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Impact of Information and Communication Technology (ICT) On The Economy of Jigawa State

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ABSTRACT: *In recent years, progress in information and communication technology (ICT) has caused many structural changes such as reorganization of economy, globalization, and trade extension, which leads to capital flows and enhancing information availability. Moreover, ICT plays a significant role in development of each economic sector, especially during liberalization process. Growth economists predict that economic growth is driven by investments in ICT. Information and Communication Technology (ICT) such as the world-wide application of mobile phones and internet etc. have contributed substantially to the fast-growing world economy in unprecedented ways. The objectives of this study was to identify and determine the role that ICT played/playing in improving the economic growth and development of Jigawa state, also factors limiting the use of ICT in most of the key areas that support economy are identified. A questionnaire survey was administered manually to 184 sampled respondents. Descriptive statistic were used in analyzing the data and testing of hypothesis among different classes of the respondents. The result showed that everyday more people are getting involved in using ICT technology, these tells that ICT brings positive change in diversifying the Jigawa state economy. The implications of these results are that most people of Jigawa state are doing farming as their occupation and have a disperse settlement, because of these, they requires maximum support from either government or private organizations to provide them with ICT facilities, orient the people on the use of ICT and the possible ways to use it for self-entrepreneurship program in order to boost the economy.*

KEYWORDS: Information and Communication Technology, Economy, ICT technology, Jigawa State.

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INTRODUCTION

Information and Communications Technology (ICT) are now inbuilt within human society. Within African community that existed before colonial domination, individuals communicated using various traditional communications instruments and codes such as talking drums flutes, gongs, and town crier and village square meetings. Many historical records are still recorded on the walls of caves, and through oral tradition. The use of writing and the invention of printing technology metamorphosed the type and content of recorded history. Communications on a universal scale became more common through the use of books, magazines newspapers, radio and Television.

Sequel to the recent technological innovations, many sophisticated ICT tools have been invented and critically aid the dissemination, processing, integration and storing of data and information. These tools nowadays become critical success factor of communications, development process and central to contemporary societies.

The ability to access and use information is very critical in today's knowledge base economy. This offers opportunities for economic, political and socio-cultural growth and broad-based development. It also facilitates the creation of knowledge-based, science and technology-driven economy with ever-expanding opportunities. This research will focus mainly on the Jigawa State ICT impact on its economy; one of the poorer state in the Northern part of Nigeria.

The rationale behind selecting Jigawa States is because of its competitiveness among States of the federation. Jigawa has achieved a 'lock-in' position in ICT, and positioned ICT as a key strategy in advocating its economic development. Jigawa state already acquired and deploys the entire necessary ICT infrastructure for effective eGovernment implementation if necessary.

Motivations

Recent reviews of a range of studies on the effects of ICT on the economy of different nations including Nigeria were made. At the present time, ICT has become a serious part of economy. Almost all firms and consumers use computers and Internet connection for economic purposes, such as providing consumers with a more diversified and customized product, improving product quality, and selling goods and services. Studying the various challenges facing the economy of Jigawa State is the motivation for this research. Some of the challenges are; issues of inadequate of ICTs facilities and ICTs skills, public private partnership, limited bandwidth, as well as data management capacity, incessant power failure and power infrastructure, limited financial resources.

Objectives of the Study

The general intent of this study is to analyze the impact of ICT on the Jigawa state economic growth and development and the following are the objectives of this study:

1. Identify and determine the role of ICT on the economic development of Jigawa State.
2. To determine the factors limiting the use of ICT as an economic mover in Jigawa State.
3. Identify the positive impact(s) of ICT based on location in the areas of education, banking, health care delivery etc., when ICT is taken as a means of economic measure.

Research Questions

The research questions are as follows:

i. What is the impact of ICT on the Jigawa State economic development?
ii. In what ways can ICT contribute to economic development of the State?
iii. What are the factors limiting the use of ICT in all sectors of the Jigawa State economy?
iv. What is the level of awareness that Jigawa State government, institutions, agencies and other private sectors have in using ICT as a tool for improving the economy of the state?
v. Does Jigawa State government benefits from private sectors and organizations (e.g. banks, hospitals) that adopts ICT technologies in the State?
vi. What role is/has ICT technology playing/played in improving the economy of Jigawa state?

