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ENTREPRENEURSHIP IN EMERGING MARKETS: AN EXAMINATION OF CAUSAL AND EFFECTUAL APPROACHES TO ENTREPRENEURIAL DECISION MAKING

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ABSTRACT

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Decision-making is constantly at the center of the entire entrepreneurial process. In a dynamic process as entrepreneurship, the entrepreneur always finds himself urged to make decisions that eventually impact business operation. This study intends to conceptualize how a certain set of structural control factors and entrepreneurial characteristics are at play in such a dynamic manner, eventually impacting the entrepreneurial approach which is followed by the entrepreneur throughout his entrepreneurial venturing. We hypothesized this decision making process is affected by some entrepreneurial characteristics; i.e., entrepreneurial self-efficacy, entrepreneurial identity, and fear of failure. The research suggests conceptual links between these entrepreneurial characteristics and a certain set of structural control factors; which consequently impact the decision to whether the entrepreneur follows a causal or effectual approach to start and run an entrepreneurial venture. We test in our study how entrepreneurial characteristics impact our dependent variable; entrepreneurial approach. We then test the same variables controlling for the structural control factors. Before we test our hypotheses, we conduct a factor analysis that tests whether causation and effectuation are distinct constructs. Our results confirm Sarasvathy (2001) and Chandler et al. (2011) definitions of effectuation as a construct comprising of four sub-dimensions. However, we contribute to the field through confirming that these sub-dimensions are distinct in that they all load separately to the contrary of Chandler et al. (2011) findings that one sub-dimension appears within both causation and effectuation. Our hypotheses receive strong support and we discuss the implications of such relationship especially when we control for the structural control variables and other demographics.

Keywords: *Entrepreneurial Self-efficacy, Entrepreneurial Approach, Effectuation,*

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CHAPTER ONE: INTRODUCTION

Interest in entrepreneurship as a universal human trend is widely established in the literature. As the impact of entrepreneurship on economic development is significant, what factors affect the entrepreneurial desire and how entrepreneurial development occurs is still a matter of debate in the field. According to the recent entrepreneurship literature, entrepreneurs follow one of two prevalent approaches when embarking upon new ventures; the synoptic or rational approach 'causal reasoning' and the spontaneous and improvised approach 'effectual reasoning' (Dew et al., 2009; Perry et al., 2012). Sarasvathy (2001) suggests in her theory of effectuation that most entrepreneurs, when trying to set up their new startups, instead of careful strategic planning and rigorous competitiveness analysis they revert to instinctive and effectual reasoning. Such entrepreneurs would make decisions based on available and accessible means and resources without necessarily having certain preset goals in mind. The theory of effectuation developed by Sarasvathy (2001) constitutes a paradigmatic shift in our perceptions of entrepreneurship but its literature is still nascent, as very few researchers have carried out empirical research and testing of the effectuation approach (Perry et al., 2012). Therefore, the need for further conceptual development and empirical testing and incorporating effectuation into existing entrepreneurial models and within different institutional contexts, other than the mainstream western context, is essentially significant.

We lay forth in this study our conceptualization by developing on several aspects of an earlier hypothesized model developed by the researcher (Al-Juma'i, 2014), testing our model through a series of relevant statistical tests, and eventually discussing and interpreting the results of these tests in light of the relevant literature. This study intends to investigate how a certain set of structural control factors; i.e., entrepreneurs' knowledge sources, sources of experience, motivation behind seeking entrepreneurship, institutional environment where they start and operate their ventures, and finally their access to needed resources through their networks, impact different entrepreneurial characteristics inside entrepreneurs; i.e., their entrepreneurial self-efficacy, identity, and fear of failure. We argue that the interaction between these structural control factors and entrepreneurial characteristics eventually affects the entrepreneurial approach entrepreneurs follow, whether causal or effectual. We test our conceptual model by sampling entrepreneurs from different emerging markets, mainly from the Middle East and North Africa (MENA) markets. According to the Global Entrepreneurship Monitor (GEM-MENA, 2010), respondents from several MENA countries scored among the highest rates in all the 55 countries studied by GEM in reporting high levels of

both entrepreneurial self-efficacy and fear of failure but low entrepreneurial intention to start up new entrepreneurial ventures (Rosinaite, 2013; GEM-MENA, 2010). We expect that such contrasting attributes make studying such population of entrepreneurs very interesting and relevant for the research knowledge base of effectuation theory in particular and the whole entrepreneurship research.

1.1 Research Objectives & Questions

This study will attempt to answer one broad research question. This question mainly investigates the decision making process impacting the entrepreneurial approach that entrepreneurs in emerging markets follow when starting up their entrepreneurial ventures. It examines such process through exploring the impact of several entrepreneurial characteristics on entrepreneurial behavior. We identify in our literature review chapter three entrepreneurial characteristics; i.e., *the entrepreneurial self-efficacy (ESE), the entrepreneurial identity,* and *fear of failure*. We then test how these entrepreneurial characteristics impact entrepreneurial behavior controlling for a set of structural control factors that we see previous research arguing they would have some effect on the entrepreneurial characteristics. These structural control factors as discussed later towards the end of our literature review are; *the knowledge source, the experiential source, the access to resources through networks, the institutional context, and the environmental trigger*. It is through testing our conceptual model, controlling for demographics and also these structural control factors, that we explore the entrepreneurial decision making process as all these variables interact within our model. Determining the nature of such decision making process and any existing relationships between the defined research variables will be accomplished by answering our research questions; how do the entrepreneurial characteristics, controlling for demographics and structural control factors influence the entrepreneurial approach entrepreneurs in emerging markets follow to start up entrepreneurial ventures?

1.2 Research Methodology

The process of this research is quantitative as it includes conducting analyses of primary data recorded through the distribution and collection of a number of descriptive questionnaires. Surveys were administered to a sample of 114 entrepreneurs from different emerging economies and mostly from within the Middle East and North Africa region. They were current and former entrepreneurs who are or have been founders, cofounders, owners, or serving on the boards of entrepreneurial ventures in the region. The data acquired through the completed questionnaires helped the researcher investigate the respondents'

perceptions of their decision making process upon embarking and operating their ventures. The research methodology could be summarized in the following steps:

a. Conducting an extensive review of all the relevant research literature to construct our conceptual framework and model as explained and illustrated earlier in previous chapter.
b. Developing of a robust research test instrument (attached herewith in Appendices 1 & 2) which included, among other questions, two validated scales that could allow for a reliable measurement of our dependent variable; entrepreneurial behavior (Chandler et al., 2011), and one of our main independent variables; entrepreneurial self-efficacy (McGee et al., 2009).
c. Building the research survey in one of the most reliable and user friendly online survey websites; surveygizmo.com, and uploading the survey questions in English and Arabic languages to be able to reach the research sample.
d. Validating the research instrument through conducting a pilot survey of 23 entrepreneurs from different countries in the region, which allowed for testing the instrument before final launch of the survey and after incorporating minor modifications in the wording of a few questions.
e. Launching the final research survey in English and Arabic languages on the online surveying website through a big scale campaign that followed a snowball approach to benefit from the use of several marketing channels including email databases and social media websites and applications.
f. Conducting a series of statistical tests that included a factor analysis and a series of multiple regressions, to test the research hypotheses and explore the relationships between all the control, dependent, and independent variables.

1.3 Research Significance

With the objective of examining what entrepreneurial characteristics and structural control factors affect entrepreneurial decision making and behavior in light of the causation and effectuation research stream, our research significance originates from the fact that it is an exploratory study where we expect to find out how these factors interact with each other. This study is a modest attempt to help add to the literature knowledge base about entrepreneurship in emerging markets, in particular, in the Middle East and North

Africa region. The research base knowledge about entrepreneurship and entrepreneurial decision making, especially with regard to recent theories such as effectuation theory is essentially nascent itself (Perry et al., 2012) let alone research within the MENA region. To our knowledge and through an exhaustive literature review, we were unable to find any literature on effectuation as an entrepreneurial approach in MENA. Therefore, our study could be considered a tipping point for researchers to further study the research subject based on a bigger sample that includes more entrepreneurs from different countries in the region.

One significant contribution of our study is our factor analysis test that we ran to further examine the entrepreneurial behavior constructs and to confirm the multidimensionality of our dependent variable, entrepreneurial behavior. Our factor analysis test results showed that causation and effectuation are two different constructs composed of multiple scale items that represent each construct and relevant sub-dimensions; 22 items in total with factor loadings above 0.5. Entrepreneurial behavior have been empirically proven in the literature by Chandler et al. (2011) through their development of the entrepreneurial behavior scale by running several factor analyses tests which finally showed that the entrepreneurial behavior is defined by two distinct formative constructs; causation and effectuation. Causation emerged as one construct; whereas the effectuation construct was found to be composed of three sub-dimensions; *flexibility*, *affordable loss*, *and experimentation*, and another shared sub-dimension of *pre-commitments* that loads on both causation and effectuation constructs as discussed later in our literature review. However, to the contrary from Chandler et al. (2011) definition of the effectuation sub-dimensions, our results showed that all items loaded distinctively on five components with the *pre-commitment* sub-dimension loading as a distinct construct and not being loaded on both causation and effectuation. Our factor analysis does not only confirm Chandler et al. (2011) definition of entrepreneurial behavior which is the most vetted empirical measure of causation and effectuation as entrepreneurial approaches in the field to date, but also expand on this definition and contribute by addressing a major issue that Chandler et al. (2011) and Perry et al. (2012) suggested for future research through showing that effectuation is made of four independent constructs.

Finally, as a Yemeni citizen, this study is very important to the researcher as it helps him contribute to the development of entrepreneurship in the country through the knowledge he gained from investing time and energy in pursuing his doctoral studies in Japan. We believe this study would help shed some light on

entrepreneurs' decision making process upon starting up and operating entrepreneurial ventures in emerging economies and what might determine or affect such process especially under the highly uncertain environments of these type of economies.

1.4 Assumptions

Prior to conducting this study, the researcher made the below main assumptions:

1. The respondents are going to provide, through the research test instrument, reliable and correct information that honestly reflect their personal perceptions on their entrepreneurial decision making behavior, their entrepreneurial characteristics and the relevant structural control factors.
2. The research methodology and the instrument that we developed for this study are reliable and valid to measure how the respondents' personal perceptions reflect and explain for the interaction between all studied relationships, controlling for the set of several conceptual factors, within the whole entrepreneurial process.
3. As the main unit of analysis in this research is the entrepreneur, the research sample selected and tested in this study is going to be representative of entrepreneurs in emerging markets which will provide solid grounds for exploring possible answers and implications of our research question.

CHAPTER TWO: LITERATURE REVIEW

We start our review of the literature by first looking at our main dependent variable; the entrepreneurial behavior, which deals with the approach entrepreneurs follow throughout their entrepreneurial endeavors. We then move to our independent variables which constitute the remaining parts of our conceptual model that we lay forth towards the end of this chapter.

2.1 Entrepreneurial Behavior

We define entrepreneurial behavior or approach as the state which exists within the entrepreneur and is triggered by entrepreneurial intention leading to the actual starting of the enterprise. Recent research in the field of entrepreneurship suggests that most entrepreneurs, when trying to set up their new startups, are reverting to instinctive and effectual reasoning instead of careful strategic planning and rigorous competitiveness analysis (Sarasvathy, 2001, 2008). As suggested by the literature, there are two approaches for starting up new ventures; the synoptic or rational approach (causal reasoning) and the spontaneous and improvised approach (effectual reasoning) (Dew et al., 2009; Perry et al., 2012). It is suggested that entrepreneurs either follow the standard approach of establishing their businesses after thorough planning which leads to the achievement of their preset goals, or they would improvise and make decisions based on available and accessible means and resources without necessarily having certain preset goals in mind.

Causal reasoning indicates that entrepreneurs follow, in the creation process of their new ventures, a synoptic approach of rational planning (Methé et al., 2000; Methé, 2014). This synoptic approach significantly includes the notion of planning for an ultimate goal to be achieved. This planning is mostly done through rigorous market research that entails the availability of organizational resources and time to be conducted. We assume that entrepreneurs in emerging markets will usually have a very limited access to the necessary resources needed when a causal approach is followed to start up new businesses. Tables (1) and (2) in the following pages provide us with two extensive conceptual comparisons of both causal and effectual logics. The entrepreneur in such uncertain market environments exploits a set of means when following an effectual approach (Sarasvathy, 2008) as follows:

- ***Who they are;*** (their personal traits, tastes, and abilities)
- ***What they know;*** (their knowledge, not necessarily about subject matter only), and;
- ***Whom they know*** (their social networks and connections)

Table 1: Comparison of Causation and Effectuation

Categories of Differentiation	Causation Processes	Effectuation Processes
Givens	Effect is given	Only some means or tools are given
Decision-making selection criteria	Help choose between means to achieve the given effect Selection criteria based on expected return Effect dependent: Choice of means is driven by characteristics of the effect the decision maker wants to create and his or her knowledge of possible means	Help choose between possible effects that can be created with given means Selection criteria based on affordable loss or acceptable risk Actor dependent: Given specific means, choice of effect is driven by characteristics of the actor and his or her ability to discover and use contingencies
Competencies employed	Excellent at exploiting knowledge	Excellent at exploiting contingencies
Context of relevance	More ubiquitous in nature	More ubiquitous in human action
	More useful in static, linear, and independent environments	Explicit *assumption* of dynamic, nonlinear, and ecological environments
Nature of unknowns	Focus on the predictable aspects of an uncertain future	Focus on the controllable aspects of an unpredictable future
Underlying logic	To the extent we can predict future, we can control it	To the extent we can control future, we do not need to predict it
Outcomes	Market share in existent markets through competitive strategies	New markets created through alliances and other cooperative strategies

Source: Sarasvathy (2001)

According to Sarasvathy (2008), the decision to start a new venture based on effectual reasoning is contingent on several principles that influence the decision making process towards seeking entrepreneurial action. These principles are:

- ***The bird-in-hand principle;*** a means-driven action, contrary to causal goal-driven, where the entrepreneur creates something new with existing means rather than finding new ways to accomplish given goals.
- ***The affordable-loss principle;*** a pre-commitment by the entrepreneur of what he could afford to lose rather than investing in calculations of expected returns to the venture.
- ***The crazy-quilt principle;*** forming partnerships with the stakeholders and garnering their pre-commitment to support the business venture, rather than carrying out rigorous competitive analyses.
- ***The lemonade principle;*** acknowledging and seizing contingency by leveraging surprises rather than trying to avoid and overcome them.
- ***The pilot-in-the-plane principle;*** focusing on the activities within the entrepreneur's control rather than limiting entrepreneurial efforts to trying to predict market trends.

Table 2: Extended Comparison of Causation and Effectuation Logics

	Causation	*Effectuation*
Nature of unknowns	Focus on predictable aspects of an uncertain future.	Focus on controllable aspects of an unpredictable future.
Market definition	Using techniques of analysis and estimation to explore and exploit existing and latent markets.	Using synthesis and imagination to create new markets that do not already exist.
Goal orientation	Seeking to identify the optimal alternative to achieve a given goal.	Allowing goals to emerge contingently over time.
Relation to uncertainty	Avoiding uncertain situations to the greatest possible extent.	Seeking uncertain situations in the hope of being able to exploit them.
Stakeholder relationships	Goal-oriented relationships with strategically- selected stakeholders	Means-oriented relationships with self-selected stakeholders
Market research	Pre-calculated and detailed competitive analyses for investigating the need for or interest in product or service.	Informal methods for investigating the need for or interest in product or service.

Source: Gabrielsson & Politis (2011) based on Sarasvathy (2001, 2008) and Sarasvathy & Dew (2005)

Although the recent entrepreneurship literature suggests that theoretically it is more logical to study causal and effectual approaches as a strict dichotomy (Sarasvathy, 2008: 16), we assume entrepreneurs would usually use both causal and effectual approaches combined together where the preference for a specific approach might depend on the entrepreneurial expertise. Experienced entrepreneurs will usually tend to use a combination of both approaches whenever it fits their business model, to the contrary of novice entrepreneurs who arguably follow a causal approach (Dew et al., 2009). We intend to study the entrepreneurial approach dependent variable based on the dimensions that Chandler et al. (2011) identified as illustrated in Table (3) in chapter 3. The following dynamic model of effectuation in Figure (1) as adopted from Sarasvathy (2008) will also help inform our conceptual work in this research.

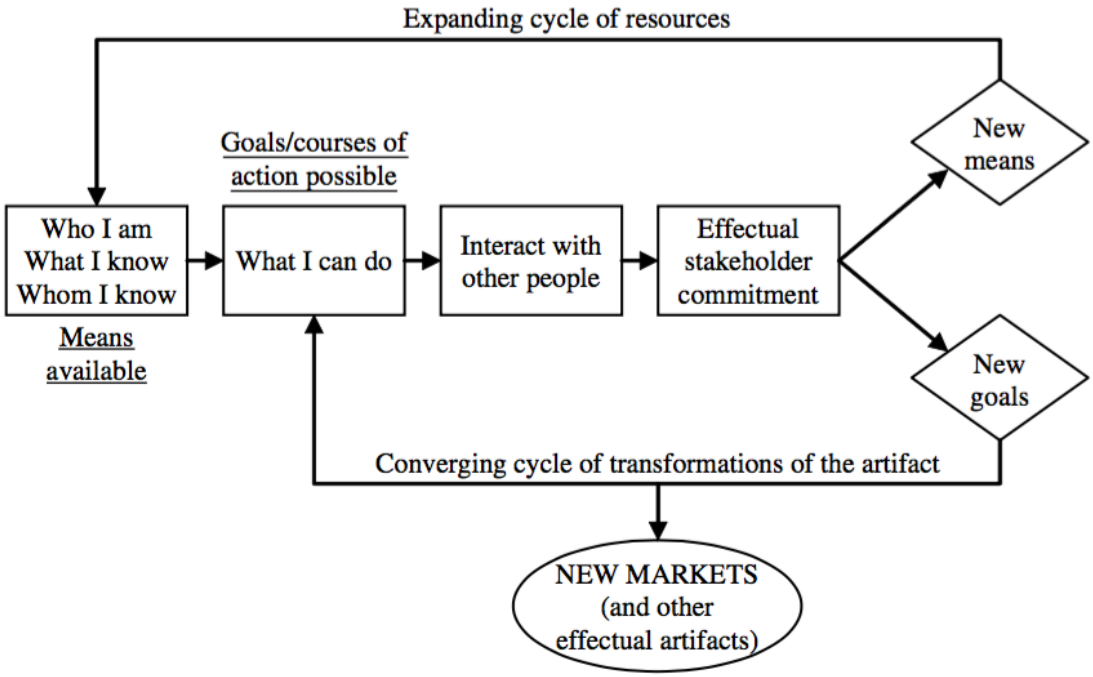


Figure 1: Dynamic Model of Effectuation

Source: Adapted from Sarasvathy (2008)

According to Perry et al. (2012) extensive literature review on the theory of effectuation, the significance of the theory emanates from its proposition of individuals' behavior in situations where causal approach assumptions are absent. They stated that very few researchers have empirically tried to test the theory ever since its introduction. Nevertheless, they concluded that the lack of research could be greatly attributed to how the concept of effectuation challenges the conventional established body of research around the causal approach in entrepreneurship field, and how difficult it would be for researchers to develop and validate effectuation measures. Chandler et al. (2011) developed one of the very few available, reliable and valid scales of causation and effectuation in the literature, with Chronbach alphas ranging between 0.70 and 0.86. They defined and examined both causation and effectuation as two distinct formative constructs, where the effectuation construct was found to be composed of three independent sub-dimensions; *experimentation*, *affordable loss*, and *flexibility*, and also another sub-dimension; *pre-commitments and alliances*, that loads on both effectuation and causation constructs. We included Chandler et al. (2011) scale in our research instrument as illustrated later in chapter three in order to solicit our sample perceptions on their decision making process in their entrepreneurial endeavors. Therefore, we define our dependent variable,

entrepreneurial behavior, in line with the research as comprised of five dimensions; *Causation*, *Pre-commitments*, *Flexibility*, *Affordable Loss*, and *Experimentation*.

2.2 Entrepreneurial Characteristics

The main research focus of our study is concerned with how a certain set of entrepreneurial characteristics affect entrepreneurs approach to strategic decision making. We first turn our attention to examining and defining these entrepreneurial characteristics before we move to examine what factors may shape these characteristics. These factors will act as control variables in our study.

2.2.1 Entrepreneurial Self-efficacy (ESE)

Based on the premises of social learning theory (Bandura, 1977, 1982), the concept of self-efficacy deals with the individual's perception of how competent they are to "execute courses of action required to deal with prospective situations" (Bandura, 1982, p. 122). Self-efficacy beliefs can influence the thought patterns and emotional reactions, as well as the choice and preparation for activities (Ajzen, 1991). It becomes more accurately predictable when studied in a social system where the behavior is evaluated (Bandura, 1977) and this behavior, i.e., entrepreneurship, is culturally legitimate (Klyver & Thornton, 2010). Ajzen (1991) contended that the perceived behavioral control, one of the antecedents of intention he identified in his theory of planned behavior, is most compatible with the concept of self-efficacy suggested by Bandura (1977, 1982). In his studies he would rather use the term Self-efficacy interchangeably with the term Perceived Behavioral Control. The other antecedents of intention are attitude towards behavior and subjective norms.

Entrepreneurial self-efficacy (ESE), the individual's perceived competence to start a new entrepreneurial venture, is a construct that could measure the confidence and belief of an entrepreneur in his ability to successfully start up a new business (Boyd & Vozikis, 1994; McGee et al., 2009; Karlsson & Moberg, 2013). However, the literature of entrepreneurial self-efficacy includes different definitions, dimensions, and also scale instruments that could measure it (McGee et al., 2009). McGee et al. developed a multi-dimensional, reliable and valid instrument, with Chronbach alphas of 0.80 to 0.91, to help measure entrepreneurial self-efficacy through identifying five ESE dimensions which could explain for the behavior of nascent entrepreneurs. They found that nascent entrepreneurship and these dimensions were positively

related and that the increased confidence of nascent entrepreneurs could be measured through entrepreneurial self-efficacy. These dimensions that we will use for our ESE variable are broadly defined as follows:

a. Searching

(1) Creating new ideas for products/services

(2) Identifying the need for them

(3) Designing them to the satisfaction of potential customers

(4) Making a sale

b. Planning

(1) Estimating customer demand for new products/services

(2) Determining competitive prices

(3) Estimating necessary funds to start business

(4) Designing effective marketing campaigns

c. Marshaling

(1) Getting others on board

(2) Networking

(3) Clear communication

d. Implementation of human resources

(1) Hiring

(2) Supervising and training

(3) Managing and delegating

(4) Leading and motivating employees

e. Implementation of financial resources

(1) Keeping financial records

(2) Managing financial assets

(3) Reading financial statements

(4) Finding financial resources/ funds

Entrepreneurial self-efficacy is influenced by the acquisition of management tools and exposure to entrepreneurial situations (Krueger & Carsrud, 1993; Fayolle et al., 2006a). It could be developed and

enhanced by experiences of mastery, vicarious or observational learning, verbal or social persuasion, and judgments of emotional or physiological states (Bandura, 1977, 1982; Boyd & Vozikis, 1994). Mastery experiences appear to be the most effective method to develop self-efficacy, as individuals tend to learn from the recurrence of their achievements (Bandura, 1977, 1982; Boyd & Vozikis, 1994). However, when their achievements are easily attained, failure tends to quickly discourage them and affect their self-efficacy (Boyd & Vozikis, 1994). Also, as learning about entrepreneurship enhances individuals' self-efficacy, it could concurrently decrease their intent to start up new businesses (Krueger & Carsrud, 1993).

2.2.2 Fear of Failure

Failure is usually defined as the condition or fact where some desired result or end could not be achieved due to insufficient performance of a significant task by an individual or the fact that things in a certain situation did not go well as expected (Politis & Gabrielsson, 2009). Fear could have a significant influence on individuals' motivation to achieve their goals and might also inhibit their business aspirations (Burnstein, 1963). Although the recurrence of failure in the process of new venture creation should be seen as an accepted and natural outcome (Politis & Gabrielsson, 2009), the decisions that lead to exploiting a business opportunity or not are affected by fear of failure (Welpe et al., 2012). Such fear varies based on entrepreneurial experience, as habitual entrepreneurs view failure as an integral aspect of the entrepreneurial process (Politis, 2008).

Cope (2011) indicated that previous entrepreneurial experience, particularly with venture failure, could constitute a distinctive learning experience where entrepreneurs learn to positively view failure. He argued that such learning experiences strongly impact the entrepreneur's knowledge leading to his recovery and re-emergence from failure. Cope also argued that Learning from failure also increases the readiness of the entrepreneur for future entrepreneurial activities. Politis & Gabrielsson (2009) used theories of experiential learning to examine why and how some entrepreneurs view failure more positively than others. Through surveying entrepreneurs who have already started new ventures, they found that prior startup experience is strongly associated with a more positive attitude towards failure. The experience from a previous business closure, according to Politis & Gabrielsson, was also found to positively affect entrepreneurs' attitude towards failure, and entrepreneurs' experiences with closure out of poor performance were deemed very valuable to their learning compared to closure for personal reasons.

McGregor & Elliot (2005) argued that fear of failure is a self-evaluative framework in which failure is an indicator of overall incompetence where the self is feared to be rejected and abandoned by significant others. Recognizing that experiencing shame causes severe distress, the individual learns to orient toward failure and seeks to avoid it in achievement situations. According to McGregor & Elliot, individuals high in fear of failure reported more shame upon a perceived failure experience than did individuals with low fear. Furthermore, shame was found to be a distinct emotional outcome of perceived failure for those high in fear of failure. They also argued that, when possible, individuals with high fear of failure will tend to avoid achievement situations, as they recognize failure as an unacceptable event that negatively impact their self-worth and relational security. Such individuals are thought to view achievement events not as learning opportunities that could improve their competence or competition against others, but rather as intimidating experiences where the whole self is at stake. Such view is responsible for the vigilant orientation to failure and recurrent avoidance of it in achievement situations (McGregor & Elliot, 2005).

We define fear of failure in line with Atkinson's definition (1957) as the capacity or propensity to experience shame or humiliation as a consequence to failure. However, we expand the definition to include experiencing not only emotional consequences but also financial and entrepreneurial risks. Therefore, we intend to study three dimensions of the fear of failure variable as follows:

a. Reputational consequences risks and fears

(1) Shame or humiliation in front of significant others

(2) Shame or humiliation in front of close social circles

(3) Shame or humiliation in front of business peers and competitors

b. Financial consequences risks and fears

(1) Suffering substantial financial losses of personal possessions and assets

(2) Suffering substantial financial losses of family possessions and assets

c. Entrepreneurial death risks and fears

(1) Inability of pursuing other businesses after public failure

Hence, we expect that, based on the reviewed literature, fear of failure will directly affect the preference for a certain entrepreneurial approach as the entrepreneur delves into the unknown, uncertain world of business venturing and attempts to minimize the risks of any potential failure.

2.2.3 Entrepreneurial Identity

Entrepreneurial identity is mostly studied based on the premises of the social identity theory (Tajfel & Turner, 1979), which provides a social psychological analysis of how an individual cognitively identifies himself as a member of a social group (Hogg, 2006). Social identity theory could help better explain how entrepreneurs share different identities that affect not only the creation process but also the outcomes of their entrepreneurial ventures (Fauchart & Gruber, 2011). While what motivates entrepreneurs to seek entrepreneurial endeavors is still a matter of debate in the field (Murnieks & Mosakowski, 2007) and almost unexamined (Sarasvathy, 2008), the classical entrepreneurship theory contends that entrepreneurs are mainly motivated by monetary gain and profit maximization (Schumpeter, 1942; Stanworth & Curran, 1976; Fauchart & Gruber, 2011). Yet another key motivation could be their need to realize their unique self-conceptions and identities as entrepreneurs (Murnieks & Mosakowski, 2007). Entrepreneurs usually associate their decisions and behaviors based on who they are and what entrepreneurial roles they identify with (Sarasvathy, 2008).

Fauchart & Gruber (2011) proposed, based on the social identity theory, that entrepreneurs or "founders" share three pure social identities as Darwinians, Communitarians, or Missionaries, that explain the different meanings and motivations those entrepreneurs associate with their entrepreneurial endeavors. Darwinians are typical classic entrepreneurs who seek monetary gain by seizing opportunities and competing with others and accordingly feel successful as they maximize profits for their ventures. Communitarians are those entrepreneurs who start up their ventures around a certain community based on perceived opportunities of mutual benefit, as they serve their community and receive support in their entrepreneurial endeavors. Success to communitarians is gained from creating value for their communities and therefore feeling respected as useful members. The third identity; missionaries, are entrepreneurs who seek opportunities that help them realize their mission or cause to serve the common good of their society. Missionaries view their success in terms of constantly getting their vision across to more members of their society who support its implementation leading to a better world for all. Although these identities are

distinct from one another, some founders are believed to have "hybrid" identities with combined elements from more than one identity. Also, Fauchart & Gruber (2011) argued that entrepreneurs' type of identity affect their decisions on what they view as relevant, based on their meanings, of market segments, customer needs, resources and capabilities.

Based on Fauchart & Gruber (2011) typology, Alsos et al. (2016) in one of the first studies in the recent effectuation literature to examine how entrepreneurs' social identities could affect their preference for causal and effectual approaches upon pursuing entrepreneurial endeavors. They studied a sample of 350 Norwegian new firms that were registered in 2013, only one year before they collected their data. Their results suggested that both darwinians and missionaries have a predominant preference for causal approach, whereas Communitarians follow an effectual approach in their entrepreneurial decisions and actions. They contended that although both darwinians and missionaries seek entrepreneurial endeavors for different motivations and meanings, they pursue a predefined end goal which could explain their preference for following a causal reasoning. While darwinians work towards monetary gains and missionaries strive towards political causes, communitarians seek mainly to serve their communities and would rather change courses of action to achieve mutually beneficial ends. Nevertheless, Alsos et al. found that communitarians would also adopt some causal behaviors, which they attributed to the fact that causation has been an established reasoning when embarking upon new ventures. Their last finding was in line with Fauchart & Grubers' (2011) that identities are not mutually exclusive and would rather overlap making for hybrid social identities of entrepreneurs.

