

E-Commerce in Agro-food Industry in Zimbabwe: Myth or Reality

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Abstract

Electronic commerce has become a valuable model for the growth of business in every sector of the economy. This paper examines the level of e-commerce adoption in agro-food firms in Zimbabwe. A cross-sectional design using a survey method is used. The results show that e-commerce growth in agro-food firms in Zimbabwe is still at the embryonic stage. The implications to industry and the whole economy are discussed.

Keywords

E-commerce, adoption, agro-food, Zimbabwe

I. Introduction

The proliferation and hyper-growth of the Internet and related technologies since the 1990s, has created a conducive environment for business [13]). A plethora of studies have shown the strategic and operational applications of e-commerce in organisation. These include internal communication [7], external information search, [8,12] receiving payment, [6] and taking orders [11]. Different scholars, including [2,3] have posited that agro-firms are not different from non-agricultural firms in terms of information communication technology (ICT) applications. In Zimbabwe, agriculture is the backbone of the country. Agricultural firms employ 66 % of the total workforce in the country. In terms of revenue, this sector contributed between 20 -25% of the GDP from 1996 to 1999. After the land reform programme which started in 2000, the agriculture industry has been characterised by low yield and productivity as a result of under-investment, uncompetitive prices of produce, low ICTs utilisation, among others. While there have been a lot of publications on the reasons for under-investment and uncompetitive prices in the agriculture sector in Zimbabwe, there is dearth of knowledge regarding the status of e-commerce in this sector.

A. Purpose of the study

This research had two main objectives. Firstly, to evaluate the extent of use of e-commerce technology by agro-food marketing firms in Zimbabwe. Secondly, to identify factors that have hindered the adoption of this new technology by those firms that have not yet adopted it.

B. Literature Review

A. Definition of e-commerce

The term e-commerce seems to be difficult to understand in its totality because no single academic discipline is prepared to encompass all of e-commerce [10]. Consequently; there has been no agreed definition of this term among academics and between academics and researchers [15]. Some define e-commerce just from the perspective of the Internet. However, [13] give a more inclusive definition when they define e-commerce as the undertaking of normal commercial, government or personal activities by means of computers and telecommunication networks and include a variety of activities

involving the exchange of information, data or value-based exchanges between two or more parties. This broad-based definition brings the idea of doing business electronically using various tools (other than the Internet). To this effect [3], clearly argue that the technology of e-commerce includes a variety of systems; from fax to cell phones, intranets, extranets and the Internet. As the communication technology continues to evolve, followed by the rapid diffusion of innovation, the e-commerce components are becoming more and more complex. Even the developing countries such as Zimbabwe have not been spared by the 'e-commerce wave'. The latest developments in Zimbabwe include the widespread adoption of the mobile broadband and the 3G technologies particularly by corporations and the middle-aged workers and entrepreneurs.

B. The Origin and evolution of e-commerce

The fact that there is no agreed definition of the term e-commerce makes it difficult to identify the period e-commerce started. [10] suggest that e-commerce started in the late 1970s while [1] points to the early 1970s as the period e-commerce started. What is clear about this period, whether late or early 1970s is that there was use of electronic data interchange (EDI) and electronic fund transfer (EFT) which is the standards format for exchanging business data. These activities support the definition of e-commerce given by [11]. It therefore, can be summed up that e-commerce started with the use of EDI and EFT. As e-commerce continued to expand, its explosion was recorded in 1994 with the rapid diffusion of the Internet and World Wide Web (www) which made conducting business on the Internet cheaper and easier, [3]. This was echoed by [12] and [10] who agree that with the first banner adverts from Volvo, ATT and others the Internet and the web page changed the face of e-commerce. Since 1995, the Internet and the web page have become the key tools of e-commerce. So if we want to trace the evolution of e-commerce, it has to be intrinsically linked to the growth and evolution of the Internet and the World Wide Web (WWW).

C. E-Commerce benefits

Research has shown that it is worth investing in e-commerce as the firm and the whole economy would immensely benefit from such initiatives. The salient benefits of e-commerce have been established and documented [9]. The major benefits appear in table 1.

Table 1: E-Commerce benefits

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| <p>Reduced cost of sales and technical documentation .</p> <p>Low purchasing prices through price transparency.</p> <p>Reduced transaction and handling costs.</p> <p>Reduced operation costs.</p> <p>Expanded access to trading partners and market research.</p> <p>Expanded access to trading partners and support services.</p> <p>Increased marketing and sales profile.</p> <p>Improved sourcing and procurement process.</p> <p>Enhanced customer service and contact.</p> <p>Competitive advantage through improved efficiencies .</p> <p>Improved efficiencies and transaction visibility and control .</p> |
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Source: Moodley (2005)

D. Barriers to E-Commerce

Electronic commerce presents many opportunities for business to improve their performance [16]. It appears firms in both developed and developing countries have faced barriers to its adoption and implementation. Although these barriers are more in developing than developed countries, the common ones are shortage of appropriate skills (DTI, 2002 in [16], concerns about security, costs, legislation, interoperability [17], and fear of technological change and lack of adequate supporting infrastructure [16].

