

Relationship Between ICT Usage and Business Strategy Development by SME's in Zanzibar

Abubakar Ahmed Chwaya¹, Abdalla Hassan Gharib²

¹Department of IT, Zanzibar University, Zanzibar, Tanzania

²Department of Engineering, Zanzibar University, Zanzibar, Tanzania

Email address:

shonaa01@hotmail.com (Abubakar Ahmed Chwaya)

To cite this article:

Abubakar Ahmed Chwaya, Abdalla Hassan Gharib. Relationship Between ICT Usage and Business Strategy Development by SME's in Zanzibar. *American Journal of Information Science and Technology*. Vol. 7, No. 4, 2023, pp. 145-150. doi: 10.11648/j.ajist.20230704.11

Received: October 14, 2023; **Accepted:** October 30, 2023 **Published:** November 21, 2023

Abstract: The main concern of this study was to examine the relationship between ICT usage and business strategy development by SME's in Zanzibar. The researcher has mainly employed quantitative research approach with appropriate method of analysis for this study. The sample size for this study consists of 339 respondents and survey questionnaire was used as data collection instrument. To achieve a reliable study a correlation analysis was used to analyses the collected data from relevant respondents. The study has revealed that the ICT usage have positive significance correlation with business strategy development for SME's in urban west region Unguja. The study concluded that information and communication technology plays a crucial role in the strategic development of small and medium-sized enterprises (SMEs) in this particular region. This suggests that SMEs in urban west Unguja are leveraging ICT tools and resources to enhance their business strategies. Finally, the study recommended that the ICT should be adopted and must be developed based on business strategy. This is because Information security is cost reduction provides a systemic approach to the form control objective in managing sensitive information with the aim of securing information and solve a problem of quality control.

Keywords: ICT Usage, SMEs, Business Strategy Development

1. Introduction

The Information technology (IT) is the process of creating, processing, storing, protecting, and exchanging various types of electronic data by using computers, networking, storage, and other physical devices Zissis [18]. T is typically used in the context of corporate activities. Telecommunications and computer technology are both included in the business usage of IT.

Producers are product sellers in the global economy, and consumers are product buyers. These two are reliant on one another; without one, the company could not function or succeed. Just as producers need consumers to buy their goods in order to sell them, consumers also need producers to meet their needs. Manufacturers offer their products at a marketplace, which is where customers go to purchase what they need. These have happened for hundreds or even thousands of years, back when commerce first began and technology was not yet advanced. [10]

When technology improved, affects the development of the business system. Currently, information technology is advancing very fast so it is difficult to avoid its development. The advancement of information technology not only assist people's life to become better every day but also support global business. Things that used to be expensive and take a long time nowadays can take a short period to complete. A work that would involve ten people nowadays can involve one person [15].

According to Atkins [1] the nature of the business strategies that companies pursue and takes into account the differences in the information technology and information systems (IT/IS) strategies employed by companies that are pursuing distinct business strategies. The empirical findings from UK survey research indicate that the majority of companies seem to be competing in their current markets with new products, and the most widely used information system is one that grows market share. The findings showed that the ability to cut costs is regarded as IT/IS's most significant contribution for businesses whose business plan is

to offer current products in current markets. Although companies do employ IT/IS strategies, they usually do so defensively in order to preserve their standing in the market.

Nonetheless, information technology and information systems strategies are recognized as contributing to the broader business strategy, specifically in terms of fostering innovation in products or markets. Additionally, this study suggests areas for future investigation, particularly concerning potential research bias arising from surveys exclusively targeting IS managers, while overlooking the perspectives of business managers. Furthermore, the current research has only examined two business strategy models, indicating a requirement to expand the analysis to encompass various business strategy frameworks, with a particular focus on Porter's model.

According to Henderson & Venkatraman [8] research has focused on issues ranging from how strategic use of IT restructures business processes and changes relationships between organizations. Given that IT is increasingly playing a crucial role in organizations and organizational strategy, it is crucial to comprehend how the management of this function is evolving, particularly with regard to the relationship with the firm's strategic planning procedures. Over the past thirty years, there has been a tremendous evolution in strategic IT planning. IT planning first concentrated on the efficient distribution of the company's resources to IT, following a structure very similar to planning.

Also, during this initial period, the act of planning played a crucial role in benefiting both the project manager and project sponsor. It did so by meticulously outlining the system requirements, defining objectives, and assigning responsibilities to those participating in the system project. Additionally, it offered a way to merge project management controls with broader financial controls within the organization. In essence, most methodologies considered the IT plan as a response to a business strategy. Although their techniques may have differed, these methods aimed to tackle the overarching concepts of top-down planning and bottom-up execution.

