

# Geography HL

## Internal Assessment



*How has the setting up of the Rajiv Gandhi International Airport of Hyderabad, in Shamashabad, affected the socio-economic conditions of the locals?*

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## **Introduction and Background:**

Hyderabad is one of India's biggest cities which has a rapidly evolving and diverse economy, state of the art infrastructure and, a well-educated population. With the growing IT sector, that was soon to become India's new Silicon Valley, the numerous tourist attractions, the cultural heritage, and numerous opportunities, Hyderabad needed to upgrade its infrastructure in order to make the city more accessible to the rest of the world. The first step towards this, was the building of a newer, larger and modern airport, to increase the operating capacity.

Consequently, the government sanctioned a new 5500-acre airport, the Rajiv Gandhi International Airport<sup>1</sup>. It has an operating capacity of 14 million people per year. It's strategic location is at border of the city, alongside expressways which connect to other metropolitan cities like Bangalore, Chennai, Delhi etc. The setting up of this world class airport has had huge impacts on Hyderabad. At the same time, it has also had impacts on the local scale, in Shamshabad. This IA aims to investigate what impact the setting up of the Rajiv Gandhi International Airport, in Shamshabad, Hyderabad, India, has had on the quality of life of the locals. My research question is, "*How has the setting up of the Rajiv Gandhi International Airport of Hyderabad, in Shamshabad, affected the socio-economic conditions of the locals?*".

In terms of Geography, this topic relates to the topic of Urbanization and Development. This IA is focused on the principle of Urban Growth, which is the increase in size of an urban place.<sup>2</sup> What is seen in Shamshabad is Suburbanization, which is the outward growth of towns and cities to engulf surrounding villages and rural areas.<sup>3</sup> Development is the advancement of the quality of life for people.<sup>4</sup> This topic is interesting and there is a lot of scope for a study in this field. I feel this is important because it helps one understand how the economy of a particular locality works and what impacts a new economic establishment has on the local residents. This might be useful for the government and companies to

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<sup>1</sup> GMR Hyderabad International Airport Limited." *GMR GROUP*. N.p., n.d. Web. 2 Feb. 2016. <<http://www.gmrgroup.in/hial.aspx>>.

<sup>2,3,4</sup> Codrington, Stephen B. *Planet Geography: Geography for Students of the International Baccalaureate Diploma, English AS and A-levels, New South Wales Higher School Certificate, and Other Senior Secondary Geography Courses with Global Focus*. Adelaide: Solid Star, 2002. Print.

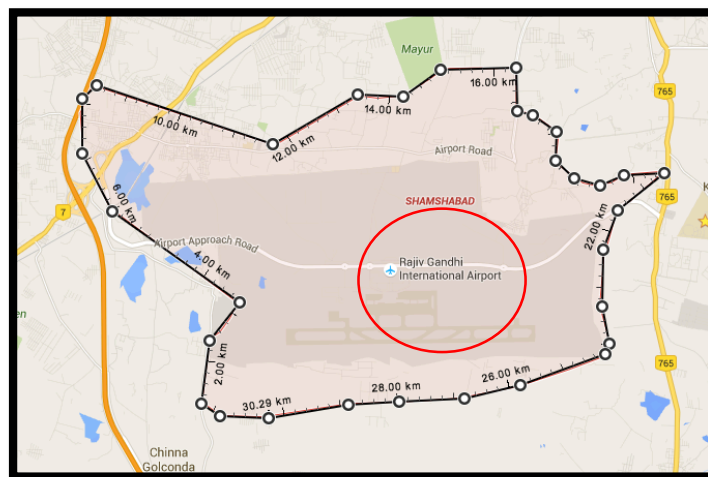
understand how they can efficiently set up new establishments in order to make them sustainable without impairing the locals.

The area of study is Shamshabad, 17.2603°N, 78.3969°E, approximately a 40 km<sup>2</sup> area in Hyderabad<sup>5</sup>. Previously, this area was a village on the outskirts of Hyderabad and once the airport came up it rapidly developed.

For this study, I have formulated 3 hypotheses;

- 1) The setting up of the airport has improved the income levels of the locals living in Shamshabad.
- 2) The setting up of the airport has improved the health and sanitation levels.
- 3) The setting up of the airport has improved water supply.

Theoretically, on lines of the pattern of a Central Business District's development, as an area faces increased development, the people should inevitably witness benefits from the development. In context of Shamshabad, the setting up of the airport would have definitely increased public inflow and would have increased demand for various things like food, hotels, etc. Therefore, it would have also led to the development of the area in terms of infrastructure, supplies of amenities such as water, electricity, etc., and increased employment and wages. Consequently, the area and its people would have greatly developed.



