

## Factors Affecting Traffic Jam in Karachi and its Impact on Performance of Economy

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### ABSTRACT

Attempt has been made to investigate the factors of traffic jam in Karachi and find out its impact on the performance of economy. Previous studies highlight the same field but due to rapidly changes in infrastructure of Karachi city and growing population raise the demand for more facilities, space and vehicles. It became a vital challenge for city to manage the flow of traffic as per routine and design the ways through which problems can rectify and minimize the future problems. In this study exploratory approach has been used and primary data was collected through various methods and techniques which helpful to investigate in the subject matter. The qualitative research study conducted via one to one interviews from citizens of Karachi along with the structured questions. Researcher's observation and experience work as a catalyst to analyze the factual finding in an appropriate way. The results of data have been critically examined from prospective. This study concluded the key issues for traffic jam is non-availability of long term planning by traffic management which leaves negative impact on performance of economy is clearly exposed. It is recommended that factors indicated in this research may be rectified and remedial measurement may be taken to control these responsible factors which will creates better performance of economy.

**JEL. Classification:** E26; P27; H11; P17.

**Keywords:** Traffic Jam, Traffic Management, Congestion, Karachi, Performance of economy.

## 1. INTRODUCTION

### 1.1 Background

Today big Cities mainly depend on transport system for their economic survival and socio-environmental sustainability and the transport system has a direct impact on all sectors of an economy. The impacts of ill-planned transport system on human environment include congestion, more energy consumption, pollution, traffic crashes, wastes time, delay, decreases productivity and imposes costs on society. These negative impacts can be minimized after the identifying the main factors of traffic jam in the city and then

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remedial measurement can be taken to control these factors. There has been a major growth of traffic volume in Karachi over the past two decades due to the great urban population with a large number of vehicle owners and citizens who transact businesses from one part of the city to another. Although many infrastructure facilities such as under passes, wide roads, bridges, signal free corridor etc. have been made in Karachi in last decade but increasing traffic volume and other main factors rapidly shrink these facilities at present and in the future there will be worst position if long-term planning has not been done before. Resultantly, our economy will be badly affected.

A considerable amount of research has been made to regulate vehicle movement through manual or automatic signalized facilities which translate into an orderly traffic flow. Despite the huge investment in road infrastructure, large cities are facing an ever increasing problem of traffic jam, accidents, air and noise pollution. One of the basic problems of the Karachi bus service lays in mismanagement particularly the failure of regulating, monitoring and enforcement agencies (Rao and Grenoble 1991).

Mankind has been endeavoring for the improvement of transportation since early history of civilization. This improvement is not only done for the easy communication of services but also for the exchange of goods and services. Consequently, this improvement has uplifted the standard of living and lifestyle of humans. A best transportation system results into a well-developed society and a progressive country (Golob and Regan 2000).

Rapid increase in population become a major cause of traffic problem and creates a turbulence situation for traffic management. Ultimately it leaves negative impact on the economic development of Pakistan (Golob and Regan 2003). Constantly increase in traffic is the growing problem for urban areas because of personal vehicles of citizens (Weisbrod et al. 2003). There is need to introduce the most effective traffic control system which comprise of technology deployment.

In the past many researchers have done the work in the same relevant field, but due to rapidly changes in the structure of Karachi city and as well as growing population demand more and enough space and facilities for vehicles. Difficulties to manage traffic flow increased day by day so it requires long term planning to shield the future related problem in this field, which should be realized today. The main factors which are selected as variables in this research are responsible for traffic jam in the city and have been investigated and analyzed through different angle. These factors are used in this research first time and no others researcher had investigated before such an angle which has been used in this research.

## **1.2. Justification and Reasons of doing this study**

After passing 65 years of independence of our country, a complete traffic management system could not be introduced to overcome the difficulties in traffic flow in Karachi. Impact of traffic jam on the performance of economy is being negatively increased. Therefore it is needed that what factors are affecting it and at what level so in light of that it may be improved.

