



Further exploring international entrepreneurial cognitions: The case of the Middle-East

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ABSTRACT

Scholars argue that at least some entrepreneurial cognition is global; but there is little evidence to test this claim in the Middle East. For this region, composed of several countries with distinct socioeconomic contexts, even baseline descriptions are rare. Indeed, some have used the case of Middle East to challenge the global nature of entrepreneurial cognitions among individual entrepreneurs. Using data from 577 entrepreneurs and professionals in Egypt, Iran, Saudi Arabia, and Turkey, four of the largest countries in the region, we study the extent to which entrepreneurial cognitions occur and explain an entrepreneurial mindset in this context.

1. Introduction

International entrepreneurship scholars long have claimed that there exists a global mindset among entrepreneurs operating in culturally distinct countries—hence, that entrepreneurial cognitions are cross-cultural (Busenitz and Lau, 1996; McGrath et al., 1992; Mitchell et al., 2000, 2002b). However, more recently, some researchers have challenged the existence of such a global mindset among individual entrepreneurs. For instance, by invoking the case of the Middle East, some scholars point to the embedded nature of entrepreneurship (e.g., importance of collective action) in driving entrepreneurial activity in these cultures, and conclude that “entrepreneurial cognition [is indeed] culturally bound” (e.g., Goktan and Gunay, 2011: 455). To help resolve this conflict and explain the extent that such cognition is bounded, we heed the more-recent call to “[build] significantly upon earlier work on entrepreneurial cognition” (Hayton and Cacciotti, 2013: 708) in studies of global entrepreneurial cognitions.

Earlier work enables comparison of results across some countries, but few studies investigate the extent to which a global mindset exists among entrepreneurs in the Middle East. The Middle East is sometimes treated as a region of the world composed of countries with similar socioeconomic contexts (e.g., emphasis on tradition, seniority). However, the region actually is composed of countries with distinct contexts and with sizable but not adequately understood entrepreneurial, business, and leadership activity (e.g., Bruton et al., 2008; Kabasakal et al., 2012). The distinct socioeconomic contexts in Middle-Eastern countries provides an excellent opportunity to further examine the degree to which there exists a global set of entrepreneurial cognitions. To the extent that

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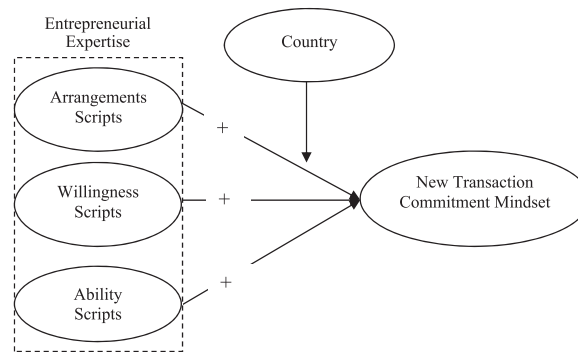


Fig. 1. Research model.

prior research results hold, then researchers can offer clarity regarding how these cognitions can be developed and mastered (e.g., Mitchell, 1994, 2005) by individuals in the Middle East to benefit themselves and entrepreneurship within their respective countries. To the extent that prior research results do not hold, then researchers will have begun to develop an understanding of the boundary conditions for existing theories, which then can enable future research to develop new and more-nuanced explanations.

2. Research model and literature review

The research model we investigate in this study is summarized in Fig. 1. Therefore, we next explain extant literature that provides the foundation for this research model.

2.1. Entrepreneurial cognition and the new transaction commitment mindset

In our study, we use two sets of concepts from prior research on entrepreneurial cognition. First, we utilize the concept of the new transaction commitment mindset (Mitchell et al., 2008; Smith et al., 2009). The new transaction commitment mindset is defined as “the extent to which an individual is psychologically committed to engaging in new socioeconomic interactions” (Smith et al., 2009: 820). This mindset is comprised of outcome expectancies, prior start-up experience, entrepreneurial capabilities, and the underlying motivations that drive entrepreneurial action (Mitchell et al., 2000, 2002a, 2002b, 2008).

