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When grit leads to success: The role of individual entrepreneurial orientation

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WHEN GRIT LEADS TO SUCCESS: THE ROLE OF INDIVIDUAL ENTREPRENEURIAL ORIENTATION

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Abstract. Successful enterprise has been related to numerous characteristics including entrepreneurial orientation. The current study aims to examine the influence of individual entrepreneurial orientation and grit dimensions on entrepreneurial success. The potential mediating role of consistency of interest and perseverance of effort, on the relationship between entrepreneurial orientation and success, was also explored. Survey data were collected in Tripoli, Libya from entrepreneurs during the current economic downturn and crisis. The data from the usable 147 responses was analyzed using partial least squares structural equation modelling. The statistical results revealed a significant relationship between the individual entrepreneurial orientation, consistency of interest, and perseverance of effort, with the dependent variable, entrepreneurial success. The dimensions of grit were also found to mediate the relationship between entrepreneurial orientation and success. The cross-sectional nature of the study and the smaller sample size make the findings difficult to generalize. Verification of the significance of success predictors can unravel concerns about the low rate of established and nascent businesses despite the presence of opportunities and positive perception of entrepreneurship. The study of grit dimensions as a mediator between the individual entrepreneurial orientation and success is unprecedented.

Keywords: individual entrepreneurial orientation, entrepreneurial success, grit, consistency of interest, perseverance of effort, crisis.

JEL Classification: L26.

“Nothing [...] will ever be attempted if all possible objections must be first overcome.”

Samuel Johnston (1759)

Introduction

Entrepreneurship has become an important vocation and therefore has the potential to generate economic growth. But there are still lots to understand about its part in the development of human and intellectual capital (Zahra & Dess, 2001). GEM (2019) report demonstrates that most entrepreneurs in lower-income economies are driven by opportunity and that these entrepreneurs create great value for their economies with high-potential ventures. Still, these activities strongly suggest that the attributes of these entrepreneurs must be influencing these processes.

In developing economies such as Libya, entrepreneurs must deal with unstable, changing and less developed institutional dynamics irrespective of crisis. Currently, development is sluggish at best with high inflation and budget deficits (The World Bank, 2019). For the private

sector to make any form of progress and for the country to show signs of positive welfare, political agreements must ensue (OECD, 2019). The biggest advantage for the Libyan entrepreneurial population is its human capital but its weakest is its risk acceptance rate, while the country suffers from a low quality of institutional support (GEM, 2018). The crisis from 2011 onwards exacerbated conditions for entrepreneurs and for the whole population to the point of bare minimum survival levels. Yet, Libyan youth have displayed unprecedented commitment to the contribution to social affairs including ingenuity in new and innovative startups (reliefweb, 2018).

There is no doubt that crises like the one in Libya diminish certain favorable conditions for entrepreneurship. And while this does not necessarily mean that entrepreneurs cannot successfully pursue opportunities in these situations, other new opportunities are presenting themselves. This perhaps implies that some opportunities are only less enticing to the average person. According to a GEM study (2013) of Libya, most of the population considered entrepreneurship as a good career choice and

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more than half perceived an opportunity to start a new business and think they have sufficient knowledge, skills, and experience to start a business. So why is it that the economy suffers from a low rate of established (3.4%) and nascent (11.2% of the total early-stage entrepreneurial activity (TEA)) businesses? This shows that there is a myriad of interesting factors that account for why people stop or lead people to different entrepreneurial actions under different environmental conditions.

Over 60 percent of Libyan entrepreneurs are opportunity-driven and about 8 percent necessity-driven (GEM, 2013). Necessity-driven entrepreneurs conduct little analysis and spend less effort in preparation for their businesses. While, opportunity-driven entrepreneurs spend much time preparing and planning for their businesses tend to be a more successful and positive impact on job creation, export orientation, and innovation. Therefore, it makes sense to explore the countless challenging conditions as well as the human factors that may account for entrepreneurial success. Other factors contributing to entrepreneurial success include powerful motivation (Stewart & Roth, 2007) and passion (Mueller et al., 2017), persistence, deliberate practice (Baron & Henry, 2010; Vallerand et al., 2007), entrepreneurial self-efficacy (McGee et al., 2009), personality traits demographical characteristics (Zhao et al., 2010), and social networking skills (Shafiq et al., 2020).

