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THE EFFECT OF ENTREPRENEURIAL CHARACTERISTICS ON THE ENTREPRENEURIAL INTENTION OF UNIVERSITY STUDENTS IN OMAN and SUDAN

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Abstract. This study intends to measure the presence of entrepreneurial characteristics like (Risk- Tolerance, Persistence, Self-confidence) among university students in developing countries. The study also aims to examine the influence of the entrepreneurial characteristics on the intention of these students to involve in entrepreneurial ventures after completing their studies. In addition, the study intends to compare between students in different universities on the level of availability of entrepreneurial characteristics, and the readiness to establish entrepreneurial projects. The study population consists of students of three universities in Oman and Sudan of which the sample consisted of 660 students randomly selected. Out of them 574 questionnaires were found valid for analysis. Following a descriptive approach and using relevant statistical tests the study reached a set of conclusions, the most important of which, shows that the level of the availability of the entrepreneurial characteristics, and entrepreneurial intention among the students of the three universities was found to be high. The results showed a high level of self-confidence and high level of entrepreneurial intention for Dhofar University students compared to students of the Sudan International University and University of Bahri. The results demonstrates that the impact of entrepreneurial characteristics of students on their entrepreneurial intention is statistically significant.

Keywords: entrepreneurial characteristics; risk tolerance; persistence; self-confidence; entrepreneurial intentions; university; students

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1. Introduction

Many studies emphasize the significance of entrepreneurship and entrepreneurial characteristics (ECs) as instruments of improving the ability to discover and exploit opportunities in an environment of extreme complexity and rapid change. The characteristics of the individual and personal traits have an impact on his behavior, attitudes and performance (Abu Samrah, 2017).

Perhaps the most prominent of these characteristics are related to entrepreneurship and behaviors that lead individuals in general to determine the strategic directions and entrepreneurial actions that contribute - positively to accelerate the growth of the business sector, which is supposed to be synonymous with the public sector and integrated with it in promoting sustainable development in society. In spite of the importance of entrepreneurial characteristics, it is noticeable after reviewing the relevant literature, that studies on the entrepreneurial characteristics in the Arab business environment are still limited.

In most of the developing countries, the public sector is the main employer of national labor. The continuous increase in the proportion of young people who seek government jobs, led to the failure of the government institutions to create jobs for the growing labor force with the increasing population. For example, a study by NCSIOMAN* (2019), reported that 87% of the job seekers prefer government jobs (The Omani youth attitudes towards work, 25). This leads governments to activate the private sector and civil society to take the lead in creating employment opportunities for youth alongside state efforts.

Compared to the rest of the world, the regulatory environment for entrepreneurship in the Oman and Sudan is still found lacking on many fronts. For example, Sudan ranks 162 out of 190 in the World Bank doing business rankings of 2017, whereas the Sultanate of Oman was ranked 78 (World Bank, 2019). On top of that, the Arab region is considered the geographic region in the world having highest unemployment rates ("Comparing unemployment rates in the Arab world between international and government figures", 2020). Therefore, employment of youth is a matter of great concern to all the state agencies in both Sudan and Oman, and efforts are being made to increase employment opportunities for young people in various sectors of the labor force so that they can participate in the development process in these countries. However, the national efforts to empower young people to lead entrepreneurship remain unfulfilled and have not reached the level at which this situation can be addressed.

Having this picture, the, educational institutions (especially the universities) are expected to play a vital role in preparing the students and equipping them with the necessary tools to tackle these problems. Therefore, it is important to create positive attitudes of the youth towards establishing their own projects and to be job creators than being just job seekers.

The success of universities in this matter depends largely on understanding the students who possess the relevant characteristics to involve in establishing their own businesses. This study tries to contribute in this regard, through assessing the level of entrepreneurial characteristics among university students in Sudan and Oman. It also intends to investigate the effect of these entrepreneurial characteristics on their entrepreneurial inclination. Therefore, the main goal of this study is to examine the impact of the entrepreneurial characteristics among undergraduate students in Sudan and Oman on their entrepreneurial intention. It also intends to meet the following goals:

1. Investigate the level of entrepreneurial characteristics (**ECs**) among university students in Oman and Sudan.
2. Investigate influence of these **ECs** on the entrepreneurial intentions (**EIs**) of university students in Sudan and Oman, and identify the most important **ECs** that can forecast the **EIs** of university students in Oman and Sudan.
3. Examine whether there are measurably noteworthy contrasts within the level of **ECs** and **EIs** between university students in Oman and Sudan.

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2. Literature Review

The concept of entrepreneurship

Entrepreneurship is a complex and multidimensional concept because of its different disciplines, such as economics, management, sociology, and others. It is not possible to say that there is a unified agreement among researchers and writers on the definition of entrepreneurship. At the same time, most of these researchers and writers do not differ in returning the concept of entrepreneurship to a French expression "entreprendre" that appeared in the Middle Ages. The functional connotations of this concept have evolved from the meaning of mediation between two parties in the sixteenth century to its contemporary meaning, which includes the completion of works through the enjoyment of specific characteristics (Al-Qahtani, n.d).

Thus, the researchers have differed on the definition of entrepreneurship and its dimensions and each of these researchers looked at it and investigated it according to their area of specialization. Economists - for example - focused on the economic dimension of entrepreneurship, while psychologists and sociologists considered it to be an attribute of a person with the ability to take risk (Ismail, 2010; AL Jabri and Bakhdar, 2019).

