



Publisher

UNLOCKING DIGITAL ENTREPRENEURSHIP THROUGH TECHNICAL BUSINESS PROCESS*

Fahim Akhter

*Management Information Systems Department,
College of Business Administration, King Saud University,
Riyadh 12372, Saudi Arabia*

E-mails: fakhter@ksu.edu.sa

Received 20 April 2017; accepted 26 June 2017

Abstract. The objective of this study is to explore the level of reliance of business processes on technologies for growth and sustainability of Saudi entrepreneurship. The technological business environment has pressed the entrepreneurs to adopt the information systems to overcome operating deficiencies, including high costs, small production cycles, dormant business process and scarce financial resources. *The future growth and sustainability of the Saudi entrepreneurship are depending on the adoption and integration of information systems* allowing to facilitate the trade processes across functional units, use of a standardized database and information sharing. Obtained data support the technological reform that claims that business technology will enable the decision-making process to be timely, consistent and reliable across organizational units and geographical locations. The data collected through online surveys with thirty-one Saudi entrepreneurs revealed the barriers faced by the entrepreneurship, and allowed to summarize provided recommendations. The analysis indicated that the growth and sustainability of the enterprise are subject to adoption of technology oriented business process lead by information systems in the organizations. The outcome of the study is further recommendation to educate and spread the awareness about the implementation of information systems to address the electronic business process. The study will help to organize, assess and improve business processes in order to meet the new requirements set by competition among entrepreneurial companies.

Keywords: entrepreneurship, information systems, electronic commerce, sustainability

Reference to this paper should be made as follows: Akhter, F. 2017. Unlocking digital entrepreneurship through technical business process, *Entrepreneurship and Sustainability Issues* 5(1): 36-42. [http://doi.org/10.9770/jesi.2017.5.1\(3\)](http://doi.org/10.9770/jesi.2017.5.1(3))

JEL Classifications: O32, O33

* *The author extends his appreciation to the Deanship of Scientific Research at King Saud University, represented by the Research Centre at the College of Business Administration, for funding this research*

1. Introduction

The word entrepreneur comes from the French word “entreprendre” which means to “undertake”. The work of Hernandez (2016) addressed the process of initiating and continuing the expansion of new businesses; entrepreneurship is credited the creation of new businesses. The business world has been transformed during the last few decades due to the advancements in technology. The research by Hernandez has suggested that there is evidence that creation of entrepreneurship based on technology and innovation has a positive impact on the economic development of the country. Information Systems are transforming every aspect of Entrepreneurship from employee recruitment to the production process, from the start-up of the business till becoming the giant, and how to interconnect with all the stakeholders. Many start-up companies are remodelling their business models and adopting information systems with the electronic commerce approach in mind. It has become more important than ever for entrepreneurs understand not just how the technology works, but also how current and future advances affect the sustainability and growth of their business. Many entry level managers give high priority to manage finances, equipment, materials, and human capital but do not consider information systems as a must have resource.

Technological oriented business process lead by information systems are the foundation for the building and running a successful business today. It is impossible to survive and even exist without the implementation of information systems regardless of the industry. The new entrepreneurship requires information systems to execute the business processes. The entrepreneurs could compete with the established business by capturing a niche market being carried out through the use of e-mail, online conferencing, and international teleconferencing. Internet technologies have become essential business tools.

1. Literature Review

This research has referred literature and conducted online surveys to address the challenges and potential opportunities faced by the Saudi entrepreneurs during the establishment of small business. The study examines the barriers that caused the small businesses in Saudi Arabia lack to transform into the digital firms. The business processes are carried out manually instead of executing by information systems by most of the local entrepreneurs. The automation of technology based business process allows small businesses to developed organization’s business partnerships with customers, suppliers, and employees and manage business assets through digital means (Shmailan 2016; Prause, Atari 2017; Hilkevics, Hilkevics 2017; Pauceanu 2016; Samašonok et al. 2016; Raudeliūnienė et al. 2016; Teletov et al. 2017). The study by Business Group has addressed the issues that arise due to the resistance of integrating information systems to perform and achieve the core business process by entrepreneurs. The business assets, including intellectual property, core competencies, and financial and human asset could have managed through the electronic means.

The Saudi government recognizes the benefit from growth in the small business segment as a major contributor to GDP and employment. Therefore, the government has initiated and introduced many programs and tools for the entrepreneurship to adapt the information systems to avoid a failure. The government has planned many technical reforms and programs by emphasizing the contribution of small business to the country’s 2030 development plan. The research by Tvaronavičienė (2009) also supported the initiative of the government that better institutional performance, the better performance of organizations-market players, and the faster sustainable development processes.

