

Antecedents of Entrepreneurial Processes of Effectuation and Opportunity Creation

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Abstract

Extant literature of Entrepreneurial opportunity studies has identified two opposing theoretical viewpoints. Theory of opportunity discovery known as “causation” is the initial perspective. The second perspective is opportunity creation. The legitimacy of opportunity discovery theory in studying entrepreneurship is challenged by scholars. Among many developing theoretical perspectives, Sarasvathy's (2001) effectuation theory is extensively cited in entrepreneurial literature. Due to the novelty of effectuation theory, previous studies of opportunity creation are conceptual in nature or qualitative, and at best experimental; the antecedents of effectuation theory are unexplored. A questionnaire was created and distributed to 1,950 in Nigeria. The objectives of this study are (i) to discover factors that can predict entrepreneurs' effectual behaviours, (ii) to observe the effect of entrepreneurial effectuation on opportunity creation process and (iii) to explore how venture performance is affected by entrepreneurial opportunity creation. Findings of this study established that entrepreneur's management skill and entrepreneurs' personality traits characteristics are significant to entrepreneurial process effectuation. Also entrepreneurial process of effectuation is a significant predictor of entrepreneurial opportunity creation.

Keywords: Effectuation, Causation, Opportunity Creation, Venture Performance

Introduction

Extant literature of Entrepreneurial opportunity studies has identified two opposing theoretical viewpoints. Theory of opportunity discovery known as “causation” is the initial perspective by (Sarasvathy, 2001). The second perspective is opportunity creation. The validity of opportunity discovery as a theory for the study of a multifaceted phenomenon like

entrepreneurship is challenged by scholars (Alvarez et al., 2010; Sarasvathy, 2001; Alvarez & Barney, 2007; Chandler et al., 2011). According to Eisenhardt et al (2010), “emerging theoretical perspective” are developed to describe the fundamental behaviours of entrepreneurs, other scholars describe this new perspective as pragmatist model of entrepreneurship (Rescher, 2005; Peirce, 1931).

Sarasvathy's (2001) theory of effectuation is mostly cited within the literature of emerging entrepreneurial theoretical perspectives. As a result of the novelty of effectuation theory, existing studies of entrepreneurial opportunity creation are experimental, qualitative or conceptual. So far the antecedents of effectuation are unexplored (Harms & Schiele, 2012). The objectives of this study are (i) to discover factors that can predict entrepreneurs' effectual behaviours, (ii) to observe the effect of entrepreneurial effectuation on opportunity creation process and (iii) to explore how venture performance is affected by entrepreneurial opportunity creation.

Entrepreneurial effectuation process has captured the attention of numerous scholars (Perry et al., 2012; Fisher, 2012, Sarasvathy & Dew, 2007; Chandler et al., 2011; Sarasvathy & Dew, 2008; Svensrud & Åsvoll, 2011). The current Entrepreneurial opportunity creation literature, have not given antecedents of opportunity creation attention. Numerous scholars argue that entrepreneurial effectuation process influences opportunity creation (Wiltbank et al., 2009; Sarasvathy & Kotha, 2001). According to Pfeffer (1993) paradigm shifts are time taking in fields where there is less agreement concerning accepted theories, models and paradigms. Entrepreneurial scholar argued that the conventionally entrenched model of entrepreneurship taught in business schools is responsible for causal process (Fisher, 2012; Harms & Schiele, 2012, Brettel et al., 2012). Most entrepreneurial researches are based on neoclassical economics theory, and studies in this field have been well explores and matured. On the other hand, factors responsible for effectuation process (which is rooted in the beliefs of pragmatism) have not been identified.

The purpose of this study is to see if education, personality attributes, and management skill may be used as predictors of the effectuation process. These elements have been suggested to have an impact on the entrepreneurial causation process, with scholars arguing that the causation and effectuation processes are not the same (Sarasvathy's, 2001). The causation process is planned strategy models, and the effectuation process is consistent with emergent strategy processes (Mintzberg, 1978).

This study makes three important contributions. First, as reported by Cunningham & Lischeron, (1991), this research has eclectically integrated the great person and psychology schools of thought into a unified construct called “Personality Traits” (1991). Entrepreneurial behaviour is defined by evaluating personal attributes, according to the great person and psychological schools of thought. These two schools of thought have been combined into a single construct (Personal characteristics) that is used to predict effectuation. Second, management and leadership schools view entrepreneurs as people who act and manage, and as such, they are expected to have “management skills” (Sambasivan et al., 2009, p.799). Entrepreneur's decisions to engage in effective processes are influenced by management and leadership schools. Finally, this research is being carried out in Africa. The majority of entrepreneurial studies to date have been undertaken in Western countries (Lau et al., 2004; Zhao & Aram, 1995; Lin, 1998) and this study would be one of the first to investigate the antecedents of effectuation in Nigeria. A smaller sample of 65 enterprises in Germany was used in a previous study on the antecedents of effectuation (Harms & Schiele, 2012). This will

be the first quantitative study to incorporate 360-degree replies. Figure 1 depicts the framework employed in this investigation.

Literature Review

Entrepreneurial Opportunity Creation and Effectuation

“Effectuation provides a challenge to conventional, established entrepreneurial strategy wisdom,” according to (Perry et al., 2012, p.838). Herbert Simon's work was the inspiration for effectuation theory, and Sarasvathy worked closely with him to develop it (Sarasvathy & Simon, 2000). Sarasvathy established the notion of effectuation by analysing expert entrepreneurs who challenged the causal logic of predictability using think-aloud procedures.

Control becomes the key beginning point for a process for an effectuator who follows these concepts. Where effectuation and causation differ is in controlling the tools available rather than focusing on future results. Experts in the field of entrepreneurship, according to Sarasvathy's research, used the process of effectuation to a greater extent than beginner entrepreneurs who preferred causal logics.

Age

Age-related research has produced mixed results. Denison & Alexander (1986); Cooper et al (1988) discovered that elderly entrepreneurs had a lower probability of experiencing growth. Previous research has also shown that family support can be beneficial or harmful. Renzulli et al (2000) for example, discovered a negative linear association between the number of kin in entrepreneurs and their likelihood to start new businesses. The following theories are based on the reasoning presented above

H1: The age of the entrepreneur will have a favourable impact on the entrepreneurial process.

