

Assessment of Socio-economic Impact of Yola International Airport on Jimeta Residents, Adamawa State, Nigeria

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Abstract

Airports plays an important role in shaping the economic activities of communities of which they serve due to the fact that they are among the largest public facilities in the world. The availability of air transportation and its associated airport infrastructure constitute a significant stimulus to economic and social development for the communities located in neighboring areas of the airports. This study examines the impact of Yola international airport on socio-economic activities of Jimeta residents. The study used primary data which were generated from the respondents through the administration of 300 copies of structured questionnaire. The combination of stratified and systematic random sampling was used to administer the questionnaire. Frequency counts and Student T-test were used to analyze the data on the socio-economic activities before and after the upgrade of the airport. The study revealed that, Yola International airport influenced the growth of socio-economic activities in the area by 62.7%, increasing patronage of customers 34.7% as well transport services 39.0%. The study further revealed that there is a significant difference at $p < 0.01$ in the socio-economic activities of the residents before and after the upgrade of Yola International airport (2003-2019). The result also revealed that, Occupation and educational level significantly influence the major activities of the residents of Jimeta before and after the Airport upgrade. The study concluded that Yola international airport has impacted positively on socio economic activities of Jimeta residents. Thus, the following recommendations were put forward: there is a need for the local economic enterprise to actively identify, monitor and supervise the creation and establishment of different business establishments around the airport vicinity.

Key-words: Airport, Air transport, infrastructure, Socio-economic, urban development.

Introduction

Airports play an important role in shaping the economic activities of the communities of which they serve due to the fact that they are among the largest public facilities in the world. It is well understood that a viable and efficient transportation system is a fundamental and necessary component to the economy of any region (Wells & Young, 2004). The availability of air transportation and its associated airport infrastructure constitute a significant stimulus to economic and social development, not only for the community located in neighboring areas of the airports, but also for the region, state and the country as a whole (Stilwell and John., 2013).

Thus, the direct socio-economic support of an airport includes employment opportunities that are directly and indirectly provided, goods and services, economic transactions and infrastructure development. While most of these activities occur within the airport borders, there are more additional supports such as revenue generation and business growth for the communities around airport such as hotels and restaurants, travel agency, taxis and parking associated with airport business. The airport has become a vital feature for business and industrial activities, providing the necessary access, in terms of air transportation, to firms and companies that serve markets. Airports are an important part of regional economic infrastructure which contribute significantly to economic growth and development (Airports Council International, 2004). In addition, the growth of air service access can increase the growth potential of a region by attracting investment and promoting internal and external trade. From mere providers of airline infrastructure, airports have become hubs of economic development and gateways to growth for not only their airline customers but also for the regions they serve (Muthukrishnan 2011). In terms of economic impact, airports handle growing number of international passengers and high volume of cargo which is flown in preference to rail or sea transport. Air transportation for freight and passengers has become a vital component of global economy (Airports Council International 2004).

Airports are a major force in the local, regional and national economy with an impact that goes well beyond the airport fence. As globalization continues to take hold, the competitiveness of industry is increasingly relying on airports and the aviation infrastructure (Muthukrishnan 2011). With rising passenger and cargo traffic and infrastructure improvements, the importance of airports as economic catalysts will only increase in the future. The economic prosperity is experienced not only at the national level but it is felt in the micro level too, at the community surrounding the airport (Ronaldo and Vilma, 2017). The long tradition of airport impact studies has identified direct, indirect, induced and catalytic impact as four main economic impacts of airport to the local community (Graham 2003, Wells & young 2004, ACI 2004). According to Nwaogbe et. al. (2015), air transport unit has contributed significantly to the economic advancement of Nigeria and the whole globe in two different ways. The levies exacted on Gross Value Added (review that it is equivalent to the total of benefits and wages). Development of communication system such as that of transport system is proved to be vital in creating economic infrastructure for the industrial and

agricultural development of the economy. Communication is not merely an amenity but in fact a key sector in economic development and constitutes the life of industry and commerce. There is a direct and positive relationship between communication and economic development. The influential factors to the service level of airport passenger terminals were classified into airport facility and airport system and these factors were constructed specifically and then evaluated according to the airport process such as arrival, connection, passing, and transit (Morgan., 2010). Although only around a hundred years old, airports have developed rapidly from simple landing facilities to important transportation hubs for people and goods (Wells and Young, 2004). More dramatically, in recent decades, airports have developed more and more from a piece of infrastructure for a transport facility to commercial centers and finally to Airport Cities and as airports are developing into profit-oriented enterprises, in which aeronautical revenues form only one part of the airport business (Button and Taylor., 2000).

