The Relationship of Individual Creativity with Entrepreneurial Intention via Individual Entrepreneurial Orientation (IEO)

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Abstract: The Entrepreneurial Intention model is the most prominent research area in understanding entrepreneurship determinants and the prediction of entrepreneurial activities. While entrepreneurship is a manifestation of innovation which is driven from creativity, there is less attention focused in the literature on the relationship of individual creativity and innovativeness that may lead to individual entrepreneurship inclination. This paper addressed this issue and proposed future empirical investigation on the role of creativity towards entrepreneurial intention through an individual entrepreneurial orientation (IEO) perspective.

Keywords: Entrepreneurship, individual entrepreneurial orientation, entrepreneurial intention, risk taking, innovativeness, pro-activeness, individual creativity.

Paper type: Conceptual paper

1. Introduction

Innovation and entrepreneurship have been the critical discussion in the development of modern economy. Schumpeter (1911), one of the major modern economists, emphasized the important impact of entrepreneurs on the economy and postulated that the dynamism of disequilibrium driven by innovating entrepreneurs in the economy is a healthy economy, instead of equilibrium and optimization from underlying economic theories and practices. Schumpeter suggested the idea of capitalism economy as an evolutionary process, in which it is driven mainly by the creation of new consumer goods, new method of production and means of transportation and new market or new type of organizations created by business enterprises. These innovation processes of change in new products, process or system lead to a new

market that is internally revolutionizing the economic structure from within, in creating a new one by destroying the old one which is known as "creative destruction" (Schumpeter, 1942).

Meanwhile, Drucker (1985) explained the nature of innovation as both conceptual and perceptual to which innovators seek and seize opportunities and try to satisfy the customers or users' expectation and needs using their innovation capability. Innovation becomes a tool for entrepreneurs to manipulate change for business advantage. With discipline, it can possibly be learned and practiced, which allows entrepreneurs to seek opportunities for innovation success (Drucker, 1985). Drucker also suggested that the topic of innovation and entrepreneurship is made up as a set of principles, practice and discipline of its own. Both innovation and entrepreneurship are a necessity in sustaining the economy, society, industry and business to self-renewal, allowing change with purpose and one which is manageable without going through social revolution, economic catastrophe or bloodshed (Drucker, 1985).

Say (1803), a French economist, defined an entrepreneur as individual who takes immediate responsibilities and risks to acquire and coordinate factors of production service or economic resources (land, labor, capital) to mobilize them from lower to higher productivity economic activities. Entrepreneur is the main economic resource director who exposes him/herself to risk due to the uncertain nature of competition and changes in the market and in return, gains the potential of a large income to generate his or her own wealth. Entrepreneurs face uncertainty and on unfixed wages and play a central active role in motivating the economic system (Cantillon, 1734). Thus, innovation is necessary for entrepreneurship (Drucker, 1985) in which it involves the commercialization of ideas or inventions produced and manifested from creativity efforts (Amebile, 1996). Entrepreneurship as a behavior is possible to be taught and learned with concepts and theories as its basic fundamental (Drucker, 1985).

The study of entrepreneurship has been focused on three major interests, namely entrepreneurial determination, entrepreneurial process and entrepreneurial outcome. The interest of this study focused on the area of entrepreneurial determination which looked into the framework entrepreneurship as planned behavior. Entrepreneurial intention is assumed to predict behavior and the basis point to understand entrepreneurship as the initial process of discovering, creating and exploiting opportunities (Gartner *et al*., 1994). Existing literature posited that Shappero's Entrepreneurial Event Model (EEM) and Azjen's Theory of Planned Behavior (TPB) are the most extensively and useful researched models used in entrepreneurial intention research (Shook et al., 2003; Solesvik *et al*., 2012). However, there has been a growing concern about the inconclusive empirical findings of the relationship between entrepreneurial intention and its determinants (Krueger, 2009; Shook *et al*., 2003).

