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Entrepreneurial self-efficacy and entrepreneurial behavior

Noor Shaheen, Shafiq AL-Haddad *

King Talal School of Business Technology Princess Sumaya University for Technology, Jordan

Abstract

The objective of this study is to determine the influence of entrepreneurial self-efficacy on entrepreneurial behavior, and to determine whether the demographic factors (gender, age and education) might cause any change in the influence. The population of the study is composed of all the entrepreneurs and the employees at entrepreneurial firms in Jordan; the sample of the study was composed of 155 respondents, the responses were obtained using convenience sampling technique. Multiple regressions and hierarchical regression were used to analyze the data. The findings indicate that entrepreneurial self-efficacy has an influence on entrepreneurial behavior, and none of the demographic factors cause a significant statistical change in the influence of entrepreneurial self-efficacy on entrepreneurial behavior. The researchers recommend that more focus should be given to the area of entrepreneurial self-efficacy in order to clearly define it for entrepreneurs and policy makers and to explain how it interacts and affects entrepreneurial behavior.

Keywords: Self-Efficacy; Entrepreneurial Behavior; Jordan; Entrepreneurship

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* Corresponding author. *E-mail address:* shafiq_62@hotmail.com

1. Introduction

This research focuses on entrepreneurial behaviour, and will explore the factor that may or may not affect it such as entrepreneurial self-efficacy which is abbreviated as (ESE) throughout this research, additionally this study will determine to what extent does self-efficacy affect entrepreneurial behaviour in different demographic groups. The importance of this study lies in determining the influence of self-efficacy (ESE) on entrepreneurial behaviour, this study will help to determine the set of skills and traits that may enhance entrepreneurial behaviour, while taking into consideration the demographic differences present which are represented by the gender, age, and educational level.

Furthermore, this kind of study has never been done at a large scale according to the publicly available data in Jordan, according to the researchers' best knowledge. Thus, it will be the first of its kind in Jordan to directly link the ESE of an entrepreneur with the performance of their firms, rather than focusing solely on the business environment and the marketplace that the firm is operating in, this can prove to be useful for entrepreneurship students, future entrepreneurs as well as existing entrepreneurs.

Statement of the Problem: Determining the factors that influence entrepreneurial behavior in Jordan is important to understand what exactly differentiates between an entrepreneur and another, and why certain entrepreneurial behaviors result in a more successful outcome than others even though they may seem very similar to the distant observer, this problem was not addressed in a conclusive manner throughout the literature that is available to the researchers, hence this topic is addressed in this research in order to try to comprehend if in fact the variables at hand influence entrepreneurial behavior, and if so, in what way.

This study seeks to answer the following questions:

- 1- What is the influence of ESE on entrepreneurial behaviour?
- 2- Is there any change in the influence of ESE on entrepreneurial behaviour due to demographic factors?

2. Objectives of the study

The objectives of this study are:

- To investigate if there is an influence of entrepreneurial self-efficacy (ESE) on entrepreneurial behaviour.
- To find out if there is a change in the influence of ESE on entrepreneurial behaviour due to demographic factors.

3. Literature review

Self-efficacy is often compared with expectancy theory, although there are similarities, where both are self-assessment tools, however, the latter is cognitive, and is based on two assumptions; one is the probability that effort will lead to performance level and the second is the probability that performance will lead to

outcome. On the other hand, self-efficacy is concerned with the execution, not the outcome of the action undertaken (Chen et al., 1998).

It was concluded by Chen et al. (1998) that self-efficacy is very suitable and ideal for studying entrepreneurship due to four main reasons: I) it helps in solving the lack of specificity in previous research on the personality of entrepreneurs because SE is a task-specific construct, meaning it changes with changing tasks and not a global disposition, II) ESE is more general than task self-efficacy and hence entrepreneurs can modify or improve their level of self-efficacy as they interact with the environment III) SE can be used to study the entrepreneur's behavior choice and effectiveness due to its closeness to action and action intentionality and IV) entrepreneurial behavior is best demonstrated in challenging situations, which is also the perfect condition for observing the relationship between SE and behavior.

ESE has the potential to be used as a distinct feature and characteristic of the entrepreneur (Chen et al, 1998), where business founders (entrepreneurs) were found to have higher self-efficacy in innovation and risk taking areas, which are considered among the five areas of concern under the umbrella of ESE; (marketing, innovation, management, risk taking and financial control), when compared to those who are not business founders. Self-efficacy was proven to have a good impact on the performance of faculty members in Jordanian universities, additionally; self-efficacy was proven to have a significant impact on how Jordanian academics performed during the teaching process (Haddad and Taleb, 2016).

Among the four dimensions that represented self-efficacy that Haddad and Taleb studied which were originally obtained from Bandura (2001), the four dimensions were: past experience, vicarious experience, verbal persuasion and finally emotional cues; all but emotional cues were found to have a positive impact on the performance of faculty members in Jordan (Haddad and Taleb, 2016), although self-efficacy alone should not be the determinant of performance, nevertheless the positive impact was clearly present, it is worth mentioning that past experience was found to have the most impact among the four dimensions of self-efficacy.

