

Performance Entrepreneurship Success: The Roles of IT Competencies on the Corporate Entrepreneurship Orientation

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Abstract: Entrepreneurship plays a dynamic role as a key driving of growth, helping on increasing the competitiveness on global market, playing another role on creating new jobs and generating a strong internal and external economy. The rapid change occurred in the technological environment made unexpected changes on the consumer behavior, market demands and the corporate orientation. Few researches investigated the impacts of different levels of IT competencies on the corporate entrepreneurship. The aim of this study is summarizing the effects of IT competencies (connectivity, flexibility, scanning) on the corporate entrepreneurship (business venturing, self-renewal, product innovation and organization innovation). The research uses a quantitative method through using a distributing a research questionnaire for collecting all the needed information and data. This study derives its empirical significance from helping employees in the tourism sector to understand the importance of the IT competencies in achieving high performance levels. The findings suggest that IT competencies (connectivity, flexibility, scanning) have a significant positive effect on performance entrepreneurship success within the organization.

Key words: IT competencies, corporate entrepreneurship, business venturing, self-renewal, product innovation and organization innovation

INTRODUCTION

The rapid change in the IT sector affected and changed in the principles of competition between Organizations which started facing the turbulence in the environment based on IT in order to offering all the needed products and services (Jacks *et al.*, 2011). This study is aiming to summarize the effects of IT competencies the corporate entrepreneurship orientation (Chen *et al.*, 2015). Choosing the research dependent and independent variables lies on previous research and studies which agreed that there is a lack of finding all the required information for adopting entrepreneurship factors in advanced and easy way (Chen *et al.*, 2015). This research aims to cover the following topics: define the capabilities of IT competencies represented by: connectivity, flexibility and scanning. Explain the role of IT competencies on the corporate entrepreneurship orientation which represented on this research by: business venturing, self-renewal, product innovation and organization innovation (Sawy and Pavlon, 2008).

Literature review: Corporate Entrepreneurship (CE) is defined adopting and applying entrepreneurship term within the organization as a vision leads strategies,

plans and works (Dess and Lumpkin, 2005). Corporate entrepreneurship leads the growth process of performance, business and produce new products and services also it changes the nature of business processes in order to be agreeing with the new plans and strategies (Simsek *et al.*, 2009). The main difference between entrepreneurship and corporate entrepreneurship is that the entrepreneurship is focusing on the individuals and employees capabilities but the corporate entrepreneurship as a term is concerning with organization's overall performance and efforts forward to applying and having business venturing, self-renewal, product innovation which in the lase will arrive for new product and development innovative business (Kappelman and McLean, 2014).

Adopting CE activities will effect on the organization's income and revenue (Simsek *et al.*, 2009). Business venturing focuses on creating new ways for achieving works within the organization business units and departments; self-renewal is the ability to redefine and reconstruct the business models within the organization based on the capabilities and ideas of employees (Hayton, 2005). Product and organization innovation is defined as the ability of doing business and producing products and services in new ways

(Hayton, 2005). The rapid change in the business environment, the lack of finding all the needed information, the misunderstanding of IT and corporate entrepreneurship concepts are some of the main reasons which the research means to discuss; through providing more information about the IT competencies capabilities on the level of organization outcomes through their effects on the corporate entrepreneurship orientation. Improving CE activities will give the organization more abilities to develop products, expanding organization business domains, renew organization departments and processes, all in order to affect positively on the performance of producing new products and services (Giudice and Straub, 2011).

The organizations begin to focus on information technology as an important part of the start of the application of the concept of business leadership, especially when it was discovered that it is critical for any organization to solve problems of providing incorrect and inaccurate information before starting to apply CE within its borders (Chen *et al.*, 2015).