Stanworth & Curran (1976) contended that entrepreneurs define their entrepreneurial roles in terms of different sets of meanings, forming the following latent social identities:

a. The 'Artisan' Entrepreneur

Artisan entrepreneurs are mainly intrinsically motivated as they are mostly focused on coming up with the best quality product or service, being autonomous and free to choose whoever joins their team, and enjoying some status within their workplace. While these meanings predominate the artisans' entrepreneurial roles, other aspects such as income, monetary gain, and growth are secondary motives,

as artisans will still need to generate income and profit to be able to continue providing value to their customers.

b. The 'Classic' Entrepreneur

Classic entrepreneurs share the classical definition of entrepreneurs who are mainly motivated by monetary gain and profit maximization (Schumpeter, 1942; Fauchart & Gruber, 2011). They basically define their entrepreneurial roles in terms of how much profits they could make while maintaining the growth and expansions of their ventures as well, which implies that intrinsic motivation is secondary to classic entrepreneurs.

c. The 'Manager' Entrepreneur

Manger entrepreneurs are mainly concerned with being recognized as excellent managers by significant others, not only their team but also other business partners and competitors. They are also most motivated by the idea of passing on such legacy of excellence in their ventures and subsequent success to their heirs, guaranteeing their heirs security.

We define entrepreneurial identity based on Stanworth & Curran (1976) typology of such identity into three latent identities that we expect to find in entrepreneurs as they seek entrepreneurial endeavors. As previous research suggests (Alsos et al., 2016), we expect to find that identity would come to directly affect entrepreneurs' decisions and actions and therefore following either causal or effectual approaches.

Based on the reviewed literature, we present below our first main research hypothesis and its sub-hypotheses.

H1 Entrepreneurial Characteristics will have a direct effect on the Entrepreneurial Behavior of entrepreneurs in emerging markets

H1a Entrepreneurial Characteristics will have a direct effect on the Causation dimension of Entrepreneurial Behavior

H1b Entrepreneurial Characteristics will have a direct effect on the Pre-commitments sub-dimension of Effectuation

H1c Entrepreneurial Characteristics will have a direct effect on the Flexibility sub-dimension of Effectuation

H1d Entrepreneurial Characteristics will have a direct effect on the Affordable Loss sub-dimension of Effectuation

H1e Entrepreneurial Characteristics will have a direct effect on the Experimentation sub-dimension of Effectuation

2.3 Structural Control Factors

As you recall, the main research focus of our study on how entrepreneurial characteristics impact the decision making approach that entrepreneurs follow. After examining and defining our entrepreneurial characteristics earlier, we must examine what factors may shape these characteristics. These factors will act as control variables in our study.

2.3.1 Knowledge Source

The first of our structural control factors is the entrepreneur's source of entrepreneurial knowledge from which he had learned and might still be learning how to pursue entrepreneurship. As Drucker (1985) suggests, entrepreneurship is a "practice of innovation" that is "neither a science nor an art" but rather a knowledge base that can be learned like any other professional practice. A broader definition of the domain of entrepreneurial education according to Hindle (2007) reads as "the knowledge transfer about how, by whom, and with what effects opportunities to create future goods and services are discovered, evaluated and exploited". Fayolle et al. (2006a) also suggest that it is any pedagogical program or educational process that deals with the enhancement of certain entrepreneurial skills and personal attitudes, without necessarily focusing only on the immediate creation of new ventures.

Aldrich and Ruef (2006) identified three key entrepreneurial knowledge sources of nascent entrepreneurs; learning from work experiences, learning from experts, and learning by copying and imitating others. Previous work experiences help entrepreneurs build important connections and relevant organizational knowledge while also allowing for accumulating an industry-related knowledge base. Learning from working with experts, including those from entrepreneurs' network ties, provides nascent entrepreneurs with a practical, hands-on knowledge source. The last knowledge source Aldrich and Ruef defined was learning by

copying and imitating existing practices and capabilities that have already proven to be successful, common, and coming from incumbent organizations in the environment.

Research indicates that entrepreneurship could be taught or at least encouraged through entrepreneurial education (Gorman et al., 1997). Although, according to Ronstadt (1990), the way entrepreneurial or other traditional business education impacts entrepreneurs remains ambivalent, yet there are still valid indications that entrepreneurs who receive such education could perform better than others, as it expands their knowledge and informs their decisions when they embark on their entrepreneurial activities. For the purposes of this paper, we define the knowledge source as any form of entrepreneurial and/or business education or learning that the entrepreneur might have already attained or is currently receiving through different knowledge sources. We break these sources into two main categories:

a. Entrepreneurial learning through education

(1) Formal education (*school, undergraduate, graduate studies*)

(2) Specialized training (*business & entrepreneurship courses, online courses*)

b. Entrepreneurial learning through work

(1) Working at family business

(2) Working with/ helping close friends in their businesses

(3) Working at other companies and organizations

We intend to study two dimensions of the knowledge source variable. The first dimension deals with determining the type of knowledge source to which the entrepreneur attributes most of his entrepreneurial knowledge prior to starting his first business venture. The second dimension deals with determining the type of knowledge source the entrepreneur perceives as being instrumental to his business operation subsequent to starting his venture.

To study the impact of entrepreneurship education on actual entrepreneurial activity, entrepreneurial intention, and self-efficacy, Noel (2001) surveyed three groups of university graduates who graduated within a period of 8 years. They were entrepreneurship majors, non-entrepreneurship business majors, and non-business majors. Entrepreneurship graduates were found to have opened more businesses than graduates from other groups. Although entrepreneurial intention was also higher among entrepreneurship

graduates as they intended to start new ventures within two to five years, self-efficacy was associated with neither actual entrepreneurial activity nor intention. Another study by Farashah (2013) examined the process of impact of entrepreneurship education and training on attitudes toward entrepreneurship, perception of social norms, self-efficacy and entrepreneurial intention of Iranian individuals. He argued that the likelihood of entrepreneurial intention increases by 1.3 times after completion of one entrepreneurship course. He also demonstrated that education and training, self-efficacy, fear of failure, entrepreneurs' status in society, and desirability of entrepreneurial career, are significant predictors of entrepreneurial intention.

Fayolle et al. (2006a) modeled the development of entrepreneurial intention through pedagogical processes and learning contexts using a framework developed mainly on the basis of the theory of planned behavior (Ajzen, 1988, 1991). They found that while entrepreneurship education had a strong measurable impact on the entrepreneurial intention of students, it had a positive yet not very significant impact on their perceived behavioral control or self-efficacy. In another study and also based on the theory of planned behavior, Fayolle et al. (2006b) assessed how entrepreneurship education programs could influence students' entrepreneurial attitudes and intentions. They surveyed students before and after a 3-day seminar on entrepreneurship following a Specialized Master in Management at a business school. Their results suggested that entrepreneurship education programs could have varying strong positive effects on some students, depending mainly on their background (i.e., age, gender, entrepreneurial background and exposure) and initial perspectives on entrepreneurial intention. Entrepreneurship education had the most positive impact on students with the lowest entrepreneurial intentions, and negatively impacted the students with highest entrepreneurial intentions. Entrepreneurship education also actually decreased the level of entrepreneurial intention for students with no exposure to entrepreneurship or entrepreneurial situations.

Learning about entrepreneurship enhances individuals' self-efficacy (Krueger & Carsrud, 1993), as when a person has relatively little knowledge about the behavior, self-efficacy may not be particularly relevant or realistic (Ajzen, 1991). Entrepreneurial learning may have a positive impact on self-efficacy (Fayolle et al., 2006a; Karlsson & Moberg, 2013) while the impact of entrepreneurial self-efficacy may depend on several factors such as age, gender, entrepreneurial background and exposure (Wilson et al., 2007; Fayolle et al., 2006b). Formal business and entrepreneurial education, just as any other type of education, follow a

pedagogical path that encourages entrepreneurs to rigorously plan for their new or existing business ventures (Dew et al, 2009; Sarasvathy, 2001, 2008). Hence, such education impacts the preference of these entrepreneurs of causal reasoning over effectual logic when they consider starting their new ventures. In reality, entrepreneurs would usually use both causal and effectual approaches combined together where the preference for a specific approach might depend on the entrepreneurial expertise, yet, theoretically it is more logical to study causal and effectual approaches as a strict dichotomy (Sarasvathy, 2008: 16). Based on the reviewed literature, we note a conceptual link between the knowledge sources and the levels of entrepreneurial self-efficacy.

2.3.2 Experiential Source

Entrepreneurial Experience is broadly defined as the level of experience and knowledge the entrepreneur has accumulated prior to starting up a new venture or after setting up multiple businesses. Such experience varies from one entrepreneur to another; those setting up their first or second business venture are usually considered novice entrepreneurs, while others with three or more ventures are habitual entrepreneurs (Politis, 2008). Exposure to entrepreneurial situations, and acquisition of management tools and experiences impact entrepreneurial self-efficacy (Krueger & Carsrud, 1993; Fayolle et al., 2006a). Other aspects of entrepreneurial experience such as experiences of mastery and vicarious or observational learning could also substantially develop and enhance entrepreneurial self-efficacy (Bandura, 1977, 1982; Boyd & Vozikis, 1994). Mastery experience is the most effective method to develop self-efficacy, since individuals tend to learn from the recurrence of their achievements (Bandura, 1977, 1982; Boyd & Vozikis, 1994).

Politis (2008) studied a sample of 231 Swedish entrepreneurs (101 novice and 130 habitual) to examine how prior entrepreneurial experience could act as a learning source in terms of how both types of entrepreneurs would cope with liabilities of newness, prefer to follow an effectual approach, and view failure. Novice entrepreneurs showed higher preference for creating new ventures in industries were they had prior experience compared to habitual entrepreneurs. Nevertheless, habitual entrepreneurs were found capable to cope better with liabilities of newness such as the uncertainty associated with new organizational functions in their new businesses. Most importantly, habitual entrepreneurs showed higher preference for the effectual approach in terms of favoring uncertainty and informal approaches of

marketing their new products and services. Politis cautiously argued that preference for effectuation increases as the number of entrepreneurs' ventures increases. Finally, habitual entrepreneurs viewed failure more favorably considering it a key learning source that helped them in later stages of their entrepreneurial endeavors, whereas novice entrepreneurs showed higher yet not significant avoidance of failure.

Prior experience in setting up new businesses is considered a major learning source for entrepreneurs in the literature (Politis, 2008). We define the experiential source as the source or combination of the following sources from which the entrepreneur might have accumulated his entrepreneurial and/or professional experience:

a. ***Experience through working at family business***
b. ***Experience through working at previous personal business***
c. ***Experience through working at other companies and organizations***

Further, we intend to study four dimensions of the experiential source variable. The first dimension deals with determining the source or sources of entrepreneur's experience prior to starting up his business venture. The second dimension deals with determining the level of entrepreneur's business experience; his experience in founding one business venture or more, and his success and failure experiences in running businesses based on the number of successful and closed businesses.

Following effectuation as an entrepreneurial approach, entrepreneurs will revert to exploit any available means including their experience to start up and maintain business ventures (Sarasvathy, 2001 & 2008). Nonetheless, the causation approach compels entrepreneurs to carefully set plans for their new or existing ventures (Dew et al, 2009; Sarasvathy, 2008). These approaches are not mutually exclusive, entrepreneurs usually use a combination of both approaches; however, their entrepreneurial experience might be pivotal to the preference of a certain approach (Sarasvathy, 2008). Novice entrepreneurs would follow a causal approach, while habitual entrepreneurs would rather use both causal and effectual approaches together as deemed fit (Dew et al., 2009).

Hence, we note a conceptual link between the experiential source, based on the reviewed literature, as well as the level of experience with the different levels of entrepreneurial self-efficacy.

2.3.3 Access to Resources Through Network

Acquiring resources required for the creation of new business ventures is inherently a difficult task for entrepreneurs, let alone those in environments where resources are scarce and unattainable without heavy negotiation and convincing of resources owners by the entrepreneur (Zhang et al., 2010). In environments that are characterized by institutional voids and corruption such as emerging markets, access to resources through social networks provide cost-effective alternatives to seeking economic endeavors at marginal or no cost (Granovetter, 2005). Connections within social networks among other aspects eventually shape the entrepreneur's knowledge about seeking entrepreneurial endeavors, as nascent entrepreneurs mainly rely on their networks' knowledge when navigating and selecting feasible opportunities and variations of potential products or services (Aldrich & Ruef, 2006). However, according to Aldrich & Ruef (2006) such dependence may hinder these entrepreneurs' ability to pursue "entrepreneurial departures from the norm" or unique methods of doing business and offering value.

Social networks and their influence on economic behavior and outcomes are broadly studied in the literature based on the social network and strength of social ties theories (Granovetter, 1973, 2005; Zhang et al., 2010; Kozan & Akdeniz, 2014). Granovetter (1973) defines the strength of interpersonal ties; strong and weak, in terms of the time spent, emotional intensity, mutual trust, and reciprocal services between individuals within that social tie. Such strength of ties become very important as it affects the flow of information within networks and therefore knowledge regarding opportunities (Granovetter, 1983). According to Granovetter's concept of strength of weak ties (1973, 1983 & 2005), weak ties allow for the exchange of and access to new ideas, information, and resources more efficiently than stronger ties. He contends that strong ties such as close family and friends typically share the same overlapping knowledge as they spend much time together and move in the same social circles. In contrast, weak ties of distant friends and acquaintances move within different social circles and networks and therefore share unique information and have access to other contacts than those of strong ties.

One of the means identified by effectuation theory; "whom I know", defines how the entrepreneur's social network helps him gain access to resources, opportunities, and alternatives, irrespective of the strength of such social ties, eventually impacting new businesses performance (Sarasvathy, 2008). Entrepreneurs tend to build

new social networks as they progress in growing their businesses, since they need access new resources, markets, investors and information which are mostly reached by expanding their networks and connections (Aldrich & Ruef, 2006). Although strong ties could provide access to finance and low-cost human resources particularly at the early stages of venture creation, such contribution could be highly institutionally and culturally context dependent (Peng, 2004; Aldrich & Ruef, 2006).

In addition to strong and weak ties of family, friends, and acquaintances, entrepreneurs build their networks through relationships with formal entities and channels of banks, public and private entities, chambers of commerce, and other professional agencies (Veciana, 2007). According to Veciana, building and maintaining such inclusive network is essential for entrepreneurs as they seek to acquire access to a diverse set of resources in their entrepreneurial endeavors. We define entrepreneurs access to resources through network in line with the literature, as the extent to which the entrepreneur depends on his social network to acquire resources. We examine such dependence in terms of the strength of the entrepreneur's following social circles:

(1) Close Family (*e.g., parents, spouse, siblings, close cousins, close in-laws*)

(2) Close friends (*e.g., close colleagues, classmates*)

(3) Extended Family (*e.g., distant relatives, distant in-laws*)

(4) Distant Friends (*e.g., distant colleagues, friends of friends, acquaintances*)

(5) Formal channels (*e.g., public & private institutions, banks, chambers of commerce*)

Although it is not of this study objectives to study the access to resources variable through conducting a network analysis, we intend to study this variable by analyzing the following dimensions:

a. Network running businesses (*Network connection as owner or cofounder of a business venture****)***

b. Access to finance through network (*Acquiring financial resources through network****)***

c. Access to human resources through network (*Acquiring human resources through network****)***

d. Access to market & customers through network (*Entering markets & attracting customers through network****)***

While entrepreneurs get access to information and resources and also acquire knowledge about potential opportunities through their networks (Veciana, 2007), entrepreneurial self-efficacy as defined by McGee et al.

(2009) deals with the entrepreneur's confidence about his competence to carrying out the tasks of searching, planning, marshaling, and implementing ideas and resources. We tend to believe that a relationship exists between the level and breadth of entrepreneurs' dependence on their networks to access resources and their entrepreneurial self-efficacy. With this we note a conceptual link between network and entrepreneurial self-efficacy.

2.3.4 Institutional Context

Institutions, according to North (1990), are formal constraints; laws & rules, and informal constraints; norms and conventions, that are created by human beings as 'rules of the game' to govern and structure the economic, social or political incentives for human interaction. Scott (1995) define these rules as *regulative*; formal codes and laws, *normative*; norms and conventions established by relevant institutions, and *cognitive*; culturally accepted beliefs and behaviors. Institutions are different from organizations; e.g., banks, regulatory bodies, as organizations emerge and function in the environmental context that institutions govern and could also act as governing bodies of rules of the game (Ugur, 2010).

Institutional environment is one of the major determinants of economic performance and growth (Veciana, 2007; Ugur, 2010) as it affects human interaction and its associated costs through structuring such interaction and reducing the inherent uncertainty (North, 1990). Institutional theory, through North's definition of institutions, provide the most appropriate conceptual lens to examine how the environment affects seeking entrepreneurial endeavors (Veciana, 2007), as it explains how the institutional context may affect organizations' emergence and development (Palthe, 2014). Consequently, the institutional context could affect individuals' decision to become entrepreneurs and therefore their motivations to seek entrepreneurial endeavors within a particular environment (Veciana, 2007). Markets with institutional environments that are highly uncertain, corrupt, and weak on protecting property rights and enforcing legal contracts, discourage entrepreneurs from seeking economic activity (Brunetti et al., 1998).

Klyver & Thornton (2010) analyzed the Global Entrepreneurship Monitor (GEM) data from 51 countries for the period of 2003-2006 to investigate how the relationship between self-efficacy and entrepreneurial intention is dependent on institutional or cultural legitimacy. They studied how this relationship could generally depend on the status of and respect towards successful entrepreneurs. Together, self-efficacy and

entrepreneurial intention were found to be universally positively related; however, this relationship becomes weaker in societies where entrepreneurship is highly culturally legitimate and preferable as a vocational career choice. Klyver & Thornton also contended that the effect of self-efficacy is moderated by the institutional environment context surrounding the individuals, where self-efficacy could positively impact intention and possibly behavior in supportive environments, but eventually it would negatively impact success as more incompetent individuals might seek entrepreneurship.

Brunetti et al. (1998) in their analysis of private sector survey data of 3,800 business ventures from 73 countries in different regions, 96 of which were from the Middle East and North Africa region, contend that economic growth and investment are negatively affected by the uncertainty of institutional rules within countries. They argue that studying what affects economic activity and growth is best achieved by examining the subjective concerns of entrepreneurs regarding the uncertainty of rules of the game that include property rights protection, contracts enforcement, and corruption, instead of objective measures of political instability. Therefore, they highlight that entrepreneurs might view the credibility of such institutional roles as highly crucial than the overall country political instability.

Wennberg et al. (2013) argued that the perceptions and motivations that stimulate the individual's entrepreneurial intention are dependent on informal institutions such as culture and behavioral norms. They examined how the effects of individual's self-efficacy and fear of failure upon entrepreneurial entry are reliant on the national cultural practices of institutional collectivism, uncertainty avoidance, and performance orientation. They analyzed a total of 8 years of survey data from the Global Entrepreneurship Monitor (GEM) and the Global Leadership and Organizational Behavior Effectiveness (GLOBE) study for 42 countries and determined that the positive effect of self-efficacy on entry is moderated by the cultural practices of institutional collectivism and performance orientation or encouragement of innovation by the community. Self-efficacy was found to be strongly and positively related with entrepreneurial entry the more the country's culture is predominantly inclined towards uncertainty avoidance. Inversely, Wennberg et al. (2013) also found that the negative effect of fear of failure on entrepreneurial entry is moderated by institutional collectivism and uncertainty avoidance.

Based on the literature, we define the institutional context variable as the institutional environment within which the entrepreneur builds and operates his entrepreneurial venture. We intend to examine how the entrepreneur's self-efficacy is affected by the institutional context in terms of the variable dimensions below:

a. Business enabling environment

b. Laws & regulations protection of intellectual property rights

c. Effect of corruption on business operation

d. Enforcement of legal contracts

We note that entrepreneurs' personal sensitivity or perceptions of the previous institutional context dimensions form a conceptual link between the institutional context and entrepreneurial self-efficacy.

2.3.5 Environmental Trigger

Research suggests that several factors and motives including environmental and physiological triggers drive individuals motivation to seeking entrepreneurship (Hessels et al., 2008). Other external and socio-cultural factors could affect individuals' decision to become entrepreneurs within a specific time and place (Veciana, 2007). Environmental triggers are also categorized as push and pull motives, with the push motives being mainly represented by unemployment and pull motives represented by opportunity seeking for autonomy, wealth, and recognition (Hessels et al., 2008). Therefore, individuals either seek to become entrepreneurs because they are unemployed and have to survive; necessity entrepreneurship, or they have identified a viable business opportunity they want to seize; opportunity entrepreneurship (Reynolds et al., 2002). Necessity or push entrepreneurship is often considered "reluctant entrepreneurship", as individuals find themselves threatened and compelled to start new ventures before or after losing employment to survive (Smallbone & Welter, 2004), a phenomena often less prevalent in developed economies (Hessels et al., 2008). Nonetheless, Smallbone & Welter (2004) suggest that such decision may not be driven by necessity alone but also by individuals' previous experiences, current external conditions, or the aspiration for better self-satisfaction and autonomy.

The level of entrepreneurial self-efficacy of individuals could significantly differ based on the motive behind seeking to start up new businesses (Lee et al., 2005; GEM-MENA, 2010). An opportunity-seeking individual may not necessarily be confident they could start up a new business, while a necessity-driven

individual will have no option but to pursue entrepreneurship irrespective of their perceived competence to do so. In developing countries, it is axiomatic that the rate of necessity driven entrepreneurship will be often more prevalent than opportunity entrepreneurship (Reynolds et al., 2002; GEM-MENA, 2010). Opportunity-seeking entrepreneurs in developing economies were found to have more pronounced sensitivity to self-efficacy than those driven by necessity, as self-efficacy had stronger influence, among other factors, on their intent to start up new businesses (Lee et al., 2005).

We define the environmental triggers of opportunity & necessity motives as the major factors that would trigger the drive of an individual to pursue starting up a new venture. We intend to study two dimensions of the environmental trigger variable. The first dimension deals with determining the type of opportunity motive that triggered the entrepreneur's drive to start his business venture, while the second dimension deals with determining the type of necessity motive. We break the key types of opportunity and necessity motives into the following:

a. Opportunity motives

(1) Seizing business opportunities/ interesting ideas

(2) Spending extra free time

(3) Investing one's savings

b. Necessity motives

(4) Due to lay-off

(5) Due to unemployment

(6) Need to help one's family

We expect the drive to seek entrepreneurship to act as a major factor that would impact individuals' level of entrepreneurial self-efficacy and thus the decision to pursue starting up new ventures. Based on the literature, we note a conceptual link between the environmental trigger and entrepreneurial self-efficacy.

With this we come to our second research hypothesis and its five sub-hypotheses below that will be tested in our results chapter.

H2 Entrepreneurial Characteristics and Structural Control Factors will have a direct effect on the Entrepreneurial Behavior of entrepreneurs in emerging markets

H2a Entrepreneurial Characteristics and Structural Control Factors will have a direct effect on the Causation dimension of Entrepreneurial Behavior

H2b Entrepreneurial Characteristics and Structural Control Factors will have a direct effect on the Pre-commitments sub-dimension of Effectuation

H2c Entrepreneurial Characteristics and Structural Control Factors will have a direct effect on the Flexibility sub-dimension of Effectuation

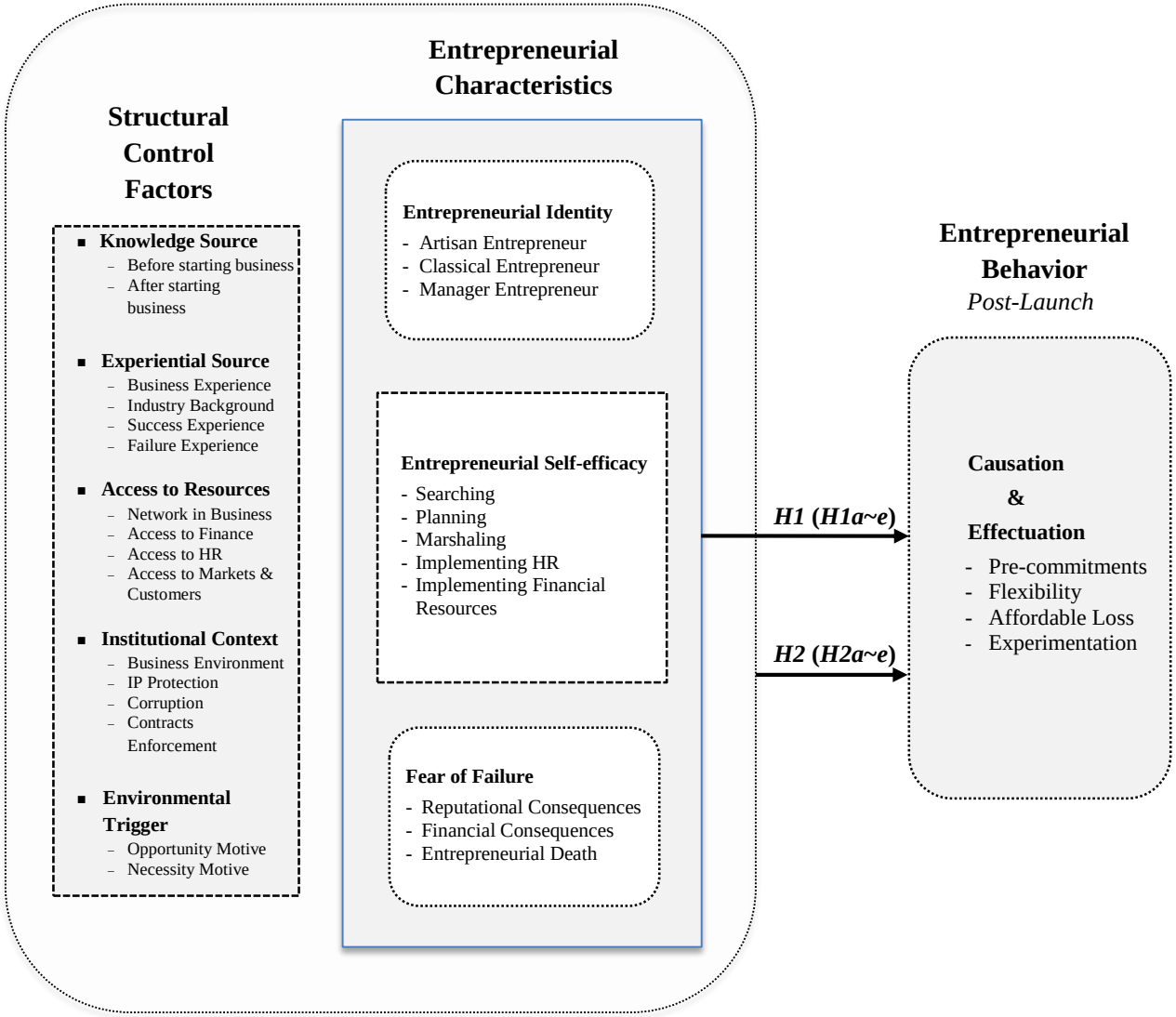
H2d Entrepreneurial Characteristics and Structural Control Factors will have a direct effect on the Affordable Loss sub-dimension of Effectuation

H2e Entrepreneurial Characteristics and Structural Control Factors will have a direct effect on the Experimentation sub-dimension of Effectuation

2.4 Research Conceptual Model

Based on the literature review, and in light of the previously determined variables and their conceptual definitions, we lay forth in Figure (2) the conceptual model of this study that was developed and is to be tested:

Figure 2: Research Conceptual Model



CHAPTER 3: RESEARCH METHODOLOGY

3.1 Research Development & Implementation

The research approach we followed in this quantitative study to analyze the primary data acquired through distributing and collecting a number of descriptive questionnaires consisted of the following steps:

a. Conducting an extensive review of all the relevant research literature to construct our conceptual framework and model as explained and illustrated earlier in previous chapter.
b. Developing of a robust research instrument (attached herewith in Appendices 1 & 2) which included, among other questions, two validated scales that could allow for a reliable measurement of our dependent variable; entrepreneurial approach (Chandler et al., 2011), and one of our main independent variables; entrepreneurial self-efficacy (McGee et al., 2009).
c. Building the research survey in one of the most reliable and user friendly online survey websites; surveygizmo.com, and uploading the survey questions in English and Arabic languages to be able to reach the research sample.
d. Validating the research instrument through conducting a pilot survey of 23 entrepreneurs from different countries in the region, which allowed for testing the instrument before final launch of the survey and after incorporating minor modifications in the wording of a few questions.
e. Launching the final research survey in English and Arabic languages on the online surveying website through a big scale campaign that followed a snowball approach to benefit from the use of several marketing channels including email databases and social media websites and applications.
f. Conducting a series of descriptive statistical tests that included inferential parametric statistics, factor analysis, and linear regressions, to test the research hypotheses and explore the relationships between all the control, dependent, and independent variables.

3.2 Study Population and Sample

The population for this study consisted of entrepreneurs from different countries especially within the Middle East and North Africa region countries. The target sample was current and former entrepreneurs who are or were founders, cofounders, owners, or serving on the boards of business ventures in the region. It is difficult to acquire official data on the exact size of the study population in terms of the number of entrepreneurial ventures being established and operating in the region in addition to the number of entrepreneurs founding and operating these ventures (Wyne & Ward, 2014). The responses of a sample of

114 current and former entrepreneurs from several countries in MENA region were randomly collected from the whole study population for the purposes of this study through several data collection methods as explained in the following section. As we are constrained by the unavailability of valid statistics regarding our population, we are unable to confirm if our sample is representative of all entrepreneurs in MENA region.

3.3 Data Collection

Subsequent to developing the research instrument as explained later in detail, building the research survey on an online surveying website, uploading it in two official languages in the region, and validating it through a pilot survey, the final survey was successfully launched to collect the research sample responses. The final research survey was launched during mid April to mid June 2016 through sharing the survey hyperlink to the online website that enables the respondents to answer the questionnaire in a very user friendly manner. Sharing the survey link was a very difficult task as the researcher had to conduct a big scale campaign that utilized several recent methods to gain access to the research sample within the very limited personal budget and the researcher network of professional and academic contacts. This campaign included sending emails, with the survey link embedded in the emails' body, to a database of around 4,000 email accounts of individuals who either own or run business enterprises in the region. This database was available to the researcher free of charge through the help of a classmate working at a marketing company in the region which specializes in such solicitation campaigns.