Prabhu et al. (2012) focused on entrepreneurial intent and examined ESE along with proactive personality as antecedents to entrepreneurial intent, this study was specifically interested in testing the mechanisms; whether mediation or moderation by which ESE affected the relationship between proactive personality/entrepreneurial intent, the findings indicated that ESE not only mediated the relationship between proactive personality and all three forms of entrepreneurial intent but also moderated the relationship between proactive personality and high growth entrepreneurial intent as well as proactive personality and lifestyle entrepreneurial intent.

Self-efficacy's pivotal role on performance and entrepreneurial behavior is further emphasized when it was found to have a positive moderating impact on the relationship between improvisational behavior and new venture performance (growth in sales), on the other hand, improvisational behavior was found to have a negative relationship with new venture performance for founders who had low entrepreneurial self-efficacy (Hmieleski and Corbett, 2008). Torres and Watson (2013) aimed to validate Chen's et al. (1998) construct, which was proposed to predict the likelihood of an individual being an entrepreneur through 5 factors: I) Marketing II) Innovation, III) Management, IV) Risk taking and V) Financial control.

Results demonstrate that one of the self-efficacy factors referred to as "expansion" in the study, positively impacts performance but negatively affects entrepreneurial intentions, hence, even when self-efficacy doesn't positively affect the intentions, it still has a positive impact on performance. Additionally, it was found that individuals with higher levels of self-efficacy have a higher probability that they'll make decisions that will yield a higher level of performance (Torres and Watson, 2013).

Processes of Self-Efficacy: According to Bandura (1977), self-efficacy in an activity such as entrepreneurship develops through the following four processes: I) performance accomplishments, II) vicarious experience, III) verbal persuasion and IV) physiological states or physiological arousal, thus through entrepreneurship education programs, these four processes can be enhanced and thus self-efficacy can be enhanced which is expected to lead to entrepreneurial behavior (Bandura, 1977), furthermore there is enough theoretical basis to prove that educational interventions in the field of entrepreneurship may increase entrepreneurial behavior (Rideout and Gray, 2013), additionally, a positive link has been found between entrepreneurship education and subsequent entrepreneurial activities, this is facilitated by the influence that the entrepreneurial education is believed to exert on the knowledge base, the achievement of skills, competences and attitudes on which future career choices of these students might be based (Raposo and Paco, 2011).

Moving on to the last variable, entrepreneurial behaviour, which was defined for the first time as: "opportunistic, value driven, value adding, creative activity where ideas take the form of organizational birth, growth or transformation" (Bird, 1989). Here we notice that entrepreneurial behaviour can occur and result in a new firm, or it can take place within an existing firm and lead to its growth, transformation or both. This behaviour however is usually a result of a long process that is affected by many factors, according to Baron's (2002) model. These factors fall mainly under three major categories: I) individual factors II) interpersonal factors and III) societal factors, where the individual factors include but are not exclusive to: person's attitudes, cognition and knowledge.

Entrepreneurial Behavior: Entrepreneurs are persons who take action, they engage in continuous efforts to transform their ideas into operating and profitable ventures. Accordingly, Baron (2007) stated that because entrepreneurs are aware of or they develop new products or services, they develop them through action and entrepreneurial behaviour into a new venture, hence entrepreneurial behaviour is the link between identifying the opportunity and venture creation (Baron, 2007).

Among the many tasks that entrepreneurs perform; the most prominent and essential for the creation of an entrepreneurial firm are summarized in 3 tasks, those are: I) generating or identifying new ideas for products or services. II) recognizing business opportunities that are derived from these ideas and III) securing the resources needed for transforming these ideas into a new venture (Baron, 2007), as previously mentioned; these are not the only tasks that entrepreneurs perform, but they are the most important in the early stages of venture creation. Social skills and social capital have been strongly associated with the creation and the success of new ventures once they are up and running, where the social skills have demonstrated evidence of increasing the social capital for individuals who possess them, which then helps them in acquiring resources that in turn contribute to the success of the new firm (Baron, 2007).

Ideas, plans, learning and intelligence do not create any economic value unless an action is undertaken, whether in the form of a new venture creation or in the form of growth within an existing organization, similar to previous definitions; entrepreneurial behavior in the academic sense was defined as “the study of human behavior involved in finding and exploiting entrepreneurial behavior opportunity through creating and developing new venture organizations” (Bird and Schjoedt, 2009). Therefore, it (entrepreneurial behaviour) eventually results in the creation of new innovations, new job opportunities, new competition and last but not least, new sources of revenue.

