



सत्यं शिवं सुन्दरम्

THE M.S. UNIVERSITY OF BARODA, VADODARA

Masters in Urban and Regional Planning

Research & Thesis

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Content

Introduction

Literature review (Attributes)

Problem statement (Research Questions & Hypothesis)

Aim, Objectives & Research Methodology

Study Area (site analysis, site visit & site selection)

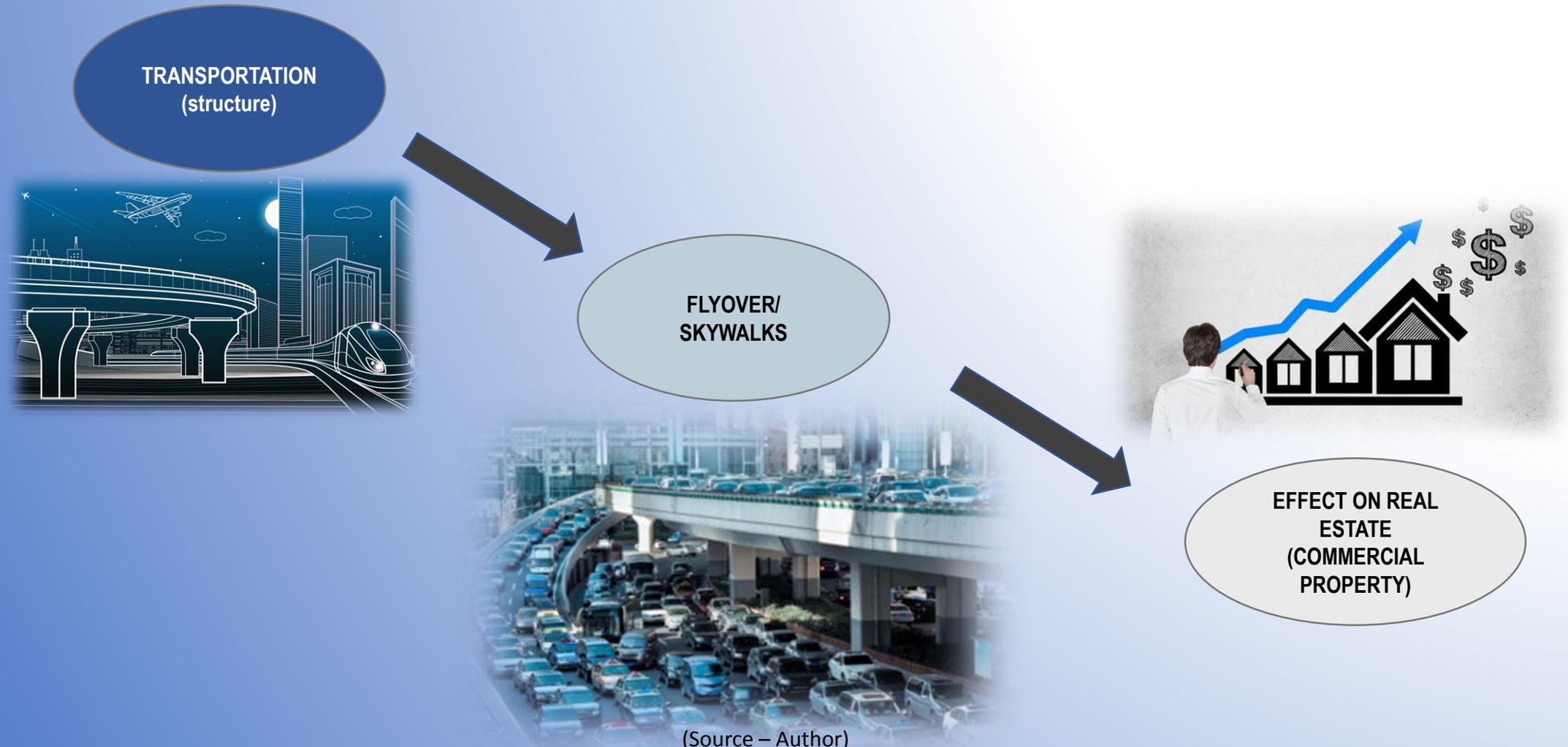
Data collection (Primary & Secondary Data)

Data analysis & Findings (Primary & Secondary)

Conclusion (Recommendation & contribution)

