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Applying the Delphi Technique to Define Entrepreneurial Orientation Variables in Indonesian Business Graduates

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ABSTRACTS

Entrepreneurial orientation plays a critical role for any newcomer aspiring to establish their business or venture. Extensive research has been carried out to determine the key factors influencing an individual's propensity to embark on entrepreneurial endeavors. A specific qualitative study was undertaken to explore the factors that shape entrepreneurial orientation among business graduate students across different Indonesian universities and business schools. This research employed methods such as focus group discussions, interviews, and the Delphi technique to capture the essential aspects of entrepreneurial orientation among these graduates. The study ultimately identified six dimensions of entrepreneurial orientation, which exhibit a significant correlation with the business graduates' perspectives towards entrepreneurial activities. These dimensions were pinpointed by a panel of experts from diverse backgrounds, providing a deeper understanding of the entrepreneurial orientation construct among business graduates in Indonesia.

BACKGROUND

Unemployment affects nations worldwide and is intricately linked to a country's economic health. In 2013, numerous advanced economies grappled with escalating unemployment rates. For example, the unemployment rate in the United States climbed to 7.6%, with the U.S. Department of Labor reporting a yearly surge in job seekers, a trend that the industries couldn't keep pace with, hence inflating the unemployment statistics (Herlinda, 2013). Similarly, Spain experienced an increase in unemployment, with the Spanish National Statistics Institute reporting a jump to 25.02% in 2012, the second highest in the EU after Greece (Altiar, 2012).

Focusing on Indonesia, open unemployment reached 8.12 million, not counting underemployment, such as those working fewer than 30 hours weekly. To address this, fostering entrepreneurship among the youth is suggested. The qualitative research discussed aims to scrutinize entrepreneurial orientation among Indonesian business graduates, utilizing the Delphi method for insights.

Despite the growing number of university graduates in Indonesia, a vast majority seek employment rather than initiate businesses. The industrial sector absorbs merely 16% of these graduates, revealing an education system that falls short in equipping students with requisite

entrepreneurial skills. This shortfall signifies an urgent need for educational reform to nurture innovative, job-creating graduates (Loy, 2013).

The Indonesian Minister of Cooperative and SMEs highlighted the need for 4.7 million new entrepreneurs, 2% of the population, to stimulate economic growth (Primartantyo, 2011). Yet, the entrepreneur rate in Indonesia lags behind regional counterparts. Furthermore, a study by the University of Indonesia found that only 3% of its graduates pursue entrepreneurship (Virdhani, 2013). A study at Ahmad Dahlan University identified low entrepreneurial orientation among students aspiring to business ownership, marked by dependence on others' opinions and risk aversion (Susanti, 2012). This mindset hinders Indonesia's progress towards becoming a competitive, developed nation. Entrepreneurial orientation embodies independence, innovation, risk-taking, proactiveness, and competitive drive. Despite these attributes, many graduates are deterred by entrepreneurship's uncertainties and pressures (Zimmerer & Scarborough, 2008). Hence, instilling entrepreneurial orientation during academic years could mitigate unemployment, necessitating further research to contextualize these attributes within the Indonesian milieu. This study aims to refine the entrepreneurial orientation variables using qualitative research and the Delphi technique, grounding the inquiry in established theories and models.

LITERATURE REVIEW

Definition of Human Resource Management

A plethora of definitions illuminate the concept of entrepreneurship, setting it apart from entrepreneurial orientation. Lumpkin and Dess (1996a) characterize entrepreneurship as the establishment of new enterprises, honing in on the core of entrepreneurial endeavors. They endeavor to tackle essential inquiries, including the appropriateness of a business venture, its congruence with individual aspirations, and its competitive as well as comparative merits. In contrast, entrepreneurial orientation investigates the execution strategies of entrepreneurship, scrutinizing the tactics and attitudes integral to entrepreneurial ventures. Within this framework, the author intends to thoroughly analyze both notions, elucidating their unique characteristics and the connections between them.