Education

Numerous researches on the role of education on entrepreneurial reward have been undertaken. The entrepreneurial role of “creative destruction,” according to Parker and van Praag (2006), cannot be performed if they confront constraints such as human capital (education). Education has the potential to be a tool for fostering entrepreneurship (Tokila & Tervo, 2010, p.690). Three dimensions were used to assess the characteristics of entrepreneurial education programs. Entrepreneurial education was defined as “entrepreneurship education comprised courses in specialized educational centers and institutions as well as self-taught education in both additional management education and entrepreneurship education” in a study by (Cruz et al., 2009). Education and training in business tasks (marketing, finance, manufacturing, operations, and so on) as well as the core business's (p.202). Formal education is the third component of education. Only entrepreneurial education, according to Cruz et al (2009), has a direct and positive effect on satisfaction with innovation behaviour. As a result, we propose the following hypotheses

H2A: Entrepreneurial special education will have a favourable impact on the process of entrepreneurship.

H2B: Entrepreneurial education will have a favourable impact on the process of starting a business.

Personality Traits

Personality theories have emphasized the importance of personal predilection in business success (McClelland, 1965). Entrepreneurial characteristics are particularly vital to venture success, according to venture capitalists (McMillan et al., 1985). Personality traits, according to Caprana and Cervone (2000), are inclinations to respond in a certain way in different contexts. A lot of research has been done on the personalities of entrepreneurs (Shaver & Scott, 1991). Numerous academics (Gartner, 1985, Low & MacMillan, 1988; Aldrich, 1999) have raised major issues about the significance of personality in the start-up phase and business success. Bateman and Crant (1993) contended, however, that the death knell for personality and entrepreneurship research may have been sounded prematurely. Personality qualities, according to Rauch and Frese (2000), are determinants of entrepreneurial behaviour. Furthermore,, Smith et al (2001) claimed that current leadership research has highlighted tenacity, enthusiasm, proactivity, goal-striving, and self-confidence as traits of successful entrepreneurs. 'Optimism,' 'self-efficacy,' and 'creativity,' according to Ardichvili et al (2003), are three personality factors linked to good opportunity recognition. We opted to investigate proactivity, passion, and optimism as potential causality factors.

The construct personality qualities are made up of the proactivity, passion, and optimism of entrepreneurs. In the field of entrepreneurship, having a proactive personality is crucial. Proactivity, according to (Bateman & Crant, 1993), captures the idea of humans playing an active role in their environments by making changes rather than passively reacting to and accepting the demands of their circumstances without protest. Similarly, Rauch, Wiklund, Lumpkin and Frese (2009) define proactivity as a forward-thinking, opportunity-seeking mindset defined by the launch of new services and products ahead of the competition and anticipating future demand. Individuals are anticipating future events by thinking, reasoning, planning, calculating, and acting in advance (Grant & Ashford, 2008; Bandura, 2006). Although not all proactive behaviours are good, according to Bateman and Crant (1993), the majority of study focuses on the benefits that proactivity brings to individuals, groups, and organizations. Crant (1996) investigated the link between proactive personality and entrepreneurial goals. A proactive attitude is favourably connected with entrepreneurial goals, according to the study's findings. In their research, Becherer and Maurer (1999) discovered substantial links between a small firm president's proactivity and the firm's competitive stance and sales growth. Kickul and Gundry (2002) found a substantial association between small business owners' proactive disposition and the level of creativity in their adopted tactics in another empirical investigation. Furthermore, José Acedo and Florin (2006) found that an individual's proactivity is linked to entrepreneurial aspirations and behaviour in terms of their firm's potential to compete and expand. Individuals who are proactive predict and visualize a future outcome, then pick and adjust events to achieve that end. Proactive entrepreneurs in Nigeria's building materials business would analyse both causation and effectual process. This is due to the fierce competition in the Nigerian construction materials business. To survive, entrepreneurs must be proactive in their business.

Passion is defined as 'a strong inclination toward an activity that people like, that they find important, and in which they invest time and energy (Vallerand et al., 2003) Obsessive and harmonized passions are suggested. Obsessive passion (OP) is the internalisation of an activity in one's identity that causes an internal demand to engage in the activity that the individual enjoys. "Harmonious passion" (HP) is an independent internalization that encourages people to choose to do what they enjoy. (p.756). Chen et al (2009), defined entrepreneurial passion as "an entrepreneur's intense affective state accompanied by cognitive and behavioural manifestations of high personal value," (p.199). Alternatively, the entrepreneur's enthusiasm

Cardon et al (2005) is at the heart of his or her success. Entrepreneurial action can be fuelled by a person's passion. Brännback, Carsrud, Elfving & Krueger (2006) state that passion can "fuel motivation, boost mental activity, and bring significance to everyday labour. Passion is one of the micro-level factors that may influence an entrepreneur's proclivity for good affect (Baron, 2008). Entrepreneurs' ability to raise funding from investors has been linked to their passion (Mitteness et al., 2012). Numerous academics believe that a better comprehension of Chen et al (2009) passion's construct is required. Scholars in the field of leadership have claimed that great company executives have a love for their work (House & Shamir, 1993). Passion is also said to be important in the context of business since it motivates entrepreneurs to overcome tremendous uncertainty and resource constraints (Timmons, 2000). Entrepreneurs in Nigeria's construction materials market who are passionate about their business would examine the two processes of opportunity as causality and effectuation. This supports the premise that the building materials industry has various obstacles, including capital requirements, transportation, storage, and security. To succeed, entrepreneurs must be enthusiastic about their business.

In terms of revenue and employment, only a small percentage of new businesses grow to become significant firms (Cassar, 2006). Despite this reality, the fact that entrepreneurs persist in the face of adversity indicates that they have a high level of dispositional optimism and deed (Hmieleski & Baron, 2009). The impact of various types of entrepreneurship on a country's innovativeness and economic growth rate has been studied (Sternberg & Wennekers, 2005). Optimism, according to Scheier and Carver (1992), defines optimism "as the tendency to believe that one will generally experience good verses bad outcomes in life" (p.203). Furthermore, according to Fraser and Greene (2006, p. 169), 'optimistic attitudes may assist individuals overcome uncertainty and, as a result, encourage entrepreneurial engagement.' Entrepreneurs are reported to be more optimistic than employees, and as they gain expertise, their level of optimism and uncertainty decreases (Fraser & Greene, 2006). Optimistic people are confident in their ability to achieve successful ends despite not being able to visualize the path that would lead them there—they simply believe that everything will turn out well in the end (Scheier et al., 2001). Busenitz and Barney (1997) found that entrepreneurs overestimate the likelihood of being correct and overgeneralize from a few traits or observations substantially more than managers of large, established organizations in an empirical research. In contrast, Hmieleski and Baron (2009) found a negative association between entrepreneurs' optimism and their new companies' performance (revenue and employment growth). Entrepreneur optimism research has generated mixed outcomes in general. Goodin et al (2012) found that optimism was associated with improved condition pain regulation. In the construction materials sector, optimism will have a strong link to the causation process for identifying opportunities. Due to the fact that not all firms succeed, only the most optimistic entrepreneurs will embark on a business venture. Entrepreneurs in the building materials market must be proactive, passionate, and optimistic to succeed. We propose the following hypothesis based on the preceding arguments

H3: The personality attributes of entrepreneurs will be positively related to the process of effectuation.