Entrepreneurial behaviour stems from the entrepreneurs’ skills, knowledge, experience, intelligence, learning and intentions, as previously mentioned in this study that intentions ultimately lead to entrepreneurial behaviour if acted upon properly, additionally, motivations, abilities and cognition are all factors that influence entrepreneurial behaviour. (Bird and Schjoedt, 2009). Entrepreneurial behaviors were once considered as discrete units of individual activity, this activity can be observed by an audience and can have a meaning for that audience, according to this definition, entrepreneurial behavior is not carried out by organizations or teams, but by the people that collectively form these teams or organizations (Bird and Schjoedt, 2009), it is worth mentioning that although entrepreneurial behaviors are carried out by individuals, however, these behaviors are not distinct and separate, they are complicated and not clearly defined, meaning they might occur separately, sequentially or in a repetitive manner.

Actions and behaviours undertaken by entrepreneurs are usually directed at their surrounding environment; however it has been argued that the most important behaviours and actions are not the ones that are suitable to the surrounding environment but the ones that are capable of changing the environment itself to accommodate the entrepreneurial behaviour (Frese, 2007). Earlier research on entrepreneurial action was concerned with whether or not an entrepreneurial action occurs altogether such as (Schumpeter, 1934), later on, researchers started focusing on how a specific entrepreneurial action occurs and who does it and for what reasons, additionally they tried to explain why some people are more likely than others to act upon an opportunity with the aim of achieving profits (McMullen and Shepherd, 2006), within the same context, Shane proposed that the recognition of opportunities is a cognitive process and the accomplishment of identifying and acting upon an opportunity is facilitated by the entrepreneurs’ experience and education (Shane, 2000). Public institutions can emphasize strategies to increase the degree of self-efficacy amongst students to enhance the level of entrepreneurial intention. (Saraih et al. 2018)

Several factors have been linked with entrepreneurship and start-up, in one study, gender, previous government employment and recent redundancy were found to have an impact in the form of barriers on the entrepreneurial process; females had more barriers to perform an entrepreneurial behavior than males, previous government employment was also found to be a barrier to entrepreneurship in addition to recent redundancy (getting laid off) (Mazzarol et al., 1999), although another research found that redundancy increases the probability of entrepreneurial behavior and hence self-employment due to urgency and necessity. Other factors that were found to significantly influence entrepreneurial behaviour and start-up were: education, previous experience in small businesses and geographic location such as cities or suburbs (Blanchflower and Meyer, 1991). Being able to identify the importance of EC and education for future

entrepreneurs is of definite concern for all the business eco-system: from intentions of young entrepreneurs to governments. (Shahab, 2018).

Entrepreneurial behavior for females seemed to somewhat stand out in terms of the sector in which they operate, the same pattern of employment that appears to be present for females who seem to find a greater chance for employment within the service sector is also present in their entrepreneurial behavior, where the service sector was prevalent for female entrepreneurial start-ups thus matching the traditional jobs that females perform (Mazzarol et al., 1999).

A positive relationship has been found to exist between entrepreneurship education and entrepreneurial behaviour; indeed, program participation and entrepreneurial engagement show that entrepreneurship education does indeed encourage entrepreneurial behaviour in students. Where entrepreneurial behaviour expressed not only students' intentions but also the concrete steps they take in order to create a new venture (Ho et al., 2014), in this case; classroom-based programs were found to have no significant impact on entrepreneurial behaviour, instead, it was experiential learning that mattered. Self-efficacy predicts entrepreneurial behavior and that occupational self-efficacy is a slightly better predictor of entrepreneurial behavior than teacher self-efficacy (Neto, et al., 2018).

The concept of "public entrepreneur" which refers to an entrepreneur in the public sector was supported by Zampetakis and Moustakis (2007) who carried out a study about the public sector in Greece, which focused on the front line staff, unlike most studies in the public sector that focus on politicians, or middle and upper management, to assess their entrepreneurial behavior, the results demonstrated that the concept of public entrepreneur concerns the average civil worker (low grade public sector employees) and that they indeed show signs and can demonstrate entrepreneurial behavior. As a result, entrepreneurial behavior can apply to first line public workers in addition to higher grade public employees and of course the private sector (Zampetakis and Moustakis, 2007).

The Action Theory and Entrepreneurial Behavior: The action theory was used by Frese, (2007) as basis for studying and understanding entrepreneurial behavior, action theory or meta-theory to be more specific; attempts to comprehend and understand how individuals govern their actions to achieve goals actively and how this is accomplished in routine situations as well as in novel and unusual ones and aims to break down what part of entrepreneurial actions are important (please note that Frese's concept of action in his research is interchangeable with the definition of behavior in this research).

In order to understand how humans regulate their actions with regard to the action theory; three aspects should be considered first, those are: sequence, structure and finally focus, sequence refers to the way actions and behaviors unfold, in other words, the steps that eventually lead to an action, structure, on the other hand, involves the levels of regulation related to taking an action and finally focus which refers to the social context within which the task took place. A brief summary of the three aspects is found below to explain the action based theory. The social context focus means that the entrepreneur focuses on the social and human interactions, such as starting an organization, managing people and even the order in the action sequence cycle are considered as social context focus, finally, the self as the focus of regulation, and here the self-management and self-efficacy play a major role. At this point, the work of Frese (2007) intersects with

previous work such as Bandura (2001) about how higher levels of self-efficacy, would lead not just to a higher level of self-focus, but also to a generalized positive impact on the whole entrepreneurial action/behavior process.