In the case of propensity to act construct, although being the main determinant of Shapero's EEM entrepreneurial intention, an empirical test on the study of student entrepreneurship highlighted that the propensity to act was found to be a weak predictor of entrepreneurial intention (Schlaegel and Koenig, 2013). While individual creativity is given less attention by entrepreneurship research, it has a strong positive relationship with entrepreneurial intention (Zampetakis *et al*., 2011). For instance, psychological characteristics like self- confidence, risk-taking and innovativeness constructs are suggested to be capable of enhancing the understanding of entrepreneurial intention and could be mediated by existing model determinants (Mokhtar and Zainuddin, 2011). Therefore, further investigation on the consistency of distal and proximal construct determinants of entrepreneurial intention may enhance the theoretical clarity of the existing models. Thus, this study intends to discuss the possible view on a better construct relationship leading to more consistency that underlies the formation of EI from a new perspective.

2. Literature Review

This section discusses the theoretical foundations for the conceptual paper. Drawing on literature on the theory of planned behavior (TPB), entrepreneurial event model (EEM), individual entrepreneurial orientation (IEO) and individual creativity, this study seeks to establish propositions for a new relationships framework.

A. Entrepreneurship as planned behavior

Entrepreneurship as planned behavior has made it possible for researchers to proceed on studying the determinant of entrepreneurship based on the intention model framework (Bird, 1988; Katz and Gartner, 1988). Studies on intention strongly suggested that actual target behavior can be best predicted from intention as a good predictor in various different contexts (Armitage and Cornner, 2001; Sutton, 1998). Intention and its antecedent are perceptions which are made possible to be learned and expanded in variations across situation and individual (Kruger and Brazeal, 1994). Studies in entrepreneurial intention research showed two dominant models as the most prominent, namely Ajzen's Theory of Planned Behavior (TPB) and Shapero's Entrepreneurial Event Model (EEM) (1975, 1982), which will be briefly discussed. Previous literature showed an existing empirical study on the determinant of entrepreneurial intention focusing on TPB and EEM (Kruger, 2009).

Theory of Planned Behavior (TPB)

Ajzen's Theory of Planned Behavior (TPB) model proposes three main antecedents to predict intentions. The first is "attitude towards behavior" which refers to perception and evaluation on one's own performance on acting the intended behavior, the second is "subjective norm" referring to the perceived influence from external parties (family, friends and peers) on individuals on intended behavior, and the third is "perceived behavioral control" which refers to personal perception on the feasibility (easy or hard) evaluation on performing the intended behavior (Ajzen and Fishbein, 1980; Ajzen, 1988, 1991). The TPB model is actually an extension of Ajzen and Fiesbein's Theory of reason action, while TRA postulated the determinants for intention which are "attitude toward behavior" and "subjective norm" to which intention is mediated between the two antecedents with the actual behavior (the dependent variable). The inclusion of "perceived behavior control" leads to the formation of Theory of Planned Behavior, which is suggested as a better model for planned behavior that is applied to the study of entrepreneurship (Krueger and Casrud, 1993).

Entrepreneurial Event Model (EEM)

Another alternative intention model that specifically focuses on explaining entrepreneurship is Shapero's Entrepreneurial Event Model (EEM). EEM model is based on the concept that displacement, either negative or positive, will disrupt the inertia of human behavior (Krueger and Brazeal, 1994; Shapero and Sokol, 1982; Shapero, 1975). A negative displacement may be in a form of losing employment due to political unrest (war) or through positive displacement from having wealth inheritance (Krueger and Brazeal, 1994). The displacement may influence the individual to alter his/her behavior and provide incentive to seek the best opportunity among available alternatives (Katz, 1992). Behavior altering depends on three main key antecedents which predict entrepreneurial intention, the first being " perceived feasibility" which means the perception of individual's own capability to perform well on the behavior; second is "perceived desirability" which refers to the perception that the act is attractive enough to the

individual to proceed, and the third is "propensity to act" which refers to the personal disposition to act on one's decision that reflects volitional elements of intentions (Krueger and Brazeal, 1994; Shapero and Sokol, 1982).

Kruger *et al*., (2000) conducted a comparative study between the two dominant models, Ajzen's TPB and Shapero's EEM and suggested that statistically, Shapero'S EEM indicated a better assessment to entrepreneurial intention. The comparative study showed that Shapero's EEM produced a marginally higher model fitness with every main antecedent being supported statistically ($p<.05$). For this reason, this study prefers to utilize more on Shapero's EEM framework as the basis for the following discussion on entrepreneurial intention.