LITERATURE REVIEW

Economic growth appears to be an on-going research following the works of Solow (1956) and Romer (1986). Empirical studies on economic growth by De Long and Summers (1993) address the specific issue of equipment investment and its impact on economic growth. Avgerou (2001) stated that ICT is a necessity for taking part in today's global economy and as such the role of ICT in the emerging global market cannot be over-emphasized. Roach (1987), early macro level studies, going back to late 1980s and early 1990s, indicated that ICT's share in productivity and economic growth was very small. Jeong and King (2001) examine the ICT-growth nexus using aggregate data covering the period 1980 to 1995 for Korea, and control for a number of ICT variables such as broad ICT investment, narrow ICT investment, and non-ICT investment. They obtain a positive and significant impact of ICT on growth. Sotiris and Papaioannou (2004) explored the effects of ICT on productivity and economic growth in both developing and developed countries over the time period of 1993-2001, using a "production function" framework and foreign direct investment (FDI) as a proxy for ICT and concluded that FDI has a positive and meaningful effect on productivity and economic growth and that the effect was greater in developing countries, and positive but not meaningful when all the courtiers were lumped together.

Also, researches have been done to examine the factors that contribute to the impact of ICT on economic growth in the Organization for Economic Cooperation and Development countries

(OECD) by Roller and Waverman (2001). Madu (2013) said in terms of e-governance, ICTs and the internet imply modernized service delivery processes with regarding to sharing of data, business process redesign and human resources; both clerical staff and managers need to develop a new and challenging set of skills, and apart from basic technical skills, general managers need an understanding of information management and the information society. This research will examine the impact of ICT in improving the economy of Jigawa State. With the purpose of identifying impact areas where information and communication technology and communication technology (ICT) support the economy.

Jigawa State ICT Targets

Jigawa State Comprehensive Development Framework (2009) highlighted two key ICT strategic targets primary and secondary, which are:

- ✓ To generate N2.0billion/annum through ICT beginning 2013 fiscal year
- ✓ To produce an average of five hundred ICT Professionals annually beginning from 2010 to 2012 through Local and Overseas Training.

While the secondary targets are:

- ✓ To achieve 100% and 25% computer literacy level in both state civil service and overall population respectively by 2012
- ✓ To Achieve 100% computerization of key Government operations such as payroll, and Integrated Financial Management Information Systems managing all aspects of public expenditure and financial management by the end of 2012.