Additionally, correcting all the information and data could give the organization the ability to receive and communicate with customer's feedback in new ways (Chen *et al.*, 2015). In the last, (Chen *et al.*, 2015) defined all needs, conditions and requirements for any organization which thinking to adopt an effective and efficient corporate entrepreneurship: having data and information up-to-date, business model includes an integrated view for the organization structures and advanced IT system for highly communication between departments and employees based on all previous researches and studies, the IT can playing main critical role for allowing and adopting the CE through implementing its activities which in the finally will arrive the firm to a sustain market share position, having more competitive advantages, developing the overall performance and having new outcomes. IT could generate new ideas, ventures which by implementing CE the positive effects on the whole departments, process, products, performance and quality will be shown and the organization will be able to get more competitive advantages which could improve and sustain their position within the market (Chen *et al.*, 2015).

IT competencies are referring to employing the capabilities of IT and integrating them with the organization's resources in the way to decreasing production and transaction costs, increasing profits and revenues (Jacks *et al.*, 2011). Previous studies and reviews suggested to focusing on IT because it contains tools and systems for communicating which there

are useful for organizations to facilitate achieving aims, improving business processes and solving problems (Bharadwaj *et al.*, 1999).

IT competencies are divided in three main types: IT connectivity which defined as applying IT systems for connecting all departments and units in the way to facilitate the process of exchange data and information and decrease having inaccurate and misunderstanding information by the organization (Zhang *et al.*, 2008). Aarstad (2012) analyzed and summarized the effects of having a networking built through using IT on the corporate entrepreneurship and he acknowledges the difficulty of selecting the best system which could be suitable for the nature of the organization. IT flexibility is the able of making modification or adaptation on IT system in order to increase the speed of exchanging information and data between organization departments (Chen *et al.*, 2015). IT scanning is defined as scan all data and information which related with the market trends and transactions in order to enrich the firm's capacities (Wang *et al.*, 2013).

IT proved its efficiencies on having data and information from different resources and integrates them using IT database system, share them all between business units by using the technological network and then scanning all inputs to check and correct their validity based on the organization goals and the date of entering (Chen *et al.*, 2015). CE could be more effective if all units and department within the organization integrated and being as one unite especially when any project for achieving initiatives starts (Chen *et al.*, 2015). Additionally, IT needs more studies to produce innovative products, dealing with new project and enhancing corporate entrepreneurship venturing and self-renewal (Chen *et al.*, 2015).

Tourism sector is not considered a new field for research but the nature of this sector as a multidisciplinary nature and this return to its role and implications on the economic. The power of entrepreneurship in the field of tourism lies on maintaining and protecting all the entire knowledge within the firm in the aim of increasing the strength of competition between individuals and organizations. The improvement process in tourism sector is related mainly with the knowledge as a unique key for the competition between people, firms and regions because firms understood that they have to improve their products and services based on the experience of people that they visited and got self-experience. The researchers agreed that the role of IT and knowledge is the main driver for the development of products and services in the tourism sector also, the knowledge-intensive orientation started because of its

effects not on the tourism sector in just one country but on the entire region based on the globalization and the role of ICT which made all the tourism sector in all the world represented as an open area which affected by any improvement process. The main changes in the middle east and the war which started in the most of countries since 5 years affected on the tourism sector in Jordan, choosing Jordan tourism sector to be the field of applying the research case study lies on the effectiveness of tourism sector in Jordan GDP which give any development project in tourism industry the positive ability to effect on the national economy growth.

Jordan is one of the biggest countries in the field of IT usage which made the field of industries impacted by the role of IT. Furthermore, most sectors in Jordan is still under the development process and there is a big misunderstanding of many important concepts such as the term of corporate entrepreneurship even if the implementation of information technology sector has already begun. Jordan tourism sector has been curtailed by regional instability with 7.4% per year tourists slipped based on the situation of the Middle East and neighboring countries and there is an urgent need for a development plan which is able to solve problems based on adopting new concepts such as entrepreneurship (Jordan tourism board). Tourism is a complex system because of the collaborating and interaction between multiple different business actors and all firms should think direct in the way of getting and having more competitive advantages in sustain way. The tourism field is not considered a new field for applying researches and the importance of tourism field for all researches is related with its role and effects on the social and economic sectors and it's representing one of the largest services industries in the entire world. Also, the research results found that the IT and entrepreneurship roles are still limited on Jordan tourism sector and it important to have more theoretical studies which could help Jordan tourism board in applying new ideas to improve the current situation in the overall sector (Jordan tourism board <http://www.jtb.com/>).