B. Entrepreneurial intention

Entrepreneurial intention is defined as the individual intention, awareness and determination to initiate a new venture or business (Bird, 1988; Hmieleski and Corbett, 2006; Krueger, 2009). According to EEM, entrepreneurial intention is predicted by perceived feasibility, perceived desirability and propensity to act. On the other hand, perceived desirability is defined by the degree of a person's perceived entrepreneurial behavior as preferable and attractive (Shapero and Sokol, 1982; Krueger and Brazeal, 1994; Schlaegel and Koenig, 2014). Studies showed that the individual with a value system and family that places a high value on innovation and entrepreneurship would perceive entrepreneurship as desirable.

Apart from that, perceived feasibility is defined by the degree of individual perception of his/her own capability and confidence to initiate entrepreneurship and to make entrepreneurship feasible (Shapero and Sokol, 1982, Krueger and Brazeal, 1994, Schlaegel and Koenig, 2014). Having the availability to access financial capital and support in starting a business from their own saving or through family and community makes it feasible for individuals to pursue entrepreneurial ventures. The feasibility of attending entrepreneurship interacts with the desirability to be involved in entrepreneurship, in which if one perceives entrepreneurship as unfeasible, he or she may conclude that entrepreneurship is undesirable to pursue (Shapero and Sokol, 1982). On the other hand, individual propensity to act is defined by the individual's disposition to act on one's decision (Shapero and Sokol, 1982; Kruger and Brazeal, 1994). It reflects the individual perception to control and prefers in controlling a situation by taking appropriate actions (Kruger *et al.*, 2000). Individuals with higher locus of control tend to manifest the act to control the events in their lives (Shapero, 1975).

Exploratory studies of intention suggested that the antecedents of entrepreneurial intention were parallel with Shapero's EEM framework and offered refinements (Kruger et al, 2000). For instance, Davidson (1991) suggested for composite dependent variables to capture the aspect of entrepreneurship such as innovativeness and entrepreneurial motivation, and proposed to add entrepreneurial conviction as a determinant of entrepreneurial intention (Davidson, 1995). Entrepreneurial conviction reflects "self-efficacy" (Krueger and Brazael, 1994; Krueger and Carsrud, 1993) as another variety of "attitude towards behavior" of the Azjen-Fishbein attitude model, (Ajzen and Fishbein, 1980) which is also the central concept in innovation adoption (Rogers, 1983). Self-efficacy is defined by individual judgement expectation on his/her own capability to act on a desired behavior (De Vries *et al*., 1988).

Innovation adoption reflecting innovativeness is one of the dimensions of entrepreneurial orientation (Miller, 1983). Distinguishing entrepreneurial orientation as a different construct from entrepreneurial intention (Thompson, 2009) leads to the objective of this article to further explore the relationship between entrepreneurial orientations at the individual level to predict entrepreneurial intention.

C. Individual Entrepreneurial Orientation (IEO)

Entrepreneurial orientation is defined as the process of making a strategy for an organization on entrepreneurial decisions and actions (Rauch *et al*., 2009). Miller (1983) introduced the concept of entrepreneurial orientation, describing an entrepreneurial firm as an entity with the characteristics of being innovative in product and market, willingness to pursue risky business and pioneering new innovations. Thus, the concept of entrepreneurial orientation comprises "innovativeness", "risk taking" and "proactiveness" to describe a firm with entrepreneurial criteria. Entrepreneurial firm performance was measured using the scale measuring technique which included innovative, risk taking and proactivenes in terms of firm entrepreneurial strategic posture (Covin and Slevin, 1989).

Extending the concept, Lumpkin and Dess (1996) contributed two constructs namely, autonomy and competitive aggressiveness to which autonomy refers to the independency in executing the idea while competitive aggressiveness refers to the propensity to intensely challenge and outperform existing rivals in the market. Being aggressive is critical for new entrance firms to increase the chances or their success (Porter, 1985). Lumpkin and Dess (1996) proposed that entrepreneurial orientation is best to describe the concept involving process, practices and decision making towards a new entrance with the intention to form a new venture by a firm. Five dimensions of entrepreneurial orientation of a firm proposed included being innovative, willing to take risk, being proactive to opportunities, having the propensity to act autonomously and being aggressive to competitors (Lumpkin and Dess, 1996).