Another medium was sharing the survey link on several social media websites and applications; Facebook, LinkedIn, Twitter, WhatsApp, Telegram, Instagram, Line, and Snapchat. To reduce self-selection bias that could inhibit online surveying, the link was shared through active and credible organizations, leaders, and influencers that work in the field of promoting and developing entrepreneurship in the region. These organizations and influencing individuals have access to a bigger network of constituents and followers that include entrepreneurs, business owners, employees and students among others. Using such method allows for a snowball effect as all networks of these organization and individuals are encouraged to share the survey to their respective networks as well. All respondents were assured at the very beginning of the questionnaire that their responses will be confidential, anonymous, and only used for the purposes of this academic research. The responses were collected from current and former

founders, cofounders, owners, and board members of business ventures from all over the MENA region during the period of mid April to mid June 2016.

3.4 Instrumentation

The test instrument used in this study consisted of 33 relevant questions, including a few demographic related questions, that will help us collect personal and educational characteristics of the respondents in addition to their personal perceptions required for examining all our study variables. The research instrument, attached in Appendices (1) and (2), was prepared in an extensive and thorough process between end of June 2015 and mid March 2016 based on the insightful consultations with the research advisor. As illustrated in detail later in Table (3) in the coming section, the survey included two validated and reliable scales that enable us to measure one of our main independent variables; entrepreneurial self-efficacy (McGee et al., 2009) and the research dependent variable; entrepreneurial approach (Chandler et al., 2011).

As explained earlier in Chapter two, McGee et al. multi-dimensional reliable and valid instrument, with Chronbach alphas of 0.80 to 0.91, helps measure entrepreneurial self-efficacy through identifying five dimensions that could explain for the behavior of nascent entrepreneurs. They found that nascent entrepreneurship and these dimensions were positively related and that the increased confidence of nascent entrepreneurs could be measured through entrepreneurial self-efficacy. These dimensions are; *Searching*, *Planning*, *Marshaling*, and *Implementation of human and financial resources*.

Chandler et al. (2011) developed one of the very few available, reliable and valid scales of causation and effectuation in the literature, with Chronbach alphas ranging between 0.70 and 0.86, where they defined and examined both causation and effectuation as two distinct formative constructs. They found that the effectuation construct was composed of the three independent sub-dimensions of experimentation, affordable loss, and flexibility and also another sub-dimension; pre-commitments and alliances, that loads not only on effectuation construct but also causation. We included Chandler et al. scale in our research instrument in order to solicit our sample perceptions on their decision making process in their entrepreneurial endeavors.

In addition to the relevant scales and other variables' questions, a demographics short survey was attached to the main research test instrument. It contained questions directed to the respondents to collect some of their personal and educational backgrounds. Such questions inquired about the respondent's nationality, age, gender, highest level of education, and major of education. The complete final survey versions in both English and Arabic languages are attached herewith in Appendices (1) and (2) for the easy reference of the reader.

As the first official language in most of the region countries is Arabic, the test questions were translated by the researcher from English into Arabic. The researcher is a trained translator who had assumed translation rules and duties for a few years, prior to pursuing his postgraduate studies, at both PricewaterhouseCoopers and the World Bank Group. He had translated business and civil laws, reports and studies, official documents, and chaired committees responsible for testing and selecting professional translators and interpreters for the World Bank in Yemen. The translated survey was then reviewed by a business professional and a management PhD holder who are both Arabic native speakers. A further review for the instrument translation was then carried out through a pilot survey of current and former entrepreneurs who were all almost fluent bilinguals.

After developing and translating the research test instrument, a careful consideration of several factors guided the selection of the online surveying website. It had to be the most reliable, user friendly, mobile compatible, and within the limited personal budget of the researcher. Surveygizmo.com website provided the best options, especially mobile compatibility, user friendly interface, allow respondents to easily switch the survey languages, and permit the respondents to save their incomplete responses and continue at another time whenever they want. This feature is very critical since we expect our sample entrepreneurs to be very busy with their ventures, have access to a very slow internet connection in most of the region and also experience regular electricity blackouts due to weak infrastructure in the region. Moreover, the online surveying website allows for all sorts of control over coding the responses, cleaning the data, and checking for duplicate entries.

Subsequent to building and uploading the research survey online, a pilot survey of 23 entrepreneurs, 21 current and two former entrepreneurs, from different countries in the region was carried out in mid March

2016 to validate and test the instrument before final survey launch. The respondents were 17 entrepreneurs from Yemen, three from Saudi Arabia, and one entrepreneur from each Jordan, United Arab Emirates and Syria. 16 of these respondents were running their first business while the remaining 7 entrepreneurs have had already two or more ventures. The pilot survey resulted in incorporating a few minor modifications in the wording of a few questions which were confusing to some of the pilot respondents.

Following all the previous steps to build our research instrument, we were very confident that the final survey could now be launched without any major obstacles. The final survey was successfully launched during mid April to mid June 2016 through sharing the link to the online survey website, as discussed earlier, to enable the respondents to answer the questions and share their responses on their decision making process.

3.5 Variables, Conceptual Definitions and Measure Questions

Based on our extensive literature review of various related studies and references, we list in Table (3) below all the variables of this research, their conceptual definitions, and measure questions, as derived from the related literature:

Table 3: Conceptual Definitions and Measure Questions

Variable	Conceptual Definitions, Measures & Dimensions	Measure Questions
1- Entrepreneurial Behavior:		
Entrepreneurial Behavior (Dependent Variable)	We define entrepreneurial behavior as that state which exists within the entrepreneur which is triggered by several structural control factors and entrepreneurial characteristics and is realized by the actual starting and operation of the business venture. There are two approaches for starting up new ventures; the 'causal reasoning' and 'effectual reasoning' approaches (Dew et al, 2009; Perry et al., 2012). We define entrepreneurial behavior based on the dimensions that Chandler et al. (2011) defined to develop their scale of causation and effectuation, which we will also use to measure our dependent variable. ***Causation:*** Causal reasoning indicates that entrepreneurs follow, in the creation process of their new ventures, a synoptic approach of rational planning (Methé et al., 2000; Methé, 2014). This synoptic approach significantly includes the notion of planning for an ultimate goal to be realized through rigorous market research that entails the availability of organizational resources and time. ***Effectuation:*** Entrepreneurs due to the lack of resources and time incline to follow an effectual approach where they adapt by exploiting the following set of means, instead of conducting rigorous planning and competitiveness analyses (Sarasvathy, 2008): 1- Who they are; (*their personal traits, tastes, and abilities*) 2- What they know; (*their knowledge, not necessarily about subject matter only*) 3- Whom they know (*their social networks and connections*) **Dimensions:** ***a.*** *Causation* ***b.*** *Effectuation* (1) Pre-commitments & Alliances (2) Flexibility (3) Affordable Loss (4) Experimentation	**Entrepreneurial Behavior** (Chandler et al., 2011); In my business..: *(5-point Likert scale; Very little ~ Very much)* ***Causation:*** ▪ I analyzed long run opportunities and selected what I thought would provide the best returns ▪ I developed a strategy to best take advantage of resources and capabilities ▪ I designed and planned business strategies ▪ I organized and implemented control processes to make sure I met objectives ▪ I researched and selected target markets and did meaningful competitive analysis ▪ I had a clear and consistent vision for where I wanted to end up ▪ I designed and planned production and marketing efforts ***Effectuation:*** ***Pre-commitments & Alliances*** ▪ I used a substantial number of agreements with customers, suppliers and other organizations and people ▪ I used pre-commitments from customers and suppliers as often as possible ▪ Network contacts provided low cost resources ▪ By working closely with people/organizations external to my company/business I have been able to greatly expand my company/business capabilities ▪ I have focused on developing alliances with other people and organizations ▪ My partnerships with outside organizations and people play a key role in my ability to provide my product/service ***Flexibility*** ▪ I allowed the business to evolve as opportunities emerged ▪ I adapted what I was doing to the resources I had ▪ I was flexible and took advantage of opportunities as they arose ▪ I avoided courses of action that restricted my flexibility and adaptability

Variable	Conceptual Definitions, Measures & Dimensions	Measure Questions
		Experimentation ▪ I experimented with different products and/or business models ▪ The product/service that I now provide is essentially the same as originally conceptualized ▪ The product/service that I now provide is substantially different than I first imagined ▪ I tried a number of different approaches until I found a business model that worked ***Affordable Loss*** ▪ I was careful not to commit more resources than I could afford to lose ▪ I was careful not to risk more money than I was willing to lose with my initial idea ▪ I was careful not to risk so much money that my business would be in real trouble financially if things didn't work out
2- Entrepreneurial Characteristics:		
Entrepreneurial Self-efficacy (Independent Variable)	We define Entrepreneurial Self-efficacy as the individual's perceived competence and belief in his ability to successfully start and run a new entrepreneurial venture (Boyd & Vozikis, 1994; McGee et al., 2009; Karlsson & Moberg, 2013). To measure ESE, we use the scale developed McGee et al. (2009) which defines ESE as the construct that could measure individual's confidence in their entrepreneurial abilities in terms of the following dimensions. **Dimensions:** 1- Searching (*Creating new ideas for products/services, identifying the need for them, designing them to the satisfaction of potential customers, and making a sale*) 2- Planning (*Estimating customer demand for new products/services, determining competitive prices, estimating necessary funds to start business, designing effective marketing campaigns*) *3*- Marshaling (*Getting others on board, networking, and clear communication*) 4- Implementing human resources (*Supervising, hiring, managing, delegating, leading, motivating, and training employees*) 5- Implementing financial resources (*Keeping financial records, managing assets, reading financial statements, and finding financial resources/ funds*)	**Entrepreneurial Self-efficacy (**McGee et al., 2009**);** Compared to other entrepreneurs that I know, I'm confident I'm good at: *(5-point Likert scale; Very little ~ Very much)* ▪ Coming up with new business ideas & identifying the need for them ▪ Designing products/ services that will satisfy customer needs & wants ▪ Making a sale ▪ Pricing, marketing, & determining customer demand for new products/ services ▪ Estimating the amount of startup funds & working capital necessary to start my business ▪ Contacting & communicating with others so they identify with and believe in my ideas & vision for the future ▪ Hiring, managing, training & setting tasks & responsibilities for my employees ▪ Inspiring, encouraging & motivating my employees ▪ Finding & managing financial resources ▪ Keeping/recording, reading & interpreting financial statements

Variable	Conceptual Definitions, Measures & Dimensions	Measure Questions
Fear of Failure (Independent Variable)	We define Fear of Failure in line with Atkinson's definition (1957) as the capacity or propensity to experience shame or humiliation as a consequence to failure. However, we expand the definition to include experiencing not only emotional consequences but also financial and entrepreneurial death risks. **Measure:** Respondent's selection and ranking of the first item from any of the experiential sources above will be interpreted as representing the exclusive respondent's experiential source **Dimensions:** 1- Major Risks/ Fears: **a.** Reputational consequences risks/fears (*Shame/humiliation in front of significant others, close social circles, and also business peers/competitors*) **b.** Financial consequences risks/ fears (*Suffering substantial financial losses of personal and/or family possessions*) **c.** Entrepreneurial death risks/ fears (*Inability of pursuing other businesses after public failure*)	**Major Risks/ Fears;** If I fail & close my business, my biggest fear is: *(Rank order)* ▪ I'll feel ashamed in front of my family & close friends ▪ I'll feel ashamed in front of other competitors & businessmen ▪ My reputation will be hurt/damaged by my failure ▪ I'll suffer financial consequences (Ex: lose collateral, assets) ▪ My family will suffer financial consequences (e.g., lose collateral, assets) ▪ If I fail publicly, I wont get a second chance to start another one ▪ I have other options, so I'm not worried if it fails
Entrepreneurial Identity (Independent Variable)	We define entrepreneurial identity based on Stanworth & Curran (1976) typology of such identity into three latent identities that we expect to occur with some frequency in relation to the role of entrepreneur in their ventures. **Measure:** Respondent's selection and ranking of the first item from any of the entrepreneurial identities' items will be interpreted as representing the exclusive respondent's identity. **Dimensions:** ***a.*** *Type of Identity:* (1) The 'Artisan' Identity (2) The 'Classical Entrepreneur' Identity (3) The 'Manager' Identity	**Type of identity;** Success means for me: (*Rank order*) ▪ Making the best products and services available ▪ Making huge profits ▪ Being the best manager ever

Variable	Conceptual Definitions, Measures & Dimensions	Measure Questions
3- Structural Control Factors:		
Knowledge Source (Independent Variable)	We define the knowledge source as any form of entrepreneurial and/or business education or learning that the entrepreneur might have already attained or is currently receiving through different knowledge sources. We break these sources into two main categories: ***a.*** *Entrepreneurial learning through education:* (1) Formal education (*school, undergraduate, graduate studies*) (2) Specialized courses (*business & entrepreneurship courses, online courses*) ***b.*** *Entrepreneurial learning through work:* (1) Working at family business (2) Working with/ helping close friends in their businesses (3) Working at other companies and organizations **Measure:** Upon collecting our data, responses to this variable questions are going to be calculated as follows: - Respondent's selection and ranking of the first item from any of the learning sources above will be interpreted as representing the exclusive respondent's knowledge source **Dimensions:** 1- Type of knowledge source *before* starting business (*Source of business learning*) 2- Type of Knowledge source *after* starting business (*Instrumental source of learning to business operation*)	**1- Source of business learning;** *Before starting my first business*, I thought I gained the most instrumental knowledge about business from my: *(Rank order)* ▪ Formal Education (School, College, Masters studies) ▪ Training Courses (Business and entrepreneurial courses, Online courses) ▪ Working at my family business ▪ Working with/ helping close friends in their businesses ▪ Working at other companies/ organizations **2- Instrumental source of learning to business operation;** *After starting my business*, I realized most instrumental knowledge in my business operation was from my: *(Rank order)* ▪ Formal Education ▪ Training Courses ▪ Working at my family business ▪ Working with/ helping close friends in their businesses ▪ Working at other companies/ organizations

Variable	Conceptual Definitions, Measures & Dimensions	Measure Questions
Experiential Source (Independent Variable)	We define the experiential source as the source or combination of sources from which the entrepreneur might have accumulated his entrepreneurial and/or professional experience. We break these sources into three main categories: ***a.*** *Experience through working at family business* ***b.*** *Experience through working at previous personal business* ***c.*** *Experience through working at other companies and organizations* **Measures:** Upon collecting our data, responses to this variable questions are going to be calculated as follows: - Respondent's selection and ranking of the first item from any of the experiential sources above will be interpreted as representing the exclusive respondent's experiential source - Numbers of businesses owned, successful, and failed, represent level of business experience **Dimensions:** 1- Business operation experience (*No. of businesses owned*) 2- Professional & business background in industry (*Sources of prior experience in industry*) 3- Business success experience (*No. of successful businesses*) 4- Business failure experience (*No. of businesses failed*)	**1- Number of businesses owned;** It is my: *(Select one answer)* ▪ 1st business ▪ 2nd business ▪ 3rd business ▪ Already had over 3 businesses **2- Sources of prior experience in industry;** Most of my experience in this type of business came from working at: *(Rank order)* ▪ My family business in the same industry ▪ My previous business in the same industry ▪ Other companies / organizations **3 & 4- Number of successful and failed businesses;** Running several business ventures, I have already: *(Select one answer)* a. Been successful in; b. Tried but failed and closed; ▪ One business ▪ Two businesses ▪ Three businesses ▪ Over three businesses ▪ None so far

Variable	Conceptual Definitions, Measures & Dimensions	Measure Questions
Access to Resources Through Network (Independent Variable)	We define access to resources through network as the extent to which the entrepreneur depends on his social networks to acquire resources. We examine such dependence in terms of the strength of the following social circles of entrepreneurs: ***a.*** Close Family *(parents, spouse, siblings, sons & daughters, close cousins, close in-laws)* ***b.*** Close friends *(Close colleagues, close classmates)* ***c.*** Extended Family *(Distant relatives, distant in-laws)* ***d.*** Distant Friends & acquaintances *(distant colleagues, friends of friends)* ***e.*** Formal channels *(Public & private institutions, banks, chambers of commerce)* **Measure:** Upon collecting our data, responses to this variable questions are going to be calculated as follows: - Respondent's selection and ranking of the first item from any of the experiential sources above will be interpreted as representing the exclusive respondent's experiential source **Dimensions:** 1- Network running businesses (*Network connection as owner or cofounder of a business venture*) 2- Access to finance through network (*Acquiring financial resources through network*) 3- Access to human resources through network (*Acquiring human resources through network*) 4- Access to market & customers through network (*Entering markets & attracting customers through network*)	**1- Network connection as owner or cofounder of a business venture;** Most of the business owners, founders & co-founders I know are from my: *(Rank order)* ▪ Close Family (e.g., Parents, spouse, siblings, close cousins) ▪ Close Friends (e.g., Close colleagues, close classmates) ▪ Extended Family (e.g.; Distant relatives, distant in-laws) ▪ Distant Friends and Acquaintances (e.g.; Distant colleagues, friends of friends) **2, 3 & 4-** Acquiring financial and HR resources, and entering markets and attracting customers through network; I can approach: (*Rank order*) ▪ Formal Channels (e.g., professional firms, banks, venture capitalists, public institutions) ▪ Close Family (e.g., Parents, spouse, siblings, close cousins) ▪ Close Friends (e.g., Close colleagues, close classmates) ▪ Extended Family (e.g., Distant relatives, distant in-laws) ▪ Distant Friends and Acquaintances (e.g., Distant colleagues, friends of friends)

Variable	Conceptual Definitions, Measures & Dimensions	Measure Questions
Institutional Context (Independent Variable)	We define the institutional context variable as the institutional environment within which the entrepreneur builds and operates his entrepreneurial venture. We intend to examine how the entrepreneur's self-efficacy is affected by the institutional context in terms of the following variable dimensions. **Dimensions:** 1- Business enabling environment 2- Laws & regulations protection of intellectual property rights 3- Effect of corruption on business operation 4- Enforcement of legal contracts	**Institutional environment;** I believe: *(5 points Likert scale; Strongly disagree ~ Strongly agree)* ▪ The business environment in the country generally encourages doing business ▪ The laws & regulations of the country protect my ideas & products ▪ Corruption in my current environment affects my business operation ▪ Legal contracts are enforced by relevant authorities in the country
Environmental Trigger (Independent Variable)	Entrepreneurs seek entrepreneurship either because they are unemployed and have to survive; necessity entrepreneurship, or because they identified a viable business opportunity they want to seize; opportunity entrepreneurship (Reynolds et al., 2002). We define the environmental triggers of necessity & opportunity motives as the major factors that would drive individuals to pursue starting up new entrepreneurial venture. **Measure:** Respondent's selection and ranking of the first item from any of the experiential sources above will be interpreted as representing the exclusive respondent's experiential source **Dimensions:** ***a.*** *Necessity motives:* (1) Lay-off (2) Unemployment (3) Helping family ***b.*** *Opportunity motives:* (1) Seizing business opportunity/ interesting idea (2) Extra free time (3) Investing savings	**Motivation of starting business;** I started my business mostly because: *(Rank order)* ▪ I lost my job ▪ I needed to make a living ▪ I needed to help my family ▪ I wanted to make use of my free time ▪ There was a business opportunity ▪ I had some money I wanted to invest

CHAPTER 4: RESULTS

In this chapter, we turn our attention to examining our main research question of this study based on the conceptual model we developed which posits that certain entrepreneurial characteristics affect entrepreneurial behavior controlling for several demographics, and then posits that the same entrepreneurial characteristics may affect entrepreneurial behavior controlling not only for demographic control variables but also for structural control conceptual variables. In the following section, we first explain the demographics of our sample. In subsequent sections, we then move to explaining all the results related to our entrepreneurial behavior factor analysis, our regression tests related to our main model, and finally the tests related to our full model.

4.1 Respondents' Characteristics Analysis

Gender

As shown in Figure (3) the majority of the sample comprises of male entrepreneurs (n=107, 93.9%), whereas the percentage of female entrepreneurs was far less represented in the sample (n=7, 6.1%).

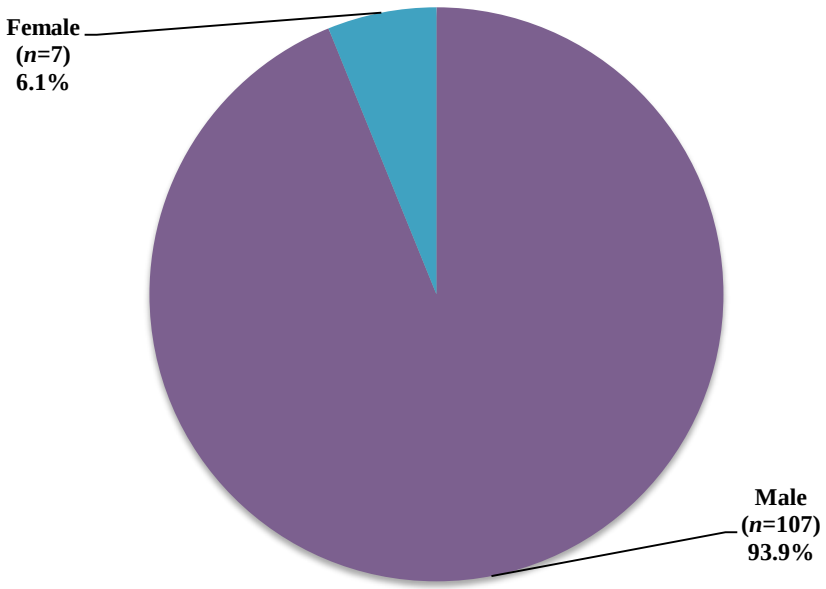


Figure 3: Respondents by Gender

Age

Figure (4) shows that the majority of the sample comprises of entrepreneurs from the age group (31 to 35 years) (n=41, 36%), followed by age group (36 to 40 years) (n=26, 22.8%), followed by age group (26 to 30 years) (n=21, 18.4%), followed by age group (41 to 45 years) (n=11, 9.6%), followed by age group (46 to 50 years) (n=7, 6.1%), followed by age group (21 to 25 years) (n=4, 3.5%), followed by age group (51 years and over) (n=3, 2.6%), and finally age group (17 to 20 years) (n=1, 0.9%).

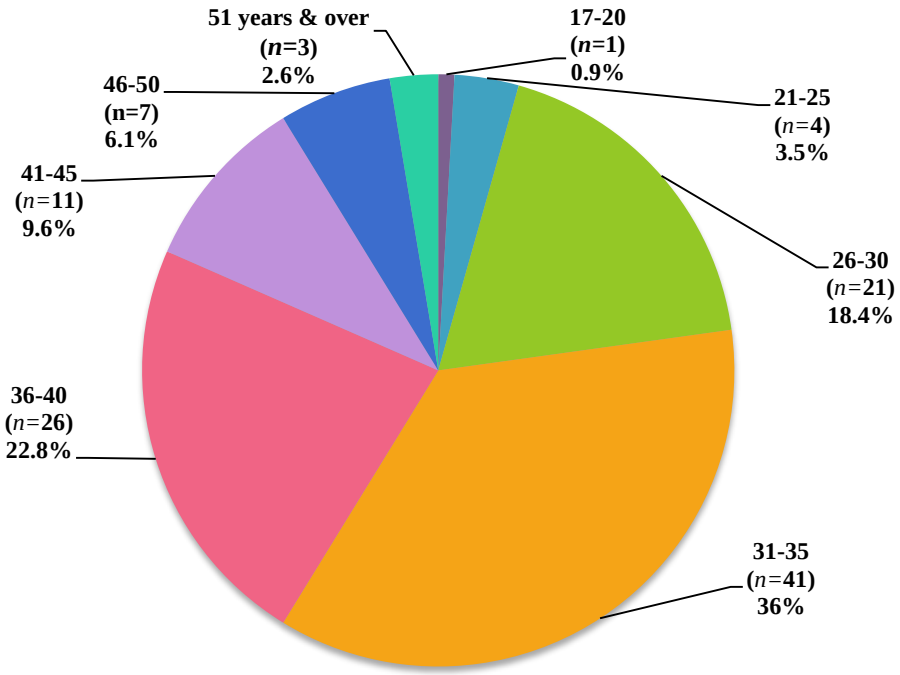


Figure 4: Respondents by Age

Nationality

Figure (5) shows that the majority of the sample comprises of entrepreneurs from Yemen (n=63, 55.3%), followed by Omani nationals (n=11, 9.6%), followed by Egyptian nationals (n=10, 8.8%), followed by Saudi nationals (n=8, 7%), followed by Lebanese and Syrian nationals each being represented equally (n=4 for each, 3.5% of all respondents for each nationality), followed by Jordanian nationals (n=3, 2.6%), followed by Pakistani nationals (n=2, 1.8%), and finally respondents of Emirati, Moroccan, Algerian, Libyan, and other nationalities each being represented equally (n=1 for each, 0.9% of all respondents for each nationality).

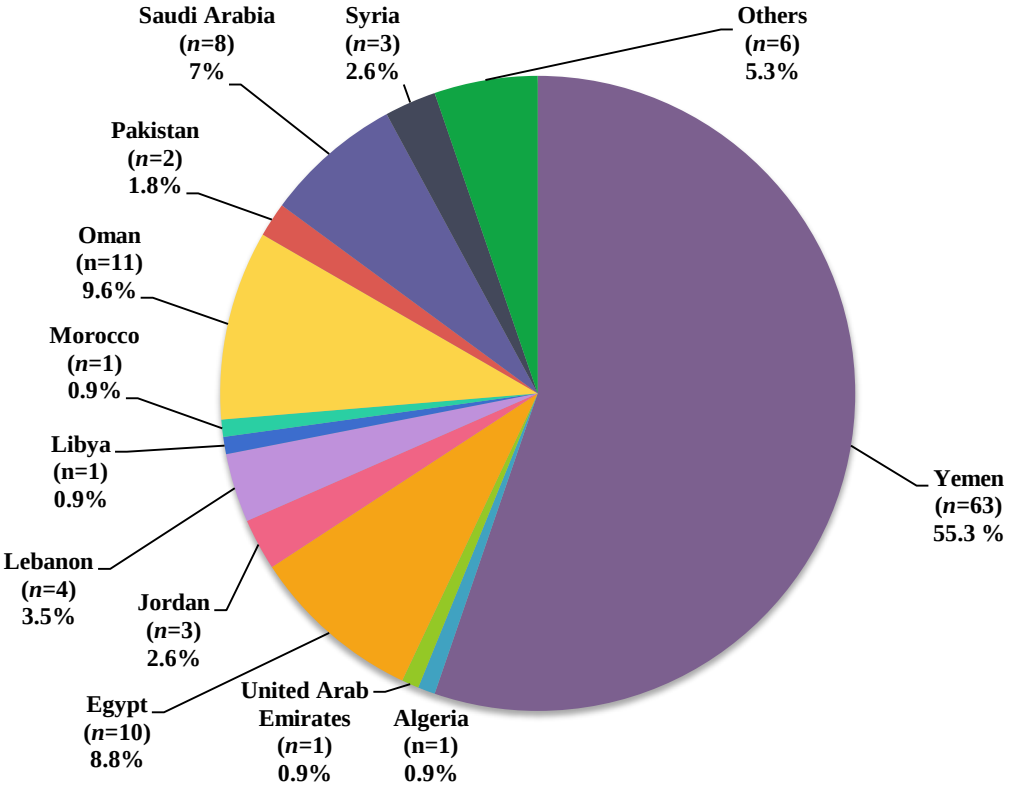


Figure 5: Respondents by Nationality

Country of Business Operation

Figure (6) shows that the majority of the sample comprises of entrepreneurs operating their businesses from Yemen (n=55, 48.2%), followed by entrepreneurs operating in Saudi Arabia, Oman, Egypt (n=11 from each country, 9.6% of all respondents for each country), followed by entrepreneurs operating in United Arab Emirates (n=8, 7%), followed by entrepreneurs operating in Qatar (n=4, 3.5%), followed by entrepreneurs operating in Lebanon (n=3, 2.6%), and finally entrepreneurs operating in Turkey, Sudan, Kuwait, Morocco, Algeria, Libya, and other countries each being represented equally (n=1 for each, 0.9% of all respondents for each country).

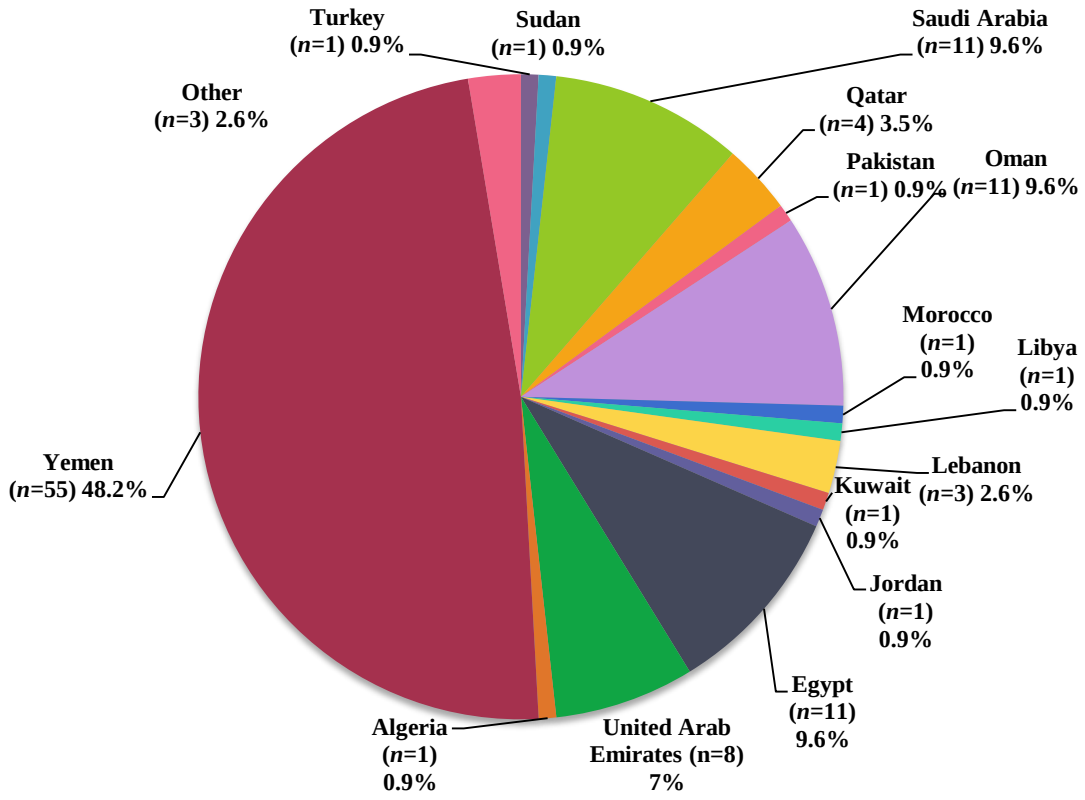


Figure 6: Respondents by Country of Business Operation

Level of Education

Figure (7) shows that the majority of the sample comprises of entrepreneurs who had already earned a Bachelor's degree (n=47, 41.2%), followed by respondents with a Masters degree (n=31, 27.2%), followed by respondents who have attended some college or Masters courses but received no degree (n=11 for each, 9.6% each of all respondents), followed by respondents who have graduated from a High School or equivalent (n=9, 7.9%), followed by Doctoral degree holders or above (n=3, 2.6%), and finally respondents who have received a high diploma or reached less than High School (n=1 for each, 0.9% each of all respondents).