Map 1 – Area Map of Shamshabad (not to scale)<sup>6</sup>

<sup>5</sup> Shamshabad Locality Map." *Maps Of India*. N.p., n.d. Web. 2 Feb. 2016.

<<http://www.mapsofindia.com/hyderabad/localities/shamshabad.html>>.

<sup>6</sup> "Shamshabad." *Google Maps*. N.p., n.d. Web. 2 Feb. 2016.

<[https://www.google.co.in/maps?q=Shamshabad&bav=on.2,or.r\\_cp.&bvm=bv.113034660,d.c2E&biw=1280&bih=712&dpr=1&um=1&ie=UTF-8&sa=X&ved=0ahUKewjkmsXD\\_9jKAhUBcl4KHdZuDSIQ\\_AUIBigB](https://www.google.co.in/maps?q=Shamshabad&bav=on.2,or.r_cp.&bvm=bv.113034660,d.c2E&biw=1280&bih=712&dpr=1&um=1&ie=UTF-8&sa=X&ved=0ahUKewjkmsXD_9jKAhUBcl4KHdZuDSIQ_AUIBigB)>.

**Research Methodology:**

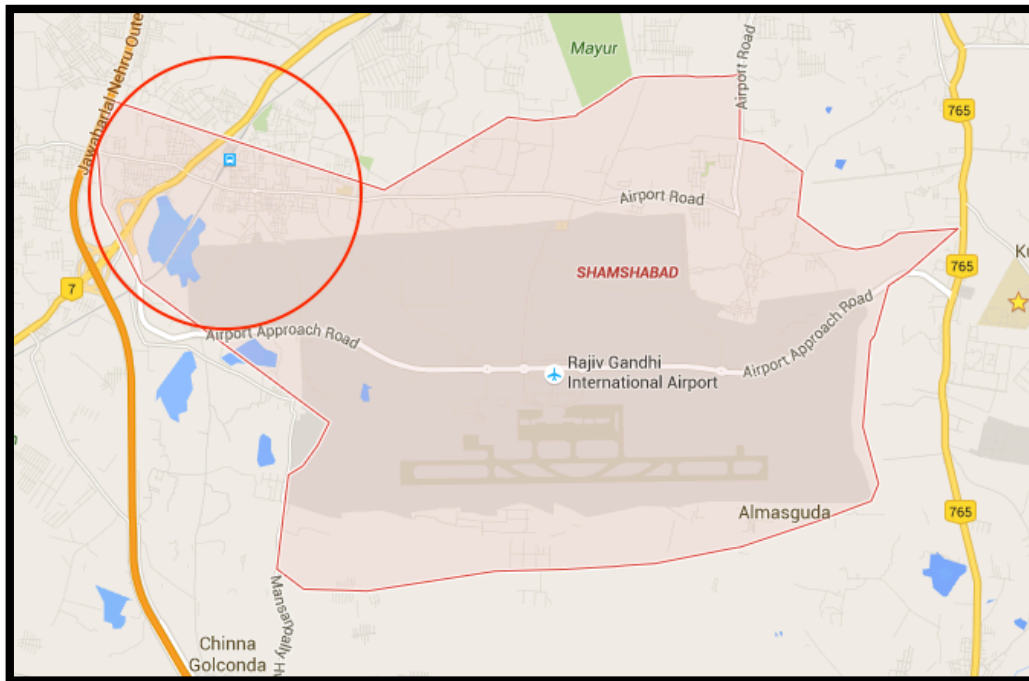
I have collected primary data to understand this issue in depth, from the eyes of the locals and to gather evidence and support my hypotheses. The data was collected on the 28th of January, 2016 at Shamshabad. I employed both qualitative and quantitative techniques. I surveyed about 15 people, using a systematic sampling method. I walked around in Shamshabad and surveyed either a pedestrian, resident or a shopkeeper every 100 meters. I then spoke to them and ticked off their answers on my questionnaire.

The questions tried to measure the development in the area. The questions were split into two sub-sections of 'before' and 'now'; with respect to the establishment of the airport. This would allow for me to draw a comparison between the two. The data collected was about the improvements in housing, income, transportation, water supply, sanitation, and technology.