Based on the previous studies of entrepreneurial orientation of Miller (1983) and Lumpkin and Dess (1996), the five dimensions are at the organizational level. Studies suggested that entrepreneurial orientation at the organizational level may include the five dimensions collectively (Lumpkinn et al., 2009; Runyan *et al*., 2008) or separately, depending on context of research (Lumpkin and Dess, 1996; Wang, 2008). However, this study intends to focus at the individual level of entrepreneurial orientation to which we are looking at the relationship with entrepreneurial intention. Bolton and Lane (2012) introduced the measurement of individual entrepreneurial orientation based on Lumpkin and Dess' five dimensions for firm entrepreneurial orientation.

Other than that, Bolton and Lane (2012) developed and tested the measurement for individual entrepreneurial orientation, and concluded that innovativeness, risk taking and proactiveness are the factors statistically correlated with entrepreneurial intention. The idea of entrepreneurial orientation is possible to be measured at the individual level is made on the realization that small owners of an entrepreneurial business could involve one single person alone as an organization (Bolton and Lane, 2012). The concept adapted from Lumpkin, Cogsiler, and Schneider (2009) validated the measurement for organizational entrepreneurial orientation to design an individual measurement, resulting in three components of entrepreneurial orientation that are highly significant. The three main components of individual entrepreneurial orientation are proactiveness, risk taking and innovativeness which will be further discussed.

Proactiveness

Proactiveness refers to the act of anticipation of future issues, needs or changes (Lumpkin and Dess, 1996). Proactiveness emphasizes on taking initiatives. At the organization level, proactiveness reflects on a firm that innovates in a fast manner and positions to be the first to introduce new products and services (Lumpkin and Dess, 1996). Colvin and Slevin (1989) posited that their model of entrepreneurial strategic posture consisted of innovativeness, productiveness and risk taking in which proactiveness referred to an aggressive competitive orientation. Lumpkin and Dess (1996), however, suggested that competitive aggressiveness is different from proactiveness. It refers to how firm responds to trends and demand in the existing market relative to other competitors, along with the competition for demand by being adoptive

with challengers. On the other hand, proactiveness is about meeting the demand of potential new market through initiating effort in influencing the environment to their advantage (Lumpkin and Dess, 1996).

According to Venkatraman (1989), proactiveness is a process involving anticipation and act on future needs by seeking new opportunities which may be related or different from an existing operation, bring forth new products and brands ahead of competitors and strategically disband business operations at the peak of maturity or at a declining stage in their life cycle. At the individual level, Bolton and Lane (2012) suggested that proactiveness is defined as "*an opportunity-seeking, forward-looking perspective characterized by new products and services ahead of the competition and acting in anticipation of future demand*".

Risk-taking

Cantillion (1734) introduced entrepreneurship to describe the main distinct features between entrepreneurs from employees, referring to the entrepreneurs' willingness to endure uncertainty and accept risks from self-employment. Risk is the main element in decision making contexts for entrepreneurs such as when attending a new venture or market, or engaging to introduce new products (Timmons 1994; Devinney, 1992). The sense of uncertainty is inherently embedded in the concept of risk such as personal risk, social risk and psychological risk (Gasse, 1982). At the organizational level, firms that are willing to engage in risk taking behaviors such as venturing to project and being involved with extensive debt and huge economic resources, are considered to be having entrepreneurial orientation (Lumpkin and Dess, 1996).

At the individual level, personality character that is receptive to take risk tends to be associated with an entrepreneurial role (McClelland (1961), but not extremely high or extremely low, but rather at the moderate risk level which may retain the incentive to pursue entrepreneurial activities (McClelland, 1966). Our study will align with Bolton and Lane's (2012) which suggested individual risk taking as "*taking bold actions by venturing into the unknown, borrowing heavily and/or committing significant resources to ventures in uncertain environments*".

Innovativeness

Schumpeter (1942) coined the term "creative destruction" in his explanation on how the market is disrupted by new products, services and solution which then channel the economic resources from existing firms to new firms that bring forth new innovations. The driver for this economic change is made through entrepreneurship which embeds innovation as an important factor. Moreover, Gabor (1970) and Bird (1989) described innovation as the process that extends an invention to become a marketable product through commercialization. Meanwhile, Drucker (1985) described innovation as the entrepreneurs' specific tool to exploit opportunities and changes. Reflecting on Rogers' theory of innovation diffusion (1983), innovators of anyone's innovation are those who are willing to adopt early products with the absence of social or personal support input from earlier users (Midgley and Dowling (1978). This concept of innovativeness describes the ability to decide on innovation decision independently from communication experienced through social process with others (Midgley, 1977).