The socio-economic impact of an airport is defined as the change in economic activity within an area due to airport or airport-related activities (Cohen., 2003). Social economics examines the interaction of economic valuations with economic activity and economic institutions and measures their outcome against basic ethical values. Its methodological hallmarks are to conceptualize a socioeconomic system as a collection of heterogeneous individuals that interact directly and/or through prices generated by markets. It recognizes that individual actors have different and alterable competencies and potentialities, develop individual identities and replicate and change their respective sociocultural context in social processes (Campbell., 2010; Muhammad *et al.*, 2014; Hakfoort *et al.*, 2001).

The following are the major components of socio-economic development; Per capita Income, Level of Agriculture Development, Level of Industrial Development, Level of Urbanization, Occupational Structure, Level of Educational Development, Health Status, Transport and Communication, and Population Characteristics (Morgan., 2010). The results indicated that market size measured by population and proximity of a resort has impact on air service in small markets (Goff, 2005). According to Gillen and Hinsch (2001) there are enormous expanses of public lands that are not available for development and that means the distance between urban centers, towns and other communities are much larger, reinforcing that air

transport help to get products to market and enable the movement of residents participating in knowledge-based professions. Kasarda and Stephen, (2012); and Appold, (2013), analyzed employment patterns around major US airports in which they reported high levels of job concentration within 4 km (2.5) of the airport around half the level of concentration of jobs found in a corresponding radius around traditional 'downtown' centers, and far greater than traditional industrial areas. Isaac (2011) documented that, airport has attracted local and foreign investors to its location thereby created job opportunities; revenues, and boost regional and international trade in an area. Ihuoma and Raimi (2019), investigated the role of airport infrastructural development on socio-economic development of a country and concluded that there was a correlation between airport infrastructure development and socio-economic development of the country.

Hakim and Merkert (2016), looked specifically at lower income countries in the Indian subcontinent where there was economic growth but inconsistent airport development. Unlike previous researches, they concluded that, economic growth flowed on to air passenger traffic and also on to air freight activity. Ronaldo *et al.* (2017), investigated the impact of Iloilo international airport on the quality of life of the residents in the nearby communities and reported moderate level and the highest negative impact was on the environment and less negative impacts was on mental health, economy, society and infrastructure. As regards to environment, noise and air pollutions caused by aviation's and motor vehicles, sewage and waste disposals system affects the physical and mental health of the residents. Azar (2007); as well as Kassarda and Linsay (2011) research findings revealed that airports served as a more suitable way to stimulate urban development in a region in terms of connectivity between two regions as complements to inner-city industry clustering. Frequent and convenient air traffic connections attract new firms or industries and promote employment at established firms. As business men in general prefer direct flights which means that companies are more likely to move into a catchment area of a gateway or hub airport than a regional airport (Button and Yuan., 2013). Smith (2014) stated that, non-aviation companies are widely found in the Airport City precinct and that both places achieve premium rents. Nigel and Svein (2010) observed catalytic impact of airports on regional accessibility, social development and economic competitiveness. Airports play an important role in securing the accessibility of regions. Similarly (Stilwell and John., 2013, Appold and kasarda, 2010 and krafczyk 2013)

opined that Airport Cities can be used as branding and marketing tools for whole economic regions and can be a competitive advantage for attracting business. This is in line with the studies of Goetz and Graham (2004) and Xiang and Zhang (2010) which primarily saw the development of an aviation-related business cluster around the airport instead of non-aviation business cluster. In contrast, Morgan (2010) revealed that industry cluster, tax-incentives, quality of the airport, supply of high-quality residential and the closeness of the airport to the city, were the success factors for industry locating in the area, similar leases found in the Central Business District (CBD) are achieved in the airport precinct and residential prices rose regardless of noise pollution. The residents of the Airport host communities according to Adindu and Raimi (2018) had moderate income having mean income of 29,645 Naira which is above the minimum wage of Akwa Ibom State. This moderate income could be attributed to the presence of the Airport.