That is, a general IT architecture, defined in terms of technology, applications systems, and more recently data was developed and implemented through a series of carefully segmented projects. According to Berisha-Shaqiri [4] Information Technology (IT) has grown and evolved over the last 50 years; you cannot think and plan a project, business, or other initiatives without the usage of this technology. When we say Information Technology that means not only personal computers or smartphones but also modern machinery in factories, automotive industry, the aviation industry, various household appliances.

In one way or another this has not only facilitated our daily lives but it has also reduced cost and time in general. Research shows that a quarter of workers in the United States of America work from home for a considerable time of the year, while, another quarter work "mobile" - on the move reflects the great opportunities that Information Technology and the Internet provide as an important tool for

implementation in organizations and public institutions. Economists highly appreciate the importance of Information Technology in business growth, lowering costs, and promoting the best products.

In recent years, globalization and computerization have redefined industry, politics, culture, and social order. Globalization refers to ultimately integrating economic and cultural institutions. Its integration occurs as a result of the use of information technology. The technological revolution presupposes global computerized networks and the free movement of goods, information, and people across national boundaries. Hence, the Internet and global computer networks make possible globalization by producing a technological infrastructure for the global economy. Computerized networks, satellite communication systems, software, and hardware link together and facilitate the global economy [3].

According to the World Bank report 2023, Tanzania is recognized for its effective use of information and communication technology (ICT in delivering public services (Tanzania Tech Media, 2023). It is ranked 26th securing the second position in Africa and top spot in the East Africa region. The report is called the Gov Tech Maturity Index (GTMI) which evaluated 198 countries and placed Tanzania in group A, a significant improvement from its previous position of 90th in 2021.

Specifically, in Zanzibar the situation is different from Tanzania because it faces several challenges and not limited to insufficiencies of ICT facilities and technological support. According to Bakari & Ali [2] illustrates that Zanzibar is faced with several challenges in ICT usage including insufficiencies of ICT facilities, teachers' knowledge, and technological support in most primary schools. Also, the attitudes of the teachers engendered the opportunities for the introduction of ICT subjects in Zanzibar's primary schools are problem.

2. Statement of the Problem

The rapid development of information and communication technologies are the main changers of the existing business structures and ways of communication [17]. Moreover, ICT and its impact in the economic, social and personal development had become an important object of scientific researches during recent decades [13] and numerous studies have focused on analyzing how the use of ICT affects a business strategy especially in SME's.

The SME's in Zanzibar have been used ICT in their business strategy but not in wider range [14]. From that view, several strategies, reforms, workshop, training and other innovative ideas have been applied in Zanzibar community in order show the opportunities that Small and Medium Enterprises can have by utilizing ICT in their business strategy. In addition, the government of Zanzibar has adopted e-government in order to streamline its operations and make doing business easier. The use of e-government presents a chance for SMEs because it will make it simple for them to

get information that will help them manage their businesses successfully.

This study aims to demonstrate the relationship between ICT usage and business plan development by SMEs in Zanzibar because ICT is essential to SMEs and its impact on social, economic, and personal development is well-established in the literature.

3. Theoretical Literature

Strategic Information Systems Theory: This theory was developed in the 1980s by several researchers. While it doesn't have a single individual attributed to its development, it emerged as a result of contributions from various scholars in the field of information systems and strategic management during that time period. Some of the key contributors to the development of SIS theory include Michael Porter, Charles Wiseman, and others who explored the strategic importance of information systems within organizations. The theory primarily focuses on how organizations can use information systems to gain a competitive advantage and achieve strategic objectives. Also, this theory focuses on the role of information systems in shaping a firm's competitive strategy. It suggests that organizations can use ICT strategically to create new products, services, and business processes that give them a competitive edge.

4. Empirical Literature Review

According to Kurtz, Hanelt, & Firk [11] which dealing with digital business strategy (DBS) which has received a lot of attention lately, little is still known about the various strategy options and their effects. This is crucial to remember, though, because various digital business plan types may employ various profit mechanisms and hence have varying effects on a company's performance. We develop four different types of digital business strategies and use panel fixed effect regression to analyze the impact of these strategies on the performance of major tech businesses in a longitudinal dataset. We discover that not every sort of digital business strategy succeeds in having a beneficial effect and draw conclusions for information systems research and commercial operations.