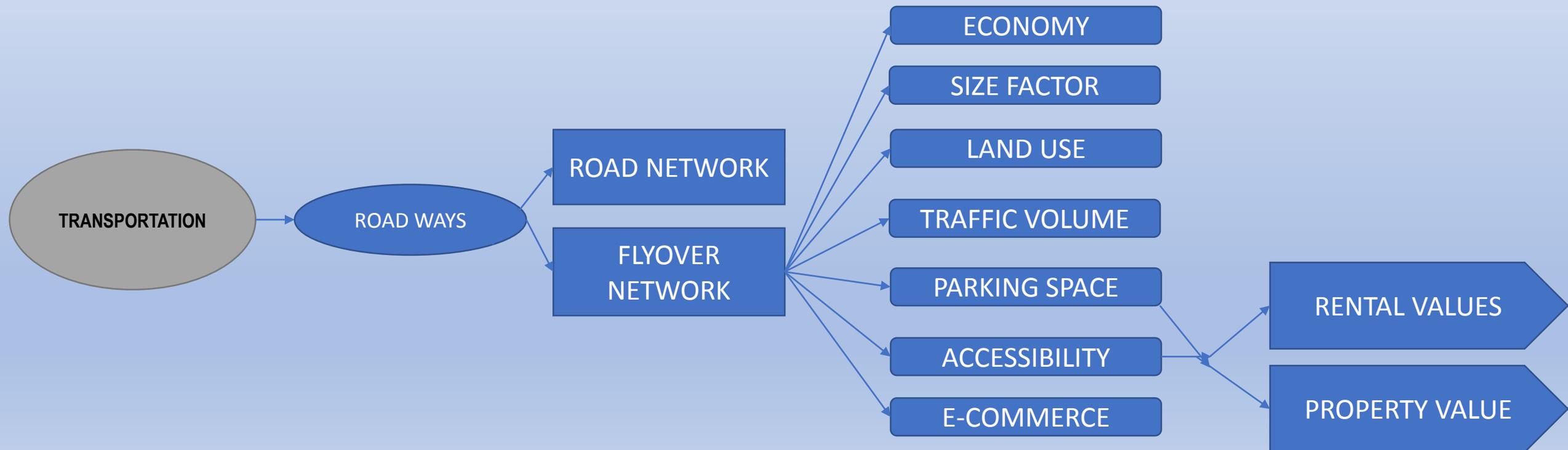
Introduction

Topic:- Impact of flyover on retail commercial properties



Literature Review & Finding

The literature on various studies of transportation infrastructure impacts on residential property values is quite extensive. In contrast, a relatively smaller body of literature exists on the determinants of commercial property values, and only a handful of studies focused on the transportation-related factors (Weinberger 2001; Ryan 2005; Billings 2011; Golub et al., 2012). Many studies focused mainly on the impacts of access to the central business district (CBD), but some of these studies also included transportation-related factors as explanatory variables (Clapp 1980; Brennan et al., 1984; Sivitanidou 1995; Sivitanidou 1996; Dunse and Jones 1998).



(Source – Author)

ACCESSIBILITY

when the accessibility of commercial property to the transport station decreases, demand for commercial property will also decrease and demand will decrease the value of commercial property. Commercial property located along the road or any station will be beneficial from shorter transport time and also travel costs, so that the demand and value of the commercial property gets increased.

Dan Nduti And Mr. Wambugu also said that investors are more interested to invest in that commercial property which commercial property is situated in such place where it has adequate transport facilities and because of that the demand and the value of property will get increased.



PARKING SPACE

With the high percentage of vehicle ownership in the country, parking has become a conflicting and confusing situation for a number of people. Whether at an airport, bus stations and shopping centers, problems with parking are an everyday occurrence. Lack of accessible parking can hurt local business and decrease the prices of it and also quality of life for residents

Parking management and planning can be used to address several issues related to sustainable urban development. For example, parking availability affects both car ownership and usage, and parking planning can affect both land use and building costs

Car parking is an issue of significance both at local and at strategic level planning (William, Russell & Michael, 1991). In order to make a firm parking policy, it is desirable to study the parking behavior and characteristics properly. Number of studies has been done on parking in the past, such as estimation of parking accumulation profiles from the survey data by the cluster analysis technique (Tong, Wong & Leung, 2004) which states that parking supply is an effective means to restrain the car ownership and usage, however acute shortage of parking might drive away commercial and other activities



Literature Reviews

<u>Author name</u>	<u>Study focus</u>	<u>Variable</u>	<u>Transport Mode</u>	<u>Year</u>
Landis and Loutzenheiser.1995	Accessibility	Asking rents (office)	Highway Roads	Single year 1993
Sivitanidou 1995	Accessibility	Effective rents of office	Airport to highway link road	Single year 1990
Weinberger.2001	Accessibility	Effective rents whole commercial	Highway and Rail road	Multiyear (1984-2000)
Cervero and Duncan 2002	Accessibility	Assessed land values of commercial	Rail road and link road	Two year (1998-1999)
Jesper de groote, jos van Ommeren, 2017	Parking issue	House prices and its rents	Road side parking and paid parking	Multiyear (1985-2014)
Hans R.A.Koster 2017	Parking	Netherland House prices	Paid parking	Multi year (1985-2014)
Francesperi, Cecilia hult, Asa hult, Anders Roth 2020	Minimum Parking space	Both land and Building Costs	Sweden Residential and commercial buildings	Single year (2019)
Nirav Vidwas, Ambika pandey. 2009	Parking plan	Building prices (commercial)	Internal city Road, 10 main roads	Multi year (last 10 year)
Munshi Talati 2020	Accessibility	Residential and commercial land value	Infrastructure provisions road,footpath,main road etc.	Single year 2020
Mohammed ali berawi, mustika sari 2019	Parking space and Traffic congestion	Commercial property value	Rail metro flyover Mumbai city	Single year 2019

Problem Statement

Research questions & hypothesis

- Which are the variables which affect the real estate market due to flyovers?
- How this variable affect in different business properties?
- How we can resolve this problem which has raised due to flyover?
- what are the Recommendations policy implications and needs to be done while executing the flyover in urban area?

Based on study from numbers of Literature review, the following is the hypothesis:

1. The impact of flyover due to parking space and accessibility to commercial areas will be more as compared to other variables .
2. The impact of flyover on commercial property is more than the residential properties.
3. As the distance of commercial property is increased from the flyover setback, the impact of flyover will different.

Aim & Objective

Aim

To determine the impact of flyover on the commercial properties resale and its rental values.

Objectives

1. To identify and select the attributes that impacts the value of commercial properties along the flyover stretch.
2. To study the pricing value change of the properties along the flyovers.
3. To establish a relationship between the value of different business commercial properties with the different attributes.

Limitations

- This research is only including property which is along and under the flyover.
- Sense of attachment of business is not considered.
- Impact of Covid-19 pandemic is not taken in consideration while the study.
- Distress value of the property is not considered.