The objective in this study is to assess the Socio-economic Impact of Yola International Airport on Jimeta Residents of Adamawa State, Nigeria. The impact before and after the upgrade of the airport were also sought.

Study Area

Jimeta-Yola is situated along the bank of River Benue and is the headquarter of Yola North Local Government Area (LGA), Adamawa State. Jimeta is located on latitude $09^{\circ}15'N$ to $09^{\circ}20'N$ and longitudes $12^{\circ}25'E$ to $12^{\circ}29'E$ The town lies within the Benue trough at an approximate altitude of 189m above sea level (figure 1). It covers a land area of about 109km^2 (Adebayo, 1999). It is a gap town which is situated at a point where the Benue River carves its valley through the eastern highlands. Jimeta is one of the two settlements that form the capital of Adamawa State. The population of Jimeta in 2016 was 199,674 with 54.3% male (108,379) and 46.7% female (91,295) (NPC, 2007., and NBS 2016). The city has been experiencing an increasing population explosion since it assumed a status of Adamawa State capital in 1976. Like any other Nigerian cities, Jimeta comprises of so many land use types ranging from institutional, commercial, and residential.

The urban nature of Jimeta being the seat of Adamawa State Government abode all the Ministries, Boards and Parastatal's headquarters resulted to the stimulation of commercial

activities. Trading in various items such as manufactured goods, food, cash crops and agricultural produce are taking place. Apart from that, many financial institutions such as Banks and Insurance houses are found. Also, there are some appreciable numbers of both small and medium scale manufacturing industries in the study area with a large number of people engaged in production of various items such as consumer goods, furniture among others. All these activities were triggered by certain social or economic activities which affect the communities either positively or negatively.

