A Publication of Departments of Accounting & Finance and Business Administration, Fountain University, Osogbo.
Journal homepage: www.osogbojournalofmanagement.com
ISSN: 2636 – 526X (Print); eISSN: 2636 - 6460 (Online)

IMPACT OF ICT ON THE TURNOVER OF PRIVATE TRANSPORT COMPANIES IN OSUN STATE, NIGERIA.

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Abstract

This study examined the influence ICT usage among selected private transport companies in Osun State. It also looked at the effects of ICT on profitability of these companies. Data analyzed were elicited with aid of questionnaire administered on surveyed private transport operators. A total 60 privatetransport operators were purposively selected in 3 major towns: Osogbo, Ilesa and Ile-Ife. The study utilized both descriptive and analytical techniques of tabular presentation, graphical illustrations and the parameters of the turnover function by Ordinary Least Squares (OLS) method of regression.The study found that the pattern of ICT possession is on the increase, while mobile phones is the most used and preferred ICT tool for transport business applications among sampled transport operators. Mobile phones are used more often for keeping in contact with drivers and/or commuters and clients compared to any other form of communication. Furthermore, results indicated that a unit change in ICT possession and utilization indices respectively increases profitability performance of the selected private transport operators by 1.36 and 2.24 units.By creating a vibrant and competitive ICT sector, transport operators are enabled to become more competitive and sustainable.The study concluded that ICT is significant tool that improved the sampled transporters' operation and business turnover.

Keywords:*ICT, Turnover, Private Transport, Companies*

1. INTRODUCTION

It is clear that as the World economy continues to move towards increased integration because of advance in communications technology, growth in developing countries, and reductions in trade barriers, some of the greatest opportunities for small business will derive from their ability to participate in the global marketplace (Akkeren and Cavaye,1999).Within the developed and developing countries of the world, it is now generally accepted by policy-makers at local, regional and national level, that privatetransport operators are becoming increasingly, important in terms of employment, wealth creation and the development of innovation (Anyawu, 2003).Furthermore, it has been widely recognized that privatetransport operators not only play an important role in the economy of a country, but are crucial to the country's economy stability. In the USA more than half of all the employment comes from firms with fewer than 500 employees

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Oerndt, Morrison and Rosenblum (1992)For instance in the study of Lange et al (2000) reported that, in the UK, transportation employ 67% of the workforce. In most EU member states, Private Transport Operations make up over 99% of enterprises, 67% of jobs and 59% of GDP.In a broader perspective, this study seeks to determine ICT adoption and usage by private transport operators in Osun State.

2. LITERATURE REVIEW

In most countries transportation generate a substantial share of GDP and a key source new jobs as well as a breeding ground for entrepreneurship and business ideas. The United States of America, UK, Japan, Australia, New Zealand, Canada and other developed, as well as developing countries, are making policies to facilitate the growth of transport businesses (Ariyo, 2005).Countries in the world are moving from an industrial economy to a knowledge economy in which economic growth is dependent on a country's ability to create, accumulate and disseminate knowledge. Computer and the internet catalyzed the growth of the knowledge economy by enabling people to codify knowledge into a digital form easily transmitted to everywhere around the world. People who have access to the their new wave of ICT - broadly defined as technology that can be used for transmitting and or processing information -are part of an information society connected to a virtual network that constantly creates and disseminates new information. The importance of ICT has been documented in the literature, the majority of which is the speed up of business transaction.

The importance of transportation in a developing economy like Nigeria is primarily attributed to their potential for transforming local and metropolitan economies into dynamic innovation systems. Other benefits include employment creation and the ease with which they can adapt to market changes. Products from such privatetransport are also increasingly popular locally because of their affordability. One main policy concern for successive governments in Nigeria is how to improve performance of privatetransport operation to achieve faster economic transformation (Agboola, 2006; Oladejo, 2014; Oladejo and Yunus, 2014;Oladejo and Adereti, 2010 and Abbasi, 2007).The rapid development and commercialization of Information and Communication Technologies (ICTs) for business has prompted different forms of firms, including public sector establishments, to increasingly adopt these technologies. This is based on the expectation that the new ICT based processes would lead to an improvement in their operating efficiencies and customer service levels. The most recent empirical evidence confirms the positive effects of ICT on firm performance not only in terms of productivity, profitability, market value, and market share, but also in intermediate performance measures, such as process efficiency, service quality, cost savings, organizational and process flexibility, and customer satisfaction (Brynjolfsson and Hitt, 2000 and Lai, 2007). The extent of the contribution of ICT to the development of Private Transport business is worthy of exploration in the Nigeria context.

3. METHODOLOGY

Since the central aim of this study is to examine the determinants and the influence of ICT applications by private transport operators in Osun State of Nigeria. This section presents an exposition on the area of study and the research design for achieving the objectives of the study.