(Source – Google image)

Objectives

Methodology of Research

1.

To identify and select the attributes that impacts the value of commercial properties along the flyover stretch.

Research Design ,
literature review

2.

To study the pricing value change in the properties along the flyovers.

Data Collection &
Instruments Used for it

Questionnaire Design

Sampling Technique and
Procedure

3.

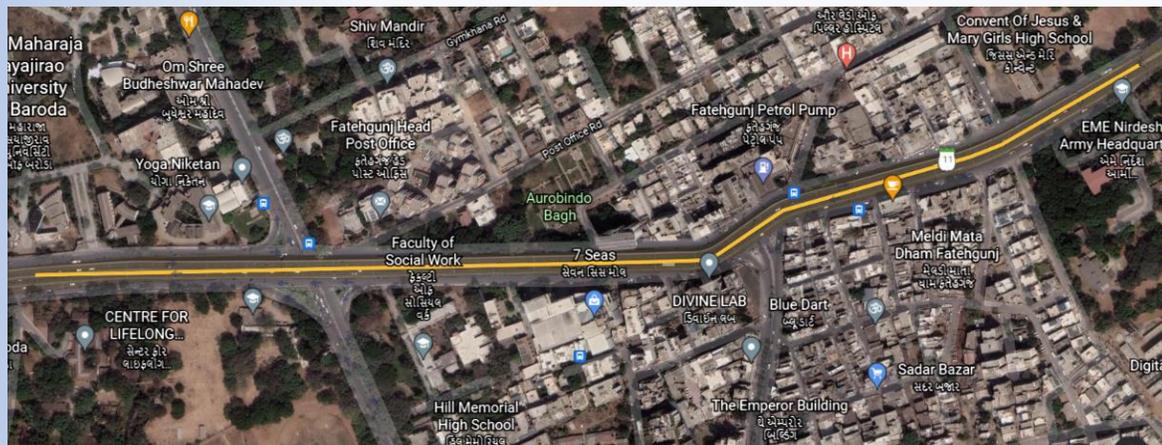
To establish a relationship between the value of commercial properties with the selected attributes

Data Analysis

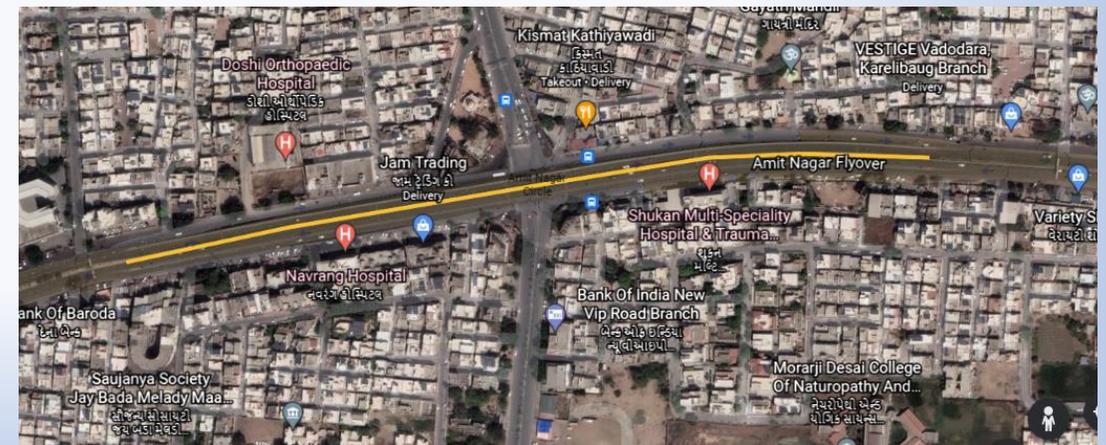
Study Area

The City of art and culture, Vadodara (Baroda) was selected as the study area because one of the study purposes is to compare the rates for commercial property after the construction of flyover. Fatehgunj VIP link road is the center of commercial property markets in the Greater Vadodara, where most of the high-rise office buildings are located. Fatehgunj VIP link road is also having the most active traffic flow and have greater commercial property along the flyover connecting the fatehgunj to VIP link road in the Vadodara Area .As of in 2013 Amitnagar flyover was constructed and 2015 fatehgunj flyover was constructed there were many commercial property are there along the flyover, excluding some properties categorized like multi purpose and residential.

Fatehgunj Flyover



Amitnagar flyover



(Source – Google Earth)

Data Collection

Secondary survey

સુપરિટેન્ડન્ટ ઓફ સ્ટેટ્સ, ગાંધીનગર, ગુજરાત રાજ્ય.

ASR - 2011 Final

CORPORATION / AUTHORITY

શહેર: AHMEDABAD

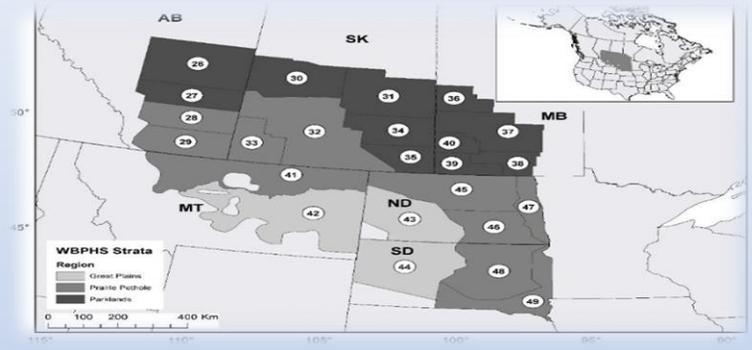
સુલક નંબર: AMBAWADI- FINAL T.P.S NO - 21

