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INFLUENCE OF ENTREPRENEURIAL ORIENTATION ON INNOVATION STRATEGY OF BANANA GROWERS

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ABSTRACT

The main purpose of this study was to find out whether Entrepreneurial orientation significantly influences innovation strategy of Banana growers. The study employed quantitative non-experimental research design utilizing correlation technique. It was tested 0.05 level of significance stating that there is no significant relationship between entrepreneurial orientation and innovation strategy on banana growers and there is no domain in the entrepreneurial orientation that significantly predicts innovation strategy. This was conducted at Compostela, Davao de Oro on November to December 2020 with 302 banana growers as respondent. The first part of the two sets of survey questionnaire was Entrepreneurial Orientation with the indicators: Autonomy, Innovativeness, Risk Taking, Pro-activeness and Competitive aggressiveness. The second part was the innovation strategy, with the following indicators: product innovation and process innovation. The research revealed that entrepreneurial orientation has a mean of 4.17, which means high. On the other hand, the innovation strategy got a mean of 4.20, which means very high. Despite the fact that the results show no significant relationship between entrepreneurial orientation and innovation strategy in banana growers, there was only one domain of entrepreneurial orientation that significantly predicted banana growers' innovation strategy: pro-activeness.

KEYWORDS: Entrepreneurial orientation, innovation strategy; Banana Growers, Compostela, Philippines.

Chapter 1

INTRODUCTION

Rationale

In today's high-paced economic environment, firms have identified organizational innovation not only as a desired element for growth, but increasingly a necessary factor for survival. As innovation spans from the development of new products over services to business processes, and administrative systems, it provides organizations with the ability to advance performance, resolve complications, add value and create competitive advantage. Innovation is inherently a highly cross-functional activity that, when it works well, product value, performance, quality, and time to market. Product

development touches every part of the company. Innovation is thought to provide organizations with a means of creating a sustainable competitive advantage that is imperative in today's turbulent environment. Innovation is positioned as a driver of economic growth (Hsueh, Lin, & Li, 2010 p. 126; Narasimhan, et al, 2016, p.519).

The Philippine government has emphasized the importance role of innovation plays in its economy's long-term and inclusive growth. The Philippine Development Plan 2017–2022, which highlights the role of innovation in improving the sectoral productivity, has reiterated the benefits of technology adoption for local firms. Despite this, the Philippines still has a long way to go in its innovation efforts. Based on the Global index (GII) 1 which measure how, out of 127 countries, the Philippines came in 73rd place. The country has remained in the same place as in the 2017 GII, while its ASEAN neighbors have improved (Dadios et al., 2018, p.54).

In Region XI, there is an urgency to conduct this study on innovation since there are a lot of barriers to the heavy regulatory burden on closed economies. In addition, there is an undereducated workforce, limited access to finance for engaging in innovation, political insecurity, high tax rates, and ineffective tax incentives. In an uncertain economic environment, with a very competitive market and quick changes in technology and information, innovation has become more than a firm strategy; it has become an inescapable activity for firms, particularly small and medium-sized businesses, to survive (SMEs). As a result, it is critical that businesses take advantage of the globalized market's potential and comprehend the market's choices and wants to produce new products or improve existing ones (Donate & de Pablo 2015, p. 263).

On the other hand, the researchers have not come across any research on the banana industries between entrepreneurial orientation and innovation strategy. It demonstrates that the current study will make a unique contribution and offer novel ideas on innovation strategy relative to the firm performance of the banana growers. In this view, the researcher is interested in determining whether entrepreneurial orientation influences the innovation strategy of the Banana growers in the Municipality of Compostela. It has the potential to enhance awareness among the study's intended beneficiaries, thus, the need to conduct the study.

Research Objective

This study was conducted to determine which domains of entrepreneurial orientation significantly influence the innovation strategy of Banana Growers.

1. To describe the level of entrepreneurial orientation of Banana Growers in terms of:
1.1 Autonomy
1.2 Innovativeness;
1.3 Risk taking;
1.4 Pro-activeness; and
1.5 Competitive Advantage

2. To describe the level of innovation strategy of Banana Growers in terms of:
2.1 Product innovation; and
2.2 Process Innovation

3. To determine the significant relationship between entrepreneurial orientation and innovation strategy of Banana Growers?
4. To determine which domains of entrepreneurial orientation significantly influence the innovation strategy of Banana Growers.

Hypothesis

The following hypothesis were tested at 0.05 level significant
1. There is no significant relationship between the entrepreneurial orientation and innovation strategy of Banana Growers.
2. There is no domain in entrepreneurial orientation that significantly influences the innovation strategy of the Banana Growers.

Review of Related Literature

Theories, opinions, and concepts of various authors to this study are discussed in this section to provide a strong frame of references about the variables of the study. It examines works on the concept of entrepreneurial orientation and innovation strategy. The specific areas covered here are various definitions for entrepreneurial orientation, factors influencing, and a general overview of innovation strategy. In this section, we discuss some of the most relevant contributions in the field, which motivate the gaps in the literature that we address in this study.

The independent variable in this study is entrepreneurial orientation, which is measured in terms of autonomy, innovativeness, risk-taking, pro-activeness, and competitive aggression. The dependent variable of this study is innovation strategy, which is gauged in terms of product innovation and process innovation (Lumpkin & Dess, 1996, p. 4; OECD Oslo Manual, 2005, p. 12).

Entrepreneurial Orientation

The independent variable of the study is the entrepreneurial orientation (EO) is a key concept, and it's an important idea to keep in mind when developing plans in the hopes of trying something new and taking advantage of possibilities that other companies cannot. Organizations that behave entrepreneurially have systems, practices, and decision-making styles that are referred to as EO. Examining how a company's degree of EO compares to the five dimensions might help you figure out how well it's doing: (1) autonomy, (2) innovativeness, (3) Risk-Taking, (4) pro-activeness, and (5) competitive aggressiveness (Lumpkin & Dess, 1996, p.135).

The first indicator of entrepreneurial orientation is autonomy. The ability of an individual or a group of individuals within an organization to conceive and carry out an entrepreneurial initiative is referred to as autonomy. People are given the freedom to bring a fresh concept to life in an organization with a high level of autonomy, free of the shackles of corporate bureaucracy. Individuals and teams can study and champion new ideas more successfully when free of organizational traditions and norms, they are able to more effectively investigate and champion new ideas (Karami & Tang, 2018 p.102; Lumpkin & Dess, 1996, p. 146).

Autonomy, which can promote employee empowerment, can be interpreted as the opposite of tight workforce control. Cost leadership is associated with reduced action freedom, decision-making authority and hence reduced autonomy. Small firms are characterized by less formalization and unsophisticated control systems, which lead to greater autonomy. Cost leadership is strongly associated with a top-down approach, while bottom-up approaches are usually reinforced by autonomy (Gupta, et al., 2016, p. 663).

Further, a necessary condition for customer orientation is autonomy, which refers to the freedom of employees to be creative, to develop new ideas and open communication and to be focused upon customer interaction and orientation. Autonomy drives flexibility and creativity flexibility enables firms to react faster to customer needs, while creativity drives innovation and uniqueness. In addition, it allows for discretionary action where solutions are needed so autonomy should be positively associated with differentiation in small firms (Hughes & Morgan, 2007, p. 651; Lumpkin et al., 2009, p. 143; Mantok et. al., 2019, p. 641).

Several giant corporations encourage autonomy by allowing a section to make its own decisions, set its own goals, and manage its budgets. Sony's PlayStation group, for example, was founded by Ken Kutaragi, the company's chief operating officer (COO), and is largely unaffected by the Sony bureaucracy. The PlayStation division eventually accounted for nearly all of Sony's net profit. Kutaragi was then tapped to change Sony's main buyer electronics business into a PlayStation clone due to the success of the independent PlayStation group (Kotane & Kuzimina-Merlino, 2017, p. 157).

In the same manner, in entrepreneurship, autonomy refers to a team or an individual ability to create a vision or an idea and then see it through to completion. According to a previous study, autonomy has been found to boost creativity, improve a company's competitiveness, effectiveness, and encourage the creation of new initiatives (Ebrahimi et al., 2018, p. 447; Lumpkin & Dess, 1996, p. 136).

The term "autonomy" denotes the independent acts made by entrepreneurs or organizations to start and establish a new business. A framework that favors control and responsibility for results through work standards is required for an efficient approach. Reduced slack, cost management, and worker monitoring are thought to be necessary for cost leadership adoption (Brock, 2003, p. 57; Lumpkin & Dess, 1996, p.138; Omisakin, 2016, p. 43).

The second indicator of entrepreneurial orientation is innovativeness. Innovativeness is the tendency to pursue innovation and experimentation. Some innovations use current abilities to produce incremental improvements, while others require new skills and make existing ones useless. In either case, the goal of innovation is to create new products, services, and processes. Organizations that are efficacious in their efforts to innovate tend to do better than those not. Innovativeness emphasizes R&D, technological leadership, the inauguration of innovative products, and the degree of change in product or service lines. Even though process innovation is not clearly exempted from the measure, it is skewed toward product innovation; changes in products may lead to changes in processes, but the original scale is heavily skewed toward product innovation. Customers view items and services as unique when they see them; this technique heavily relies on product innovation and marketing activities (Lumpkin & Dess, 1996, p. 148; Proctor, 2018, p. 246).