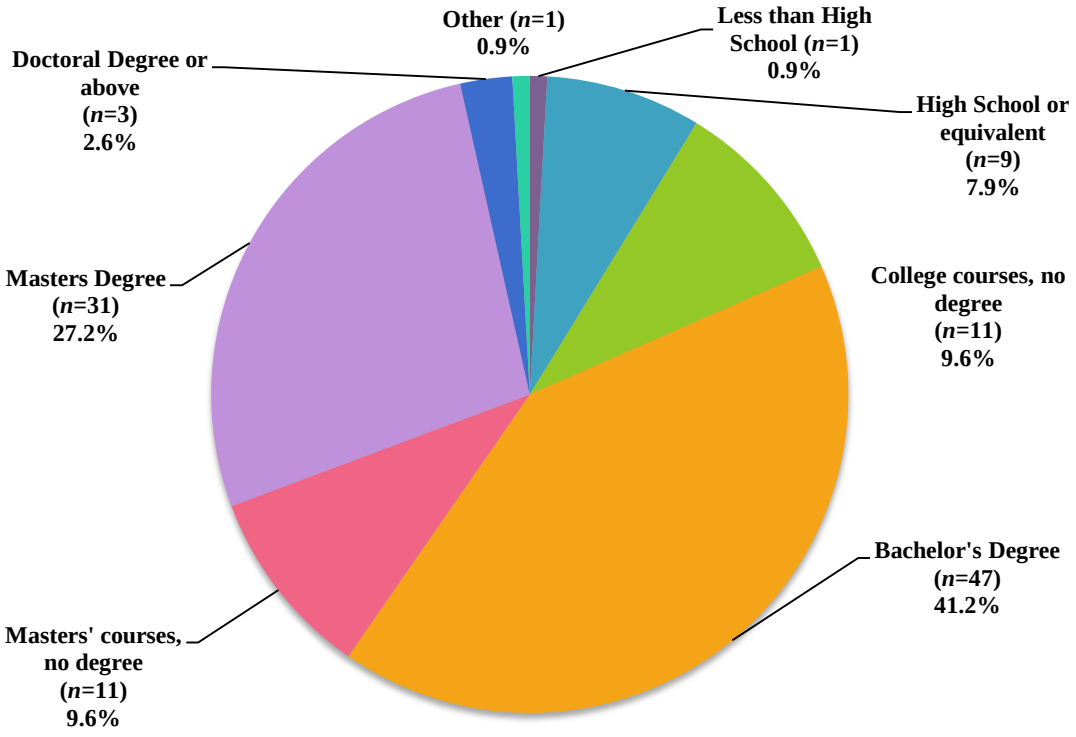


Figure 7: Respondents by Level of Education

Bachelor's & Doctoral Field of Study

Figure (8) shows that of the sample of entrepreneurs who, all combined, had already earned a Bachelor's degree, attended some college courses, or hold a Doctoral degree or above (n=61, 53.4% of all respondents) almost half of them have studied Business Administration or a business related field in their university studies (n=31, 50.8%). The remaining half of respondents with college or doctoral studies and above have studied in other fields (n=30, 49.2%) with fields such as Education (n=4) and Engineering, Software Engineering, Networks & Information Security, Media, Literature, and Law (n=2, for each field) among other fields (n=1, for each field).

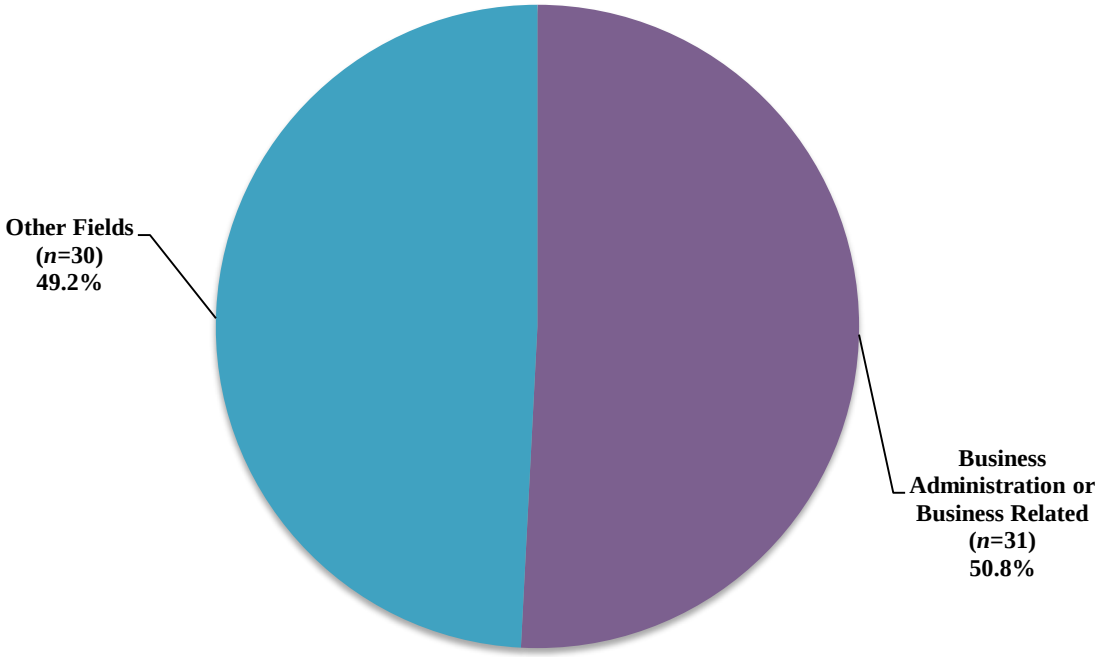


Figure 8: Respondents by Bachelor's & PhD Field of Study

Masters' Field of Study

Figure (9) shows that of the sample of entrepreneurs who, all combined, had already hold a Master's degree or have attended some Masters' courses (n=42, 36.8% of all respondents) more than half of them have studied in an a Masters of Business Administration (MBA) program (n=24, 57.1%), followed by respondents who studied at the Masters' level but in other fields (n=11, 26.2%) such as Education, Engineering, Software Engineering, Information Technology & Management (n=1, for each field) among other fields, and finally respondents who studied in a business related field, but not in an MBA, in their Masters' studies (n=7, 16.7%).

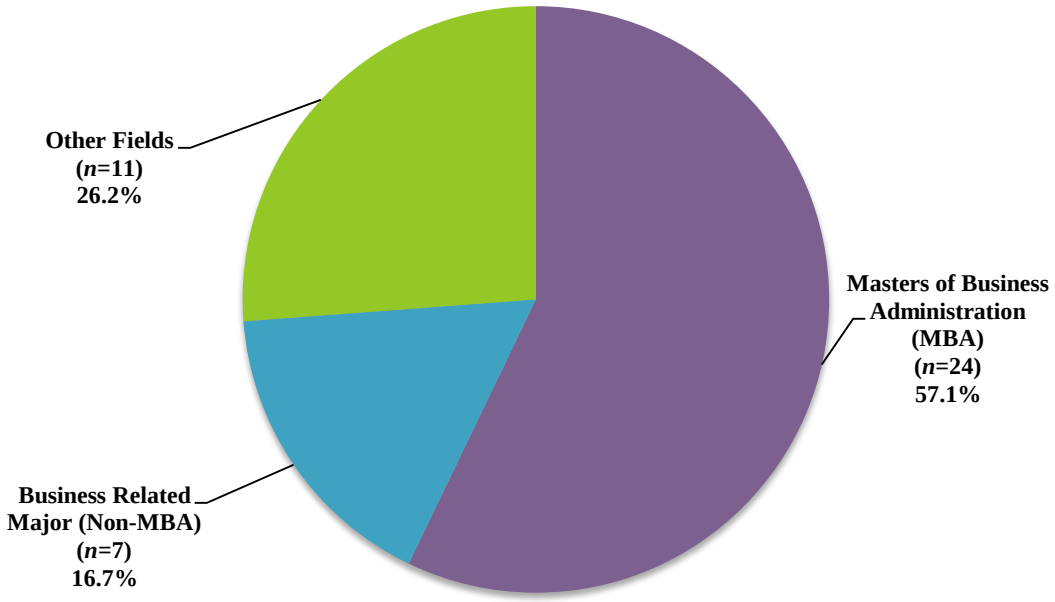


Figure 9: Respondents by Masters' Field of Study

4.2 Entrepreneurial Characteristics & Entrepreneurial Behavior

As noted before, the main research question of this study was how do entrepreneurial characteristics affect the decision making choice of entrepreneurs. In order to understand this question, we developed a conceptual model which posits that certain structural control factors should influence the entrepreneurial characteristics. Our main model examines how entrepreneurial characteristics affect the entrepreneurial behavior controlling for several demographics, and then also how these characteristics affect entrepreneurial behavior controlling not only for demographics but also for the structural control factors we discussed in our literature review. As this is an exploratory study, we have also run several regressions to test how structural control factors impact entrepreneurial characteristics. Although this is not one of this study objectives, these regressions' results are all attached in Appendix (4) for those interested in reading how these structural control factors affect the entrepreneurial characteristics. Before turning our attention to our main model tests results, we will explain in the following section the results of our factor analysis test that was performed to confirm our definition of the entrepreneurial behavior dimensions.

4.2.1 Entrepreneurial Behavior Factor Analysis

As discussed before, we used Chandler et al. (2011) scale of entrepreneurial behavior to seek the respondents perceptions on their decision making choice. Chandler et al. upon validating their scale ran several factor analyses tests which finally showed that the entrepreneurial behavior is defined by two distinct formative constructs; causation and effectuation. Causation emerged as one construct; whereas the effectuation construct was found to be composed of three sub-dimensions; *flexibility, affordable loss, and experimentation*, and another shared sub-dimension of *pre-commitments* that loads on both causation and effectuation constructs as discussed earlier in our literature review.

However, we ran a factor analysis test to further examine the entrepreneurial behavior constructs and to confirm the multidimensionality of our dependent variable, entrepreneurial behavior. Our factor analysis test results as illustrated in table (4) below, showed that causation and effectuation are two different constructs composed of multiple scale items that represent each construct and relevant sub-dimensions; 22 items in total with factor loadings above 0.5 (full analysis is attached herewith in Appendix 3). All the seven causation items of Chandler et al. (2011) entrepreneurial behavior scale loaded on one distinct component we defined as Causation, with factor loadings above 0.5 ranging from 0.834 to 0.635.

Effectuation also appeared to be composed of four components or sub-dimensions of *pre-commitments, flexibility, affordable loss, and experimentation*, where 15 out of the 17 scale items of Chandler et al. (2011) loaded on each construct with factor loadings above 0.5. To the contrary from Chandler et al. (2011) definition of the effectuation sub-dimensions, our results showed that the *pre-commitment* sub-dimension loaded as a distinct construct and did not load on both causation and effectuation. Our factor analysis does not only confirm Chandler et al. (2011) definition of entrepreneurial behavior which is the most vetted empirical measure of causation and effectuation as entrepreneurial approaches in the field to date, but also expands on this definition and contributes by addressing a major issue that Chandler et al. suggested for future research through showing that effectuation is made of four independent constructs.

Table 4: Entrepreneurial Behavior Factor Analysis Rotated Component Matrix[a]

Scale Item	Component				
	1	2	3	4	5
1- I analyzed long run opportunities & selected what I thought would provide the best returns	**.751**	.076	.174	-.065	.071
2- I developed a strategy to best take advantage of resources & capabilities	**.742**	-.020	.169	.070	.228
3- I designed & planned business strategies	**.812**	-.013	-.012	.212	.218
4- I organized & implemented control processes to make sure I met objectives	**.643**	.294	.043	.029	.246
5- I researched & selected target markets & did meaningful competitive analysis	**.834**	.145	.081	.041	.026
6- I had a clear & consistent vision for where I wanted to end up	**.635**	.098	.349	-.137	.127
7- I designed & planned production & marketing efforts	**.763**	.162	.152	.023	.190
8- I experimented with different products and/or business models	.245	.068	.312	-.018	**.716**
9- The product/service that I provide is essentially the same as originally conceptualized	.347	.473	.050	.221	-.126
10- The product/service that I provide is substantially different than I first imagined	.261	-.086	-.033	.074	**.674**
11- I tried a number of different approaches until I found a business model that worked	.206	.052	.001	.155	**.745**
12- I was careful not to commit more resources than I could afford to lose	-.067	.109	.303	**.749**	.188
13- I was careful not to risk more money than what I was willing to lose with my initial idea	.083	.156	.176	**.827**	.112
14- I was careful not to risk so much money that my business would be in real trouble financially if things didn't work out	.057	.084	.054	**.847**	-.026
15- I allowed the business to evolve as opportunities emerged	.166	.140	**.656**	.218	.095
16- I adapted what I was doing to the resources I had	.077	.219	**.607**	.354	.060
17- I was flexible & took advantage of opportunities as they arose	.156	.119	**.829**	.024	.086
18- I avoided courses of action that restricted my flexibility & adaptability	.254	.147	**.670**	.131	-.023
19- I used a substantial number of agreements with customers, suppliers & other organizations & people	.223	**.755**	.026	.081	-.068
20- I used pre-commitments from customers & suppliers as often as possible	.186	**.793**	-.155	.070	.046
21- Network contacts provided low cost resources	.226	.400	.212	.008	-.131
22- By working closely with outside organizations/people, I have been able to greatly expand my business venture capabilities	-.055	**.713**	.293	.134	.255
23- I have focused on developing alliances with other people & organizations	-.024	**.762**	.220	.020	.047
24- My partnerships with outside organizations/people played a key role in my ability to provide my product/service	-.028	**.765**	.292	.110	.020

Extraction Method: Principal Component Analysis. *Rotation Method:* Varimax with Kaiser Normalization.[a]

a. Rotation converged in 6 iterations.

Based on the literature, and subsequent to our factor analysis test, we define our dependent variable of entrepreneurial behavior in terms of the five distinct components that resulted from our factor analysis as represented in their scale items below.

Causation (Component 1)

The causation construct deals with how much entrepreneurs seek a pre-defined goal through conducting rigorous planning and competitive analysis of resources and opportunities to reach that goal. The causation dimension is represented by the below seven measure items:

1. I analyzed long run opportunities and selected what I thought would provide the best returns
2. I developed a strategy to best take advantage of resources and capabilities
3. I designed and planned business strategies
4. I organized and implemented control processes to make sure I met objectives
5. I researched and selected target markets and did meaningful competitive analysis
6. I had a clear and consistent vision for where I wanted to end up
7. I designed and planned production and marketing efforts

Effectuation (Components 2~5)

As seen in our factor analysis results table, the effectuation approach is comprised of four components (Components 2~5). The effectuation construct deals with how much entrepreneurs adapt in their business decision making process by exploiting a set of means of who they are, what and whom they know, instead of conducting rigorous planning and competitiveness analyses (Sarasvathy, 2008). The effectuation construct is made up of four sub-dimensions that define this decision making process as follows.

Pre-commitments (Component 2)

The first effectuation sub-dimension of pre-commitments deals with how much the respondents have focused and depended on pre-commitments and alliances with customers, suppliers, organizations, network connections, among others, as represented by the below six scale items that measure this sub-dimension:

1. I used a substantial number of agreements with customers, suppliers, other organizations & people
2. I used pre-commitments from customers and suppliers as often as possible

3. By working closely with people/organizations external to my company/business I have been able to greatly expand my company/business capabilities
4. I have focused on developing alliances with other people and organizations
5. My partnerships with outside organizations and people play a key role in my ability to provide my product/service

Flexibility (Component 3)

The second effectuation sub-dimension of flexibility deals with how much the respondents have adapted and their ventures to be able to seize opportunities, as represented by the below four scale items that measure the flexibility sub-dimension:

1. I allowed the business to evolve as opportunities emerged
2. I adapted what I was doing to the resources I had
3. I was flexible and took advantage of opportunities as they arose
4. I avoided courses of action that restricted my flexibility and adaptability

Affordable Loss (Component 4)

The third effectuation sub-dimension of affordable loss deals with how much the respondents have been risk averse and careful when committing or utilizing any available resources, as represented by the below three scale items that measure the affordable loss sub-dimension:

1. I was careful not to commit more resources than I could afford to lose
2. I was careful not to risk more money than I was willing to lose with my initial idea
3. I was careful not to risk so much money that my business would be in real trouble financially if things didn't work out

Experimentation (Component 5)

The final effectuation sub-dimension of experimentation deals with how much the respondents have tested and adapted their offerings and business models as they develop and progress in their ventures. The experimentation sub-dimension is represented by the below four scale items:

1. I experimented with different products and/or business models
2. The product/service that I now provide is substantially different than I first imagined

3. I tried a number of different approaches until I found a business model that worked

After defining our dependent variable, and to test our main part of the conceptual model, we started by testing all hypothesized relationships between entrepreneurial characteristics and entrepreneurial behavior, controlling for several demographics, through a series of regression equations. Hypothesized relationships between the entrepreneurial behavior and entrepreneurial characteristics; *Entrepreneurial Self-efficacy (ESE)*, *Entrepreneurial Identity*, *Fear of Failure*, were tested controlling for entrepreneur's age and educational level, major of education (whether in business or other disciplines), and the country from which his business operates. For our ESE variable, we used the five ESE dimensions defined and validated by McGee et al. (2009); *Searching*, *Planning*, *Marshaling*, *Implementing HR*, and *Implementing Financial Resources*, to test the first part of our model as explained in detail in the following sections. These ESE dimensions are composed of multiple scale items, 10 items in total. The following sections will elaborate on the statistical tests that examine the first main research hypothesis below and its sub-hypotheses.

H1 Entrepreneurial Characteristics will have a direct effect on the Entrepreneurial Behavior of entrepreneurs in emerging markets

- ***H1a Entrepreneurial Characteristics will have a direct effect on the Causation dimension of Entrepreneurial Behavior***
- ***H1b Entrepreneurial Characteristics will have a direct effect on the Pre-commitments sub-dimension of Effectuation***
- ***H1c Entrepreneurial Characteristics will have a direct effect on the Flexibility sub-dimension of Effectuation***
- ***H1d Entrepreneurial Characteristics will have a direct effect on the Affordable Loss sub-dimension of Effectuation***
- ***H1e Entrepreneurial Characteristics will have a direct effect on the Experimentation sub-dimension of Effectuation***

We first turn our attention to the relationships between all entrepreneurial characteristics and causation; the first construct of the entrepreneurial behavior, controlling for age and educational level, major of

education, and country of business operation. It is worth mentioning that all statistically significant statistics in the following regressions' tables will be highlighted in Bold font type.

4.2.2 Entrepreneurial Characteristics & Causation

As you recall from our factor analysis, we found that the causation construct deals with how much the respondents have planned, analyzed, and developed opportunities, strategies, and other efforts, as represented by the below seven items that measure causation:

1. I analyzed long run opportunities and selected what I thought would provide the best returns
2. I developed a strategy to best take advantage of resources and capabilities
3. I designed and planned business strategies
4. I organized and implemented control processes to make sure I met objectives
5. I researched and selected target markets and did meaningful competitive analysis
6. I had a clear and consistent vision for where I wanted to end up
7. I designed and planned production and marketing efforts

H1a Entrepreneurial Characteristics will have a direct effect on the Causation dimension of entrepreneurial behavior

The linear regression performed with Causation being the dependent variable reported an R Square of 0.540 as shown in Table (5). The whole regression model was very significant at 0.000 with an F-statistics of 4.848 as shown in Table (6). The Coefficients of all entrepreneurial characteristics and causation in Table (7) showed that only two sub-dimensions of ESE have very strong relationships with causation within the whole regression model. In the Entrepreneurial Self-efficacy variable, the first ESE Searching sub-dimension which deals with 'Coming up with new business ideas & identifying the need for them' had a very strong and positive relationship of 0.009 at a significance level of 0.00 with the causation variable. Also, the first ESE Human Resources sub-dimension which deals with 'Hiring, managing, training & setting tasks & responsibilities for my employees' had a very strong and positive relationship of 0.000 at a significance level of 0.00 with the causation variable. Based on the previous results, we find that the model as a whole strongly supports our sub-hypothesis above on the basis of our statistically significant F-test, and within our model the sub-hypothesis receives support from the independent variables.

Table 5: Entrepreneurial Characteristics & Causation Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.735	.540	.428	.75610599

Table 6: Entrepreneurial Characteristics & Causation ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	60.976	22	2.772	4.848	**.000**
Residual	52.024	91	.572		
Total	113.000	113			

Table 7: Entrepreneurial Characteristics & Causation Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-2.862	.811		-3.527	.001
Age	-.014	.012	-.089	-1.108	.271
Educational Level	-.053	.060	-.072	-.877	.383
Country of Business Operation	.010	.010	.081	1.007	.316
Education Major in Business	-.065	.167	-.032	-.386	.700
Entrepreneurial Self-efficacy (ESE)					
ESE Searching 1	.290	.109	.281	2.664	**.009**
ESE Searching 2	.036	.114	.032	.312	.756
ESE Planning 1	.129	.112	.123	1.158	.250
ESE Planning 2	.114	.097	.120	1.173	.244
ESE Marshaling	.013	.129	.010	.103	.918
ESE HR 1	.461	.101	.451	4.576	**.000**
ESE HR 2	-.027	.106	-.023	-.251	.802
ESE Finance 1	.067	.102	.072	.656	.513
ESE Finance 2	.068	.093	.070	.725	.470
ESE Searching 3	-.124	.122	-.112	-1.018	.311
Entrepreneurial Identity					
'*Classic*' Entrepreneur Identity	-.229	.205	-.089	-1.114	.268
'*Manager*' Entrepreneur Identity	-.073	.237	-.024	-.307	.760
Fear of Failure					
Shame in front of *Significant Others*	.038	.425	.008	.090	.929
Shame in front of *Business Peers/Competitors*	-.091	.391	-.022	-.233	.816
Fear of *Personal* Financial Consequences	-.029	.316	-.009	-.092	.927
Fear of *Family* Financial Consequences	.150	.329	.041	.457	.649
Fear of Entrepreneurial Death	.076	.393	.017	.194	.847
Other Options Availability	-.103	.240	-.052	-.428	.670

4.2.3 Entrepreneurial Characteristics & Effectuation

4.2.3.1. Entrepreneurial Characteristics & Pre-commitments

The first effectuation sub-dimension of pre-commitments deals with how much the respondents have focused and depended on pre-commitments and alliances with customers, suppliers, organizations, network connections, among others, as represented by the below six scale items that measure this sub-dimension:

1. I used a substantial number of agreements with customers, suppliers, other organizations & people
2. I used pre-commitments from customers and suppliers as often as possible
3. By working closely with people/organizations external to my company/business I have been able to greatly expand my company/business capabilities
4. I have focused on developing alliances with other people and organizations
5. My partnerships with outside organizations and people play a key role in my ability to provide my product/service

H1b Entrepreneurial Characteristics will have a direct effect on the Pre-commitments sub-dimension of Effectuation

The linear regression performed with the effectuation sub-dimension of pre-commitments being the dependent variable reported an R Square of 0.381 as shown in Table (8). The whole regression model was very significant at 0.001 with an F-statistics of 2.549 as shown in Table (9). In examining the Coefficients of all entrepreneurial characteristics and pre-commitments as shown in Table (10) below several dimensions of the entrepreneurial characteristics had significant relationships with the pre-commitments sub-dimension within the whole regression model. First, almost half of the sub-dimensions within the ESE independent variable, had strong relationships, with the ESE Searching second and third sub-dimensions, which deal with 'Designing products/ services that will satisfy customer needs & wants' and 'Making a sale', reporting strong and positive relationships of 0.045 and 0.042 respectively at a significance level of 0.04. Also, the ESE Human Resources first sub-dimension which deals with 'Hiring, managing, training & setting tasks & responsibilities for my employees' reported a strong and negative relationship of 0.043 at a 0.04 significance level, and the ESE Finance second sub-dimension which deals with 'Keeping/recording, reading & interpreting financial statements' reported a strong and negative relationship of 0.069 at a 0.06 significance level. Within the Entrepreneurial Identity variable, the 'Classic' identity dimension reported a

strong and positive relationship of 0.033 at a significance level of 0.03, and the 'Manager' Identity reported a very strong and positive relationship of 0.000 at a significance level of 0.00 with the pre-commitments sub-dimension of effectuation. Finally, within the Fear of Failure variable, shame in front of significant others reported a weak and negative relationship of 0.130 at a significance level of 0.13, fear of family suffering financial consequences reported a strong and positive relationship of 0.093 at a significance level of 0.09, and finally availability of other options reported a strong and positive relation of 0.098 at a significance level of 0.09. Therefore, we find that the model as a whole strongly supports our sub-hypothesis above on the basis of our statistically significant F-test, and within our model the sub-hypothesis receives support from the independent variables.

Table 8: Entrepreneurial Characteristics & Pre-commitments Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.617	.381	.232	.87655891

Table 9: Entrepreneurial Characteristics & Pre-commitments ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	43.080	22	1.958	2.549	**.001**
Residual	69.920	91	.768		
Total	113.000	113			

Table 10: Entrepreneurial Characteristics & Pre-commitments Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	**Std. Error**	**Beta**	**t**	**Sig.**
(Constant)	-2.310	.941		-2.456	.016
Age	-.006	.014	-.039	-.413	.681
Educational Level	.054	.070	.073	.770	.443
Country of Business Operation	.006	.012	.046	.496	.621
Education Major in Business	.099	.194	.050	.510	.612
Entrepreneurial Self-efficacy (ESE)					
ESE Searching 1	-.176	.126	-.170	-1.390	.168
ESE Searching 2	.269	.132	.245	2.034	**.045**
ESE Planning 1	-.021	.129	-.020	-.162	.872
ESE Planning 2	.102	.113	.108	.906	.368
ESE Marshaling	-.054	.149	-.041	-.361	.719
ESE HR 1	-.240	.117	-.235	-2.052	**.043**
ESE HR 2	.076	.123	.064	.613	.542
ESE Finance 1	.018	.118	.019	.150	.881
ESE Finance 2	.199	.108	.207	1.842	**.069**
ESE Searching 3	.291	.141	.263	2.058	**.042**
Entrepreneurial Identity					
'*Classic*' Entrepreneur Identity	.517	.238	.201	2.170	**.033**
'*Manager*' Entrepreneur Identity	1.113	.275	.367	4.046	**.000**
Fear of Failure					
Shame in front of *Significant Others*	-.752	.492	-.155	-1.527	**.130**
Shame in front of *Business Peers/Competitors*	.016	.454	.004	.036	.972
Fear of *Personal* Financial Consequences	-.181	.367	-.058	-.494	.623
Fear of *Family* Financial Consequences	.646	.381	.175	1.696	**.093**
Fear of Entrepreneurial Death	.203	.455	.046	.446	.657
Other Options Availability	.466	.279	.234	1.670	**.098**

4.2.3.2. Entrepreneurial Characteristics & Flexibility

The second effectuation sub-dimension of flexibility deals with how much the respondents have adapted their ventures to be able to seize opportunities, as represented by the below four scale items that measure the flexibility sub-dimension:

1. I allowed the business to evolve as opportunities emerged
2. I adapted what I was doing to the resources I had
3. I was flexible and took advantage of opportunities as they arose
4. I avoided courses of action that restricted my flexibility and adaptability

H1c Entrepreneurial Characteristics will have a direct effect on the Flexibility sub-dimension of Effectuation

The linear regression performed with the effectuation sub-dimension of flexibility being the dependent variable reported an R Square of 0.332 as shown in Table (11). The whole regression model was very significant at 0.010 with an F-statistics of 2.051 as shown in Table (12). The Coefficients of all entrepreneurial characteristics and flexibility in Table (13) showed that four dimensions of these characteristics had strong and weak relationships with the flexibility sub-dimension of effectuation within the whole regression model. First, within the ESE independent variable, the ESE Searching first sub-dimension which deals with 'Coming up with new business ideas & identifying the need for them' reported a weak and positive relationships of 0.154 at the significance level of 0.15, and the ESE Marshaling dimension which deals with 'Contacting & communicating with others so they identify with and believe in my ideas & vision for the future' reported a strong and positive relationship of 0.048 at a 0.04 significance level. Within the Entrepreneurial Identity variable, the 'Manager' Identity reported a weak and negative relationship of 0.104 at a significance level of 0.10. Finally, within the Fear of Failure variable, fear of entrepreneurial death reported a strong and negative relationship of 0.081 at a significance level of 0.08 with the flexibility sub-dimension of effectuation. Therefore, we find that the model as a whole strongly supports our sub-hypothesis above on the basis of our statistically significant F-test, and within our model the sub-hypothesis receives support from the independent variables.