Human resources represent the potential inherent within individuals to realize their roles as adaptive and transformative social beings capable of managing themselves and all the potential within nature towards achieving a well-balanced and sustainable welfare of life. In a practical, everyday sense, human resources are understood as an integral part of the system that constitutes an organization. Therefore, in the field of psychology, HR practitioners should specialize in industrial and organizational psychology (Greer, Charles R: 1995).

From the definitions above, it can be stated that human resource development includes all activities conducted by an organization to facilitate its employees in acquiring the knowledge, skills, and/or attitudes necessary for addressing current or future tasks. These activities are not limited to aspects of education and training but also involve career aspects and organizational development. In other words, human resource development is closely linked to efforts to enhance the knowledge, skills, and/or attitudes of organizational members, as well as to the provision of career paths supported by the organization's flexibility in achieving its goals.

Entrepreneurship

Since the 1700s, the concept of entrepreneurship has been recognized and has continuously evolved. While some may simply equate entrepreneurship with starting a business, many economists assert it encompasses much more (Bureau of International Information Programs, n.d.). To certain economists, an entrepreneur is someone willing to assume the risk of a new venture if it promises substantial profit. Some view the entrepreneur as an innovator marketing their invention, while others believe entrepreneurs introduce and develop new products or processes that the market demands but lacks.

Reynolds (2005) defines entrepreneurship as identifying opportunities and creating new economic activities, often through establishing new organizations. Hirisch and Peters (as cited in Watson, 2004) describe entrepreneurship as innovating and creating something of different value, requiring commitment, assuming various risks, and seeking financial gains, personal satisfaction, and independence.

Entrepreneurship signifies the entrepreneur's significance. A self-employed individual not only reduces unemployment by providing for himself but may also create jobs for others if successful. Suryana (2003) as cited in Susanti (2012), mentions that entrepreneurship's functions and roles can be analyzed through micro and macro perspectives. At the micro-level, entrepreneurs act as innovators, generating new products, technologies, or ideas, and planners, devising business strategies and organizational structures. At the macro level, they contribute to national prosperity, equitable wealth distribution, and job creation, driving economic growth.

Louis Jacques Filion (1997) portrays the entrepreneur as a visionary, capable of setting and achieving goals, recognizing opportunities, and making decisive choices. Entrepreneurs think creatively, identify and exploit opportunities, and initiate new businesses, illustrating economic vitality through creative destruction (Zimmerer et al., 2008). Besides ideation, entrepreneurs are also characterized by their bravery in seizing opportunities and addressing challenges independently. Those inclined toward entrepreneurship demonstrate an entrepreneurial orientation, a trait crucial for competing globally. Entrepreneurial orientation is linked to entrepreneurial success, as evidenced by a study showing a positive correlation between entrepreneurial orientation and the success of small business owners in Namibia (Frese, Brantjes, & Hoorn, 2002).

Entrepreneurial Orientation

Numerous studies have presented various perspectives on entrepreneurial orientation (EO), indicating that its definition is not universally agreed upon, suggesting the absence of a single, definitive description of EO (Wales, 2012). Broadly speaking, EO is characterized as a firm's propensity to venture into new business opportunities, with key attributes including innovativeness, risk-taking, proactiveness, competitive aggressiveness, and autonomy (G T Lumpkin & Dess, 1996a). Furthermore, EO is seen as an organizational attribute that signifies managerial capabilities driving firms toward proactive and bold moves to reshape their competitive landscape favorably (Ko, 2013). Ko also contends that EO reflects a firm's commitment to challenging and reassessing its assumptions about the market, competitors, and environment, fostering transformative initiatives.

While recognizing the variable nature of EO, it's important to acknowledge that certain risks and uncertainties inherent in entrepreneurial endeavors might limit EO's advantages. EO is often articulated as comprising several interrelated behaviors embodying innovativeness, proactiveness, competitive aggressiveness, risk-taking, and autonomy (Pearce II, Fritz, & Davis, 2010). Despite varying interpretations, Miller (1983) and later G T Lumpkin & Dess (1996a) identified five core dimensions—autonomy, innovativeness, risk-taking, proactiveness, and competitive aggressiveness—as crucial in influencing firm performance, hence defining the essence of EO.