The studies and developments continued in the areas of entrepreneurship since the thirties of the twentieth century as a result of the attention of several people, economists and others. One of the most famous of them was Joseph Shumpeter as well as some Austrians economists such as: Carl Menger and Ludwig von Mises and Friedrich von Hayek, who worked on refining the currently used entrepreneurial concepts. (Higher Population Council HPC, 2018). As for Shumpeter, "the entrepreneur, is the person who is able to invent and create what is successful and new, by transforming ideas with will and determination" (Higher Population Council HPC, 2018). Thus, through their creative activities entrepreneurial powers create new business models and products in the marketplace, hence helping in long-term economic growth and working on industrial development (Higher Population Council HPC, 2018).

Below are some of the most notable features of the development of the concept of entrepreneurship, some of which have affected the concept of entrepreneurship up to the present times.

In the period of the 1920s, particularly in 1921, Frank. H. Knight embraced the idea that entrepreneurship depends on the principle of risk. This belief continued until 1967, when another concept prevailed, which is the entrepreneur's ability to apply ideas and their implementation without the adoption of the principle of risk that was brought by Frank Knight (Alam and Mohiuddin, 2014).

During the 1970s Peter Drucker took the concept back to the idea of relying entrepreneurship on the principle of risk (Eroglu and Pıçak, 2011).

Following the economic difficulties which prevailed in the 1970s, towards the beginning of the 1980s, the idea of entrepreneurship was built around the persons who looked at things in their own way to achieve profits by using ~~by using~~ the right time and effort to seize the available opportunities.

Perhaps the beginning of the nineties witnessed a qualitative development in the entrepreneurial thought and linking it to the environment surrounding the economy and the world of business and economic openness, which affected the world in general. Therefore, the broader definition became that entrepreneurship is to build a creative economic organization in order to make a profit or growth under risk and uncertainty conditions (High Population Council HPC, 2018). Entrepreneurship has been described as the process of launching a business, and providing the necessary resources for it, taking into account the benefits and risks associated with it. The concept was defined also as the process of creating a new business of value through exerting effort, spending capital and allocating time, and taking risks, to obtain the reward. Another definition states that entrepreneurship is the process of finding something different that has value through allocating the time and effort necessary for that,

while preparing to take the material, physical, social and consequential risks (Sultan, 2016). In a nutshell, the concept of entrepreneurship has grown with the development of different countries' perspective of the economic and social objectives they seek to attain. In developing countries, those who take the initiative and take risks, and create a new businesses that is expected to contribute to the objectives of economic and social development as entrepreneurs.

The Entrepreneur

Historically, the entrepreneur concept dates to the middle ages to point at the person who runs big production projects. In the 17th century, the concept was used to describe a person who makes conditional contracts with the government. In the 18th century, a distinction was made between the person who provides capital to others as an investor and the person who needs capital as a entrepreneur to use the capital. In the 19th century, the entrepreneur was known as the person who organizes and manages the project to obtain individual gains using his skills and experiences in the hope that he would achieve gains by operating these sources and exposing him to risks. In the 20th century, the entrepreneur was known as the creative innovator who reorganizes the form of production using a specific invention or a new technological means, or providing an existing commodity in an uncommon form. Worth noting that English speakers know entrepreneurship as the small and new project, and German speakers know it by force and ownership, i.e. the person who owns and runs the project himself (Al-Qahtani, n.d)

Richard Cantillon, was the first to use the term entrepreneur in the economic literature (Entrialgo, Fernández, and Vázquez, 2000). According to Cantillon, the entrepreneur is the person who initiates and leads all activities in the market as buyer from producers and seller to consumers. He buys at a specific price and sells at an uncertain price in future, and this reflects the entrepreneurial spirit. Thus, it can be said that the entrepreneur is the initiator of adopting new ideas, the one who seeks to discover and maximize opportunities, who possesses a spirit of risk, clear vision, has the ability to plan and deal with ambiguous circumstances in order to add value or develop products to achieve profit and growth (Entrialgo, Fernández, and Vázquez, 2000). The concept was then broadened to include a person who bears the full risk towards the business that he runs.

Entrepreneurial Characteristics

The entrepreneurial characteristics are the necessary requirements for entrepreneurs in an accelerated business environment at all levels. These characteristics are a number of personal characteristics, including what is inherited, what is acquired and grows during the entrepreneur's career and appears in his behaviors, and becomes part of his personality that cannot be changed in many cases. Regarding entrepreneurial characteristics (Sultan, 2016) reports that the characteristics of an entrepreneur represent a set of knowledge, skills, abilities, and behaviors that a person must possess in order to become an entrepreneur; some are inherited by him and others are acquired by learning and training. In general, the entrepreneurship researchers seek to link entrepreneurial activities with creativity and risk, and the ability to use modern technology and its applications. As noted by Kusmintarti et.al. "These characteristics are a combination of some characteristics that should be owned by an entrepreneur and some psychological attributes that are regarded as predictor of entrepreneurial intention (Anik Kusmintarti, Armanu Thoyib, Khusnul Ashar, and Ghozali Maskie, 2014). More specifically, Al-Balawi described the entrepreneurial characteristics as a set of personal, behavioral, and managerial characteristics related to the entrepreneur that describes the person as entrepreneur and enables him to add value to the product, service, method, and procedures, and to find what is new and special" (Al-Balawi, 2015 as cited in Abu Samrah, 2018).