Schumpeter, Kirzner and Knight, Simon, and others, were among the many scholars that discussed the impacts of knowledge and/or motivation, according to McMullen and Shepherd's review of their work; Schumpeter discussed the role of motivation in entrepreneurial behavior but his work relatively ignored the role of knowledge in the process, Kirzner, on the other hand, demonstrated the importance of knowledge and knowledge distribution in his work, but somewhat ignored the role of motivation. Knight's work was the only one among the three that addressed the importance of both knowledge and motivation in the process of entrepreneurial behaviour however; his theory was based on behaviour within an existing organization, hence delivered little explanation on how entrepreneurs move from the point of no knowledge to the point of obtaining it. (McMullen and Shepherd, 2006).

Due to the previously mentioned observations, McMullen and Shepherd developed a model where they established the need for the consideration of both knowledge and motivation simultaneously, which is similar to what Knight proposed, but a two-staged conceptual model of entrepreneurial action was added. This model consists of two stages; the first is an attention stage that is focused on the assessment of third person opportunities (a possible opportunity for someone other than the entrepreneur himself). The second stage is an evaluation stage that assesses first-person opportunities (opportunities that are available to the entrepreneurs themselves); which-according to McMullen and Shepherd- provides a perspective that allows for the evaluation of entrepreneurial behaviours and actions at the individual's level of analysis (McMullen and Shepherd, 2006).

Human motivations have been argued to influence the pursuit of entrepreneurial opportunities, which are pursued through processes such as the discovery of an opportunity, its evaluation, acquiring resources and finally designing a method to exploit this opportunity. The variance that is present between individuals in the level of motivation has an impact on the previously mentioned processes and hence on how people undertake the entrepreneurial process (Shane et al., 2003). In addition to motivation, other factors may influence the process of entrepreneurial behavior and its outcome such as: I) political factors such as political and currency stability, II) market forces such as, market size, demographics of the population, technology etc. and III) resources e.g. capital, skilled labor, these factors need to be controlled in order for the influence of motivation to be successfully assessed (Shane et al., 2003).

The Austrian approach to entrepreneurship has been used as a possible explanation to why different people respond in a different manner to seemingly the same opportunities. This approach which is concerned with the distribution of knowledge throughout the market was used by (Shane,2000) as he showed that differences in an individual's prior information have a major influence on who discovers the opportunity and hence who acts on it through an entrepreneurial behavior, in other words, not all people have the same possibility of recognizing the same entrepreneurial opportunity that results from a new technology, an additional suggestion was that entrepreneurs discover opportunities through recognition, not through search (Shane, 2000).

According to Kuratko and Hornsby (2001), corporate entrepreneurship (intra-preneurship) has been conceived as incorporating entrepreneurial efforts that require organizational sanctions and commitment of a certain amount of resources for the purpose of performing creative activities in the form of a new product, process or organizational innovativeness. Their model for corporate entrepreneurial behavior proposed that continuous entrepreneurial behaviour is the result of the perception of the presence of many organizational antecedents such as top management support, autonomy and rewards, thus it was contended that corporate entrepreneurial behaviour is a direct result of an equal perception by the individual and the organization. Which means that both the individual and the organization must perceive the same opportunities, where satisfaction with the results of the entrepreneurial behavior serve as a feedback for choosing between continuing with the current strategy or switching to a different approach, finally, it was contended that middle managers, since they are the ones that carry out the entrepreneurial process, should be satisfied with the outcomes of the entrepreneurial behavior they perform, that is cascaded down from their upper management.

4. Methodology

4.1. The population of the study

The population of the study includes all the entrepreneurs and the employees working at entrepreneurial firms in Jordan since the aim of the study is to determine the factors that influence entrepreneurial behaviour in Jordan; it is essential to explore these factors for any individual who is in a position or capable of performing an entrepreneurial action. Consequently, entrepreneurs and the employees working at their firms are the suitable candidates for this study. Although there is no formal registry in Jordan for the entrepreneurial firms; the estimated number of entrepreneurs and employees at entrepreneurial firms in Jordan according to the researchers' predictions is close to 1000 from all fields, based on personal field visits to various business accelerators in Jordan where the researchers was able to collect informal data from the entrepreneurs at these business accelerators.

The total number of respondents in this study was 180, where 25 of these were neither entrepreneurs nor employees at entrepreneurial firms, hence were directly excluded before the analysis process. The rest of the respondents were almost equally divided between the two target groups in this study; entrepreneurs or employees at entrepreneurial firms where the entrepreneurs formed 52.3% and the employees at entrepreneurial firms were 47.7%. It is worth mentioning the total number of entrepreneurs and employees at entrepreneurial firms contacted was approximately 500 across Jordan.