Regarding innovativeness, it is the tendency to foster and champion new ideas, novelty, experimentation, and creative processes that can lead to new products or technological advancements (G T Lumpkin & Dess, 1996a). Echoing this, Suryana (2009) as cited in Susanti (2012) defines creativity as the craft of ideating novel solutions and spotting opportunities. Thus, innovativeness is about applying creativity to identify and execute new solutions, demonstrating a strong link between creativity and innovation. Innovativeness also encompasses the pursuit of introducing novel products or services and achieving technological leadership, particularly through R&D (Lumpkin & Dess, 1996b). Although the degree of innovativeness can vary, its core lies in transitioning from outdated to necessary current technologies. Various methods have been employed to gauge innovativeness, ranging from assessing the expertise within an organization to measuring the financial commitment to innovation and evaluating a firm's focus on technological advancement. For instance, a study in DIY, Indonesia, revealed that 90% of SMEs were motivated to innovate new products, which bolstered their business enthusiasm (Muafi, Wahyuningsih, Effendi, & Sriyono, 2012).

Proactiveness involves a forward-thinking process aimed at anticipating and fulfilling future needs through the identification of new opportunities, whether they relate to current operations or not. It includes introducing new products or brands to surpass competitors and strategically discontinuing mature or declining activities. A company's proactiveness can be gauged by its propensity to initiate rather than follow in the development of new technologies or practices (Sulistyorini, 2013). Arini (2011) established that there is a positive correlation between industrial job training performance and entrepreneurship knowledge, enhancing students' proactive mindset and their interest in entrepreneurship.

Competitive aggressiveness is the intensity and directness with which a business challenges its competitors to gain or improve market standing. It embodies a firm or individual's readiness to confront competitors aggressively to secure or enhance market position (G T Lumpkin & Dess, 1996a). This concept also embodies a readiness to adopt both conventional and novel strategies to outmaneuver competitors, targeting their vulnerabilities and prioritizing high-value offerings while managing costs effectively. Various methodologies, like those from Covin & Covin (1990) and MacMillan & Day (1987), have been used to quantify competitive aggressiveness, assessing the scope and speed of capturing new market opportunities or innovating products.

Risk-taking characterizes the extent to which an individual or organization is willing to pursue uncertain ventures, potentially involving significant resource commitments or financial leveraging. Experts like Brockhaus (1980) and Kahneman & Tversky (1979) offer methods to assess risk propensity, evaluating decisions that involve varying levels of uncertainty and

potential gain. Research by Triawan and Sumaryono (2008) indicates a positive relationship between risk-taking and entrepreneurial inclination among university students, suggesting that a willingness to embrace risk can predict entrepreneurial intent.

Lastly, autonomy is recognized by Lumpkin, Cogliser, and Schneider (2009) as a critical component of entrepreneurial orientation, defined as the capacity of an individual or team to independently develop and implement ideas or visions. In smaller enterprises or academic settings, autonomy might be measured by the extent of delegation and reliance on expertise. For true business autonomy, individuals need the freedom to make decisions independently, signifying a capacity for self-directed action.

Beyond the five key dimensions, it is crucial to consider the networking dimension, which significantly influences students' entrepreneurial intentions (Taatila & Down, 2012). Students may struggle to launch a business if they do not actively engage with their community, acknowledging that businesses operate not in isolation but as interconnected entities within their communities (Jenssen & Greve, 2002). Effective interaction is vital for maximizing one's potential, particularly in entrepreneurship. Networking is also seen as a conduit to additional skills and resources (Davis, 1969; Hautamäki, 2003; McAdam & McClelland, 2002; Myint, Vyakarnam, & New, 2005), offering active networkers opportunities to leverage these benefits for their ventures. To fully capitalize on network resources, it is essential to foster a continuous and proactive engagement in social networking activities, facilitating a robust flow of interaction (Swan, Newell, Scarbrough, & Hislop, 1999).