Yonca Gürol and Nuray Atsan, (2006), distinguished between three sets of factors which influence entrepreneurial behavior, the individual, social and environmental factors. The social factors model examines the personal and family background, while the environmental factors model examines the contextual factors such as value of wealth, tax reduction and indirect benefits. The third set of factors which is an individualist approach, on the other hand, concentrates on characteristics of entrepreneurs. This model assumes that entrepreneurs possess some unique characteristics which distinguish them from others. Many studies have been conducted based on this model.

Various research studies have analyzed entrepreneurial characteristics. There is no agreement among studies on the number or the nature of these characteristics. For instance, Abu Samrah (2018) states that the literature mentions more than 40 characteristics of the entrepreneur. However, the effect of these characteristics was very uneven in studies conducted on many entrepreneurs around the world. AL Hashweh (2012) reviewed (26) studies on the characteristics of entrepreneurs published between the years 2000-2012, and came out with some most frequently used characteristics which included: Risk-taking, decision-making, taking responsibility, self-confidence. Abu Samrah, (2018) reviewed (11) studies and concluded that “the most frequently used characteristics are: innovativeness, initiation, risk-taking propensity, need for achievement, self- confidence, internal locus of control, and independence”. On the other hand, Zemmmer and Scarborough, identified the most important entrepreneurial characteristics which include: taking personal responsibility for the results of risk, self-control over resources to achieve specific goals, has confidence in the possibility of success, interested in direct feedback, knowledge of the level of performance, perseverance, has a high level of ambition and has a direction towards the future and has the ability to deal with uncertainty of success (Zemmmer and Scarborough, 2005, cited in Al-Jabri, K. M., and Bakhdar, A. M. 2019) .

In the present study three ECs are used to define the entrepreneurial profile of students. These are risk tolerance, pervasiveness, and self-confidence. These characteristics were chosen since they are frequently cited in different studies in the entrepreneurship literature (Yonca Gürol and Nuray Atsan, (2006). Another reason is that the authors believe that these three characteristics are broad enough to include many other sub-characteristics. In addition, the three characteristics were chosen because the researchers have examined other characteristics in a previous studies.

Risk Tolerance

Entrepreneurial activities usually involve a certain degree of risk. The more the degree of desire to succeed, the more the entrepreneur is inclined to take risk. Therefore, risk tolerance is considered a major characteristic of entrepreneurs and is widely discussed in entrepreneurship literature (Zaman, 2013). Risk tolerance for entrepreneurs reveals the capability to handle uncertainty and the readiness to accept a loss. These are significant and vital skills for effective entrepreneurs (Oosterbeek, Van Praag, and IJsselstein, 2008). The most important thing that an entrepreneur should enjoy is bravery and accepting uncertainty. Ammar (2016) distinguishes between, risk and gambling, explaining that the former is associated with putting the necessary effort and seizing opportunities, while gambling is associated with luck and chance, it is a game of challenge and excitement, and the pleasure of working for success. “Unlike gamblers, entrepreneurs are not high-risk takers; they calculate their risks before taking action and place themselves in situations involving moderate risk” (Ayalew and Zeleke, 2018).

This suggests students who have high risk tolerance may be more willing to start their entrepreneurial activities. Therefore, it can be assumed that:

***Risk tolerance** has effect of statistical significance on the **entrepreneurial intention** of university students in Sudan and Oman.*

Perseverance

Perseverance involves the ability to continue willfully, in spite of setbacks or objections (Oosterbeek, Van Praag, and IJsselstein, 2008, p. 8). It includes being patient, persistent, tenacious, and passion for what he is doing with a strong belief that he can succeed. This characteristic means that the entrepreneur has the desire to work for long hours and to withstand the work pressures. He is someone who does all or more than, what is required of him. That is because of the passion for work which gives him the ability to be patient for the results when they come late, or less than expected, or even if the results are negative he does not give up but tries again and again till the achievement of desired results. This is what is called by Barringer and Irelan, (2016) as the tenacity despite failure. A successful entrepreneur has a high degree of perseverance that makes him believe that he can succeed provided that he does not back down, and learns from his experience and that of other people. Studies show a positive relationship between perseverance and the level of business success (Ammar, 2016).

Nothing is more necessary to achieve success than perseverance because it is about overcoming all obstacles.

Entrepreneurs know they're likely to come across disappointments on the way to success. That is why persistence is regarded as one of the essential characteristics of a competent entrepreneur. Entrepreneurs ought to acknowledge difficulties and indeed be willing to begin from scratch in order to achieve their business goals. Belás and Ključnikov, in their study, concluded that “entrepreneurs consider expertise, responsibility and perseverance to be the most important personal characteristics and skills” (Belás and Ključnikov, 2016). This indicates that students who enjoy perseverance characteristic may be more inclined to establish their own business. Therefore, it can be proposed that:

***Perseverance** has effect of statistical significance on the **entrepreneurial intention** of university students in Sudan and Oman.*

Self-confidence

This characteristic is reflected in the entrepreneur's ability to confront challenges without getting bored and working to tame the difficulties in light of evoking the capabilities and problems. Entrepreneurs not only feel that they can face the challenges, but they seek for challenging and demanding tasks, which require greater confidence. Through self-confidence entrepreneurs make their business successful as they are more sensitive towards different types of problems and have higher ability to arrange these problems and deal with them better than others. Therefore, self-confidence is always cited as an important entrepreneurial characteristic in the entrepreneurial literature, whereas some others regard self-confidence as the key to entrepreneurial success. Ho and Koh (1992) and Ferreira et al., (2012) argued that self-confidence is a required entrepreneurship characteristic and that empirical studies in the entrepreneurial literature have found that entrepreneurs have higher self-confidence than non-entrepreneurs (cited in Garaika, Negara, and Margahana, 2019). On the other hand, “many university students prefer to work as employee in a company or becoming government employee, and only few of them think to create self-employment or become entrepreneur due to lack of confidence” (Herdjiono, Puspa, Maulany, and Aldy, 2017).