Second, we use the concept of expert scripts, defined as “highly developed, sequentially ordered knowledge germane to a specific field” (Mitchell et al., 2000: 975), acquired through deliberate practice (Glaser, 1984; Mitchell, 2005). Domain-specific scripts, such as entrepreneurial scripts that make up entrepreneurial cognitions, help individuals to process information significantly better than the average person in the population (Ericsson et al., 1993), and thereby also help them to identify opportunities that others cannot see (Baron and Henry, 2010). Three sets of fairly inclusive scripts have been identified as *formative* constructs (Diamantopoulos and Winklhofer, 2001) that comprise entrepreneurial cognitions: arrangements, willingness, and ability scripts (Mitchell et al., 2000, 2002b). Arrangements scripts are those knowledge structures that individuals possess to make use of resources, contacts, and assets that are necessary to organize exchange relationships and form a new venture. Willingness scripts are those knowledge structures that motivate individuals to be receptive to engaging in economic activity. Ability scripts are those knowledge structures that individuals possess about the knowledge, skills, norms, and attitudes that are required to organize new economic activity.

Expert information processing theory suggests an expertise-to-behavior link: the more individuals possess domain-specific scripts, the more likely those individuals are to engage in behaviors linked to that domain (Warner, 1979). In the case of entrepreneurs, research indicates that individuals with higher levels of entrepreneurial-script-supported expertise are more likely to demonstrate an entrepreneurial mindset and commitment to engage in new transactions (e.g., Smith et al., 2009). Hence, such scripts help support the pursuit of opportunities.

To date, research that focuses on Middle Eastern countries—their socio-cognitive context and their links to entrepreneurial cognition—has not adequately examined the expert scripts-to-mindset link that may transcend culture. For example, some researchers challenge the global entrepreneurial-mindset idea by invoking a Middle Eastern collective socioeconomic culture to emphasize the group- versus individual-level nature of entrepreneurial activity in the region; and conclude that entrepreneurial cognition is indeed “culturally bound” (Goktan and Gunay, 2011: 455). Others argue that Middle Eastern countries each have distinct social, economic, cultural, and political contexts (Dhillon and Yousef, 2011; Kabasakal et al., 2012).

Additionally, most studies do not directly explore the extent to which the entrepreneurial expert script-to-mindset link at the individual level transcends these distinct contexts. Instead, these studies often focus on certain culturally focused perspectives (e.g., on influence of societal norms on entrepreneurial action) (e.g., Goktan and Gunay, 2011; Karimi et al., 2016). Also, when individual-level entrepreneurship is examined in the literature, these studies often focus on intentions, attitudes, or other judgment-based concepts among undergraduate students (e.g., Hattab, 2014; Kirby and Humayun, 2013); but they neglect the exploration of well-established, action-based concepts among practicing entrepreneurs, which then makes it difficult to compare the results with prior findings (Hayton and Cacciotti, 2013). It is for these reasons that we seek to investigate explicitly this likely, but underexplored, positive relationship between expert scripts in entrepreneurship, and the new transaction commitment mindset in the Middle-East Region.

2.2. The role of country

That entrepreneurial cognitions transcend various cultures does not mean that cognition is insensitive to all features of the socioeconomic contexts in which it is situated (Shaver, 2012). Indeed, the socially situated nature of cognition (Semin and Smith, 2013) suggests that individuals in a specific social setting are subject to certain common factors that influence commitment to new economic exchange when interacting with their entrepreneurial cognitions (Mitchell et al., 2011). For example, individuals are expected to adapt to specific yet common events (e.g., economic sanctions) occurring in their country (Haynie et al., 2010). Similarly, in each country, common factors such as human cultures, histories, and social attitudes are critical means through which human cognition is influenced (Busenitz et al., 2000).