Entrepreneurs frequently confront not just brief problems, but repeated strains throughout the long time it takes to develop a business (Bakar et al., 2015; Nambisan & Baron, 2013). A major challenge underlined is the shortage of entrepreneurial competencies and skills among entrepreneurs that is universally inclusive of capabilities necessary for handling the imminent trials and tribulations of starting and running business ventures (Abd Aziz & Mahmood, 2010; Kiggundu, 2002; Rennemo, 2015). Entrepreneurship must constitute ample resilience in the face of a multitude of challenges. The careful alignment of certain forces that drive entrepreneurial success is imperative to benefit from the rapid change and uncertainty by gaining and sustaining a competitive advantage (Eskreis-Winkler et al., 2014; Mooradian et al., 2016; Mueller et al., 2017). The gravity of certain situations does not exclude the likelihood that particular qualities too can affect behavior and so have crucial consequences on entrepreneurship (Roberts & Robinson, 2010). Therefore, the present study aims to examine the effects of entrepreneurial orientation and grit on entrepreneurial success. An important question that emerged from the review of literature is whether grit dimensions could predict performance at times of crisis. This is based on the assumption that grit is the constant that entrepreneurs share along similar fortunes to be successful. Scholars previously conceptualized and found that grit is associated with positive outcomes (Bandura, 1997; Duckworth et al., 2011; Mooradian et al., 2016; Mueller et al., 2017).

Another key inquiry that arose from literature is whether individual entrepreneurial orientation (IEO)

actually predicts performance especially at times of crises. It would be interesting to verify at the individual level what past studies found regarding the general EO construct, i.e. EO was shown to be a contributor to a firm's success during various levels of complications through its innovative, risk-taking, and proactive components (Bolton & Lane, 2012; Kraus et al., 2012; Tsai & Yang, 2014; Zahra & Covin, 1995).

However, for a slick individual entrepreneurial orientation to actualize during the hectic and fast-changing events of an economic downturn and civil unrest, entrepreneurs need to fall back on a trait that draws on their interests and effort without fail. Despite the threats of fast-paced economic downturn and crises, to the knowledge of the researcher, there is hardly any research that examined a concept that tugs on steadfastness to interests and continuous effort to mediate between individual entrepreneurial orientation and entrepreneurial success in economic downturns that comes with civil unrest. Building on the assumptions put forward in the above, this study intends to achieve the following research objectives:

To examine the relationship between grit dimensions and entrepreneurial success (ES) among entrepreneurs.

To investigate the relationship between individual entrepreneurial orientation (IEO) and ES among entrepreneurs.

To determine the intervening effect of grit dimensions on the relationship between IEO and ES among entrepreneurs.

1. Literature review and hypotheses

1.1. Grit and entrepreneurial success

People with similar intelligence accomplish more than others because some traits seem more crucial than others for certain vocations. But one common ingredient they seem to share in every field is grit. Grit is perseverance and passion toward the attainment of aspirations for years and is what allows people to reach brilliant accomplishments like creating successful businesses (Baum & Locke, 2004; Drnovsek et al., 2016; Duckworth et al., 2007; Duckworth & Gross, 2014; Mueller et al., 2017; Schulte-Holthaus, 2019; Westphal et al., 2008). Therefore, in the current study grit is proposed as a predictor of entrepreneurial success.

Grit is made up of consistency of interest which is an ongoing pursuit of a long-term goal but without the purely motivational and emotional experience that exists in passion. Another component of grit is the perseverance of effort, which is tenacity in surmounting difficulties (Duckworth et al., 2007). Grit is conceptualized as having a positive association with entrepreneurial success because without grit people can give up in the face of obstacles (Bandura, 1997). Past studies found that grit effects firm outcomes like the level of effort devoted, valued benefits and deliberate practice (Duckworth et al., 2011; Gendolla & Richter, 2010; Mooradian et al., 2016; Mueller et al.,

2017; Nambisan & Baron, 2013; Schulte-Holthaus, 2019; Silvia et al., 2013; Uy et al., 2015). Update This can be decisive because the level of commitment required to build a business over many months and sometimes years most likely is the primary way an entrepreneur can accumulate the required prior experience and appropriate strategy required for business success (Gartner, 1985; Gimeno et al., 1997; Reynolds & Curtain, 2008). Based on these arguments, the current study sought to put forward the following two hypotheses:

H1. Consistency of interest is positively and significantly related to entrepreneurial success.

H2. Perseverance of effort is positively and significantly related to entrepreneurial success.

1.2. Individual entrepreneurial orientation and success

Entrepreneurial orientation (EO) is considered a strategic element that is a major contributor to a firm's success (Miller, 1983; Wiklund & Shepherd, 2005). Individual entrepreneurial orientation's first dimension is innovativeness which is defined as, "Predisposition to creativity and experimentation through the introduction of new products and services as well as technological leadership via R and D in new processes". Next, pro-activeness is defined as, "An opportunity-seeking, forward-looking perspective characterized by new products and services ahead of the competition and acting in anticipation of future demand". While risk-taking is defined as, "Taking bold action by venturing into the unknown, borrowing heavily and/or committing significant resources to ventures in uncertain environments." However, EO has been studied mostly as unidimensional because its items were shown to move together in most contexts (Rauch et al., 2009).

