	EC3	Yes	140	55.8	1.44
			No	111	44.2	
4	Availability for raw material?	EC4	Yes	113	45.0	1.55
			No	138	55.0	
5	Small industries?	EC5	Yes	106	42.2	1.58
			No	145	57.8	

Employment opportunities within the village is low, its 37.1 % because most of our respondents were educated and they can't find employment according to their scope within the rural area. As the previous table showed that land prices are comparatively lower than the surrounding area and also the low average of employment opportunities with less development have fewer investment opportunities, 68.9 % respondents said that there are not much investment opportunities only 31.1 % respondent said that there are investment opportunities but on a very small scale. Home based or small industries have a response of almost same 42.2 % people said there are small industries like embroidery, Jewelry, ceramics, cutlery, Wood work and sport goods and according to more than 57% people there were no small industries.

Rural and peri-urban new development are socially, environmentally and economically interlinked. New development and projects generally unthinkable in the absence of rural development. These rural areas are absolutely important for urban areas to function properly. To know about the economic condition of rural area before stating the new development is very important because it is necessary to know how the new development can attract the rural areas and make its economy better. Economy is one of the considerable attraction factors for new development. The above table shows that 62.9 % respondents said that they have no employment opportunities in their area. New development can easily attract this population by providing employment opportunities.68.9 % respondents says that they have no investment opportunities. New development an provide investment opportunities not only in residential side but also in commercial activities. It can make these housing projects successful and also rental housing has a huge attraction for rural residents. Construction workers, labor usually live closer to the construction site and thus they spend substantial part of their wages in local community which is also beneficial for these developments. Prosperity of new development and rural residents of the business, provision of goods and transport, provision of raw material allowing new developers to purchase more from rural areas. Scale of new project and economy of surrounding areas are interlinked. Mega housing projects can provide mega economic opportunities. Analysis of the data shows that the economic factor has not much higher and not much lower impact. The impact of economy to attract new development is medium in this study.

4.5 Gender

Gender factor is very important and have a huge importance in any development. In all rural development women of rural areas are the key agent. They can play a catalytic role in sustainable rural development, its economy and social values. They also play a role in agriculture by doing work in fields

and food production. Empowering of women can help in eradicating the poverty of rural areas but also the overall economy. It is important to have resources for them. Following table 8 is showing three factors of rural women, how they are taking part in the economy of the rural areas.

Table 7 Attraction of Gender Indicator

Sr.no	Indicators	Codes	Response	Frequency	Percentage	Means
1	women run small business in your village?	G1	Yes	117	46.6	1.53
			No	134	53.4	
2	women provide domestic services?	G2	Yes	179	71.3	1.29
			No	72	28.7	
3	women leave agricultural activities and start doing paid labor?	GE	Yes	143	57.0	1.43
			No	108	43.0	

Small industries include embroidery, Jewelry, ceramics, cutlery, Wood work and sport goods etc. the ratio of running small industries in rural areas is less, only 46.6 % women are running small businesses remaining 53.4 % are mostly housewives or doing domestic work and some other jobs. Domestic services include many roles and responsibilities of the households like house work and child rearing. 71.3 % respondents are directly and indirectly providing domestic services and many of women 57% leaves agricultural activities and started doing paid labor. Results drawn from composite index show that the factor gender has a low impact on attracting new development because small business, provision of domestic services and paid job have a very small impact to make new project successful. That's why this factor has a low impact.

4.6 Education

There is lack of educational facilities in rural areas like quality school system, colleges, tuition centers and universities. New development with good educational facilities can attract most of the rural people towards it. Following table 9 is showing the collected data and its frequency.

Table 8 Attraction of Education indicator

Sr.no	Indicators	Codes	Response	Frequency	Percentage	Means
1	Any College or university in your village?	ED1	Yes	38	15.1	1.85
			No	213	84.9	
2	Any technical education institute in your village?	ED2	Yes	59	23.5	1.76
			No	192	76	

Collected data showed that the existing facility of colleges and university is only 15 % it means there is a huge opportunity to provide them educational facilities but affordability is also an important element. If these facilities are affordable for rural community, they will avail these facilities more. Availability of technical institute is also very low only 23 % people said that there is technical institute near them. Education in every sense is one of the important factors for any development. It not only provides education but also provide job opportunities and play a very vital role in fortifying economic and social progress improving income distribution. It improves the quality of community's lives and leads to broad social benefits to individuals and society.