Jordan Tourism Board (JTB) is considered a public agency which is responsible. About the development of the tourism sector in the private and public Jordan. The collaboration between public and private tourism firms and projects in order to establish marketing strategies to promote Jordan rousts products and services (Jordan tourism board). Furthermore, JTB is responsible about the supporting of business entrepreneurs and providing all the necessary studies and infrastructure to develop their business to create the tourists satisfaction and reflects a positive experience. Jordan tourism board applies set of

projects as marketing strategic partner which includes promotional activities in order to participate in fairs, workshops, trades, trips and multimedia production in order to achieve their goals in leading the brands, promotion, positions Jordan or to be the destination of choice for tourists (Jordan tourism board). The research case study aims to help Jordan tourism board on finding some solutions for solving all problems and obstacles that Jordan tourism sector is suffering-of such as the unawareness from Jordanian people in the importance of tourism activities, the problem of not including Jordan within the global tour catalogues, the high cost of tourism tours with the low rate of income, the lake of organizations structure and the staff cognitive and knowledge capabilities, the problems of trainings for firm's staff and employees because of the lack of resources.

MATERIALS AND METHODS

Research model: In this study, a research model is designed and presented and observed in the perspective of the IT competencies effects on the corporate entrepreneurship orientation, Fig. 1 shows the model which includes three of the IT variables (connectivity, flexibility, scanning) and their effects on four of the CE activities (business venturing, self-renewal, product innovation and organization innovation). The model shows that the adopting and having an advanced technological environment could lead and effect on achieving corporate entrepreneurship orientation. Therefore, the following are the research hypothesis:

- H₁: the technological competencies (connectivity, flexibility and scanning) have a significant and positive impact on the business venturing
- H₂: the technological competencies (connectivity, flexibility and scanning) have a significant and positive impact on the self-renewal

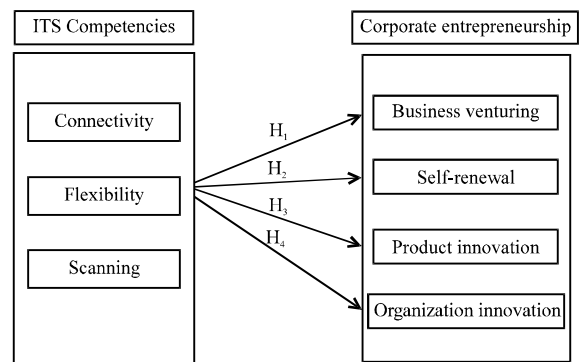


Fig. 1: Theoretical framework

- H₃: the technological competencies (connectivity, flexibility and scanning) have a significant and positive impact on the product innovation
- H₄: the technological competencies (connectivity, flexibility and scanning) have a significant and positive impact on the organization innovation

This research used previous studies and literatures to prove the research hypotheses which discussed the subject of the IT competencies effects represented by (connectivity, flexibility and scanning) on the orientation of corporate entrepreneurship represented by (business venturing, self-renewal, product innovation and organization innovation). In addition, IT indicators are considered important to measure their effects on adopting the corporate entrepreneurship inside the organization. This study aims to summarizing and offering more effective information about the relationship between IT role and entrepreneurship within the organization. Figure 1 supposed three hypotheses to study the IT role on applying corporate entrepreneurship and it summarized this role in the following points: the organization which has a strong technological environment could be able to have an advanced technological system to connect all business units and represent them as a one unified unit. The organization could be able to receive all the data and information through internal and external channels. Scanning them all and check their validity to determine if the organization has the possibility monitor organize and reuse this information in new way which able to produce new outputs and give customers new products with high quality and less cost. Based on that the research analyzed the relationship and the effects on the orientation of corporate entrepreneurship and it summarized based on previous studies how each activity will be affected and how using IT competencies could also effect on the overall performance, market position and competitive advantages.