There has been a lasting positive relationship established between entrepreneurial orientation and performance and (Jalali et al., 2014; Otache & Mahmood, 2015; Rtanam, 2015; Su et al., 2015). Past studies have shown that entrepreneurial orientation is positively related to firm outcomes. Studies showed that EO is associated with generating higher market share, profitability and sales growth relative to their competitors (Lumpkin & Dess, 2001). Other studies showed that EO is linked to creating value-added services to customers (Lee & Chu, 2011; Pett & Wolff, 2016; Tang et al., 2015). For example, the study by Rtanam (2015) found positive significant relationships between risk-taking, innovation, autonomy, and competitive-aggressiveness orientations with firm performance. The four entrepreneurial orientations were tested among SMEs in the hotel industry of Jaffna district in Sri Lanka. In another example, Arshad et al. (2014) found a medium association between EO and business performance in 88 technology-based SMEs in Malaysia.

Past literature also discovered the more intense positive performance effect of EO in business environment challenges and greater disruptions (Covin & Slevin, 1989; Kraus et al., 2012; Wiklund & Shepherd, 2005; Tsai &

Yang, 2014; Zahra & Covin, 1995). For instance, Zahra and Covin's (1995) work concluded that EO asserted a greater positive effect on firm performance in a hostile rather than a benign environment. A more recent example is a study by Kraus et al. (2012) which demonstrated that the positive relationships between EO dimensions and performance had indeed become stronger under conditions of higher market turbulence. Furthermore, EO had appeared in much previous research reflecting the ability to address situations of resource scarcity (Hughes & Morgan, 2007) and momentous changes (Li et al., 2006, 2008).

Moving to an individual level, a study by Kollman et al. (2017) through empirical data gathered in 104 dyadic entrepreneurial teams found that innovativeness diversity facilitates team performance. But found that diversity in pro-activeness and risk-taking within a team impairs team performance. More recently, Hughes et al. (2018) identified that innovative behavior influences individual and team workplace performance positively. Likewise, Fatima and Bilal (2019) found a positive association in the IEO of SME owners and their performance in the service and manufacturing sector of Pakistan. Moreover, as noted by Wales et al. (2013), EO remains almost unstudied in many strategically important countries such as Brazil, India, and Russia, in addition to groups like the Middle East, Latin America, and Sub-Saharan Africa. Towards this end, the current study put forth the following hypothesis formulated between IEO and entrepreneurial success:

H3: IEO is positively and significantly related to entrepreneurial success.

1.3. Grit mediation

Grit is made up of consistency of interest which is an ongoing pursuit of a long-term goal but without the purely motivational and emotional experience that exists in passion. Another component of grit is the perseverance of effort, which is tenacity in surmounting difficulties (Duckworth et al., 2007). This consistency of interest and perseverance of effort are activities that can be thought of as integration at the individual level. At the organizational level, integrating activities are defined as "the process of coordinating various tasks, functions, and divisions so that they work together and not at cross purposes" (Jones, 2013, p. 121). Lumpkin and Dess (1996) suggested that integrating activities intervene in the relationship between EO and performance. In the current paper, the researcher proposes drawing a parallel at the individual level. The similarities between the individual and society are evident in our assumption and that we are already integrated, and that it is only society beyond us that needs integrating. Society needs integrating, but so do we as individuals. If society is like an individual, then, the individual is also like a society (Ellis, 2020). Because the two dimensions of grit are conceptually dissimilar, in the current study the researcher intends to examine the subscale-specific impact as they have not been explored sufficiently (Duckworth et al., 2007, 2011; Nambisan & Baron, 2013; Silvia et al.,

2013). This is especially interesting in the innovation context, in which the variation between the perseverance of effort and consistency of interest could be a key factor. Therefore, it is proposed that consistency of interest and perseverance of effort (grit) surface between the time individual entrepreneurial orientation start to operate to influence entrepreneurial success and the time IEO's impact is felt on it.