At the organizational level, innovativeness reflects the firm's engagement tendency to adopt new ideas and experiment and engage with creative processes which lead to the development of new processes, products, services or technology beyond the existing practice (Kimberly, 1981). Early researches have made a distinction in product-market innovation and technological innovation. Scherer (1980) suggested that product-market innovation is driven by design, market research and advertisement, while Maidique and Patch (1982) suggested that technological innovation involves the product and process development through the engineering approach by technical experts. The distinction leads to

various approaches in the measurement of innovation. In evaluating technological innovation, research and development (R and D) cost to sales ratio is used to measure the financial commitment to innovation (Miller, 1987). As for the product-market innovation, the sales to cost of market initiation and implementation ratios are used as measurement (Miller, 1987). According to Bolton and Lane (2012), innovativeness is the predisposition to creativity and experimentation in producing new products, services and technology through R and D of new processes.

Based on the individual level perspective, studies showed that founders of growing firms indicated higher personal innovation than hired managers (Smith and Miner, 1985). Entrepreneurs seeking growth and profit as a basis to start a business venture tend to have higher innovation preference compared to small business owners (Carland *et al*., 1988). Sexton and Bowman-Upton (1986) suggested that students of entrepreneurship showed higher innovation tendency compared to students of business study. A previous study also showed that the opportunity to innovate in pioneering a new technology drove the purpose for entrepreneurs to start a business venture (Shane *et al*, 1991).

Proactiveness, risk taking and innovativeness of entrepreneurial orientation in predicting "performance" lead to the suggestion that individual entrepreneurial orientation may predict another proxy of performance, which is entrepreneurial intention (Bolton and Lane, 2012). Derived from the same idea, the innovativeness component in IEO which has led this study to explore the available concepts seems to be scarce in the entrepreneurial intention research field, but believed to be possibly related to IEO through the component of innovativeness. The concept to be discussed next is known as individual creativity.

D. Individual creativity

Amebile (1996) defined creativity as the production of novel and useful ideas. According to Ward (2004), novel and useful ideas are the fundamental for entrepreneurship since the ability to seek potential opportunity and idea generation to innovate are critical attributes for an entrepreneur (Schumpeter,1934). For instance, entrepreneurial creativity leads to self-employment which provides individuals the platform to express their creativity and to build their own business enterprise (Feldman and Boleno, 2000). High level of creativity in individual shows a strong positive influence over entrepreneurial intention (Hamidi *et al*., 2008).

The more creative an individual, the more tendency in which he or she is involved in entrepreneurship and this is likely to influence his or her level and type of novelty in his or her business (Koellinger, 2008). A study showed that students who have more ideas generated and higher quality of ideas produced increased their entrepreneurial intention (Molaei *et al*., 2014). The ability to generate ideas is consistent with divergent thinking which leads to an increase in individual having divergent thinking to positively predict entrepreneurial intention (Batchelor and Butch, 2012). Individuals with creativity in providing useful ideas towards solving significant problems that people are willing to pay for, reflect the high value of the ideas to be captured through entrepreneurial activities (Kavanagh and Hisrich, 2010). Findings by Zampetakis *et al*., (2011) indicated that individual creativity does not only predict entrepreneurial intention, but also mediates creativity supported by family and university.

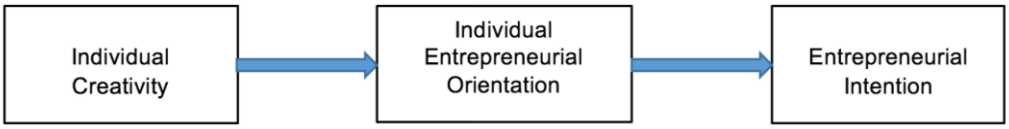
Creativity differs from innovation in terms of process in which creativity as a process emphasizes on generating ideas (Mumford and Gustafon,1988), whereas innovation extends the process of ideas to implementation and execution (Govindarajan, 2010; Gurteen, 1998). Furthermore, innovation also extends production through the adoption of useful ideas and their implementation (Kanter, 1988; Van de Ven, 1986).