Extant literature documents significant differences that exist among the socioeconomic contexts of Middle East countries. From a cultural standpoint, key dimensions of national cultures in these countries differ greatly. For instance, Iranian culture is more individualistic and enables greater levels of tolerance for uncertainty than in Egyptian, Saudi Arabian, and Turkish cultures (Javidan and Dastmalchian, 2003). The culture in Saudi Arabia stresses power relations and masculinity to a greater degree than in Egypt, Iran, or Turkey (Hofstede, 2001). Middle-East countries also differ from an economic standpoint. For example, economic affairs in Turkey are governed in a secular way (separation of regulations from religious affiliations), while economic affairs in Iran, Egypt, and Saudi Arabia are governed in part based on rules associated with distinct branches of Islam (Kabasakal et al., 2012). Iran has been under economic sanction, while Egypt, Saudi Arabia, and Turkey have not. Thus, for example, the World Bank (2018) suggests that existing conditions for starting and doing business are most favorable (e.g., fewer restrictive regulations) in Turkey, and are least favorable in Egypt.

From a situated cognitive view, although the factors briefly reviewed above are important individually, there is empirical evidence suggesting that mindsets arising from specific situations also ought to be viewed from a *macroscopic* perspective in which the totality of the situation controls its composite parts (Semin and Smith, 2013). Thus in this view, country level factors, although having specific effects, are expected also to merge to create *total* situations that affect thinking in their combined forms, manifesting in distinct *categories* of contexts (Vahidnia et al., 2017), providing key influences on the specific ways of doing business in each country. This leads us to wonder whether factors about the country in which an entrepreneur is operating, in a *macroscopic* sense, moderate the expected relationship between expert scripts and a new transaction commitment mindset.

3. Methods

3.1. Data collection

In our sampling method, we closely followed steps taken in prior research (e.g., Mitchell et al., 2000, 2002b; Smith et al., 2009) to increase the comparability of findings from Middle Eastern countries to research findings in other countries. One primary aim was to ensure that the same type of respondents used in prior research would be part of our sample. We started by using a purposive sample of both entrepreneurs and business professionals operating in Egypt, Iran, Saudi Arabia, and Turkey, as four of the five largest economies in the region. Prior research often includes both entrepreneurs and business professionals in studies of entrepreneurial cognitions for at least two reasons. First, both groups are included to ensure that sufficient variance exists in terms of dependent variables that capture entrepreneurial mindsets. Second, the two groups are included because entrepreneurial expert scripts not only are acquired through direct engagement in entrepreneurship by enterprising individuals, but also through involvement in key entrepreneurship-related tasks by business professionals (e.g., tasks in internal development projects, corporate entrepreneurship offices, venture capital firms, etc.). For instance, business professionals may help prepare or implement business plans, sit on venture boards, etc. (Mitchell, 1994; Mitchell et al., 2000) and can, as a result, possess entrepreneurial expertise that affects a new transaction commitment mindset. Including both groups thus enables researchers to capture entrepreneurial scripts and mindsets wherever they form.

A purposive sample is appropriate in international entrepreneurship research where sampling frames are not available for probability samples (McDougall and Oviatt, 1996). Respondents were identified through small business development centers, local chambers of commerce, and contacts provided by local business schools in each of the four countries. Respondents came from major cities in these countries—specifically, those operating in Cairo (Egypt); Tehran, Isfahan, and Tabriz (Iran); Riyadh, Mecca, and Medina (Saudi Arabia); and Istanbul and Ankara (Turkey). Local assistants in each of the four countries were utilized to personally deliver and retrieve a self-administrated structured survey from respondents who agreed to participate in the study. Approximately 32% of respondents were female. Furthermore, 43% were founders of businesses/entrepreneurs. The other respondents were business professionals who had not made the venture-creation decision.

The average age of respondents was 36 years old and the average business experience of respondents was five years. The entrepreneurs were significantly older ($p < 0.001$) than the business professionals (a mean age of 39 years versus 33 years). Additionally, there were fewer women entrepreneur respondents than business professional respondents (33% female entrepreneur respondents versus 41% female business professional respondents). These demographics are consistent with previous studies of entrepreneurial cognitions in other country contexts (Mitchell et al., 2000, 2002b; Smith et al., 2009). Similar to this prior research, these respondents came from various industries—e.g., food and agriculture, information and communication technology, management consulting, various engineering fields, and others.