Orrensalo, Ghorbanian Zolbin, & Nikou [13] three crucial, interconnected elements of the entrepreneurship process in the digitally based economy are digitalization, company strategy, and entrepreneurial networks. For entrepreneurs to make wise decisions, fast, accurate, and trustworthy information is also essential. Entrepreneurs frequently rely on their entrepreneurial networks to meet their information demands because of constraints on their resources and abilities. The findings of this paper show that entrepreneurial networks significantly influence entrepreneurial success and survival and that access to accurate and timely information enhances business strategy development.

Coskun-Setirek, & Tanrikulu, [7] elaborated the advent of new digital technology has brought about a significant

transformation in the conventional methods of conducting business. The advantages of digital technologies—Internet of Things, social computing, Cloud computing, cyber-physical systems, big data and analytics, wireless networks, robots, artificial intelligence, simulation, etc.—allow businesses to maintain their competitiveness. The global outbreak of COVID-19 in 2019 has led to a heightened awareness of the significance of an organization's capacity to stay abreast of digital advancements. Thus, in order to survive in the digital age, business model renewal is becoming a more and more important component. Based on the design science research methodology, this study creates a process model for digital innovations-driven business model regeneration. In order to do this, the current models and cases.

According to Eikelenboom, & de Jong [7]. Incorporating circularity into a company's strategic approach presents a significant challenge due to the need for substantial changes in fundamental business processes. While previous research has mainly focused on identifying the primary obstacles, there has been limited exploration of the organizational characteristics that can facilitate the adoption of circular practices in corporate strategies. This study aims to investigate how the actions of organizational managers and their interactions within networks impact the incorporation of circularity in business strategies. By analyzing survey data from 627 small- and medium-sized enterprises in the Netherlands, this research demonstrates that managers who view circularity as an opportunity can directly and indirectly enhance the integration of circular practices into a company's strategy. Additionally, the findings underscore the crucial role of circular network interactions in this process. This article responds to the growing demand for more practical research on circularity integration and provides valuable insights for companies seeking to embrace circular business models.

Moomal & Masrom [12] they were eager to offer a review of the literature on the evolution of ICT and how it affects HRM and e-business practices in Pakistani firms. The study's conclusions show that Pakistan is still trailing behind other industrialized nations in terms of ICT development for e-business and HRM initiatives.

Jones et, al., [9] conducted a study that examined the attitudes and tactical reactions of microbusiness owners in adopting information and communication technology (ICT) through a longitudinal case-based investigation. By doing this, it adds to the scant literature on ICT adoption in micro-enterprises, with an emphasis on sole proprietors. It offers a foundation for expanding the theoretical framework of the literature related to the use of ICTs on two fronts. In order to show the linkages between attitudes toward ICT adoption, endogenous and exogenous influences of these attitudes, and the ensuing strategic response in ICT adoption, a framework integrating the data is first constructed. Second, the essay expands on this framework to highlight the particular difficulties, chances, and consequences of ICT adoption for microbusinesses run by sole proprietors.

5. Methodology

Research design: In this study quantitative research design was used to perfect the research questions, which were prepared by the researcher to SME's owners to the local context.

Study Area: The study was conducted at one of the small and medium enterprises (SMEs) located in Zanzibar in Unguja. Specifically, the study was conducted in Unguja urban west region because the SMEs at that area were being working that already integrating the system of security.

Study Population: The target population for this study was all SME's registered in urban west region in Unguja-Zanzibar. The total number of SME's registered in urban west region is around 2,350. Therefore, the study population was 2,350 SMEs in Unguja.

Sampling Techniques and Sample Size: To obtain the representative of this study simple random technique was used to select respondents for questionnaires survey. The reason behind selecting this method is that it is very conducive for covering a wide study area (Watanabe, 2000). Also, a total of 339 was used as a sample size to represent the total population of this study.

Data Collection Methods: The self-administered questionnaire was used for this study because it enables the researcher to collect data from relatively large sample size and minimize. The reasons behind this selection of questionnaire is that it is the most affordable way to gather quantitative data on the spot.

Data Analysis and Presentation: The study use inferential statistical techniques (correlation method) together with the Statistical Package for Social Science (SPSS version 23) was used in this study as tool for data entry.

6. Findings of the Study

6.1. Demographic Profile of the Respondents

Demographic characteristics of respondents typically refer to the specific attributes or traits of individuals participating in a survey, study, or research project. The following characteristics were examined in this study.

Table 1. Demographic Characteristics of the Respondents.