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The private transport operators covered by study are dispersed over towns and cities of Osun State of Nigeria. Most of the data relevant to the analysis contained in their study were obtained through questionnaire survey of operators.

Three major towns of Osogbo, Ilesa, and Ile-Ife were purposively selected using purposive sampling technique whereby a totalof 60 private transport operatorswere purposively selected.The selectionwas selected based on their profiles. Primary sources of data were elicited with the aid of structured of questionnaires which were administered on the purposively selected respondents. The collected datawere analyzedusing both qualitative and quantitative techniques.

4. FINDINGS AND DISCUSSION

The study adapted from the approach of Chau and Turner, (2001) by utilizing a modified turnover function to measure the impact of ICTs on the profitability of firms. A turnover function is specified as follows: $P_{PTO} = \beta_1 + \beta_1 PI + \beta_3 UI + \mu_1$

Where

$P_{PTO} = \frac{Turnover(Sales)}{TotalValueoAssets}$

PI = ICT possession index

UI = ICT usage index

μ_1 = Error terms

Dependent variable = LOG (P_{PTO})

Note that:

The ICT possession index looked at what business has in terms of ICT equipment and facilities. One point (1) was given for each of the ICT devices owned by a business and maximum of eight (8) points was obtained, should a business have all 6 items mentioned in the questionnaire. The ICT usage index was developed by awarding one point (1) for any employment of ICT facilities and equipment to carry out business transaction; thus giving a maximum of fifteen (1 5) points should a business be making use of all the ICT facilities and equipment mentioned in the questionnaire for business purposes.The parameter of the turnover function was estimated by standard Ordinary Least Squares (OLS) methods of regression.

Table I and II displayed the socio-economic and demographic characteristics of respondents private transport operators. The is expected to guide in their responses to the research questions for the analyses. Table II revealed that most of the transport operators were into sole proprietorship (63.36) while, few were partnership among limited company with 18.33% each. The implication of this on ICT adoption usage by transporters is the affordability and maintenance of ICT deployment. The Table further showed that the majority (45%) of the transporters sampled have been in the business for ten years indicating acceptable business experience. The table further revealed that age of transporters is grown up adult in the age range of 36 to 55 years (61%). Also, the highest educational qualification of sampled transporters is NCE/OND (61%) indicating most Nigerian transporters now have higher degree than primary and secondary education. All these are expected to have being on the responses of the sampled

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transporters to the research questions in term of their understanding of the questions and the logic of answer to the questions.

Table 1:Socio-Economic and Demographic Characteristics of Respondent Private Transport Operators

Figures	Frequency	Percent (%)
FORM OF TRANSPORT OWNERSHIP		
Sole proprietorship	38	63.33%
Partnership	11	18.33%
Limited liability	11	18.33%
	60	100%
YEARS OF BUSINESS START UP		
1-2	3	5.00%
3-5	9	15.00%
6-10	27	45.00%
10+	21	35.00%
	60	100%
ESTIMATED NUMBER OF EMPLOYEES		
0-5	10	16.67%
6-10	11	18.33%
11-20	25	41.67%
21-40	8	13.33%
41-50	1	1.67%
50+	5	8.33%
AGE OF TRANSPORT BUSINESS OWNERS/MANAGERS		
-25	2	3.33%
25-35	9	15.00%
36-45	15	25.00%
46-55	22	36.67%
56+	12	20.00%
	60	100%
EDUCATIONAL BACKGROUND OF TRANSPORT BUSINESSOWNERS/MANAGERS		
Primary School	-----	-----
Secondary School	8	13.33%
ND/NCE	37	61.67%
B.sc/HND	3	5.00%
M.Sc	7	11.67%
PhD	5	8.33%

Source:*Field Survey,(2018)*

Table 2:ICT possession by Respondent Private Transport Operators

The business possesses:	Yes	No
One or more working fixed line telephones	16 (26.67%)	44 (73.33%)
One or more working mobile telephones	60 (100%)	0 (0.00%)
One or more working fax machine	3 (5%)	57 (95%)
One or more post boxes	34 (56.67%)	26 (43.33%)
One or more working desktop computers	52 (86.67%)	8 (13.33%)
One or more working laptops	46 (76.67%)	14 (24.33%)
Internet connections	44 (73.33%)	16 (26.67%)
Host a company website	26 (43.33%)	34 (56.67%)

Source:*Field Survey, (2018)*

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Figure 1 displayed the level of ICT possession by the sampled transporters with mobile telephone the popular ICT possessed by the transporters followed by Desktop Computers in their offices and working Laptops. Most of them were internet connected. The implication is first business connected and communicates with commuters and other stakeholders of transport.