Management Skill

Entrepreneurs are characterized by management and leadership schools as individuals who act and manage a firm. Entrepreneurs are organizers of business ventures, persons who

organize, own, manage, and assume risks, according to management school (Cunningham & Lischeron, 1991). 'Entrepreneurs can be created or trained in the technical tasks of management,' according to the school. Entrepreneurs also engage in the following behaviours: 'production planning, human resource management, capitalization, and budgeting' (Cunningham & Lischeron, 1991.p.47). Entrepreneurs, according to the Leadership school, are "people leaders." They are able to adjust their approach to the needs of others, "and it is assumed that" an entrepreneur cannot achieve his or her aim on his or her own, but must rely on others. "Motivating, guiding, and leading are among the behaviours and skills of entrepreneurs" (Cunningham & Lischeron, 1991.p.47). These two schools of thought have been integrated into a single construct (management abilities), which is also hypothesized to predict effectuation process.

According to Khan and Rocha (1982), a small business owner/manager strengthens his or her managerial practice in order to avoid major challenges and final failure. They go on to say that the managerial domains of accounting, cash flow management, and marketing are all interconnected, and that a lack of expertise in one can cause an issue in another. "Increased management education" is one of the most frequently claimed reasons for lowering small business failure (Peterson et al., 1983). We merged two management skills in this study, and the dimension of management skills includes the following skills: social network and utilizing other people's resources. We propose the following based on the preceding arguments

H4: The management ability of entrepreneurs will be positively associated to the entrepreneurial effectuation process.

Effectuation

Entrepreneurs in organizations (intrapreneurs) are those who reassess and adjust, according to the intrapreneurship school (which Sarasvathy called effectuators). Entrepreneurs that participate in the effectuation process create opportunities. The construct effectuation is made up of experimentation, flexibility, and affordable loss.

Experimentation

Chandler et al (2011) define experimentation as "part of the process of establishing a suitable business model." 'Experiments that fail are halted early, allowing the entrepreneur to pursue other opportunities' (p.380). Experimentation has been discovered to be a low-cost means of probing the future (Brown & Eisenhardt, 1997). According to McGrath (1999), in real options reasoning, investment can be redirected away from experiments that are not performing well.

Flexibility

Sarasvathy further points out that effectuators tend to be adaptable because the form of the growing organization is based on the contingent opportunities available. "The necessity for prediction is considerably reduced" as a result (Sarasvathy, 2001: 252). Start-up companies have an advantage over established businesses in terms of flexibility. When a company is created and grows, it develops procedures, policies, and routines (March & Simon, 1958).

Affordable Loss

"Affordable loss relates to advance commitment to what one is willing to lose rather than engaging in calculations about expected returns to the project" (Sarasvathy, 2008. p. 21). The term "affordable loss" refers to instances in which investment decisions are made with the

goal of reducing risk. Furthermore, goal-setting focuses on sticking to budgets and timetables, resulting in process efficiency (Dew et al., 2009). Entrepreneurs who generate financial projections during the start-up period, according to Tornikoski and Newbert (2007), are more likely to succeed in forming new businesses. Also, Read, et al (2009), discovered evidence that specialists are aware of the dangers connected with beginning a new business. They are more inclined to consider cost when making decisions in order to exert some control and reduce the risk of failure. The level of uncertainty and risk is rather simple to assess. Reliable return estimates, on the other hand, necessitate data such as market acceptance and sales volumes, which are notoriously difficult to estimate (Brettel et al., 2012). Commitments to the project budget and schedule help avoid over spending, therefore a successful strategy should improve investment efficiency. We propose the following possibilities based on these arguments:

H5: The process of entrepreneurial effectuation is linked to the generation of opportunities.

Opportunity Creation

According to the Intrapreneurship School of Thought “entrepreneurial talents can be valuable in complex organizations, ‘and’ organizations must adapt to survive” (Cunningham & Lischeron, 1991, p.47). The ability to create opportunities is less developed than the ability to recognize and recognize opportunities (Alvarez & Barney, 2007). Action and Reaction, Socially Created, and Individual Differences are examples of entrepreneurial behaviors that produce opportunity.

Action and Reaction

Opportunity creation, according to Aldrich and Kenworthy (1999), is all about action, creativity, exploration, and playfulness. The contingent interactions between the behaviours, beliefs, and goals of entrepreneurs and partners within a given set of means might be claimed to be the source of opportunity (Sarvasathy, 2001). Entrepreneurs, according to Baker and Nelson (2005), try to generate opportunities iteratively (action and reaction). Entrepreneurs act and watch how markets respond to their actions in an iterative process, according to (Alvarez & Barney, 2007).

Socially Constructed/Created

Weick (1979) coined the term socially constructed / created to describe the development of opportunities. Opportunities are created as a result of environmental and societal factors rather than by a single person's insights (Dimov, 2007). It is proposed that opportunities do not originate in a vacuum, but rather emerge as a result of co-evolution between entrepreneurs and social institutions (Sarason et al., 2006). Due to the diffusion of knowledge among diverse persons, opportunities can emerge through the intense interaction among concerned actors (Baker & Nelson, 2005). Entrepreneurs who consider both collective and self-interests, according to Ven et al (2007), are more likely to recognize, develop, and/or create chances. As a result, this study indicates that social factors play an essential part in the formation of opportunities.

Individual Differences

Idiosyncratic behaviour and subjective judgment are used to create opportunities (Baker & Nelson, 2005; Klein, 2008). Existing logics were not a constraint to the entrepreneurs who created opportunity (Shah & Tripsas, 2007). Entrepreneurs who generate opportunities are

operating in a state of utter ignorance (McMullen & Shepherd, 2006);, and their starting positions are unconscious (Aldrich and Kenworthy, 1999). Individual differences are reflected in these characteristics, making them a crucial factor of opportunity creation. As a result, socially formed action and reaction, as well as individual variances, are crucial aspects of opportunity generation. It is hypothesized that, based on the above arguments:

H6: The process of generating entrepreneurial opportunities has a favourable correlation with venture performance.