RESEARCH METHODOLOGY

This study utilized the Delphi method as its research design to investigate the various categories and factors associated with entrepreneurial orientation across different universities. Originating in the 1950s, the Delphi method is renowned for its ability to generate consensus, drawing upon real-world expertise and experience pertinent to the research area. Dalkey (1972) emphasized that collective judgment often surpasses that of the individual, encapsulating the notion that "n heads are better than one." The Delphi technique is esteemed for its structured communication process, aiming to conduct thorough analyses and deliberations on specific issues to establish objectives, examine policies, or predict future occurrences accurately (Kumar, 2013). Typically, the Delphi method involves a series of semi-structured interactions and interviews, with a strong emphasis on process diligence to ensure methodological rigor.

From mid-March to mid-November 2013, the Delphi process was executed among a select group of experts with knowledge in entrepreneurial orientation, incorporating interviews to enhance the study's depth and breadth. Telephone interviews were carried out to collect data from participants. A total of 40 experts from industry and academia were identified and contacted via email or phone, receiving invitations to participate in the research. The researcher provided all necessary clarifications regarding the study's objectives. Though interaction and communication were established with 30 of these respondents, only 20 expressed a willingness to engage in the discussion. Ultimately, these 20 participants were interviewed using telephone and email methods. The interviews were recorded and subsequently analyzed manually. The methodology employed in this study adhered to the following procedural steps characteristic of the Delphi technique.

Identification of the Expert Panel:

The assembled panel comprised professionals renowned for their profound knowledge and expertise in the field of entrepreneurial orientation. This panel included individuals deeply engaged with various sectors, such as industry consultants, business owners, senior executives, entrepreneurs, professors, researchers, and scholars. The composition of expert members featured 15 males (75%) and 5 females (25%), representing a dynamic and informed group capable of providing pertinent insights and a comprehensive understanding of entrepreneurial orientation.

Rounds

a. Round 1

In the first round, the Delphi process traditionally begins with an open-ended questionnaire. The open-ended questionnaire serves as the cornerstone of soliciting specific information about a content area from the Delphi subjects (Custer, R. L., Scarcella, J. A., & Stewart, 1999).

The questions:

1. How do you define entrepreneurial orientation?
2. How do you relate the entrepreneurial orientation with entrepreneurial learning and development?
3. Which are the major factors, in general closely related to entrepreneurial orientation?
4. Contextualizing the topic to the Indonesian scenario, which are the major factors, closely related to entrepreneurial orientation in Indonesia?

b. Round 2

The second round concentrate into categories and the items which are more closed to the concept entrepreneurial orientation. Followed by the procedure the Delphi members where received the second questionnaire and accordingly they were required to rate or rank order the items in order to establish first level preferences among item incorporated into. In this stage, based on the decision and deliberation, agreement and disagreement on the items consider in relation to entrepreneurial orientation were make. Care should be taken that, the number on Delphi iteration should be based on how far consensuses have been arrived at effectively on the concept of entrepreneurial orientation in the study.

c. Round 3:

In the third round, each Delphi panelist receives a questionnaire that includes the categories and items ratings, summarized by the investigators in the previous round and are asked to revise his/her judgments or "to specify the reasons for remaining outside the consensus" (Pfeiffer, 1968). This round gives Delphi panelists an opportunity to make further clarifications of both the information and their judgments about the relative importance of the categories and items. Second level screening of the 191 categories which were having a high and low influence on entrepreneurial orientation identified with corresponding items. The process further identified 60 categories, which are having high and low proximity of the entrepreneurial orientation identified. Classification of the items in 60 categories of 6 factors

was being made with appropriate loaded items. Thematic presentation and the categorization of the items were done.

d. Round 4

This round is the last round in which the researchers tried to eliminate the minority opinion in order to capture the maximum level of consensus based on their rating on the categories and items which related to entrepreneurial orientation. Crosschecking of this categories and items were thoroughly make and the suitability clearly ascertained for fixing up the categories and items related the factor entrepreurial orientation. During third level, screening of the 51 categories of 6 factors which were having items with high and moderately high proximity of entrepreneurial orientation identified. Sought the expert opinion on the appropriateness of the core factors selected for the study.