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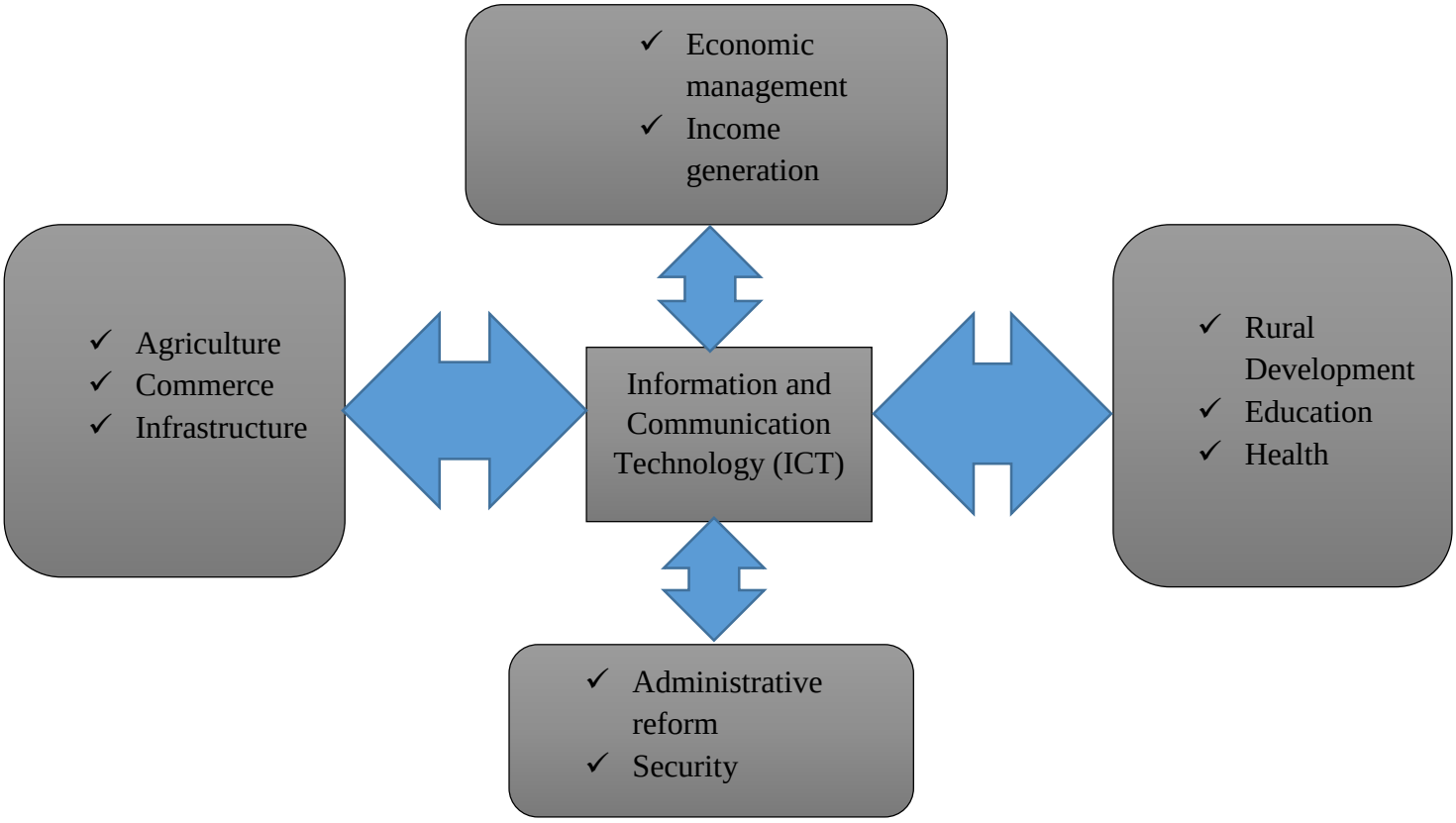

Figure 1.0: Jigawa State ICT framework (Jigawa State Directorate of Budget and Economic Planning, 2009)

The Strategies

To achieve both primary and secondary targets of the ICT sector, Jigawa State government has highlighted the following key implementation strategies in the few years to come:

- Establishment of computer assembly plant in collaboration with any interested partners by the year 2020.
- Sustaining long term partnership and collaboration with internationally renowned IT Institutions such as the Informatics Singapore, C-tech US and establishing new relationship.
- Improvement and expansion of the Jigawa Informatics now known as Jigawa State Institute of Information Technology (JIIT), Kazaure.
- Establishing of a small pro-type ICT Village/Park for the development of ICT talents.
- Encourage the use of internet services; through the Jigawa own broadband company (Galaxy ITT).
- Improve all the state own computer training centers and establish more.

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Population of the Study

The population of the research consist of one hundred and eighty-four (184) persons across Jigawa State. Since the study cannot cover the entire population of the state, the 184 people are selected in representation of the entire population for this study. It is however considered relevant for the purpose of this study.

METHOD OF DATA COLLECTION

The questionnaire was the instrument use to collect empirical data (primary data) from the field. While the source document was used to obtain secondary data required for the literature review. In order to obtain the validity of the instrument, the supervisor of the project was requested to judge the appropriateness, comprehensiveness and clarity of items in the questionnaire. His contribution in form of suggestion and constructive criticism were used in the final draft.The researcher personally collected data from the respondent through the help of the human resource manager. After distribution of the questionnaire, respondents were given 5-10 days to fill-out the questionnaire. This time frame was given in order to give ample time to the respondents to reflect on the items on the questionnaire to facilitate valid responses.