III. Methodology

A. Instrumentation

The study used a cross-sectional design on agribusiness firms in diverse business sectors ranging from businesses that grow and market vegetables and fruits; cotton and other seeds to those that process food, tea, stock-feeds and sugarcane. A questionnaire was administered to information technology or sales/marketing manager of each selected firm. They were then persuaded to complete the questionnaire which was hand delivered by the researchers. The respondents were asked to state whether their firm had a website and if the answer was yes, they were asked to identify from a given list of e-commerce activities those they were currently doing. The list of e-commerce activities was drawn from the existing literature on e-commerce. The respondents were also asked to explain how their website had in some way helped improve the firm's performance. Those respondents whose firms had not started using the Internet as a business tool were asked to identify and rank from a given list the reasons for not doing so. The list of some common reasons for not using the Internet in developing countries was also drawn from existing literature. The instrument also included questions relating to the context of the respondent's firm. This included the main business activity, number of employees, the major customer categories and major competitors. The instrument was pre- tested with 9 firms in Gweru. This highlighted a number of issues which were addressed in the final questionnaire.

B. Population and sampling

The population of this study consisted of firms throughout Zimbabwe that are in the business of growing, processing and marketing of agricultural food products. The sample frame was composed of agro- firms that have been in operation for more than five years that are exporters and have well established businesses. A list of 40 agro -firms that have been in operation since year 2000 and which export their products was obtained

from the Ministry of Industry and Commerce. This was cross-checked with the list from the Ministry of Agriculture. It was not known if the selected firms were using or intended to use e-commerce. A simple random sample of 25 firms was then selected from this list. The justification for using random sampling technique is that it eliminates the possibility that the sample is biased by preference of the individual selecting the sample [5].

IV. Results

A. Response rate

A total of 20 copies of the questionnaire were completed and returned. This represents 80% response rate.

B. Firm's profile

Of the sampled firms, 80 % were into the business of farming and processing while 20% were into storage and distribution. 10% employed more than 100 employees while 90% employed less than 100 employees. This means that the majority of the firms sampled were small to medium enterprises (SMEs) in farming, agro-processing, storage or distribution.

C. Website presence

90 % of the firms indicated that they have a functional website. A verification exercise was done by logging on to the given website.

D. E-commerce activities performed

Many activities are already taking place on the web. Fig. 1 in the annexe shows that 100% of the firms are using the web to promote institutional image, 80% promote individual products, 10% individualise or personalise the product, 10% solicit international business while 40% generate revenue through banner advertisements. 0% of the firms are receiving payments via the Internet (using e-money).

In response to whether the firms were deriving any benefits from the installation of the website, 80% of the respondents agreed that the website helped their firms to improve business performance through easy access by customers, 24/7 product display and improved information dissemination to customers. Many managers said that although the business performance of their firms had improved, there were challenges associated with slow navigation, power outage, escalating internet operational costs and inefficient service from Internet Service Providers (ISPs).

E. Reasons for not adopting e-commerce

10 % of the surveyed firms do not have a website and have not yet adopted e-commerce. The respondents cited the reasons indicated in Fig. 2 in the annexe section. Fig. 2 shows that 10% of the respondents perceive cost of starting and maintaining the Internet service, as their main barrier while 10 % attribute their laggardness to lack of technical expertise. However, 80% of the managers cited lack of security as the main barrier. Perhaps this explains why none of those firms that have adopted e-commerce has been able to have online payments.

F. Discussion

The main objective of this study was to examine the extent of adoption of e-commerce by agribusiness firms. The study sought to assess whether e-commerce is now a reality or is still a myth for the agro-food firms in Zimbabwe. The study

revealed that although there has been marked investment in the hardware devices, e-commerce is still at the embryonic stage in agro-firms in Zimbabwe as none of them is realising transactions on the net. This means that the hardware is still to be put to good use through allowing transactions with customers from any geographic corner of the globe. The results seem to be consistent with those of [2] who studied ICT adoption by Nigerian SMEs.

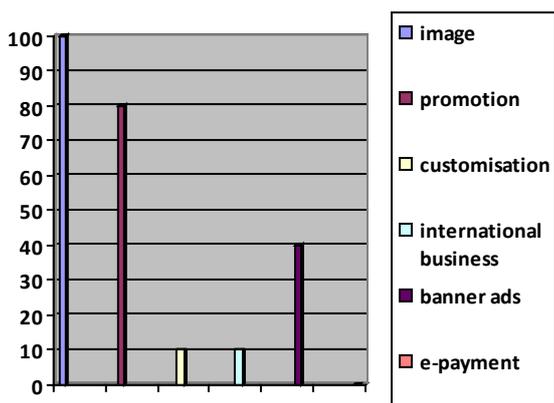
It should be noted that since agriculture is the backbone of the economy of Zimbabwe, the performance of any firms in this sector affects the performance of the whole economy. It would be prudent to have in place an institutional framework for the provision of E-commerce as a business model in this sector. This would regulate e-commerce activities including the legitimisation of e-payments and knowledge sharing among firms through strategic alliances, networks and collaborations.