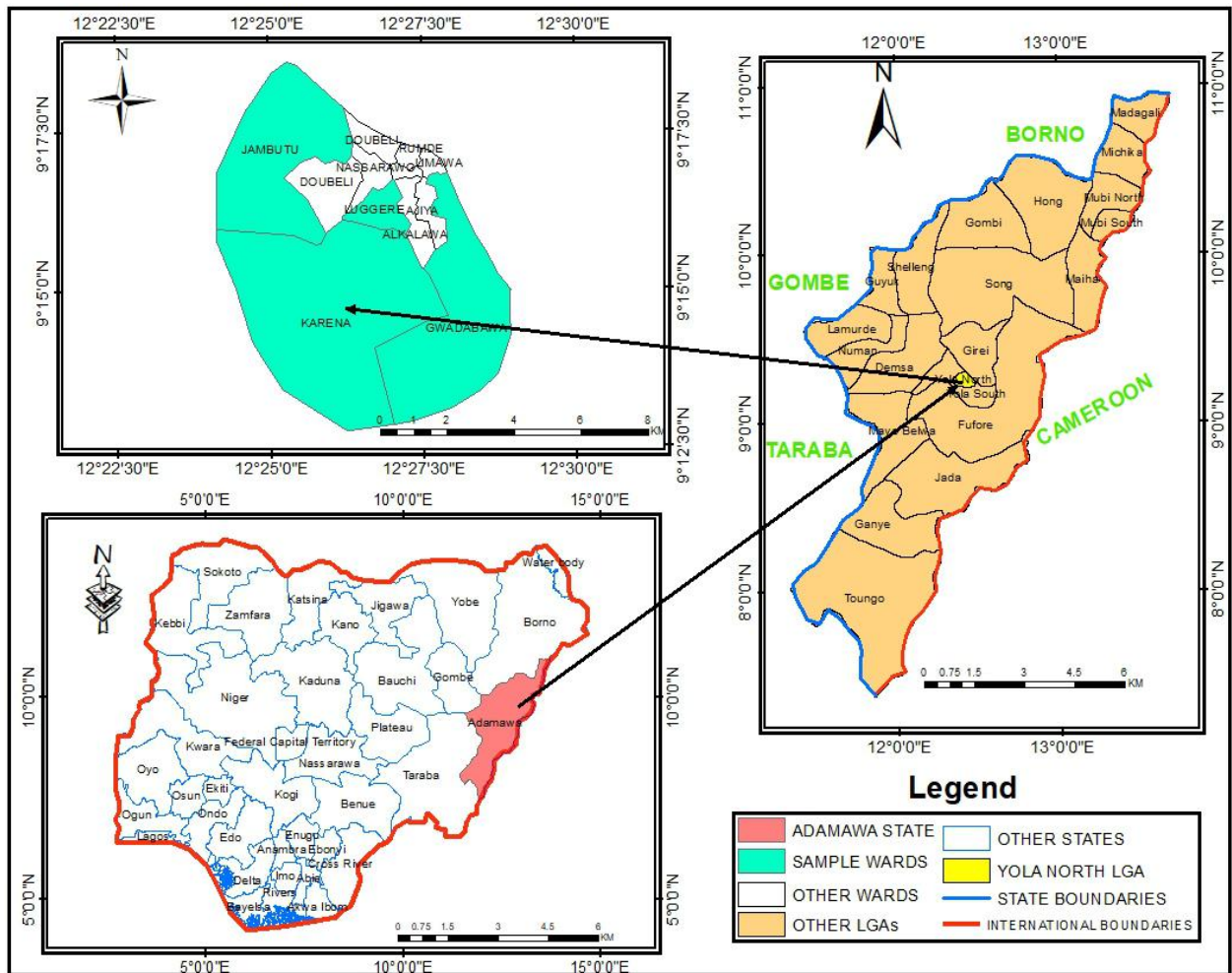


Figure 1: Map of the study Area

Materials and Methods

There are different sampling schemes to use when collecting reference data. The opinion on which scheme that is appropriate to use varies among disciplines which is also flexible to the researcher's interest as well as the nature of the problem under investigation. The study used primary data which was obtained through administration of 300 copies of structured questionnaire in which socio-economic characteristics of the respondents before and after the upgrade of the airport were sought. The combination of stratified and systematic random sampling was used, in which the number of wards selected for questionnaire administration was based on purposive sampling method, simply because the number of population of the wards differs greatly. The first household sampled was selected randomly in each of the ward while systematic sampling was used to select every fourth household in the wards for the subsequent sampling. Data collected were subjected to simple frequency count and student T-test to assess the socio-economic impact before and after the upgrade of the airport.

Results and Discussion

Table 1 presents result on the impact of Yola International Airport upgrade on the livelihood of the respondents. Result of the findings revealed that, majority of respondents have agreed with the fact that Yola airport upgrade brought about changes to their livelihood. In the same vein, result on the impact of Yola airport upgrade on socio-economic growth of the residents in Table 2 revealed that, majority of the respondents (62.7%) accepted that Yola airport has influenced growth of socio-economic activities in the area which clearly showed that, Yola international airport has tremendous impact in the study area in terms of engineering and propelling different socio-economic activities of the residents. It is also clear that, construction of Yola international airport has propelled different business activities in the area as well as providing Business and employment opportunities for the residents as also revealed in Table 3 were majority of the respondents (72.0%) agreed that the airport upgrade generate Business and employment opportunities. In addition, majority of the respondents documented that, they have benefited from the upgrade of Yola International Airport through; high patronage of customers to their business and access to business trip which enhance their business efficient in the study area (Table 4). This result is in line with the findings of Nigel and Svein (2010) who documented that, airport provide opportunities for the development of

businesses. This is in line with a study by Nigel and Svein (2010), Azar (2007), as well as Kassarda and Linsay (2011) and Appold and Kasarda (2013).