The Ministry of Commerce is providing the assistance required to bring the entrepreneurs contribution to the gross domestic product as compared to the US, 50%, France 56%, Spain 57%, and Japan 64%. The government has instructed the banks to accommodate small businesses, financial request to become digital firm, including

purchasing technology solutions. The financial intuitions and relevant stakeholders have offered expertise and logistics to training small businesses on how to transform their manual conducted business process into a digital one. Similarly, Samba Financial Group is hosting workshops for SMEs through its Business Edge program. The initiatives are educating the entrepreneurship to understand the technological way of conducting modern business that allows them to sustain and grow.

2. Materials and Methods

The thirty-one entrepreneurs were asked to express the extent of their experiences in adopting the technology oriented business process, especially with information systems, including enterprise resource planning and customer relations. The subjects were allowed to share their knowledge against survey statements on electronic business infrastructure in Saudi Arabia. The aim of collecting the data is to generalize Saudi entrepreneur's attitudes and expectations about being digital firm and what actions are required at different levels of transforming manual business process into digital automation.

The survey, conducted through online between December 19, 2016, and January 20, 2017. The researcher used the SPSS statistical package to analyze the responses to the twenty-five open-ended questionnaires. The respondents were asked about their opinions, investigating the importance of being digital firm, the know-how of Internet functionality and cultural influence in setting up a new venture in Saudi Arabia.

A pilot test was conducted to verify the tools before collecting data. The purpose of the pilot test was to access whether the instruments were capturing the phenomena desired. The researcher used simple random sampling because of the process of random selection of the sample, which removes the possibility of biases. Any differences that do occur are then the results of chance rather than bias on the part of the researcher. The key to obtaining a random sample is to ensure that every member of the population has an equal and independent chance of being selected. The researcher, achieved this objective by using a table of random numbers.

3. Results and Discussion

It is observed from the responses that many entrepreneurs are familiar with the rationales of managing business resources such as equipment and people, and claimed that these aspects are important. Although, they are not certain that there is interdependence between a firm's ability to use information technology and its ability to implement strategies and achieve business goals. The research has extracted the following five themes from the responses regarding introducing technology in small firms. The respondents agree that businesses could improve the efficiency and operations through automation and allow to achieve higher profitability. The entrepreneurs believe that information systems could streamline the business process to boost the effectiveness and productivity of the services. The automation could come with changes in business practices and management behavior.

The respondents suggested creation or remodification of business models in order enabling adopt information systems, and empower entrepreneurs. The modified models will produce new business process, products, and services. The implementation of technological solutions will allow entrepreneurs to build, deliver, and sell a product or service to cater the demands of the customers. The work by Akhter (2017) explained that a technology oriented business process through enterprise resource planning (ERP) system fosters a satisfied customer and enhances the supplier intimacy. An ERP systems have numerous benefits to support business processes, including the elimination of redundant processes, reduce inventory, minimize production cost, address customer and suppliers and enhance response time. An ERP addresses the needs of the clients and vendors to serve them well. The survey suggested that entrepreneurs like to implement the system to allow the suppliers to have access to

entrepreneurship inventories for just-in-time supplies to avoid delays. The procurement process could be executed through the information systems with the minimal human interference to increased revenues and profits. The high level of automation with business stakeholders allow them to position themselves early to address the needs of the entrepreneurs. It also lowers the cost of conducting business for all stakeholders.

The respondents express the concern of not having access to accurate and current data, and therefore feel to be forced to rely on forecasts, best guesses, and luck while make strategic decisions. They preferred to install an affordable information system to access to real-time data from the different databases to make business decisions. The information systems will allow entrepreneurs to make informed and accurate decisions resulting in lowered costs and earned customers' trust.

The survey emphasizes the reliance on information systems to enable entrepreneurs to perform better than competitors, offer low-cost quality products and respond to stakeholder's inquiries in real time. The entrepreneurs believe that support from information systems will result in repeating business, satisfaction, higher sales, and trusted reputation that competitors cannot match. The Walmart was the first mover to adapt the information systems in retail business and pass the competitive advantage to the customers to beat the retail market competition. The survey outcome is supported by Bharthvajjan's work in 2014 that access to the latest and most efficient technology and techniques will bring competitive advantage to the major players. The respondents agreed that in the technological base business environment, it is necessary for them to equip with information systems to conduct business. Otherwise, competition will catch up the real competitive advantage by taking corrective actions and strategies. The Saudi government did understand the importance of information systems for business sustainability and assisted the entrepreneurship to acquire information systems and modern technologies.