વેલ્યુએન	મુલ્યા પ્લોટનો ભાવ	રાસપાક ફલોટ/ એપાર્ટમેન્ટ	જમીન + બાંધકામનો ભાવ	ઓરિસ	કુશન	મુલ્યા પ્લોટનો ભાવ (બી.બી.સી.)	મેટ્રીની જમીનનો ભાવ	બીન પીપત
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21/1	35000	19250	33500	57500	30500	20500	19650	

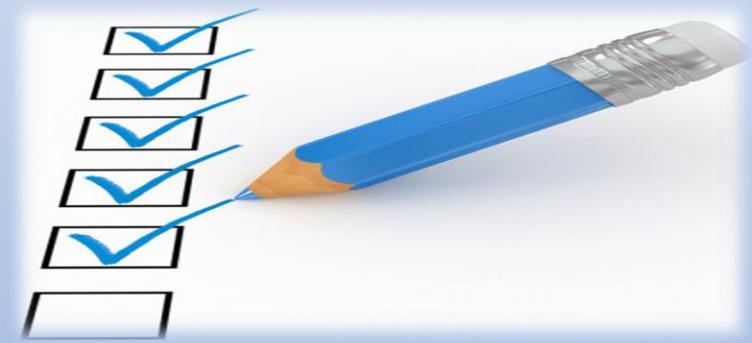
EP.No. 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 51, 52, 53, 54, 55, 56, 57, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 369, 370, 448, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 621, 622, 623, 624, 625, 630, and all other plots included in the zone boundary.

21/1/A	34000	15000	28500	51500	29500	23750	19800
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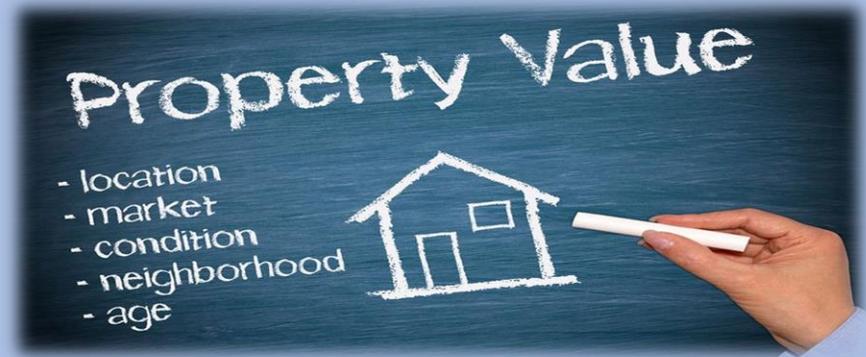
EP.No.



Questionnaire Design



Primary survey



(Source – Googleimage)

Secondary data

(Amit nagar -Flyover)

2006 Jantri Rates

T.P. SCHEME NO: 9		NAGARWADA FINAL				
Zone	Rate of Developed Land Rs. per Sq Mt.	Rate of Land + Construction (Rs.per Sq.Mt.)			Rate of Open Land of Industries Rs. per Sq.Mt.	Rate of Agricultural Land Rs.per Sq.Mt.
		Residential	Office	Shop		
18/9/1	9000	8000	15000	40000	7200	-

REVENUE VILLAGE NO: 8		HARNI REVENUE				
Zone	Rate of Developed Land Rs. per Sq. Mt.	Rate of Land + Construction (Rs.per Sq.Mt.)			Rate of Open Land of Industries Rs. per Sq.Mt.	Rate of Agricultural Land Rs. per Sq.Mt.
		Residential	Office	Shop		
8/0/4	4500	5000	12000	20000	3500	1600

(Source – Jantri govt.)

Jantri year	Area name	Rates of property Land + Construction per Sq.mt		
		offices	shops	Inflation rate per year
2006	Nagarwada	15000	40000	5% inflation
2011		25000	44000	
projected 2016		35500	48200	
Projected 2021		46525	53610	
2006	Harni	12000	20000	5% inflation
2011		15000	22200	
projected 2016		18150	24510	
Projected 2021		21460	26940	

2011 Jantri Rates

વિસ્તાર નામ : NAGARWADA

(ભાવ પ્રતિ ચો.મી.)

વેલ્યુઓન	ખુલ્લા પ્લોટનો ભાવ	જમીન + બાંધકામનો ભાવ			ખુલ્લા પ્લોટનો ભાવ (ઓદ્યોગિક)	ખેતીની જમીનનો ભાવ	
		રહેણાંક ફ્લેટ/ એપાર્ટમેન્ટ	ઓફિસ	દુકાન		પીચત	બીન પીચત
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18/9/1	17000	15000	25000	44000	14500	8000	7000

વિસ્તાર નામ : HARNI

(ભાવ પ્રતિ ચો.મી.)

વેલ્યુઓન	ખુલ્લા પ્લોટનો ભાવ	જમીન + બાંધકામનો ભાવ			ખુલ્લા પ્લોટનો ભાવ (ઓદ્યોગિક)	ખેતીની જમીનનો ભાવ	
		રહેણાંક ફ્લેટ/ એપાર્ટમેન્ટ	ઓફિસ	દુકાન		પીચત	બીન પીચત
૧	૨	૩	૪	૫	૬	૭	૮
8/0/4	9750	8600	15000	22200	10250		8000

(Source – Jantri govt.)