Research method: The research used a research questionnaire which designed based on studying the relationships between dependent and independent variables of this research, the research gathered all the needed data and information based on the responses of IT directors, IT managers and the head of departments within Jordan tourism board. Choosing respondents were considered appropriate for reducing any possible measurement mistakes. The research distributed and collected 110 research questionnaires on managers and employees within the Jordan tourism board. Respondents have been chosen from all managerial levels within the marketing and management departments. The research

Table 1: Alpha coefficient

Parameters	Value
Cronbach's alpha	0.9981

questionnaire guaranteed that all answers and respondents will be confidential and they will be used only for analyzed and reported. Any research questionnaire which not completed has been eliminated With the purpose of getting accurate answers and this remains 100 research questionnaires only. This research used the following scales: p-value, coefficient and cronbach's alpha for determining the reliability of research, proving or disproving the research hypotheses. The research questionnaire is provided in Appendix 1.

The SPSS application used for analyzing all the research respondents and all opinions and answers has been used to determine the effects of IT competencies on the corporate entrepreneurship orientation. The research questionnaire includes eighteen questions which used a five point Likert item: strongly agree, agree, neutral, disagree and strongly disagree. Finally, the research measured the internal consistency by using cronbach's Alpha which defined how a closely set of items are as group. In Table 1 cronbach's alpha has been run on a sample size of 100 research questionnaires, the alpha coefficient for the eighteen questions is: 0.981 as shown in Table 1.

RESULTS AND DISCUSSION

Results and hypotheses tests: The IT function which the organization has is as follows: 18% of the respondents answer that the organization has a system connectivity, 19% answer that the organization IT is flexible, 29% answer that the organization IT system is able to scan and enter needed and data and 34% of the respondents answer that the organization has all the IT functions. The Information technology that the organization uses to support the conversation as follows: 0% of respondents answer that the organization uses social website, 14% of respondents answer that the organization uses email account, 86% of respondents answer that the organization uses organization website and 0% of respondent's answer that the organization doesn't have any of the above.

In order to test the research four hypotheses the researcher proposed the following questions and used coefficient and p-values for each one and the results were as follows:

- H₁: the information technological competencies (connectivity, flexibility and scanning) have a significant and positive impact on the business venturing in Table 2

Table 2: Information technology competencies

Question	Strongly agree	Agree	Neutral	Strongly disagree	Disagree
In this business, we use IT competencies (connectivity, flexibility and scanning) to improve employees skills and knowledge	60	27	5	3	5
We use IT competencies (connectivity, flexibility and scanning) for motivating our employees to take new task and ventures	63	34	0	2	1
We depend on IT competencies (connectivity, flexibility and scanning) for any changes based on the market ventures	72	23	1	4	0
We depend on IT competencies (connectivity, flexibility and scanning) for discussing market trends and selecting projects and ventures that the employees are able to execute	32	40	20	7	1
We use IT competencies (connectivity, flexibility and scanning) as a key for giving customers what they need	55	37	0	0	8

H₁: the information technological competencies (connectivity, flexibility and scanning) have a significant and positive impact on the business venturing. R² = 0.937; p = 0.000

Table 3: Connectivity, flexibility and scanning on self-renewal

Question	Strongly agree	Agree	Neutral	Strongly disagree	Disagree
We use IT competencies (connectivity, flexibility and scanning) for improving organization in resume manner	12	62	0	16	10
IT competencies (connectivity, flexibility and scanning) connectivity between department for altering all about. A specific risk or task	92	8	0	0	0
Our employees are capable for communicating with our IT competencies in order to improve their self to be more innovative	77	12	5	0	6
Once our company applies new technology our employees use this technology as a network for discussing business and improve self-skills	86	0	0	0	14

H₂: the technological competencies (connectivity, flexibility and scanning) have a significant and positive impact on the self-renewal. R² = 0.897 p = 0.000