Method of Data Analysis

The data from the sample shall be analysed using simple percentage frequency distribution, tables and pie charts are used to serve as statistical tools for analysing and assessing the extent to which Jigawa state economy boost the its economy and will gives possible suggestion on how it will be improved if proper ICT technology were in used.

Presentation of Result

According to the responses received from the questionnaire about whether ICT has an impact to the Jigawa State economy. High number of respondents proved that there is need of integration of ICT with economy in the State. Below is the pie chart to proof that;

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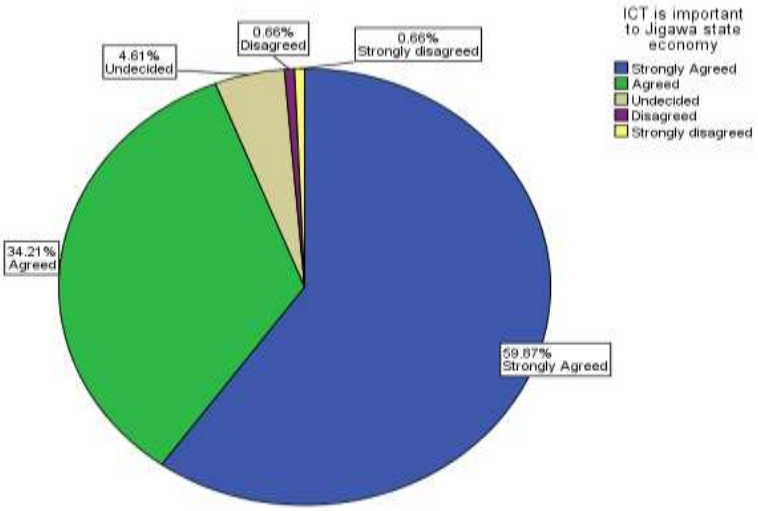