The setting up of the airport increased the amount of public commuting through Shamshabad. This would have indirectly increased businesses such as hotels, vehicle service centers, gas stations, etc. Consequently, firstly, the locals would see a rise in their incomes. Second, because of development, the domestic supplies would improve, e.g. electricity, water supply. Third, due to higher income, lifestyle and exposure would increase, e.g. smartphones, internet, transportation, and sanitation. All this information will help me prove my hypothesis. Once I am able to understand the changes and measure them through these factors, I will have a fair idea of how much development has taken place. These questions are important as they will directly help me analyze the changes in income, the development of domestic supplies, and the improvement in the life of locals. With my assumption being that the airport's establishment was central to Shamshabad's development, I will now analyze the data that I collected.



Photograph 1 – Survey Conduction by Me



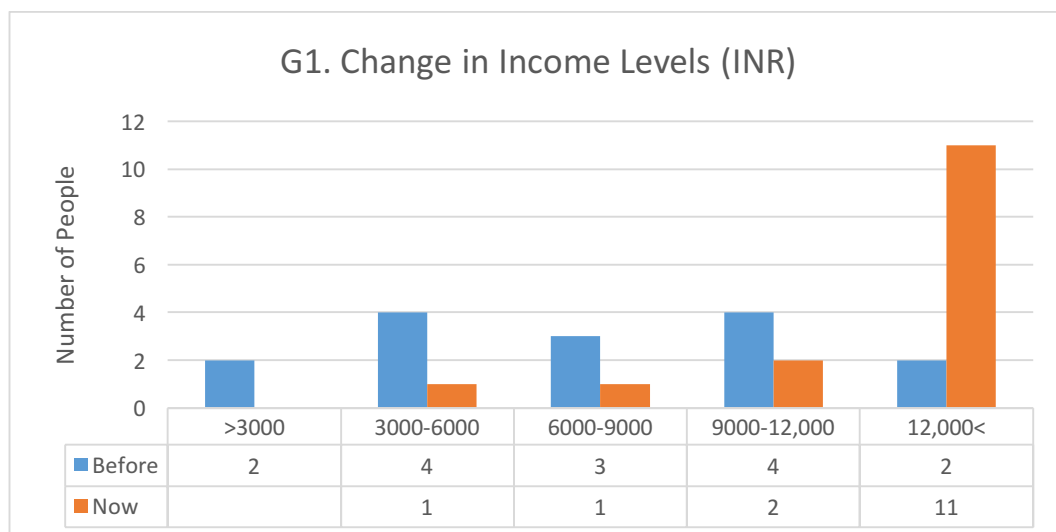
Map 2 – Area Of Survey (not to scale)<sup>7</sup>

<sup>7</sup> "Shamshabad." *Google Maps*. N.p., n.d. Web. 2 Feb. 2016.  
<[https://www.google.co.in/maps?q=Shamshabad&bav=on.2,or.r\\_cp.&bvm=bv.113034660,d.c2E&biw=1280&bih=712&dpr=1&um=1&ie=UTF-8&sa=X&ved=0ahUKewjkmsXD\\_9jKAhUBcI4KHdZuDSIQ\\_AUIBigB](https://www.google.co.in/maps?q=Shamshabad&bav=on.2,or.r_cp.&bvm=bv.113034660,d.c2E&biw=1280&bih=712&dpr=1&um=1&ie=UTF-8&sa=X&ved=0ahUKewjkmsXD_9jKAhUBcI4KHdZuDSIQ_AUIBigB)>.

### Data Presentation and Analysis:

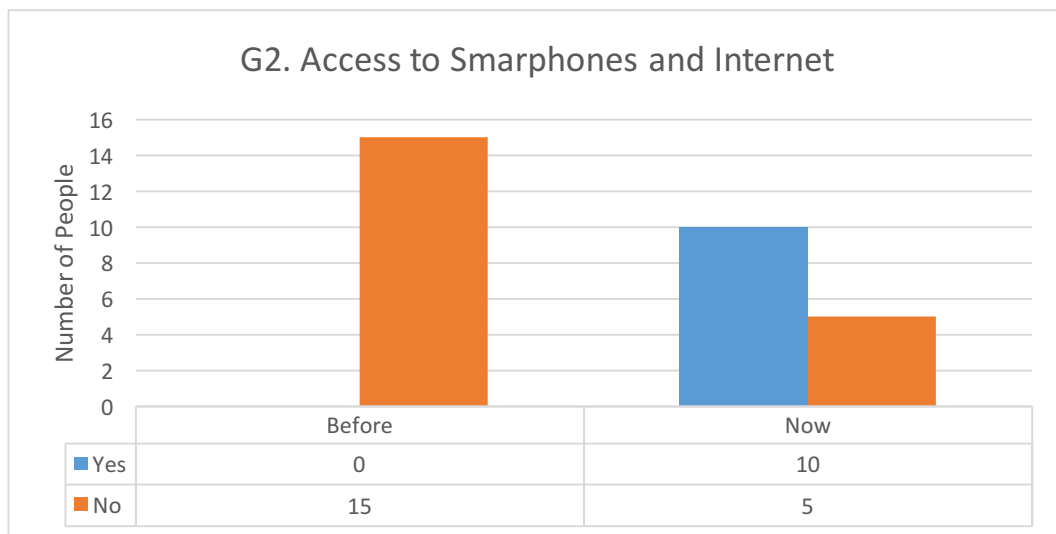
The data collected will be presented through bar graphs. This will allow me to show the comparison between the area's development before and after the airport's establishment. I will now analyze the data that I have collected in order to prove my hypotheses one by one.