Venture Performance

The outcome construct that is used to determine the effects of opportunity creation in the Nigerian construction materials sector is venture performance. There is no single discipline, according to Stevenson, (1988), that provides the tool for managing an entrepreneurial enterprise. This framework tries to provide an all-encompassing model with corroborating data by focusing on opportunity creation rather than opportunity recognition from an entrepreneurial standpoint in a single model.

Methodology

The study's target audience is made up of all Nigerian entrepreneurs who sell building materials. The sample firms were chosen at random from a list compiled by the National Bureau of Statistics and the Nigerian Small and Medium Enterprises Development Agency (Survey Report (MSMEs) In Nigeria, 2010). Owner managers in the construction materials industry responded to the survey. This study considers a variety of measures each variable is based on prior literature works of Demography, Personality Traits, Management abilities, and Effectuation in order to assist investigation of elements that impact the option of applying the Causation process. A 7-point Likert scale was used to evaluate questions across all dimensions. SmartPLS version 3.0 was used to analyse the data. The decision to use SmartPLS was based on the skewness and kurtosis tests, as well as the fact that the data for this study is not regularly distributed. Furthermore, there are two formative constructions in this framework (Entrepreneur Education and Entrepreneur Special Education). These parameters, according to Hair et al (2010), make PLS- SEM ideal for analysing the relationship in the model.

These states account for about 21% (4900) of all registered SMEs and are primarily retailers of building goods. These many geopolitical zones were chosen to provide a balanced depiction of Nigeria's religious, cultural, ethnic, and social diversity. During the first wave, 1,950 questionnaires were sent out, with 230 responses. Following up, a total of 130 replies were obtained. All constructs in the research model were subjected to an independent t-test, and the results revealed no significant differences between early and late respondents. These findings show that non-response bias had no effect on the survey data (see Table 1 in Appendix for the results of non-response bias).

It's crucial to look for collinearity between the variables. To analyse the problem of considerable multicollinearity, the variance inflation factor (VIF) was used. The standard VIF criterion is 10. Table 1 show that multicollinearity is not a problem because all VIF values in the model are less than the approved threshold of 3.3, as indicated by the authors (Diamantopoulos & Sigauw, 2006). The VIFs of the constructs in the model ranged from 1.000 to 1.434, according to the multicollinearity diagnostic.

Table 1

Variance inflation factor

| Outer VIF Value | VIF |
|-----------------|-------|
| Effectuation | 1.000 |
| Entre Education | 1.000 |
| OPPCRAR | 1.002 |
| OPPCID | 1.000 |
| OPPCRSC | 1.002 |
| OPTM | 1.434 |
| PASS | 1.307 |
| PROAC | 1.209 |
| PERF | 1.000 |
| Ent SPC EDU | 1.000 |
| Magt. Skill | 1.000 |

Reliability and Validity

The dependability of all formative items of sales volume, sales growth, profitability, entrepreneur education, and entrepreneur special education was tested using the spearman correlation coefficient. Table 2 shows the results, which show that all correlation coefficients were over 0.7, indicating that all items are credible. Cronbach alpha for all constructs: proactivity, passion, optimism, management skill social network, management skill using other people's resources, effectuation is over the threshold of 0.7, according to the reliability test (see Table 2 in Appendix).

Table 2

Reliability of formative items

| | |
|-----------------------|---------|
| Sales Volume | 0.758** |
| Sales Growth | 0.899** |
| Profitability | 0.897** |
| Entre. Educ. 65 | 0.861** |
| Entre. Educ. 66 | 0.746** |
| Entre. Educ. 67 | 0.852** |
| Entre. Educ. 68 | 0.837** |
| Entre. Spec. Educ. 69 | 0.826** |
| Entre. Spec. Educ. 70 | 0.756** |
| Entre. Spec. Educ. 71 | 0.795** |
| Entre. Spec. Educ. 72 | 0.781** |

Findings

Given the nature of building materials, it's hardly surprising that almost 98 percent of respondents are men. The respondents are of various ethnicities, with 43.1 percent belonging to the Ibo race, 23.9 percent to the Yoruba, 20.6 percent to the Hausa/Fulani, and 12.5 percent to other ethnic groups. 28.9% of the respondents are over the age of 46, and 25.8% are between the ages of 44 and 49. Over 19 percent have a National Diploma, whereas 10.8% have a Doctorate.

Structural equation modeling (PLS-SEM) is a technique for exploratory investigation. The goal of this research is to look into the components that drive the entrepreneurial effectuation process, how it influences opportunity creation, and how the entrepreneurial creation process

affects venture performance. To examine the strength of the association, the study's hypotheses were tested using PLS-SEM. SmartPLS 3.0 was used to run PLS-SEM models. The sample mean, standard deviation, t-statistics values, and p. value were all calculated using the SmartPLS bootstrapping program. The bootstrapping method yielded 5000 samples from 360 cases in this investigation. The t-statistics and p. value are presented in Table 3, and the PLS-Variance output is shown in Figure 1. The entrepreneurial opportunity creation process is the exogenous variable in Model One, whereas venture performance is the endogenous variable. The exogenous variable in Model Two is the entrepreneurial effectuation process, while the endogenous variable is entrepreneurial opportunity generation. Entrepreneurial effectuation process is the endogenous variable in Model Three, while entrepreneur age, entrepreneur special education, entrepreneur education, personality qualities, and management abilities are exogenous variables.