## **1.3. Research Question**

What are factors of traffic jam in Karachi due to which economy is badly suffered?

## **1.4. Objectives of the Study**

Main object is to find out main factors of traffic jam in Karachi while specific objectives which are influencing the traffic jam to find out the impact of:

- Encroachment on road and Footpath.
- Less parking facilities.
- Impact Road Design.
- Traffic Signals and roundabouts.
- Inefficiency of traffic police.
- More vehicles on road.
- Violation of traffic rules by drivers.
- Political and other agitation.
- Construction of new building and shopping centers.

### **1.5. Scope of the Study**

This study helps to determine the main factors of traffic jam through which corrective measure should be taken for the removal of difficulties faced on road by citizens of Karachi and economy will also grow in future.

### **1.8. The Delimitation**

This study is limited due to time and budget constraints and had included very limited size of sample to probe in this research therefore further study in depth is required.

### **1.9 Organization of Paper**

Section 1 introduction Section 2 literature review, Section 3 methodology Section 4 results and findings, Section 5 discussion and conclusion of paper, Section 6 is about recommendation and implications.

## **2. LITERATURE REVIEW**

In the past many researchers have done the research in the same relevant field, but due to rapidly changes in the structure of Karachi city and as well as growing population demand more and enough space and facilities for vehicles. Difficulties to manage traffic flow increased day by day so it requires long term planning to cover the future related problem in this field, which should be realized today. Some example are added which support to this current research and study.

Traffic jams occur when the road capacity is saturated owing to a high number of vehicles passing the same point at the same time. They generally occur in the morning and evening (“structural” queues) and sometimes during the day (incident-related queues) due to road works, accidents, severe weather conditions etc (Salman and Qureshi 2009).

According to conservative estimates, more than 300 private vehicles were registered every day in Karachi and it reached to 1.5 million. The customer find easy access to private vehicles because of car financing schemes from different banks, low prices of CNG and LPG (Humayun 2006).

There are certain issues like overloading of luggage and old vehicles on the road may cause the slow speed of traffic. Alternatively, high accident ratio in Karachi also associated with the poor road design, lack of road maintenance, people less aware of road safety measure (Odero et al. 1997).

Traffic congestion is linked with the conditions through which traffic slow down. It is because of poor traffic sign and overloaded traffic on the road. In populated city it is quite difficult to expand the roads

while city infrastructure is not properly designed. This scenario can be easily observed in the several urban areas where vehicles growing faster and exceed over the capacity of transportation system. In resultant, slow traffic create problem for people and leave negative impact on the business economy because the response rate of people towards their assign task become low.

It is also noticed that the traffic congestion hurt the routine life of people, negative impact on air quality due to emission, time killing and additional cost apply on business activities from the end of workforce, supplier and customer markets (Weisbrod et al. 2003).

The major portion of the economy is linked with the workers those who spend time for business activities. When traffic congestion occurred then it create a critical situation for workers to response on time. Specifically in the metropolitan areas, delay in response directly leave the negative impact on the business activity and not generate good response for economic development of Pakistan. When workers travel a long distance then it directly affect the time and congestion cost. It is fact that the traffic congestion loses the precious time and money. In this sense, there is need to find out the ways through that leads towards the effective management of transportation system of the metropolitan cities. It also generates the effective results for business organizations to minimize the risk factor that cause because of traffic congestions (Weisbrod et al. 2003).

In connection with the congestion reduction several workers can respond to their workplace on time and generate efficient results for the development of economy (Hashimoto 1990). Drastic change in the demand of vehicles leaves negative impact on the time management and other resources which consumed during the moment. It is necessary to maintain the proper control system of traffic during peak hours (Hau 1992). On the other hand, traffic congestions also increase the rate of accidents and injuries. Most of the time common citizens were being affected from this uncertainty issue during traffic congestion in metropolitan cities.