Therefore, it can be proposed that: ***Self-confidence** has effect of statistical significance on the **entrepreneurial intention** of university students in Sudan and Oman.*

Entrepreneurial Intention (EI)

The issue of intention is significant part of understanding human behavior and provide opportunity for more concentration on forecasting future behaviors instead of only those that describe the behavior. Tendency of people to be self-employed reveals the difference between an individual's awareness of his or her personal aspiration to work for his own, and his or her desire to work for other business institutions. Therefore, the high

tendency to be self-employed shows that an individual tends to work more for his own than for other people (Kolvereid, 1996, as cited in Ramadan, 2012).

There are various definitions and thoughts about EI. Krueger, Reilly and Carsrud, (2000) regraded EI as a strong indicator of individual planned behaviors, especially when this behavior is rare, difficult to control, or unpredictable. Thompson (2009) defines it as a conviction of self-esteem in setting up a new project and planning to do it in the future. Intention of entrepreneurship is also defined as “a state of consciousness that directs the attention, experience, and behavior of people towards entrepreneurial behavior” (Bird, 1988). So entrepreneurial intent shows that individuals are ready to behave in a specific manner. Entrepreneurial intention has been researched from different aspects as it proved to be one of the stronger predictors of entrepreneurial behavior (Indrasari, Purnomo, Syamsudin, and Yunus, 2018). Thus, it can be said that, the degree of the intent of the individual sets the limits for the degree of eagerness and passion which is then manifested in the level of real performance that motivates it towards the success of the project (Atiya, Bilal, Abulhamid, and Shoaib, 2019).

Various models were also developed to explain the entrepreneurial intention. Some of these models have proven to be the best methods that can be used to predict entrepreneurial actions. Two models are specifically important in the context of entrepreneurship. One was developed and well validated in social psychology namely, the Theory of Planned Behavior (**PB**). The other was proposed, but not well tested from the domain of entrepreneurship research is Shapero’s model of the ‘Entrepreneurial Event’ (Krueger, Reilly, and Carsrud, 2000).

The theory of planned behavior assumes that the root of all behavior is an intention., while the basic idea of Shapero’s model of the ‘Entrepreneurial Event’ is that there is an event in a person’s life that changes course of his career. According to Shapero, there are four factors that contribute to raising the EI of the individual, social factors, economic factors, realizing the desire to materialize, and the realization of embodiment. He points out that the entrepreneurial spirit stems from awareness of the feasibility and desire of the person, and this path is affected by the cultural and social context. The entrepreneurial intention is primarily related to taking the initiative, action or transferring to the application. Individuals who enjoy the entrepreneurial intention have the intention to try new things or to do things in a different way (Ayad S. Galoon, G. and Aynoose, R., 2019).

For the purpose of the current study the theory of planned behavior is more relevant. The theory of PB claims that EI is dependent on an individual’s perception toward the extent of desirability of an entrepreneurial career, beliefs about others' normative expectations of the individual and the motivation to comply with these expectations, and the amount of control that an individual exercises over his behavior and the strength of his intentions to perform this behavior (Kume, Kume, and Shahini, 2013).

3. Research Problem and Questions

This study attempts to analyze the effect of entrepreneurial characteristics on entrepreneurial intention of university students in Sudan and Oman.

In accordance with the topic of the research, the following questions express the content of the research problem:

- Do students in the Sudanese and Omani Universities possess entrepreneurial characteristics (risk tolerance, perseverance and self-confidence)?
- To what extent do university students in Sudan and Oman enjoy EI?
- Do university students in Oman and Sudan have high level of EI?
- What is the effect of ECs on the EI of university students in Oman and Sudan?

- Are there differences of statistical significance in the opinions of the surveyed university students in Sudan and Oman, regarding the entrepreneurial characteristics and the entrepreneurial intention that can be attributed to the university?

Consistent with this, the research tries to achieve its fundamental objectives which are centered around determining the extent of the impact of the entrepreneurial characteristics of university students in Oman and Sudan, on their intention to be self-employed. The study also aims to examine whether there are measurably noteworthy contrasts within the level of ECs and EIs between university students in Sudan and Oman.

The study derives its academic significance as it may contribute to bridging the knowledge gap of studies and research related to this topic when it becomes clear the scarcity and modernity of the studies that dealt with it according to the researcher's knowledge in the Sudanese and Omani libraries. Likewise, what the study offers in terms of intellectual and theoretical enrichment regarding the entrepreneurial characteristics, the entrepreneurial intention to local library, and clarifying the nature of the relationship between the two variables among university students in Oman and Sudan. Another peculiar significance of the study is that it empirically explores the attitudes of university students in Oman and Sudan and makes some comparison between them.

