

Impact of E-Commerce Adoption as a Competitive Strategy in Rwandan Market: A Case Study of Jumia Food Rwanda

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Abstract: *As competition intensifies, many businesses continue to look for profitable ways to differentiate themselves from competitors. Every organization needs to adopt strategies which will enable it to have a competitive edge over the other players in the market. Competitive strategies in businesses have become very critical for their survival since they are operating in a very turbulent environment. In order to survive and remain profitable in the competitive environment, it becomes necessary for businesses to be aggressive in their search and development of strategies that provide competitive advantage as they step up defensive strategies. Hence this study seeks to fill the existing research gap by conducting a study to investigate the impact of e-commerce adoption as a competitive strategy in Rwandan market with a reference of JUMIA Food Rwanda. The study was built on both general and specific objectives. The specific objectives were; to ascertain the effectiveness and efficiency of e-commerce adoption in JUMIA Food Rwanda; to evaluate the outcomes of e-commerce as a competitive strategy in JUMIA Food Rwanda over other strategies; to examine the relationship between e-commerce adoption and performance of JUMIA Food Rwanda. In order to reach the achievement of the above objectives, a combination of questionnaires, interviews, documentary reviews and analyzing financial and other reports were used. The researcher adopted descriptive research design. Questionnaires were distributed to a group of 98 respondents; however, only 84 questionnaires were well filled and returned for analysis. This represented a response rate of 85.7%, which is good enough to draw conclusion from. Stratified simple random sampling technique was applied in the study. The data were analyzed using SPSS for descriptive statistics to test the effectiveness and efficiency of e-commerce at JUMIA Food Rwanda. Correlation analysis and regression analysis were used to determine the nature and magnitude of the relationship between the study variables. Findings revealed that there were effective and efficient e-commerce at JUMIA Food Rwanda and this was in support of 76.2% of the respondents who agreed on that the infrastructure lowers costs. Secondly, research results represented by 75.0% of the participants cited better performance in JUMIA due customer base expansion as a result of e-commerce as a competitive strategy. In addition strategy outcomes, it was evidenced that the net profit margin of JUMIA Food Rwanda increased greatly from 2014 to 2017 and this is represented by 30.7 to 37.2 respectively As it is revealed in table 4.9, the value of $r_s=0.703$ and $p=0.004$ which explains that there was a strong, positive monotonic correlation between e-commerce and the strategy ($= .703, n = 84, p < .004$). Regression analysis revealed that the value of adjusted R squared was 0.779, an indication that there was variation of 77.9% on strategy outcomes to the changes in e-commerce particularly electronic ordering, electronic billing and electronic payment. Management was recommended to use e-commerce components to watch over safety measures and risk. Government was recommended to sensitize the general public on electronic commerce. JUMIA Food was recommended to extend its services to other secondary cities of Rwanda.*

1. Background of the study

Over the years the world has seen a massive change in the management of businesses; from organizations relying more on specialized in-house service functions, conventional multipurpose service functions to outsourced services. Information technology (IT) has helped many businesses in improving their operational efficiencies by providing internet based solutions for their supply chain networks and electronic solutions. From the late 1990s a raft of new e-commerce technologies emerged which revolutionized working practices, threatening existing business models. As a result of this development on the use of e-commerce in business-to-business market, there has been significant adoption of new supply chain related technology and applications by organizations globally (Sheng, 2012).

A study on a Japanese company named Suzuki Manufacturers in 2011 stated that as has been evident for the past decade; Asian consumers have flocked to digital technologies, with adoption e-commerce on rates for some devices, especially mobile phones, outstripping Western rates. IT usage has skyrocketed in Asia, and across age segments the "consumer decision journey" has increasingly

moved online. The pattern for most purchases now is that they are researched online and concluded in the branch, but we are beginning to see online purchasing as well. A significant constraint on the progress of this trend is the state of regulation in many countries, which require purchases to be finalized by customers signing documents in branches, in the presence of branch employees (Kossowki, 2010).

In Malaysia, the government at some point issued a statement calling for all suppliers to use the e-commerce during procurement processes. Kaliannan et al. (2009) pointed out that Malaysian public sector are going through a rapid change especially as far as adoption of technology is concerned. Adoption of e-government and particularly e-procurement is inevitable for the government. E-commerce is associated with benefits to the purchasing and supplying organizations, its implementation comes with a number of challenges. He categorizes these challenges into organizational and economic-legal challenges. Organizational challenges include: restructuring difficulties and resistance to change while economic-legal challenges include: regulatory framework, technological requirement, capital requirement and the general education level of the employees.