Adoption of idea sources can either be outside an organization or from others instead of being the first implementer or new idea creator (Scott and Bruce, 1994). Both creativity and innovation however are essential for business development (Robinson and Stubberud, 2014).

3. Discussion

The entrepreneurial intention model by far helps to explain entrepreneurial behavior within the realm of planned behavioral theories. Ajzen's TPB and Shapero's EEM continue being dominant in explaining entrepreneurial intention. However, a recent study suggested that several components of entrepreneurial intention determinants may need to include other distal constructs to better explain entrepreneurial intention (Schlaegel and Koenig, 2014).

Figure 1. Conceptual framework



Although the personality factors construct such as creativity seems to get less attention in entrepreneurial intention research, a previous research showed a positive relationship with entrepreneurial intention (Linan and Fayolle, 2015). Individual creativity is able to influence student entrepreneurial intention and mediate between institutional factors (family and university support to creativity) with entrepreneurial intention (Zampetakis *et al*. 2011). Moreover, the individual creativity ideation resulting in novel ideas would need the initiative to extend the idea into implementation or to be adopted as innovation. Individual innovativeness reflects the extension of idea implementation/adoption and would require initiatives such as proactiveness and risk taking to expand idea diffusion. Besides, innovativeness, proactiveness and risk taking are best represented in three components of the individual entrepreneurial orientation (IEO) construct. Thus, these lead to the following suggestions:

Proposition 1: Individual Creativity has a positive effect on Entrepreneurial Intention

Proposition 2: Individual Creativity has a positive effect on Individual Entrepreneurial Orientation

Innovation is the fundamental factor that drives entrepreneurship (Drucker, 1985). The intention to pursue profit and growth of entrepreneurs is influenced by innovation and creativity (Carland et al., 1984). Proactive personality has a strong influence on entrepreneurial intention (Crant, 1996). In addition, individual personal trait significantly determines entrepreneurial intention (Rauch and Frese, 2007) and the individual entrepreneurial orientation (IEO) construct, provided that the conclusive solution has all the combined components of the personality traits. According to Bolton and Lane (2012), the introduction of IEO measurement leads to the suggestion that based on the individual traits perspective, the IEO components of innovativeness, risk taking and proactiveness of individuals could influence entrepreneurial intention, thus leading to the following suggestions:

Proposition 3: Individual Entrepreneurial Orientation has a positive effect on Entrepreneurial Intention
Proposition 4: The relationship between Individual Creativity and Entrepreneurial Intention is mediated by Individual Entrepreneurial Orientation.

4. Conclusion

Entrepreneurship as an economic engine is a critical component for the nation's growth and business ecosystem continuity. Future research could be made to empirically test the proposed framework complementing the existing entrepreneurial model of TPB or Shapero's EEM. Research focusing on individual level would be beneficial for empirical testing and analytical purposes. One could explore the outcome within the context of individuals such as students or trainees of business and entrepreneurial courses or programs. Students of business studies, MBA programs or trainees in business accelerator and incubator may be the best samples to apply the proposed framework. Entrepreneurship as a challenging career demands high commitment of resources for expected high returns in the future, while also inherently has a high level of uncertainty and financial risk for individuals who pursue it as well as for those who invest on them. Thus, being able to access individual potential in the entrepreneurial trait and behavior to pursue entrepreneurship could be an advantage in reducing unnecessary wrong investment and allocation of economic resources. Besides, optimization can be made on economic resource allocation towards more successful business and entrepreneurial candidates.

Extending this concept may contribute to the theory of planned behavior in entrepreneurial intention to become a more comprehensive model. It may help with further clarity on explaining how individual creativity affects individual intention to start a new venture from a new perspective with the inclusion of IEO. The expected benefits derived from understanding this proposed relationship may also identify potential mechanisms for existing firms in selecting potential individuals who are suitable for leading new venture projects with better assessment criteria. The same case may also be applied to venture capital and accelerator programs. Another possible outcome is to assist individuals who believe and show interest in pursuing entrepreneurship. Meanwhile, understanding certain criteria in personal traits and behaviors related to entrepreneurial activity could be handy in terms of helping better decision makings for career path, works or projects that are positively supportive. This also helps express their creativity and exercise their own innovative behavior, besides being contributive for their entrepreneurial journey prior to starting their own company.

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