My first hypothesis is, "The setting up of the airport has improved the income levels of the locals living in Shamshabad." To prove this, I have taken several data sets such as change in income, access to internet and smartphones, housing, and transportation. The change in income would be the most important factor to understand if there has been any economic development or not. The economic development could be credited to the increase in the amount of businesses in Shamshabad due to the establishment of the airport.

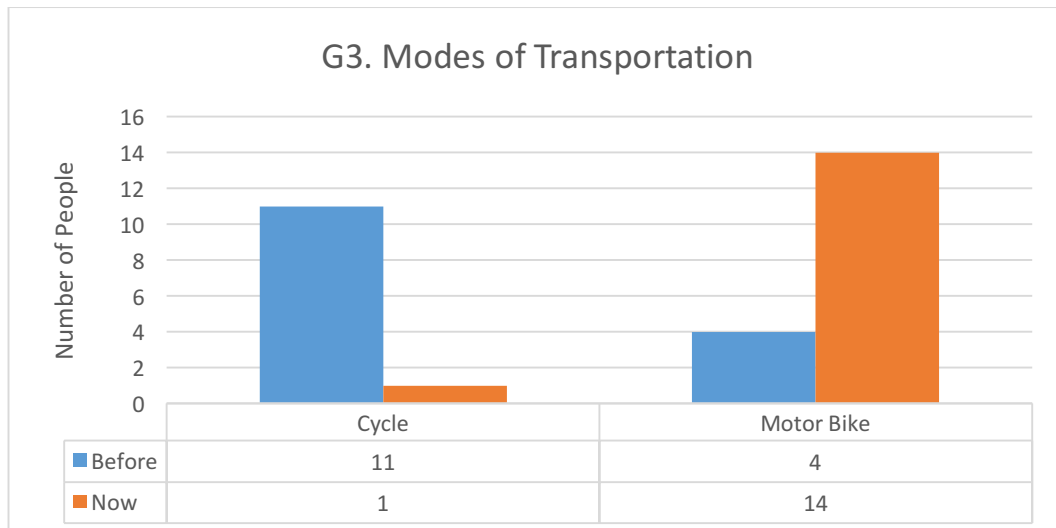


From this graph, it is evident that the income levels have greatly increased. From a ratio  $[(>3000):(3000-6000):(6000-9000):(9000-12,000):(12,000<)]$  of 2:4:3:4:2, to 0:1:1:2:11. This shows that Shamshabad has developed so well that 11 out of 15 people now have an income of more than INR 12,000. This is a clear sign of economic development. The anomaly here is the 1 person still below an income of INR 6000. This could be due to his/her business not picking up or unemployment at the time of the survey.

As income levels increases, expenditure increases as well. Following are the graphs of access to smartphones and internet, housing type, and transportation. Changes in these factors will be a clear measure of increase in income, and expenditure.