Table 11: Entrepreneurial Characteristics & Flexibility Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.576	.332	.170	.91109856

Table 12: Entrepreneurial Characteristics & Flexibility ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	37.461	22	1.703	2.051	**.010**
Residual	75.539	91	.830		
Total	113.000	113			

Table 13: Entrepreneurial Characteristics & Flexibility Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	-1.235	.978		-1.264	.210
Age	-.019	.015	-.121	-1.242	.217
Educational Level	.017	.073	.023	.230	.818
Country of Business Operation	.004	.012	.034	.351	.726
Education Major in Business	-.096	.202	-.048	-.478	.634
Entrepreneurial Self-efficacy (ESE)					
ESE Searching 1	.189	.131	.182	1.436	**.154**
ESE Searching 2	.130	.137	.119	.949	.345
ESE Planning 1	-.007	.135	-.007	-.053	.958
ESE Planning 2	.048	.117	.051	.411	.682
ESE Marshaling	.311	.155	.239	2.007	**.048**
ESE HR 1	-.124	.121	-.121	-1.021	.310
ESE HR 2	-.023	.128	-.020	-.182	.856
ESE Finance 1	-.087	.123	-.094	-.710	.479
ESE Finance 2	-.072	.112	-.075	-.641	.523
ESE Searching 3	.169	.147	.153	1.150	.253
Entrepreneurial Identity					
'*Classic*' Entrepreneur Identity	.183	.247	.071	.741	.460
'*Manager*' Entrepreneur Identity	-.470	.286	-.155	-1.644	**.104**
Fear of Failure					
Shame in front of *Significant Others*	-.050	.512	-.010	-.097	.923
Shame in front of *Business Peers/Competitors*	-.255	.472	-.062	-.541	.590
Fear of *Personal* Financial Consequences	-.438	.381	-.140	-1.150	.253
Fear of *Family* Financial Consequences	-.487	.396	-.132	-1.230	.222
Fear of Entrepreneurial Death	-.836	.473	-.188	-1.766	**.081**
Other Options Availability	.003	.290	.002	.012	.991

4.2.3.3. Entrepreneurial Characteristics & Affordable Loss

The third effectuation sub-dimension of affordable loss deals with how much the respondents have been risk averse and careful when committing or utilizing any available resources, as represented by the below three scale items that measure the affordable loss sub-dimension:

1. I was careful not to commit more resources than I could afford to lose
2. I was careful not to risk more money than I was willing to lose with my initial idea
3. I was careful not to risk so much money that my business would be in real trouble financially if things didn't work out

H1d Entrepreneurial Characteristics will have a direct effect on the Affordable Loss sub-dimension of Effectuation

The linear regression performed with the effectuation sub-dimension of affordable loss being the dependent variable reported an R Square of 0.232 as shown in Table (14). The whole regression model was weakly significant at 0.230 with an F-statistics of 1.248 as shown in Table (15). The Coefficients of all entrepreneurial characteristics and affordable loss in Table (16) showed that several dimensions of the entrepreneurial characteristics had significant relationships with the affordable loss sub-dimension within the whole regression model. First, within the ESE independent variable, the ESE Planning first sub-dimension which deals with 'Pricing, marketing, & determining customer demand for new products/services' reported a strong and positive relationship of 0.037 at a significance level of 0.03 and also the ESE Marshaling dimension which deals with 'Contacting & communicating with others so they identify with and believe in my ideas & vision for the future' reported a strong and negative relationship of 0.028 at a 0.02 level of significance. Within the Fear of Failure variable, five relationships showed strong and weak relationships, with shame in front of significant others reporting a strong and negative relationship of 0.070 at a significance level of 0.07, shame in front of business peers/competitors reporting a very strong and negative relationship of 0.018 at a significance level of 0.01, fear of suffering personal financial consequences reporting a strong and negative relationship of 0.082 at a significance level of 0.08, fear of family suffering financial consequences reporting a weak and negative relationship of 0.150 at a significance level of 0.15, and finally availability of other options reporting a very strong and negative relation of 0.041 at a significance level of 0.04. Therefore, we find that the model as a whole weakly

supports our sub-hypothesis above, although within the model the sub-hypothesis receives support from the independent variables.

Table 14: Entrepreneurial Characteristics & Affordable Loss Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.481	.232	.046	.97667072

Table 15: Entrepreneurial Characteristics & Affordable Loss ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	26.196	22	1.191	1.248	**.230**
Residual	86.804	91	.954		
Total	113.000	113			

Table 16: Entrepreneurial Characteristics & Affordable Loss Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	.411	1.048		.392	.696
Age	.012	.016	.077	.736	.463
Educational Level	.089	.078	.121	1.147	.254
Country of Business Operation	-.014	.013	-.112	-1.075	.285
Education Major in Business	.098	.216	.049	.453	.652
Entrepreneurial Self-efficacy (ESE)					
ESE Searching 1	-.065	.141	-.063	-.464	.644
ESE Searching 2	-.079	.147	-.072	-.535	.594
ESE Planning 1	.305	.144	.291	2.112	**.037**
ESE Planning 2	.114	.126	.120	.908	.367
ESE Marshaling	-.370	.166	-.285	-2.231	**.028**
ESE HR 1	.037	.130	.036	.281	.780
ESE HR 2	-.095	.137	-.081	-.694	.489
ESE Finance 1	-.109	.132	-.117	-.823	.413
ESE Finance 2	.113	.121	.117	.936	.352
ESE Searching 3	.022	.158	.020	.138	.891
Entrepreneurial Identity					
'*Classic*' Entrepreneur Identity	-.036	.265	-.014	-.137	.891
'*Manager*' Entrepreneur Identity	.041	.307	.014	.134	.894
Fear of Failure					
Shame in front of *Significant Others*	-1.007	.549	-.207	-1.835	**.070**
Shame in front of *Business Peers/Competitors*	-1.217	.506	-.293	-2.407	**.018**
Fear of *Personal* Financial Consequences	-.718	.408	-.229	-1.758	**.082**
Fear of *Family* Financial Consequences	-.617	.425	-.167	-1.452	**.150**
Fear of Entrepreneurial Death	-.473	.508	-.106	-.933	.353
Other Options Availability	-.645	.311	-.324	-2.075	**.041**

4.2.3.4. Entrepreneurial Characteristics & Experimentation

The final effectuation sub-dimension of experimentation deals with how much the respondents have tested and adapted their offerings and business models as they develop and progress in their ventures. The experimentation sub-dimension is represented by the below three scale items:

1. I experimented with different products and/or business models
2. The product/service that I now provide is substantially different than I first imagined
3. I tried a number of different approaches until I found a business model that worked

H1e Entrepreneurial Characteristics will have a direct effect on the Experimentation sub-dimension of Effectuation

The linear regression performed with the effectuation sub-dimension of experimentation being the dependent variable reported an R Square of 0.195 as shown in Table (17) below. The whole regression model was not significant at 0.468 with an F-statistics of 1.004 as shown in Table (18). Yet, the Coefficients of all entrepreneurial characteristics and experimentation in Table (19) showed that one of the demographics along one of the ESE Finance sub-dimension and two Fear of Failure variable dimensions showed strong and weak relationships with this effectuation sub-dimension. First, the demographic of educational level reported a weak and negative relationship of 0.129 at a significance level of 0.12. Within the ESE independent variable, only the ESE Finance second sub-dimension which deals with 'Keeping/recording, reading & interpreting financial statements' reported a very strong and negative relationship of 0.027 at the significance level of 0.02. Finally, within the Fear of Failure variable, fear of suffering personal financial consequences reported a strong and negative relationship of 0.077 at a significance level of 0.07 and availability of other options reported a weak and negative relationship of 0.111 at a significance level of 0.11. Therefore, while we find that the model as a whole does not support our sub-hypothesis above, several independent variables show statistically significant relationships with the dependent variable.

Table 17: Entrepreneurial Characteristics & Experimentation Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.442	.195	.001	.99964840

Table 18: Entrepreneurial Characteristics & Experimentation ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	22.064	22	1.003	1.004	.468
Residual	90.936	91	.999		
Total	113.000	113			

Table 19: Entrepreneurial Characteristics & Experimentation Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	.436	1.073		.406	.685
Age	.004	.016	.025	.235	.815
Educational Level	-.122	.080	-.166	-1.531	**.129**
Country of Business Operation	.003	.013	.027	.249	.804
Education Major in Business	.298	.221	.150	1.346	.182
Entrepreneurial Self-efficacy (ESE)					
ESE Searching 1	-.070	.144	-.067	-.484	.630
ESE Searching 2	-.072	.151	-.065	-.477	.635
ESE Planning 1	.176	.148	.168	1.195	.235
ESE Planning 2	-.057	.129	-.060	-.444	.658
ESE Marshaling	.000	.170	.000	-.003	.998
ESE HR 1	.153	.133	.150	1.152	.252
ESE HR 2	-.089	.141	-.075	-.633	.529
ESE Finance 1	.031	.135	.034	.231	.818
ESE Finance 2	-.277	.123	-.288	-2.242	**.027**
ESE Searching 3	.188	.161	.170	1.167	.246
Entrepreneurial Identity					
'*Classic*' Entrepreneur Identity	.004	.271	.002	.015	.988
'*Manager*' Entrepreneur Identity	-.151	.314	-.050	-.482	.631
Fear of Failure					
Shame in front of *Significant Others*	-.459	.562	-.094	-.817	.416
Shame in front of *Business Peers/Competitors*	-.231	.518	-.056	-.446	.657
Fear of *Personal* Financial Consequences	-.747	.418	-.239	-1.788	**.077**
Fear of *Family* Financial Consequences	-.277	.435	-.075	-.637	.526
Fear of Entrepreneurial Death	-.573	.519	-.129	-1.103	.273
Other Options Availability	-.511	.318	-.257	-1.608	**.111**

4.3 Structural Control Factors, Entrepreneurial Characteristics & Entrepreneurial Behavior

The second section of our analysis examines how entrepreneurial characteristics affect the entrepreneurial behavior controlling for several demographics and structural control factors. As noted earlier, this study aims at exploring how different factors and characteristics affect the entrepreneurial approach entrepreneurs follow under uncertain circumstances and within unpredictable environments. The literature has suggested that the earlier defined structural control factors could impact entrepreneurial characteristics at different levels with varying and contradicting results. However, the second part of our conceptual model takes into account these structural control factors and posits that together with entrepreneurial characteristics they could affect entrepreneurial behavior. In the second section of our analysis, we turn our attention to testing the second research hypothesis and its sub-hypotheses through several regression tests. Controlling for entrepreneurs age and educational level, major of education, and the country from which they operate their ventures, we test entrepreneurial characteristics as well as the structural control factors; *Knowledge and Experiential Sources*, *Access to Resources Through Network*, *Environmental Trigger*, and *Institutional Context*. The second research hypothesis and its five sub-hypotheses that will be tested in the following sections are as follows:

H2 Entrepreneurial Characteristics and Structural Control Factors will have a direct effect on the Entrepreneurial Behavior of entrepreneurs in emerging markets

- ***H2a Entrepreneurial Characteristics and Structural Control Factors will have a direct effect on the Causation dimension of Entrepreneurial Behavior***
- ***H2b Entrepreneurial Characteristics and Structural Control Factors will have a direct effect on the Pre-commitments sub-dimension of Effectuation***
- ***H2c Entrepreneurial Characteristics and Structural Control Factors will have a direct effect on the Flexibility sub-dimension of Effectuation***
- ***H2d Entrepreneurial Characteristics and Structural Control Factors will have a direct effect on the Affordable Loss sub-dimension of Effectuation***
- ***H2e Entrepreneurial Characteristics and Structural Control Factors will have a direct effect on the Experimentation sub-dimension of Effectuation***

We first turn our attention to the relationships between all entrepreneurial characteristics, structural control factors and causation; the first construct of the entrepreneurial behavior, controlling for age and educational level, major of education, and country of business operation.

4.3.1 Structural Control Factors, Entrepreneurial Characteristics & Causation

As discussed before, the causation construct which is measured by 7 scale items is concerned with how much entrepreneurs have diligently and rigorously planned for and analyzed opportunities, competitive strategies, and other marketing efforts.

H2a Entrepreneurial Characteristics and Structural Control Factors will have a direct effect on the Causation dimension of Entrepreneurial Behavior

The regression test performed with Causation being the dependent variable reported an R Square of 0.642 as shown in Table (20). The whole regression model was very significant at 0.000 with an F-statistics of 3.692 as shown in Table (21). The Coefficients of all entrepreneurial characteristics, structural control factors and causation in Table (22) showed several strong and weak relationships between different characteristics and factors. First, a weak and negative relationship of 0.118 at the significance level of 0.10 between age and causation was reported. Varying relations between several dimensions of four of the structural control factors and the causation variable were reported. Within the Experiential Source variable, the dimension of business operation experience (number of founded ventures) reported a weak and positive relationship with causation of 0.102 at the significance level of 0.10, and the dimension of business success experience (number of successful ventures) reported a very strong and negative relationship of 0.059 at the significance level of 0.05. Within the Access to Resources through Network variable, both access to finance and market/customers through network reported strong and positive relationships of 0.070 and 0.071 respectively at a significance level of 0.07. The Environmental Trigger variable also reported a strong and negative relation of 0.098 at the significance level of 0.09. The last relations between structural control factors and causation were reported within the Institutional Context variable, with the business enabling environment dimension showing a weak and positive relation of 0.100 at a 0.10 significance level, and the corruption effect on business operation dimension showing a very strong and positive relation of 0.056 at a 0.05 significance level.

As for the entrepreneurial characteristics, only four sub-dimensions within the Entrepreneurial Self-efficacy variable have showed significant relationships with causation within the whole regression model. Both the first ESE Searching sub-dimension which deals with 'Coming up with new business ideas & identifying the need for them' and the first HR sub-dimension which deals with 'Hiring, managing, training & setting tasks & responsibilities for my employees' reported very strong and positive relationships of 0.009 and 0.001 respectively at a significance level of 0.00 with the causation variable. Also, the first and second ESE Planning sub-dimensions reported weak and positive relationships of 0.145 and 0.140 respectively at a significance level of 0.14 with the causation dependent variable. Based on the previous results, we find that the model as a whole strongly supports our sub-hypothesis above on the basis of our statistically significant F-test, and within our model the sub-hypothesis receives support from the independent variables.

Table 20: Structural Control Factors, Entrepreneurial Characteristics & Causation Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.802	.642	.468	.72907416

Table 21: Structural Control Factors, Entrepreneurial Characteristics & Causation ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	72.602	37	1.962	3.692	**.000**
Residual	40.398	76	.532		
Total	113.000	113			

Table 22: Structural Control Factors, Entrepreneurial Characteristics & Causation Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	-4.196	.951		-4.410	.000
Age	-.022	.014	-.141	-1.580	**.118**
Educational Level	-.050	.064	-.068	-.781	.437
Country of Business Operation	-.003	.012	-.023	-.238	.813
Education Major in Business	.103	.173	.051	.592	.555
Knowledge Source					
Before Starting Business	.065	.051	.117	1.286	.202
After Starting Business	-.055	.046	-.100	-1.178	.243
Experiential Source					
Business Operation Experience	.164	.099	.198	1.654	**.102**
Industry Experience	.049	.074	.053	.667	.507
Business Success Experience	-.205	.107	-.208	-1.917	**.059**
Business Failure Experience	-.004	.113	-.004	-.039	.969
Access to Resources Through Network					
Network Connections Running Businesses	-.040	.062	-.053	-.653	.516
Access to *Finance* through Network	.083	.045	.164	1.835	**.070**
Access to *HR* through Network	-.019	.046	-.035	-.418	.677
Access to *Market/Customers* through Network	.078	.042	.159	1.834	**.071**
Environmental Trigger					
Necessity & Opportunity Motives	-.073	.044	-.132	-1.674	**.098**
Institutional Context					
Business Enabling Environment	.131	.079	.159	1.663	**.100**
IP Rights Protection	-.046	.087	-.051	-.529	.598
Corruption Effect on Business Operation	.136	.070	.171	1.944	**.056**
Legal Contracts Enforcement	.051	.089	.053	.570	.570
Entrepreneurial Self-efficacy (ESE)					
ESE Searching 1	.317	.118	.307	2.691	**.009**
ESE Searching 2	-.017	.116	-.015	-.147	.884
ESE Planning 1	.171	.116	.163	1.472	**.145**
ESE Planning 2	.159	.107	.168	1.493	**.140**
ESE Marshaling	-.038	.134	-.030	-.287	.775
ESE HR 1	.381	.107	.373	3.580	**.001**
ESE HR 2	.014	.106	.012	.131	.896
ESE Finance 1	.121	.108	.130	1.115	.268
ESE Finance 2	.030	.099	.031	.299	.766
ESE Searching 3	-.047	.128	-.043	-.368	.714
Entrepreneurial Identity					
'*Classic*' Entrepreneur Identity	-.124	.213	-.048	-.580	.564
'*Manager*' Entrepreneur Identity	.271	.260	.089	1.044	.300
Fear of Failure					
Shame in front of *Significant Others*	.185	.462	.038	.401	.690
Shame in front of *Business Peers/Competitors*	-.426	.419	-.103	-1.015	.313
Fear of *Personal* Financial Consequences	.106	.336	.034	.315	.754
Fear of *Family* Financial Consequences	.178	.348	.048	.512	.610
Fear of Entrepreneurial Death	.023	.405	.005	.057	.954
Other Options Availability	.083	.260	.041	.318	.751

4.3.2 Structural Control Factors, Entrepreneurial Characteristics & Effectuation

4.3.2.1 Structural Control Factors, Entrepreneurial Characteristics & Pre-commitments

The first effectuation sub-dimension of pre-commitments, as represented by the six measure items mentioned in previous sections, examines the respondents focus on pre-commitments and alliances with customers, suppliers, organizations, network connections, among others.

H2b Entrepreneurial Characteristics and Structural Control Factors will have a direct effect on the Pre-commitments sub-dimension of Effectuation

The linear regression performed with the effectuation sub-dimension of pre-commitments being the dependent variable reported an R Square of 0.534 as shown in Table (23). The whole regression model was very significant at 0.001 with an F-statistics of 2.349 as shown in Table (24). The Coefficients of all entrepreneurial characteristics, structural control factors and pre-commitments in Table (25) showed that several dimensions and sub-dimensions of the entrepreneurial characteristics and structural control factors had significant relationships with the pre-commitments sub-dimension within the whole regression model. First, within the Knowledge Source variable, only knowledge source before starting business showed a very strong and negative relationship of 0.028 at a significance level of 0.02. Several dimensions within the Experiential Source variable showed strong and very strong significance, with business operation experience (number of founded ventures) reporting a very strong and negative relationship with the pre-commitment variable of 0.033 at the significance level of 0.03, the business success experience (number of successful ventures) reporting a very strong and positive relationship of 0.003 at the significance level of 0.03, and the business failure experience (number of failed ventures) reporting a strong and negative relationship of 0.064 at the significance level of 0.64. Within the Access to Resources through Network variable, only access to market/customers through network reported a weak and negative relationship of 0.150 at a significance level of 0.15. Finally, within the Institutional Context variable, only the corruption effect on business operation dimension showed a weak and positive relation of 0.154 at a 0.15 significance level.

As for the entrepreneurial characteristics, almost half of the sub-dimensions within the ESE independent variable, had strong and very strong relationships with pre-commitment, with the ESE Searching second

and third sub-dimensions, which deal with 'Designing products/ services that will satisfy customer needs & wants' and 'Making a sale', reporting strong and very strong positive relationships of 0.067 and 0.027 respectively at significance levels of 0.06 and 0.02 respectively. Also, The ESE Human Resources first sub-dimension which deals with 'Hiring, managing, training & setting tasks & responsibilities for my employees' reported a very strong and negative relationship of 0.018 at a 0.01 significance level, and the ESE Finance second sub-dimension which deals with 'Keeping/recording, reading & interpreting financial statements' reported a strong and negative relationship of 0.094 at the 0.09 significance level. Within the Entrepreneurial Identity variable, the 'Classic' and 'Manager' identity dimensions reported very strong and positive relationships of 0.009 and 0.000 respectively at a significance level of 0.00 with the pre-commitments sub-dimension of effectuation. Finally, within the Fear of Failure variable, fear of family suffering financial consequences reported a strong and positive relationship of 0.065 at a significance level of 0.06, and availability of other options reported a very strong and positive relationship of 0.036 at a significance level of 0.03. Therefore, we find that the model as a whole strongly supports our sub-hypothesis above on the basis of our statistically significant F-test, and within our model the sub-hypothesis receives support from the independent variables.

Table 23: Structural Control Factors, Entrepreneurial Characteristics & Pre-commitments Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.730	.534	.306	.83282789

Table 24: Structural Control Factors, Entrepreneurial Characteristics & Pre-commitments ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	60.286	37	1.629	2.349	**.001**
Residual	52.714	76	.694		
Total	113.000	113			

Table 25: Structural Control Factors, Entrepreneurial Characteristics & Pre-commitments Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	**Std. Error**	**Beta**	**t**	**Sig.**
(Constant)	-1.626	1.087		-1.496	.139
Age	.003	.016	.016	.161	.873
Educational Level	.000	.073	.001	.006	.995
Country of Business Operation	.009	.014	.076	.677	.500
Education Major in Business	.050	.198	.025	.255	.799
Knowledge Source					
Before Starting Business	-.130	.058	-.233	-2.240	**.028**
After Starting Business	-.004	.053	-.007	-.075	.941
Experiential Source					
Business Operation Experience	-.246	.113	-.297	-2.171	**.033**
Industry Experience	-.050	.084	-.054	-.594	.554
Business Success Experience	.379	.122	.384	3.098	**.003**
Business Failure Experience	-.243	.130	-.224	-1.877	**.064**
Access to Resources Through Network					
Network Connections Running Businesses	.038	.071	.050	.533	.596
Access to *Finance* through Network	.048	.052	.095	.930	.355
Access to *HR* through Network	.040	.053	.073	.764	.447
Access to *Market/Customers* through Network	-.080	.049	-.162	-1.642	**.105**
Environmental Trigger					
Necessity & Opportunity Motives	-.030	.050	-.055	-.609	.544
Institutional Context					
Business Enabling Environment	.089	.090	.108	.994	.323
IP Rights Protection	.030	.099	.034	.303	.763
Corruption Effect on Business Operation	.115	.080	.145	1.441	**.154**
Legal Contracts Enforcement	-.115	.101	-.120	-1.136	.259
Entrepreneurial Self-efficacy (ESE)					
ESE Searching 1	-.123	.135	-.119	-.911	.365
ESE Searching 2	.246	.132	.224	1.856	**.067**
ESE Planning 1	-.121	.133	-.115	-.909	.366
ESE Planning 2	-.055	.122	-.058	-.448	.655
ESE Marshaling	.047	.153	.036	.304	.762
ESE HR 1	-.293	.122	-.287	-2.408	**.018**
ESE HR 2	.015	.121	.013	.122	.903
ESE Finance 1	.084	.124	.090	.677	.501
ESE Finance 2	.192	.113	.200	1.695	**.094**
ESE Searching 3	.329	.146	.298	2.255	**.027**
Entrepreneurial Identity					
'*Classic*' Entrepreneur Identity	.651	.243	.253	2.676	**.009**
'*Manager*' Entrepreneur Identity	1.180	.297	.389	3.974	**.000**
Fear of Failure					
Shame in front of *Significant Others*	-.413	.528	-.085	-.783	.436
Shame in front of *Business Peers/Competitors*	.322	.479	.078	.673	.503
Fear of *Personal* Financial Consequences	.229	.384	.073	.597	.552
Fear of *Family* Financial Consequences	.745	.397	.202	1.874	**.065**
Fear of Entrepreneurial Death	.590	.463	.132	1.274	.207
Other Options Availability	.634	.297	.318	2.139	**.036**

4.3.2.2 Structural Control Factors, Entrepreneurial Characteristics & Flexibility

The second effectuation sub-dimension of flexibility which is represented by four measure items as mentioned earlier examines the extent of adaptation and flexibility the respondents have shown in operating their ventures.

H2c Entrepreneurial Characteristics and Structural Control Factors will have a direct effect on the Flexibility sub-dimension of Effectuation

The linear regression performed with the effectuation sub-dimension of flexibility being the dependent variable reported an R Square of 0.464 as shown in Table (26). The whole regression model was very significant at 0.018 with an F-statistics of 1.775 as shown in Table (27). The Coefficients of all entrepreneurial characteristics, structural control factors and flexibility in Table (28) showed several strong and very strong relationships between the different characteristics and factors. As for structural control factors, the Environmental Trigger variable reported a very strong and positive relationship of 0.022 at the significance level of 0.02. The other variable that showed significant relationships was the Institutional Context variable within which the business enabling environment dimension showed a very strong and negative relationship of 0.041 at a 0.04 significance level, and the corruption effect on business operation dimension showed a very strong and negative relationship of 0.039 at a 0.03 significance level.

With regard to entrepreneurial characteristics, within the ESE independent variable, the ESE Searching second sub-dimension which deals with 'Designing products/ services that will satisfy customer needs & wants' reported a strong and positive relationships of 0.093 at the significance level of 0.09, and the ESE Marshaling dimension which deals with 'Contacting & communicating with others so they identify with and believe in my ideas & vision for the future' reported a strong and positive relationship of 0.016 at a 0.01 significance level. Finally, within the Entrepreneurial Identity variable, the 'Manager' Identity reported a very strong and positive relationship of 0.022 at a significance level of 0.02 with the flexibility sub-dimension of effectuation. Therefore, we find that the model as a whole strongly supports our sub-hypothesis above on the basis of our statistically significant F-test, and within our model the sub-hypothesis receives support from the independent variables.

Table 26: Structural Control Factors, Entrepreneurial Characteristics & Flexibility Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.681	.464	.202	.89308144

Table 27: Structural Control Factors, Entrepreneurial Characteristics & Flexibility ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	52.383	37	1.416	1.775	**.018**
Residual	60.617	76	.798		
Total	113.000	113			

Table 28: Structural Control Factors, Entrepreneurial Characteristics & Flexibility Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	-.520	1.166		-.446	.657
Age	-.013	.017	-.082	-.752	.454
Educational Level	-.010	.078	-.014	-.128	.898
Country of Business Operation	.008	.015	.068	.567	.572
Education Major in Business	-.214	.212	-.108	-1.012	.315
Knowledge Source					
Before Starting Business	-.018	.062	-.033	-.295	.769
After Starting Business	.026	.057	.047	.454	.651
Experiential Source					
Business Operation Experience	-.106	.122	-.128	-.874	.385
Industry Experience	.011	.090	.012	.118	.906
Business Success Experience	.168	.131	.170	1.280	.204
Business Failure Experience	-.020	.139	-.019	-.147	.883
Access to Resources Through Network					
Network Connections Running Businesses	-.024	.076	-.032	-.321	.749
Access to *Finance* through Network	-.059	.056	-.116	-1.060	.292
Access to *HR* through Network	.032	.056	.058	.562	.576
Access to *Market/Customers* through Network	.048	.052	.097	.918	.361
Environmental Trigger					
Necessity & Opportunity Motives	.125	.053	.227	2.344	**.022**
Institutional Context					
Business Enabling Environment	-.200	.096	-.243	-2.081	**.041**
IP Rights Protection	-.058	.106	-.065	-.544	.588
Corruption Effect on Business Operation	-.179	.086	-.226	-2.095	**.039**
Legal Contracts Enforcement	.016	.109	.017	.150	.881
Entrepreneurial Self-efficacy (ESE)					
ESE Searching 1	.161	.144	.156	1.116	.268
ESE Searching 2	.242	.142	.220	1.703	**.093**
ESE Planning 1	-.078	.142	-.075	-.550	.584
ESE Planning 2	.081	.131	.085	.618	.538
ESE Marshaling	.405	.164	.312	2.465	**.016**
ESE HR 1	-.108	.130	-.105	-.824	.412
ESE HR 2	-.079	.130	-.067	-.605	.547
ESE Finance 1	-.169	.133	-.182	-1.269	.208
ESE Finance 2	-.073	.121	-.076	-.599	.551
ESE Searching 3	.160	.157	.144	1.019	.312
Entrepreneurial Identity					
'*Classic*' Entrepreneur Identity	-.001	.261	.000	-.002	.998
'*Manager*' Entrepreneur Identity	-.744	.318	-.245	-2.336	**.022**
Fear of Failure					
Shame in front of *Significant Others*	.174	.566	.036	.307	.760
Shame in front of *Business Peers/Competitors*	-.143	.514	-.035	-.279	.781
Fear of *Personal* Financial Consequences	-.469	.412	-.150	-1.139	.258
Fear of *Family* Financial Consequences	-.302	.426	-.082	-.709	.480
Fear of Entrepreneurial Death	-.620	.496	-.139	-1.249	.216
Other Options Availability	-.074	.318	-.037	-.232	.817

4.3.2.3 Structural Control Factors, Entrepreneurial Characteristics & Affordable Loss

The third effectuation sub-dimension of affordable loss which is represented by three measure items that measure how much the respondents have been risk averse and careful when committing or utilizing any available resources for their business operation.

H2d Entrepreneurial Characteristics and Structural Control Factors will have a direct effect on the Affordable Loss sub-dimension of Effectuation

The regression analysis performed with the effectuation sub-dimension of affordable loss being the dependent variable reported an R Square of 0.361 as shown in Table (29). The whole regression model was weakly significant at 0.288 with an F-statistics of 1.160 as shown in Table (30). The Coefficients of all entrepreneurial characteristics, structural control factors and affordable loss in Table (31) showed that a few dimensions of structural control factors and sub-dimensions of the entrepreneurial characteristics had significant relationships with the affordable loss sub-dimension within the whole regression model. First, the demographic of country of business operation reported a weak and negative relationship of 0.145 at a significance level of 0.14. Within the Access to Resources through Network variable, only the network connections running businesses dimension reported a very strong and negative relationship of 0.043 at a significance level of 0.04. The Environmental Trigger variable reported a strong and positive relationship of 0.067 at the significance level of 0.06.

As for the entrepreneurial characteristics, within the ESE independent variable the ESE Planning first sub-dimension which deals with 'Pricing, marketing, & determining customer demand for new products/services' reported a weak and positive relationship of 0.119 at a significance level of 0.11 and also the ESE Marshaling dimension which deals with 'Contacting & communicating with others so they identify with and believe in my ideas & vision for the future' reported a weak and negative relationship of 0.126 at a 0.12 level of significance. Within the Fear of Failure variable, only shame in front of business peers/competitors reported a very strong and negative relationship of 0.035 at a significance level of 0.03. Therefore, we find that the model as a whole weakly supports our sub-hypothesis above, although within the model the sub-hypothesis receives support from the independent variables.