The study sample is chosen based on convenience sampling since according to the best knowledge of the researchers'; there is no publicly available registry for all entrepreneurs or entrepreneurial firms in Jordan. Convenience sampling is used where information is gathered from those individuals the researchers has access to through personal relationships, word of mouth, publicly known entrepreneurs and entrepreneurial

firms, and snowball technique; A technique for finding research subjects. One subject gives the researchers the name of another subject, who in turn provides the name of a third, and so on (Vogt, 1999).

4.2. The study tool

The study tool in this research, in other words; the questionnaire was developed after considering and choosing the related and suitable studies and measuring tools from the literature in order to develop a questionnaire that covers all the variables in this research, starting with entrepreneurial self-efficacy, which was derived from a study done by Haddad and Taleb (2016), and finally a tool to measure entrepreneurial behavior, derived from the work of Pearce et al. (1997). Collectively the three tools from the three previously mentioned researches formed the questionnaire in this study with some minor modifications to the wording of the original questionnaires in order to match the content and subject of this study, which isn't focused on a specific field within entrepreneurship.

4.3. Data collection

The data collected was performed from two major sources which were secondary sources; ones that are publicly available to researchers through online journals and articles, and primary sources, which is the data collected by the researchers through the survey that was developed based on previous studies and publications. The data was collected over a period of three months and was done either online or face to face in three business accelerators in Amman, where the entrepreneurs or the employees at entrepreneurial firms were directly contacted and asked to fill the questionnaire.

The secondary sources in this study included data from online libraries, publications, magazines books, university libraries and monthly journals which are publicly available online through several websites such as Emerald and Google scholar, where researches and publications with a high number of citations were chosen to form the literature and to form the best possible questionnaire and data measurement tools for this research. As previously mentioned, data from published journals and articles was used to form the questionnaire in this researches which in turn was used to collect the primary data in this study.

The questionnaire is composed of three parts; the first part contains information about the demographic factors which include: gender, age and educational level, the second part measures entrepreneurial self-efficacy (ESE) through four sub-sections; past experience, vicarious experience, verbal persuasion, emotional cues, and these four sub-sections. The third and final section is dedicated to measure the dependent variable in this study which is entrepreneurial behaviour, this variable through three sub-sections, and these are: employee change orientation, employee strategic vision and creation of an energetic working environment based on Pearce et al. (1997).

The reliability of the collected data was tested using Cronbach's alpha test, the alpha coefficient, the reliability for each scale alone is 0.88 for ESE, 0.86 for EB, and 0.94 for all variables. As for the validity area, the questionnaire was validated over two stages, stage one was the distribution of the questionnaire to five faculty members from different Universities in Jordan, where recommendations and suggestions were made

and the questionnaire was reviewed and modified according to these recommendations, The next step was the distribution of the amended survey to 5 entrepreneurs in order to guarantee the suitability of this questionnaire for the different fields of entrepreneurship in Jordan, and again the survey was further improved based on these recommendations.

Additionally, after the data collection was complete, the validity test was conducted to ensure that no data was missing from the 155 filled questionnaires and that all the surveys collected are in fact valid and suitable for analysis.

The demographic factors in this study are composed of three areas; gender, age and educational level, the total number of respondents was 155, males represented 61.90% of the sample, while females were only 38.10%, this result indicates that the entrepreneurial environment is a male-dominated one, much like the overall Jordanian marketplace; where males dominate the workforce. According to an article published by the World Bank in 2014, the participation of women in the labour force in Jordan is only 22% versus 87% for their male counterparts; this raises the question of why is the female participation in the workforce and in the entrepreneurial field still limited. An additional observation that can be drawn from this very high percentage of male involvement in entrepreneurship is that males are no longer settling for regular jobs, and are seeking to meet the economic challenges through self-employment and entrepreneurship as a viable alternative and as an additional source of income.

The age criterion was predominated by individuals between 20-30 years old (71%), the second most prevalent age group is the 31-40 years old group (23.20%), the rest of the age groups were equally represented with 1.90% for each age group, this result demonstrates a highly youthful entrepreneurial society, which is a good indication that the new generation in Jordan is adapting to the new economic changes that are occurring globally, where the entrepreneurial firms are increasing and growing and thus are responsible for the employment of a large percentage of the workforce, which helps overcome the challenges and the burdens that the local government is facing specifically the creation of new job opportunities and reducing unemployment.

Moving on to the educational level, the vast majority of respondents hold a Bachelor's degree (83.20 %), in second place came the Master's degree holders who formed 11.60% of the total respondents and the rest of the respondents were either at high school or below level (2.60%), have a Higher Diploma (1.90%) or have a community college degree (0.60%). Interestingly, none of the respondents had vocational training or a PhD.

These results highlight a gap in the Jordanian market in terms of entrepreneurship for people with vocational training, this could be due to lack of opportunities for these individuals, or could be due to lack of exposure for these individuals that none of them were able to reach the business accelerators, where the majority of the surveys were collected. Meanwhile, this could be also viewed as an untapped opportunity for individuals with vocational training and hence can have more opportunities to enter the entrepreneurial marketplace in the future.