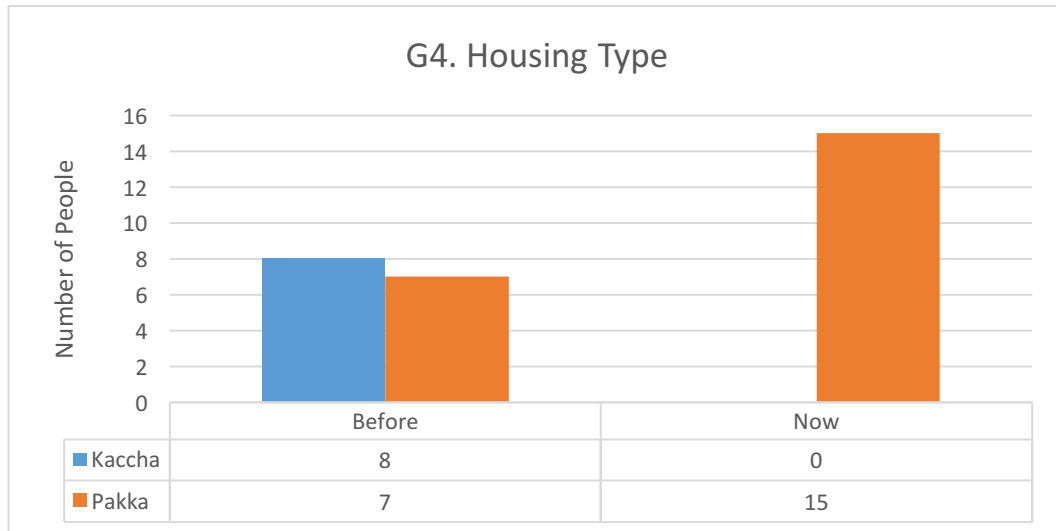
This graph clearly shows how there has been an increase in access to smartphones and internet from a ratio (yes:no) of 0:15, to 10:5. This clearly shows how people have an increased exposure and a higher income to be able to afford these amenities. The reason for some people still not having access to these amenities could be that they might still not be able to afford the services or have no use for them.



This graph clearly shows the development in the modes of personal transportation for locals. The ratio (cycle:motorbike) has changed from 11:4, to 1:14. This shows how people could afford to invest in a motor bike and is again a sign of economic development.

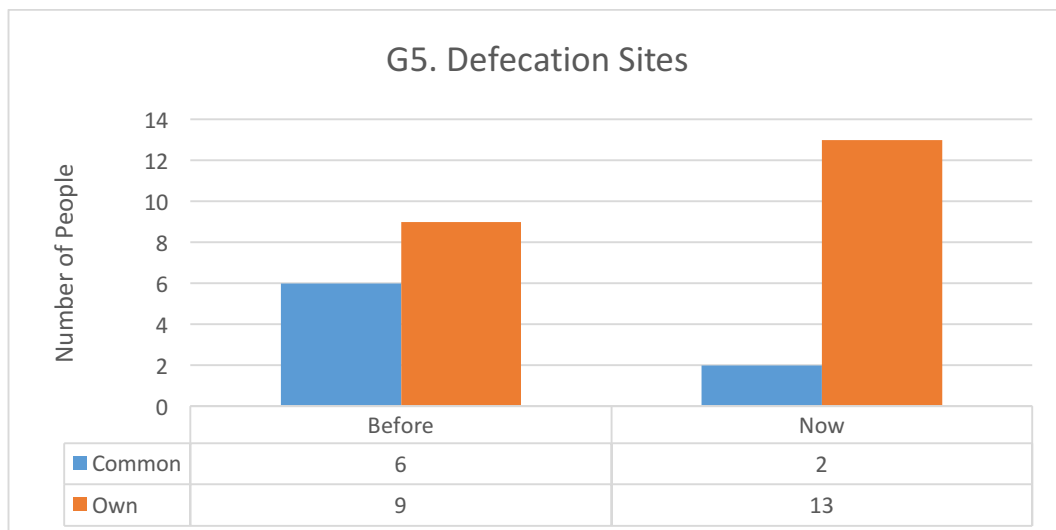
The next factor of measurement is the change in housing type. This was classified into two sections. A 'kaccha' house is one that is made form raw materials such as wood, mud, metal, etc. and is usually a temporary structure. A 'pakka' house on the other hand is one that

is made from concrete and is a permanent establishment. This again, is a measurement of economic development in terms of expenditure. The ratio (kaccha:pakka) changed from 8:7, to 0:15. Therefore, more number of people being able to build a permanent house, is a sign of economic development.