Furthermore, Innovativeness is the ability of a company to adopt and promote creative processes that can lead to new products, new technology, new services, innovations, new testing, and so on. Innovativeness encourages businesses to invest more in technological invention events such as new product creation, new technology acquirement, and so on, allowing them to strengthen their ability to innovate technologically (Fang & Chiu, 2017, p. 34; Wiklund & Shepherd, 2003, p.75).

In the same manner, innovativeness is one of the significant tools in an enterprise's growth strategy. It can innovate to expand into new areas, raise market share, and gain a competitive advantage. Companies have begun to recognize the necessity of innovation due to the rapidly changing technologies and severe global competition, which swiftly erodes the value-added of existing products and services. Thus, innovations are an essential part of company plans for various reasons, including applying more productive production methods, performing better in the market, pursuing a positive reputation in the eyes of customers, and gaining a sustainable competitive advantage (Jeihoony et al., 2019, p.48; Kuratko et al., 2005, p.3).

Entrepreneurial businesses are known for their high levels of innovativeness, which drives them to invest more in technology innovation activities such as new product creation, new technology acquisition, and so on. As a result, a company's potential to innovate technologically can be improved by being innovative. The ability to detect and absorb new external knowledge, integrate it, and mix it with current knowledge to create new knowledge can be aided by a high absorption capacity. As a result, businesses may use knowledge to solve practical problems. Furthermore, a strong absorptive ability can help boost the frequency of invention and the pace and effectiveness of innovation (Diochon, 2018, p. 97; Lumpkin & Dess, 1996, p.151).

Innovativeness can be leveraged to gain a competitive advantage through uniqueness. While introducing low-cost designs for existing product categories demands creativity, it is logical to think that companies who pursue a cost-leadership approach are on the lower end of the innovativeness scale. Through competent product design or procedures, this brings industry-standard items to market.

Small businesses limited resources necessitate a high level of investment prioritization, resulting in trade-offs. Cost leadership is a more capital-intensive strategy that requires minimal innovation (Dowling & McGee, 1994, p. 9; Lee et al., 2019, p. 144).

The third indicators of entrepreneurial orientation are risk-taking. Risk-taking imitates a company's tendency to take part in risky operations. This dimension focuses on a company's daring acts, such as stepping into the unknown, borrowing much, and/or investing considerable resources in risky undertakings. Risk-taking denotes a company's tendency to take risky actions to reap a high return, and it may be explained in two ways: technology and market (Garidis & Rossman, 2019, p. 26).

In terms of technology, risk-taking represents a company's tendency to invest resources in high-risk, high-uncertainty technological innovation strategies or initiatives, and it's linked to a company's risk preferences and attitudes toward new technologies (Bloch & Bhattacharya, 2016, p.193; Lumpkin & Dess, 1996, p. 153).

Risk-taking aids in the formation of a culture of tolerance and risk in an organization; it also encourages experimentation, which speeds up the acquirement, learning, and absorbing of the new external technology, resulting in improved technology innovation performance. In terms of the market, it represents a company's desire and tendency to assume the risk of incoming a new market, and it is directly associated with a company's risk preference. When a company cannot foresee the future market, it tends to behave proactively and seeks, discovers, and exploits new chances to boost its competitive advantage and reap the rewards of innovation (Alegre & Chiva, 2008, p. 49; Covin & Wales, 2019, p.43).

Another essential aspect of entrepreneurship is risk-taking, which is heavily incorporated into SMEs' working activities. Risk-taking is a combination of daring intentions and actions taken by a company in order to boost its profits and growth effectively. Venturing into unfamiliar markets, investing in ventures with unpredictable consequences, and borrowing significant amounts from the market are all examples of these procedures. Risk taking can be defined as management's readiness to commit considerable resources in order to pursue prospects that have both a probability of failure and a chance of success (Eggers et al., 2013, p. 13; Rezaei & Fanak, 2019, p.68).

The fourth indicators of entrepreneurial orientation are pro-activeness. The term "pro-activeness" refers to a forward-thinking, opportunity-seeking attitude that involves launching new products and services along with the competition and anticipating upcoming demand. The greatest way to exploit the market opportunity is to be the first to act, and pro-activeness refers to the efforts that go into being the first to act. If a company sees a market opportunity and takes advantage of it as soon as possible, it can generate significant profits and gain brand awareness. Firms that are proactive in anticipating future requirements and actively exploring new opportunities are generally the first to join new markets (Lumpkin & Dess, 1996, p.164; Nazdrol et al., 2017, p. 21).

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In addition, the firm's proactive efforts may include searching for new changes that are significant to the current line of business, proposing new products and brands onward of competitors, and selectively eliminating operations that are in the middle or end of their life cycle. To put it another way, being proactive is intimately linked to pursuing first-mover advantages. As a result, companies may invest in environmental research and monitoring in order to discover emerging trends. To give critical competence that may boost the firm's ability, it is necessary to both systematize internal knowledge and extend discussion with known exchange partners and search widely into different knowledge platforms. As a result of such efforts, both should be made easier (Linton & Kask, 2016, p.169).

Maintaining an opportunity-searching and forward-looking perception, as evidenced by the introduction of new products and services and competitors, is referred to as proactive action. By dominating the distribution channel, the first initiator can control market access. There is a connection between competitive aggressiveness and innovative, risk-averse, and proactive organizations. Firm success should be viewed as a multifaceted notion that includes revenue, turnover, market share, staff growth, and other metrics. A recent study discovered that product innovation's creation and adaptable style are both favorably and yet differently associated with pro-activeness and risk-taking behavior (Richard et al., 2004, p. 17; Tang et al., 2018, p. 5).

Pro-activeness is the tendency to anticipate and act on upcoming needs rather than reacting to events as they occur. A proactive organization seeks out new opportunities. These businesses are frequently the first to go into new markets or "fast follow" that improve first movers' initial efforts by acting ahead of changing market demand. In a technologically, environmentally, and politically unstable world, proactive executives have carved themselves a profitable niche by embracing opportunities that others fear (Amin et al., 2016, p.41; Choi et al., 2008, p. 3; Rita et al., 2018, p.49).

Pro-activeness pertains to the ability to do ahead and respond to market demands and wishes in the future, resulting in a competitive advantage over competitors. The term "pro-activeness" refers to a forward-thinking, opportunity-seeking attitude that introduces new products or services ahead with the competition. It also creates change and shapes the environment in anticipation of future demand. Proactive companies can get a competitive advantage by targeting prime market segments and skimming the market along with their rivals. Therefore, pro-activeness is likely to be valuable in securing superior firm performance (Lumpkin & Dess, 2001, p. 133; Omisakin et al., 2016, p. 23).

Enterprises with pro-active marketing strategy, proactive activity, and leading strategies to bring new products are said to be proactive. Proactive businesses prefer to take advantage of market possibilities and their rivals and lead the way in offering new products and services to obtain a competitive edge. It is critical to be proactive in order to gain and withstand a competitive advantage in today's competitive industry and market. As a result, pro-active businesses are more likely to spot new market

opportunities, act quickly on them, and then deliver creative results to enterprises (Jia et al., 2018, p.49).

Proactivity foresees competitor moves and retains a first-mover advantage; it is a key determinant in distinction. Innovation, as a source of originality, necessitates active participation. Small businesses that distinguish themselves and emphasize innovation have a solid incentive to anticipate the competition to achieve long-term success (Blumentritt, 2006, p. 7; Fadda, 2018, p. 4).

Pro-activeness is concerned with anticipating and creating upcoming demand, avoiding rivalry, and favoring exclusivity; it is less concerned with efficiently meeting existing demand. For instance, the dominance of Japanese corporations' cost leadership tactic is linked to their late entry and lack of pro-activeness (Allen, 2007, p. 23; Manning, 2018, p. 12).

Proactivity cannot only project the firm into the future market but also alter the market environment and provide existing competitive capabilities a new edge. The spirit of pro-activeness necessitates capitalizing on emerging markets. Proactivity is anticipated to play a large part in ensuring outstanding business performance. They can more easily target prime markets and gain first-mover edges, such as scanning the market well along with their competition (Farja et al., 2016, p. 29; Tang & Hull, 2012, p. 14).

The fifth or last indicator of entrepreneurial orientation is competitive aggressiveness. Competitive aggressiveness entails setting aggressive market share goals or taking aggressive activities such as price cuts, outspending rivals on marketing, and expanding manufacturing capacity. On the other hand, a more significant market share does not always imply greater viability for a differentiation strategy. However, building more extensive production capabilities aims to achieve better economies of scale, which is at the core of a cost leadership approach (Dowling & McGee, 1994, p. 38; Tajeddini, 2017, p.100).

Furthermore, competitive aggressiveness differs from differentiation reasoning in small businesses. Economies of scale drive cost leadership; organizations contend more intensely for market share and enough production volume to take advantage of scale economies. Substantial market share leads to larger production capacities, which is a no-no for cost leadership, which equally applies to small-scale businesses looking to outperform their competitors on cost (Blumentritt ,2006, p. 62; Jalilvand, et al., 2018, p. 210).