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A review conducted by Commonwealth of Australia indicates that the National governments of Italy, New Zealand, Scotland, New South Wales and Western Australia in 2015 revealed that these countries were already using e-commerce system for public procurement activities. Implementation of e-business is an elaborate process and requires transformation and restructuring of government procurement structures. The process requires electronic systems for: demand estimation, budget definition, needs notification, sourcing, contracting and ordering and supply monitoring (Howard et al, 2015).

In Africa, the concept of e-commerce is currently gaining popularity especially in the private sector. To deal with the problems of lack of accountability and transparency in procurement activities in the public sector, most African countries have also resorted to legal reforms and adoption of electronic commerce. Tanzania for instance put into place e-procurement systems to allow e-sharing, e-advertisement, e-submission, e-evaluation, e-contacting, e-payment, e-communication and e-checking and monitoring to ensure all public procurement activities are conducted online (Leo Sun, 2009). According to Murphy (2010), e-commerce is associated with increased efficiency, lower transactional costs, reduced corruption and enhanced control and monitoring of public procurement process. On the other hand pointed out that e-procurement can lead to improved labor productivity.

Over the last decade, the Government of Rwanda has undertaken a number of reforms including business registration, public finance management and procurement reforms which have initiated changes to the law and regulations; it has also successfully developed Financial management information system FMIS and has installed country wide fiber optic backbone – both of these are huge developments and critical to the success of its vision. Building from these achievements, the Government of Rwanda initiated a project to automate the public businesses cycle and was designed to facilitate the transformation of the procurement discipline within Rwanda for the future. More so, these strategies have enabled the private sector to embrace the technology by engaging in electronic commerce which they of recently have taken as their strategic mode of planning (MINECOFIN, 2015).

Rwanda has experienced significant progress in the deployment of ICT infrastructures that connect the country to global networks. The existing national fiber optic backbone network connects Rwanda to international sea cables and thus provides for affordable access to Internet across the country. Legal and regulatory tools have been developed following governmental initiatives to diffuse ICT and e-commerce-related technology among Rwandan large and small companies. Focusing on SMEs, Rwanda has received a variety of governmental and nongovernmental initiatives to foster ICT and e-commerce usage. However, SMEs still face limitations especially with regard to system standardization and payment solutions (NICI, 2015).

JUMIA Food is a food delivery company operating in more than 11 counties in Africa, Rwanda included. At JUMIA Food, they believe that ordering food online should be easy,

fast and definitely fun! JUMIA Food wanted to provide clients the best online food ordering experience, so they made it. JUMIA Food is an online food delivery service, which simplifies food ordering for Rwandan people. A client simply chooses the food they want on online menus, and be delivered at home. JUMIA Food Rwanda is located at Remera KN 5 Rd, Mathias house 2nd floor.

Therefore, this study aimed at finding out the success story about the implementation and the impact of e-commerce adoption as a competitive strategy in Rwandan Market taking JUMIA Food Rwanda as a case study.

2. Statement of the Problem

As competition intensifies, many businesses continue to look for profitable ways to differentiate themselves from competitors (Porter, 2010). Every organization needs to adopt strategies which will enable it to have a competitive edge over the other players in the market. Strategies concern the purpose and objectives of the organization. Strategies are the things that organizations do, the paths they follow and the decisions they take in order to reach certain level of success. Increased competition threatens the attractiveness of an industry and impacts on profitability. It exerts pressure on firms to be proactive and to formulate successful strategies that enable proactive response to anticipated and actual changes in the competitive environment (Rainbird, 2014).

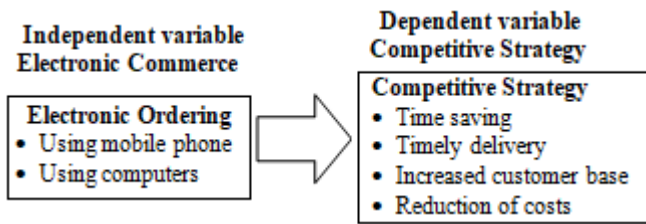
Competitive strategies in businesses have become very critical for their survival since they are operating in a very turbulent environment and have difficulty in coming up with the appropriate strategy that will ensure success in their mode and operations. Success of any businesses depends on implementation of deployed competitive strategies. In order to survive and remain profitable in the competitive environment, it becomes necessary for businesses to be aggressive in their search and development of strategies that provide competitive advantage as they step up defensive strategies to protect their competitive advantages held. Strategic deployment of competitive strategies is a fundamental function for Small and Medium Enterprises. Any business that fails to adopt competitive strategies will continuously experience heavy financial losses and loss competitiveness (D'Aveni, 2014).