As per the Jantri rates of offices in Nagarwada area is increasing by approx. 60% and shop rates are increasing by 10% in 5 years. And in Harni office rates are increasing by 25% and shops by 10% in 5 years

Secondary data

(Fatehgunj-Flyover)

2006 Jantri Rates

D-TIKA				KASBA		
D-TIKA Zone No:	Rate of Developed LandRs per Sq Mtr.	Rate of Land + Construction (Rs.per Sq.Mt.)			Rate of Open Land of Industries Rs per Sq.Mt.	Rate of Agricultural LandRs per Sq.Mt.
		Residential	Office	Shop		
D/1/5	20000	12000	20000	45000	16000	-

(Source – Jantri govt.)

2011 Jantri Rates

વિસ્તાર નામ : VADODARA KASBA

D/1/5

(ભાવ પ્રતિ ચો.મી.)

વેલ્યુએશન	ખુલ્લા પ્લોટનો ભાવ	જમીન + બાંધકામનો ભાવ			ખુલ્લા પ્લોટનો ભાવ (ઔદ્યોગિક)	ખેતીની જમીનનો ભાવ	
		રહેણાંક ફ્લેટ/ એપાર્ટમેન્ટ	ઓફિસ	દુકાન		પીયત	બીન પીયત
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D/1/5	22900	17000	27100	48400	23000		

(Source – Jantri govt.)

Jantri year	Area name	Rates of property Land + Construction per Sq.mt		
		offices	shops	Inflation rate per year
2006	Kasba	20000	45000	5% inflation
2011		27100	48400	
projected 2016		34555	51970	
projected 2016		42385	55720	

In fatehgunj (kasba area) as per jantry rate offices prices Are increasing by 35% and shop rates are increasing by 7.5% approximately in 5 years

FINDING

Actual market value of the property is 6 to 7 times more than the Jantry rates of the government. And jantry rates are not affected by the current scenario or situation of the location .

Method of survey

Questionnaire Design


THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA
 Masters in Urban and Regional Planning (MURP)

QUESTIONNAIRE (Property owner)

- Name: - _____
- Firm/Company/Shop Name: - _____
- Contact Details: -
• Mobile no: - _____
- No of years' doing business in this area: - _____
- % Reduce/ Increase business Income after flyover construction: - _____

Property survey details:

- Floor of the property: - _____
- Area of the Property In Sq. ft.: - _____
- Property value per sq. ft. - Before Flyover: _____
After Flyover: _____
- Property Rental / Lease value per sq. ft. - Before Flyover: _____
After Flyover: _____
- Reasons for Reduce/Increase the selling price / rental values of Your properties:
 - Parking space
 - Accessibility
 - Other: - _____

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QUESTIONNAIRE (Real-estate Broker)

- Name: - _____
- Firm/Company Name: - _____
- Contact Details: -
• Mobile no: - _____
- No of years' experience in the Real estate market field: - _____
- Name of areas you working in: _____

Property survey details:

- Commercial property selling price per sq. ft. -

Discription	Rate before flyover	Rate after flyover
Ground floor		
First floor		
office		
- Commercial property Rental/Lease values per sq. ft. -

Discription	Rate before flyover	Rate after flyover
Ground floor		
First floor		
office		
- Reasons for Reduce/Increase the selling price / rental values of commercial properties:
 - Parking space
 - Accessibility
 - Other: - _____

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Property owner

- Type of business
- No of years in this business and location
- % business affected
- Their property value and rent.
- Reasons affecting

Real Estate Broker

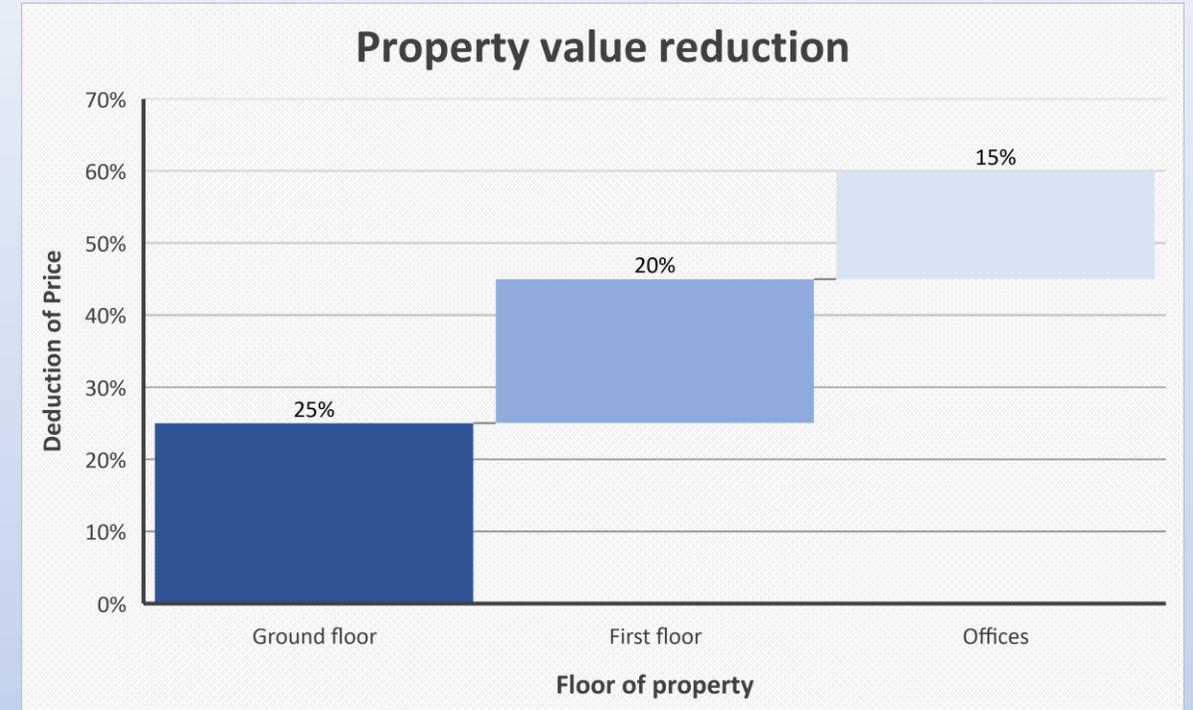
- No of year experience.
- Property value difference before after
- Property rent/Lease Price change
- Reasons of change due to flyover.