4. Hypothesis Development

In light of reviewing of literature on entrepreneurial characteristics and intention, the conclusions reached, the study questions, in addition to the objective to be accomplished, a number of hypotheses can be formulated for the present study as follows:

H1: There is statistically significant correlation between **entrepreneurial characteristics** (risk tolerance, Perseverance, and Self-confidence) of university students in Sudan and Oman and their **entrepreneurial intention**

H2. The entrepreneurial characteristics (risk tolerance, Perseverance, and Self-confidence) have effect of statistical significance on the **entrepreneurial intention** of university students in Sudan and Oman

H1a: **Risk tolerance** has effect of statistical significance on the **entrepreneurial intention** of university students in Sudan and Oman

H1b. **Perseverance** has effect of statistical significance on the **entrepreneurial intention** of university students in Sudan and Oman

H1c. **Self-confidence** has effect of statistical significance on the **entrepreneurial intention** of university students in Sudan and Oman

H3. There are no differences of statistically significance in opinions of the surveyed university students in Oman and Sudan that can be related to the university.

There are no differences of statistically significance in opinions of the surveyed university students in Sudan and Oman that can be attributed to the university.

5. Methodology

The study followed the descriptive approach through which it is possible to collect data and information necessary to develop the theoretical framework and conduct a field survey to collect data and information about the dimensions of the study through the questionnaire prepared by the researcher, and to analyze these data and information based on descriptive statistics methods of the dimensions of the research tool and its statements according to the requirements of the research question to achieve the research goals.

The study population consists of students of three universities in Oman and Sudan. Namely Sudan International University with a total number of students of 12,450, University of Bahri (Sudan) with a total number of students

of 23,000 and Dhofar University (Oman) with a total number of 5,100 students. This makes the total study population 36,100 students. The study sample consisted of 660 male and female students. The study participants were randomly selected from these three universities. They were informed of the purpose of the survey, and were also ensured of the privacy and secrecy of their responses. Thus, 660 questionnaires were distributed and 574 questionnaires were retrieved valid for analysis.

In order to achieve the goals of the study, the researchers have developed a questionnaire to collect the necessary data, related to the concept of ECs among university students and their intention to start their own business. The questionnaire consisted of the following sections:

Section one: General information.

Section two: This section represented the independent variables of entrepreneurial characteristics. The statements of this section were based on the study of Muhamad, (2014), Sultan (2016), and Abdulfattah, (2016).

The questionnaire used five point Likert scale (1=Strongly Disagree, 1=Disagree, 3=Neutral, 4=Agree, 5=Strongly agree).

Section three: this section represents the dependent variable entrepreneurial intention. The statements of this section were based on the study of Zaidan (2011), Karimi, et. al. (2012), Ramadan (2012), Sultan (2016), and Sacral, H. C. (2017).

After developing the questionnaire, it was presented to a number of expert professors for review and evaluation. Their remarks and recommendation for amendments, addition or deletion were taken in to consideration. The reliability of the study tool was then tested using Cronbach's α coefficient which was satisfactorily at 0.886.

The table 1 below shows profiles of the sample of respondents

Table 1: Demographic Information

Variable	Category	Number	Percentage
University	Dhofar University (DU)	127	22.1%
	Sudan International University (SIU)	224	39.0%
	University of Bahri (UoB)	223	38.9%
	Total	574	100%
Age	20 yrs or less	100	17.4%
	More than 20 – 25 yrs	422	73.5%
	More than 25 – 30 yrs	34	5.9%
	More than 30 yrs	18	3.1%
	Total	574	100%
Gender	Male	257	44.8%
	Female	317	55.2%
	Total	574	100

Table 1 shows that the 39 percent of the respondents was from from SIU, followed by 38.9 percent from UoB, and 22.1 percent from DU. The table also shows that the percentage of female respondents was 55.2%, whereas the percentage of males in the sample was 44.8%. This is in line with current trends of growing number of female students in higher education institutions.

More than 73.5% of the respondents were within the age group of, (more than 20 - 25 years) whereas the age group of (20 years or less) represented 17.4 percent. The category (more than 25 years) represented 9 percent. The information from the table clearly shows that the respondents can understand and address the questionnaire accurately.

Within this study, the internal consistency of the research instrument was evaluated using Cronbach's α coefficient. The outcome of the reliability test showed that the study instrument with the α coefficient of 0.886 of a Cronbach, is reasonably reliable.

6. Analysis of the Study Questions

In this section of the research, the authors evaluated the respondent’s answers to the basic research questions as follows:

Question One: Do students in the Sudanese and Omani Universities possess entrepreneurial characteristics (risk tolerance, perseverance and self-confidence)?

Question Two: To what extent do university students in Sudan and Oman enjoy the entrepreneurial intention?

Table 2 presents the arithmetical mean, the standard deviations, and the level of agreement:

Table 2: Means and standard deviations of the Study variables

Variable	Mean	Standard Deviation	The level of Agreement
Risk tolerance	3.99	1.066	High
Perseverance	4.32	0.908	Very High
Self-confidence	4.10	0.85	High
Entrepreneurial Intention	4.04	1.033	High

Table 2 demonstrates that the surveyed respondents enjoy high level of the three entrepreneurial characteristics. The arithmetic mean of the three characteristics collectively is 4.13 which is rated as high level. This indicates that respondents have entrepreneurial characteristics. Perseverance was the highest characteristic with a mean of 4.32 followed by self-confidence with an average mean of 4.10 and then, risk tolerance with an average mean of 3.99, while the entrepreneurial intention showed a mean of 4.04. This indicates that students are willing to involve in business activities and are ready to put whatever effort that may be required, but they are somehow very calculative regarding risk.