At the same time none of the respondents have a PhD, which is also an observation that should be highlighted as to why people with a PhD don't engage in entrepreneurship in Jordan, which can also be viewed as an opportunity for those who have the theoretical knowledge, but are not applying it in the

entrepreneurial field in a practical manner. Another interesting observation is that the vast majority of the respondents have a Bachelor's degree or higher educational level (96.80%), proving that the Jordanian entrepreneurial environment is composed of highly educated individuals and again highlighting a shortcoming in entrepreneurship for individuals with a lower or no educational degree.

5. Descriptive analysis

The percentage of entrepreneurs among the respondents was 52.30% while that of the employees at entrepreneurial firms was 47.70%,

The overall mean score for the whole variable is 3.97, which falls in the H classification, the question with the highest score was "my experience has helped me to increase my self-confidence" with a score of 4.44 which is a good indication for future entrepreneurs, where one's experience will help them develop their personal skills, self-confidence in particular. The question with the lowest score in this section was "when I feel aches or pains, trouble sleeping, I can't come to work" with a score of 2.56.

The mean score for the past experience sub-variable, all questions were classified as "High" in this section, with an average of 4.24 and a classification of H, the highest score was for "my experience has helped me to increase my self-confidence" with a score of 4.44, and the lowest score for "My resourcefulness allows me to handle unforeseen situations" with a score of 4.04, nevertheless, the whole sub-variable was within the "High" classification.

The results for the vicarious experience sub-variable of ESE, the highest score was for the question "I believe in the quote "If they can do it I can do it", with a score of 4.35, and the lowest score went to "I would never be affected by a failure of any of my colleagues" with a score of 3.79, it is worth mentioning that all the items in this sub-variable are classified as "High", the average mean score of vicarious experience is 4.06 which is also classified as "High".

The verbal persuasion sub-variable, the highest score was recorded for "I have the ability to encourage my colleagues to raise their achievements" with a mean score of 4.30, which is a good trait in an entrepreneur and the lowest mean score was recorded for "I can foster colleague creativity" with a mean score of 3.95. All the questions for this sub-variable were in the "High" classification, the average mean score of all items was 4.09 that is also classified as "High".

The mean score for the emotional cues sub-variable, this sub-variable contains the lowest overall scores, where the lowest was 2.56, which was recorded for "When I feel aches or pains, trouble sleeping, I can't come to work", and the highest was recorded for "When I'm angry or worried it quickly appears on my face" with a score of 3.65, the average mean score was also the lowest among all ESE sub-variables (3.2) and the only sub-variable with a classification of "Medium".

The third and final variable is the dependent variable in this study; entrepreneurial behaviour, where the mean score for the variable is 3.96, which is the lowest among the three variables in this research, but is still classified as high (H), the maximum mean score in this section is for the question "I display enthusiasm for

acquiring new skills” with a score of 4.21, which is a very good sign that the Jordanian entrepreneurs are keen on their continuous personal development.

The lowest score in this section was for the question “quickly I change course of action when results aren’t being achieved” which indicates flexibility is slightly lower for those entrepreneurs compared to other areas. Nonetheless, all the areas in this section had a mean score that fit within the H classification, which is also a good sign about the Jordanian entrepreneurial environment.

6. Hypothesis one test

Multiple regression was used to test H01 and its sub hypotheses, the results for the first hypothesis linear regression test, where ESE1, ESE2, ESE3 and ESE4 (past performance, vicarious experience, verbal persuasion and emotional cues respectively) represented the independent variables and Entrepreneurial Behavior (EB) was the dependent variable.

R value is 0.73 and an R Square value is 0.54, an adjusted R Square is 0.53 and finally the standard error of the estimate is 0.39. 73 percent of the EB variable is explained by ESE, which is considered as a good percentage to predict the dependent variable.

As for the sub hypotheses, past performance had a significance level of 0.001; hence the null hypothesis (H011) is rejected and the alternative hypothesis is accepted, hence, it is concluded that past performance has a statistically significant influence on entrepreneurial behavior at the level of $\alpha \leq 5\%$.

Vicarious experience had a significance level of 0.398, which means that we accept the null hypothesis (H012) and conclude that vicarious experience has no statistical significant influence on entrepreneurial behavior at the level of $\alpha \leq 5\%$.

Verbal persuasion was found to have a significance level of 0.00; hence the null hypothesis (H013) is rejected and it is concluded that verbal persuasion has a statistically significant impact on entrepreneurial behavior at the level of $\alpha \leq 5\%$.

Finally, emotional cues had a significance level 0.013; therefore the null hypothesis is rejected and the alternative hypothesis is accepted. Hence it can be concluded that emotional cues has a statistically significant influence on entrepreneurial behavior at the level of $\alpha \leq 5\%$ since the significance value is less than 0.05.

7. Hierarchical regression analysis

H03: There is no significant statistical change in the influence of ESE on entrepreneurial behavior due to demographic factors at level of $\alpha \leq 5\%$.

Starting with H031 which states that: there is no significant statistical change in the influence of ESE on entrepreneurial behavior due to gender at $\alpha \leq 5\%$.