Competitive aggressiveness is defined as a company's desire to outdo its industry competitors, as seen by a sturdy offensive stance and a strong response to competitor moves to gain or enhance position. Firms that exhibit this conduct are more likely to take a hostile view toward competitors in an attempt to outperform competitors who threaten their survival or market position in the industry. As a result, Competitive Aggressiveness can be defined as the motivation to face the intense acute competition

provided by competitors. It is the company's strategic response to market competitors in order to maintain its competitive market posture (Kraus et al., 2018, p. 446; Lumpkin & Dess, 2001, p. 439). Competitive aggressiveness was defined in the current study as a more dominate competitors through a combination of proactive moves and innovative efforts. Companies are aggressive if they frequently initiate acts to which rivals respond; are often first to launch new products, administrative processes, operating technology, and so on; and typically embrace a highly competitive, "undo-the-competitors" stance (Covin & Covin, 1990, p. 37; Kraus et al., 2018, p. 445).

If a company can use its unique resources and talents to make changes in the business setting, it has a competitive advantage. It contrasted firm resources and capabilities, claiming that resources provide the foundation for establishing firm capabilities. In contrast, capabilities are the primary source of competitive advantage, reflecting the firm's ability to organize resources appropriately for the volatile market setting (Mandal & Saravanan, 2019, p. 11).

Furthermore, competitive aggressiveness is the propensity to confront competitors head-on rather than try to avoid them. Price-cutting and increased marketing, quality, and production capacity are examples of aggressive initiatives. Furthermore, competitive aggressiveness is intricate in scouring the environment for competitor’s characteristics, determining where to aim, and implement a new product offering (Teece, 2016, p. 209).

An entrepreneurial process that involves innovativeness, pro-activeness and risk-taking characterized by entrepreneurs or entrepreneurial firms to act entrepreneurially and is used in an effort to defeat their competitors. Entrepreneurial strategies have been suggested a useful for firms striving for renewal and sustained competitive. Within the entrepreneurship perspective the emphasis is on how individual and organizational level capabilities work together to facilitate growth. (Covin & Slevin, 1989, p.75).

It is Basic reality that entrepreneurs are more likely to be overconfident, which lowers their risk perception. And, because these effects may also apply to the organizational layer, excessively entrepreneurial conduct may lead to too hazardous product innovation ventures that result in technological or market failure (Busenitz & Barney 1997, p.12, Singh, 2020, p. 25).

Furthermore, even when there are no prior involvements in uncertain regimes to generalize from, entrepreneurs tend to generalize their experiences. As a result, a strong entrepreneurial attitude could backfire, resulting in less product innovation success under strong leadership. Technological unpredictability, in particular, has the potential to convert proactive and risk-taking activities into dangerous games (Alvarez & Barney, 2007, p.39; Ayalew & Zeleke, 2018, p. 32).

Entrepreneurial orientation is a set of traits that can help a firm function better. These characteristics can be seen in business conduct, including risk-taking, creativity, and proactivity. All of these factors are indicators of a company's performance. As a result, having an entrepreneurial mindset will make

it easier to make business decisions and take action. It can build competitive advantage because entrepreneurial orientation is attained by recognizing the organization's aims and vision (Irwin et al., 2018, p. 137).

Adaption-Innovation Theory which is founded on the idea that each person is creative and solves problems KAI is chiefly concerned with cognitive style and determining how people solve problems. Kirton (1976) described adaptors as individuals who prefer to "do things better" and innovators as people who prefer to "do things differently." He postulated that understanding the cognitive styles of adaptors and innovators would greatly enhance organizational cultures of change and diversity. Research shows that understanding adaptive and innovative tendencies of team members can greatly enhance the effectiveness of the organization (Kirton, 1976 p. 622).

Innovation Strategy

The dependent variable of this study is innovation strategy which is gauged in terms of product innovation and process innovation. The first indicators of innovation strategy are product innovation. Product innovation can modify the overall product or make minor modifications to product attachment. Organizations profit from good product innovation in a variety of ways, including increased market position, and brands, attracting new customers and boosting customer loyalty. The innovative industry has a high degree of innovative potential, but it can also provide a conducive environment for the development of new products, processes, or systems (Chandy & Tellis, 2000, p. 4; Lin et al., 2016, p. 115; OECD Oslo Manual, 2005, p. 42).

Product innovation can help a company keep its competitive advantage. Exploiting the business's competencies and looking for something new are two ways to innovate successfully. If a company does not take chances or is unwilling to change, it will not be able to innovate. One factor that can spur creativity is a risk. Furthermore, taking risks and being proactive will aid in the development of new ideas. These aspects are part of a company's entrepreneurial orientation (Guptra & Batra, 2016, p.663; Perez et al., 2011, p. 557).

Product innovation is viewed as one of the most critical drivers of difference, as it creates distinctiveness in the perspective of customers. The way a company innovates depends on its competitive strategy, and there is a strong link between product innovation and differentiation. If we think that small businesses have a weaker tendency for creativity, then comparatively, more innovativeness will enhance the differentiation strategy of small firms (Blumentritt, 2006, p. 12; Kudlats & Dunne, 2018, p. 375).

Another study found that one part of empowering company resources to generate new products is innovation strategy. A company needs capabilities that enable all resources to adapt to changing market situations and improve its performance in order to gain a competitive edge. Product innovation is the introduction of products or services with innovative features or applications, such as increased

technical requirements, components and materials, and other functions. Product innovation is often observed as a change or improvement of a product or service (Angkanurakbun, 2016, p.3).

Product innovation is defined as the use of a good or service that has been remarkably improved in terms of its features, such as practical requirements, elements, and materials, integrated software, user-friendliness, or other valuable aspects. Market acceptance ultimately determines the success of a new product. Firms may gain confidence in their beneficial ideas, but technological superiority does not guarantee market success. Moreover, an innovative product feature can set a new product apart from competitors' offers, and it helps gain a competitive edge in the market. Lastly, product innovativeness has been found to have a positive impact through different instruments on new product profitability and success of the market (Garidis & Rossmann, 2019, p. 877; Yongchuan et al., 2011, p. 9).

The second and last indicators of innovation strategy are process innovation. The term "process innovation" denotes enhancing the effectiveness and efficiency of a company's operations. As a result, process innovation can be observed as a means of improvement or a new internal procedure for achieving the firm's highest goals and performance. Changes in equipment procedures, higher operational efficiency, and decreased production costs are all examples of process innovation (Scafuto et al., 2018, p. 26).

Applying significantly better manufacturing or delivery method is known as process innovation. Changes in procedures, equipment, and software are all part of this. Process innovation can be implemented to lower manufacturing or distribution unit costs, improve quality, or develop significantly better products and provide the best services (Genc et al., 2019, p. 254; OECD Oslo Manual, 2005, p. 21).

Process innovations have a favorable impact on an organization's optimized maintenance efforts. However, in terms of the impact on manufacturing costs, it believes that while not all innovation processes result in cost savings, some allow the firm to market its products at competitive pricing. As a result, one may express that the innovative process positively impacts production performance, which is defined as merging accomplishments in such performance indicators as speed, value, flexibility, and cost-efficiency (Guday et al, 2011, p. 6; Ratnawati et al., 2018, p. 22).

Internal needs for efficiency and effectiveness in producing and delivering goods and services to customers focus on process innovations. The focus of technical process innovation is on the organization's basic operating systems and procedures, which directly influence the nature of the services provided to customers. Process innovations positively impact an organization's overall quality management efforts. However, not all innovation methods will result in cost reductions, but some will allow the firm to market its products at competitive costs (Gil et al., 2018, p. 296; Guday et.al, 2011, P. 48).

Because of two factors, adopting an innovation strategy is probable to result in significant welfare for a company. First, organizations that use innovation can capture a far larger pool of information to produce new intellectual property and, as a result, new goods and/or services. As a result, this method allows for a more rapid and long-term new product/service development process, possibly with greater success rates. Because innovation expands and provides opportunities to gather information and enhance the new product/service development process, it also upsurges innovation and provides opportunities to gain knowledge and improve the new product/service development process itself (Ireland et al., 2018, p.49; Sisodiya, Johnson, & Grégoire, 2014, p. 837).

Second, when a company combines its current knowledge base and product/service development skills with knowledge obtained from external sources, it can benefit from increased efficiency and lower costs. When a company's unique resources and knowledge base are combined with outside knowledge, the company's product/service development capabilities and efficiency levels are enhanced. Furthermore, innovation encourages the more effective use of underused resources, improving business performance (Chesbrough & Garman 2009, p.69; Soto- Acosta, 2016, p. 240).

Innovation strategy directs the ability to manage organizational resources, expertise in analyzing markets and taking opportunities and managing access to information both market and capital. Innovation is one of the keys to building competitive advantage. Innovation in general implies the process of creating, improving and expanding products, process, markets and management in order to improve business performance and competitive advantage in the market. (Avlonitis & Salavou 2007, p. 566).