Furthermore, recent studies suggest motivational factors like orientations to happiness (Von Culin et al., 2014) and purpose commitment (Hill et al., 2016) are related to grit. Al Issa et al. (2019) and Cardon and Kirk (2015) identified the significance of goal cognitions as possible intervening variables of the impact of passion on entrepreneurial behaviors. Similarly, Mueller et al. (2017) extended these models by including self-regulatory mode and grit as intervening variables of the passion-performance association. The rationale is that the business disposition to take risks to be innovative and proactive spurs the entrepreneur to call on her consistency of interest and perseverance of effort so that she does what it takes toward entrepreneurial success. Consistency of interest and perseverance of effort is influenced by individual entrepreneurial orientation and acts as a chief mediator in defining how objectives are sought and the level of grit that entrepreneurs display in trying to build their businesses successfully. Given the discussion above, the following hypothesis is put forth.

H4: Consistency of interest significantly mediates the relationship between IEO and entrepreneurial success.

H5: Perseverance of consistency significantly mediates the relationship between IEO and entrepreneurial success.

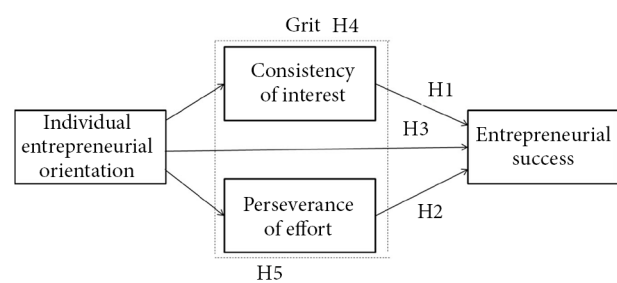


Figure 1. Research framework

The research framework illustrating the hypothesized relationships between individual entrepreneurial orientation, grit, and entrepreneurial success is presented in Figure 1. The hypothesized relationships are supported by the resource-based view (RBV), social learning theory, and self-determination theory. Firstly, Barney (1991) explains that resource is defined as all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc., controlled by a firm to conceive of and implement strategies that improve its efficiency and effectiveness. RBV states that effective use of a firm's inimitable resources can lead to a sustained competitive advantage and emphasizes the internal resources of firms. Individual entrepreneurial orientation was selected using

three dimensions, viz., risk-taking orientation, innovative orientation, and pro-activeness orientation. They were theorized to assert a positive influence on performance. As decision-making styles, process, and practice are internally-initiated actions, the positive effect of IEO on performance is corresponding to RBV's benefit of being tacit, and so letting firms leverage valuable, rare, inimitable, and organized (VRIO) resources to their competitive advantage (Barney & Hesterly, 2010). Secondly, the social learning theory referred to self-efficacy as a core characteristic of learning and risk-taking. Scholars support the reasoning that people with innate luck and self-confidence are more determined in their tasks compared to others (Bandura, 1986; Cardon & Kirk, 2015). According to Miao et al. (2017), self-efficacy is a key determinant of tenacity as the start of a new business carries several challenges that involve strong efficacy to persevere. If the entrepreneur is self-assured of her abilities to do all tasks necessary to start and run her new business, she is almost certain to eventually succeed in it. Thirdly, the self-determination theory proposes that people prefer to feel they have control over their actions, so anything that makes a previously enjoyed task feel more like an obligation than a freely chosen activity will undermine motivation. Therefore, self-determination and social learning is the rationale behind how an individual entrepreneurial orientation establishes the supporting platform for entrepreneurs to apply their grit to do whatever it takes for business success (Gagné et al., 2005).

2. Methodology

2.1. Sample and procedure

A structured questionnaire consisting of close-ended multiple-choice questions was used in the survey. The researcher opted for a five-point Likert scale as past researchers have claimed that using a scale with mid-point offers superior and precise results and it enables respondents to comfortably show their stand more accurately (Krosnic & Fabrigar, 1997). The data was collected using self-administered questionnaires in Tripoli, Libya. The present civil unrest made collecting data quite dangerous and so convenience sampling and the snowball sampling methods were used. Convenience sampling is used when convenient availability and nearness to the researcher is ideal (Cooper & Schindler, 2014), Snowball sampling was also ideal because it allowed existing respondents to recruit upcoming ones from their contacts. The researcher considered these methods appropriate as suggested by Saunders et al. (2009) for sampling when potential respondents are difficult to identify and find from a chosen population. A priori G*Power analysis (versus posteriori) was computed based on the desired level of power, desired alpha level (error rate), desired effect size, and the known number of parameters, which was necessary for later analysis using PLS-SEM as per Hair et al. (2017). The power analysis revealed that the

minimum sample size was 89 required to detect an effect size of .15 with .95 power at the alpha level of .05 (Bruin, 2006; McCrum-Gardner, 2010). Thus, the total number of questionnaires administered was 400. The questionnaires were circulated to entrepreneurs who were managers-owners of small businesses ventures in Tripoli, but only 154 were returned, of which 147 were usable. This meant a response rate of 36%, which the author deemed reasonable under the circumstances and considering the unstable conditions in the country.