The R value of this analysis as demonstrated is 0.72, the R square is 0.522, the adjusted R square is 0.52 and standard error of the estimate is 0.39, consequently; the change in R Squared due to gender value is minimal (0.004) and is not a major one.

The significance level is 0.287, and therefore, since the significance value is more than 0.05; we accept the null hypothesis H031.

The second hypothesis: There is no significant statistical change in the influence of ESE on entrepreneurial behavior due to age at $\alpha \leq 5\%$.

The R value of this analysis is 0.72, the R square is 0.518, the adjusted R square is 0.518 and standard error of the estimate is 0.396, there is no change in the R squared value due to age.

The significance level which is equal to 0.983, and therefore, since the significance value is more than 0.05; we accept the null hypothesis H032 and it is concluded that:

“There is no significant statistical change in the influence of ESE on entrepreneurial behaviour due to age at $\alpha \leq 5\%$ ”.

The third hypothesis states that: there is no significant statistical change in the influence of ESE on entrepreneurial behavior due to education at $\alpha \leq 5\%$.

The R value of this analysis is 0.722, the R square is 0.522, the adjusted R square is 0.515 and standard error of the estimate is 0.394, the change in R square value is 0.004 due to educational level, hence it is a very minimal change.

The level of significance for H033, which is 0.288, and therefore, since the significance value is more than 0.05; we accept the null hypothesis H033, consequently it is concluded that:

“There is no significant statistical change in the influence of ESE on entrepreneurial behavior due to education at $\alpha \leq 5\%$.”

8. Discussion of the results

A significant statistical influence was found between ESE and entrepreneurial behavior, furthermore, the R value indicates a strong relationship ($R= 0.73$) between ESE and entrepreneurial behavior, these findings are in line with previous research by Haddad and Taleb (2016), where ESE was found to have an impact on the performance of faculty members in Jordan, in their study; Haddad and Taleb found that ESE does have a clear positive impact on performance, where all the dimensions of ESE but emotional cues had a positive impact on performance, additionally, past experience was found to have the most impact on performance in their study. On the other hand; in this study, vicarious experience was the only dimension not to have an influence on entrepreneurial behavior, with a significance value of 0.398, while verbal persuasion had the highest impact among the four dimensions of ESE on entrepreneurial behavior in this study (significance = 0.000).

Another study that confirms the results of this hypothesis is Prabhu et al. (2012), where they concluded that ESE has an influence on entrepreneurial intent, which in turn affects the behavior of the entrepreneur,

this is perfectly in line with the findings in this research, where ESE has a direct and strong positive influence on entrepreneurial behavior according to the alternative hypothesis which was accepted.

Furthermore et al. (2008) concluded that self-efficacy has a positive moderating impact on the relationship between improvisational behavior and performance of new firms, and that individuals who had a low level of self-efficacy, suffered from a negative relationship between improvisational behavior and performance, hence the positive impact of self-efficacy on the performance of entrepreneurial firms, which is in line with the findings, although ESE was used as an independent variable not as a moderating one like it was used in Hmieleski and Corbett's (2008) study.

Torres and Watson (2013) concluded that even when SE doesn't positively affect entrepreneurial intentions; it still has a positive impact on performance. An additional study confirms the findings in this study by concluding that the higher the degree of ESE; the higher the probability of entrepreneurial actions during later stages of an individual's career (Boyd and Vozikis, 1994). There is no significant statistical change in the influence of ESE on entrepreneurial behavior due to any of the demographic factors.

Prabhu et al. (2012) concluded that gender is not a predictor, nor a moderator in the relationship between proactive personality and entrepreneurial intent, which is consistent with our findings, even though there are slight differences between this study and Prabhu's. An additional study found similar results to ours in three different countries and indicated that there were no significant difference between men and women respondents in their entrepreneurial intentions, it is worth mentioning that entrepreneurial intent is an antecedent to entrepreneurial behavior, but is not identical (Gupta et al., 2009), hence there are slight dissimilarities between these results and ours but nonetheless, gender was not relevant, which is in line with our findings. Additionally, ESE was found to be affected by other factors that are beyond the scope of this research but is not affected by gender (Hackett and Betz, 1981), this is a good indication that gender does not impact the relationship between ESE and entrepreneurial behavior, and hence, female entrepreneurs can engage in entrepreneurship without barriers.

There is no significant statistical change in the influence of ESE on entrepreneurial behavior due to age, which is contrary to Haddad and Talib (2016) findings, where age did have an impact on the relationship between ESE and performance level. Some researchers noted that there seems to be a trend where people begin entrepreneurship at an early age (Hsu et al., 2007), where in this case age was associated with entrepreneurship, which is also contradictory to our findings, this may be attributed to the fact that the majority of the sample in this study (71%) fall within the 20-30 year old age group, hence the impact of other age groups was not significant on the relationship between ESE and entrepreneurial behavior. But analyzing the results at hand, the finding that age does not have an impact on the relationship between ESE and entrepreneurial behavior is of vital importance because it means that age is not a barrier for the youth to engage in entrepreneurial acts, given the current economic conditions in the region as a whole and in Jordan in specific, this is a good indication.