The Theory of Resource-Based View (RBV) which became famous because of Penrose's (1959) study. In this theory, managerial resources, including their capabilities, are drivers to a firm's growth initiative. This theory is also linked to innovation as several Resource-based view research has sought to analyze the deployment of resources and capabilities that leads to innovative ways of improving performance (DeSarbo et al., 2007, p. 103; Newbert (2007 p. 121).

Correlation between measures

There is a significant relationship between the two variables in which the entrepreneurial orientation comparatively influences the innovation strategy of banana growers. Product and process innovation is necessary for an organization's existence and success. It identifies the impact of entrepreneurial orientation on innovation strategy. The concept of two factors that he mentions, entrepreneurial orientation and decision-making activity, explains the process and practice that leads to creating a new method and product for the organization's survival and development (Peres et al., 2019, p. 94; Wang & Ahmed, 2004, 305).

Although the Entrepreneurial orientation dimension of innovativeness appears to have the latent to define whether a company is innovative, it expresses a company's inclination to support creativity and

research in novel product development, technology edition, and internal processes and processes. EO, on the other hand, stimulates an organization's creativity, fosters a proactive approach to innovation, encourages autonomy, and fosters innovation. As a result, we anticipate that entrepreneurial orientation will influence the entire innovation process (Baker & Sinkula, 2009, p. 443; Lin et al., 2019, p. 117). According to the following study, Entrepreneurial orientation focuses on the market's demand for new products, processes, and management systems by taking various risks in these projects. The inclination of an organization's level of entrepreneurial orientation should be a pioneer in innovative activities, allowing it to offer better products than its primary competitors. Furthermore, entrepreneurial orientation enables businesses to improve their abilities and technical knowledge to focus on providing technical solutions to clients and consumers by developing new products and services or developing existing ones. As a result, entrepreneurial orientation is linked to product innovation in a good way (Lumpkin & Dess, 1996, p. 169; Martin & Javalgi, 2016, p. 14).

Others in the field, such as, think that developing important breakthroughs necessitates a higher level of risk-taking proactivity on the part of businesses. Similarly, argue that EO has a favorable impression on product innovation. Furthermore, prior findings in organizational behavior imply a substantial connection between EO and the number of innovations made by a firm. For example, proactivity and risk-taking were positively related to the number of innovations (Genc et al., 2019, p. 259; Pérez-Luño, Wiklund & Cabrera, 2011, p. 558).

As a strategic organization, an entrepreneurial orientation strategy leads to practical activities on product innovation with a high level of risk. As a result, innovation is a critical activity that may be considerably enhanced by boosting the adoption and implementation of a more entrepreneurial mindset. Furthermore, entrepreneurship has a direct impact on product and process innovation. As a result, a firm's autonomy, competitive aggressiveness, pro-activeness, and readiness to take risks and innovates rise as entrepreneurial orientation increase. Entrepreneurial orientation and performance in terms of innovation can be linked (Atuahene-Gima & Ko, 2001, p. 55; Keh et al., 2017, p. 21; Lumpkin & Dess, 2001, p. 136).

Entrepreneurial orientation can be defined as a business's ability to innovate and adapt to market developments. By inventing or upgrading products, processes, and management systems, innovation can be described as the execution of novel ideas that allow firms to generate value directly and indirectly for customers and consumers. As a result, organizations must constantly identify opportunities provided by the markets in which they participate to adequately satisfy the desires of their clients and consumers, generate novel ideas to make or improve their products, and obtain market data. In this context, entrepreneurial orientation pertains to how businesses can take advantage of the opportunities available to them (Beekman, Steiner & Wasserman, 2012, p. 33; Pett & Wolff, 2016, p. 5).

The preceding literature review emphasized the importance of the banana industry's entrepreneurial orientation and innovation strategy. The research also revealed that the researcher's entrepreneurial orientation significantly influences the banana industry's innovation strategy.

Theoretical framework

This research is anchored on the Theory of Resource-Based View (RBV) which became famous because of Penrose's (1959) study. In this theory, managerial resources, including their capabilities, are drivers to a firm's growth initiative. This theory is also linked to innovation as several Resource-based view research has sought to analyze the deployment of resources and capabilities that leads to innovative ways of improving performance (DeSarbo et al., 2007, p. 103; Newbert (2007 p. 121).

This study is further anchored on the Adaption-Innovation Theory which is founded on the idea that each person is creative and solves problems KAI is chiefly concerned with cognitive style and determining how people solve problems. Kirton (1976) described adaptors as individuals who prefer to "do things better" and innovators as people who prefer to "do things differently." He postulated that understanding the cognitive styles of adaptors and innovators would greatly enhance organizational cultures of change and diversity. Research shows that understanding adaptive and innovative tendencies of team members can greatly enhance the effectiveness of the organization. (Kirton, 1976 p. 622)

Moreover, in this study, the proposition of Covin and Slevin is supported: an entrepreneurial process that involves innovativeness, pro-activeness, and risk-taking is characterized by entrepreneurs or entrepreneurial firms acting entrepreneurially and is used in an effort to defeat their competitors. Entrepreneurial orientation has been suggested as useful for firms striving for renewal and sustained competitiveness. Within the entrepreneurship perspective, the emphasis is on how individual and organizational capabilities work together to facilitate growth. (Covin & Slevin,1989, p. 75)

Furthermore, it is stated that Product and Process Innovation are seen as necessary for a company's survival and success. It identifies the impact of entrepreneurial orientation on innovation strategy. The concept of two factors that he mentions, entrepreneurial orientation and decision-making activity, explains the process and practice that lead to creating a new method and product for the organization's survival and development (Wang and Ahmed, 2004, p. 303).

Conceptual Framework

Presented in Figure 1 is the conceptual framework of the study. The independent variable of this study is the entrepreneurial orientation with the following indicators. Autonomy, in an entrepreneurial sense, refers to the independent action by a team or individual to bring forth a vision or idea and then see it through to completion. Innovativeness represents the tendency of an organization to introduce new products and/or services by means of creativity and experimentation; Risk-taking, reflects a company's propensity to engage in risky operations. Pro-activeness describes a firm's opportunity-seeking and

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forward-looking posture. Competitive aggressiveness refers to the firm's tendency to intensely and directly challenge its competitors to outperform rivals in the marketplace.

The dependent variable is innovation strategy with the following indicators: Product Innovation refers to the introduction of a new or significantly improved good or service in terms of its characteristics or intended uses, and Process Innovation which significantly improved delivery and production methods.

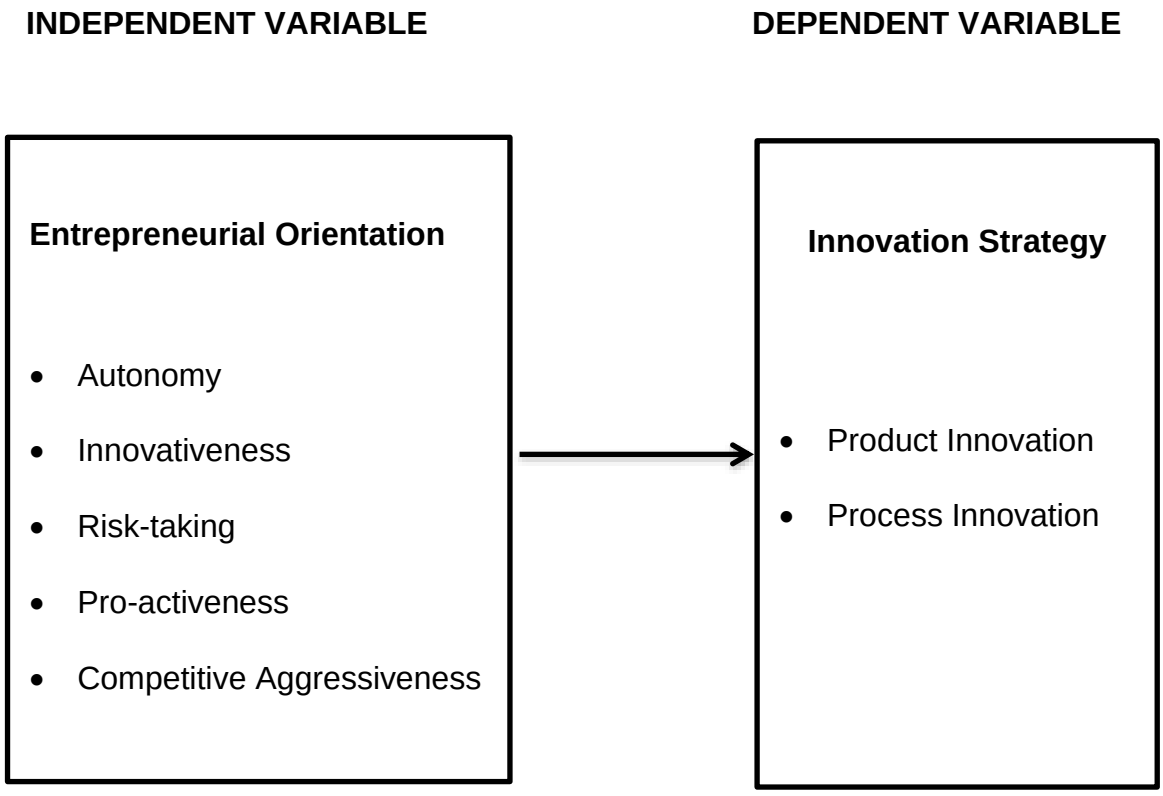

Figure 1. **Conceptual Framework of the Study.**

Significance of the Study

The findings of the study can serve as an important tool to facilitate information relating to the level of entrepreneurial orientation and innovation strategy of banana growers. First, the outcome of this study can provide insights to banana growers since the study was conducted not just to evaluate the influence of entrepreneurial orientation and innovation strategy of the banana growers but also to determine their level of entrepreneurial orientation and innovation strategy. It may motivate them to be innovative and to exhibit pro-activeness.