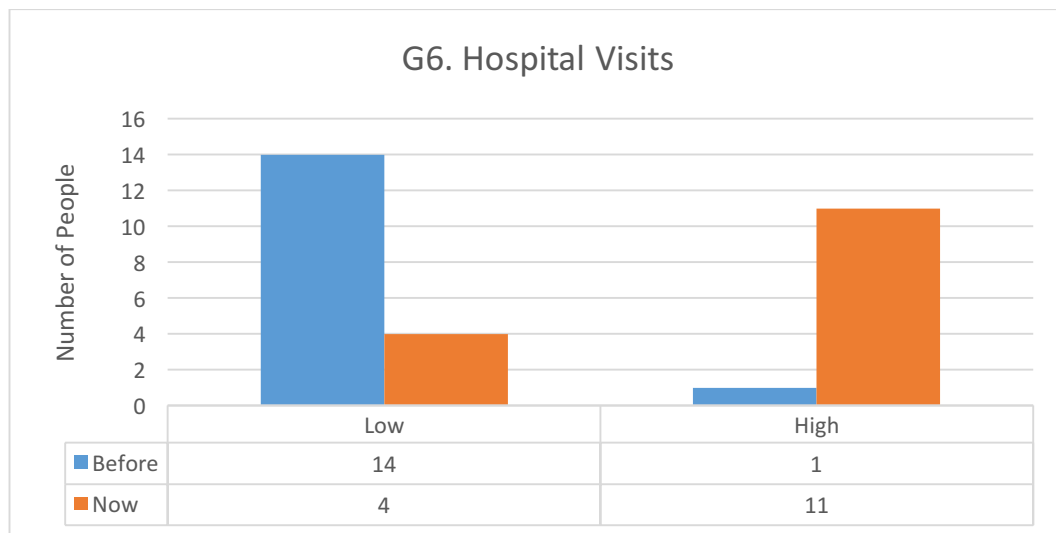


Overall, all these measure show how people have witnessed economic growth and the establishment of the airport has improved their economic status and purchasing power.

My second hypothesis is, “The setting up of the airport has improved the health and sanitation levels”. I will be analysing data on hospital visits, and defecation sites. As an area faces development and rise in income, the people would be more affluent as well. This will lead to improvements in their sanitation as well. ‘Common’ is in reference to a shared or public toilet and ‘Own’ is in reference to one within the person’s home, used privately.

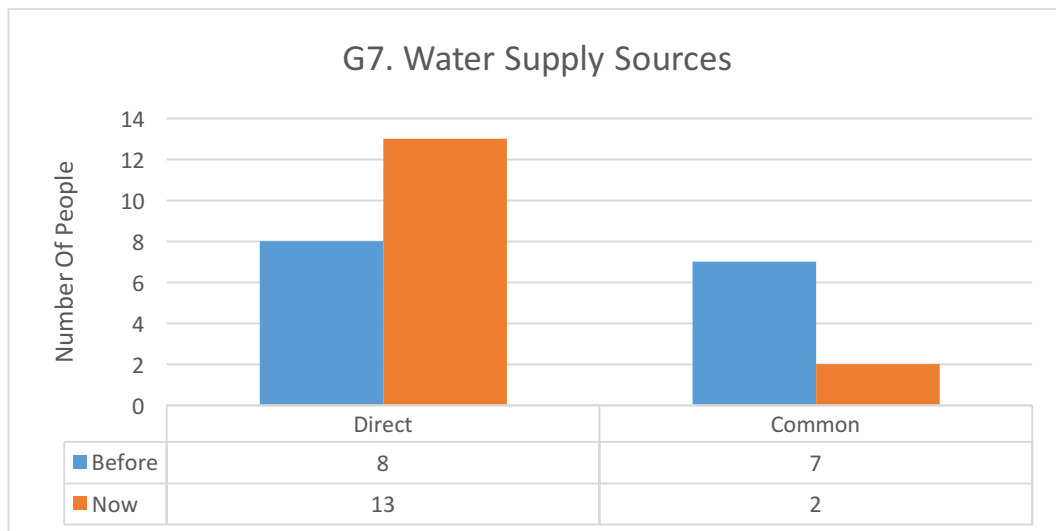


This graph shows how there has been high development. The ratio (common:own) has changed from 6:9, to 2:13. This is a good measure of increased levels of sanitation. This could be due to higher exposure and an increase in income. The next factor that I will be looking at is the change in hospital visits. Theoretically, an affluent society should have a good amount of medical facilities. Also, affluent societies believe in preventive rather than curative methods and this is why affluent societies visit hospitals routinely. I asked people about their visits to hospitals in terms of general checkups and not for actual health issues.