RESULTS

Table No 1: Delphi table on Entrepreneurial Orientation

Sl. No	Factors	Categories	No.Items	No of Expert (N=20)	% Of Expert
1	**Autonomy**	Thinking without interference	2	18	90%
		Propensity to act autonomously	3	15	75%
		Ability to be self directed	1	15	75%
		Decide on their own	2	15	75%
		Independent action	2	18	90%
		Capacity to make a decision	1	16	80%
		Resistance toward people side effect	2	14	70%
		Having self reliance	1	15	75%
		Having access to vital information	1	15	75%
		Developing own potency	3	15	75%
2	**Competitive Aggressiveness**	Aggressive action to competitors	3	15	
		Ability to beat competitors	1	15	75%
		Keep competitor from entering the same market	1	15	75%
		Taking competitor's target market	2	15	75%
		New product development	1	16	80%
		Using latest tactics	2	15	75%
		Taking aggressive approach	3	15	75%
		Analyzing market target	2	15	75%
		Determining market target	2	16	80%
		Outmaneuvering the competition	2	15	75%
3	**Innovation**	Taking a bold approach in competition	3	18	90%
		Introduction of new technology	4	14	70%
		Technology development	2	18	90%
		Frequency of changing products	1	14	70%
		Adapting the new process	3	14	70%

		Marketing new products in certain period	3	18	90%
		Trying new methods & technologies	3	16	80%
		Depart from obsolete technology	3	17	85%
		Research and development	3	16	80%
		Supporting new ideas/novelty	2	15	75%
4	**Proactiveness**	Seeking new opportunities	1	17	85%
		Intend to lead the future	2	14	70%
		Tendency to lead	2	15	75%
		Initiating action	3	18	90%
		First using the new product	3	16	80%
		Anticipating problems	3	15	75%
5	**Risk Taking**	Making decisive and risky action	3	14	70%
		Performed under risk pressure	2	15	75%
		Making decision in uncertainty	1	17	85%
		Venturing into the unknown	2	18	90%
		Borrowing heavily	1	15	75%
		Plotting the risk issue	1	15	75%
		Business speculation	3	15	75%
6	**Networking**	Level of interaction	3	17	85%
		Proactive social networking	1	18	90%
		Communicating with people.	1	18	90%
		Separating social life very -clearly from the social circle of his/her work	3	15	75%

The initial factor examined in this study is Autonomy concerning entrepreneurial orientation, where the experts recognized 18 items within this dimension. Autonomy is broken down into 10 key categories, with the predominant factors identified as the ability to think independently (90%) and take independent actions (90%) within the context of entrepreneurial orientation. Following closely is the capacity for decision-making (80%). Additional aspects highlighted include the tendencies towards autonomous action (75%), self-direction (75%), independence (75%), self-reliance (75%), access to essential information (75%), developing personal strengths (75%), and resisting external influences (70%). These are vital competencies that young students should be familiarized with regarding entrepreneurial orientation.

The study's second dimension is Competitive Aggressiveness, where 19 items were pinpointed, integrating into 10 categories. Key aspects include new product development (80%) and market targeting (80%), reflecting significant ties to entrepreneurial orientation. Other crucial elements involve aggressive strategies against competitors (75%), competitive superiority (75%), market defense (75%), capturing competitors' markets (75%), tactical innovation (75%), market analysis (75%), assertive strategies (75%), and outperforming rivals (75%), all of which are crucial for educating young students in entrepreneurial dynamics.

Innovation emerged as the third factor, with 27 items identified by experts as essential for budding entrepreneurs' innovative capacity. The standout categories involve launching new products (90%), advancing technology (90%), and adopting innovative competitive strategies (90%). Additional considerations include moving away from outdated technology (85%), enhancing R&D (80%), and adopting new methods (80%). Supporting innovation (75%), embracing new processes (70%), frequent product updates (70%), and new technology adoption (70%) are also highlighted as key for young students' entrepreneurial acumen.