Second, the result of this study may encourage Sumifru Company to empower its banana growers by allowing them to participate in coming up with training related to product and process innovation. It may help to boost the decision ability of the banana growers.

Third, the results of this research may also benefit the Department of Agriculture as it can provide information and implications of innovation that can be adopted by banana growers to enhance innovation performance with regard to innovation strategies. Finally, the outcomes of this study may provide the future researcher with an initial point on how to intensify the researcher's coverage in terms of the variables enclosed in the study.

Definition of Terms

In order for the reader to have a better understanding on the terminologies used in the study, the following are defined operationally.

Entrepreneurial Orientation – In this study it refers to autonomy, innovativeness, risk taking, pro-activeness and competitive aggressiveness.

Innovation Strategy – In this study refers to the firm setting measured by product innovation and process innovation.

Chapter 2

METHOD

This chapter describes the methodological approach used for the study. The research design, research location, study population, sample size, research equipment, data collection and statistical technique are all described.

Research Design

This study used a correlation technique to conduct a quantitative non-experimental research design. This strategy was applied to the current state of affairs at the time of a certain occurrence. The study employed a descriptive survey research design to give current data on entrepreneurial orientation and its impact on innovation strategy. The researcher plans to collect data from a selected population, and the data acquired will be used to measure the relationship between independent and dependent variable (Mbizi et al., 2013, p.19).

A correlational analysis is used as a statistical technique to determine the strength and weaknesses of the relationship between independent and dependent variables. The correlational analysis is a technique for collecting, interpreting, and explaining quantitative data. The correlational analysis is a technique for analyzing data from multiple variables. Correlation depicts the relationship between two variables to investigate how changes in one variable affect the other.

This survey focuses on the application of quantitative techniques and models in the testing of ideas and hypotheses. Quantitative data are presented in the form of numbers such as statistics and

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percentages. In quantitative research techniques, questions are well defined and to the point of acquiring data from respondents quickly. With the help of SPSS, the researcher analyzes and examines data. This method can be used to confirm the validity of hypotheses.

Research Locale

The findings of this study are detailed in the context of the banana plantation of Compostela, Compostela Valley. Because of the scope and sample size, the findings' general application is limited. Accordingly, Compostela Valley, the first-class province, was prearranged out from the province of Davao del Norte. It became an independent province by virtue of Republic Act No. 8470 on January 30, 1998 and formally ratified through a plebiscite on March 7, 1998. Compostela is a first-class municipality in the province of Davao de Oro, Philippines.

The municipality covers 287.00 square kilometers (110.81 square miles), accounting for 6.41% of the entire area of Davao de Oro. According to the 2015 Census, it has a population of 87,474. This accounted for 11.88% of the total population of Davao de Oro, or 1.79% of the Davao Region's total population.

Presented in Figure 2 is the map of the Philippines consisting of 17 regions in which the municipality of Compostela, province of Davao de Oro is located in Region XI. Moreover, the land productivity of 2,200 hectares banana.

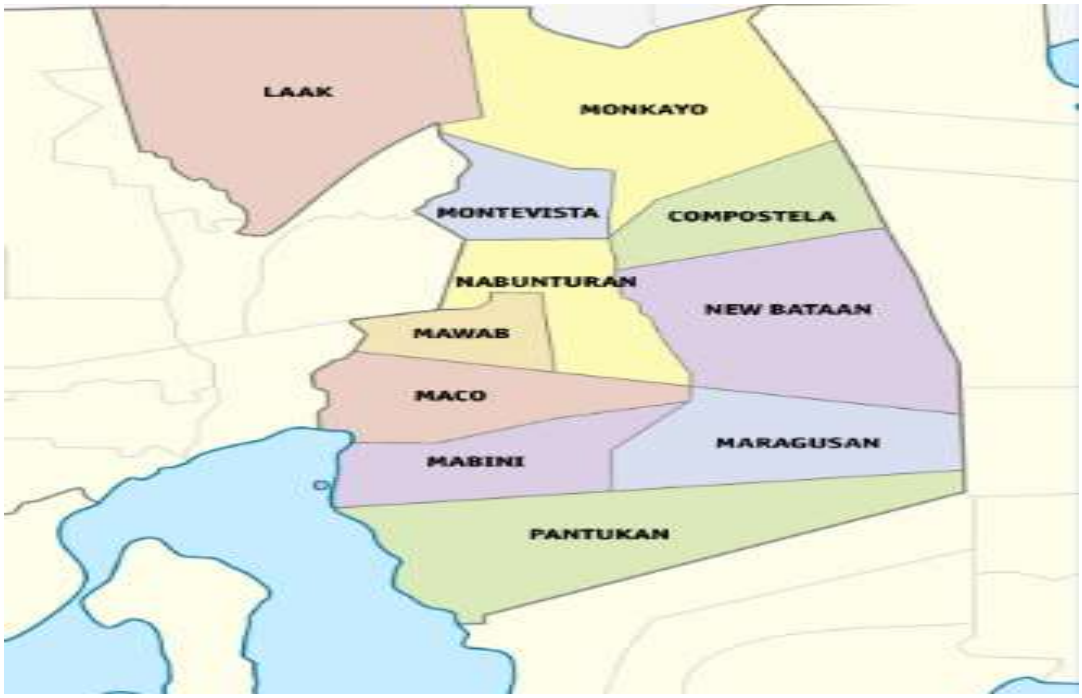

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Figure 2. Map of the Philippines Highlighting Davao de Oro

plantations and 11 packing plants in Davao de Oro. The plantations are run as grower ships, which primarily small land owners enter into to the contract. The respondent's location is located in, Davao de Oro. It is located at the San Jose Compostela and they also have another plantation in Pilar, Compostela, New Alegria, Poblacion Compostela, Tamia, Osmeña, Davao de Oro.

Population and sample

A population refers to a selection of things, services, events and set of people that are selected for a study (Kombo & Tromp, 2006). The populations for the study are the Banana Growers.

Distribution of Respondent

Plantation	Number of Respondent
A	46
B	36
C	44
D	42

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E	34
F	52
G	48
Total	**302**

The selections of the respondents of the study use stratified sampling per plantation with a total of 302 banana growers of Sumifru Philippines Corporation. The distribution of the respondents were as follows: 46 banana growers from Plant A, 36 banana growers from Plant B, 44 banana growers from Plant C, 42 banana growers from Plant D, 34 banana growers from Plant E, 52 banana growers from Plant F, and 48 banana growers from plant G. The total number of banana growers involved in the study is 302.

Since it is impossible and impractical to survey every member of the population, the Slovin's formula was used to get a sample that most represented the population being studied. A total of 800 banana growers were considered respondents.

The respondent was not threatened during the conduct of the study and the researcher observed and followed full ethical standards in the conduct of the study following the study protocol assessment and standardized criteria. They are the ones who will provide the useful information to test the hypothesis of this research. The study was conducted between November to December 2020.

The respondent can withdraw anytime if they feel threatened by the conduct of the study.

Research Instrument

In this study, the instruments employed were two downloaded, adapted, and modified questionnaires in gathering the data, which were validated by the panel of experts and pilot tested with Cronbach Alpha to test the reliability. The first set was used to describe the level of the independent variable, which is entrepreneurial orientation, in terms of autonomy, innovativeness, risk-taking pro-activeness, and competitive aggressiveness. Lumpkin & Dess (1996) cited Venter (2014) for the independent variable.

In evaluating the level of entrepreneurial orientation in banana growers, the five orderable gradations with their respect range of means and description were considered:

Parameter limits used in Entrepreneurial orientation

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Range of mean	Description equivalent	Interpretation
4.20 – 5.00	Very High	This means that the Entrepreneurial orientation in banana growers were very much observed.
3.40 – 4.19	High	This means that the Entrepreneurial Orientation in banana growers was observed.
2.60 – 3.39	Moderate	This means that the Entrepreneurial orientation in banana growers was moderately observed.
1.80 – 2.59	Low	This means that the Entrepreneurial orientation In banana growers was less observed.
1.00 – 1.79	Very Low	This means that the Entrepreneurial orientation in banana growers was not observed.

The second set of downloaded, adapted and modified questionnaire was used to determine the level of innovation strategy in terms of product innovation and process innovation for the dependent variable Njeri (2017) and cited by OECD Oslo Manual (2005).