According to the WHO (2009) high rate of road injuries largely depends upon the motor vehicles and poor implementation of the traffic rules and regulation. There is need to respond such type of issues on priority basis and ensure the safety measure for general public.

Building road infrastructures, installing and maintaining traffic control systems, training new and young drivers, as well as educating pedestrian and bicyclists not used to heavy vehicle traffic, taming the « road rage » of aggressive drivers, all of these endeavors take time and money. Few cities in developing countries have underground transportation, therefore all traffic is on streets.

WHO (2009) Congestion occurs, when road resources become scarce to serve the growing traffic requirements. Congestion manifests itself in the form of slower speeds, longer trip times, high fuel wastage and increased queuing.

Congestion costs refer to the incremental delay, vehicle operating costs, pollution emission and stress when the traffic density exceeds the road capacity. Traffic congestion has severe effects on the economy, human psyche, safety and environment. Almost all countries in the world (both developed and developing) are somehow affected by its negative impacts (Golob and Regan 2000).

### **3. RESEARCH METHODOLOGY**

To meet objectives of the study and research, both primary and secondary data was collected through various methods and techniques.

Secondary data was obtained from various government offices and concerned departments. Besides consulting different journals, research reports, internet and some newspapers were also used to extract the required information.

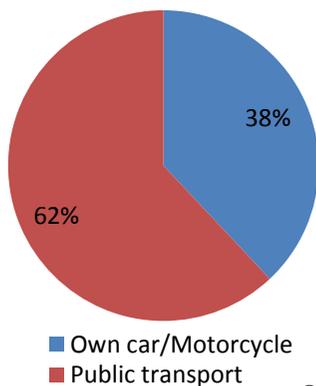
Primary data was collected through questionnaires; field survey, personal observations and interviews. During collection of primary data, the study area of Karachi have been visited many times, Questions and interviews of different respondents including drivers of public transport and personal vehicle owners, general public in a random format have been carried out. Information was also recorded through general observation and interviews with officials of different concerned departments. The primary object to evaluate main factors of traffic jam and their impact of the performance of economy has also been assessed. The data obtained was analyzed and shown in graphs.

#### 4. RESULTS AND FINDINGS

To illustrate this study, it is worth mentioning here that we reached this result through a survey, personal observations & experiences. The result of this survey is mention below.

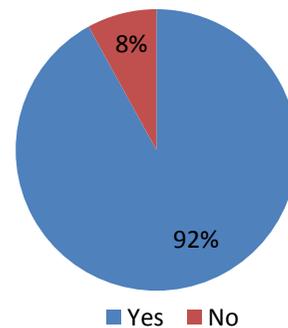
##### Q1: What type of transport you used?

- a) Own car/motor cycle
- b) Public transport



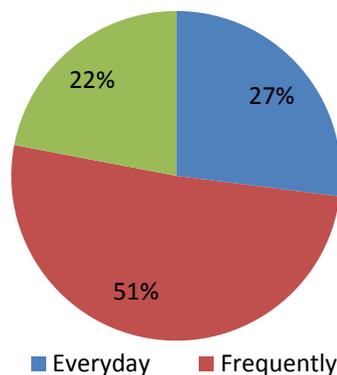
##### Q2: Are you sticking in road jam?

- a) Yes
- b) No



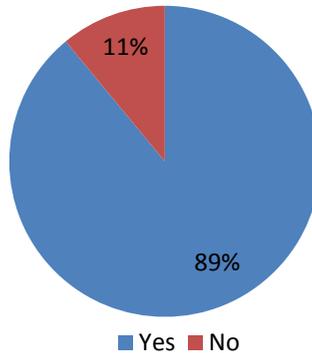
##### Q3: How you are sticking on road jam?