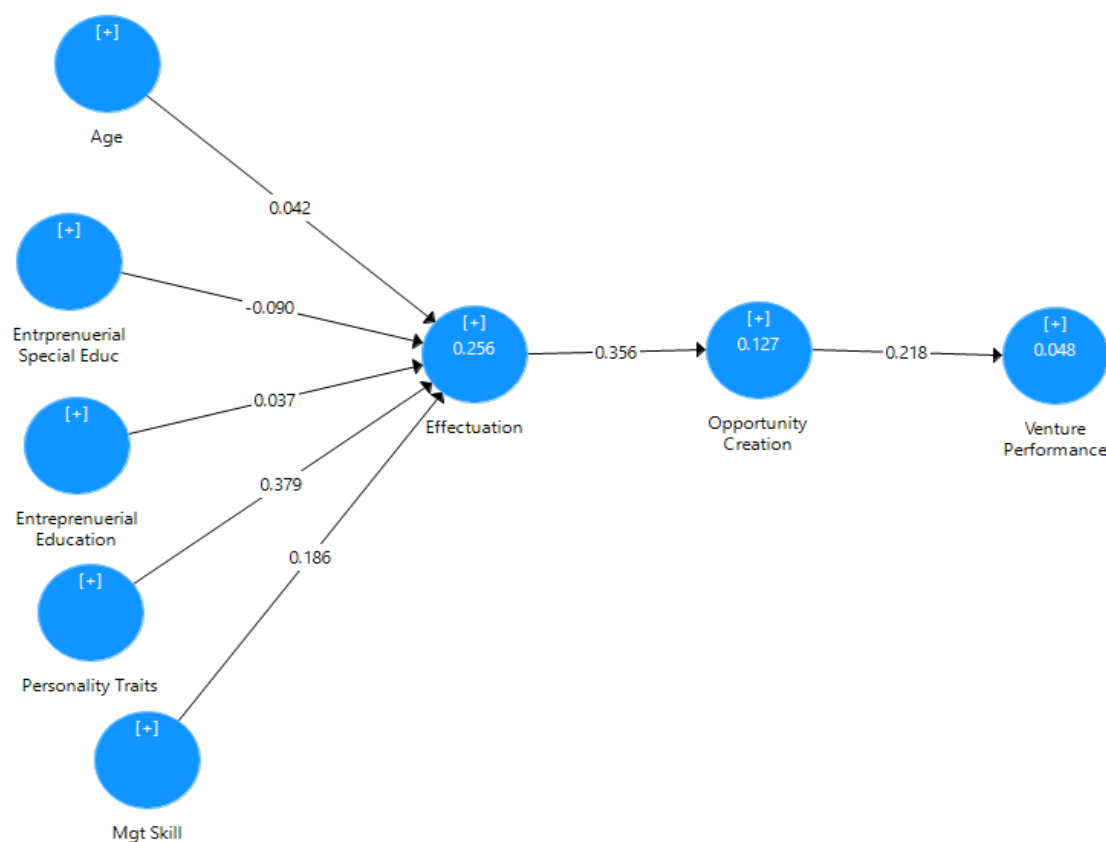


Figure 1. Research Framework

When the five antecedents of the entrepreneurial effectuation process, entrepreneurial age, entrepreneur special education, entrepreneur education, personality traits, and managerial abilities were combined together, a R Square of 0.256 increment in total variance was explained. Only entrepreneurial personality qualities and managerial abilities are important among these factors, as shown in the graph below. As a result, H3 and H4 have been approved, but H1, H2A, and H2B have not.

The results show that entrepreneurial personality traits have the highest coefficient (- 0.379) and are the most important variable for predicting the entrepreneurial effectuation process. The second most important antecedent of the entrepreneurial effectuation process was found to be entrepreneurial management skill (- 0.186). Entrepreneurial age (-0.042), entrepreneurial special education (= -0.090), and entrepreneurial education (= -0.037) are not

statistically significant predictors of effective process. In conclusion, only two factors (personality traits and management skills) play a significant role in predicting entrepreneurial success.

In the second model, the entrepreneurial effectuation process was regressed on the opportunity creation process, yielding a coefficient of (-0.356). When the entrepreneurial effectuation process was regressed on the opportunity creation process, there was a R Square of 0.127 increment in total variance. Because this number is substantial after boot strapping, H5 is recommended.

Entrepreneurial opportunity creation and venture performance, in the first model where opportunity creation was regressed on venture performance has a coefficient of (β - 0.218) and R square of 0.048. This value is significant after the boot strapping.

Table 3

t-statistics and p. value.

| Relationship | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (O/STDEV) | P Values |
|--|---------------------|-----------------|----------------------------|--------------------------|----------|
| Age->Effectuation | 0.042 | 0.040 | 0.044 | 0.959 | 0.338 |
| Effectuation- > Opp. Creation | 0.356 | 0.358 | 0.071 | 4.984 | 0.000 |
| Entrepreneurial Educ. - > Effectuation | 0.037 | 0.036 | 0.053 | 0.708 | 0.479 |
| Entrepreneurial Spec. Edu - > Effectuation | -0.090 | -0.089 | 0.050 | 1.787 | 0.074 |
| Mgt. Skills - > Effectuation | 0.186 | 0.180 | 0.074 | 2.527 | 0.012 |
| Opp. Creation -> Venture Performance | 0.218 | 0.220 | 0.059 | 3.686 | 0.000 |
| Personality Traits - > Effectuation | 0.379 | 0.384 | 0.064 | 5.947 | 0.000 |

*Significant at 0.05 level of significant

Discussion

Entrepreneurial effectuation process antecedents: This study developed a model by combining 'great person' and psychological theories into a single construct of entrepreneurial personality traits. In addition, as antecedents of the entrepreneurial causation process, combining management and leadership theories into a single construct entrepreneurial management skill. The majority of entrepreneurial opportunity studies have focused on the factors that influence the recognition of opportunities. By looking into the antecedents of entrepreneurial effectuation processes, this study adds to the existing body of knowledge. The findings of this study confirmed that entrepreneur characteristics, such as personality traits and management skills, are important in the entrepreneurial process.

In addition, the study looked into the link between the entrepreneurial effectuation process and the creation of opportunities. According to the findings, the entrepreneurial effectuation process is a strong predictor of opportunity generation. Harms and Schiele (2012) are the only researchers to look at the antecedents of causality and effectuation in the creation of international new ventures. The current study differed from Harms and Schiele's research in

that it looked for antecedents of effectuation in small businesses (Retail business). Why are effectuation antecedences important? The neoclassical theory (Fisher, 2012; Chandler et al., 2011) is the most common approach to exploitation of entrepreneurial opportunity. This method is consistent with the causality process (Sarasvathy, 2001). Numerous academics have recently questioned the validity of the causation approach (Read et al., 2009). Scholars have proposed a model of entrepreneurship as a means-driven, risk-averse, and circular process involving effectuation and bricolage as a viable alternative (Sarasvathy, 2001; Baker & Nelson, 2005). As (Sarasvathy, 2001) points out, the causation approach 'is useful in a static, linear, and independent environment' (p. 251). In a 'dynamic, nonlinear, and ecological environment,' the causal approach may not be useful (p. 251). Exploring factors that will predict the process is a welcome academic exercise when considering the existence of static environments in the business world. Identifying elements that influence the effectuation process can have an impact on entrepreneur training, as Baron, (2007) argues. Entrepreneurs can be trained to recognize opportunity through suitable training. Entrepreneurial personality traits have a positive relationship with the effectuation process, according to the findings of this study. The effectiveness of an entrepreneur's management skills is positively related to the process of effectuation. As a result, training programs designed to teach entrepreneurs about the 'entrepreneurial process of effectuation' must take into account the personality traits and management skills of the entrepreneurs. These factors have a greater impact on entrepreneurs' ability to engage in the execution process than other factors.