Table 28: Structural Control Factors, Entrepreneurial Characteristics & Affordable Loss Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.601	.361	.050	.97480555

Table 29: Structural Control Factors, Entrepreneurial Characteristics & Affordable Loss ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	40.781	37	1.102	1.160	**.288**
Residual	72.219	76	.950		
Total	113.000	113			

Table 30: Structural Control Factors, Entrepreneurial Characteristics & Affordable Loss Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	.967	1.272		.760	.450
Age	.019	.018	.122	1.026	.308
Educational Level	.085	.086	.115	.991	.325
Country of Business Operation	-.024	.016	-.193	-1.472	**.145**
Education Major in Business	.125	.231	.063	.542	.589
Knowledge Source					
Before Starting Business	-.066	.068	-.118	-.972	.334
After Starting Business	.030	.062	.055	.485	.629
Experiential Source					
Business Operation Experience	-.060	.133	-.072	-.451	.654
Industry Experience	-.114	.098	-.123	-1.154	.252
Business Success Experience	.009	.143	.010	.066	.948
Business Failure Experience	.066	.152	.061	.436	.664
Access to Resources Through Network					
Network Connections Running Businesses	-.171	.083	-.225	-2.061	**.043**
Access to *Finance* through Network	-.021	.061	-.041	-.342	.733
Access to *HR* through Network	-.056	.062	-.102	-.907	.367
Access to *Market/Customers* through Network	.059	.057	.121	1.047	.298
Environmental Trigger					
Necessity & Opportunity Motives	.108	.058	.196	1.861	**.067**
Institutional Context					
Business Enabling Environment	.025	.105	.030	.239	.812
IP Rights Protection	-.117	.116	-.131	-1.011	.315
Corruption Effect on Business Operation	-.067	.093	-.084	-.713	.478
Legal Contracts Enforcement	.105	.119	.109	.887	.378
Entrepreneurial Self-efficacy (ESE)					
ESE Searching 1	-.078	.158	-.075	-.494	.623
ESE Searching 2	-.053	.155	-.048	-.343	.733
ESE Planning 1	.245	.155	.233	1.575	**.119**
ESE Planning 2	.076	.142	.080	.533	.596
ESE Marshaling	-.277	.179	-.213	-1.545	**.126**
ESE HR 1	-.024	.142	-.024	-.171	.865
ESE HR 2	-.115	.142	-.097	-.809	.421
ESE Finance 1	-.100	.145	-.107	-.688	.494
ESE Finance 2	.030	.133	.032	.230	.819
ESE Searching 3	.112	.171	.102	.658	.513
Entrepreneurial Identity					
'*Classic*' Entrepreneur Identity	-.106	.285	-.041	-.371	.712
'*Manager*' Entrepreneur Identity	-.160	.347	-.053	-.460	.647
Fear of Failure					
Shame in front of *Significant Others*	-.557	.618	-.115	-.901	.370
Shame in front of *Business Peers/Competitors*	-1.205	.561	-.290	-2.149	**.035**
Fear of *Personal* Financial Consequences	-.534	.450	-.170	-1.187	.239
Fear of *Family* Financial Consequences	-.334	.465	-.090	-.718	.475
Fear of Entrepreneurial Death	-.299	.542	-.067	-.552	.583
Other Options Availability	-.417	.347	-.210	-1.202	.233

4.3.2.4 Structural Control Factors, Entrepreneurial Characteristics & Experimentation

The final effectuation sub-dimension of experimentation which is represented by four measure items deals with how much the respondents have tested and adapted their offerings and business models as they develop and progress in their ventures.

H2e Entrepreneurial Characteristics and Structural Control Factors will have a direct effect on the Experimentation sub-dimension of Effectuation

The regression analysis performed with the effectuation sub-dimension of experimentation being the dependent variable reported an R Square of 0.272 as shown in Table (31). The whole regression model was not significant at 0.811 with an F-statistics of 0.768 as shown in Table (32). The Coefficients of all entrepreneurial characteristics, structural control factors and experimentation in Table (33) showed that only two Fear of Failure variable dimensions reported strong relationships with this effectuation sub-dimension. First, fear of suffering personal financial consequences reported a strong and negative relationship of 0.091 at a significance level of 0.09 and availability of other options reported a strong and negative relationship of 0.059 at a significance level of 0.05. Therefore, while we find that the model as a whole does not support our sub-hypothesis above, two independent variables show statistically significant relationships with the dependent variable.

Table 31: Structural Control Factors, Entrepreneurial Characteristics & Experimentation Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.522	.272	-.082	1.04033356

Table 32: Structural Control Factors, Entrepreneurial Characteristics & Experimentation ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	30.746	37	.831	.768	.811
Residual	82.254	76	1.082		
Total	113.000	113			

Table 33: Structural Control Factors, Entrepreneurial Characteristics & Experimentation Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	**Std. Error**	**Beta**	**t**	**Sig.**
(Constant)	.862	1.358		.635	.528
Age	.001	.020	.005	.038	.970
Educational Level	-.112	.091	-.152	-1.222	.225
Country of Business Operation	.001	.017	.006	.045	.964
Knowledge Source					
Before Starting Business	-.043	.072	-.078	-.600	.550
After Starting Business	.038	.066	.070	.575	.567
Experiential Source					
Business Operation Experience	.080	.142	.097	.566	.573
Industry Experience	-.007	.105	-.007	-.063	.950
Business Success Experience	.077	.153	.078	.506	.614
Business Failure Experience	.015	.162	.014	.094	.925
Access to Resources Through Network					
Network Connections Running Businesses	-.046	.088	-.060	-.518	.606
Access to *Finance* through Network	-.013	.065	-.025	-.196	.845
Access to *HR* through Network	.017	.066	.032	.264	.792
Access to *Market/Customers* through Network	-.083	.061	-.170	-1.378	.172
Environmental Trigger					
Necessity & Opportunity Motives	.008	.062	.015	.137	.892
Institutional Context					
Business Enabling Environment	.052	.112	.063	.460	.647
IP Rights Protection	.093	.124	.104	.753	.454
Corruption Effect on Business Operation	-.020	.100	-.025	-.197	.844
Legal Contracts Enforcement	-.019	.127	-.020	-.152	.880
Education Major in Business	.230	.247	.115	.931	.355
Entrepreneurial Self-efficacy (ESE)					
ESE Searching 1	-.107	.168	-.103	-.636	.527
ESE Searching 2	-.050	.165	-.046	-.304	.762
ESE Planning 1	.183	.166	.174	1.104	.273
ESE Planning 2	-.079	.152	-.084	-.522	.603
ESE Marshaling	.012	.191	.010	.065	.948
ESE HR 1	.160	.152	.157	1.056	.294
ESE HR 2	-.062	.151	-.052	-.408	.685
ESE Finance 1	-.031	.155	-.033	-.199	.843
ESE Finance 2	-.188	.142	-.196	-1.329	.188
ESE Searching 3	.115	.182	.104	.632	.529
Entrepreneurial Identity					
'*Classic*' Entrepreneur Identity	.057	.304	.022	.188	.851
'*Manager*' Entrepreneur Identity	-.244	.371	-.080	-.658	.512
Fear of Failure					
Shame in front of *Significant Others*	-.603	.659	-.124	-.915	.363
Shame in front of *Business Peers/Competitors*	-.340	.598	-.082	-.568	.572
Fear of *Personal* Financial Consequences	-.822	.480	-.262	-1.712	**.091**
Fear of *Family* Financial Consequences	-.533	.496	-.144	-1.074	.286
Fear of Entrepreneurial Death	-.705	.578	-.158	-1.218	.227
Other Options Availability	-.710	.371	-.357	-1.918	**.059**

CHAPTER 5: DISCUSSION

The main research question of this study of how do entrepreneurial characteristics affect the decision making choice of entrepreneurs was tested through a series of regression equations as explained in the previous chapter. Our main model and hypothesized relationships, as depicted in our first main hypothesis and its five sub-hypotheses, examined how entrepreneurial characteristics could affect the entrepreneurial behavior controlling for several demographics. The second part of our model then looked at how these entrepreneurial characteristics could affect the entrepreneurial behavior controlling not only for demographics but also for several structural control factors that were suggested by previous research to have shown different levels of relationships with entrepreneurial characteristics. Although most of our regression models supported our hypothesized relationships, and since this study is exploring this new research theme of entrepreneurial behavior and the theory of effectuation, we did not only consider significant models but also looked at the variables that showed some significance within the insignificant models. To explore such relationships, we were not very rigid in treating the weakly significant relationships in our analysis as we thought these even if not strongly significant could provide further guidance for future research in the field. In the following section, we turn our attention to discussing the results of our regressions' results and the relationships that appeared between the independent variables and our dependent variable within these models.

5.1 Entrepreneurial Characteristics & Entrepreneurial Behavior

Within our main research model, the whole models of Causation, Effectuation sub-dimension of Pre-commitments, and sub-dimension of Flexibility were strongly significant with several variables within these models being significant. Therefore we received support for our first main hypothesis and the first three sub-hypotheses. Although several independent variables within the whole regression models of the remaining two Effectuation sub-dimensions of Affordable Loss and Experimentation showed strong significant relationships with the dependent variable, the whole model of Affordable Loss sub-dimension was weakly significant and the whole model of Experimentation sub-dimension was not significant. Therefore, our Affordable Loss sub-hypothesis received partial support, whereas our Experimentation sub-hypothesis did not receive support. We discuss and analyze in the following sections our results relationships that emerged comparing how the independent variables and the structural control variables interacted within the different models to better inform our research discussion.

5.1.1 Entrepreneurial Characteristics & Causation

Testing how entrepreneurial characteristics would impact causation as a decision making choice controlling for demographics, the regression model was very significant. However, only two sub-dimensions of entrepreneurial self-efficacy (ESE) seemed to predict causation within the whole model. The first was the ESE Searching sub-dimension that deals with the level of entrepreneurs' confidence in their ability to create and develop new business ideas that could address customers needs. The very significant and positive relation showed that the more confident entrepreneurs are in their creativity skills with regard to developing new and practical business models the more they would rigorously plan and design strategies and market analysis to be able identify and match their customers needs. The second was the ESE Human Resources sub-dimension that deals with the level of entrepreneurs' confidence in several HR skills and abilities such as recruitment, management, training, and defining responsibilities of their ventures' staff, showed a very significant and positive relation with causation. These relationships imply that entrepreneurs seem to revert to a causal approach the more confident they become in their HR management skills and capabilities.

However, when the relationships between entrepreneurial characteristics and causation are tested controlling for the structural control variables, we see that several elements become important. We first see that two ESE Planning sub-dimensions that deal with the entrepreneurs confidence in his abilities in marketing and determining customers demand for his new products or services and also his abilities in estimating the needed funds & capital to embark on his venture, appear to affect how the entrepreneur could be more causal controlling for other elements, although such relation is weakly significant. Certain structural control factors become important such as the number of businesses the entrepreneur has already founded which appeared to increase the entrepreneurs tendency to be more causal as he becomes a habitual entrepreneur. The entrepreneur's success experience in business venturing also appeared to highly predict causation the less successful the entrepreneur was. Environmental trigger of opportunity-driven entrepreneurship also appeared to impact causation which implies that necessity-driven entrepreneurs will tend to be less causal. Access to resources through network also seemed to significantly predict how much causal entrepreneurs could be, especially in terms of both their ability to get access to financial resources and also markets or customers through their network. Entrepreneurs seem to follow causal approach the more they depend on distant and formal relations like acquaintances, banks and other formal access

channels. Moreover, two elements within the institutional context variable showed some significance in impacting causation, with corruption effect on business operation being a strong predictor that the entrepreneur will tend to be more causal and depends more on planning to maximize returns as corruption increases in his environment. The other less significant institutional element is how enabling is the business environment for the entrepreneur's venture which indicates that in an enabling environment he could develop long term strategies and design plans that will help him reach pre-defined goals. Finally, age appears to have a weakly significant effect on the entrepreneur's choice of causation, with younger entrepreneurs being more causal than older ones.

5.1.2 Entrepreneurial Characteristics & Effectuation

5.1.2.1 Entrepreneurial Characteristics & Pre-commitments

After testing Causation with entrepreneurial characteristics and all structural control variables, we tested each of the four effectuation sub-dimensions with our independent variables. We started with testing the pre-commitments sub-dimension which deals with how much entrepreneurs have focused and depended on pre-commitments and alliances with customers, suppliers, and other organizations or individuals. The regression model was very significant as several variables tended to be related with the pre-commitment sub-dimension. First, within the ESE independent variable, almost half of its sub-dimensions had strong relationships with pre-commitments as a dependent variable. The ESE Searching sub-dimensions that deal with the entrepreneur's perception of his ability to develop a product or service that addresses a certain customer demand, and also his ability to sell such product or service, appeared to impact the extent of how much the entrepreneur will depend on pre-commitments and alliances that enable him to provide value that matches such customer needs. Also, the ESE Human Resources sub-dimension which deals with the entrepreneur's abilities to recruit, manage, and train employees seemed to affect their dependence on pre-commitments and alliances the less able they were to perform such tasks as pre-commitments with people might help them find and retain staff. The last ESE Finance sub-dimension that deals with book-keeping and ability to understand financial statements also showed a negative relationship with the level of pre-commitments use which implies that entrepreneurs with less financial literacy prefer to depend more on alliances to bridge such gap by reducing uncertainty through involving other people or organizations. Within the Entrepreneurial Identity variable, the classic identity of entrepreneurs who are mainly motivated by financial gains predicted the use of pre-commitments and alliance as one could infer that such

agreements would result in more sales, customers and gains. Also, the manager identity of entrepreneurs who desire to be recognized as excellent managers appeared to very significantly predict the dependence on pre-commitments since this type of entrepreneurs seek recognition from other peers and competitors as well. Finally, within the Fear of Failure variable, shame in front of significant others reported a weak relationship with pre-commitments that shows the more entrepreneurs are afraid to fail in front of significant others the less alliances they make. Entrepreneurs high on fear of having their families lose financial assets also significantly predict that these entrepreneurs will increasingly depend on alliances to minimize such risk. Finally, more availability of other options besides the current business for the entrepreneur appeared to affect the preference for more alliances and pre-commitments.

Controlling for structural control variables, we see that the same relationships between entrepreneurial characteristics and pre-commitments are still significant, with some of the structural controls showing varying significance in relation to the dependent variable. First, the knowledge source before starting business had a very strong relationship with pre-commitments, with entrepreneurs depending more on alliances the more formal was their knowledge source before starting the venture. Also, the more entrepreneurs are and the less failure experiences they have the more they depend on pre-commitments, which could be attributed to their lack of business experience that they need to compensate for by forming alliances with organizations and people that could better lead to achieving sales and delivering value. Access to markets and customers through network also appeared to affect use of pre-commitments especially with entrepreneurs who have such access through strong social ties which is more limited than broad alliances with weak ties and formal organizations. Finally, the increasing effect of corruption on business operation appeared to affect preference for more pre-commitments as such uncertain environment would intuitively push entrepreneurs to alliances that could decrease any transaction costs.

5.1.2.2 Entrepreneurial Characteristics & Flexibility

The tests of our entrepreneurial characteristics with the second effectuation sub-dimension of flexibility that deals with how much entrepreneurs have adapted their ventures to be able to seize opportunities as they emerge, showed several significant relationships before and after controlling for our structural control factors. First, the ESE Searching sub-dimension that deals with the entrepreneur's perception of his ability to come up with feasible business ideas and match a certain customer need for that product or service

reported a weakly significant relationship with the flexibility sub-dimension indicating the entrepreneur's increased tendency to allow his venture to stay flexible and open to providing new offerings so that it does not impede the creativity process needed to encourage the development of new ideas. Also, the ESE Marshaling dimension, which deals with the entrepreneur communication skills that enable him bring others on board with regard to his business ideas and vision, appeared to affect the preference and use of flexibility. The manager identity of entrepreneurs that are concerned about their managerial success in running their ventures also seemed to have a weakly significant relationship with flexibility which indicated that such entrepreneurs would allow less flexibility in running their ventures to attain such managerial success. Finally, fear of entrepreneurial death by failing publicly and therefore losing the chance to start another venture showed strong relationship with flexibility as entrepreneurs with such fear would tend to rather stick to the norms and run their ventures through conservative and conventional systems that do not allow much flexibility.

Controlling for the structural control factors, the relationships within entrepreneurial characteristics slightly shift or disappear, as the impact of fear of entrepreneurial death on flexibility seems to disappear when we include the structural control factors in our model. Within the ESE dimensions, we note that the relationship with the first ESE Searching sub-dimension of entrepreneurs ability to generate new business ideas disappears from the model. We instead see that the ESE second sub-dimension that deals with the entrepreneur's perception of his ability to design and develop a product or service that addresses a certain customer demand reported a weakly significant relationship with the flexibility sub-dimension that indicates the entrepreneur's increased tendency to adapt his venture the more he could come up with a feasible product or service since such flexibility allows him to react faster to customer needs and wants. Moreover, within the environmental trigger control factor, opportunity seeking entrepreneurs seem to have a more pronounced levels of flexibility preference which is expected since flexibility is about being always adaptable to move faster as opportunities emerge. Within the institutional context control factor, we find interesting relationships which show that a less enabling business environment increases entrepreneurs choice to adopt flexible ventures that can adapt to be able to survive in such environment. Corruption and its affect on business operation also appeared to be strongly significant in predicting use of flexibility by entrepreneurs, suggesting that the less the effect of corruption is the higher the preference of flexibility by entrepreneurs.

5.1.2.3 Entrepreneurial Characteristics & Affordable Loss

We first tested our independent variables impact on the third effectuation sub-dimension of affordable loss that deals with how much entrepreneurs have been risk averse and careful when committing or utilizing any available resources beyond a certain limit of risk of losing resources or funds. We then tested the same model controlling for our structural control factors to see the extent of change or influence of all our independent and control variables. The whole model showed weak significance before and after including our control variables but several dimensions of entrepreneurial characteristics had significant relationships with the affordable loss dependent variable within the whole regression model. First, within the ESE independent variable, a strong relationship appears between the dependent variable and the ESE Planning first sub-dimension which deals with entrepreneurs abilities in carrying out marketing efforts related to the pricing and development of products or services after determining customer demand for these new offerings. This relationship implies that affordable loss tends to increase as entrepreneurs confidence in their abilities related to planning and marketing products increases. We could infer from such relationship that entrepreneurs with higher marketing planning capabilities prefer to follow a safer approach of allocating resources and funds within acceptable risks of losing funds or wasting resources.

Also, the ESE Marshaling dimension that deals with entrepreneurs communication and leadership skills, which enable them to influence others to support their ideas and vision, showed that it could affect entrepreneurs' preference for an effectual approach of taking calculated risks. Such relationship implies that the less confident entrepreneurs are in their communication and leadership skills the more they consider that they do not lose more than they could afford of resources or funds. We believe this might be due to the fact that lacking such skills the entrepreneur might not have a strong support network around his business which leads him to try his best to not lose beyond what could afford. Other elements of fear of failure showed strong relationships with affordable loss, an expected and self-explanatory result especially considering that the concept of affordable loss is all about how entrepreneurs set their boundaries of acceptable failure and loss. Four dimensions of fear of failure showed strong predictability of affordable loss, with the most significance shown in the fear dimensions of shame in front of other business men and competitors and also availability of any options other than staying in business. Entrepreneurs who are more concerned with not failing publicly or have no other options than running a business, especially if they lack

leadership and communication characteristics might highly adopt an affordable loss approach. Entrepreneurs who are also high on fear of failing in front of significant others or fear of suffering personal financial risks such as losing assets or collaterals also seem to follow more an affordable loss approach which might be viewed as the safest bet when they commit resources or invest with funds. The least significant relationship was that related to fear of causing the family to suffer any financial losses, which we view in light of the relationships that appeared within the ESE dimensions above. Entrepreneurs low on both marketing and leadership skills will tend to depend more on strong social relations such as close family to receive the support and encouragement that might not be achievable with weaker social ties due to lack of relevant skills.

Controlling for our structural control factors, a few dimensions of these control factors and sub-dimensions of the entrepreneurial characteristics have significant relationships with the affordable loss dependent variable within the whole regression model. First, the demographic of entrepreneur's country of business operation appears to have a weakly significant relationship with affordable loss. Entrepreneurs operating their businesses in markets that are highly uncertain and unstable such as Yemen would be expected to show stronger preference for the affordable loss approach. Another strong relationship that we note is between opportunity driven entrepreneurship and affordable loss, which seems plausible as opportunity seeking entrepreneurs could be more concerned with seizing their sought-after business opportunities with less risks of losing more resources or money in the process targeted. Also, as entrepreneurs have no social connections running businesses or have close family and friends as business owners, they tend to be high on their loss affordability adoption. This could be tied back to the fear of failing in front of significant others as discussed in the model test without the structural control variables included. However, in this model with all control variables in, only shame in front of business peers and competitors reported a very strong and negative relationship with affordable loss, implying that this type of entrepreneurs would not mind risking some funds and resource as long as they maintain the respect of their business peers and competitors and therefore save face.

5.1.2.4 Entrepreneurial Characteristics & Experimentation

The final effectuation sub-dimension of experimentation which deals with how much entrepreneurs tend to experiment with different iterations of their products and also adapt their offerings and business models

as they develop and progress in their ventures. Both regression model tests of entrepreneurial characteristics and experimentation, before and after controlling for the structural controls, were not significant. Yet, in the first model without the structural control factors several relationships showed within the model. First, the demographic of educational level reported a weak and negative relationship with experimentation, which suggests that the less educational degree entrepreneurs hold the more they are prone to follow a more exploratory approach of experimentation. This relationship shows support for previous research and also one of our arguments that more formal education lessens the exploratory nature of entrepreneurs as such education emphasizes the notions of rigidly planning and strategizing instead of experimentation. Within the entrepreneurial characteristics, only one strong relationship appeared between the ESE Finance sub-dimension that deals with entrepreneurs' financial literacy in tasks such as recordkeeping and understanding financial statements. Such relationship could imply that entrepreneurs follow an experimentation approach the less competent they are in issues related to finance. It is unclear though why would such relation occur. Finally, two dimensions of fear of failure showed some significant relationships in predicting experimentation; fear of losing personal financial assets and also availability of other options besides running a business. Both predicted experimentation in what seems to appear as a rational logic as the less entrepreneurs are on their fear of losing personal financial funds or assets or the less options they have other than being entrepreneurs, the higher they follow experimentation. Finally, when we test all entrepreneurial characteristics, structural control factors and experimentation, only the same two Fear of Failure variable dimensions reported above seem to show as significantly meaningful.

5.2 Major Research Contributions & Suggestions for Future Research

As discussed before, we ran a factor analysis test to further examine the entrepreneurial behavior constructs and to confirm the multidimensionality of our dependent variable, entrepreneurial behavior. Our factor analysis test results showed that causation and effectuation are two different constructs composed of multiple scale items that represent each construct and relevant sub-dimensions; 22 items in total with factor loadings above 0.5. All the seven causation items of Chandler et al. (2011) entrepreneurial behavior scale loaded on one distinct component we defined as Causation, with factor loadings above 0.5 ranging from 0.834 to 0.635. Effectuation also appeared to be composed of four components or sub-dimensions of *pre-commitments*, *flexibility*, *affordable loss*, *and experimentation*, where 15 out of the 17 scale items of Chandler et al. (2011) loaded on each construct with factor loadings above 0.5. Chandler et al. upon

validating their scale ran several factor analyses tests which finally showed that the entrepreneurial behavior is defined by two distinct formative constructs; causation and effectuation. Causation emerged as one construct; whereas the effectuation construct was found to be composed of three sub-dimensions; *flexibility, affordable loss, and experimentation*, and another shared sub-dimension of *pre-commitments* that loads on both causation and effectuation constructs as discussed earlier in our literature review. However, to the contrary from Chandler et al. (2011) definition of the effectuation sub-dimensions, our results showed that the *pre-commitment* sub-dimension loaded as a distinct construct and did not load on both causation and effectuation. Our factor analysis does not only confirm Chandler et al. (2011) definition of entrepreneurial behavior which is the most vetted empirical measure of causation and effectuation as entrepreneurial approaches in the field to date, but also expand on this definition and contribute by addressing a major issue that Chandler et al. (2011) and Perry et al. (2012) suggested for future research through showing that effectuation is made of four independent constructs. Our study therefore goes a step further by confirming the definition of effectuation of four distinct dimensions that load each strongly on a separate factor components.

With the objective of examining what entrepreneurial characteristics and structural control factors affect entrepreneurial decision making and behavior in light of the causation and effectuation research stream, our research significance also originates from the fact that it is an exploratory study where we expect to find out how these factors interact with each other. This study is a modest attempt to help add to the literature knowledge base about entrepreneurship in emerging markets, in particular, in the Middle East and North Africa region. The research base knowledge about entrepreneurship and entrepreneurial decision making, especially with regard to recent theories such as effectuation theory is essentially nascent itself (Perry et al., 2012) let alone research within the MENA region. To our knowledge and through an exhaustive literature review, we were unable to find any literature on effectuation as an entrepreneurial approach in MENA. Therefore, our study could be considered a tipping point for researchers to further study the research subject based on a bigger sample that includes more entrepreneurs from different countries in the region. Moreover, as a Yemeni citizen, this study is very important to the researcher as it helps him contribute to the development of entrepreneurship in the country through the knowledge he gained from investing time and energy in pursuing his doctoral studies in Japan. We believe this study would help shed some light on entrepreneurs' decision making process upon starting up and operating entrepreneurial ventures in

emerging economies and what might determine or affect such process especially under the highly uncertain environments of these type of economies.

Based on the results and findings of our study, we suggest that future research should take into account replicating this study on a bigger sample from other different markets and compare results controlling for more variables such as cultural differences, more demographics that include a gender balanced representative sample. Another research direction would be conducting a study that examines entrepreneurs' perceptions pre and post founding businesses to better evaluate if the relationships between the research variables will hold constant after founding the ventures and over a longer period of time. Analyzing how each of our independent variables and structural control factors could affect entrepreneurial behavior is worth examining further, as our results and the different interactions and significant relationships that emerged within our models hint at how each element could impact the dependent variable differently.

5.3 Limitations

The first major limitation that almost jeopardized the whole research process was the fluid and unstable security situation in the whole Middle East and North Africa region, leading to the restriction of entry to several countries of the region due enhanced security measures, especially against Yemeni citizens and the researcher as a result. Such security and travel restrictions taken by countries in MENA region made it impossible for the researcher to administer questionnaires in the field and rather compelled that we revert to collecting our sample opinions through online surveying methods. The researcher had no access to any financial or human resources to conduct his research and rather personally financed the whole study including hosting the questionnaire on a professional survey building online website and distributing the questionnaire in several countries in the region.

The previous limitations also impeded administering a pencil and paper type of questionnaires and instead the only feasible method was online surveying, a method usually inhibited by self-selection bias. However, the researcher tried reducing such bias through sharing the survey on several media outlets of official, active and credible organizations and individuals that work in the field of promoting and developing entrepreneurship in the region. Moreover, time was very limited, as this study test instrument was distributed online for both the pilot and final survey launch, and responses were collected in around 3

months between mid March, 2016 and mid of June, 2016. Limited time and financial resources did not allow for the researcher to conduct a pre and post firm creation study to better evaluate the relationships between the research variables both before and after establishing the entrepreneurial venture, over an extended period of time, and across several industries and regions. Since it was difficult to acquire official data on the exact size of the study population in terms of number of entrepreneurs and entrepreneurial ventures being established and operating in the region (Wyne & Ward, 2014), we could not confirm if our sample was representative of all entrepreneurs in MENA region.

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APPENDIX (1): RESEARCH

TEST INSTRUMENT ENGLISH

VERSION

Entrepreneurship - copy

1. **I currently own & run a business venture**

- Yes
- Used to
- Never

2. My business venture is/was in

(Specify business industry)

- Accounting / Audit
- Agriculture / Forestry / Fishing
- Aviation / Automotive
- Business / Professional Services
- Construction / Real Estate
- Consulting
- Education / Training
- Engineering / Architecture
- Entertainment / Recreation
- Finance / Banking / Insurance
- Food Services
- Healthcare / Medical
- Internet
- Legal
- Manufacturing
- Marketing / Public Relations
- Media / Printing / Publishing
- Non-Profit
- Oil / Mining
- Pharmaceutical / Chemical
- Retail
- Software
- Telecommunications
- Tourism / Hotels / Travel
- Transportation / Distribution
- Wholesale
- Other

Please specify industry

3. It is my

- 1st business
- 2nd
- 3rd business
- Already had over 3, specify

4. My main role / position in my business
(Check all applicable)

- Co-founder
- Owner
- Founder
- Other, specify

5. I started my business **mostly** because
*(Rank in order **only** your most applicable answer/s)*

	1
I wanted to make use of my free time	
I needed to help my family	
There was a business opportunity	
I had some money I wanted to invest	
I needed to make a living	
I lost my job	

6. My business head office is / was in

- **Middle East & North Africa**
  - Afghanistan
  - Algeria
  - Armenia
  - Bahrain
  - Djibouti
  - Egypt
  - Iran
  - Iraq
  - Jordan
  - Kuwait
  - Lebanon
  - Libya
  - Mauritania
  - Morocco
  - Oman
  - Pakistan
  - Palestine
  - Qatar
  - Saudi Arabia
  - Somalia
  - Sudan
  - Syria
  - Tunisia
  - Turkey
  - United Arab Emirates
  - Yemen

Specify which country

7. Number of my staff (full & part-time) including myself

(Ex: 15)

8. I started my current business in

2016
2015
2014
2013
2012
2011
2010
2009
2008
2007
2006 or before

9. My business operated ..

From

2016
2015
2014
2013
2012
2011
2010
2009
2008
2007
2006 or before

To

2016
2015
2014
2013
2012
2011
2010
2009
2008
2007
2006 or before

10. **Most of my experience in this type of business** came from working at
*(Rank in order **only** your most applicable answer/s)*

	1
My family business in the same industry	○
My previous business in the same industry	○
Other companies/organizations	○
I have no experience in such business	○

11. **Before starting my first business,** I thought I gained most instrumental knowledge about business from
*(Rank in order **only** your most applicable answer/s)*

	1
Formal Education (Ex: College, Master's studies)	○
Training Courses (Ex: Business courses)	○
Working at my family business	○
Working/helping friends in their businesses	○
Working at other organizations	○
None of the above	○

12. **After starting my business,** I realized most instrumental knowledge in my business operation was from
*(Rank in order **only** your most applicable answer/s)*

	1
Formal education	○
Training courses	○
Working at my family business	○
Working/helping friends in their businesses	○
Working at other organizations	○
Working in my own business	○

13. **Most of the business owners & founders I know** are from my ..