In the current study, data was collected during the Fall of 2019 and showing descriptive information of the respondents' profile. The sample was made up of respondents involving in a variety of businesses. The highest percentage of entrepreneurs were in the wholesale and retail trade (23.13%), followed by Building and construction and hotels and restaurants ((10.88%). Further, most of the entrepreneurs were males (78.9%), and their capital structure was based on personal savings or partnership (32.65%).

The sample was comprised of entrepreneurs from a variety of enterprises. The greatest percentage of businesspersons were in wholesale and retail trade (23.13%), followed by building and construction (10.88%), hotels and restaurants (10.88%), and small manufacturing businesses (13%). Moreover, most of the entrepreneurs were males (78.9%), with the majority having their source of capital investment from personal savings (32.65%) and the partnership (32.65%) followed by family (19.05).

2.2. Measures

In this study, all constructs were measured using the 5-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree) based on the earlier works of Bolton and Lane (2012), and Duckworth and Quinn (2009), and Suliyanto and Rahab (2012). There are three variables in this study, about entrepreneurial success, a total of six items adapted from Suliyanto and Rahab (2012) was used. Entrepreneurial success was operationalized as the ability to access the level of success or otherwise of a given venture through profits, sales, and growth. The ten items that measured individual entrepreneurial orientation measure was adopted from Bolton and Lane (2012). IEO was operationalized as a unidimensional construct, made up of three dimensions, namely risk-taking, innovativeness, and proactiveness. The grit variable had eight items and was adopted from Duckworth and Quinn (2009). The indicators denoted the two scales of grit are "consistency of interest" and "perseverance of effort". Grit is operationalized as perseverance of effort, which is working industriously in the direction of chosen objectives regardless of adversity or luring options, and consistency of interest, which is a lasting attention to long-term objectives (Duckworth & Quinn, 2009). Additionally, demographic information was collected that included gender, education level, sources of capital, and firm activities. Before the data collection process, a pilot test was carried out on a sample of 40

respondents, followed by some minor alterations to take into account culture and language. Finally, respondents were provided with English and Arabic questionnaires to choose from. For this reason, back-to-back translation was carried out as recommended by (Craig & Douglas, 2005).

3. Results

For data analysis, SPSS v20 was employed to handle missing data, outliers (Mahalanobis distance), normality, linearity, multicollinearity, and homoscedasticity. All assumptions and measurement assessment were watched as well as confirmatory factor analysis, common method variance (CMV), and normality. There were no indications of non-response bias as presented by an independent samples t-test to compare the study's variables. All *p* values were above .05 in the t-test results showed no significant difference between early and late responders (Pallant, 2013). The output from SPSS was checked for outliers by looking at the Mahalanobis distances for values that are greater than (18.47) the critical chi-square value using the three independent variables as the degrees of freedom (the highest value being 15.01) confirming the absence of outlier observations (Tabachnick & Fidell, 2007).

The effects of common method variance were treated by safeguarding the anonymity of the surveyed entrepreneurs and decreasing evaluation fear and clarifying items by elucidating each indicator. Likewise, Harman's single factor test was used with the first factors explaining less than 50% of the total variance as recommended by MacKenzie and Podsakoff (2012). Further, to reduce measurement error a pilot test was carried out on a sample of 40 and some adjustments were made on the translations accordingly. After retrieval of all questionnaires, a data cleaning process showed that less than 5% values were missing per indicator and so these were replaced with SPSS's Expectation-Maximization function. Normality was established for all variables using the Q-Q plot, which was very close to a straight line and the histogram was near a bell shape and the de-trended normal Q-Q graphical showing no gathering of points, with the majority accumulating near the zero. Furthermore, VIF (variance-inflated factor) was below 5, at 2.347, 2.042, and 2.470, and tolerance values above .20, at .426, .490, and .405, all for IOE, consistency of interest, and perseverance of effort, respectively, which indicated that there were no multicollinearity issues among the constructs.

Having examined the underlying structure of the constructs and having preliminarily attested their theoretically-proposed reflective measurement specification, the PLS-SEM measurement model was constructed for confirmatory factor analysis. Generally, reflective measurement models are examined in terms of reliability and validity. Both were assessed at the indicator and construct level. To achieve this end, this study followed Henseler et al. (2009) five evaluation criteria to assess the measurement models of reflectively-measured constructs. These

criteria included the examination of (i) indicator reliability, (ii) internal consistency reliability, (iii) convergent validity, (iv) discriminant validity at the indicator level, and (v) discriminant validity at the construct level.