Table 9 above show that the availability of any college and university in only 15.1 % and small technical education institutes like short computer courses, English language courses, short duration diplomas are available in the study area are 23.5 %. This type of community can easily be attracted if the provisions of educational services can provide by giving importance to the affordability. These services attract more people from surrounding areas and make this development successful. Above radar chart which is made by the results of composite index shows the impact of education to attract the housing project in an area has a mix low and medium impact. There is a mild difference between low and medium. Overall impact of education factor is low.

4.7 Health

Health factors are used to identify the health needs and prioritizing them, evaluation of health services, planning and allocation of health resources and measure of health success. There is always lack of health facilities in rural areas like clinics, hospitals, laboratories, gynecological facilities and medical stores.

New development with good health facilities can attract most of the rural people towards it. Following table 10 is showing the collected data and its frequency.

Table 9 Attraction of Health Indicator

Sr.no	Indicators	Codes	Response	Frequency	Percentage	Means
1	Any Hospital in your village?	H1	Yes	71	28.3	1.72
			No	180	71.7	
2	Any private clinic in your village?	H2	Yes	171	68.1	1.32
			No	80	31.9	
3	Any Gynecological hospital in your village?	H3	Yes	79	31.5	1.69
			No	172	68.5	
4	Dispensary in your village?	H4	Yes	174	69.3	1.31
			No	77	30.7	

Results of composite index analysis are given below in fig. 1. Availability of hospitals is only 28.3 % remaining 71.7 % people said there is no quality hospital in their area. Private clinic are the source of good income and the areas like villages where no adequate health facilities available, people have to go to the private clinics that’s why the ratio of private clinics is 68.1 % which is more than other health facilities. Gynecological facilities are also not much availability. According to 31.5 % people these facilities exist. Small dispensaries and medical store exist in those rural areas with the percentage of 69.3 but there is lack of advance medicines. Laborites are also not much existing in those areas. It shows that if there is a new development along these rural areas there is much percentage of using the health facilities in new development but according to the affordability. The result shown in the fig.1 is depicting that the factor health is attracting very low to the new development as compare to others.

4.8 Overall Attraction factor

In this study the existence of roads and connectivity, availability of land, existing infrastructure of that area and economy, female community, educational institutes and health facilities of the housing scheme can attract the surrounding areas.

Table 10 Overall attraction factor

Attracting Factors	Low Impact	Medium Impact	High Impact
Roads and connectivity	4	110	137
Land	0	60	191
Existing facilities	222	29	0
Economy	62	189	0
Gender	233	18	0
Education	136	115	0
Health	190	61	0

Results of analysis and ranking of these parameters from developers and expert professionals show that (fig. 2) the indicator with highest attraction factor of real estate projects are existing road network and connectivity, Availability of cheap land and largest chunks of land.

■ Roads and Connectivity ■ Land ■ Existing facilities ■ Economy ■ Gender ■ Education ■ Health

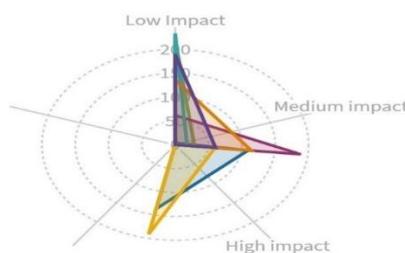


Figure 2 Overall attraction factors

It means presence of existing road network and availability of land both are the important factors than existing infrastructure, economy, female community, educational institutes and health facilities. While choosing the location of new housing projects these two factors should be prioritized.

5. CONCLUSION

There is a severe problem of housing shortage. Due to the more demand of housing and less supply of it created a gap between supply and demand in the big cities. To fulfil this gap more housing projects are being started. For any housing site searching and site selection is a major and most important element. This study identified that which factors attracts the more these housing projects towards them. Each housing project along with all real estate decisions, identification of location is very critical. Roads and public transport attract these housing projects because, availability of existing roads can provide good connectivity to surrounding and city center areas. Availability of public transport to serve the tenants, permanent residence, service providers to approach their desired destinations. Proximity to great public team might be a prerequisite or give an upper hand to subsidizing applications. Many others factors are important in site selection criteria like scale of the project, housing and construction, location, Land acquisition, Zoning considerations and community acceptance. From selected indicators in this study: existence of roads and connectivity, availability of land, existing infrastructure of that area and economy, female community, educational institutes and health facilities the indicator with highest attraction factor of real estate projects are existing road network and connectivity, Availability of cheap land and largest chunks of land. It means presence of existing road network and availability of land both are the important factors than existing infrastructure, economy, female community, educational institutes and health facilities. While choosing the location of new housing projects these two factors should be prioritized.

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