*(Rank in order **only** your most applicable answer/s)*

	1
Close Family (Ex: Parents, close cousins)	○
Close Friends (Ex: Close colleagues & classmates)	○
Extended Family (Ex: Distant relatives & in-laws)	○
Distant Friends & Acquaintances (Ex: Friends of friends)	○
I don't know any business owners	○

14. **To acquire financial resources,** I can approach

*(Rank in order **only** your most applicable answer/s)*

	1
Formal Channels (Ex: Banks, venture capitalists)	○
Close Family	○
Close Friends	○
Extended Family	○
Distant Friends & Acquaintances	○
Nobody, I'll just use my savings	○

15. **To acquire human resources,** I can approach

*(Rank in order **only** your most applicable answer/s)*

	1
Formal Channels (Ex: Recruitment agencies)	○
Close Family	○
Close Friends	○
Extended Family	○
Distant Friends & Acquaintances	○
Nobody, I'll do it by myself	○

16. **To enter the market & attract customers,** I can approach
*(Rank in order **only** your most applicable answer/s)*

	1
Formal Channels (Ex: Consulting firms, business partners)	○
Close Family	○
Close Friends	○
Extended Family	○
Distant Friends & Acquaintances	○
Nobody, I'll do it by myself	○

17. My business became profitable in

- ○ 1st year
- ○ 2nd
- ○ 3rd year
- ○ After over 3 years, specify
- ○ Not profitable

18. **I estimate ..**

My business invested capital around (specify in US$)

My business annual sales/revenues around (specify in US$)

Comments

19. **Compared to existing businesses in the country,** my business is ..

- ○ Unique & the first of its type
- ○ Similar but with unique features
- ○ Very similar & generic

20. **It was easy / difficult for me to..**

	Very Easy	Easy	Average	Difficult	Very Difficult
1- Identify potential customers	○	○	○	○	○
2- Identify potential rival companies	○	○	○	○	○
3- Identify potential rival products/services	○	○	○	○	○
4- Acquire financial resources	○	○	○	○	○
5- Acquire human resources	○	○	○	○	○

21. Success means for me
*(Rank in order **only** your most applicable answer/s)*

	1
Being the best manager ever	○
Making huge profits	○
Making the best products & services available	○

22. **Running several business ventures,**

	1 Business	2	3 Businesses	Over 3	None so far
I've already been successful in	○	○	○	○	○
I've already tried but failed & closed	○	○	○	○	○

23. **If I fail & close my business,** my biggest fear is
*(Rank in order **only** your most applicable answer/s)*

	1
I'll feel ashamed in front of other competitors & businessmen	○
My family will suffer financial consequences (Ex: lose assets)	○
I'll feel ashamed in front of my family & close friends	○
If I fail publicly, I wont get a second chance to start another	○
I have other options, so I'm not worried if it fails	○
I'll suffer financial consequences (Ex: lose collateral/ assets)	○
My reputation will be hurt/damaged by my failure	○

24. Running my business, **I'm most concerned about**

*(Rank in order **only** your most applicable answer/s)*

	1
Not making huge profits	○
Losing huge sums of money	○
Failing as a manager	○
Making lousy products/services	○

25. **I believe ..**

	Strongly Disagree	Moderately Disagree	Agree	Moderately Agree	Strongly Agree
1- The business environment in the country generally encourages doing business	○	○	○	○	○
2- The laws & regulations of the country protect my ideas & products	○	○	○	○	○
3- Corruption in my current environment affects my business operation	○	○	○	○	○
4- Legal contracts are enforced by relevant authorities in the country	○	○	○	○	○

26. **Compared to other entrepreneurs that I know,** I'm confident I'm good at

	Very Little	Little	About the Same	Much	Very Much
1- Coming up with new business ideas & identifying the need for them	○	○	○	○	○
2- Designing products/ services that will satisfy customer needs & wants	○	○	○	○	○
3- Pricing, marketing, & determining customer demand for new products/ services	○	○	○	○	○
4- Estimating the amount of startup funds & working capital necessary to start my business	○	○	○	○	○
5- Contacting & communicating with others so they identify with and believe in my ideas & vision for the future	○	○	○	○	○

	Very Little	Little	About the Same	Much	Very Much
6- Hiring, managing, training & setting tasks & responsibilities for my employees	○	○	○	○	○
7- Inspiring, encouraging & motivating my employees	○	○	○	○	○
8- Finding & managing financial resources	○	○	○	○	○
9- Keeping/recording, reading & interpreting financial statements	○	○	○	○	○
10- Making a sale	○	○	○	○	○

27. **In my business operation ..**

	Very Little	Little	Moderate	Much	Very Much
1- I analyzed long run opportunities & selected what I thought would provide the best returns	○	○	○	○	○
2- I developed a strategy to best take advantage of resources & capabilities	○	○	○	○	○
3- I designed & planned business strategies	○	○	○	○	○
4- I organized & implemented control processes to make sure I met objectives	○	○	○	○	○
5- I researched & selected target markets & did meaningful competitive analysis	○	○	○	○	○
6- I had a clear & consistent vision for where I wanted to end up	○	○	○	○	○
7- I designed & planned production & marketing efforts	○	○	○	○	○

	Very Little	Little	Moderate	Much	Very Much
8- I started by looking at what & who I know & thought of different things I could try	○	○	○	○	○
9- I experimented with different products and/or business models	○	○	○	○	○
10- The product/service that I provide is essentially the same as originally conceptualized	○	○	○	○	○
11- The product/service that I provide is substantially different than I first imagined	○	○	○	○	○
12- I tried a number of different approaches until I found a business model that worked	○	○	○	○	○
13- I was careful not to commit more resources than I could afford to lose	○	○	○	○	○
14- I was careful not to risk more money than what I was willing to lose with my initial idea	○	○	○	○	○

	Very Little	Little	Moderate	Much	Very Much
15- I was careful not to risk so much money that my business would be in real trouble financially if things didn't work out	○	○	○	○	○
16- I allowed the business to evolve as opportunities emerged	○	○	○	○	○
17- I adapted what I was doing to the resources I had	○	○	○	○	○
18- I was flexible & took advantage of opportunities as they arose	○	○	○	○	○
19- I avoided courses of action that restricted my flexibility & adaptability	○	○	○	○	○
20- I used a substantial number of agreements with customers, suppliers & other organizations & people	○	○	○	○	○
21- I used pre-commitments from customers & suppliers as often as possible	○	○	○	○	○

	Very Little	Little	Moderate	Much	Very Much
22- Network contacts provided low cost resources	○	○	○	○	○
23- By working closely with outside organizations/people, I have been able to greatly expand my business venture capabilities	○	○	○	○	○
24- I have focused on developing alliances with other people & organizations	○	○	○	○	○
25- My partnerships with outside organizations/people played a key role in my ability to provide my	○	○	○	○	○

product/service

28. Age

Under 17
17-20
21-25
26-30
31-35
36-40
41-45
46-50
51 years and above

29. Gender

- Male
- Female

30. Nationality

Middle East & North Africa
- Afghanistan
- Algeria
- Armenia
- Bahrain
- Djibouti
- Egypt
- Iran
- Iraq
- Jordan
- Kuwait
- Lebanon
- Libya
- Mauritania
- Morocco
- Oman
- Pakistan
- Palestine
- Qatar
- Saudi Arabia
- Somalia
- Sudan
- Syria
- Tunisia
- Turkey
- United Arab Emirates
- Yemen

Specify country name

31. Educational Level (highest degree)

- Less than high school
- Graduated High School or equivalent
- Some college courses, no degree
- Bachelor's Degree
- Some Masters courses, no degree
- Masters Degree
- Doctoral Degree or more
- Other

Specify degree type

32. My university major

- Business Administration or business-related
- Other, specify

33. My Masters studies are / were towards

- (MBA) Masters of Business Administration
- Business-related major (Not MBA)
- Other, specify

One last thing!

Can we contact you later, **if necessary**, for a few more questions?

- Yes
- No

Contact Information

Name

Company

Email Address

Phone

URL

Comments

APPENDIX (2): RESEARCH

TEST INSTRUMENT ARABIC

VERSION

ريادة الأعمال في الأسواق الناشئة

1. **أمتلك وأدير مشروعاً تجارياً في الوقت الحالي**

- نعم
- إمتلكت مشروعاً من قبل
- لا، على الإطلاق

2. مشروعي التجاري في مجال
(حدد مجال المشروع)

- الأدوية / المستحضرات
- الإعلام / الطباعة / النشر
- الاتصالات
- الاستشارات
- البرمجيات
- البيع بالتجزئة
- البيع بالجملة
- الترفيه / الاستجمام
- التسويق / العلاقات العامة
- التصنيع
- التعليم / التدريب
- الخدمات البنكية / التمويل / التأمين
- الخدمات الصحية / الطبية
- الخدمات الغذائية
- الخدمات القانونية
- الخدمات المهنية / التجارية
- الخدمات غير الربحية
- الزراعة / التشجير / الصيد
- السياحة / الفندقة / السفر
- السيارات / الطيران
- المحاسبة / التدقيق
- المقاولات / العقارات
- النفط / التنقيب / التعدين
- النقل / التوزيع
- الهندسة
- خدمات الانترنت
- أخرى

الرجاء تحديد مجال المشروع

3. يعتبر هذا المشروع

- مشروعي الأول
- الثاني
- مشروعي الثالث
- لدي أكثر من ٣ مشاريع (يرجى التحديد)

4. دوري الرئيسي في هذا المشروع هو
(اختر كل ما ينطبق)

- مؤسس المشروع
- مالك المشروع
- شريك مؤسس
- دور آخر

5. **أهم أسباب تأسيسي لهذا المشروع**
(**اختر بحسب الأهمية وبالترتيب أهم ما ينطبق فقط** مما يلي)

	1
وجدت فرصة تجارية سانحة	
لمساعدة أسرتي مادياً	
للإستفادة من وقت فراغي	
فقداني لوظيفتي	
أردت استثمار جزء من أموالي	
لكسب لقمة العيش	

6. المركز الرئيسي للمشروع يقع في

الرجاء تحديد البلد

7. عدد العاملين، بالإضافة إلي، في المشروع (بدوام كامل وجزئي) هو
(مثال: ١٥)

8. بدأت مشروعي الحالي في

- ٢٠١٦
- ٢٠١٥
- ٢٠١٤
- ٢٠١٣
- ٢٠١٢
- ٢٠١١
- ٢٠١٠
- ٢٠٠٩
- ٢٠٠٨
- ٢٠٠٧
- ٢٠٠٦ أو قبل ذلك

---

9. **إستمر مشروعي بالعمل**

من

- ٢٠١٦
- ٢٠١٥
- ٢٠١٤
- ٢٠١٣
- ٢٠١٢
- ٢٠١١
- ٢٠١٠
- ٢٠٠٩
- ٢٠٠٨
- ٢٠٠٧
- ٢٠٠٦ أو قبل ذلك

إلى

- ٢٠١٦
- ٢٠١٥
- ٢٠١٤
- ٢٠١٣
- ٢٠١٢
- ٢٠١١
- ٢٠١٠
- ٢٠٠٩
- ٢٠٠٨
- ٢٠٠٧
- ٢٠٠٦ أو قبل ذلك

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10. **إكتسبت معظم خبرتي في مجال مشروعي التجاري من خلال عملي سابقاً في**
(**اختر بحسب الأهمية وبالترتيب أهم ما ينطبق فقط** مما يلي)

	1
مشروع العائلة الخاص في نفس المجال	○
مشروع سابق لي في نفس المجال	○
شركات/مؤسسات أخرى	○
ليس لدي خبرة سابقة في هذا المجال	○

11. **قبل بدء مشروعي التجاري الأول،** كنت أعتقد بأن أهم معرفتي الإدارية والتجارية اكتسبتها من خلال
(**اختر بحسب الأهمية وبالترتيب أهم ما ينطبق فقط** مما يلي)

	1
التعليم الرسمي، مثل: الكلية، دراسات الماجستير	○
الدورات التدريبية، مثل: الدورات الإدارية	○
العمل في مشروع العائلة الخاص	○
العمل مع/مساعدة أصدقائي في مشاريعهم	○
العمل لدى شركات/مؤسسات أخرى	○
لا شيء مما سبق	○

12. **بعد بدء مشروعي،** إتضح لي أن أهم معرفتي الإدارية والتجارية المتعلقة بأداء المشروع كانت من
(**اختر بحسب الأهمية وبالترتيب أهم ما ينطبق فقط** مما يلي)

	1
التعليم الرسمي	○
الدورات التدريبية	○
العمل في مشروع العائلة الخاص	○
العمل مع/مساعدة أصدقائي في مشاريعهم	○
العمل لدى شركات/مؤسسات أخرى	○
العمل في مشروعي التجاري	○

13. **معظم مالكي أو مؤسسي المشاريع التجارية الذين أعرفهم هم من**
(**اختر بحسب الأهمية وبالترتيب أهم ما ينطبق فقط** مما يلي)

	1
أفراد الأسرة المقربين، مثل: الوالدين، أبناء العم المقربين	○
الأصدقاء المقربين، مثل: زملاء العمل والدراسة المقربين	○
الأقارب غير المقربين، مثل: أبناء العم والأصهار البعيدين	○
الأصدقاء والمعارف غير المقربين، مثل: أصدقاء أصدقائي	○
لا أعرف أحد	○

14. لإيجاد وتوفير **موارد مالية،** يمكنني الاعتماد على
(**اختر بحسب الأهمية وبالترتيب أهم ما ينطبق فقط** مما يلي)

	1
جهات رسمية وخاصة، مثل: بنوك، جهات مختصة، مستثمرين	○
أفراد الأسرة المقربين	○
الأصدقاء المقربين	○
الأقارب غير المقربين	○
الأصدقاء والمعارف غير المقربين	○
لا أحد، سأعتمد على مدخراتي الشخصية	○

15. لإيجاد وتوفير **موارد بشرية،** يمكنني الاعتماد على
(**اختر بحسب الأهمية وبالترتيب أهم ما ينطبق فقط** مما يلي)

	1
جهات رسمية وخاصة، مثل: شركات توظيف، جهات مختصة	○
أفراد الأسرة المقربين	○
الأصدقاء المقربين	○
الأقارب غير المقربين	○
الأصدقاء والمعارف غير المقربين	○
لا أحد، سأجدهم بمفردي	○

16. **للدخول للأسواق التجارية وجذب العملاء،** يمكنني الاعتماد على (**اختر بحسب الأهمية وبالترتيب أهم ما ينطبق فقط** مما يلي)

	1
جهات رسمية وخاصة، مثل: شركات استشارية، تجار آخرين	○
أفراد الأسرة المقربين	○
الأصدقاء المقربين	○
الأقارب غير المقربين	○
الأصدقاء والمعارف غير المقربين	○
لا أحد، سأفعل ذلك بمفردي	○

17. أصبح مشروعي يحقق أرباحاً منذ

- ○ السنة الأولى
- ○ الثانية
- ○ السنة الثالثة
- ○ بعد أكثر من ٣ سنوات، تحديداً في السنة
- ○ لم يحقق أرباحاً

18. **في تقديري، يبلغ..**

رأس مال مشروعي (بالدولار الأمريكي) حوالي

اجمالي المبيعات أو الدخل السنوي لمشروعي (بالدولار الأمريكي) حوالي

ملاحظات

19. يعتبر مشروعي التجاري **بالمقارنة بالمشاريع الأخرى في البلد** ..

- ○ فريد جداً والأول من نوعه
- ○ مشابه لها ولكن بخصائص مميزة
- ○ مشابه جداً لها وبسيط

20. **فيما يتعلق بمشروعي التجاري، أعتقد أن..**

	سهل جداً	سهل إلى حدٍ ما	متوسط	صعب إلى حدٍ ما	صعب جداً
١- تحديد عملائي/زبائني المحتملين	○	○	○	○	○
٢- تحديد المشاريع/الشركات المحتملة والمنافسة لي	○	○	○	○	○
٣- تحديد المنتجات/الخدمات المحتملة والمنافسة لي	○	○	○	○	○
٤- الحصول على/إيجاد موارد مالية	○	○	○	○	○
٥- الحصول على/إيجاد موظفين/موارد بشرية	○	○	○	○	○

21. النجاح بالنسبة لي يعني ..
(**اختر بحسب الأهمية وبالترتيب أهم ما ينطبق فقط** مما يلي)

	1
أن أقدم للعملاء أفضل المنتجات والخدمات المتاحة	○
أن أصبح أفضل مدير أعمال على الإطلاق	○
أن أجني أرباح طائلة	○

22. **من خلال إمتلاكي وإدارتي لأكثر من مشروع،**

	مشروع تجاري واحد	مشروعان	ثلاثة مشاريع	أكثر من ٣	لا شيء حتى الآن
نجحت في	○	○	○	○	○
حاولت ولكني أخفقت وقمت بإغلاق	○	○	○	○	○

23. **أكبر مخاوفي إذا فشلت وأغلقت مشروعي ..**
(**اختر بحسب الأهمية وبالترتيب أهم ما ينطبق فقط** مما يلي)

	1
سأتحمل خسائر مالية، مثل: رهن عقاري	○
ستتحمل أسرتي خسائر مالية، مثل: رهن عقاري	○
سأشعر بالحرج أمام المنافسين لي وأصحاب المشاريع	○
سأشعر بالحرج أمام أسرتي وأصدقائي المقربين	○
إذا علم الجميع بفشلي، لن أستطيع بدء مشروع آخر	○
لدي خيارات أخرى ولست قلقاً إذا فشل هذا المشروع	○
ستتضرر سمعتي إذا فشل مشروعي	○

24. **أكثر ما يقلقني في إدارتي لمشروعي**
(**اختر بحسب الأهمية وبالترتيب أهم ما ينطبق فقط** مما يلي)

	1
أن أفشل كمدير أعمال	○
أن لا أجني أرباح طائلة	○
أن أقدم منتجات/خدمات رديئة	○
أن أخسر مبالغ مالية ضخمة	○

25. **أعتقد بأن ..**

	لا أتفق إطلاقاً	لا أتفق إلى حدٍ ما	أتفق	أتفق إلى حدٍ ما	أتفق بشدة
١- بيئة الأعمال في البلد بشكل عام تشجع ممارسة الأعمال التجارية	○	○	○	○	○
٢- القوانين واللوائح في البلد تحمي أفكاري ومنتجاتي	○	○	○	○	○
٣- الفساد في بيئتي الحالية يؤثر على سير مشروعي	○	○	○	○	○
٤- الجهات المعنية في البلد تلزم المتعاقدين بتنفيذ العقود القانونية	○	○	○	○	○

26. **بالمقارنة بأصحاب المشاريع الأخرى اللذين أعرفهم،** أنا واثق من قدرتي على ..

	قليلاً جداً	قليلاً	في نفس مستواهم	كثيراً	كثيراً جداً
١- الخروج بأفكار تجارية جديدة والتأكد من حاجة العملاء إليها	○	○	○	○	○
٢- تصميم المنتجات/الخدمات التي تلبي احتياجات ورغبات العملاء	○	○	○	○	○
٣- تسعير وتسويق المنتجات/الخدمات الجديدة ومعرفة حجم طلب العملاء عليها	○	○	○	○	○
٤- تقدير رأس المال والتمويل اللازم للبدء بمشروعي	○	○	○	○	○
٥- بناء العلاقات الاجتماعية والتواصل مع الآخرين حتى يقتنعوا ويؤمنوا بأفكاري ورؤيتي للمستقبل	○	○	○	○	○
	قليلاً جداً	قليلاً	في نفس مستواهم	كثيراً	كثيراً جداً
٦- توظيف، وإدارة، وتدريب، وتحديد مهام ومسؤوليات العاملين لدي	○	○	○	○	○
٧- إلهام، وتشجيع، وتحفيز العاملين لدي	○	○	○	○	○
٨- إيجاد وإدارة الموارد المالية	○	○	○	○	○
٩- مسك وتقييد الحسابات، وقراءة، وفهم البيانات المالية	○	○	○	○	○
١٠- القيام بعمليات بيع لمنتجاتي/خدماتي	○	○	○	○	○

27. **خلال إدارتي لمشروعي ..**

	قليلاً جداً	قليلاً	بشكل متوسط	كثيراً	كثيراً جداً
١- قمت بتحليل الفرص على المدى البعيد واخترت ما سيوفر أفضل العوائد	○	○	○	○	○
٢- وضعت استراتيجية للإستفادة المثلى من الموارد والقدرات	○	○	○	○	○
٣- خططت ووضعت استراتيجيات للعمل	○	○	○	○	○
٤- قمت بتنظيم ومراقبة سير العمل للتأكد من تحقيق الأهداف	○	○	○	○	○
٥- بحثت وقمت بإختيار الأسواق المستهدفة وأجريت تحليل تنافسي جيد	○	○	○	○	○
٦- كان لدي رؤية واضحة وثابتة لما أرغب أن أصل إليه في نهاية المطاف	○	○	○	○	○
٧- قمت بتصميم وتخطيط أعمال الإنتاج والتسويق	○	○	○	○	○
	قليلاً جداً	قليلاً	بشكل متوسط	كثيراً	كثيراً جداً
٨- بدايتي كانت بالتفكير في كل ما أمتلك من معرفة وخبرة وعلاقات، ثم فكرت بكل ما يمكنني تجريبه	○	○	○	○	○
٩- قمت بتجريب أساليب ونماذج عمل/منتجات مختلفة	○	○	○	○	○
١٠- المنتج/الخدمة التي أقدمها هي بالأساس نفس ما تم تصميمه في البداية	○	○	○	○	○
١١- المنتج/الخدمة التي أقدمها تختلف إلى حد كبير عما تصورت أولا	○	○	○	○	○
١٢- جربت عدد من الأساليب المختلفة حتى وجدت نموذج الأعمال المناسب للمشروع	○	○	○	○	○
١٣- حرصت على عدم تخصيص موارد أكثر مما يمكنني تحمل خسارتها	○	○	○	○	○
١٤- حرصت على عدم المخاطرة بمال أكثر مما كنت مستعد لخسارته لتنفيذ فكرتي الأولية	○	○	○	○	○
	قليلاً جداً	قليلاً	بشكل متوسط	كثيراً	كثيراً جداً
١٥- حرصت على عدم المخاطرة بمبالغ كبيرة حتى لا يتعثر مشروعي مالياً إذا لم تسر الأمور بنجاح	○	○	○	○	○
١٦- سمحت للمشروع بالتطور كلما ظهرت فرص جديدة	○	○	○	○	○
١٧- قمت بملائمة عملي بحسب ما توفر لدي من موارد	○	○	○	○	○
١٨- كنت مرناً وأستغل الفرص كلما أستطعت	○	○	○	○	○
١٩- تجنبت قرارات العمل التي قد تقيد مرونتي وقدرتي على التكيف	○	○	○	○	○
٢٠- عقدت الكثير من الاتفاقات مع العملاء والموردين وغيرهم من الشركات والأشخاص	○	○	○	○	○
٢١- أخذت إلتزامات مسبقة من العملاء والموردين كلما أمكن ذلك	○	○	○	○	○
	قليلاً جداً	قليلاً	بشكل متوسط	كثيراً	كثيراً جداً
٢٢- علاقاتي الاجتماعية وفرت لي موارد منخفضة التكلفة	○	○	○	○	○
٢٣- بالعمل بشكل وثيق مع الأشخاص والشركات الأخرى تمكنت من					

توسيع قدرات مشروعي بشكل كبير					
٢٤- ركزت على توسيع تعاوني وتحالفاتي مع الأشخاص والشركات الأخرى					
٢٥- لعِبت شراكاتي مع الأشخاص والشركات الأخرى دوراً رئيسياً في قدرتي على تقديم المنتج/الخدمة					

28. العمر

- تحت ١٧ عاماً
- ١٧-٢٠
- ٢١-٢٥
- ٢٦-٣٠
- ٣١-٣٥
- ٣٦-٤٠
- ٤١-٤٥
- ٤٦-٥٠
- ٥١ عاماً وأكثر

29. الجنس

- ذكر
- أنثى

30. الجنسية

ق الأوسط وشمال أفريقيا
أرمينيا
أفغانستان
إيران
الأردن
الإمارات
البحرين
الجزائر
السعودية
السودان
الصومال
العراق
الكويت
المغرب
اليمن
باكستان
تركيا
تونس
جيبوتي
سوريا
عُمان
فلسطين
قطر
لبنان
ليبيا
مصر
موريتانيا

الرجاء تحديد البلد

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31. المستوى التعليمي (أعلى شهادة دراسية)

أقل من ثانوية عامة
ثانوية عامة أو ما يعادلها
بدأت ولم أكمل دراستي الجامعية
درجة البكالوريوس
بدأت ولم أكمل دراسة الماجستير
درجة الماجستير
درجة الدكتوراة أو ما يعادلها
أخرى

الرجاء تحديد نوع الشهادة العلمية

32. التخصص الجامعي

- إدارة أعمال أو ما يتعلق بها
- اخرى، يرجى التحديد

33. التخصص في دراسات الماجستير

- ماجستير إدارة أعمال MBA
- مجال ذو علاقة بالإدارة
- أخرى، يرجى التحديد

!قبل أن تنهي الاستبيان

هل بإمكاننا التواصل معك لاحقاً، **إذا لزم الأمر**، للاستفسار أكثر عن آرائك في إدارة المشاريع التجارية؟

- نعم
- لا

بيانات التواصل

الإسم

اسم المشروع / الشركة

البريد الالكتروني

رقم الهاتف

الموقع الالكتروني (إن وجد)

APPENDIX (3):

ENTREPRENEURIAL

BEHAVIOR FACTOR ANALYSIS

RESULTS

Entrepreneurial Behavior Factor Analysis Results

Table 1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.797
Bartlett's Test of Sphericity	**Approx. Chi-Square**	1329.960
	df	276
	Sig.	.000

Table 2: Communalities

	Initial	Extraction
1- I analyzed long run opportunities & selected what I thought would provide the best returns	1.000	.609
2- I developed a strategy to best take advantage of resources & capabilities	1.000	.637
3- I designed & planned business strategies	1.000	.752
4- I organized & implemented control processes to make sure I met objectives	1.000	.563
5- I researched & selected target markets & did meaningful competitive analysis	1.000	.726
6- I had a clear & consistent vision for where I wanted to end up	1.000	.570
7- I designed & planned production & marketing efforts	1.000	.669
8- I experimented with different products and/or business models	1.000	.675
9- The product/service that I provide is essentially the same as originally conceptualized	1.000	.411
10- The product/service that I provide is substantially different than I first imagined	1.000	.536
11- I tried a number of different approaches until I found a business model that worked	1.000	.624
12- I was careful not to commit more resources than I could afford to lose	1.000	.705
13- I was careful not to risk more money than what I was willing to lose with my initial idea	1.000	.758
14- I was careful not to risk so much money that my business would be in real trouble financially if things didn't work out	1.000	.731
15- I allowed the business to evolve as opportunities emerged	1.000	.534
16- I adapted what I was doing to the resources I had	1.000	.551
17- I was flexible & took advantage of opportunities as they arose	1.000	.734
18- I avoided courses of action that restricted my flexibility & adaptability	1.000	.553
19- I used a substantial number of agreements with customers, suppliers & other organizations & people	1.000	.632
20- I used pre-commitments from customers & suppliers as often as possible	1.000	.694
21- Network contacts provided low cost resources	1.000	.273
22- By working closely with outside organizations/people, I have been able to greatly expand my business venture capabilities	1.000	.680
23- I have focused on developing alliances with other people & organizations	1.000	.632
24- My partnerships with outside organizations/people played a key role in my ability to provide my product/service	1.000	.684

Extraction Method: Principal Component Analysis.

Table 3: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.816	28.399	28.399	6.816	28.399	28.399	4.438	18.492	18.492
2	3.165	13.188	41.588	3.165	13.188	41.588	3.567	14.861	33.353
3	2.163	9.014	50.602	2.163	9.014	50.602	2.664	11.098	44.451
4	1.501	6.254	56.856	1.501	6.254	56.856	2.349	9.787	54.239
5	1.287	5.361	62.218	1.287	5.361	62.218	1.915	7.979	62.218
6	1.053	4.385	66.603						
7	1.019	4.246	70.849						
8	.920	3.835	74.684						
9	.690	2.873	77.557						
10	.652	2.718	80.276						
11	.621	2.588	82.864						
12	.534	2.226	85.089						
13	.488	2.033	87.122						
14	.417	1.737	88.859						
15	.401	1.671	90.531						
16	.356	1.483	92.014						
17	.346	1.442	93.455						
18	.313	1.303	94.758						
19	.290	1.209	95.968						
20	.263	1.095	97.063						
21	.225	.939	98.002						
22	.178	.742	98.744						
23	.171	.711	99.455						
24	.131	.545	100.000						

Extraction Method: Principal Component Analysis.

Table 4: Component Matrix[a]

	Component				
	1	2	3	4	5
1- I analyzed long run opportunities & selected what I thought would provide the best returns	.602	-.437	-.149	-.082	-.160
2- I developed a strategy to best take advantage of resources & capabilities	.629	-.480	.042	.009	-.091
3- I designed & planned business strategies	.636	-.510	.049	.231	-.178
4- I organized & implemented control processes to make sure I met objectives	.656	-.277	-.187	.143	.027
5- I researched & selected target markets & did meaningful competitive analysis	.667	-.423	-.184	.055	-.255
6- I had a clear & consistent vision for where I wanted to end up	.610	-.349	-.107	-.252	-.039
7- I designed & planned production & marketing efforts	.700	-.397	-.115	.025	-.082
8- I experimented with different products and/or business models	.520	-.224	.232	-.060	.544
9- The product/service that I provide is essentially the same as originally conceptualized	.503	.178	-.227	.158	-.224
10- The product/service that I provide is substantially different than I first imagined	.320	-.362	.246	.226	.436
11- I tried a number of different approaches until I found a business model that worked	.408	-.226	.261	.278	.510
12- I was careful not to commit more resources than I could afford to lose	.400	.395	.587	.200	-.069
13- I was careful not to risk more money than what I was willing to lose with my initial idea	.466	.343	.512	.345	-.207
14- I was careful not to risk so much money that my business would be in real trouble financially if things didn't work out	.329	.329	.488	.405	-.336
15- I allowed the business to evolve as opportunities emerged	.547	.180	.279	-.353	-.021
16- I adapted what I was doing to the resources I had	.534	.328	.308	-.244	-.056
17- I was flexible & took advantage of opportunities as they arose	.550	.147	.227	-.598	.045
18- I avoided courses of action that restricted my flexibility & adaptability	.557	.128	.171	-.427	-.118
19- I used a substantial number of agreements with customers, suppliers & other organizations & people	.527	.357	-.447	.162	-.031
20- I used pre-commitments from customers & suppliers as often as possible	.471	.330	-.496	.331	.086
21- Network contacts provided low cost resources	.399	.175	-.241	-.104	-.117
22- By working closely with outside organizations/people, I have been able to greatly expand my business venture capabilities	.545	.513	-.143	.020	.316
23- I have focused on developing alliances with other people & organizations	.469	.515	-.339	-.017	.179
24- My partnerships with outside organizations/people played a key role in my ability to provide my product/service	.516	.574	-.267	-.035	.127

Extraction Method: Principal Component Analysis.[a]

a. 5 components extracted.

