UNITED STATES INTERNATIONAL UNIVERSITY AFRICA

CHANDARIA SCHOOL OF BUSINESS

CONCEPTUAL PAPER

TITLE: ASSESSMENT OF TRAFFIC CONGESTION AND ITS EFFECT ON PRODUCTIVITY IN NAIROBI METROPOLITAN REGION

DBA Students
Njiinu Andrew Njiraini
Shawn Bolouki
Gitonga Kenneth Murithi
Mwai Grace Mirigo
Milkah Chebii
Bonn Jonyo
Introduction

- Efficient mobility is a pre-requisite for **effective socio-economic performance** of a nation.
- Good transport is vital in confronting the multiple urban development challenges.
- Impact on **poverty reduction, productivity enhancement**.
- Effect of traffic jams on productivity in Nairobi City.
- Reason, rise of income leads to car ownership and contributing to traffic jams.
- Impact on energy consumption, environment and productivity.
- Other contributing factors are: *urban migration, poor urban planning, common schedule of workers.*

**FACTORS**
- Increased incomes leading to increased vehicles
- Poor urban planning
- Rural to Urban migration

**EFFECTS**
- High energy demand
- Environmental impact
- Productivity Decline

**SOLUTIONS**
- Infrastructure upgrades
- Public transport efficacy
- Develop a 24 hour economy
- Leverage technology for virtual working
• This is a conceptual paper that seeks to assess the effects of traffic congestion on productivity within Nairobi Metropolitan area.

• The study reviews literature on the factors contributing to heavy traffic jams in Nairobi metropolitan city.

• The paper analyses the effect of traffic jams on productivity within Nairobi city as well as offering solutions to such problems.

• Traffic increase is as a result of
  o Migration from less developed areas in pursuit of better economic opportunities
Background of the study

• In 2014, UN report noted that 54% of the world’s population lives in the urban areas - *anticipated to rise to 66% by 2050.*

• With growing population, this could add another 2.5 billion people into the urban population by 2050.

• 90% of the increase is anticipated to be from Asia and Africa.

• 75% of the Nairobi drivers are alone in their cars (IBM, 2012).

• 80% of Kenya’s passenger and freight traffic use road transport comprised of the use of buses, mutatus and private transportation.
Problem Statement

- Despite the chronic traffic jam scenarios experienced in Nairobi for a long period of time, little or no effort has been made to establish the effect of such snarl-up on productivity.

- The Government has spent money to improve roads and traffic flow.
  
- ALL employees have same working hours, 8am to 5pm.

- LACK of efficient public transportation and use of private vehicles continues to aggravate the situation.

- This study therefore sought to establish the effect of traffic congestion on overall productivity in Nairobi metropolitan area.
Summary of the study

Purpose of the study

• The purpose of this study was to assess the effect of traffic congestion on productivity in Nairobi Central District Business.

Objectives of the study

The main objective of this study was to assess the effect of traffic congestion on productivity within Nairobi city. The specific objectives of this research were:

• To identify specific factors that leads to traffic congestion within Nairobi city.
• To assess the effect of transportation on productivity within Nairobi city.
• To find out measures that can be put in place to address traffic congestion in Nairobi city.

Research questions

• What are the specific factors that cause traffic congestion within Nairobi city?
• What is the effect of transportation on productivity within Nairobi city?
• What measures can be put in place to address traffic congestion in Nairobi city?
Scope of Study

• Study effects of traffic jam on productivity in Nairobi.

• Identify factors leading to traffic congestion.

• The population is the Nairobi city residents who commute to central business district.

• The review focused on productivity as a dependent variable and traffic congestion as an independent variable.

• Study carried out between January 2015 to April 2015.

• Limitation – not having exact population of residents who commute to CBD.
Theoretical Framework

• Nairobi’s GDP is driven by the service sector that contributes 59.2%.

• Followed by agriculture at 24% and a large part of the remainder – 16.8% - coming from the manufacturing industry.

• Causes of traffic jam:
  - similar working hours in the country,
  - use of private transport, unplanned city,
  - poor discipline,
  - lack of alternate traffic means, archaic management and tight development budgets.
The Conceptual Framework

Figure 1 - The conceptual framework

Rise in income → Increase in car ownership → More car travels → Increase in traffic congestion → High demand in energy → Increase in trade deficit → Less social and economic development → Loss of man-hours → Reduction in productivity → Health implications → Environmental Impact

Source: Adopted and modified from Pacione, (2005)
The Conceptual Framework of an Effective Transport System

Figure 2 - The conceptual framework

Source: Adopted and modified from Karlsson et al., (2007)
Research Methodology

• The research philosophy is post positivist.

• The research design is qualitative.

• Desktop review study of 17 articles - critical review of literature in line with the traffic congestion globally, regionally and within the country.

• Most of the reviewed studies used a questionnaire as the main tool for data collection.

• Our data analysis was deductive, where we looked for similarities in the data collected using content analysis.
Results & Discussions

Effects of traffic congestion:

- In 2012 Kenya lost around to Ksh. 50 million (approximately $650,000) a day due to time wasted on the road instead of it being used to do productive activities (IBM 2012).

- High consumption of fossil fuel which impacts the climate.

- Increased environmental pollution.

- Health challenges for the residents from the air pollution and long stay in the traffic.

- High charges by private transport providers to compensate resources spent in traffic jam.

- High demand for fossil fuel (oil).

- High stress level.

- Long work days (5am till 9pm) leading fatigue, absenteeism and residents burn out.
Conclusion

The government should consider the following;

• Flexible working hours and telecommuting *(virtual working)*
• Increased use of public transport systems *(ensure better organization)*
• Increased investment in public transport systems
• Better management of human traffic
• Flexible time frame for workers
• Introduce high parking fees
• Investment by Government in public transportation
• Modern traffic/urban planning – zoning,
• Enforcement of traffic laws