For Innovation strategy, the following parameter limits will be used

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Range of means	Description equivalent	Interpretation
4.20 – 5.09	Very High	This means that the Innovation strategy in Banana growers was very much observed.
3.40 – 4.19	High	This means that the Innovation strategy in Banana growers was observed.
2.60 – 3.39	Moderate	This means that the Innovation strategy in banana growers was moderately observed.
1.80 – 2.59	Low	This means that the Innovation strategy in Banana growers was less observed.
1.00 – 1.79	Very Low	This means that the Innovation strategy in banana growers was not observed.

Remarkably, the instrument used in the study has undergone the following with an overall rating of 4.20.

Data Collection

After the approval of the panel members, the researcher went through the following steps and procedures in gathering data for the study.

The researcher asked consent from the office of the Manager of the Sumifru Philippines Corporation to conduct a study on the different banana growers of the company of Compostela, Davao de Oro. Upon approval, a letter of endorsement was requested to allow the researcher to administer the survey questionnaire to the study's respondents. The researcher personally delivered the questionnaire and

explained the aim of the research tool. The researcher approached a few of the organization's banana producers and asked them to fill out a questionnaire. This method was chosen because it allows the researcher to motivate respondents to complete the questionnaire and answer any questions they may have.

Furthermore, after the respondents have completed the survey items, the researcher gets the survey questionnaire. Finally, the researcher tabulates and tails all of the data collected from the responder, then subjects it to statistical analysis. The statistical data is examined and interpreted. With the data, conclusions were drawn.

Statistical Tool

The statistical tools that are used for data analysis and interpretation are the following:

Mean. This was used to find out the level of entrepreneurial orientation and innovation strategy of banana growers of Compostela, Davao de Oro.

Pearson (r). This was used in testing the significant relationship between entrepreneurial orientation and innovation strategy of banana growers.

Regression Analysis. This statistical tool was used to determine which domain of entrepreneurial orientation influence on the innovation strategy in banana growers of Compostela, Davao de Oro.

Ethical Consideration

There were considerable ethical issues and concerns that had specific ramifications for this quantitative inquest. Such issues and problems may arise primarily from the methodology involved in this study. The ethical challenges that are pertinent to this research concern the issues of the right to conduct the study, confidentiality, and anonymity.

The researcher observed and followed complete ethical standards in the conduct of the study following the study protocol assessments and standardized criteria, particularly in managing the population and data such as, but not limited to:

Voluntary participation. The banana growers of the selected plant were given the free will to participate without any form of consequence or penalty, or loss of benefits. Therefore, the purpose and benefits of the study will be described and presented to the participating plantation. Then, the rights of the respondents to contribute to the body of knowledge will be carefully considered and adhered to.

Privacy and confidentially. The researcher will keep the respondent's personal information private and with the utmost confidentiality that may be required in the study.

Informed consent process. The research questionnaires are free of technical terms, which make it easier for the respondents to understand. It gives the respondents a clear view of the benefits they may get after the conduct of this study. The researcher's questionnaire will be administered with the consent of the banana grower's management.

Recruitment. The distribution of the respondents shows how the respondents are disseminated. Furthermore, the data collection procedures will be indicated, as will how the questionnaire will be administered and the manner of respondents involved in the study.

Risks. The study does not involve high risks of situations that the respondents may experience in physical, psychological, or socio-economic concerns. The study just involves their field of motivation towards learning.

Benefits. The result of the study benefits the Banana growers of Compostela Valley, particularly the Municipality of Compostela, in terms of acquiring information as to the level of entrepreneurial orientation that could influence the innovation strategy of banana growers.

Plagiarism. The study has no trace or evidence of misrepresentation of someone else's work as their own. The study will undergo plagiarism detectors like Grammarly and Turnitin software.

Fabrication. This study has no trace or evidence of misrepresentation of what has been done. No making up data and results or purposely putting forward conclusions that are not accurate.

Falsification. The study has no trace of purposefully misrepresenting the work to fit a model or theoretical expectation and has no evidence of over claiming or exaggeration.

Conflict of interest (COI). The study has no trace of conflict of interest, for example, the disclosure of COI, which is a set of conditions in which professional judgment concerning primary interests such as participants' welfare or the validity of the research tends to be influenced by a secondary interest such as financial or academic gains or recognition.

Deceit. The study has no trace of misleading the respondents about any potential harm.

Authorship. The researcher of the study was a graduate of Bachelor of Science in Commerce major in Management. The researcher of the study underwent a series of revision papers because of the recommendations made by her adviser. The study also followed the standards of the University of Mindanao Ethics Review Committee for the guidelines of ethical consideration. After their approval, the study undergone pilot testing, and the data collected was interpreted for the consistency of the research questionnaire.

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Chapter 3

RESULTS

Presented in this chapter are the analysis, interpretation and the findings of the data gathered out of the research instruments used in the study to find out what domain would significantly influence the Entrepreneurial Orientation to Innovation strategy of banana growers.

The Standard deviation was between 0.53 and 0.97 which is lower than the average standard deviation for a 5-likert scale. This means that the ratings obtained in this study are close from mean indicating smaller variation of the respondents' responses (Wittink &Bayer, 1994).

Level of Entrepreneurial Orientation

One of the variables used in this study was Entrepreneurial orientation, with the following indicators: Autonomy, Innovativeness, Risk Taking, Pro-activeness and Competitive Aggressiveness. Presented in Table 1 is the summary of mean scores for the indicators of Entrepreneurial orientation of the Banana Plantation, six banana plantation locations: San Jose, Pilar, New Allegria, Poblacion Compostela, Tamia and Osmenia in the municipality of Compostela Davao de Oro in terms of Competitive Aggressiveness, Pro-activeness, Innovativeness, Risk Taking, and Autonomy. The overall mean is 4.17, which means that the entrepreneurial orientation is high with a standard deviation of 0.09. This implies that the entrepreneurial orientation was very much evident and applied by the banana growers. The three indicators with the same mean of 4.20, which are described as very high, are competitive aggressiveness with a standard deviation of 0.17; pro-activeness with a standard deviation of 0.16; and innovativeness with a standard deviation of 0.18. They are followed by risk-taking with a mean of 4.17 with a standard deviation of 0.20; and the least is autonomy with a mean of 4.09 with a standard deviation of 0.18.

Table 1. Level of Innovation Entrepreneurial Orientation

Level of Innovation Entrepreneurial Orientation

Indicators	Mean	SD	Descriptive Equivalent
Competitive aggressiveness	4.20	0.17	Very High
Pro-activeness	4.20	0.16	Very High
Innovativeness	4.20	0.18	Very High

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Risk Taking	4.17	0.20	High
Autonomy	4.09	0.18	High
Overall	**4.17**	**0.09**	**High**

The highest mean score of 4.20 with a standard deviation of 0.17 which describe as very high was gained by *competitive aggressiveness*. The data indicated from appended Table 1.5 reveal that the respondent have observed the following order of importance a mean of 4.25 for *adopt the competitive way of dealing competitors known as undo the competitors posture*, which is described as very high; a mean of 4.24 for *consider competition to be done aggressively and intensively*, which is described as very high*;* a mean of 4.24 for *assume an aggressive posture to combat trends that may threaten our survival or competitive position,* which is described as very high, a mean of 4.21 *for know when it is danger of acting overly aggressive;* which is described as very high; a mean of 4.07 for *identify first who is offering the best value for money then sets standards price that have a competitive advantage* which is described as high.

The second equally highest mean score was gained by *pro-activeness* with a mean of 4.20 and a standard deviation of 0.16, described as very high. The data shown in appended Table 1.4 bring to light that the respondents have observed the following order of importance: a mean of 4.33 for *keep updating on new technique in banana management*, which described as very high; a mean of 4.22 for *initiate action to keep us always competitive in our business*, which described as very high; ; a mean of 4.19 for *continue monitor market trends and identifies future needs of my clients*, which described as high; a mean of 4.16 for *seek looking into new ways of producing quality banana*, which described as high; a mean of 4.09 for *deal with any potential threats of problem before they even emerge* which is described as high.

Thirdly, *Innovativeness* the third equally highest mean of 4.20 with a 4.20 standard deviation of 0.18, described as very high. The data stipulated in appended Table 1.2 unveil the following order of importance observed by the respondents: a mean of 4.22 for *encourages them to manage their own work and have flexibility to resolve problems,* which described as very high; a mean of 4.22 for *consider my workers to perform their task to which they feel comfortable as they follow the work methods*, which described as very high; a mean of 4.21 for *encourage employee to take initiative to do their work without continual supervision,* which described as very high; a mean of 4.21 for *allow my employees to be creative and try different methods to do their job,* which described as very high; a mean of 4.19 for *allow them to make decision without going through elaborate justification and approval procedures,* which described as high

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The fourth highest mean is *risk taking* with a mean of 4.17 and a standard deviation 0.20, which described as high. As appended on table 1.3, the following order of importance were noted by the respondents: a mean of 4.30 for *keep exploring on possible market opportunities,* which described as very high; a mean of 4.20 for *encourage my workers to take calculated risks concerning new ideas;* which described as very high; a mean of 4.15 for *prepares for any uncertainties relating to my business decisions,* which described as high; a mean of 4.15 for *consider "risk taking attitude" as positive attributes for workers in our business,* which described as high; a mean of 4.05 for *take chance of adopting new techno and trends of banana farming,* which described as high.