Table 5: Rotated Component Matrix[a]

	Component				
	1	2	3	4	5
1- I analyzed long run opportunities & selected what I thought would provide the best returns	.751	.076	.174	-.065	.071
2- I developed a strategy to best take advantage of resources & capabilities	.742	-.020	.169	.070	.228
3- I designed & planned business strategies	.812	-.013	-.012	.212	.218
4- I organized & implemented control processes to make sure I met objectives	.643	.294	.043	.029	.246
5- I researched & selected target markets & did meaningful competitive analysis	.834	.145	.081	.041	.026
6- I had a clear & consistent vision for where I wanted to end up	.635	.098	.349	-.137	.127
7- I designed & planned production & marketing efforts	.763	.162	.152	.023	.190
8- I experimented with different products and/or business models	.245	.068	.312	-.018	.716
9- The product/service that I provide is essentially the same as originally conceptualized	.347	.473	.050	.221	-.126
10- The product/service that I provide is substantially different than I first imagined	.261	-.086	-.033	.074	.674
11- I tried a number of different approaches until I found a business model that worked	.206	.052	.001	.155	.745
12- I was careful not to commit more resources than I could afford to lose	-.067	.109	.303	.749	.188
13- I was careful not to risk more money than what I was willing to lose with my initial idea	.083	.156	.176	.827	.112
14- I was careful not to risk so much money that my business would be in real trouble financially if things didn't work out	.057	.084	.054	.847	-.026
15- I allowed the business to evolve as opportunities emerged	.166	.140	.656	.218	.095
16- I adapted what I was doing to the resources I had	.077	.219	.607	.354	.060
17- I was flexible & took advantage of opportunities as they arose	.156	.119	.829	.024	.086
18- I avoided courses of action that restricted my flexibility & adaptability	.254	.147	.670	.131	-.023
19- I used a substantial number of agreements with customers, suppliers & other organizations & people	.223	.755	.026	.081	-.068
20- I used pre-commitments from customers & suppliers as often as possible	.186	.793	-.155	.070	.046
21- Network contacts provided low cost resources	.226	.400	.212	.008	-.131
22- By working closely with outside organizations/people, I have been able to greatly expand my business venture capabilities	-.055	.713	.293	.134	.255
23- I have focused on developing alliances with other people & organizations	-.024	.762	.220	.020	.047
24- My partnerships with outside organizations/people played a key role in my ability to provide my product/service	-.028	.765	.292	.110	.020

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 6 iterations.

Table 6: Component Transformation Matrix

Component	1	2	3	4	5
1	.651	.486	.433	.276	.276
2	-.643	.595	.227	.351	-.240
3	-.193	-.587	.344	.635	.312
4	.080	.184	-.801	.513	.233
5	-.347	.177	.017	-.367	.845

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

APPENDIX (4): STRUCTURAL CONTROL FACTORS & ENTREPRENEURIAL SELF-EFFICACY (ESE) REGRESSIONS' EXPLORATORY RESULTS

Structural Control Factors & Entrepreneurial Self-efficacy (ESE)

To test our conceptual model, we started by testing all hypothesized relationships between our structural control factors and entrepreneurial self-efficacy (ESE), controlling for several other factors, through a series of linear regressions. Hypothesized relationships between ESE and our structural control factors; *Knowledge and Experiential Sources*, *Access to Resources Through Network*, *Environmental Trigger*, and *Institutional Context*, were tested controlling for entrepreneur's age and educational level, his major of education (whether in business or other disciplines), and the country from which his business operates. We used the five ESE dimensions defined and validated by McGee et al. (2009); *Searching*, *Planning*, *Marshaling*, *Implementing HR*, and *Implementing Financial Resources*, to test the first part of our model as explained in detail in the following sections.

1. Structural Control Factors & ESE Searching Dimension

The ESE Searching dimension includes three sub-dimensions; creating new ideas for products/services and identifying the need for them, designing products/services to the satisfaction of potential customers, and finally making a sale of these products/services. We start by testing all of our structural control factors relationships with ESE in terms of the first Searching sub-dimension of the ESE dimension, controlling for age and educational level, major of education, and country of business operation.

Structural Control Factors & ESE Searching Sub-dimension 1

The first ESE Searching sub-dimension deals with the respondent's confidence relative to other entrepreneurs that he knows in terms of the scale item 'Coming up with new business ideas & identifying the need for them'. The linear regression performed reported an R Square of 0.168 as shown in Table (1). The whole regression model was not significant at 0.471 as shown in Table (2). However, the Coefficients of all structural control factors and the ESE Searching first sub-dimension in Table (3) showed that some dimensions of three structural control factors have weak and strong relationships with the first ESE searching sub-dimension. First, in the Knowledge Source variable, the dimension of the knowledge source before starting business had a weak and negative relationship of 0.126 at a significance level of 0.12. In the Access to Resources through Network variable, the dimension of entrepreneur's network connections running businesses showed a strong and positive relationship with the first ESE searching sub-dimension of

0.090 at a significance level of 0.09. Finally, in the Institutional Context variable, the business enabling environment dimension only showed a weak and positive relationship of 0.111 at a significance level of 0.1.

Table 1: Structural Control Factors & ESE Searching Sub-dimension 1 Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.410	.168	.000	.968

Table 2: Structural Control Factors & ESE Searching Sub-dimension 1 ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	17.753	19	.934	.998	.471
Residual	88.001	94	.936		
Total	105.754	113			

Table 3: Structural Control Factors & ESE Searching Sub-dimension 1 Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	3.118	.948		3.289	.001
Age	.005	.016	.035	.323	.747
Educational Level	-.018	.076	-.025	-.238	.812
Country of Business Operation	-.015	.014	-.128	-1.072	.286
Knowledge Source					
B*efore* Starting Business	-.094	.061	-.174	-1.543	**.126**
A*fter* Starting Business	.055	.058	.104	.954	.343
Experiential Source					
Business Operation Experience	.086	.110	.107	.782	.436
Industry Experience	-.069	.090	-.077	-.761	.449
Business Success Experience	.036	.128	.038	.280	.780
Business Failure Experience	.016	.129	.015	.121	.904
Access to Resources					
Network Running Businesses	.126	.074	.172	1.712	**.090**
Access to *Finance*	-.074	.056	-.150	-1.323	.189
Access to *HR*	-.075	.055	-.141	-1.361	.177
Access to *Market/Customers*	.040	.051	.084	.789	.432
Environmental Trigger					
Necessity/Opportunity Motives	.040	.054	.075	.741	.460
Institutional Context					
Business Enabling Environment	.155	.096	.195	1.610	**.111**
IP Rights Protection	.050	.106	.058	.475	.636
Corruption Effect on Business	.047	.083	.061	.562	.576
Legal Contracts Enforcement	-.031	.110	-.033	-.282	.778
Education Major in Business	-.029	.200	-.015	-.146	.884

Structural Control Factors & ESE Searching Sub-dimension 2

This ESE Searching sub-dimension deals with the respondent's confidence concerning the scale item 'Designing products/ services that will satisfy customer needs & wants'. The linear regression performed reported an R Square of 0.134 as shown in Table (4). The whole regression model was not significant at 0.742 as shown in Table (5). The Coefficients of all structural control factors and the ESE Searching

second sub-dimension as in Table (6) demonstrated that the industry experience dimension of the Experiential Source variable showed a weak and negative relation of 0.156 at a 0.15 significance level. The institutional Context dimension of corruption effect on business operation also showed a weak and positive relation of 0.108 at a 0.1 significance level with the second ESE searching sub-dimension.

Table 4: Structural Control Factors & ESE Searching Sub-dimension 2 Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.366	.134	-.041	.929

Table 5: Structural Control Factors & ESE Searching Sub-dimension 2 ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	12.529	19	.659	.764	.742
Residual	81.093	94	.863		
Total	93.623	113			

Table 6: Structural Control Factors & ESE Searching Sub-dimension 2 Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.912	.910		4.298	.000
Age	-.012	.016	-.088	-.792	.430
Educational Level	-.074	.073	-.111	-1.019	.311
Country of Business Operation	-.005	.014	-.049	-.400	.690
Knowledge Source					
B*efore* Starting Business	-.045	.058	-.088	-.766	.446
A*fter* Starting Business	.052	.055	.105	.947	.346
Experiential Source					
Business Operation Experience	.006	.105	.008	.054	.957
Industry Experience	-.124	.087	-.147	-1.430	**.156**
Business Success Experience	.057	.123	.064	.464	.644
Business Failure Experience	-.108	.124	-.109	-.872	.385
Access to Resources					
Network Running Businesses	.071	.071	.103	1.005	.317
Access to *Finance*	-.030	.054	-.065	-.563	.575
Access to *HR*	-.008	.053	-.017	-.160	.873
Access to *Market/Customers*	-.015	.049	-.033	-.300	.765
Environmental Trigger					
Necessity/Opportunity Motives	-.008	.052	-.015	-.149	.882
Institutional Context					
Business Enabling Environment	.124	.093	.165	1.339	.184
IP Rights Protection	.010	.101	.012	.095	.925
Corruption Effect on Business	.129	.080	.179	1.622	**.108**
Legal Contracts Enforcement	.016	.105	.019	.155	.877
Education Major in Business	.056	.192	.031	.290	.773

Structural Control Factors & ESE Searching Sub-dimension 3

The last ESE Searching sub-dimension deals with the respondent's confidence relative to other entrepreneurs in terms of the scale item 'Making a sale'. The regression performed reported an R Square of

0.141 as shown in Table (7). The whole regression model was not significant at 0.690 as shown in Table (8). However, the Coefficients of all structural control factors and the ESE Searching 'Making a sale' sub-dimension as in Table (9) showed that the access to market/customers dimension of the Access to Resources through Network variable has a weak and negative relationship of 0.101 at a 0.1 with this ESE searching sub-dimension. Two of the control variables showed strong and negative relations with this ESE searching sub-dimension, with the Educational Level variable reporting a strong and negative relation of 0.066 at a 0.06 significance and the Education Major in Business variable reporting 0.082 at a 0.08 significance level.

Table 7: Structural Control Factors & ESE Searching Sub-dimension 3 Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.375	.141	-.033	.918

Table 8: Structural Control Factors & ESE Searching Sub-dimension 3 ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	12.981	19	.683	.810	.690
Residual	79.273	94	.843		
Total	92.254	113			

Table 9: Structural Control Factors & ESE Searching Sub-dimension 3 Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	4.774	.900		5.305	.000
Age	.003	.015	.021	.190	.850
Educational Level	-.135	.072	-.202	-1.862	**.066**
Country of Business Operation	.010	.014	.086	.711	.479
Knowledge Source					
B*efore* Starting Business	-.016	.058	-.031	-.272	.786
A*fter* Starting Business	.006	.055	.012	.111	.912
Experiential Source					
Business Operation Experience	.001	.104	.001	.010	.992
Industry Experience	-.108	.086	-.129	-1.259	.211
Business Success Experience	.044	.122	.049	.361	.719
Business Failure Experience	-.136	.123	-.138	-1.106	.271
Access to Resources					
Network Running Businesses	.028	.070	.041	.401	.689
Access to *Finance*	.007	.053	.015	.132	.895
Access to *HR*	.004	.052	.008	.077	.939
Access to *Market/Customers*	-.080	.048	-.179	-1.654	**.101**
Environmental Trigger					
Necessity/Opportunity Motives	.032	.051	.065	.635	.527
Institutional Context					
Business Enabling Environment	-.039	.091	-.053	-.428	.669
IP Rights Protection	.094	.100	.117	.941	.349
Corruption Effect on Business	.009	.079	.012	.109	.914
Legal Contracts Enforcement	.013	.104	.015	.125	.901
Education Major in Business	-.334	.190	-.186	-1.761	**.082**

2. Structural Control Factors & ESE Planning Dimension

The ESE Planning dimension includes two sub-dimensions that deal with pricing, marketing, & determining customer demand for new products/services, and also estimating the amount of startup funds & working capital necessary to start a business. In the following sections, we test all of our structural control factors relationships with ESE in terms of the two Planning sub-dimensions, controlling for age, educational level, major of education, and country of business operation.

Structural Control Factors & ESE Planning Sub-dimension 1

The first ESE Planning sub-dimension deals with the respondent's confidence relative to other entrepreneurs in terms of 'Pricing, marketing, & determining customer demand for new products/services'. The linear regression performed reported an R Square of 0.175 as shown in Table (10). The whole regression model was not significant at 0.414 as shown in Table (11). The Coefficients of all structural control factors and the ESE Planning first sub-dimension in Table (12) showed that some dimensions of four structural control factors have weak and strong relationships with the first ESE planning sub-dimension. In the Knowledge Source variable, the dimension of the knowledge source before starting business had a strong and negative relationship of 0.071 at a significance level of 0.07 with this ESE planning sub-dimension. The industry experience dimension of the Experiential Source variable also showed a weak and negative relationship of 0.131 at a 0.13 significance level. The access to finance dimension of the Access to Resources through Network variable has a weak and negative relationship of 0.136 at a significance level of 0.13 with this sub-dimension. Finally, the Environmental Trigger variable showed a weak and positive relation of 0.100 at a 0.1 significance level with the first ESE planning sub-dimension.

Table 10: Structural Control Factors & ESE Planning Sub-dimension 1 Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.418	.175	.008	.950

Table 11: Structural Control Factors & ESE Planning Sub-dimension 1 ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	17.995	19	.947	1.050	.414
Residual	84.785	94	.902		
Total	102.781	113			

Table 12: Structural Control Factors & ESE Planning Sub-dimension 1 Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.872	.931		4.161	.000
Age	.016	.016	.110	1.015	.313
Educational Level	-.076	.075	-.108	-1.015	.313
Country of Business Operation	-.004	.014	-.035	-.297	.767
Knowledge Source					
B*efore* Starting Business	-.109	.060	-.205	-1.825	**.071**
A*fter* Starting Business	.023	.057	.044	.404	.687
Experiential Source					
Business Operation Experience	-.103	.108	-.131	-.960	.340
Industry Experience	-.135	.089	-.153	-1.523	**.131**
Business Success Experience	.080	.126	.085	.635	.527
Business Failure Experience	-.099	.127	-.096	-.783	.435
Access to Resources					
Network Running Businesses	.055	.072	.076	.758	.450
Access to *Finance*	-.083	.055	-.170	-1.506	**.136**
Access to *HR*	-1.307E-5	.054	.000	.000	1.000
Access to *Market/Customers*	-.042	.050	-.090	-.851	.397
Environmental Trigger					
Necessity/Opportunity Motives	.088	.053	.167	1.661	**.100**
Institutional Context					
Business Enabling Environment	.081	.095	.102	.851	.397
IP Rights Protection	.104	.104	.122	1.000	.320
Corruption Effect on Business	.113	.081	.150	1.394	.167
Legal Contracts Enforcement	-.141	.108	-.153	-1.307	.194
Education Major in Business	-.199	.196	-.105	-1.015	.313

Structural Control Factors & ESE Planning Sub-dimension 2

The second ESE Planning sub-dimension deals with the respondent's confidence relative to other entrepreneurs in terms of the scale item 'Estimating the amount of startup funds & working capital necessary to start my business'. The regression performed reported an R Square of 0.242 as shown in Table (13). The regression model was significant at 0.078 as shown in Table (14). The Coefficients as in Table (15) showed that the dimension of the knowledge source before starting business in the Knowledge Source variable had a very strong and negative relationship of 0.002 at a significance level of 0.00 with this ESE planning sub-dimension. Also, in the Experiential Source variable, the business operation experience (number of businesses owned) dimension has a very strong and negative relationship of 0.022 at a 0.02 significance level, and the dimension of business success experience (number of successful businesses) has a very strong and positive relationship of 0.032 at a 0.03 significance level with this ESE planning sub-dimension. Age is the only control variable that shows a very strong and positive relation with this sub-dimension, reporting 0.006 at a 0.00 significance level.

Table 13: Structural Control Factors & ESE Planning Sub-dimension 2 Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.492	.242	.089	1.008

Table 14: Structural Control Factors & ESE Planning Sub-dimension 2 ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	30.478	19	1.604	1.579	**.078**
Residual	95.487	94	1.016		
Total	125.965	113			

Table 15: Structural Control Factors & ESE Planning Sub-dimension 2 Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	3.753	.988		3.800	.000
Age	.048	.017	.294	2.821	**.006**
Educational Level	-.050	.079	-.064	-.627	.532
Country of Business Operation	-.006	.015	-.043	-.379	.705
Knowledge Source					
B*efore* Starting Business	-.205	.063	-.349	-3.241	**.002**
A*fter* Starting Business	.024	.060	.041	.397	.692
Experiential Source					
Business Operation Experience	-.267	.114	-.305	-2.337	**.022**
Industry Experience	-.087	.094	-.089	-.926	.357
Business Success Experience	.291	.134	.279	2.174	**.032**
Business Failure Experience	-.035	.135	-.030	-.260	.796
Access to Resources					
Network Running Businesses	.009	.077	.011	.115	.909
Access to *Finance*	-.048	.058	-.089	-.823	.413
Access to *HR*	-.078	.057	-.135	-1.362	.177
Access to *Market/Customers*	-.066	.053	-.127	-1.248	.215
Environmental Trigger					
Necessity/Opportunity Motives	-.003	.056	-.005	-.049	.961
Institutional Context					
Business Enabling Environment	.030	.100	.034	.295	.769
IP Rights Protection	.068	.110	.072	.619	.537
Corruption Effect on Business	.063	.086	.076	.733	.465
Legal Contracts Enforcement	-.089	.114	-.087	-.778	.438
Education Major in Business	-.294	.208	-.140	-1.411	.162

3. Structural Control Factors & ESE Marshaling Dimension

This ESE Marshaling dimension deals with the respondent's confidence in his communication and networking abilities relative to other entrepreneurs, as represented by the item 'Contacting & communicating with others so they identify with and believe in my ideas & vision for the future'. An R Square of 0.089 was reported from the regression performed as shown in Table (16). The model was not significant at 0.963 as shown in Table (17), and therefore the Coefficients of all structural control factors and the ESE Marshaling dimension just showed one strong and negative relationship of 0.086 at a

significance level of 0.08 between this ESE dimension and the Experiential Source variable dimension of industry experience as illustrated in Table (18).

Table 16: Structural Control Factors & ESE Marshaling Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.299	.089	-.095	.806

Table 17: Structural Control Factors & ESE Marshaling ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	5.989	19	.315	.486	.963
Residual	61.002	94	.649		
Total	66.991	113			

Table 18: Structural Control Factors & ESE Marshaling Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	3.401	.789		4.309	.000
Age	.015	.014	.130	1.137	.258
Educational Level	.026	.063	.046	.412	.681
Country of Business Operation	.004	.012	.044	.354	.724
Knowledge Source					
B*efore* Starting Business	-.037	.051	-.086	-.728	.469
A*fter* Starting Business	-.010	.048	-.025	-.217	.829
Experiential Source					
Business Operation Experience	.008	.091	.012	.083	.934
Industry Experience	-.130	.075	-.183	-1.734	**.086**
Business Success Experience	-.010	.107	-.014	-.098	.922
Business Failure Experience	.036	.108	.043	.331	.741
Access to Resources					
Network Running Businesses	.048	.061	.082	.784	.435
Access to *Finance*	-.051	.046	-.131	-1.100	.274
Access to *HR*	.007	.046	.016	.151	.880
Access to *Market/Customers*	-.035	.042	-.091	-.818	.416
Environmental Trigger					
Necessity/Opportunity Motives	.023	.045	.054	.516	.607
Institutional Context					
Business Enabling Environment	.056	.080	.088	.697	.487
IP Rights Protection	.022	.088	.032	.247	.805
Corruption Effect on Business	.061	.069	.100	.887	.377
Legal Contracts Enforcement	-.099	.091	-.134	-1.084	.281
Education Major in Business	.153	.166	.099	.916	.362

4. Structural Control Factors & ESE HR Dimension

The ESE Human Resources dimension includes two sub-dimensions that deal with the respondent's confidence in his capabilities of human resources implementation of tasks such as hiring, managing, delegating, leading, motivating, and training employees. We test all of our structural control factors

relationships with the two ESE HR sub-dimensions as follows, controlling for age, educational level, major of education, and country of business operation.

Structural Control Factors & ESE HR Sub-dimension 1

The first ESE HR sub-dimension deals with the respondent's confidence relative to other entrepreneurs that he know as represented by the scale item 'Hiring, managing, training & setting tasks & responsibilities for my employees'. The regression performed reported an R Square of 0.120 as shown in Table (19). The whole regression model was not significant at 0.835 as shown in Table (20). The Coefficients of all structural control factors and the ESE HR first sub-dimension in Table (21) Age is the only variable that shows a weak and positive relationship of 0.130 at a 0.13 significance level.

Table 19: Structural Control Factors & ESE HR Sub-dimension 1 Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.346	.120	-.058	1.007

Table 20: Structural Control Factors & ESE HR Sub-dimension 1 ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	12.994	19	.684	.675	.835
Residual	95.260	94	1.013		
Total	108.254	113			

Table 21: Structural Control Factors & ESE HR Sub-dimension 1 Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	3.755	.986		3.807	.000
Age	.026	.017	.171	1.527	**.130**
Educational Level	-.045	.079	-.063	-.572	.568
Country of Business Operation	-.001	.015	-.008	-.062	.951
Knowledge Source					
B*efore* Starting Business	-.044	.063	-.081	-.702	.485
A*fter* Starting Business	-.068	.060	-.126	-1.129	.262
Experiential Source					
Business Operation Experience	-.006	.114	-.007	-.051	.959
Industry Experience	-.045	.094	-.050	-.479	.633
Business Success Experience	.173	.134	.178	1.292	.199
Business Failure Experience	-.082	.134	-.078	-.613	.541
Access to Resources					
Network Running Businesses	-.092	.077	-.123	-1.194	.235
Access to *Finance*	-.076	.058	-.152	-1.300	.197
Access to *HR*	-.026	.057	-.049	-.458	.648
Access to *Market/Customers*	.015	.053	.032	.293	.770
Environmental Trigger					
Necessity/Opportunity Motives	-.010	.056	-.018	-.172	.864
Institutional Context					
Business Enabling Environment	.108	.100	.134	1.081	.283
IP Rights Protection	-.088	.110	-.101	-.801	.425
Corruption Effect on Business	.047	.086	.060	.541	.590
Legal Contracts Enforcement	.025	.114	.026	.216	.829
Education Major in Business	-.057	.208	-.029	-.273	.786

Structural Control Factors & ESE HR Sub-dimension 2

This ESE HR dimension deals with the respondent's confidence relative to other entrepreneurs, as represented by the item 'Inspiring, encouraging & motivating my employees'. An R Square of 0.076 was reported from the regression performed as shown in Table (22). The model was not significant at 0.985 as shown in Table (23), and therefore the Coefficients of all structural control factors and the ESE HR second sub-dimension showed no relationship between the variables as illustrated in Table (24).

Table 22: Structural Control Factors & ESE HR Sub-dimension 2 Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.276	.076	-.110	.892

Table 23: Structural Control Factors & ESE HR Sub-dimension 2 ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	6.181	19	.325	.409	.985
Residual	74.740	94	.795		
Total	80.921	113			

Table 24: Structural Control Factors & ESE HR Sub-dimension 2 Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	3.614	.874		4.136	.000
Age	-.010	.015	-.078	-.675	.501
Educational Level	.050	.070	.080	.710	.480
Country of Business Operation	.017	.013	.159	1.266	.209
Knowledge Source					
B*efore* Starting Business	-.024	.056	-.050	-.423	.674
A*fter* Starting Business	.007	.053	.015	.130	.897
Experiential Source					
Business Operation Experience	-.065	.101	-.092	-.639	.525
Industry Experience	-.051	.083	-.066	-.616	.539
Business Success Experience	.145	.118	.173	1.225	.224
Business Failure Experience	-.038	.119	-.041	-.316	.753
Access to Resources					
Network Running Businesses	.038	.068	.059	.560	.576
Access to *Finance*	-.016	.051	-.036	-.304	.762
Access to *HR*	.007	.051	.016	.145	.885
Access to *Market/Customers*	-.017	.047	-.040	-.357	.722
Environmental Trigger					
Necessity/Opportunity Motives	.045	.050	.096	.906	.367
Institutional Context					
Business Enabling Environment	.017	.089	.024	.191	.849
IP Rights Protection	-.016	.097	-.021	-.162	.872
Corruption Effect on Business	.086	.076	.128	1.127	.263
Legal Contracts Enforcement	-.035	.101	-.043	-.351	.727
Education Major in Business	.153	.184	.091	.831	.408

5. Structural Control Factors & ESE Finance Dimension

The last ESE dimension of Finance includes two sub-dimensions that deal with the implementation of financial resources and the respondent's confidence in their abilities of keeping financial records, managing financial assets, reading financial statements, and finding financial resources/ funds. In the following sections, we test all of our structural control factors relationships with ESE in terms of the two Finance sub-dimensions, controlling for age, educational level, major of education, and country of business operation.

Structural Control Factors & ESE Finance Sub-dimension 1

The first ESE Finance sub-dimension deals with the respondent's confidence relative to other entrepreneurs in terms of 'Finding & managing financial resources'. The linear regression performed reported an R Square of 0.129 as shown in Table (25). The whole regression model was not significant at 0.777 as shown in Table (26). The Coefficients of all structural control factors and the ESE Finance first sub-dimension in Table (27) show no significant relationships between any of the structural control factors

and this ESE sub-dimension. Only Education Major control variable shows a strong and negative relationship with the ESE finance sub-dimension, reporting 0.070 at a 0.07 significance level.

Table 25: Structural Control Factors & ESE Finance Sub-dimension 1 Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.359	.129	-.047	1.102

Table 26: Structural Control Factors & ESE Finance Sub-dimension 1 ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	16.904	19	.890	.732	.777
Residual	114.219	94	1.215		
Total	131.123	113			

Table 27: Structural Control Factors & ESE Finance Sub-dimension 1 Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	3.678	1.080		3.405	.001
Age	.012	.019	.075	.668	.506
Educational Level	-.115	.087	-.145	-1.330	.187
Country of Business Operation	-.001	.016	-.007	-.060	.952
Knowledge Source					
B*efore* Starting Business	-.048	.069	-.080	-.695	.489
A*fter* Starting Business	.039	.066	.066	.592	.555
Experiential Source					
Business Operation Experience	-.056	.125	-.063	-.449	.655
Industry Experience	.000	.103	.000	-.002	.999
Business Success Experience	.175	.146	.164	1.196	.235
Business Failure Experience	-.178	.147	-.152	-1.206	.231
Access to Resources					
Network Running Businesses	-.081	.084	-.100	-.968	.335
Access to *Finance*	-.052	.064	-.095	-.815	.417
Access to *HR*	.039	.063	.065	.616	.539
Access to *Market/Customers*	-.017	.058	-.032	-.291	.772
Environmental Trigger					
Necessity/Opportunity Motives	.048	.061	.081	.789	.432
Institutional Context					
Business Enabling Environment	.030	.110	.034	.274	.785
IP Rights Protection	.037	.120	.039	.310	.758
Corruption Effect on Business	.017	.094	.020	.184	.854
Legal Contracts Enforcement	.108	.125	.104	.863	.391
Education Major in Business	-.418	.228	-.195	-1.833	**.070**

Structural Control Factors & ESE Finance Sub-dimension 2

The second ESE Finance sub-dimension deals with the respondent's confidence relative to other entrepreneurs in terms of the scale item 'Keeping/recording, reading & interpreting financial statements'. The regression performed reported an R Square of 0.112 as shown in Table (28). The regression model was significant at 0.878 as shown in Table (29). The Coefficients as in Table (30) showed that only the

dimension of the access to HR in the Access to Resources through Network variable had a weak and negative relationship of 0.132 at a significance level of 0.13 with this ESE finance sub-dimension.

Table 28: Structural Control Factors & ESE Finance Sub-dimension 2 Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.335	.112	-.067	1.074

Table 29: Structural Control Factors & ESE Finance Sub-dimension 2 ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	13.689	19	.720	.625	.878
Residual	108.381	94	1.153		
Total	122.070	113			

Table 30: Structural Control Factors & ESE Finance Sub-dimension 2 Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	2.935	1.052		2.789	.006
Age	.023	.018	.143	1.269	.208
Educational Level	-.029	.085	-.038	-.340	.734
Country of Business Operation	-.012	.016	-.096	-.774	.441
Knowledge Source					
B*efore* Starting Business	-.012	.068	-.021	-.179	.859
A*fter* Starting Business	-.046	.064	-.080	-.714	.477
Experiential Source					
Business Operation Experience	-.128	.122	-.149	-1.052	.296
Industry Experience	-.082	.100	-.085	-.819	.415
Business Success Experience	.101	.142	.099	.711	.479
Business Failure Experience	.012	.143	.011	.083	.934
Access to Resources					
Network Running Businesses	-.020	.082	-.026	-.248	.804
Access to *Finance*	-.024	.062	-.045	-.386	.700
Access to *HR*	-.093	.061	-.163	-1.519	**.132**
Access to *Market/Customers*	.056	.056	.110	.994	.323
Environmental Trigger					
Necessity/Opportunity Motives	.043	.060	.074	.711	.479
Institutional Context					
Business Enabling Environment	.026	.107	.030	.239	.812
IP Rights Protection	-.013	.117	-.014	-.108	.914
Corruption Effect on Business	.084	.092	.102	.915	.362
Legal Contracts Enforcement	.090	.122	.090	.742	.460
Education Major in Business	-.008	.222	-.004	-.035	.972