Figure 2.0: Pie chart representing responses

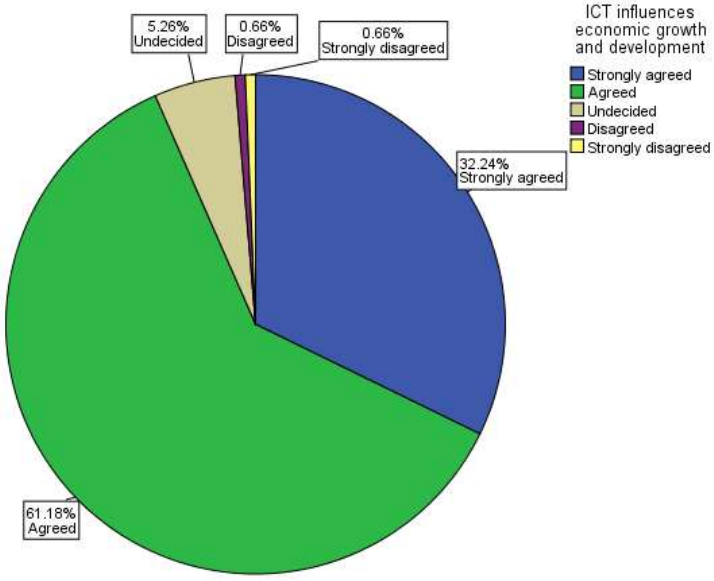

Figure 3.0: Pie chart representing responses

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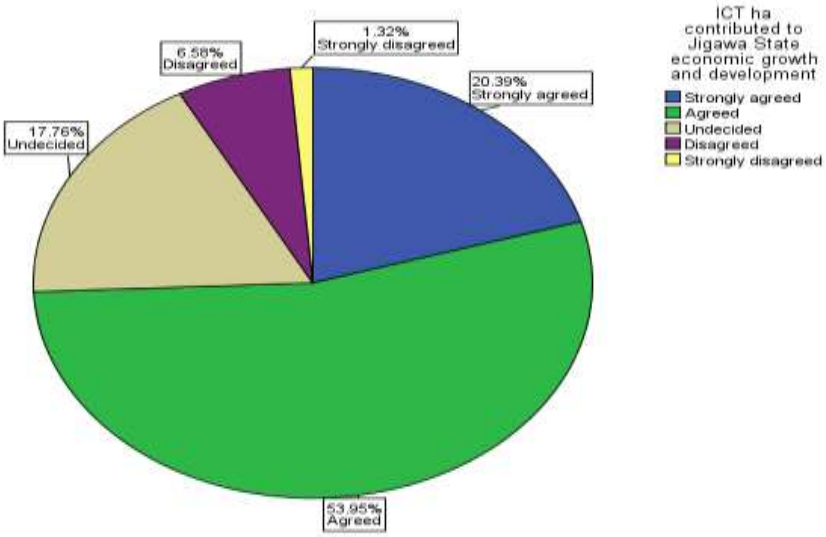

Figure 4.0: Pie chart representing responses

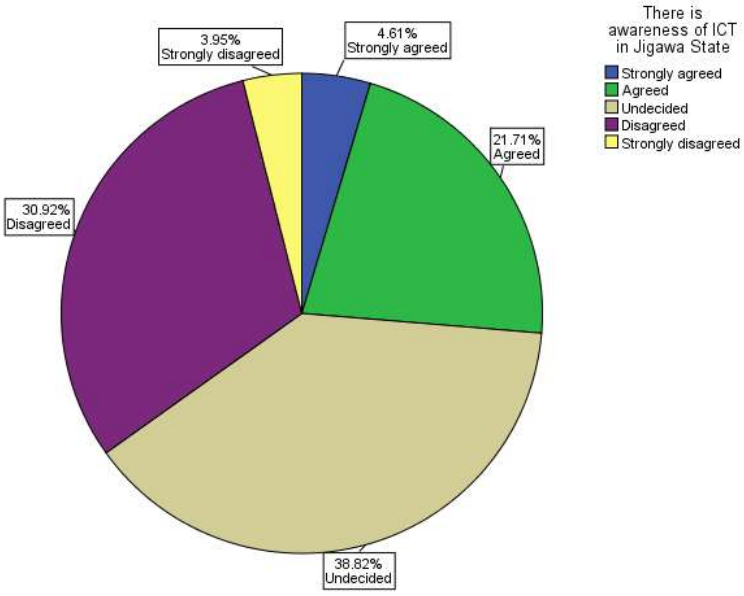

Figure 5.0: Pie chart representing responses

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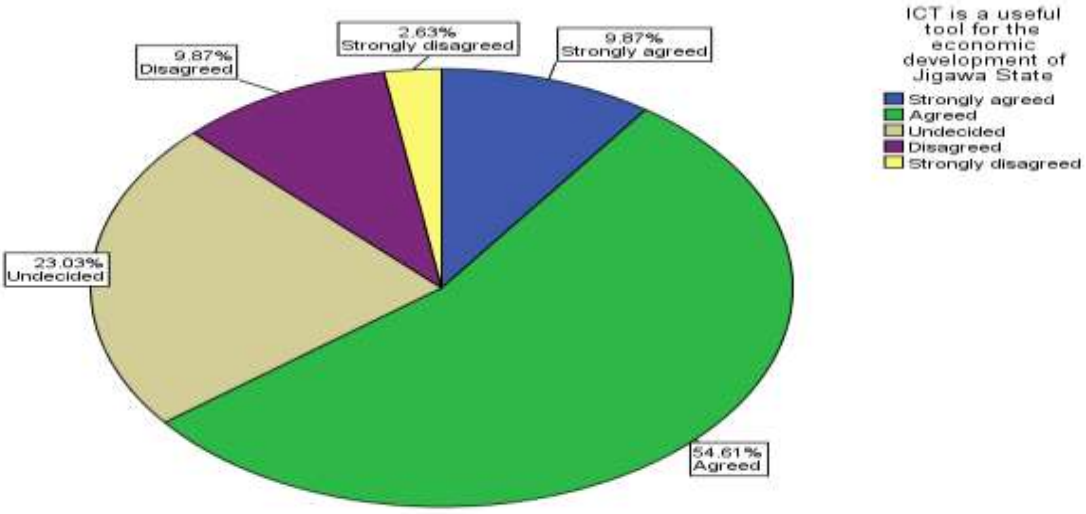