Primary data

Property Value

Market Rate of Property

Floor	Rate per sq. Ft.	
	Before flyover	After flyover
Ground floor	17000/-	13000/-
First floor	14800/-	11800/-
Offices	7000/-	6000/-



FINDING

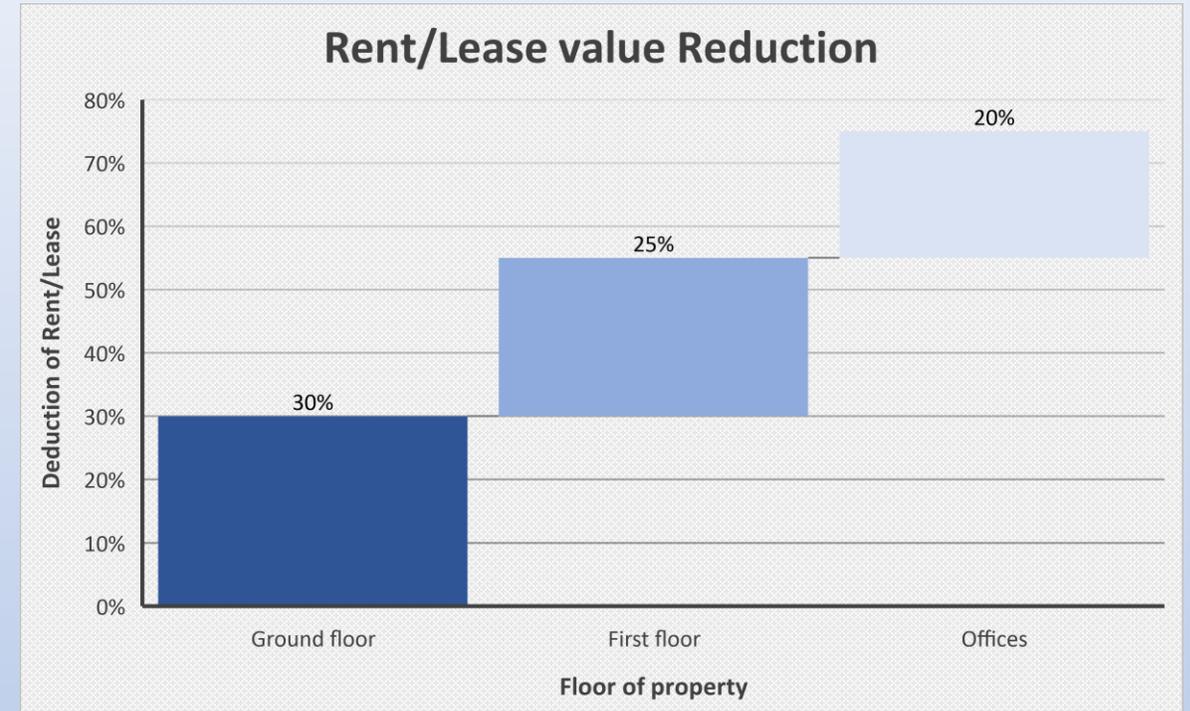
Actual market value of the property of ground floor, first floor and offices are decreased by 25%,20% and 15% respectively.

Primary data

Property Rent/Lease value

Rental/ Lease value of Property

Floor	Rate per sq. Ft.	
	Before flyover	After flyover
Ground floor	110/-	80/-
First floor	80/-	60/-
Offices	60/-	50/-