Variables	Category	Frequency	Percentage
Age	21-30	120	35.4
	31-40	100	29.5
	41-50	60	17.7
	51-60	50	14.7
	61 above	6	1.8
Gender	Male	215	63.3
	Female	124	36.7
Marital status	Married	164	48.48
	Single	144	42.42
	Widow	10	3.03
	Divorced	21	6.06
	A'level	21	6.06
Education level	Certificate	92	27.27
	Diploma	103	30.30
	Bachelor degree	82	24.24

Variables	Category	Frequency	Percentage
Working experience	Post graduates	41	12.12
	One year	134	39.4
	1 – 2 years	72	21.21
	3 – 4 years	82	24.24
	5- 6 years	51	15.15
	7 years above	0	0

The summarized results from table 1 indicates that, 120 respondents equal to (35.4%) ranges from 21 – 30, 100 (29.5%) ranges from 31 – 40, 60 (17.7%) ranges from 41 – 50, 50 (14.7%) ranges from 51 – 60 and those who were 61 above were 9 respondents equal to (2.7%). Therefore, the analysis revealed that respondents were dominated by the large number of age groups of 21 to 50. This is a good age of main power in every activity in any country.

Also, the results show that, total of 339 respondents equal to 100% were asked in this question. 215 respondents equal to (63.3%) were male and 124 respondents equal to (36.7%) were female. These results clearly indicated that the most respondents who were participated in this study question were male, since males is a group which is most participated in fishing activities rather than female.

Although the Table show that, 164 respondents made (48.48%) were married, 144 (42.42%) were single, 10 (3.03%) were widow and those who were divorced were 21 (6.06%). This is indicated that, most of the respondents who were involved in answering questions in this study were married and single since, covered more than 48.48% and 42.42% of the total respondents.

Furthermore, a total of 339 respondents who were involved in this study, 21 respondents equal to (6.06%) were having a' level education, 92 (27.27%) were in a certificate level, 103 (30.30%) were having diploma education, 82 (24.24%) were having bachelor degree and 41 respondents (12.12%) were having post graduate education. Therefore, the results of the study indicated that, most of the respondents involved in this study were having diploma and bachelor degree levels of education, since, it they cover by more than 57.57%

Finally, a total of 339 respondents who were involved in this study, 134 respondents equal to (39.4%) were having one year, 72 (21.21%) were having 1-2 years, 82 (24.24%) were having 3-4 year, 51 (15.15%) were having 5-6 years' experience. Therefore, the results of the study indicated that, most of the respondents involved in this study were having experience between one years, since, it they cover 39.4% of total respondents.

6.2. The Relationship Between ICT and Business Strategy Development in Zanzibar

Breach or misuse, since more than 70% of all respondents agreed and strongly agreed.

Correlations Analysis

This technique was used in this study in order to explore the strength of the relationship between two continuous variables. Pearson correlation coefficients (r) can range from -1 to +1 [16]. The sign in front indicates whether there is a

positive correlation (as one variable increases, so too does the other) or a negative correlation (as one variable increases, the other decreases). The size of the absolute value (ignoring the sign) provides information on the strength of the relationship. A perfect correlation of 1 or -1 indicates that the value of one variable can be determined exactly by knowing the value on the other variable. On the other hand, a correlation of 0 indicates no relationship between the two variables.

Specifically, in this study a researcher was interested to know the strength of the relationship between *ICT usage and business strategy development in Zanzibar*. Thus, to determine/ interpret the value of correlation different authors suggest different interpretations; however, Cohen (1988, pp. 79–81) suggests the following guidelines.

Table 2. Interpretation of Person's correlation coefficient (*r*).

Values of Pearson's correlation coefficient	Interpretation
$r = 0.10$ to 0.29	Small correlation
$r = 0.30$ to 0.49	Medium correlation
$r = 0.50$ to 1.0	Large correlation

Source: Cohen (1988, pg 79 – 82)

The results of the Pearson's correlation coefficient (*r*) as seen in the table 3 show that all predictor variables namely saving component and investment component correlate positively with the dependant variable livelihood enhancement.

Table 3. Correlations Analysis.

		ICT usage	Business Strategy Development
ICT usage	Pearson Correlation	1	.465**
	Sig. (2-tailed)		.004
	N	339	339

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Field Data, (2023)

In looking at the strength of the relationship, it is clearly seen that independent variable ICT usage have significance correlation with business strategy development. The table 3 indicates that the correlation between ICT usage and business strategy development by SME's in Zanzibar Urban west region is 0.465, $p < 0.01$; two-tailed. With reference to Cohen [5] thresholds of interpreting the strength of the correlation regardless the direction of the sign either positive or negative, it could be concluded that ICT usage have medium correlation with business strategy development of SME's in urban west region in Zanzibar. This result indicates that the ICT is useful in enhancing the business strategies of SME's in urban west region in Zanzibar.