Conclusion

The study's initial contribution was to investigate the components that influence the process of opportunity exploitation effectuation. We investigate the effects of entrepreneur age, entrepreneur special education, entrepreneur education, personality traits, and managerial abilities on the effectuation process both theoretically and practically. Second, Sarasvathy's (2001) effectuation was extended to the retail trade. Third, we created a theoretical framework that combines numerous entrepreneurship theories and confirmed it using a quantitative analysis. The major findings of this study suggest that entrepreneur's personality qualities and managerial skills have a favourable impact on the entrepreneurial process of effectuation. The second most important antecedents of entrepreneurial effectuation process was found to be entrepreneurial management skills. It is also found that entrepreneurial effectuation process has a positive impact on entrepreneurial opportunity creation. Finally entrepreneurial creation process has an impact on venture performance.

One of the study's weaknesses is that the results are limited to Nigeria. Two, the sample exclusively includes retail businesses in the construction materials industry. Three, because this is a cross-sectional study, the causal effect of this study cannot be experimentally validated. Future research could be in different industries, and a longitudinal study with an in-depth interview could be investigated. Other characteristics not considered in this study should be explored in future research.

Appendix

Table 1

t-test for non-response bias.

| | | | t-test for Equality of Means | | | |
|---------|---------|---------------|------------------------------|---------|---------|-----|
| | | | T | Df | Sig. | (2- |
| | | | | | tailed) | |
| PROAC1 | Equal | variances | .266 | 358 | .791 | |
| | assumed | | | | | |
| PROAC2 | Equal | variances not | .272 | 286.575 | .786 | |
| | assumed | | | | | |
| PROAC3 | Equal | variances | .265 | 358 | .791 | |
| | assumed | | | | | |
| PROAC4 | Equal | variances not | .271 | 285.937 | .786 | |
| | assumed | | | | | |
| PROAC5 | Equal | variances | .252 | 358 | .801 | |
| | assumed | | | | | |
| PROAC6 | Equal | variances not | .258 | 287.802 | .797 | |
| | assumed | | | | | |
| PROAC7 | Equal | variances | 1.233 | 358 | .218 | |
| | assumed | | | | | |
| PROAC8 | Equal | variances not | 1.243 | 274.224 | .215 | |
| | assumed | | | | | |
| PROAC9 | Equal | variances | .036 | 358 | .971 | |
| | assumed | | | | | |
| PROAC10 | Equal | variances not | .037 | 283.304 | .971 | |
| | assumed | | | | | |
| PROAC11 | Equal | variances | -.680 | 358 | .497 | |
| | assumed | | | | | |
| PROAC12 | Equal | variances not | -.712 | 304.696 | .477 | |
| | assumed | | | | | |
| PROAC13 | Equal | variances | -.623 | 358 | .534 | |
| | assumed | | | | | |
| PROAC14 | Equal | variances not | -.630 | 276.063 | .529 | |
| | assumed | | | | | |
| PROAC15 | Equal | variances | -.719 | 358 | .472 | |
| | assumed | | | | | |
| PROAC16 | Equal | variances not | -.751 | 303.148 | .453 | |
| | assumed | | | | | |
| PROAC17 | Equal | variances | .005 | 358 | .996 | |
| | assumed | | | | | |
| PROAC18 | Equal | variances not | .005 | 277.202 | .996 | |
| | assumed | | | | | |
| PROAC19 | Equal | variances | -.095 | 358 | .925 | |
| | assumed | | | | | |
| PROAC20 | Equal | variances not | -.096 | 280.910 | .924 | |
| | assumed | | | | | |
| OPTM11 | Equal | variances | .010 | 358 | .992 | |

| | | t-test for Equality of Means | | | |
|------------------------|-------------------------------------|------------------------------|---------|-----------------|--|
| | | T | Df | Sig. (2-tailed) | |
| OPTM12 | assumed Equal variances not assumed | .011 | 293.641 | .991 | |
| | assumed Equal variances not assumed | -.005 | 358 | .996 | |
| OPTM13 | assumed Equal variances not assumed | -.005 | 284.791 | .996 | |
| | assumed Equal variances not assumed | -.445 | 358 | .656 | |
| OPTM14 | assumed Equal variances not assumed | -.454 | 284.219 | .650 | |
| | assumed Equal variances not assumed | -.828 | 358 | .408 | |
| OPTM15 | assumed Equal variances not assumed | -.850 | 289.615 | .396 | |
| | assumed Equal variances not assumed | -.214 | 358 | .830 | |
| OPTM16 | assumed Equal variances not assumed | -.223 | 301.197 | .824 | |
| | assumed Equal variances not assumed | -.610 | 358 | .542 | |
| MAGTSNetwork17 | assumed Equal variances not assumed | -.632 | 295.863 | .528 | |
| | assumed Equal variances not assumed | -.727 | 358 | .468 | |
| MAGTSNetwork18 | assumed Equal variances not assumed | -.735 | 276.488 | .463 | |
| | assumed Equal variances not assumed | -.656 | 358 | .512 | |
| MAGTSNetwork19 | assumed Equal variances not assumed | -.656 | 267.437 | .513 | |
| | assumed Equal variances not assumed | .212 | 358 | .832 | |
| MAGTSNetwork20 | assumed Equal variances not assumed | .214 | 276.210 | .830 | |
| | assumed Equal variances not assumed | -.159 | 358 | .874 | |
| MAGT Other Peoples' 21 | assumed Equal variances not assumed | -.160 | 275.467 | .873 | |
| | assumed Equal variances not assumed | -1.125 | 358 | .261 | |
| MAGTOther Peoples' | assumed Equal variances not assumed | -1.187 | 311.596 | .236 | |
| | assumed Equal variances not assumed | -1.442 | 358 | .150 | |