The government's assistance in the process of to the enterprise business models' transformation would bring greater returns as increased productivity, increased revenues and superior long-term strategic positioning. The reliance on information systems would offer value added to entrepreneurship processes, including helping managers to make sound decisions, business processes become efficient, allowing to escalate profitability. The respondents believe that access to multiple technological solutions can assist them to identify processes that may need to be changed or deleted. The technical solutions could trigger a quality audit on business process to verify the status of expected performance. The decision support systems or expert systems could enhance the effectiveness of existing business processes by extracting reports from other systems. The entrepreneurship expressed that they need systems that keep track of their business activities and transactions, such as sales, receipts, cash deposits, payroll, credit decisions, and the flow of information in business. The entrepreneurs also expressed the interest in cloud computing to use the computing resources as per their needs instead of buying them exclusively.

Some small companies are shifting their business process to conduct through cloud computing. There are some respondents, who mentioned using Google online tools and services, and some are suitable for cloud collaboration. They are using most of the free services, including Google Drive, Google Docs, Google Apps, Google Sites, and Google+. The revolutionary commercial potential of the Internet allows the companies to minimize the turnaround time and keep the potential customer engage in the buying process. The access to the Internet option is available to entrepreneurs to serve the customers as big giants, including Airbnb or Uber. The CRM and ERP could design or modified business process and allow for transparent communication between all stakeholders of activity. It will give entrepreneurs a competitive advantage for managing stakeholder interactions, dealing with potential customers, optimizing and systematizing relationships at a lower cost. For example, the systems could enhance and streamline the checkout process of the entrepreneurship. The checkout process could become quick and straightforward to prevent checkout abandonment.

Conclusions

It is determined from the responses that now the entrepreneurship can sustain the growth of the business with the increasing benefits of the Internet and the emergence of the advanced information systems, such as the Web3.0, mobile commerce, business intelligence, cloud computing and others. The respondents believe that cloud computing is changing the way organization activities performed finance, accounting and supply chain management. Saudi entrepreneurs must look for the initiatives to be supported by the advantages of benefits the information technology offers. They must regularly review their business process, adopt the options technology offers that can help to reach new markets and global customers. The technologically innovative business process will allow them to reinvent business models to capture productivity and performance, unlocked by the information technology.

Information Technology is the lifeline for the business to sustain. Almost 87 percent of the entrepreneurs believe that the information systems will have the greatest impact on lowering entrepreneurship operating costs over the next ten years. The survey outcome argues that it is necessary to invest in information systems to sustain the growth of the enterprise. It is an ethical and business responsibility of the financial institutes, non-profit microfinance organizations, and venture capitalists seek out initiatives and step up their efforts to serve the small business in Saudi Arabia.

The entrepreneurs are required to have an awareness that absence of information system is causing little revenue per client, high risk of losing the customers, and the dormant and obsolete business process. The Saudi government has taken initiatives to support entrepreneurs to acquiring technological tools. It is observed from the responses that when adopting an information system, entrepreneurship should involve top management in the process and also consider the internal culture. The research by Ghodbane (2016), Abunar (2016), and Akhter (2017) agreed that age, gender, and social networks positively influence technology entrepreneurship with the shift of information communication technology jobs.

It is advised to acquire vendor support from the beginning of the transition to address training, business process re-engineering, and maintenance. The information systems will allow the businesses to have access real-time data. This option will allow the business intelligence tools to perform a high level of forecasting and analysis to generate the most accurate information. The information systems work in conjunction with the Internet, extranets, and intranets to create new opportunities to conduct business online. Information Systems makes entrepreneurship more feasible, cheaper, and easier to set up than before as it allows a small group of employees from a different area of the company to collaborate on a project without leaving their premises. The costs of trading across borders and barriers to entrepreneurship could significantly be reduced by the adoption of information systems across the organization.