The SmartPLS v3 results are presented next, which examined the conceptual model and hypotheses and assessed items and construct validities and reliabilities (Hair et al., 2017). Subsequently, the elimination of only one indicator (ES5) from the original 24 was essential to maintain reliability for indicators with loadings below .40 as shown in Tables 1, 2, and 3, which also display satisfactory composite reliability ranges from .810 to .910, .893, and .879

Table 1. Reliability and validity – entrepreneurial success

Variables/Indicators	Loadings	AVE	CR
Entrepreneurial Success		0.466	0.810
ES1	0.788		
ES2	0.786		
ES3	0.670		
ES4	0.592		
ES6	0.539		

Table 2. Reliability and validity – grit

Variables/Indicators	Loadings	AVE	CR
Consistency of Interest		0.718	0.910
G1	0.806		
G2	0.837		
G3	0.877		
G4	0.867		
Perseverance of Effort		0.677	0.893
G5	0.740		
G6	0.822		
G7	0.873		
G8	0.851		

Table 3. Reliability and validity – individual entrepreneurial orientation

Variables/Indicators	Loadings	AVE	CR
Individual Entrepreneurial Orientation		0.427	0.879
IEO1	0.619		
IEO2	0.583		
IEO3	0.680		
IEO4	0.662		
IEO5	0.798		
IEO6	0.840		
IEO7	0.711		
IEO8	0.473		
IEO9	0.491		
IEO10	0.581		

for the four constructs. Convergent validity was confirmed through the average variance extracted (AVE), with lowest AVE for IEO at .427. This lower AVE was tolerated because Fornell and Larcker had accepted it on the condition that composite reliability was higher than .6 (Fornell & Larcker, 1981). The evaluation of the measurement model began by inspecting the outer model and then the valuation of discriminant validity output that showed the heterotrait-monotrait ratio (HTMT) and established discriminant validity showing the highest estimated HTMT ratio at .858 for perseverance of effort with IEO, next was .756 for IEO with consistency of interest followed by .149 for consistency of interest with entrepreneurial success, all of which were below the recommended .90 (Gold et al., 2001; Teo et al., 2008).

Having confirmed the reliability and validity of the measurement models, the study was then ready to assess the structural model which involved the examination of the model’s predictive capability and the relationship between the constructs. To assess the structural model, this study adhered to the six main steps for the statistical procedure recommended by Hair et al. (2017). The structural model used for the ultimate estimations for hypotheses testing in this study is as presented in Figure 2. The first step is to assess the structural model for collinearity issues. VIF (variance-inflated factor) was below 5, and tolerance values above .20 (Consistency of interest = 2.03, Perseverance of effort = 2.51, and IEO = 2.42), which confirmed that multicollinearity issues were not present (Hair et al., 2017). The next step is to assess the significance and relevance of the structural model relationships through coefficients, T statistics, and the results of the hypotheses tests are displayed in Table 4. SmartPLS bootstrapping output at 5000 subsamples showed three of the hypotheses accepted at $p < .01$, namely, H1, H3, and H4. The remaining two hypotheses, namely H2 and H5, were accepted at $p < .05$. The convention was followed for frequently used critical values for two-tailed tests, to test a non-directional hypothesis, 2.57, 1.96, and 1.65 for significance levels of 1%, 5%, and 10%, respectively (Hair et al., 2017).

The third step in evaluating the structural model is to assess the level of R². PLS-SEM output revealed the Coefficient of Determination R² value for the endogenous

Table 4. Structural estimates

Hypothesis	Standard beta	t-statistics	Decision
H1. Consistency of interest → ES	0.409	3.796	Accept
H2. Perseverance of effort → ES	0.370	2.370	Accept
H3. IEO → ES	0.232	2.625	Accept
H4. IEO → Consistency of interest → ES	-0.268	3.621	Accept
H5. IEO → Perseverance of effort → ES	0.272	2.204	Accept

construct entrepreneurial success at 0.157 (Figure 2). This must be followed by the fourth step which is to assess f^2 effect size. The effect sizes (f^2) for the three constructs were 0.098, 0.065, and 0.026, for consistency of interest, perseverance of effort, and IEO, respectively. The effect size f^2 allows assessing an exogenous construct's contribution to an endogenous latent variable's R^2 value. According to Hair et al. (2017), f^2 values of 0.02, 0.15, and 0.35 indicate small, medium, or large effect. Next, the fifth step involved the blindfolding procedure which was performed to assess the predictive relevance Q^2 of the endogenous latent construct indicators, which was .116 (omission distance $D = 6$). This step is used to find out the quality of the model, which can be assessed using the blindfolding procedure to obtain $Q^2 = 1 - SSE/SSO$ from the construct cross-validated redundancy report. Lastly, step six assessed the q^2 effect size. This value shows if an exogenous construct has a small, medium, or large predictive relevance for a certain endogenous construct. Accordingly, q^2 values were calculated for consistency of interest, perseverance of effort, and IEO, and showed small predictive relevance at 0.078, 0.053, and 0.014, respectively (Hair et al., 2017).