Proactiveness is the fourth factor, identified through 14 items emphasizing young students' proactive stance in entrepreneurship. The leading category is initiating actions (90%), with seeking new opportunities (85%) and pioneering product introductions (80%) as critical aspects. Also, leading tendencies (75%), problem anticipation (75%), and future leadership (70%) were outlined as essential teachings for students' entrepreneurial orientation.

Risk Taking is the fifth factor explored, comprising 19 items across 11 categories. Predominant aspects include venturing into the unknown (90%) and engaging in significant deals (90%), indicative of a strong orientation toward entrepreneurship. Other key categories include decision-making under uncertainty (85%), business speculation (75%), bold stances (75%), risk analysis (75%), and thriving under pressure (75%), all critical for nurturing entrepreneurial ambition in students.

Lastly, the sixth factor pertains to Networking's role in entrepreneurial orientation, with eight items divided into four categories. Primary focus areas include active social networking (90%) and effective communication (90%), vital for young entrepreneurs. Interaction levels (85%) and balancing social engagement (85%) were also recognized as essential for nurturing network-centric skills in entrepreneurial education.

DISCUSSION

Although there is extensive literature on entrepreneurial orientation, fewer studies investigate its connection with entrepreneurial intentions. Recognizing that variables change based on sample populations, identifying the correct variables to explore this phenomenon is crucial. This study aimed to pinpoint relevant variables for investigating entrepreneurship among students in Indonesian universities and business schools.

Experts identified six key factors of entrepreneurial orientation vital for young graduates in Indonesia, underscoring the necessity of examining these within the local context. Entrepreneurship is viewed as a transformative process, turning innovative ideas into enterprises and then into value creation (Kauffman, 2007). The preliminary step in imparting proper entrepreneurship education involves analyzing the mindset of students entering higher education to initiate new businesses. Developing the correct mindset to identify and seize opportunities, face challenges, and exhibit distinctive personality traits can transition an enterprise into a value-creating entity. The growing number of university graduates in Indonesia tends to seek employment rather than entrepreneurship, with industry absorbing only 16% (Loy, 2013). This scenario underscores a gap in the educational system, which often fails to instill necessary entrepreneurial skills, rendering many graduates job seekers instead of creators.

The study delineated six factors of entrepreneurial orientation—autonomy, innovation, proactiveness, risk-taking, competitive aggressiveness, and networking—as essential for nurturing Indonesian youths' entrepreneurial engagement. Experts emphasized subcategories such as creative thinking, independent action, and initiation.

The first factor, autonomy, implies the capacity for individuals or teams to develop and implement ideas or visions independently (Lumpkin and Dess, 1996). Young entrepreneurs should be adept at timely decision-making with available resources to lead or initiate business ventures. Addressing Indonesian employment challenges requires enhancing students' skill sets for independent business decisions.

For competitive aggressiveness, the second factor, students need skills to identify market targets, develop customer-centric products, and employ market-oriented strategies. Educational institutions should foster competitive aggressiveness to prepare graduates for market challenges.

Innovation, the third factor, involves embracing new technologies, product development, research, and fostering new ideas to translate into businesses, aligning with Lumpkin's (1981) definition of innovativeness.