In relation to the above, there has been significant strong progress in the deployment of ICT infrastructures in Rwanda which is aimed at transforming the Rwandan traditional market into electronic market as strategies, one therefore needs to understand the level of adoption electronic business in Rwandan market and the role it has played ever since. Hence this study sought to fill the existing research gap by conducting a study to investigate the impact of e-commerce adoption as a competitive strategy in Rwandan market with a reference of JUMIA Foods Rwanda.

3. Objective of the study

To assess the effect of electronic ordering on competitive strategy in JUMIA Foods Rwanda.

Conceptual framework



4. Research Design

The study adopted a descriptive research design where descriptive statistics were applied to analyze data from questionnaires and interview guide. Descriptive research design allowed the researcher to study the elements in their natural form without making any alterations to them. Rowley (2012) indicates that a case study research is good for contemporary events when the relevant behavior cannot be manipulated.

5. Population of the Study

The population of interest in this research constitutes staff of JUMIA Food Rwanda. In line with this, the target population was 130 employees of JUMIA Food Rwanda working in finance, procurement, distribution departments, in addition to management team.

6. Sample Size and sampling techniques

The sample size of the study was 98 respondents. To determine this sample, the researcher used the Solvin's sample size formula and it is shown below:

$$n = \frac{N}{1 + Ne^2}$$

Where n = the desired sample size
 e= probability of error (i.e., the desired precision, e.g., 0.05 for 95% confidence level)

N=the estimate of the population size.

Therefore: N=130; e=0.05

$$n = \frac{130}{1 + 130(0.05)^2} = 98 \text{ Respondents}$$

7. Research Findings and Discussion

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.868 ^a	0.752	0.779	19.371
1. a. Predictors: (Constant), Electronic ordering				

The model summary indicated that an adjusted R squared is coefficient that determines the variation in the dependent variable due to changes in the independent variable. As revealed in the table, the value of adjusted R squared was 0.752, an indication that there was variation of 75.2% on strategy outcomes to changes electronic ordering, electronic billing and electronic payment.

Findings revealed in the table show that 75.2% changes in strategy outcomes could be accounted on by electronic

ordering has a strong positive impact between the study variables marked by R=.752^a.

Table 2: ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	1.624	1	0.421	3.613	.000 ^b
	Residual	0.523	82	0.024		
	Total	2.23	83			
a. Dependent Variable: Strategy outcomes						
b. Predictors: (Constant), Electronic ordering						

As revealed in the ANOVA test, a p-value of 0.000 less than alpha (5%), the significance positive impact level. In addition, the results clarify that the given data perfect well with the multiple regression models. Therefore, the significance value was less than 0.05, an indication that the model was statistically significant.

Table 3: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.854	1.543		1.232	0.002
	E-ordering	0.826	0.233	0.526	2.256	0
a. Dependent Variable: Strategy outcomes						

From the data reached in the table, the established regression equation was the following:

$$Y = 1.854 + 0.826 \sum_0$$

From the above regression equation it was revealed that holding electronic ordering.. To note is that, a unit increase in E-ordering would lead to increase in strategy outcomes at JUMIA Food Rwanda by a factor of 0.826, a unit increase in e-ordering would lead to increase in strategy outcomes at JUMIA Food Rwanda by a factor of 0.826; and a unit increase in e-payment would lead to increase in strategy outcomes at JUMIA Food Rwanda by a factor of .826. In addition to the above, since earlier the study also found that all the p-values were less than 0.05, this is a confirmation that all the variables were statistically significant in influencing e-commerce adoption by JUMIA Food Rwanda as a competitive strategy on its outcomes.

8. Conclusion

This research's interest was to understand the adoption of e-commerce significantly contributes as a competitive strategy in Rwandan market with reference to JUMIA Food Rwanda. Basing on a sample of 84 employees and review of reports, all specific objectives were achieved as indicated.

The study concluded asserting the effective and efficient e-commerce facilities and high profitability of JUMIA Food Rwanda which according to the study participants it was mainly due to the adoption of electronic commerce at the company.

In addition, since according to the chi-square test; a p-value (0.019) was less than the significance level (0.05), we then conclude that there is a correlation between e-commerce and performance at JUMIA Food Rwanda. From the Chi-square test therefore, the researcher learnt that e-commerce in terms

of electronic ordering, electronic billing and electronic payment is significantly related to the performance in JUMIA Food Rwanda.

10. Recommendations

Regarding safety measures, the top management should be looked into the fact of using e-commerce components to watch over safety measures and risk management.

On public awareness, some stakeholders such as the ministry together with other responsible stakeholders in the government are recommended to sensitize the general public on electronic commerce. This will enable the company to increase the customer base.

For the company to increase its customer base, the company is recommended to extend its services to other secondary cities of Rwanda. This would make an awareness to more people since these cities are located near to the rural areas.

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