| | | | t-test for Equality of Means | | | |
|-------------|-------|---------------------|------------------------------|---------|---------|-----|
| | | | T | Df | Sig. | (2- |
| | | | | | tailed) | |
| 22 | | assumed | | | | |
| | | Equal variances not | -1.524 | 313.126 | .129 | |
| | | assumed | | | | |
| | | Equal variances | -.554 | 358 | .580 | |
| MAGT | Other | assumed | | | | |
| Peoples' 23 | | Equal variances not | -.573 | 295.571 | .567 | |
| | | assumed | | | | |
| | | Equal variances | -.442 | 358 | .659 | |
| MAGT | Other | assumed | | | | |
| peoples'24 | | Equal variances not | -.452 | 286.068 | .652 | |
| | | assumed | | | | |
| | | Equal variances | 1.506 | 358 | .133 | |
| EFFEXP32 | | assumed | | | | |
| | | Equal variances not | 1.569 | 301.711 | .118 | |
| | | assumed | | | | |
| | | Equal variances | 2.804 | 358 | .005 | |
| EFFEXP33 | | assumed | | | | |
| | | Equal variances not | 3.006 | 324.349 | .003 | |
| | | assumed | | | | |
| | | Equal variances | 1.047 | 358 | .296 | |
| EFFEXP34 | | assumed | | | | |
| | | Equal variances not | 1.102 | 310.092 | .271 | |
| | | assumed | | | | |
| | | Equal variances | 1.842 | 358 | .066 | |
| EFFEXP35 | | assumed | | | | |
| | | Equal variances not | 1.966 | 321.022 | .050 | |
| | | assumed | | | | |
| | | Equal variances | .493 | 358 | .623 | |
| EFFAL36 | | assumed | | | | |
| | | Equal variances not | .519 | 310.647 | .604 | |
| | | assumed | | | | |
| | | Equal variances | -.306 | 358 | .760 | |
| EFFAL37 | | assumed | | | | |
| | | Equal variances not | -.319 | 302.280 | .750 | |
| | | assumed | | | | |
| | | Equal variances | -1.113 | 358 | .266 | |
| EFFAL38 | | assumed | | | | |
| | | Equal variances not | -1.158 | 300.450 | .248 | |
| | | assumed | | | | |
| | | Equal variances | .372 | 358 | .710 | |
| EFFLEX39 | | assumed | | | | |
| | | Equal variances not | .374 | 272.243 | .709 | |
| | | assumed | | | | |
| | | Equal variances | -.574 | 358 | .566 | |
| EFFLEX40 | | assumed | | | | |

| | | t-test for Equality of Means | | |
|----------|-------------------------------------|------------------------------|---------|-----------------|
| | | T | Df | Sig. (2-tailed) |
| EFFLEX41 | assumed Equal variances not assumed | -.582 | 279.466 | .561 |
| | assumed Equal variances assumed | .033 | 358 | .974 |
| | assumed Equal variances not assumed | .033 | 277.301 | .973 |
| EFFLEX42 | assumed Equal variances not assumed | .020 | 358 | .984 |
| | assumed Equal variances not assumed | .020 | 285.445 | .984 |
| | assumed Equal variances not assumed | .097 | 272.478 | .923 |
| OPCRAR47 | assumed Equal variances not assumed | -.842 | 358 | .400 |
| | assumed Equal variances not assumed | -.883 | 306.462 | .378 |
| | assumed Equal variances not assumed | .435 | 358 | .664 |
| OPCRAR48 | assumed Equal variances not assumed | .434 | 265.805 | .664 |
| | assumed Equal variances not assumed | .196 | 358 | .845 |
| | assumed Equal variances not assumed | .197 | 269.192 | .844 |
| OPCRAR49 | assumed Equal variances not assumed | .384 | 358 | .702 |
| | assumed Equal variances not assumed | .384 | 268.252 | .701 |
| | assumed Equal variances not assumed | -2.605 | 358 | .010 |
| OPCRAR50 | assumed Equal variances not assumed | -2.866 | 342.035 | .004 |
| | assumed Equal variances not assumed | -10.404 | 358 | .000 |
| | assumed Equal variances not assumed | -11.930 | 357.519 | .000 |
| OPCRSC51 | assumed Equal variances not assumed | -9.220 | 358 | .000 |
| | assumed Equal variances not assumed | -10.504 | 356.443 | .000 |
| | assumed Equal variances not assumed | -9.168 | 358 | .000 |
| OPCRSC52 | assumed Equal variances not assumed | -9.797 | 321.836 | .000 |
| | assumed Equal variances not assumed | | | |
| | assumed Equal variances not assumed | | | |
| OPCRSC53 | assumed Equal variances not assumed | | | |
| | assumed Equal variances not assumed | | | |
| | assumed Equal variances not assumed | | | |
| OPCRSC54 | assumed Equal variances not assumed | | | |
| | assumed Equal variances not assumed | | | |
| | assumed Equal variances not assumed | | | |

| | | t-test for Equality of Means | | | |
|---------------------|-------------------------------------|------------------------------|---------|-----------------|--|
| | | T | Df | Sig. (2-tailed) | |
| OPCRSC55 | assumed Equal variances | -8.658 | 358 | .000 | |
| | assumed Equal variances not assumed | -10.037 | 357.939 | .000 | |
| OPCRID56 | assumed Equal variances | .403 | 358 | .688 | |
| | assumed Equal variances not assumed | .410 | 283.346 | .682 | |
| OPCRID57 | assumed Equal variances | -.508 | 358 | .612 | |
| | assumed Equal variances not assumed | -.513 | 275.929 | .608 | |
| OPCRID58 | assumed Equal variances | -.567 | 358 | .571 | |
| | assumed Equal variances not assumed | -.577 | 282.856 | .564 | |
| OPCRID59 | assumed Equal variances | .053 | 358 | .958 | |
| | assumed Equal variances not assumed | .054 | 281.359 | .957 | |
| Entr. Educ. 65 | assumed Equal variances | -.403 | 358 | .687 | |
| | assumed Equal variances not assumed | -.405 | 270.984 | .686 | |
| Entr. Edu. 66 | assumed Equal variances | 1.432 | 358 | .153 | |
| | assumed Equal variances not assumed | 1.441 | 273.053 | .151 | |
| Entr. Edu. 67 | assumed Equal variances | 1.345 | 358 | .180 | |
| | assumed Equal variances not assumed | 1.313 | 248.960 | .191 | |
| Entr. Educ. 68 | assumed Equal variances | -1.648 | 358 | .100 | |
| | assumed Equal variances not assumed | -1.605 | 247.182 | .110 | |
| Entr. Spec. Educ 69 | assumed Equal variances | -1.312 | 358 | .190 | |
| | assumed Equal variances not assumed | -1.272 | 244.176 | .205 | |
| Entr. Spec. Educ 70 | assumed Equal variances | -1.711 | 358 | .088 | |
| | assumed Equal variances not assumed | -1.668 | 247.994 | .097 | |