To validate the survey instrument we first created the instrument in English, then translated it from English by a bilingual native of each country, and then back translated it into English by an independent bilingual speaker. We reconciled discrepancies by

consensus. The sampling process generated responses from 577 respondents, of which 495 were usable (determined by whether there were more than three [20%] missing values across the measures of key constructs). This final sample consists of 185 from Saudi Arabia, 145 from Turkey, 114 from Iran, and 51 from Egypt.

3.2. Measurement

New transaction commitment mindset was measured using the scale developed by Smith et al. (2009), which captures key aspects of this high-order construct using reflective indicators concerned with transacting experience; new business self-efficacy; transacting expertise; and venturing behavioral intention. The observed Cronbach's alpha of 0.78 is the same as that found by Smith et al. (2009). As in previous work, we find new transaction commitment mindset to be significant predictor of venture creation decision ($\beta = 0.196$, $p < 0.000$) in our Middle East context.

Arrangements, willingness, and ability expert scripts in entrepreneurship were measured as formative indicators using an accepted script-scenario construction model proposed by Read (1987) and adopted by Mitchell et al. (2000, 2002b) and by Smith et al. (2009). Paired script recognition and distracter cues (coded 1 when recognized and 0 when not) are used as formative indicators of an underlying cognitive script construct and summed into interval scales (Nunnally, 1978) indicating the likelihood or strength of script possession (Mitchell et al., 2000, 2002b). Please see Mitchell et al. (2000: 992) for the list of the formative indicators used for measuring each type of entrepreneurial cognitions. Country was measured using dummy variables, capturing the social situation (at the national level) in which our respondents operated. Age, measured with an interval scale, was included as a control.

3.3. Data Analysis

We used ANCOVA and hierarchical regression analysis. Following Mitchell et al. (2002b), and as appropriate with the use of independent formative indicators (Pedhazur and Schmelkin, 1991: 54), principal components factor analysis confirmed the dimensionality of each of the script constructs. Consistent with prior work (Mitchell et al., 2002b; Smith et al., 2009) the results of this analysis demonstrated three arrangements script dimensions (protectable idea, resource access, and resource possession); three willingness script dimensions (seeking focus, opportunity motivation, and commitment tolerance); and three ability script dimensions (venture diagnostic ability, ability-opportunity fit, venture knowledge). Analysis identified a fourth ability script dimension, venture success, captured with a single item: "The new venture stories I recall illustrate principles necessary for success." These results from the principal components factor analysis suggest that the meaning of the constructs is similar to that of the 11 other countries previously investigated in prior research (Mitchell et al., 2002b), when measured within the four Middle East countries investigated, reinforcing the idea that at least some entrepreneurial cognitions are universal (Mitchell et al., 2002b). External validity is evident by the finding that arrangements, willingness, and ability scripts explain 11% of the variance in New Transaction Commitment Mindsets in the four Middle East countries compared to 23% of the variance in other countries on the narrower measure of the venture creation decision (Mitchell et al., 2000). For the preliminary analysis of main effects, we summed these scales, as per previous research with these measures.

4. Results

ANCOVA results show both age and country to be significantly related to new transaction commitment mindset (Table 1). With respect to the main effects, arrangements scripts and willingness scripts are significant, but ability scripts are not. In comparison, a study conducted in Canada, USA, and Mexico (Smith et al., 2009), showed all three scripts to be significant predictors of new transaction commitment mindset.

Because Country was significant in the ANCOVA analysis, we examined our model at the country level using Hierarchical Regression analysis. Egypt was left out of this additional step because the sample size was small. Table 2 identifies stark differences by country.

In the Iran sample, only the arrangements scripts main effect was significant. In the Saudi Arabia sample, only the willingness scripts main effect was significant, but arrangements scripts was approaching significance ($p < 0.07$), which may be a statistical

Table 1
ANCOVA (DV= new transaction commitment mindset).

| | Middle East | |
|--------------|-------------|-------|
| | F | P |
| Age | 8.9 | 0.003 |
| Country | 3.1 | 0.77 |
| Arrangements | 6.0 | 0.003 |
| Willingness | 9.4 | 0.000 |
| Ability | 0.8 | 0.458 |
| R-square | 0.11 | |