There is no significant statistical change in influence of ESE on entrepreneurial behavior due to the educational level, these findings are contrary to what Kangasharju and Pekkala (2002) concluded, where they found that a higher level of education greatly decreases the exit probability of entrepreneurial firms,

meaning they prolong the life span of the business, especially in recession periods, interestingly, they found the opposite impact during times of economic upturn. This point is worth explaining because it might explain the low number of PhD entrepreneurs in Jordan; according to Kangasharju and Pekkala (2002), they believed that the reason behind this observation is due to the high demand for well qualified individuals, hence people who have a high level of education were sought after by more businesses/organizations during the upturn of the economy, hence the high exit probability.

Additionally, Kangasharju and Pekkala (2002) concluded that the effect of higher education on growth probability of the firms is also positive regardless whether the economy is in a good or a bad state, this can explain the very low percentage of respondents who have vocational training (0%), or have a degree that is lower than a bachelor's degree (3.2%). There is no significant statistical change in influence of ESE on entrepreneurial behavior due to the educational level might therefore be attributed for the fact that the majority of the respondents have a bachelor's degree (83.2%) and the rest of the respondents did not represent a large enough sample to cause a change in the influence of ESE on entrepreneurial behavior.

An additional study by (Dolinsky et al., 1993), concluded that the educational level does indeed affect the level of self-employment; that the incidence of initial market entry, continuous market stayers and reentry into markets has increased with increasing educational levels where the educational levels were classified as: did not complete high school, high school only and college degree or higher. The classification used in this study was more comprehensive and contained more options, and even though the results indicate that there is no significant statistical change in influence of ESE on entrepreneurial behavior due to the educational level, it is worth taking a closer look at the results, because as previously mentioned that the majority of the respondents already have a college degree, and more investigation is needed to understand what is impeding those without a college degree from entering the entrepreneurial market, and why are PhD holders not participating enough in the entrepreneurial arena in Jordan.

The results are important because they confirm previous findings were ESE do impact entrepreneurial behavior, therefore it is beneficial to know that Jordanian entrepreneurs are no different, and that their levels of self-efficacy is high, and it has a significant influence on the entrepreneurial behavior, another interesting observation is that none of the demographic factors had any moderating influence on the relationship between ESE and entrepreneurial behavior on one hand. This finding emphasizes that entrepreneurial behavior is not related to age, gender or education, at least in the Jordanian marketplace, and it relies on the capabilities of the entrepreneur in terms of ESE.

9. Recommendations

- Since ESE was found to have a significant statistical impact on entrepreneurial behavior; the researchers recommend that the concept of ESE is to be incorporated into the curriculum of entrepreneurship programs, whether at universities or in training courses, by defining it clearly and explaining its dimensions to the students and the entrepreneurs-to be, and then linking it to the behavior they undertake. Additionally, it is recommended that special attention is given to

ESE by employers, whether these employers are entrepreneurial firms or regular businesses that aim to foster and encourage an environment of entrepreneurship within their organization.

- Past performance, verbal persuasion and emotional cues, but not past experience were found to have an influence on entrepreneurial behavior, this area is of great importance and should be taken into consideration in the process of training entrepreneurs, because according to this finding; the previous work/ educational experience does not affect the behavior of the entrepreneur, and hence they can utilize their skills in other areas in order to perform an entrepreneurial behavior.
- All demographic factors were found not to cause any significant statistical change in the influence of ESE on entrepreneurial behavior; the researchers recommends that these factors are no longer considered as barriers or hurdles in the path to entrepreneurship in Jordan, although these results are not all consistent with the available literature, but the Jordanian entrepreneurs have demonstrated that what really matters is the level of and entrepreneurial self-efficacy they possess that influences entrepreneurial behavior and not the gender, age or educational level of the entrepreneur, hence these findings are recommended to be taken into consideration in the early stages of entrepreneurship training in order to correct any misconceptions about the entrepreneurial process that the entrepreneurs themselves may have, which might lead to unrealistic barriers and hurdles in their path to entrepreneurship.

An additional recommendation that is drawn from the findings is that since the age, gender or education do not cause any statistically significant change in the influence of ESE on EB; the researchers recommend that focus is to be given to the other variables such as ESE and in terms of the resources allocated to nourish and develop these entrepreneurs and not to focus on issues such as gender and age that were found not to have any impact at all on the relationship between ESE, and entrepreneurial behavior.

10. Future research

This research recommends the followings for future studies:

- 1- In later stages; a study can be done that separates entrepreneurs from the employees at entrepreneurial firms to investigate whether there is a difference in the levels of ESE, entrepreneurial behaviour.
- 2- More research is needed on entrepreneurial behaviour, as demonstrated in this study, a large body of literature is available on entrepreneurial intentions, but entrepreneurial behaviour has been studied to a lesser extent.

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