Hypotheses Testing

In the light of the reviewing the descriptive statistics for the study variables, and the conclusions reached, the first group of the present study hypotheses can be tested as follows:

H1: First Main Hypothesis: This hypothesis states that *there is statistically significant correlation between entrepreneurial characteristics (risk tolerance, Perseverance, and Self-confidence) of university students in Oman and Sudan and their entrepreneurial intention*

To test this hypothesis, the Pearson correlation coefficient was used as follows:

Table 3: Pearson correlation coefficient of the relationship between ECs and EI

Entrepreneurial Characteristics	Entrepreneurial Intention	
	Correlation Coefficient	Significance
Risk Tolerance	0.519**	0.000
Perseverance	0.521**	0.000
Self-Confidence	0.577**	0.000

The results of Table No. (3) shows that Pearson's correlation coefficients for the relationship between each entrepreneurial characteristic and entrepreneurial intention is (0.519) for the risk-tolerance characteristic, and (0.521) for the perseverance characteristic, and (0.577) for the self-confidence characteristic. The statistical significance level accompanying this was (0.000), which is less than the level of significant significance (0.01). Based on this result, we can say that there are direct and statistically significant correlation relationships between entrepreneurial characteristics (risk tolerance, Perseverance, and Self-confidence) of university students in Sudan

and Oman, and their entrepreneurial intention. This is evidenced by the association of the entrepreneurial characteristics that students possess in researched universities with their EI. In other words, the possession of the researched students of the entrepreneurial characteristics represented by risk tolerance, perseverance, and self-confidence, reinforce their entrepreneurial intentions. The above provides an indication for the acceptance of the first main research hypothesis

H2: Second Main Hypothesis: *The entrepreneurial characteristics (risk tolerance, Perseverance, and Self-confidence) have effect of statistical significance on the EI of university students in Sudan and Oman.* The following are the three sub hypotheses extracted from the second main hypothesis:

H2a: *Risk tolerance has effect of statistical significance on the entrepreneurial intention of university students in Sudan and Oman*

H2b. *Perseverance has effect of statistical significance on the entrepreneurial intention of university students in Sudan and Oman*

H2c. *Perseverance has effect of statistical significance on the entrepreneurial intention of university students in Sudan and Oman*

In order to complete the analysis the authors tested the effect of the relationship between the ECs (combined and individually) and EIs of university students in Sudan and Oman, using multiple regression analysis where all variables were introduced at once into the regression model, as follows:

Table 4: Model Summary

Correlation	Coefficient of determination R ²	Adjusted Coefficient of determination	Standard Error
0.653	0.427	0.424	0.48980

Table 4 shows that a correlation coefficient of 0.653 exists between the entrepreneurial characteristics and the entrepreneurial intention, which demonstrates a positive correlation between them. This means understanding and identifying those who have these ECs is an important matter to understand and expect the EI. The adjusted coefficient of determination of (0.424) shows that all ECs (combined) interpret (43%) of the change in the EI of university students in Sudan and Oman. This means that a change in the ECs by one unit results in a change in the EI of university students in Sudan and Oman, by 0.43.

Table 5: ANOVA

	Sum of squares	Df.	Mean Squares	F	Sig
Regression	101.897	3	33.966	117.419	0.000
Residual	136.744	570	0.240		
Total	238.640	573			

The outcomes of Table 5 explain that the value of (F) for the regression was (117.419) and the corresponding statistical significance is (.000) which is less than the statistical significance level (0.01). In view of this result, it very well may be said that the inclination of the entrepreneurial characteristics on the entrepreneurial intention is statistically significant at a level below (0.01). This implies that there is a statistically significant impact at (0.01) level of at least one of the three entrepreneurial characteristics on the entrepreneurial intention. In other words, the entrepreneurial intention of university students surveyed can be predicted through some or all of the entrepreneurial characteristics. From the results of the above analysis, it is evident that the students' adoption and ownership of the characteristics expressing the entrepreneurship represented in risk tolerance, perseverance, and self-confidence contribute to the entrepreneurial intention. That is, the entrepreneurial intention of students to go into self-employment depends to a large extent on the level of availability of the ECs of these students in the researched universities.

Table 6: Correlation Coefficient of the variables

Source of Variation	Regression coefficient	Beta	T	Sig
Constant	0.838		5.301	0.000
Risk Tolerance	0.214	0.235	5.853	0.000
Perseverance	0.187	0.189	4.506	0.000
Self-Confidence	0.376	0.358	9.140	0.000

To test the individual sub-effects of each entrepreneurial characteristic on the entrepreneurial intention in the researched universities, the data of the Table 6 shows the existence of effects on the individual level of each characteristic on in the entrepreneurial intention.

The self –confidence characteristic had the highest contribution of influence, as it explained 38% of the total differences in the entrepreneurial intention supported by a corresponding statistical significance of (.000), which is lower than the Sig. level of (0.01). This means that the entrepreneurial intention of the surveyed university students can be enhanced whenever they enjoy the self –confidence characteristic. In other words, the entrepreneurial intention of the surveyed university students depends largely on having a level of self-confidence. The risk-tolerance characteristic came in second place in terms of influencing the entrepreneurial intention of the surveyed university students, as it explained 0.21 of the total differences in entrepreneurial intention, supported by a corresponding statistical significance of (.000), which is lower than the Sig. level of (0.01). This means that having the risk-tolerance characteristic and adopting it as behavior by the surveyed students will contribute in their tendency to involve in business related work.