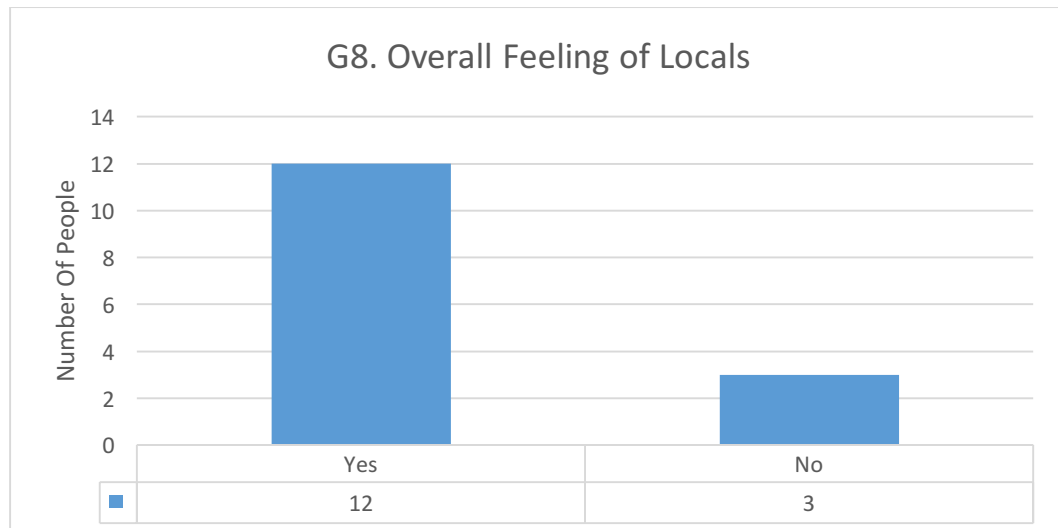


From this graph, it is evident how the hospital visits have greatly increased from a ratio (low:high) of 14:1 to 4:11. This proves that the society has seen a rise in income as well as health standards. Therefore, this proves my hypothesis that the airport has helped increase health and sanitation levels in Shamshabad.

The third hypothesis is, “The setting up of the airport has improved water supply.” The domestic supplies of an area are quite an important measure to understand its development. If the area faces a shortage or difficulty in domestic supply of things like water, electricity etc., then the area is not well developed. As the area’s demands and development increases, the supply of these common amenities should as well. The graph below, is of the changes in the sources of water supply in Shamshabad. A Common line of water is a system where, in a locality, water is pumped through one outlet for all the residents to collect for just a few hours each day. Although, as development increases, people invest in Direct lines, which is when the water is directly piped to one’s home with a continuous supply all day long.



This graph shows how there has been a major shift in sources from a common line to direct lines. The ratio (direct:common) has changed from 8:7, to 13:2. This is a good sign of development in access to common amenities. The establishment of the airport would have called for a new water supply line, which consequently also helped improve Shamshabad’s supply.



At the end of my survey, I asked the people an overall question as well. I directly asked them if they felt whether Shamshabad had developed as a result of the establishment of the Airport or not. As the results show, 12 people said yes, while 3 said no. The reason for the 3 people saying no could be because they might have already been well off before the airports establishment and it made no difference to them. But, the overall trend evident here is that the airport has positively helped develop the Shamshabad region and its people.

**Conclusion and Evaluation:**

In conclusion, I believe that this investigation has been successful and I have been able to prove all my hypotheses with relevant measures. The region of Shamshabad was witness to Suburbanization, which led to its overall development. The setting up of the airport did have a positive impact on the region as it created huge employment and business opportunities. This mainly increased the income of the locals. With a rise in income, the locals were able to enjoy a better and healthier quality of life. This helped improve their housing, modes of transportation, and access to basic modern world amenities like smartphones and the internet. A higher income, making the society more affluent, improved their sanitation and healthcare. Many people adopted the preventive mindset and visited hospitals frequently which ensured their well-being. In terms of sanitation, with more exposure to health, and money, people built their own hygienic toilets which also improved their health and sanitation levels. Finally, as the the airport was established, supply lines of domestic amenities such as water would have also been laid. This indirectly also improved the supply in Shamshabad. Locals had also moved to having direct lines to their house instead of having to go to a far off common line. Through this, it is clearly evident how the establishment of the airport has aided in the urbanization of Shamshabad. It has developed it, and its people to a great extent and improved their quality of life.

I have learnt through this IA that while establishing anything new, one needs to be mindful of the surroundings and its people. In this case, the government and developers were mindful of the surroundings and helped urbanize a village by making it a pass-through point to get to to the airport. This way, they were able to improve hundreds of lives.