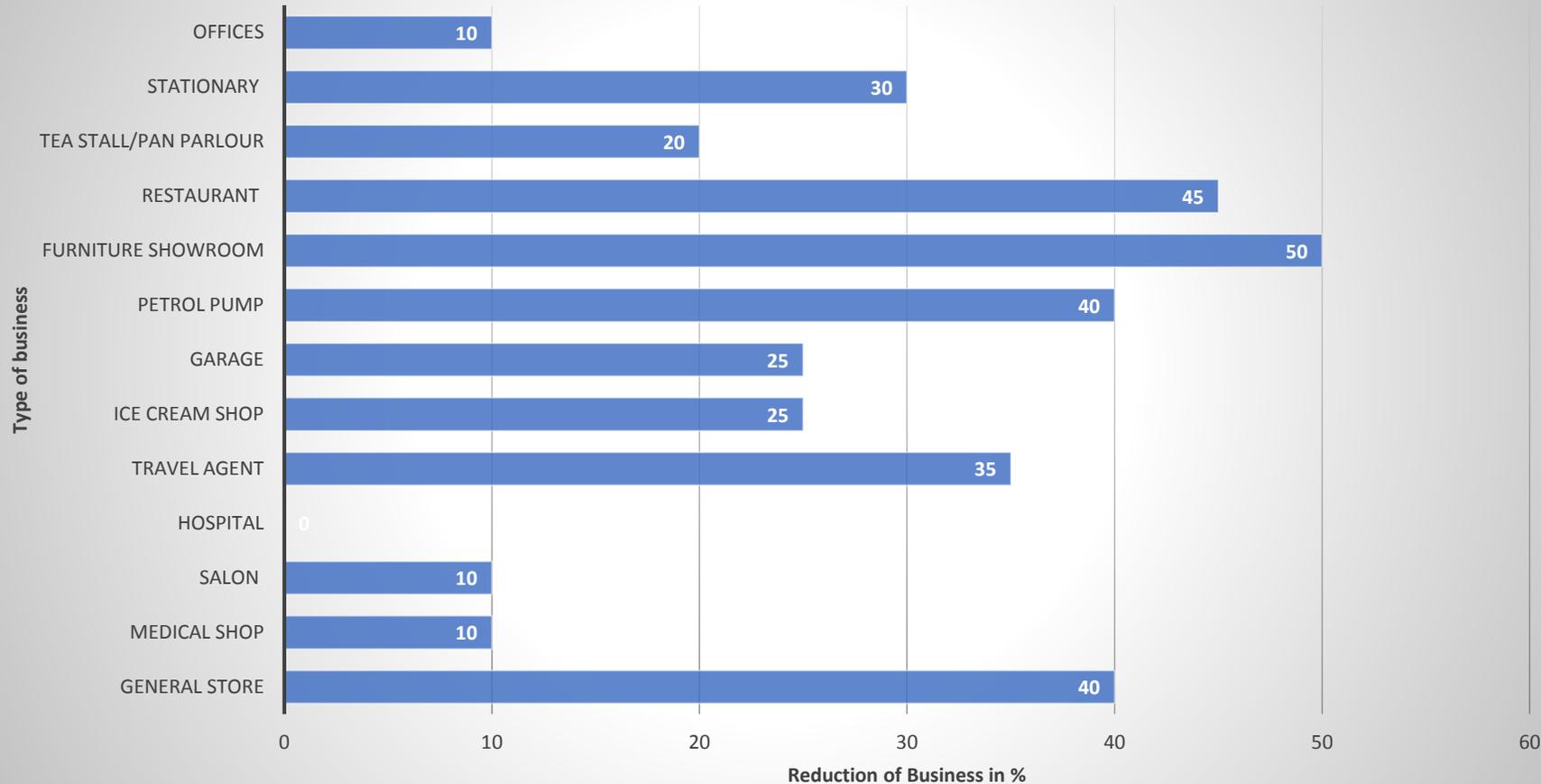
FINDING

Actual Rental and lease value of the property of ground floor, first floor and offices are decreased by 30%,25% and 20% respectively.

Primary data

Impact on Retail business

Business Reduction after flyover



Impact on furniture shops, restaurants, general store and travel agents are more i.e. 30 to 50% as compare to the essential services like medical shops, salon and hospitals i.e. 0 to 10 % after the flyover execution.

Primary data

Reasons of impact on property value and business

Reasons of Impact



Type of Business	Accessibility	Visibility	Parking space
General store	•	•	
Medical shop		•	
Salon	•	•	•
Hospital			•
travel agent			•
ice cream shop	•	•	
garage	•	•	
Petrol pump	•	•	
furniture showroom	•	•	
Restaurant		•	
tea stall/Pan parlor	•	•	•
stationary	•	•	•
offices			•

Accessibility i.e. direct traffic flow and the visibility from the flyover are the main two reasons of reducing the business and the property value. Parking issue is mainly on the starting and ending part of the flyover.