Finally, the perseverance characteristic contributed in the EI of the students in the surveyed universities, as it explained 0.19 of the total differences in the entrepreneurial intention supported by a corresponding statistical significance of (.000), which is lower than the Sig. level of (0.01). This means that having the perseverance characteristic and adopting it as behavior by the surveyed students will contribute in enhancing their entrepreneurial intention. That is to say, entrepreneurial intention of the university students surveyed derives its requirements from the perseverance characteristic possessed by those students.

Depending on the results of the regression analysis, which confirmed the existence of a significant effect of the entrepreneurial characteristics, risk tolerance, perseverance, and self-confidence (combined and separated) on the EI of the surveyed university students, the second main hypothesis with its sub-hypothesis is accepted.

H3: Third Main Hypothesis: There are no differences of statistically significance in opinions of the surveyed university students in Sudan and Oman that can be attributed to the university.

To test for differences in entrepreneurial characteristics and entrepreneurial intention ANOVA has been used and the results are as follows:

The results of Table 7 show the analysis of the differences between the three universities (University of Bahri (UoB), Sudan International University (SIU) and Dhofar University (DU)) towards the entrepreneurial characteristics and entrepreneurial intention. The statistical significance associated with the value of F in the variables of risk tolerance, self-confidence and entrepreneurial intention, was lower than (0.05) which shows that there are statistically significant differences in the views of respondents from the three universities towards these two variables.

Table 7: Results of ANOVA test for entrepreneurial characteristics and entrepreneurial intention according to universities

Dimension	Source of variation	Sum of squares	Df.	Mean Squares	F	Sig.
Risk Tolerance	Between groups	4.776	2	2.388	4.807	.009
	intra group	283.627	571	.497		
	Total	288.403	573			
Perseverance	Between groups	.192	2	.096	.225	.799
	intra group	243.983	571	.427		
	Total	244.175	573			
Self-confidence	Between groups	7.237	2	3.618	9.879	.000
	intra group	209.144	571	.366		
	Total	216.381	573			
Entrepreneurial Intention	Between groups	4.302	2	2.151	5.242	.006
	intra group	234.338	571	.410		
	Total	238.640	573			

To determine the direction of the differences arising in the above test in the variables of risk tolerance, self-confidence and entrepreneurial intention, Tukey’s pairwise comparisons test was used as follows (Table 8):

Table 8: Results of the Tukey’s test for differences between universities regarding the variable of risk tolerance

University	University	Mean Difference	Sig.
DU	SIU	-.02198	.957
	UoB	.17235	.072
SIU	UoB	.19432*	.010

Table 8, shows the results of the Tukey pairwise comparison test for the differences between the three universities towards the risk tolerance variable at the level of significance (0.05). The result shows differences between the views of students of SIU, compared to views of students of UoB. It is observed that students of SIU have higher risk tolerance than that of UoB students. This interesting result may be due to the fact that, while SIU is private university UoB is a public university. So, the differences may be due to organizational culture (entrepreneurial orientation) between private and public universities (Table 9).

Table 9: Results of the Tukey’s test for differences between universities regarding the variable of Self-confidence

University	University	Mean Difference	Sig.
DU	SIU	.29497*	.000
	UoB	.22509*	.003
SIU	UoB	-.06988	.441

Table 9 shows the results of the Tukey’s pairwise comparisons to know the differences between the three universities towards the variable of self-confidence at the level of significance (0.05). Dhofar University is better than the students of Sudan International and Bahri Universities. This may indicate self-confidence is higher for students of DU than students of SIU and UoB (Table 10).

Table 10: Results of the Tukey test for differences between universities regarding the variable of entrepreneurial intention

University	University	Mean Difference	Sig.
DU	SIU	0.12436	0.189
	UoB	0.22889*	0.004
SIU	UoB	0.10453	0.197

Table 10 presents the results of the Tukey’s pairwise comparison test for the differences between the three universities towards the entrepreneurial intention variable at the level of significance (0.05). The result shows differences between the views of students of DU, compared to views of students SIU and UoB. It can be said that the entrepreneurial intention among students of DU is stronger than that of SIU and UoB students. This may be attributed to some entrepreneurial environment in DU and Oman in general. The following table summarizes the acceptance or rejection of the hypotheses tested (Table 11).

Table 11: Hypotheses’ Acceptances or Rejections

Hypothesis Statement	Status
<i>H1. There is statistically significant correlation between entrepreneurial characteristics (risk tolerance, Perseverance, and Self-confidence) of university students in Sudan and Oman and their entrepreneurial intention</i>	Accepted
<i>H2. The entrepreneurial characteristics (risk tolerance, Perseverance, and Self-confidence) have effect of statistical significance on the entrepreneurial intention of university students in Sudan and Oman.</i>	Accepted
<i>H2a: Risk tolerance has effect of statistical significance on the entrepreneurial intention of university students in Sudan and Oman</i>	Accepted
<i>H1b. Perseverance has effect of statistical significance on the entrepreneurial intention of university students in Sudan and Oman.</i>	Accepted
<i>H1c. Self-confidence has effect of statistical significance on the entrepreneurial intention of university students in Sudan and Oman.</i>	Accepted
<i>H3. There are no differences of statistical significance in opinions of the surveyed university students in Sudan and Oman, regarding the entrepreneurial characteristics and the entrepreneurial intention, that can be attributed to the university.</i>	Rejected

Conclusions

Based on what is presented in the previous pages the following conclusions can be drawn.