| | | t-test for Equality of Means | | |
|---------------------|-------------------------------------|------------------------------|---------|-----------------|
| | | T | Df | Sig. (2-tailed) |
| Entr. Spec. Educ 71 | assumed Equal variances | -.591 | 358 | .555 |
| | assumed Equal variances not assumed | -.596 | 274.712 | .552 |
| Sales Volume | assumed Equal variances | -1.921 | 358 | .056 |
| | assumed Equal variances not assumed | -1.931 | 272.263 | .055 |
| Sales Growth | assumed Equal variances | -.915 | 358 | .361 |
| | assumed Equal variances not assumed | -.981 | 323.999 | .327 |
| Profitability | assumed Equal variances | -1.202 | 358 | .230 |
| | assumed Equal variances not assumed | -1.220 | 280.163 | .223 |

Table 2
Cronbach alpha

| Construct | Item | Mean | Std Dev. | Loadings | T-Statistics |
|--|----------|--------|----------|----------|--------------|
| Proactivity CR = 0.8869 | PROAC002 | 0.1816 | 0.0168 | 0.6574 | 10.7427 |
| | PROAC003 | 0.2307 | 0.0164 | 0.7822 | 14.1742 |
| | PROAC004 | 0.2606 | 0.0139 | 0.8313 | 18.7963 |
| | PROAC005 | 0.2766 | 0.0183 | 0.7891 | 14.9959 |
| | PROAC006 | 0.3184 | 0.0228 | 0.839 | 13.8547 |
| Passion CR = 0.8282 | PASS007 | 0.232 | 0.0369 | 0.658 | 6.4233 |
| | PASS008 | 0.4056 | 0.03 | 0.8358 | 13.4087 |
| | PASS009 | 0.3878 | 0.0373 | 0.7607 | 10.3328 |
| Optimism CR = 0.8687 | PASS010 | 0.3052 | 0.0281 | 0.6959 | 10.9727 |
| | OPTM011 | 0.2802 | 0.0229 | 0.7514 | 12.1011 |
| | OPTM012 | 0.2217 | 0.018 | 0.6938 | 12.2494 |
| | OPTM013 | 0.199 | 0.0172 | 0.6954 | 11.5278 |
| | OPTM014 | 0.1917 | 0.0162 | 0.6973 | 11.8578 |
| | OPTM015 | 0.2456 | 0.0144 | 0.756 | 17.1449 |
| Social Network CR = 0.9206 | OPTM016 | 0.2407 | 0.014 | 0.7498 | 17.1614 |
| | SNFS017 | 0.2691 | 0.0179 | 0.8864 | 15.0227 |
| | SNF018 | 0.3139 | 0.0161 | 0.8749 | 19.4584 |
| | SNF019 | 0.3121 | 0.0174 | 0.8835 | 17.9948 |
| Using other peoples resources CR = 0.9179 | SNF020 | 0.2635 | 0.0229 | 0.8022 | 11.4769 |
| | OPR021 | 0.39 | 0.0126 | 0.8872 | 30.7904 |
| | OPR022 | 0.3952 | 0.0131 | 0.8911 | 30.183 |
| Causation | OPR023 | 0.3424 | 0.011 | 0.8856 | 31.0937 |
| | CAUS025 | 0.2051 | 0.0336 | 0.7984 | 5.9796 |

| | | | | | |
|--------------------------------------|-----------|--------|--------|--------|---------|
| CR= 0.9149 | CAUS026 | 0.1524 | 0.0317 | 0.6807 | 4.8613 |
| | CAUS027 | 0.2151 | 0.0281 | 0.7898 | 7.5508 |
| | CAUS028 | 0.1386 | 0.0374 | 0.7924 | 3.9786 |
| | CAUS029 | 0.1896 | 0.0303 | 0.7583 | 6.1522 |
| | CAUS030 | 0.1741 | 0.027 | 0.826 | 6.5552 |
| | CAUS031 | 0.2093 | 0.0318 | 0.7969 | 6.3801 |
| | EFFEXP032 | 0.3278 | 0.1402 | 0.9418 | 2.8977 |
| Experimentation CR = 0.9157 | EFFEXP033 | 0.1853 | 0.279 | 0.6731 | 0.3062 |
| | EFFEXP034 | 0.2597 | 0.1125 | 0.8384 | 2.1997 |
| Affordable loss CR = 0.8634 | EFFEXP035 | 0.312 | 0.143 | 0.9453 | 2.6069 |
| | EFFAL036 | 0.4232 | 0.0351 | 0.8341 | 12.089 |
| | EFFAL037 | 0.3669 | 0.0282 | 0.7934 | 12.9884 |
| | EFFAL038 | 0.4252 | 0.0309 | 0.8425 | 13.6547 |
| | EFFLEX039 | 0.2421 | 0.1709 | 0.7228 | 1.5594 |
| Flexibility CR = 0.8386 | EFFLEX040 | 0.3853 | 0.16 | 0.865 | 2.6825 |
| | EFFLEX041 | 0.2564 | 0.2945 | 0.6794 | 0.864 |
| | EFFLEX042 | 0.3289 | 0.2387 | 0.7322 | 1.506 |
| Action and Reaction CR = 0.8716 | AR048 | 0.3673 | 0.2357 | 0.9067 | 1.8257 |
| | AR049 | 0.4097 | 0.2353 | 0.9153 | 2.236 |
| | AR050 | 0.2727 | 0.3717 | 0.6586 | 0.5239 |
| | SC052 | 0.3018 | 0.2174 | 0.863 | 1.8607 |
| Socially Created CR = 0.8869 | SC053 | 0.2611 | 0.2233 | 0.7694 | 0.8072 |
| | SC054 | 0.3083 | 0.2256 | 0.8607 | 1.954 |
| | SC055 | 0.2447 | 0.2293 | 0.7579 | 0.764 |
| Individual Differences CR = 0.872 | ID056 | 0.2969 | 0.0636 | 0.7813 | 4.7215 |
| | ID057 | 0.2246 | 0.0692 | 0.7359 | 3.3303 |
| | ID058 | 0.2877 | 0.0621 | 0.8209 | 4.7619 |
| | ID059 | 0.4358 | 0.0821 | 0.8348 | 5.1537 |

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