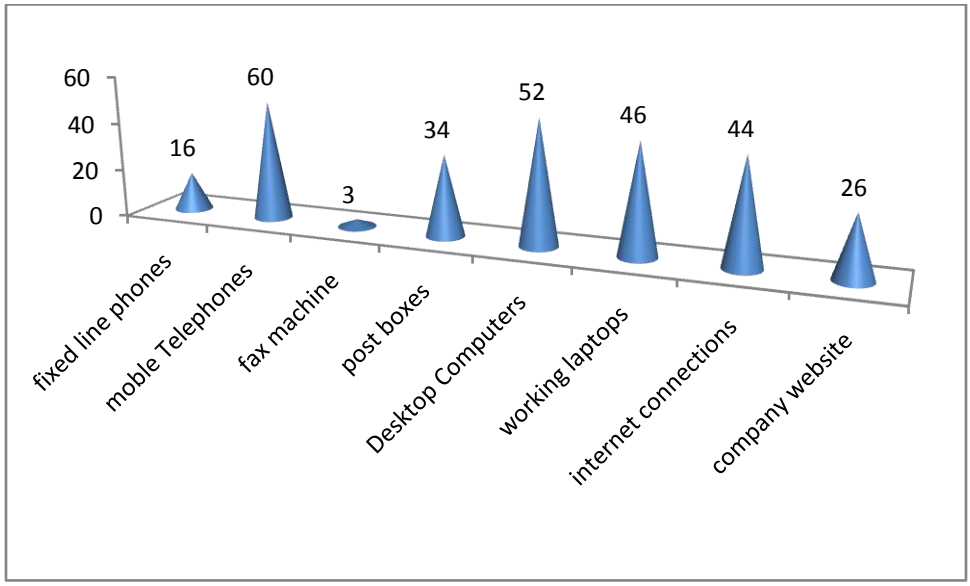

Fig. 1:Possession of ICT Equipment among Sampled Private Transport Operators

Source:*Data Analysis (2018)*

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4.1 Regression Analysis

Table 3: Impact of ICT on Profitability of Private Transport Operators
Dependent variable: LOG (P_{PTO})
Method: Least Squares
Sample (adjusted): 59
Included Observations: 59 after adjustments

Variable	Coefficient	Std. Error	T – statistics	Prob.
C	4.530440	2.023198	2.239247	0.0291
LOG (ICTP)	1.368884	0.729480	1.876519	0.0658
LOG (ICTU)	2.242130	0.998225	2.246118	0.0287
R – Squared	0.884031	Mean – dependent var.		0.518756
Adjusted R – Square	0.851318	S. D dependent var.		1.654834
S. E. of Regression	1.611814	Akaike Info criterion		3.842106
Sum squared Residual	145.4848	Schwarz criterion		3.947744
Log likelihood	-110.3421	Hannan – Quinn criterion.		3.883343
F – statistic	2.568720	Durbin – Watson Stat		0.769535
Prob. (F – statistic)	0.085637			

Source:*Data Analysis, (2018).*

Table 3above presents the estimation results of the effect of ICT possession and usage index on the profitability performance of the selected Private Transport Operators in the study. The results confirmed the theoretical proposition that ICT applications hold potentials for stimulating the performance of Private Transport Operators. Results from the Table indicated that a unit change in ICT, possession and utilization indices respectively increases profitability performance of the selected Private Transport Operators by 1.36 and 2.24 units. These relationships are statistically significant with t =1.9765, p.value = 0.045 and t= 2.2461, p.value = 0.0287.

All diagnostic checks confirmed the estimation to be well specified, conforming with most statistical and econometric assumptions. The proportion of variation in profitability that is jointly explained (that is, R-squared) by ICT possession index and ICT usage index is about 88%. Even when the influence of insignificant explanatory variable is accounted for (that is, the Adjusted R-squared), the proportion of variation in profit level of Private Transport Operators that is jointly explained by ICT possession index and ICT usage index is still very high. It is about 85%, The Durbin-Watson statistic (2.00350) shows the absence of serial correlation among the variables. In essence, the error terms are not correlated. This study is in consonance with the earlier findings of Courtney and Fintz (2002) where small businesses accepted and adopted E-commerce in the Western-Cape Province of South Africa and it enhances profitability.

5. CONCLUSION AND RECOMMENDATION

The study concludes that majority of sampled private transport operators are ICT complied and this had caused their operations to improve significantly.Further results from the

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regression analysis indicated that a unit change in ICT possession and utilization indices respectively increases profitability performance of the selected Private Transport Operators.Based on the result from the survey, it is very obvious that some businesses such as private transport companies would prefer the use of ICT but are only limited in terms of resources, thereforeto encourage ICT usage, Government should be keen to establish competitive ICT markets to lower the cost of access to and usage of ICTs. Effective regulation of markets that are currently dominated by few players is inevitable. A policy focus should be to encourage the development of Transport Operation-specific ICT tools and to encourage lower ICT.

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