The results of this study supported by the results of the study conducted by Jones et, al., [9] which gives a foundation for expanding the literature's theoretical foundation for the use of ICT on two levels. In order to highlight the links between attitudes toward ICT adoption, endogenous and exogenous influences of these attitudes, and subsequent strategic response in ICT adoption, a framework that incorporates the data is first constructed. Second, utilizing

this framework as a foundation, the article explores the specific issues, possibilities, and effects of ICT adoption for sole proprietor micro-enterprises.

7. Conclusion

The study examines relationship between ICT usage and business strategy development by SME's in Zanzibar, findings obtained and evidence presented it is reasonable and it might get the conclusion that ICT use is essential for creating modern company strategies. It supports innovation, global reach, and adaptability in addition to improving efficiency and production. Businesses that want to prosper in today's dynamic and competitive environment must progressively embrace ICT as an essential component of the strategic planning process.

8. Recommendation of the Study

To explore the relationship between ICT usage and business strategy development by SME's in Zanzibar, the researcher recommended the following suggestions based on the finding of this study.

Since the data can be used to make informed business decisions, spot trends, and identify opportunities or threats in the market so study recommendations on data analytics tools and techniques can directly influence how a business formulates its strategies. Also, ICT recommendations can focus on streamlining processes, automating tasks, and improving overall efficiency. When implemented effectively, these recommendations can lead to cost reductions and improved resource allocation, aligning with cost-focused strategies. Finally, the recommendations on tools for sentiment analysis, social listening, and customer relationship management (CRM) can shape strategies that revolve around customer satisfaction and market responsiveness.

References

- [1] Atkins, M. H. (1994). Information technology and information systems perspectives on business strategies. *The Journal of Strategic Information Systems*, 3 (2), 123-135.
- [2] Bakari, A. D., & Ali, M. M. (2023). Introduction of ICT subject in Zanzibar primary education: Challenges and opportunities. *Social Sciences & Humanities Open*, 8 (1), 100522.
- [3] Banks, C., & Douglas, H. (2002). *Law on the Internet*. Federation Press.
- [4] Berisha-Shaqiri, A. (2014). Impact of information technology and internet in businesses. *Information technology*.
- [5] Cohen, J. (1988). Set correlation and contingency tables. *Applied psychological measurement*, 12 (4), 425-434.
- [6] Coskun-Setirek, A., & Tanrikulu, Z. (2021). Digital innovations-driven business model regeneration: A process model. *Technology in Society*, 64, 11.0146.

- [7] Eikelenboom, M., & de Jong, G. (2022). The impact of managers and network interactions on the integration of circularity in business strategy. *Organization & Environment*, 35 (3), 365-393.
- [8] Henderson, J. C., & Venkatraman, N. (1989). Strategic alignment: a process model for integrating information technology and business strategies.
- [9] Jones, P., Simmons, G., Packham, G., Beynon-Davies, P., & Pickernell, D. (2014). An exploration of the attitudes and strategic responses of sole-proprietor micro-enterprises in adopting information and communication technology. *International Small Business Journal*, 32 (3), 285-306.
- [10] Kotter, J. P. (2007). Leading change: Why transformation efforts fail. In *Museum management and marketing* (pp. 20-29). Routledge.
- [11] Kurtz, H., Hanelt, A., & Firk, S. (2021, March). Digital Business Strategy and Firm Performance: An Empirical Investigation. In *International Conference on Wirtschaftsinformatik* (pp. 606-624). Springer, Cham.
- [12] Moomal, A., & Masrom, M. (2015). ICT Development and Its Impact on e-Business and HRM Strategies in the Organizations of Pakistan. *Journal of Advanced Management Science* Vol, 3 (4).
- [13] Ollo-Lopez, A., & Aramendia-Muneta, M. E. (2012). ICT impact on competitiveness, innovation and environment. *Telematics and Informatics*, 29, 204–210.
- [14] Said, H. (2014). Untapped Opportunities: ICT Use by Zanzibar SMEs. *Journal of Information Engineering and Applications*, 4 (8), 30-55.
- [15] Shaqiri, A. B. (2015). Impact of Information Technology and Internet in Businesses. *Academic Journal of Business, Administration, Law and Social Sciences*, 1 (1), 73–79.
- [16] Tabachnick, B. G., & Fidell, L. S. 2014. *Using Multivariate Statistics - International Edition* (6th ed.). New Jersey, United States of America: Pearson Education, Limited.
- [17] Tarutė, A., & Gatautis, R. (2014). ICT impact on SMEs performance. *Procedia-social and behavioral Sciences*, 110, 1218-1225.
- [18] Zissis, D., & Lekkas, D. (2012). Addressing cloud computing security issues. *Future Generation computer systems*, 28 (3), 583-592.