Table 2
Hierarchical regression (DV= new transaction commitment mindset).

| | ALL | Egypt | Iran | Saudi Arabia | Turkey |
|------------------|---------|-------|---------|--------------|--------|
| Age (base model) | 0.14*** | | 4.7*** | 0.74 | 2.6** |
| RSQ (base model) | 0.02* | | 0.17*** | 0.00 | 0.05** |
| Arrangements | 0.17*** | | 5.0*** | 1.9^ | 0.54 |
| Willingness | 0.18*** | | 1.9^ | 2.1* | 3.2** |
| Ability | 0.05 | | 0.26 | - 0.19 | 1.9^ |
| Age | | | 4.2*** | 0.74 | 2.0* |
| RSQR | 0.09 | | 0.36 | 0.05 | 0.16 |
| Change RSQR | 0.07** | | 0.19 | 0.05* | 0.11** |

Note: *** p < .001; ** p < .010; * p < .05; ^ p < .07; RSQR for the base model (Age) is 2%.

power issue with a smaller sample size. In the Turkey sample, the willingness scripts main effect was significant and the ability scripts main effect was approaching significance (p. < 0.07). In contrast, all three main effects were significant in North America. We conclude from these results that while arrangements, willingness, and ability scripts have some relevance as constructs in the Middle East context, they manifest differently within countries. To better appreciate how differences manifest within country, we engaged in exploratory post-hoc analysis to examine differences at the sub-construct level: that is, by analyzing the dimensions of arrangements, willingness, and ability scripts.

In a post-hoc MANOVA analysis of cognition differences by country, we found significant differences. We provide the results of our post-hoc investigation of country differences in terms of arrangements scripts, willingness scripts, and ability scripts in Table 3 (with an explicit articulation of these results in the right-most column). Specifically, we observed significant differences for the arrangements cognitions factor protectable idea, where cognitions related to having a protectable idea were highest (most salient) in Egypt and lowest (least salient) in Iran. Significant country differences are observed for all three willingness scripts dimensions. Seeking focus was the lowest in Turkey and highest in Egypt. Opportunity motivation was significantly lower in Turkey than in the other countries, while commitment tolerance was significantly higher in Turkey and Iran than in Saudi Arabia or Egypt. Significant country differences also are observed for all four ability script dimensions. In Turkey, venture diagnostic ability was highest, but ability/opportunity fit was lowest. Venture knowledge was significantly lower in Iran and Turkey, but venture success was highest in those two countries. To assist in additional theory building, we engage in abductive explanation in the discussion section to help to account for these country differences.

5. Discussion

In this study, we further investigated the idea that there exists a global mindset among entrepreneurs that applies also to the Middle East. We tested for potential differences in entrepreneurial cognitions: comparing a set of countries in the Middle East with

Table 3
Post-hoc country differences analysis.

| | MANOVA Sig. | Country Means | | | | Post-hoc Investigation of Country Differences in Arrangements Scripts, Willingness Scripts, and Ability Scripts |
|------------------------------------|----------------|---------------|-----------------|--------|--------|--|
| | | Iran | Saudi Arabia | Turkey | Egypt | |
| Arrangements | | | | | | |
| Protectable Idea | 0.000 | 0.460 | 0.630 | 0.730 | 0.940 | Most important in Egypt, least importance in Iran. No difference between Saudi Arabia and Turkey. |
| Resource Access | 0.513 | 1.300 | 1.410 | 1.430 | 1.270 | No significant differences were observed. |
| Resource Possession | 0.496 | 1.300 | 1.260 | 1.290 | 1.130 | No significant differences were observed. |
| Willingness | | | | | | |
| Seeking Focus | 0.000 | 1.250 | 1.090 | 0.890 | 1.450 | Turkey significantly lower than others; Egypt significantly higher than Saudi Arabia and Iran |
| Opportunity Motivation | 0.001 | 1.260 | 1.350 | 1.010 | 1.450 | Turkey significantly lower than others. |
| Commitment Tolerance | 0.000 | 0.710 | 0.520 | 0.690 | 0.470 | Turkey and Iran significantly greater than Saudi Arabia and Egypt |
| Ability | | | | | | |
| Venture Diagnostic Ability | 0.000 | 1.370 | 1.490 | 2.060 | 1.450 | Turkey significantly greater than others. |
| Ability/Opportunity Fit | 0.002 | 1.370 | 1.480 | 1.210 | 1.710 | Turkey significantly lower than Saudi Arabia and Egypt; Iran Significantly lower than Egypt |
| Venture Knowledge | 0.001 | 0.710 | 0.960 | 0.760 | 1.040 | Turkey and Iran significantly lower than Saudi Arabia and Egypt. |
| Venture Success | 0.000 | 0.810 | 0.580 | 0.760 | 0.550 | Turkey and Iran significantly greater than Saudi Arabia and Egypt. |
| New transaction commitment mindset | 0.000 | 20.460 | 18.780 | 21.890 | 21.960 | Saudi Arabia is significantly lower in new transaction commitment mindset than Turkey and Egypt. |