4. Discussion

The present study set out with the aim of examining the relationship between IEO and entrepreneurial success (ES), and the relationship between consistency of interest (CI) and perseverance of effort (PE) with ES, and fifthly, to investigate the mediating roles of CI and PE between IEO and ES. SmartPLS output produced strong results and evidence that IEO and grit dimensions predict entrepreneurial success and that grit dimensions intervenes in the relationship between IEO and success. Table 4 provided the results obtained from the preliminary analysis of the hypotheses testing showing a significant and positive correlation as predicted between consistency of interest and entrepreneurial success (standard beta = 0.409, t-statistic = 3.796, $p < .01$). A positive correlation was also found between the perseverance of effort and entrepreneurial

success (standard beta = 0.370, t-statistic = 2.370, $p < .05$). A positive correlation was also discovered between IEO and entrepreneurial success (standard beta = 0.232, t-statistic = 2.625, $p < .01$). There was a significant but negative mediating effect from CI on the relationship between IEO and ES (standard beta = -0.268, t-statistic = 3.621, $p < .01$). But there was a significant and positive mediating effect from PE on the relationship between IEO and ES (standard beta = 0.272, t-statistic = 2.204, $p < .05$).

The first research objective of the present study was “To examine the relationship between grit dimensions and entrepreneurial success among entrepreneurs.” Parallel to research objective 1, hypothesis H1 and H2 were tested and supported. This means that the consistency of interest is positively and significantly related to entrepreneurial success. The expected result was based on the assumption that grit is the constant that entrepreneurs share along similar fortunes to be successful. Moreover, scholars previously conceptualized and found that grit was associated with positive outcomes (Bandura, 1997; Duckworth et al., 2011; Mooradian et al., 2016; Mueller et al., 2017).

It can be imaginable that entrepreneurs who have a high enduring focus on a long-term goal, are more likely to accomplish more and so their firms thrive. In this way, we expect businesspeople with greater consistency of interest to be more proficient than their rivals as they chase a steady objective in the long haul leading them to further effectiveness and systematic implementation of strategies. Individuals who have high levels of consistency of interest describe themselves as not distracted from their set goals, obsess with ideas and maintain focus on projects for many months and even years. With fewer diversions and increased single-mindedness in the quest of a single objective, it is more likely this consistency of interest will result in a positive association performance. Likewise, the second dimension of grit, perseverance of effort, was expected to have a positive and significant association with entrepreneurial success. To diligently work toward one's goals despite hardship and attractive alternatives is intuitively predictive of success. Bandura (1997) theorized how

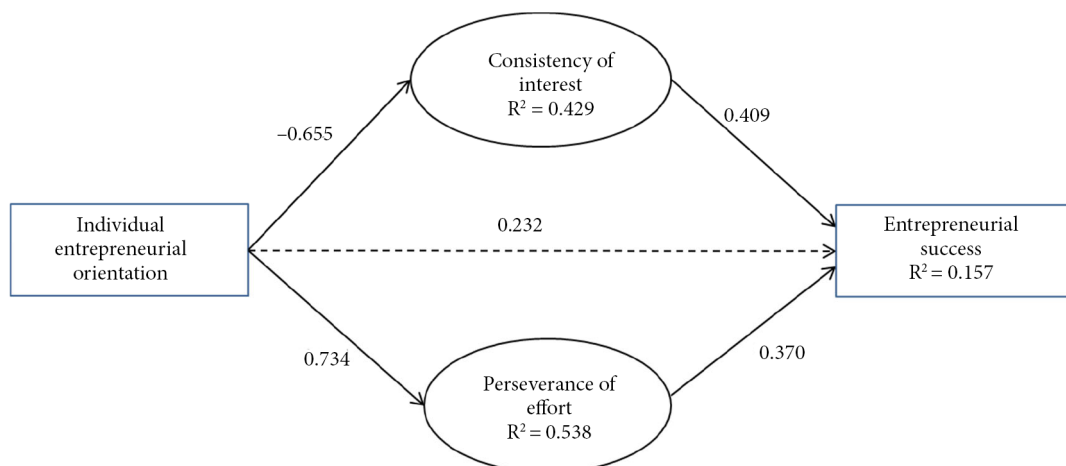


Figure 2. Structural model

perseverance, which includes qualities like hard work, diligence, undiscouraged from setbacks, and finishing whatever one begins related to accomplishments.