Table 4: Technological competencies on the product innovation

Question	Strongly agree	Agree	Neutral	Strongly disagree	Disagree
Our information technology is considered flexible with any innovative changes on products	80	11	9	0	0
IT competencies help employees to communicate quickly with the current situation in the aim of improving products quality	34	61	0	0	5
The organization system gives the ability to entering and scanning all the needed data and information in order to improve products based on employee's feedback	85	10	5	0	0
The organization system is able to correct any data mistakes and doubling before any changes on end products	43	22	20	5	10

H₃: the technological competencies (connectivity, flexibility and scanning) have a significant and positive impact on the product innovation. R² = 0.928; p = 0.000

The value of determination coefficient (R² = 0.937) and that means the IT competencies can affect 93.7% of the on the business venturing. The p-value was >5% and this rejects the null hypothesis which that the IT competencies has no positive effects on business venturing.

- H₂: the technological competencies (connectivity, flexibility and scanning) have a significant and positive impact on the self-renewal in Table 3

The value of determination coefficient (R² = 0.897) and that means the IT competencies can affect 89.7% of the on self-renewal. The p-value was >5% and this rejects the null hypothesis which that the IT competencies has no positive effects on self-renewal.

- H₃: the technological competencies (connectivity, flexibility and scanning) have a significant and positive impact on the product innovation in Table 4

The value of determination coefficient (R² = 0.928) and that means the IT competencies can affect 92.8% of the on product innovation. The p-value was >5% and this rejects the null hypothesis which that the IT competencies has no positive effects on product innovation.

- H₄: the technological competencies (connectivity, flexibility and scanning) have a significant and positive impact on the organization innovation (Table 5)

The value of determination coefficient (R² = 0.915) and that means the IT competencies can affect 91.5% of the on organization innovation. The p-value was >5% and this rejects the null hypothesis which that the IT competencies has no positive effects on organization innovation.

Previous research of IT focused on the effects and the role of IT in producing outputs like organization performance and productivity (Chen *et al.*,

Table 5: Technological competencies on the organization innovation

Question	Strongly agree	Agree	Neutral	Strongly disagree	Disagree
Our information technology is considered flexible with any innovative changes on products	80	11	9	0	0
IT competencies help employees to communicate quickly with the current situation in the aim of improving products quality	34	61	0	0	5
The organization system gives the ability to entering and scanning all the needed data and information in order to improve products based on employee's feedback	85	10	5	0	0
The organization system is able to correct any data mistakes and doubling before any changes on end products	43	22	20	5	10

H₄: the technological competencies (connectivity, flexibility and scanning) have a significant and positive impact on the organization innovation. R² = 0. 915; p = 0.000

2015). Until-now, the relationship between IT and entrepreneurship is not measured and understood well. The main outcomes from this research contribute to the IT competencies through measuring how IT competencies contribute to corporate entrepreneurship. The research shows that IT competencies enable corporate entrepreneurship and it is considered important and critical to improve the performance of output innovation. The needs, demands and issues of tourism sector forced Jordan tourism board to use their IT capabilities in improving the over whole situation in the public and private firms.

This research proved that using IT competencies represented by connectivity, flexibility and scanning has a positive impact on the orientation of corporate entrepreneurship. Based on the data collection and analysis, this research discussed four main hypotheses: the first hypothesis discussed and supposed that the information technological competencies (connectivity, flexibility and scanning) have a significant and positive impact on the business venturing, based on the data analysis the value of determination coefficient (R² = 0.937) and the IT competencies means can affect 93.7% of the on the business venturing. The p-value was >5% and this rejects the null hypothesis which that the IT competencies has no positive effects on business venturing. The second hypothesis supposed that the technological competencies (connectivity, flexibility and scanning) have a significant and positive impact on the self-renewal and based on data analysis the value of determination coefficient (R² = 0.897), the IT competencies means can affect 89.7% of the on self-renewal and the p-value was >5% and this rejects the null hypothesis which that the IT competencies has no positive effects on self-renewal. The third hypothesis were related with supposing that the technological competencies (connectivity, flexibility and scanning) have a significant and positive impact on the product innovation, based on data analysis the value of determination coefficient (R² = 0. 928), the IT competencies means can affect 92.8% of the on product innovation and the p-value was >5% and this rejects the null hypothesis which that the IT competencies has no positive effects on product innovation. And the last hypothesis supposed that the technological competencies (connectivity, flexibility and

scanning) have a significant and positive impact on the organization innovation, based on the analysis of research collected information and data the value of determination coefficient (R² = 0. 915), the IT competencies means can affect 91.5% of the on organization innovation and the p-value was >5% and this rejects the null hypothesis which that the IT competencies has no positive effects on organization innovation.