those countries that are studied predominantly (e.g., Western, Educated, Industrialized, Rich and Democratic, or WEIRD). Overall, we found substantive similarity between the entrepreneurial cognitions of Middle Eastern entrepreneurs and those of the rest of the world. But we also found some cross-country differences. We next discuss the implications for research, practice and public policy.

5.1. Implications for research

One contribution of our research is that certain key theoretical assertions from prior research gain “credibility” through our analysis (Stinchcombe, 1968: 20). Specifically, the relative stability of the cognitive antecedents to the new transaction commitment mindset in the Middle East lend further credence to the idea that entrepreneurs worldwide tend to have a great deal in common in their thinking (Mitchell et al., 2002b). We therefore can suggest that the search for a possible ‘elixir of entrepreneurship’ continue, possibly to be built upon the mechanisms of within-group entrepreneurial knowledge structures (Mitchell, 1994; Mitchell et al., 2000, 2002b) that continue to be detected in international entrepreneurial cognition research.

We also draw attention to key finding regarding the differences we have documented. While we find that arrangements, willingness and ability entrepreneurial scripts explain 11% of variance in new transaction commitment mindset, prior research has found these scripts to explain between 22% and 35% of such variance in entrepreneurial outcomes (e.g., Mitchell et al., 2002; Smith et al., 2009). In part, the insignificance of ability scripts in the Middle East may be responsible for entrepreneurial scripts explaining a lower level of variance in new transaction commitment mindset. This possibility thus may suggest a greater propensity for necessity entrepreneurship (de Soto, 2011), where entrepreneurs may be motivated or forced to venture regardless of their ability. In this way, for entrepreneurial cognitions to play a strong role, the context is important. For example, it may be that Middle-East venturers must grapple with problems of ambiguity, complexity, or equivocality (Townsend et al., 2018) to a greater extent than those in contexts that had predominantly been utilized elsewhere. Thus, we suggest that a fruitful avenue for future research may be to study how individuals develop entrepreneurial expertise and mindsets under conditions of ambiguity, complexity, or equivocality where entrepreneurs, out of necessity, must still “show up” and create value.

We also found that different sub-dimensions of arrangements, willingness, and ability scripts impact the new transaction commitment mindset distinctly across the countries studied. These differences suggest that, while there may be high-level similarities in entrepreneurial cognition across countries, there are significant differences in the socially-situated salience of different aspects of those cognitions between countries (see e.g., Mitchell et al., 2011; Randolph-Seng et al., 2015). Although there is little theory to explain these differences currently, an abductive explanation to account for this observation is the notion of *situated expertise*. Indeed, the notion of field-specific expertise in any domain is explicitly built on the idea of *efficient* thinking and doing within that domain and its broader context (Ericsson et al., 1993). The idea of efficiency implies a medium, i.e., context, in relation to which something is fairly optimal. When the broader country-level contexts as total wholes (Vahidnia et al., 2017) vary distinctly from one another, the idea of *situated expertise*—implying situated efficiency and situated rationality—suggests that for efficient thinking and doing, domain-specific scripts must have a way to capture key information linked to their particular contexts—e.g., both in the development and enactment of expert scripts (Mitchell et al., 2017). Thus, future entrepreneurship research may adapt a socially situated view of entrepreneurial expertise where each particular set of scripts and their salience are studied further to provide a more nuanced understanding of how entrepreneurial expertise forms, operates, and impacts key outcomes in distinct (experimental or real) contexts. Doing so thereby also would enable researchers to unbundle further the microfoundations of socially situated entrepreneurial cognitions and their links to situated entrepreneurial action (Dew et al., 2015; Grégoire et al., 2011; Mitchell et al., 2011; Randolph-Seng et al., 2015; Vahidnia et al., 2017).