The second research objective sought to investigate the relationship between individual entrepreneurial orientation and entrepreneurial success. The corresponding hypothesis 3 that IEO correlates with ES was found significant and accepted ($\beta = .232$; t -value = 2.625; $p < .01$) and is in line with previous studies that found entrepreneurial orientation associated with positive outcomes (Fatima & Bilal, 2019; Hughes et al., 2018; Hughes & Morgan, 2007; Kollman et al., 2017; Li et al., 2006; Tsai & Yang, 2014;).

The third research objective was to determine the mediating effect of grit dimensions on the relationship between IEO and ES among entrepreneurs. The corresponding hypothesis 4 that consistency of interest significantly mediates the relationship between IEO and ES was negatively significant and accepted ($\beta = -.268$; t -value = 3.621; $p < .01$). According to Hair et al. (2017), competitive mediation is the indirect effect and the direct effect both are significant and point in opposite directions. This result was consistent with results by Mooradian et al. (2016), who found the consistency of interest negatively affected innovativeness. This is most likely due to the innovative orientation in IEO. The rationale is that individuals who frequently alter their interests or choose to follow different goals must be more creative than those who stay on track. Another reason for the negative mediation effect of consistency of interest on the IEO-ES relationship is that individuals who alter their interest more and more can be expected to attempt various elements, alter goals, and methods, which is in accordance with March's (1991) view of exploration which included concepts like risk-taking, innovativeness, and proactivity.

Hypothesis 5, which corresponded to the third research objective, sought to test whether perseverance of effort significantly mediates the relationship between IEO and ES. H5 was positively significant and accepted ($\beta = .268$; t -value = 3.621; $p < .01$). According to Hair et al. (2017), this is a complimentary mediation, where the indirect effect and the direct effect both are significant and point in the same direction. As expected the disposition to take risks, to be innovative and proactive incited the entrepreneur persevere in her efforts to do what it takes toward entrepreneurial success.

Conclusions

The present inquiry fills a void in the scant literature that explores entrepreneurial orientation in Libya, one of many strategically important countries as identified by Wales et al. (2013). This current study answered the need to clarify how entrepreneurial psychological factors explain firm outcomes and broadened the association between IEO and performance by incorporating mediating factors (Frese & Gielnik, 2014; Wales, 2016). To the knowledge of

the researcher, no empirical work had embarked on examining the influence of individual entrepreneurial orientation and grit dimensions on entrepreneurial success, especially during crisis times. The study of the potential mediating role of consistency of interest and perseverance of effort, on the relationship between entrepreneurial orientation and success, was also unprecedented. The statistical results revealed a significant relationship between the individual entrepreneurial orientation, consistency of interest, and perseverance of effort, with the dependent variable, entrepreneurial success. The dimensions of grit were also found to mediate the relationship between entrepreneurial orientation and success. This study fills in a gap in the study of these two components distinctively which improves our understanding of aspects of human nature that predict success.

This research had a small number of respondents ($n = 147$), all respondents came from the central part of one city, Tripoli, Libya. Further, the convenience and snowball sampling approaches following in the current study present bias issues because respondents approach similar entrepreneurs and so the sample results end up being quite homogeneous (Saunders et al., 2009). Therefore, caution should be exercised when extending the findings to other entrepreneurs in the region since the current study's respondents were from the capital city. These respondents are more likely to be predisposed to behave differently from their rural counterparts. One more limitation of the present research is the use of self-rating scales which tend to contribute to response bias and CMV, as well as the threat of socially desirable responding. The study as an alternative relied mainly on clarifying questionnaire items, protecting anonymity and reducing evaluation apprehension, as well as using the Harman's single factor test. The cross-sectional nature of the study and the smaller sample size make the findings difficult to generalize. Therefore, future replication should pursue a larger sample size that is more representative including samples from all regions of the country. The ratios pertaining to Libyan entrepreneurs being opportunity-driven (over 60%) while only a smaller portion (about 8%) being necessity-driven might be slightly skewed due to the mental stresses during the more hostile crisis times. Another limitation is related to the interpretation of the direct effects and mediation associations in this cross-sectional study. Future research is advised to conduct longitudinal studies with data that offers advantages of tracking changes over time and thus bring a truer picture of the studied entrepreneurship constructs that are in the processes of exploration phase (Davidsson, 2008).

Disclosure statement

The author of this article declares that there are not any competing financial, professional, or personal interests from other parties.

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