Figure 6.0: Pie chart representing responses

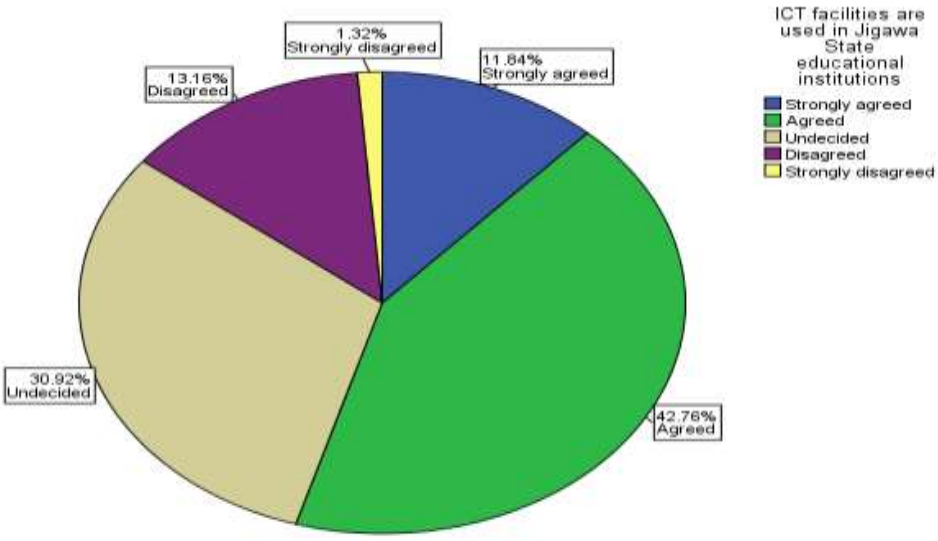

Figure 7.0: Pie chart representing responses

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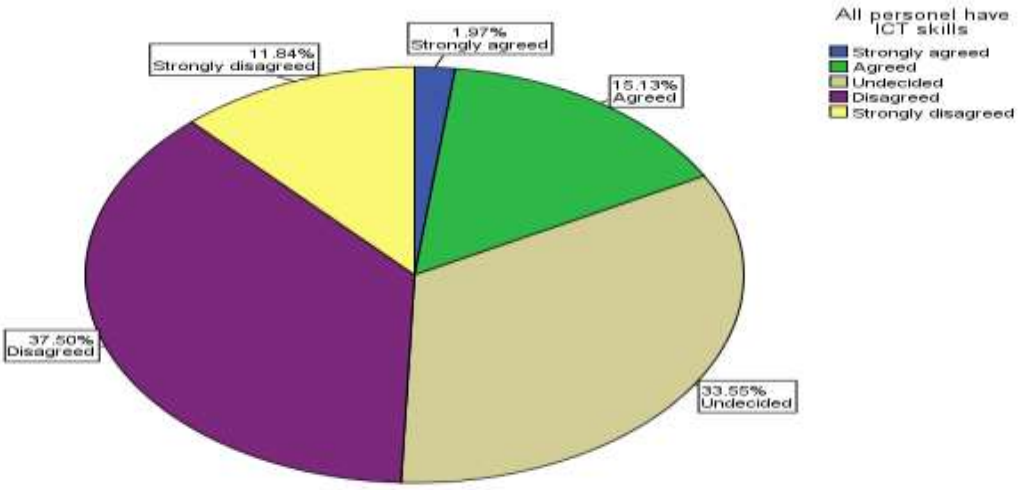