5.2. Implications for practice

Our results enable us to delineate further what steps potential entrepreneurs in the Middle East can take to develop their own entrepreneurial mindsets. That is, the “mysticism” (Mitchell, 1996) that often surrounds the practice of entrepreneurship is demystified through an explanation of how individuals in the four different countries of the Middle East can: (1) develop entrepreneurial cognitions and skills, and also can (2) understand where there might be distributed gaps in expertise and skills. In this way, these entrepreneurs can know how they can focus their efforts in undertaking the deliberate practice that is required for entrepreneurial expertise acquisition (Baron and Henry, 2010; Mitchell, 2005). Additionally, although age was only included as a control in our analysis, our results suggest that the strong influence of age may serve as more than simply a control variable to partial-out an alternative explanation; but rather be the driver of a primary explanation of an age-dependent entrepreneurial mindset.

5.3. Implications for public policy

It has been suggested that sociopolitical unrest in many Middle Eastern countries is linked to the high rate of youth unemployment and under-representation in entrepreneurial activity (de Soto, 2011). Presently, about 60% of the population in the region is under age 30 (Dhillon and Yousef, 2011). In some countries, e.g., Egypt (2006), up to 80% of the unemployed have been below age 30 (Roudi, 2011). Furthermore, each of the countries in the region that have experienced societal unrest had a median age of 24 or younger (Bowyer, 2013). Thus, the strong influence of age in the Middle East also has key implications for public policy. Individuals develop entrepreneurial expertise to create new value through deliberate practice often through either (1) direct engagement in entrepreneurship or (2) deliberate-practice-based entrepreneurship education, or both. Regarding the former, as one

World Bank (2007): 45) report shows, many entrepreneurial activities in the Middle East indeed “are operating at far from [the reach of young entrepreneurs] because of market failures that prevent them from obtaining access to credit, skilled labor, better technologies, and larger domestic and export markets.” Not being involved in such activities—e.g., lacking expert mentors—means difficulty for regional youth to develop expertise needed to create future new value (e.g., due to limited interaction with experts, and working with financial, technological, and informational infrastructure involved).

What appears viable, then, is promoting high-quality entrepreneurship educational public policy to help address the above-noted age-relevant gap in developing entrepreneurial expertise. To date, however, most educational programs focus on developing entrepreneurial intentions or positive attitudes toward entrepreneurship. Alternatively, the deliberate practice (Baron and Henry, 2010; Mitchell, 2005) school suggests that beyond promoting intention or attitudes, educational programs should enable effective practice, characterized by intensity, duration, and relevant content, in key aspects of entrepreneurship such that individuals can acquire competence in entrepreneurial performance. From a practical perspective, our results thus suggest the importance of prior research, which has articulated how such educational programs may be developed (e.g., Béchard and Grégoire, 2005; Mitchell and Chesteen, 1995; Morris et al., 2013).

5.4. Conclusions

In this study, we have found that some key global entrepreneurial cognitions also operate in the Middle East, and that the relevance and use of such cognitions helps to support the idea of an entrepreneurial mindset for entrepreneurs globally as a group. Also, we find that within-group entrepreneurial cognitions of individuals operating in different countries and generations differ significantly. A key limitation of our study, arising in part from lack of baseline descriptions of entrepreneurial cognitions in the region, is lack of specificity to study which particular cognitions are linked to specific socioeconomic factors at the country level. We invite future research to investigate this task and hope that our study offers help toward this aim.

Conflict of interests statement

We report that we are not aware of any direct or indirect conflict of interests associated with this research.

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