References

- Abunar, Z. 2016. Enhancing Accounting Information Systems to Facilitate Supply Chain Management between Supermarkets/ Suppliers: The Case of Saudi Arabia, *Journal of Accounting and Marketing* <http://dx.doi.org/10.4172/2168-9601.1000158>
- Akhter, F. 2017. Innovation and Social Technologies are Revolutionizing Saudi Consumer Attitude Towards E-Commerce, *International Journal of Security, Privacy and Trust Management* 6(1) <http://dx.doi.org/10.5121/ijstpm.2017.6102>
- Akhter, F. 2017. Strategic imperatives and core competencies to empower small and medium enterprise. *International Journal of Advanced and Applied Sciences*, 4(4): 170-174. <https://doi.org/10.21833/ijaas.2017.04.025>
- Bharthvajan, R. 2014. Entrepreneurship in the globalizing economy in according with car industry,” *International Journal of Innovative Research in Science, Engineering, and Technology* 3(7) https://www.ijirset.com/upload/2014/july/20_Entrepreneurship%20in%20Globalising%20Economy%20in%20accordance%20with%20CAR%20Industry.pdf
- Business Group. 2017. <http://www.oxfordbusinessgroup.com/analysis/starting-small-given-large-number-local-smes-opening-financing-and-opportunities-key-2> (last access on May 2017)
- Ghodbane, W. 2016. Challenges of Technological Entrepreneurship in Africa: The Case of Tunisia, *Journal of Entrepreneurship & Organization Management* 5:176. <https://doi.org/10.4172/2169-026X.1000176>
- Hernandez J.G. 2016. Development of Entrepreneurship in ZMG: Growth Startups and Precursor of Innovation and Economic Development, *Business and Economics Journal* 8: 277. <https://doi.org/10.4172/2151-6219.1000277>
- Hilkevics, S.; Hilkevics, A. 2017. The comparative analysis of technology transfer models, *Entrepreneurship and Sustainability Issues* 4(4): 540-558. [https://doi.org/10.9770/jesi.2017.4.4\(11\)](https://doi.org/10.9770/jesi.2017.4.4(11))
- Pauceanu, A. M. 2016. Innovation and entrepreneurship in Sultanate of Oman – an empirical study, *Entrepreneurship and Sustainability Issues* 4(1): 83-99. [https://doi.org/10.9770/jesi.2016.4.1\(8\)](https://doi.org/10.9770/jesi.2016.4.1(8))
- Prause, G.; Atari, S. 2017. On sustainable production networks for Industry 4.0, *Entrepreneurship and Sustainability Issues* 4(4): 421-431. [https://doi.org/10.9770/jesi.2017.4.4\(2\)](https://doi.org/10.9770/jesi.2017.4.4(2))
- Raudeliūnienė, J.; Stadnik, B.; Kindarytė, R. 2016. Knowledge appliance process: theoretical and practical evaluation aspects, *Entrepreneurship and Sustainability Issues* 3(4): 368-379. [https://doi.org/10.9770/jesi.2016.3.4\(5\)](https://doi.org/10.9770/jesi.2016.3.4(5))
- Samašonok, K.; Išoraitė, M.; Leškienė-Hussey, B. 2016. The internet entrepreneurship: opportunities and problems, *Entrepreneurship and Sustainability Issues* 3(4): 329-349. [https://doi.org/10.9770/jesi.2016.3.4\(3\)](https://doi.org/10.9770/jesi.2016.3.4(3))
- Shmailan, A. 2016. Compare the Characteristics of Male and Female Entrepreneurs as Explorative Study, *Journal of Entrepreneurship & Organization Management* 5: 203. <https://doi.org/10.4172/2169-026X.1000203>
- Teletov, A.; Nagornyi, Y.; Letunovska, N.; Shevliuga, O. 2017. Competitive and sustainable technological development: focus on business enterprises, *Journal of Security and Sustainability Issues* 6(3): 491-500. [https://doi.org/10.9770/jssi.2017.6.3\(13\)](https://doi.org/10.9770/jssi.2017.6.3(13))
- Tvaronavičienė, M.; Grybaitė, V.; Tvaronavičienė, A. 2009. If Institutional Performance Matters: Development Comparisons of Lithuania, Latvia and Estonia, *Journal of Business Economics and Management* 10(3): 271–278. <http://dx.doi.org/10.3846/1611-1699.2009.10.271-278>

Acknowledgements

The author extends his appreciation to the Deanship of Scientific Research at King Saud University, represented by the Research Centre at the College of Business Administration, for funding this research.

Biographical note

Fahim AKHTER is the Professor of Management Information Systems at College of Business Administration, King Saud University, Saudi Arabia. His research trajectories and priorities include entrepreneurship and information systems that have given rise to a range of publications in the form of case studies, book chapters, articles in peer-reviewed journals, conference proceedings, and research seminars. Dr. Akhter scholarly work has published in the high impact Journals and indexed in Web of Science, including International Journal of Advanced and Applied Sciences, TEM Journal, International

ORCID ID: orcid.org/0000-0003-3748-3475

Copyright © 2017 by author(s) and VSI Entrepreneurship and Sustainability Center
This work is licensed under the Creative Commons Attribution International License (CC BY).
<http://creativecommons.org/licenses/by/4.0/>