- a) Everyday
- b) Frequently
- c) Occasionally

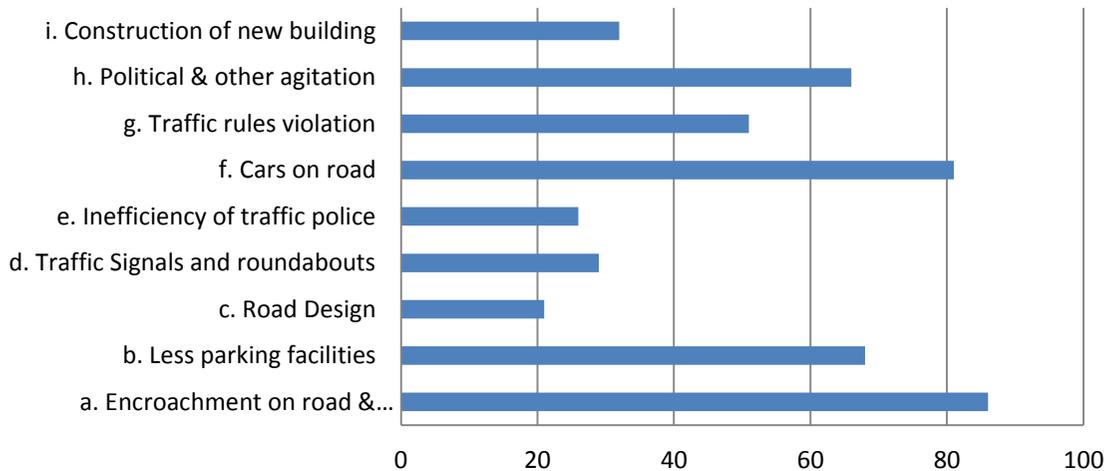


According to above table we reached and got five main factors for traffic jam in Karachi which has also negative impact on the performance of economy. 100 respondents have been asked to give their response on above survey. In which 27% every day, 51% frequently and 22% occasionally stuck in a month in traffic jam. When they have been asked about the five main reasons/factors for traffic jam in Karachi, so out of 92 respondents the majority of 86 votes goes to encroachment on road and footpath, 81 votes goes to more cars on roads, 68 votes goes to less parking facilities, 66 votes goes to political & other agitation and last but not least 51 votes goes to violation of traffic rules. Whereas 92% feel that due to traffic jam they waste their time and money as well as performance of economy is badly affected.

**Q4: Is traffic jam affecting the performance of economy?**



**Q5: Select any five reasons of traffic jam from the following:**



**5. DISCUSSION AND CONCLUSION**

It is concluded from the results that Karachi city is in terrible condition due to ill planned fast growing traffic, especially during the past few years. This study also concluded the core factors for traffic jam due to non-availability of long term planning by traffic management and negative impact on the performance of economy is clearly exposed. Although many infrastructure facilities such as under passes, wide roads, bridges, signal free corridor Lyari express way etc. have been made in Karachi in last decade but

increasing traffic volume and other main factors rapidly shrink these facilities. In the future there will be worst position if long-term planning has not been done before. The city lacks proper traffic planning and management and therefore, 92 % of the respondents are not satisfied with the present traffic management due to less parking facilities and increasing number of cars on road.

Due to following reasons Encroachment on road & Footpad, Less parking facilities, Impact Road Design, Traffic Signals and roundabouts, Inefficiency of traffic police, More vehicles on road, Violation of traffic rules by divers, Political and other agitation, construction of new building and shopping centers.

These main factors cause serious congestion, which is counterproductive in terms of time, extra fuel/gas charges, delay and hence the greater air emissions and its psychological and health impacts, resultantly, our economy has been badly affecting.

## 6. RECOMMENDATIONS AND IMPLEMENTATIONS

It is recommended that factors indicated in this research may be rectified and remedial measurement may be taken to control these responsible factors which will create better performance of economy. All government departments related to the transport sector must be under one window for their better coordination and management. General Awareness must be developed in the public. To reduce the fastest ever traffic growth, the use of private cars should be discouraged through the introduction of decent public transport, including circular rail and transit transport in the city.

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