The lowest mean score of 4.09 with a standard 0.18 described as high, was acquired by *autonomy.* the data presented in Table 1.1 uncover that the respondents have observed the following order of importance: a mean of 4.38 for *encourage employee to take initiative to do their work without continual supervision,* which described as very high; a mean of 4.25 for *encourages them to manage their own work and have flexibility to resolve problems,* which described as very high; a mean of 4.21 for *consider my workers to perform their task to which they feel comfortable as they follow the work methods,* which described as very high; a mean of 4.10 for *allow my employees to be creative and try different methods to do their job,* which described as high; a mean of 3.51 for *allow them to make decision without going through elaborate justification and approval procedures,* which described as high.

Innovation Strategy

Table 2 shows the level of Innovation strategy of banana growers of the six banana plantation: San Jose, Pilar, New Allegria, Poblacion Compostela, Tamia and Osmenia in the municipality of Compostela Davao de Oro in terms of *product innovation* and *process innovation*.

The level of innovation strategy among banana growers in Compostela Davao de Oro. Data show that the overall mean is 4.20 with a descriptive equivalent of very high with a standard deviation of 0.11. Among the two indicators, *Product innovation* gets a very higher mean of 4.22 with a standard deviation of 0.15, followed by Process Innovation gets a high mean of 4.18 with a standard deviation of 0.15. This indicates that the level of innovation strategy among banana growers in Compostela Davao de Oro is very much observed.

Table 2. Level of Innovation Strategy

Indicators	Mean	SD	Descriptive Equivalent
Product Innovation	4.22	0.15	Very High
Process Innovation	4.18	0.15	High
Overall	**4.20**	**0.11**	**Very High**

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The highest mean score of 4.22 with a standard deviation of 0.15, which is described as very high was gained by *product innovation*. The data shown in appended Table 2.1 reveal that the respondents have observed the following order of importance: a mean of 4.52 for *adopting integrated pest management to improve the quality of the product,* which described as very high*; a mean of 4.27 for very high for using organic fertilizer while keeping costs low,* which described as very high*; a mean of 4.20 for developing new products with chemical-free bananas to improve customer satisfaction,* which described as very high*; a mean of 4.20 for adopting an eco-friendly practice of green manuring to improve product quality,* which described as very high*; a mean of* 4.15 for *adopt an agronomy practice to reduce costs,* which described as high; a mean of *4.13 for introducing new varieties of banana to improve customer satisfaction,* which described as high; a mean of 4.13 for *use of systemic fungicide in combination with mineral oil;* and a mean of *4.12 for integrating disease management, particularly through preventive practices,* which described as high.

The lowest mean score of 4.18 with a standard deviation of 0.15 described as high was acquired by *process innovation*. The data presented in Table 2.2 uncover that the respondents have observed the following order of importance: a mean of 4.36 for *use cableways to deliver the banana's to the packing plant,* which described as very high; a mean of 4.29 for *adopts standardized storage and handling procedures of the product,* which described as very high; a mean of 4.25 for *adopt machine sprayer to improve the growth of the plant,* which described as very high; a mean of 4.24 for *on delivery speed by early harvesting in the morning to avoid destruction,* which described as very high; a mean of 4.22 for *consider the ratio of population of labor cost cutting and prosper in the daily operation,* which described as very high; a mean of 4.21 for *decrease of chances of disease by using tissue culture seedlings,* which described as very high; a mean of 4.20 for *decreased variable cost by using organic pesticide,* which described as very high; a mean of 3. 67 for *imports advance quality control machine to detect the metal content of the banana,* which described as high.

Significance on the Relationships of the Domain of Entrepreneurial Orientation to Innovation Strategy

Table 3 shows that the one indicator specifically pro-activeness, *illustrates* that there is a significant relationship between entrepreneurial orientation and innovation strategy. The r-value for *pro-activeness* is 0.051* with a p-value of 0.004*, that shows a positive correlation at 0.0228 while the four indicators namely: *autonomy, innovativeness, risk taking* and competitive aggressiveness has no correlation. The r-value for autonomy is 0.033 with a p-value of 0.282; the r-value for innovativeness is 0.084 with a p-value of 0.074; the r-value for risk-taking is 0.046 with a p-value of 0.211; and lastly, the r-value of competitive aggressiveness is 0.010 with a p-value of 0.434. Thus, the null hypotheses, which states that there is no significant relationship between entrepreneurial orientation and innovation strategy and does not affect nor influence the banana growers in Compostela Davao de Oro.

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Table 3. *Significance on the Relationships between the Domains of Entrepreneurial Orientation to Innovation Strategy on Banana Growers*

Independent Variable	Dependent Variable	r-value	r^2	p-value	Decision
Autonomy		0.033	0.0011	0.282	Do not Reject Ho
Innovativeness		0.084	0.0071	0.074	Do not Reject Ho
Risk taking	**Innovation strategy**	0.046	0.0021	0.211	Do not Reject Ho
Pro-activeness		0.051*	0.0228	0.004	Reject Ho
Competitive aggressiveness		0.010	0.0001	0.434	Do not Reject Ho

*p<0.0

Regression Analysis on the influence the domain of Entrepreneurial Orientation of Innovation strategy on banana growers

Table 4 shows the regression analysis on the level of entrepreneurial orientation and the level of innovation strategy on banana growers. The table shows the f-ratio of 2.078 and p value of 0.068 which is greater than the 0.05 level of significance. This allows the researcher to do not reject the null hypothesis, which states that "there is only one domain in entrepreneurial orientation that significantly influences the innovation strategy of the Banana Growers. The r-value of 0.184 with an overall p-value of 0.068 indicates that there is no relationship between the level of entrepreneurial orientation and the level of innovation strategy for banana growers.

Table 4. ***Regression Analysis on the influence of Entrepreneurial Orientation to Innovation Strategy on Banana Growers***

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Independent Variables	Unstandardized Coefficients		Standardized Coefficients	T-Value	P-Value	Decision
	B	SE	Beta			
(Constant)	4.288	0.262				
Autonomy	0.018	0.035	0.033	0.531	0.596	Do not Reject Ho
Innovativeness	0.046	0.036	0.076	1.298	0.195	Do not Reject Ho
Risk Taking	0.028	0.031	0.053	0.899	0.369	Do not Reject Ho
Pro-activeness	0.107	0.039	- 0.159*	- 2.753	0.006	Reject Ho
Competitive aggressiveness	0.007	0.038	-0.011	0.191	0.849	Do not

Dependent Variable: Innovation Strategy

*p<0.05 R=0.184 R^2 =0.034 F-ratio = 2.078 P-value = 0.068

Further, as presented in the Table 4, the first hypothesis, which states that there is no significant relationship between entrepreneurial orientation and innovation strategy on banana growers, is not rejected.

The indicator *pro-activeness* has a beta of -0.159* and corresponding p-value of -2.753* which also means that there is a significant influence that predicts on the innovation strategy since their probability is -2.753 lesser than 0.05 level of significance. On the other hand, there are four indicators that the p-value is greater than 0.05 level of significance hence, not significantly predicts the innovation strategy namely; *autonomy*, *innovativeness*, *risk taking and competitive aggressiveness*. The indicator of *autonomy* has a beta of 0.033 and a corresponding p-value of 0.596. The indicator of *innovativeness* has a beta of 0.076 and a corresponding p-value of 0.195. The indicator of *risk*-taking has a beta of 0.053 and a corresponding p-value of 0.899. The last indicator of *competitive aggressiveness* has a

beta of -0.011 and a corresponding p-value of 0.849. Further, these also mean that the four indicators have no significant influence that predicts on innovation strategy among banana growers. Hence, the only focus and majority of attention of banana growers is more evident on *pro-activeness* and not much focus, and it is seldom observed on *autonomy, innovativeness, risk-taking, and competitive aggression.*

Further, as presented in Table 4, the second hypothesis that states that no domain in the entrepreneurial orientation significantly predicts the innovation strategy of banana growers is rejected on one indicator, pro-activeness. While the four indicators are shown in Table 4 to answer the second hypothesis that states that there is no domain in the entrepreneurial orientation that significantly predicts the innovation strategy of banana growers is not rejected.

Chapter 4

DISCUSSION

The segment present further understanding and related work to the results of the study drawn conclusion, and the relevant and valuable recommendations offered by the researcher based on the obtained results.

Level of Entrepreneurial Orientation

In the preceding chapter, it was found that the level of Entrepreneurial orientation in the banana growers was high. This is due to high-level ratings given by the respondents in competitive aggressiveness, pro-activeness, innovativeness, risk-taking, and autonomy, which were very much experienced and evident. Results also show that competitive aggressiveness, pro-activeness, and innovativeness are the most significant elements in establishing entrepreneurial orientation. The high level of entrepreneurial orientation of banana growers is due to the high rating given by the respondents in each indicator. This further implies that the banana growers were able to:

In support of the findings of Kraus et al. (2018, p. 446) that entrepreneurial orientation in terms of competitive aggressiveness, which was also very highly observed, Competitive aggressiveness is defined as a company's desire to outdo its industry competitors, as seen by a strong offensive stance and a strong response to competitor moves to gain or enhance position. Firms that exhibit this conduct are more likely to take a hostile stance toward competitors to outperform competitors who threaten their survival or market position in the industry. The willingness to be eccentric rather than rely on standard competing techniques is a sign of a company's aggressiveness. As a result, Competitive Aggressiveness can be defined as the motivation to face the intense acute competition provided by competitors. It is the company's strategic response to market rivalry to maintain its competitive market position.