CONCLUSION

Due to the rapid grow of IT importance on changing the strategies of all business. Results of this research show that information technology has a positive impact on the orientation of corporate entrepreneurship generally. The research studied the impact of IT competencies on corporate entrepreneurship orientation. The theoretical framework of this research has been developed based on (Chen *et al.*, 2015; Yarbrough *et al.*, 2011; DeSarbo *et al.*, 2005; Yiu and Lau, 2008). The main contributions of this research is: providing future research with more valuable information about the role of IT o supporting ad adopting corporate entrepreneurship, defining the effects and the importance of IT competencies on the organizational technological environment. This is reliable and consistent with many other studies and reviews which give emphasis to organization to give more attention of the role of IT in changing the business environment if the organization has the orientation for implementing corporate entrepreneurship within organization. Based on data methods and analysis the research proved its four main hypotheses though using following scales: cronbach's alpha, p-value and coefficient. The results also showed that the impact of IT competences ha positive impacts on business venturing, self-renewal, product innovation and organization innovation. For future research, this research recommended others to study and focus more on the role of IT and knowledge on corporate entrepreneurship and it is important to take more variables in order to create a deeply verve about this subject. Also, future research can adopt this research in one of the geographically areas in order to get more accurate results.

APPENDIX

The research questionnaire aims to know your opinions about the effects of IT competencies represented by connectivity, flexibility and scanning on the orientation of corporate entrepreneurship within the organization represented by self-renewal, business venturing, product innovation and organization innovation. The information given by you will be used for academic purpose only so feel free to fill up the questionnaire as your identity will not be disclosed.

Appendix 1: Research questionnaire

Question	Strongly agree	Agree	Neutral	Strongly disagree	Disagree
This business, we use IT competencies (connectivity, flexibility and scanning) To improve employees skills and knowledge	60	27	5	3	5
We use IT competencies(connectivity, flexibility and scanning) for motivating our employees to take new task and ventures	63	34	0	2	1
We depend on IT competencies (connectivity, flexibility and scanning) for any changes based on the market ventures	72	23	1	4	1
We depend on IT competencies (connectivity, flexibility and scanning) for discussing market trends and selecting projects and ventures that the employee are able to execute	32	40	20	7	1
We use IT competencies (connectivity, flexibility and scanning) as a key for giving customers what they need	55	37	0	0	8
We use IT competencies (connectivity, flexibility and scanning) For improving organization in resume manner	12	62	0	16	10
IT competencies (connectivity, flexibility and scanning) connectivity between department for altering all about a specific risk or task	92	8	0	0	0
Our employees are capable for communicating with our IT competencies in orde to improve their self to be more innovative	77	12	5	0	6
Once our company applies new technology our employees use this technology as a network for discussing business and improve self-skills	86	0	0	0	14
Our technology is considered flexible with any sudden changes	80	0	0	0	14
The flexibility of IT within the organization helps employees to communicate quickly with the current situation	34	61	0	0	5
The organization system gives the ability to entering and scanning all the needed data and information	85	10	5	0	0
The organization system is able to correct any data mistakes and doubling before saving on the database	43	22	20	5	10
Applying entrepreneurship could be possible if the organization has an advanced technological system	52	32	10	2	3
Once the organization has an IT system, employees are able to improve their knowledge	25	72	0	0	3
Improving employee's knowledge can make our employees able to do some entrepreneurship activities like self-renewal	14	69	0	10	7
Having IT system could allow for employees to entering new business venturing	20	80	0	0	0
IT can effect positively on product and organization innovation	84	10	3	3	0

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