V. Conclusions

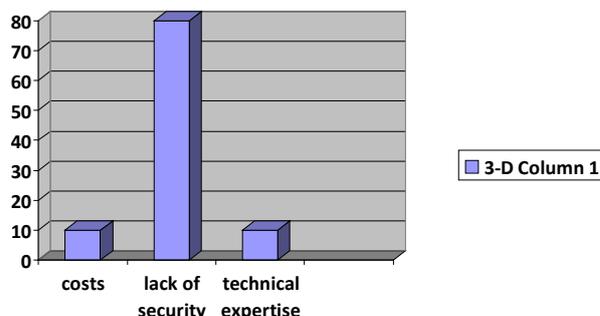
The study sought to examine e-commerce adoption by agro-firms in Zimbabwe. Although the majority of agro-firms have started using the Internet by developing websites, in strict terms e-commerce is still at the ‘embryonic stage’ in agro-firms in Zimbabwe. Internet usage is still largely restricted to email usage, virtual product displays and promotion. No single firm has yet started receiving e-payments. This makes international transactions via the net impossible, yet they are the backbone of business to business (B2B) interactions in this e-commerce era. There is still a myriad of barriers to the full realisation of e-commerce in agro-food firms in Zimbabwe. The key barriers are lack of privacy and security, lack of technical expertise and limited financial resources.

A. Limitations and suggestions for further studies

Given that 95% of the sample was SMEs, the study cannot be simply generalised to larger firms. Such firms are likely to have a significant number of existing e-commerce transaction systems. Studies should therefore be undertaken focusing on SMEs and larger firms separately.



Source: Authors’ survey
Fig.1: E-commerce activities in agro-firms in Zimbabwe



Source: Authors’ survey
Fig 2: Major e-commerce barriers in agro-firms in Zimbabwe

References

- [1] Akoh, B., “E-business in the Developing World, Africa and Ethiopia (Ethiopia in the Knowledge Age)”. Unpublished Report, 2001.
- [2] Aleke, B.,Ojiako, U., Wainwright, D.W, “ICT adoption in developing countries: perspectives from small scale agribusiness”, *Journal of Enterprise Information Management*, Vol. 24 No.1, 2011.
- [3] Baourakis, G., Kougiantakis, M., Migdalas, A., “The impact of e-commerce on agro-food marketing: The case of agricultural cooperatives, firms and consumers in Crete”, *British Food Journal*, Vol.104 No.8, 2002.
- [4] Bellaman, M.L, “Bricks and mortar: 21st Century survival” *Business Horizon* Vol. 44 No 3, 2000.
- [5] Bordens, S.K., Abbott, B.B, “Research Design and Methods: A process Approach”, (5th Edition), New York, McGraw-Hill, 2002.
- [6] Doherty, N. Hughes, F. Ellis Chadwick, “An investigation into the factors affecting the level of e-commerce uptake amongst SMEs”, *Proceedings of the 6th Annual Conference of UKAIS*, Portsmouth, No April, 2001.
- [7] Dutta, B. Evrard, P., “Information Technology and Organisation within European small enterprises”. *European Management Journal* Vol. 17 No. 3, 1999.
- [8] Jacobs, G. Dowsland, W., “The dot.com economy in Wales, the long road ahead,” *Proceedings of the 7th Annual Conference of UKAIS*, Swansea, April, 2000.
- [9] Joseph, W.B., Cork, R.W., Javalgi R.G., “Marketing on the Web: How executives feel”, what businesses do; *Business Horizons*, Vol. 44 No 4, 2001.
- [10] Laudon, K., Traver, C., “E-Commerce: Business, Technology”, Society 4th Edition, Pearson Prentice Hall, Upper Saddle River, NJ, 2008.
- [11] Moodley, S., “Status of B2b E-commerce in South African Manufacturing sector”, *Evolutionary or Revolutionary*. [Online] Available : www.wits.ac.za/journal/-sagren. Accessed 20 June 2010.
- [12] Poon, S, Jevons, C., “Internet enabled international marketing: a small business network perspective,” *Journal of Marketing Management* Vol. 13, 1997.
- [13] Poon, S. Swatman, P.M.C., “An exploratory study of small business internet commerce issues,” *Information and Management*, Vol. 35 No.1, 1999.
- [14] Rao, S.S., Metts, G., Monge, C.M, “Electronic Commerce development in small and medium sized enterprises: A stage model and its implications”. *Business Process Management Journal*, Vol. 9 No.1, 2003.
- [15] Riggins, F.J., Rhee, H., “Towards a unified view of electronic

commerce”, [Online] Available : <http://rigginsmgt.iac.gatech.edu/papers>, 1998.

- [16] Simpson, M. , Docherty, A.J., “E-commerce adoption support and advice for UK SMEs”; *Journal of Small Business Enterprise Development*, Vol. 11 No 3, 2004.
- [17] Timmers, P., “Electronic commerce strategies and models for Business to Business Trading”, John Wiley, Chichester, 1999.



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