Moreover, as stated to the study of Nazdrol et al. (2017 p. 21) that entrepreneurial orientation in terms of pro-activeness was also observed very high, Pro-activeness pertains to a forward-thinking, opportunity-seeking attitude that includes forecasting future demand and offering new products and services ahead of the competition. The greatest way to make the most of the market opportunity is to

be the first to act, and pro-activeness refers to the efforts that go into being the first to act. If a company sees a market opportunity and takes advantage of it as soon as possible, it can generate significant profits and gain brand awareness. Firms that are proactive in anticipating future requirements and actively exploring new opportunities are generally the first to join new markets.

This congruent to the study Jeihoony et al. (2019, p. 48) that innovativeness is one of the most important tools in a company's growth strategy is its ability to innovate in order to expand into new areas, raise market share, and gain a competitive edge. Companies have begun to recognize the necessity of innovation as a result of the rapidly varying technologies and fierce worldwide competition, which swiftly erodes the value-added of current products and services. Thus, innovations are an important part of company plans for a variety of reasons, including applying more productive production methods, performing better in the market, pursuing a positive reputation in the eyes of customers, and gaining a sustainable competitive advantage.

Furthermore, it was presented in the study conducted by Covin & Wales (2019, p. 43) that entrepreneurial orientation in terms of risk taking was also observed high. Risk taking aids in the formation of a culture of tolerance and risk in an organization; it also encourages experimentation, which speeds up the attainment, learning, and absorbing of new external technology, resulting in improved technology innovation performance. In terms of the market, it represents a company's desire and tendency to assume the risk of entering a new market, and it is directly linked to a company's risk preference. When a company cannot foresee the future market, it tends to behave proactively and seeks, discovers, and exploits new chances to gain a competitive edge and reap the rewards of innovation.

The study is parallel to the research of Mantok et al. (2019, p. 4) that entrepreneurial orientation in terms of autonomy is an essential condition for customer orientation, which refers to their ability to be creative, to generate new ideas, to communicate openly, and to be focused on customer contact and orientation. Flexibility and creativity are both driven by autonomy. Flexibility allows businesses to respond to client needs more quickly, while creativity fosters innovation and originality. Furthermore, when solutions are required, it allows for discretionary action, hence in small businesses.

Level of Innovation Strategy

In the preceding chapter, it was found that the level of innovative strategy in the banana growers was very high. This implied that the innovation strategy in the institution is very much experienced by banana growers. The very high level of innovation strategy of banana growers is due to the very high rating given by the respondents on each indicator. The two indicators of product innovation got the highest mean, which is the most significant element in establishing an innovation strategy. This further implies that the banana growers were able to get the necessary resources to do their job, facilitating their work in the company.

This is congruent to the study of Gupta & Batra (2016, p. 663) Product innovation can help a company keep its competitive advantage. Exploiting the business's competencies and looking for something new

are two ways to innovate successfully. If a company does not take chances or is unwilling to change, it will not be able to innovate. One factor that can spur creativity is a risk. Furthermore, taking risks and being proactive will aid in the development of new ideas. All of these aspects are part of a company's entrepreneurial orientation.

Moreover, in consonance to the study of Scafuto et al. (2018 p. 26) Innovation strategy in terms of process innovation was also observed high. Process innovation pertains to enhancing the efficacy and efficiency of a company's operations. As a result, process innovation can be considered a means of improvement or a new internal procedure for achieving the firm's highest goals and performance. Changes in equipment procedures, higher operational efficiency, and decreased production costs are all examples of process innovation.

Significance on the Relationship of Entrepreneurial Orientation and Innovation Strategy

The test of the relationship between the two variables involved in the study proves that there was no significant relationship between entrepreneurial orientation and innovation strategy among banana growers, implying that there is no direct correlation between the existing entrepreneurial orientation and innovation strategy that the institution has.

Presented the study conducted by Fadda (2018, p.4) revealed that Entrepreneurial orientation positively and significantly influences Innovation strategy in terms of pro-activeness. Pro-activeness anticipates competitors' moves and ensures first-mover advantage; it is a key determinant of indifference. As a driver of rareness, innovation necessitates proactive behavior. Small businesses that differentiate themselves and emphasize innovation have a strong incentive to anticipate the competition to achieve long-term success.

This is supported by the study of Bloch & Bhattacharya (2016, p.193) which stated that in the technological aspect, risk-taking refers to an organization's propensity to invest resources in technological innovation strategies or initiatives that have a high risk of failure and unpredictability, and it's linked to risk preferences and attitudes toward new technologies.

Singh (2020, p. 25) stated that it's a fundamental reality that entrepreneurs are more likely to be overconfident, which lowers their risk perception. And, because these effects may also apply to the organizational layer, excessively entrepreneurial conduct may lead to too hazardous product innovation ventures that result in technological or market failure. This means that there is no significant correlation between entrepreneurial orientation and innovation strategy.

Regression Analysis of Entrepreneurial Orientation and Innovation Strategy among Banana Growers

The test of significance was done further using the regression analysis model, which shows that the only domain that influences the relationship between entrepreneurial orientation and innovation strategy is pro-activeness. While the other indicators of entrepreneurial orientation have no significant

influence on predicts innovation strategy among the banana growers of Compostela Davao de Oro. The finding is congruent with Ayalew & Zeleke (2018) also stated that a strong entrepreneurial attitude could backfire, resulting in less product innovation success under shaky leadership. Technological unpredictability, in particular, has the potential to convert proactive and risk-taking activity into a risky game.

Therefore, the null hypothesis in the study is not rejected. Results of the current study underscore the importance of entrepreneurial orientation to innovation strategy**.** Further, these also mean that the four indicators have no significant influence on predicting the innovation strategy of banana growers.

CONCLUSION

Based on the findings, the following conclusions are drawn: the overall level of entrepreneurial orientation is high. The findings revealed that the entrepreneurial orientation was very high for the indicators, which are competitive aggressiveness, pro-activeness, and innovativeness, but high for risk-taking and autonomy. The study also finds a very high level of innovation strategy with indicators, namely, product innovation and process innovation. Furthermore, the study finds that only pro-activeness has a significant relationship between entrepreneurial orientation and innovation strategy. The findings confirm according to Rita et al. (2018, p. 49) that pro-activeness is a mindset of anticipating and acting on future market desires and needs, resulting in a first-mover advantage over competitors. The other indicators, namely innovativeness, competitive aggressiveness, autonomy, and risk-taking, have no influence on innovation strategy. The entrepreneurial orientation indicator has no influence on the innovation strategy. Thus, only one domain of entrepreneurial orientation predicts the innovation strategy.

Therefore, the findings of this study confirmed the anchored proposition of Singh (2020, p. 25) stating that it is a basic reality that entrepreneurial people are more likely to be overconfident, which lowers their risk perception. Overly entrepreneurial conduct may drive organizations into overly hazardous product innovation activities that result in technological or market failure, as these effects may also be valid for the organizational layer. In other words, there is no significant correlation between entrepreneurial orientation and innovation strategy.

RECOMMENDATION

Premised on the preceding findings and conclusions, the following recommendations are offered by the researcher.

Entrepreneurial orientation is high, including its indicators: innovativeness, risk-taking, pro-activeness, and competitive aggressiveness. This means that the banana growers experienced considering these results. The researchers recommend further strengthening it by an effective program like setting a production and operation management training to boost the banana growers. Furthermore, autonomy resulted lowest among the itemized responses. It is recommended that the banana growers allow the farming family to manage their work and solve challenges with flexibility but with

management supervision, which would positively contribute to the increasing level of entrepreneurial orientation.

Likewise, the above study emphasizes the importance of innovation strategy and various aspects like product innovation and process innovation that significantly affect it. The outcome of this study finds a very high level of innovation strategy, although; process innovation resulted lowest among the indicator responses. Based on the results, it is recommended that banana growers undergo an enhancement program on Cultivation Best Practices Training on proper handling of banana production using updated technology, particularly on the cropping system. It may reduce the cost of cultivation and improve product quality.

Furthermore, the insignificant relationship between entrepreneurial orientation and innovation strategy on banana growers' engagement, that entrepreneurial orientation, and innovations strategy implausibly may not affect the level of banana growers' engagement. With that, the entrepreneurial orientation of the institution is independent of the innovation strategy. Hence, it is safe to say that entrepreneurial orientation is not the only factor that can affect the innovation strategy of an organization. Another evaluation tool with the different indicators may be used for further studies as it may have different results and implications.

As a result of the study's findings, only one domain in entrepreneurial orientation significantly affected the innovation strategy. The pro-activeness can be helpful in the banana growers that it can adopt an opportunity-seeking perspective and skim the market ahead of competitors. Thus, the researcher recommended further research because both independent and dependent variables have various parameters and dimensions, and the use of different indicators that could affect the innovation strategy may be conducted.

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