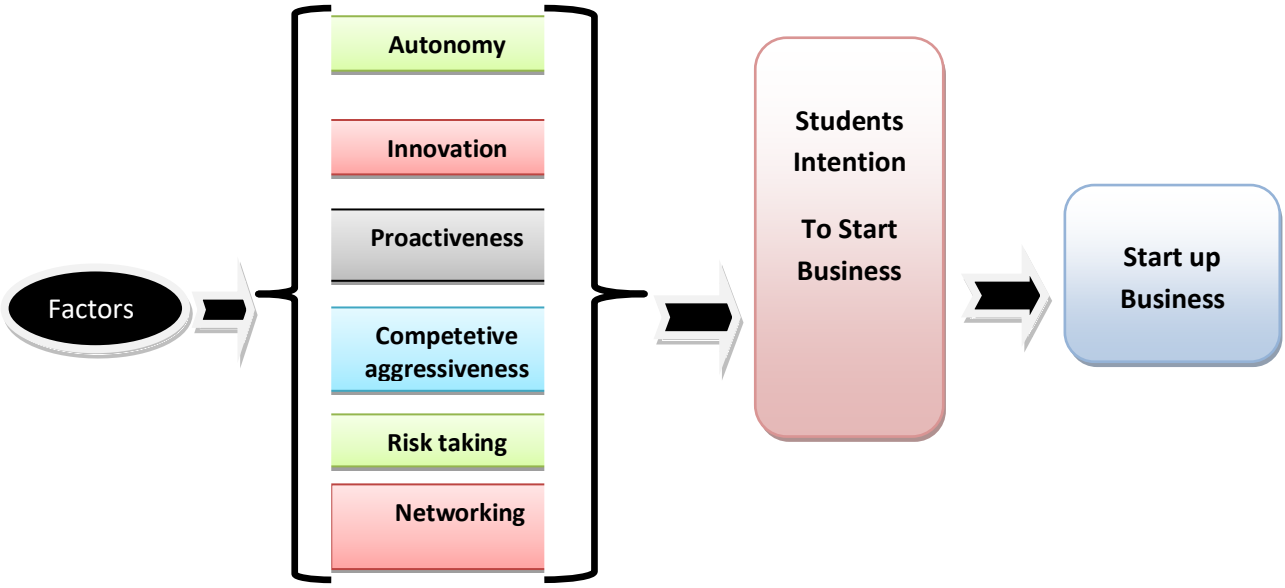
The fourth factor, proactiveness, entails anticipating future needs and seeking new opportunities, crucial for developing products that satisfy evolving customer demands. Training programs should cultivate students' proactive capabilities to inspire business initiation.

Risk-taking, identified as the fifth factor, encourages students to step beyond conventional educational frameworks, embracing entrepreneurial challenges and uncertainties to discover personal and professional paths.

Lastly, networking, the sixth factor, involves building robust social and professional connections, leveraging these networks for entrepreneurial success. Students should develop skills in proactive networking to exploit business opportunities effectively.

These factors collectively underscore the imperative for an educational paradigm shift in Indonesia to foster entrepreneurial orientation among students, equipping them with the skills to innovate, compete, and thrive in entrepreneurial endeavors.

Figure 2. Model: Factors Related to Entrepreneurial Incubation Centres



IMPLICATION

This study focuses on entrepreneurial orientation with the aim of pinpointing and refining the appropriate variables for an in-depth analysis of students' potential to emerge as young entrepreneurs. The research delineated seven key factors of entrepreneurial orientation: autonomy, competitive aggressiveness, innovation, proactiveness, risk-taking, and networking. Experts emphasize the necessity of selecting variables that resonate with the target demographic of the study. Researchers are advised against exclusively relying on pre-existing models and theories for variable selection. By tailoring the variables to reflect the perspectives of young students, the study has identified a set of entrepreneurial orientation factors that are particularly relevant to the Indonesian context. Consequently, Indonesian universities and business schools are encouraged to explore these specific variables to gain meaningful insights into the entrepreneurial orientation of students, aiding them in initiating new businesses.

CONCLUSION

Numerous research efforts have focused on entrepreneurial orientation, offering various models and theories for academic exploration. However, when narrowing down to the Indonesian academic context, particularly within universities and business schools, there exists a scarcity of tailored studies. This specific research aims to address this gap by establishing pertinent variables concerning entrepreneurial orientation for Indonesian students, employing the Delphi method to qualitatively identify seven essential factors. Following this foundational research, the next step envisages a quantitative analysis, utilizing grounded theories and the identified variables. The ultimate goal is to delve deeply into how these variables influence entrepreneurial intentions among Indonesian students, with the findings expected to inform and enhance learning and development initiatives, notably through business incubation programs.

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