Table 1: Impact of Airport upgrade on Change in livelihood

		Frequency	Percent (%)
Valid	Yes	188	62.7
	No	112	37.3
	Total	300	100.0

Table 2: Airport upgrade as a factor for socioeconomic activities growth

		Frequency	Percent (%)
Valid	Yes	216	72.0
	No	84	28.0
	Total	300	100.0

Table 3: Area affected by Airport upgrade

		Frequency	Percent (%)
Valid	Employment	71	23.7
	Business	135	45.0
	Others	94	31.3
	Total	300	100.0

Table 4: How Airport upgrade affect Business

		Frequency	Percent (%)
Valid	High Patronage of Customers	93	31.0
	Provide Accessibility to Business trips	129	43.0
	No impact	74	24.7
	Others	4	1.3
	Total	300	100.0

Result on the socio-economic activities engage before the construction of Yola airport by respondents of the area revealed that trading activities were the highest activities (39.7%) before the airport upgrade followed by farming activities (25.7%) while commercial taxi and motor cycle drivers identified to be the least activities (34.7%) engaged by the residents of Yola (Table 5). Information on the socio-economic activities after the upgrade on the other

hand revealed that commercial taxi and tricycle drivers' services has the highest number of respondents (39.0%) followed by trading activities (32.3%) after upgrade of Yola airport (Table 6).

Following the results obtained, it is clear that commercial driving and trading were identified to be the major activities after the upgrade of Yola International Airport while farming was identified to be the least activities after the upgrade contrary to it engagement before the upgrade. This result suggested that, farming is one of the major activities before the airport upgrade based on the fact that, there was land availability that support farming in the area, but with upgrade of the airport, most of the land availability were taken over by urban expansion as documented by Birma & Ezra (2020).

Result on the test of difference between the socio-economic activities before and after the airport upgrade revealed a t-value of -12.60 at $p = 0.000$ (Table 7). This result clearly revealed that the probability level is 0.000 is less than 0.01 as such, there is a significant difference in socioeconomic activities before and after the airport upgrade. This result can be clearly explained with Table 5 and 6 were the number of residents engage in farming activities before the upgrade decreased from 25.7% to 2.7% while those engaged in commercial driving and hotel Attendants increased from 34.7% to 39.0% and 0% to 16.3% respectively after the airport upgrade. This result clearly revealed that upgrade of Yola International Airport affected the socioeconomic activities of Yola residents thereby influencing their activities as also documented by Stilwell and John (2013) as well as Appold and kasarda (2010) and krafczyk (2013).

Table 5: Activities engaged before upgrade

		Frequency	Percent
Valid	Farming	77	25.7
	Trading	119	39.7
	Commercial Taxi/Motor cycle driver	104	34.7
	Hotels Attendant	0	0
	Others	0	0
	Total	300	100.0

Table 6: Major activities after upgrade

		Frequency	Percent
Valid	Farming	8	2.7
	Trading	97	32.3
	Commercial Taxi/Motor cycle driver	117	39.0
	Hotels Attendant	49	16.3
	Others	29	9.7
	Total	300	100.0

Table 7: Test of differences in socioeconomic activities before and after the Airport upgrade

	Paired Differences				t	df	Sig. level	
	Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference				
				Lower				Upper
Activities engaged before upgrade and activities after upgrade	-.89000	1.22320	.07062	-1.0289	-.7510	-12.60	299	0.000**

**t-test is significant at 1%

Source: Author's work (2020)

Conclusion

Based on the findings of this study, it was concluded that, construction of Yola international airport has propelled different business activities in the area as well as providing Business and employment opportunities for the residents. In addition, farming is one of the major activities before the airport upgrade but with upgrade of the airport, commercial driving and trading were identified to be the major activities. It was also concluded that there is a significant difference in socioeconomic activities such as farming, commercial driving and Hotel

attendants before and after the upgrade the Airport. It is recommended that there is a need for the State and Local Government Unit (SLGU) to identify the area to be converted for transportation, commercial and residential use to facilitate the zoning of the area and regulations for the construction of the infrastructures and other business establishments to improve the socio-economic activities of the residents.

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