The study represents a special importance that it responds to national priorities in Sudan and Oman in the search for ways to empower and encourage young people and provide a suitable environment to launch their own projects through better utilization of their energies and skills in entrepreneurial projects. Specially, that both Sudan and Oman have witnessed during the last decade, unprecedented interest in the concept of entrepreneurship, and this interest has been at the highest levels. Also, the study helps in trying to identify the entrepreneurial characteristics of student who are on their way to the labour market.

The findings of the study show that the level of the availability of the ECs, among students of the three universities was found to be high, with an average mean of 4.11. This result indicates that university students in Oman and Sudan possess the entrepreneurial characteristics that may be necessary to start their own business.

Regarding the level of risk tolerance, the students in the three universities showed high level of risk tolerance, and the students of Sudan International University enjoyed a higher level than the students of University of Bahri.

With regard to perseverance, the students three in universities showed very high level and there was no clear and significant difference between the responses of students in the three universities.

Self-confidence as an entrepreneurial characteristic was at a high level among the students of the researched universities, and it was higher among Dhofar University students compared to the students of the Sudan International University and the University of Bahri.

As for the entrepreneurial intention, the results of the analysis showed a high level among the three university students towards entrepreneurship, and Dhofar University students enjoyed a higher level in the entrepreneurial intention than the students of the international universities of Sudan and Bahri

The results of the study display that there is a positive relationship of statistical significance between the three entrepreneurial characteristics, (risk tolerance, perseverance, and self-confidence), and their EIs. This simply

means that as level of availability of the entrepreneurial characteristics increase, the entrepreneurial intention will also go up. This is particularly important in view of the fact that the intention to involve in entrepreneurial activity precedes the actual conduct of that activity.

The results of the study reveal that there is an effect of statistical significance of entrepreneurial characteristics of students on their entrepreneurial intention. Our results indicate that self-confidence, risk tolerance and perseverance have significant effect on students' EIs. Additionally, the results showed that a student's perseverance had a greater effect on their EIs than that of the self-confidence and risk tolerance. This increases the possibility of students engaging in self-employment activities and entrepreneurial work if the necessary requirements of entrepreneurial work are available (Atiya, Bilal, Abulhamid, and Shoaib, 2019, p. 82).

Implications of the study

This study responds to national priorities in Sudan and Oman in the search for ways to empower and encourage young people and provide a suitable environment to launch their projects through better utilization of their energies and skills in entrepreneurial projects. Specially, that both Sudan and Oman have witnessed during the last decade, unprecedented interest in the concept of entrepreneurship, and this interest has been at the highest levels. Also, the study helps in trying to identify trends among youths who are on their way to the labour market.

The results of this study can help decision-makers to design and develop appropriate policies and interventions to support and encourage the development of entrepreneurship in Sudan and Oman, especially among the university students who are about to enter the labor market. This is more realistic in view of the fact that the willingness to involve in business precedes the actual conduct of that activity.

The study revealed the important role of entrepreneurial characteristics as traits that can help in forecasting the entrepreneurial inclination of university students. As a result, officials in the higher educational institutions should be able to notice attributes of their student's that can indicate readiness to be engaged in entrepreneurial activities. Universities can play a vital role, through changing the situational variables towards entrepreneurship, or the student's self-confidence to start their own businesses. More attention should be paid to training and education because of their importance in encouraging students to start small private projects as it may contribute to reducing the burden on the government to secure jobs for graduates. All which may contribute to reducing unemployment rates among young university graduates.

Originality/value

The paper demonstrates one of the few attempts to examine the effects of entrepreneurial characteristics of university students on their entrepreneurial intentions in two Arab countries. Specifically, we reconfirm students' perseverance as a more important predictor of their entrepreneurial intentions than the self-confidence and risk tolerance in the Sudanese and Omani university context. Additionally, by also demonstrating concept development support as a significant predictor of entrepreneurial intentions, we provide new insights into how universities in Arab countries can foster the entrepreneurial intentions of their students. This result adds to the academic literature on entrepreneurial intentions in Arab world.

Limitations and Future Research Directions

The findings of this research have to be seen in light of some limitations. The first limitation arises from the budget and time constraint for collecting data from three universities in two different countries. This has limited the sample size. A second limitation arises from the nature of measuring entrepreneurial intentions of students. Even students who have demonstrated a high level of entrepreneurial characteristics or intention may not engage

in entrepreneurial activities after graduation. This possibility calls for further research to find out whether those students transformed their intention in to real entrepreneurial projects. Therefore, it is important for future research to go beyond examining entrepreneurial intent, but to continue examining whether intentions lead to entrepreneurial entry and entrepreneurial success. Another main limitation lies with small number of universities in Sudan and Oman, and the fewer numbers of characteristics that were examined. Moreover, the research culture is not very much established in these countries. So there is a lot of resistance by the respondents to provide their responses. So data was collected from the universities whose students were accessible and willing to participate in this research. Further researches can readdress these issues with larger number of universities, participants and entrepreneurial characteristics. Generally, researchers as well as decision makers should be careful to make generalizations of the data gathered. Nevertheless, the article provided some areas for future studies that could contribute in mitigating the gaps between existing and prospective investigations on the entrepreneurial characteristics and intention in Sudan and Oman.

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