I feel that the data that I used for my IA was adequate. Although, what would yield a more accurate result was is if I was able to survey more people; about 50. This way, I would have a fair and accurate idea whether the region has actually developed or not. Because, now, 15 results are very less for me to decide what the all the people actually feel. I feel that this was one of the biggest limitations. I conducted my survey in the exteriors of the region, from where the highway passed. This could have skewed my data as places near the highway would have highly developed. So, if I had visited the interiors, I might have found different results as well. Now, I also feel that my sample size was too small. But I wasn't able to survey any more people due to the lack of time and resources. I do not think that there were

any problems in my survey techniques. As I used a systematic sampling method, I walked 100 meters and surveyed pedestrian, resident or a shopkeeper. In this method, sometimes, I didn't come across a person, house or shopkeeper to survey after 100 meters, or they were un-willing to. This way, I had to walk a little more than a 100 meters. Overall, I feel that this IA has been really interesting and I would definitely love to study something of similar sorts in the future!

**Bibliography:**

[1] "GMR Hyderabad International Airport Limited." GMR GROUP. N.p., n.d. Web. 2 Feb. 2016. <<http://www.gmrgroup.in/hial.aspx>>.

[2,3,4] Codrington, Stephen B. Planet Geography: Geography for Students of the International Baccalaureate Diploma, English AS and A-levels, New South Wales Higher School Certificate, and Other Senior Secondary Geography Courses with Global Focus. Adelaide: Solid Star, 2002. Print.

[5] "Shamshabad Locality Map." Maps Of India. N.p., n.d. Web. 2 Feb. 2016. <<http://www.mapsofindia.com/hyderabad/localities/shamshabad.html>>.

[6,7] "Shamshabad." Google Maps. N.p., n.d. Web. 2 Feb. 2016. <[https://www.google.co.in/maps?q=Shamshabad&bav=on.2,or.r\\_cp.&bvm=bv.113034660,d.c2E&biw=1280&bih=712&dpr=1&um=1&ie=UTF-8&sa=X&ved=0ahUKEwjkmXD\\_9jKAhUBcI4KHdZuDSIQ\\_AUIBigB](https://www.google.co.in/maps?q=Shamshabad&bav=on.2,or.r_cp.&bvm=bv.113034660,d.c2E&biw=1280&bih=712&dpr=1&um=1&ie=UTF-8&sa=X&ved=0ahUKEwjkmXD_9jKAhUBcI4KHdZuDSIQ_AUIBigB)>.

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**NOTE:** Cover photo was clicked by me.

**Appendix:****A1. Survey Questionnaire:**1) Do you have access to a Smartphone and the Internet?

Before	
Now	

2) What was and is your Income group?

INR	>3000	3000-6000	6000-9000	9000-12000	12000<
Before					
Now					

3) What was and is your Water Supply Source?

	Direct Home Line	Common Line
Before		
Now		

4) What was and is your Mode of Transportation?

	Cycle	Motor Bike
Before		
Now		

5) How much were and are your monthly Hospital Visits?

	Less	More
Before		
Now		

6) What was and is your Housing Type (kaccha, pakka)

	Type
Before	
Now	

7) What was and is your Defecation Site?

	Common	Own
Before		
Now		

8) Do you feel there has been an Overall Change?

	Change
Yes	
No	

**A2. Answered Questionnaires:**

1) Do you have access to a Smartphone and the Internet?

Before	
Now	✓

2) What was and is your Income group?

INR	>3000	3000-6000	6000-9000	9000-12000	12000<
Before		✓			
Now					✓

3) What was and is your Water Supply Source?

	Direct Home Line	Common Line
Before		✓
Now	✓	

4) What was and is your Mode of Transportation?

	Cycle	Motor Bike
Before	✓	
Now		✓

5) How much were and are your monthly Hospital Visits?

	Less	More
Before	✓	
Now		✓

6) What was and is your Housing Type (kaccha, pakka)

	Type
Before	Kaccha
Now	Pakka

7) What was and is your Defecation Site?

	Common	Own
Before	✓	
Now		✓

8) Do you fee there has been an Overall Change?

	Change
Yes	✓
No	

Answer Sheet 1

1) Do you have access to a Smartphone and the Internet?

Before	✓
Now	✓

2) What was and is your Income group?

INR	>3000	3000-6000	6000-9000	9000-12000	12000<
Before				✓	
Now					✓

3) What was and is your Water Supply Source?

	Direct Home Line	Common Line
Before		✓
Now	✓	

4) What was and is your Mode of Transportation?

	Cycle	Motor Bike
Before		✓
Now		✓

5) How much were and are your monthly Hospital Visits?

	Less	More
Before	✓	
Now		✓

6) What was and is your Housing Type (kaccha, pakka)

	Type
Before	Pakka
Now	Pakka

7) What was and is your Defecation Site?

	Common	Own
Before		✓
Now		✓

8) Do you fee there has been an Overall Change?

	Change
Yes	
No	✓

Answer Sheet 2