Figure 8.0: Pie chart representing responses

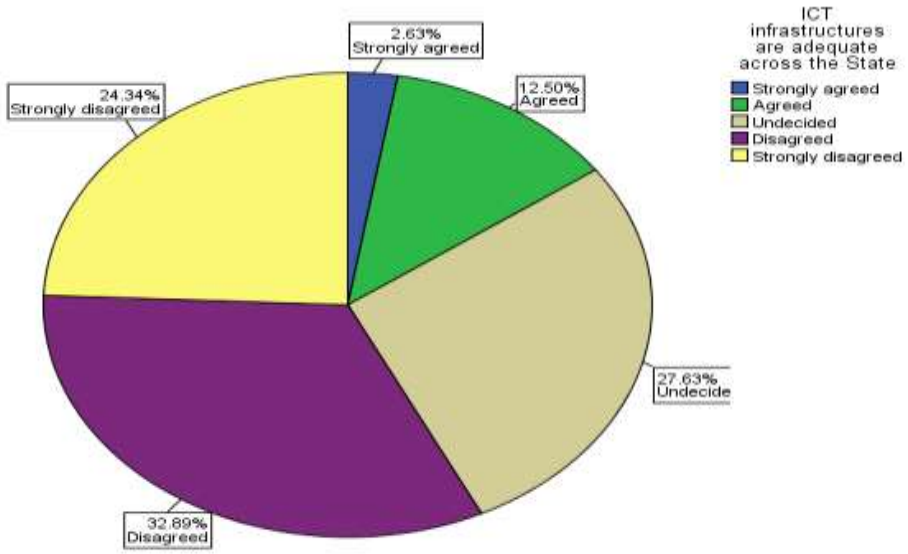

Figure 9.0: Pie chart representing responses

DISCUSSIONS

This study explores the impact of ICT on the economy of Jigawa State. The objectives of the study was to identify and determine the role of ICT on the economic development of Jigawa State, to also determine the factors limiting the use of ICT as an economic mover in Jigawa State and lastly to identify the positive impact(s) of ICT based on location in the areas of education, banking, health care delivery etc., when ICT is taken as a means of economic measure.

Findings of the study revealed that Information and communication technology (ICT) has a great impact and has result positively to the economy of Jigawa State according to the responses that was analyzed using simple percentages and presented using pie chart.

CONCLUSION

This study concentrated on exploring the effect of ICT on economic growth. The results show that ICT use has a significant effect on the economic growth of Jigawa State. The coefficient measuring the effect of the ICT use on economic growth was positive, indicating that ICT affect economic growth of many countries in a positive way. Furthermore, in high income countries ICT use index has the strongest effect on real GDP per capita among the others while this effect is the lowest in countries with low level of income. Moreover, the performance of the both higher middle and lower middle income groups in the effect of ICT use index is somewhat lagging. Therefore, these countries can improve their overall GDP growth with policies aimed at increasing ICT use.

Consequently, ICT plays a vital role as a mean for economic growth. Therefore, it seems necessary for all state in Nigeria to increase their ICT use index through increasing the number of internet users, fixed broadband internet subscribers and the number of mobile subscription per 100 inhabitants in order to boost economic growth. It is also essential for the governments to provide the society with information, up-to-date structures and educate people in order to use ICT efficiently. The major research limitation of this study was the failure to collect data for a longer time period. Therefore, future research for a longer time span would shed more light in the assessment of the relationship between ICT use and economic growth.

Recommendations

The importance or impact of information communication technology (ICT) may have to a very large extent influenced proceedings and happenings in this dispensation. The Jigawa state economy has over the years witnessed its fair share of inconsistencies and they may have been as a result of several factors. In addressing and maintaining economic growth in the state, one of the aspects that one has to study with critical attention is the impact of the information communication technology on the Jigawa state economic growth and development. The ICT sector is a critical sector not just for economic growth alone but for educational and social development of any nation inclusive. The research finds out and come with the clear status of ICT technology and at the same time comes with many recommendations on how to improve it, The key to all the recommendations

is involvement of government and other private sectors in supporting people and other private firm.

It is therefore recommended that government should improve accessibility of ICT facilities to poor people who are living in remote areas (villages). To boost economy, eradicating un-employment is a key issue, so, government and private sector are required to support ICT technology in order to improve the sector.

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