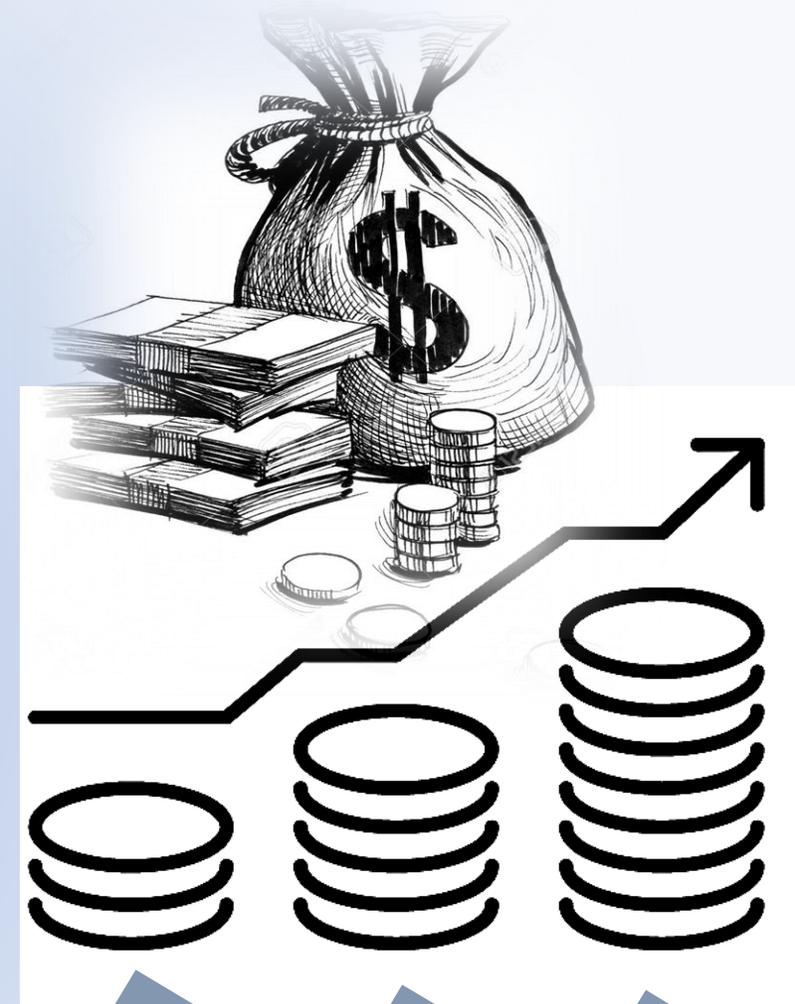
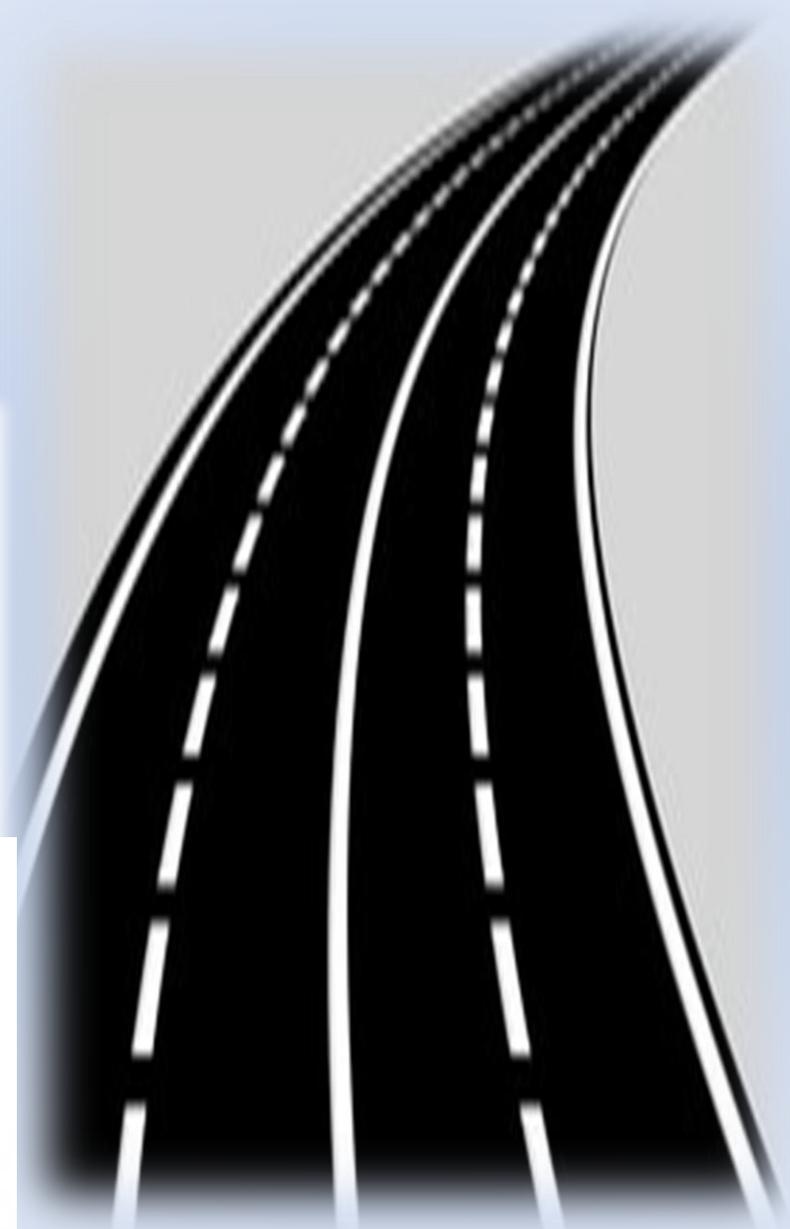
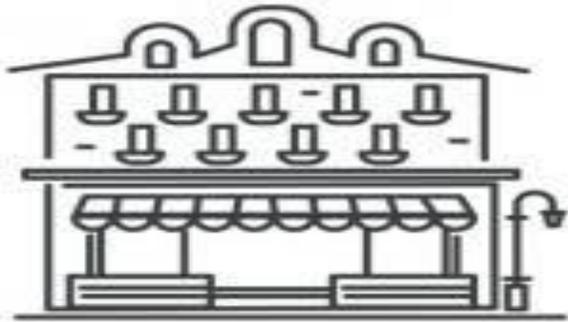
Offices



1st Floor shops



Ground Floor shops



Rent/Lease price

Property value

Business

(Source – Author)

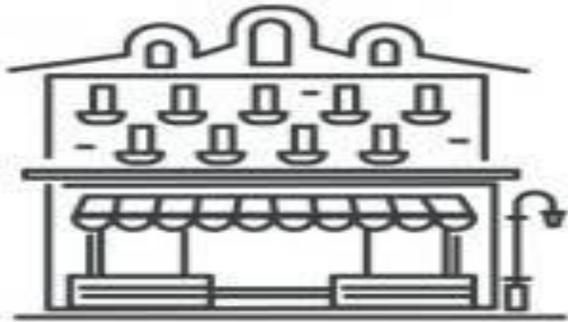
Offices



1st Floor shops



Ground Floor shops



Rent/Lease price

Property value

Business

(Source – Author)

Conclusion

Contribution of Research

- While considering the two major attributes parking space and Convenience terms of accessibility after the primary survey its found that **visibility** is also the major issue compare to parking space for the ground floor and first floor shop keepers.
- **Visibility** is also needs to be consider while defining the attributes which can affect the commercial retail property value after the flyover construction.
 - **Sign boards and hoardings** are need to provide before the flyover starts in both the sides.
 - **Sufficient parking space** needs to be consider below and along the flyover stretch before the flyover propose, mainly starting and ending portion of the flyover. By the bylaws 30 to 50 % of total FSI.
 - **Land Locked** should be less so its better accessible to the flyover again.
 - **Monopoly of the business** is need to be change which attracts the people. And that increase the business and goodwill of the property.

Thank You !!