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Research paper

Entrepreneurial Capability and Ecosystem Synergy: A Strategic Alignment

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Abstract

The study aims to identify whether there is a relationship between an entrepreneur's capability and the entrepreneurial ecosystem to develop a good strategy that would help an entrepreneur with decision-making. This would be beneficial to for them to realize the requirement to become successful entrepreneurs and for Batangas Province to realize the perfect environment for these entrepreneurs. The researcher employed a descriptive research method to collect the necessary data and information addressing the status of the study. The total number of respondents comprised 395 registered entrepreneurs from Batangas Province. To analyze the data and address the research objectives, various statistical tools were utilized, including Frequency/Percentage, Weighted Mean, One-Way Analysis of Variance (ANOVA), Brown-Forsythe test for non-homogeneous variances, and Pearson correlation. The findings revealed that most respondents were female, above 45 years old, married, and held a college degree. Regarding business profiles, most of the entrepreneurs operated establishments classified under the Wholesale and Retail Trade sector, employed 1–3 workers, and had been in operation for over 10 years. The assessment of entrepreneurial capability, measured in terms of sensing, selecting, shaping, and synchronizing, received a verbal interpretation of "Capable." Meanwhile, the entrepreneurial ecosystem, evaluated through dimensions such as policy, markets, human capital, support systems, culture, and finance, were rated as "favorable." A significant relationship was found between the entrepreneurial ecosystem and entrepreneurial capability, particularly in the aspect of sensing. A model was developed based on the results of the study.

Keywords: *MSMEs, Entrepreneur's Capability, Entrepreneurial Ecosystem, Entrepreneurship, Entrepreneur*

1. Introduction

Online businesses have become vital to the global economy, serving as key drivers of economic growth in our country, especially through job creation. Entrepreneurs continually seek innovative strategies to promote their brands and reach potential customers. Even before the pandemic, digital platforms provided an effective means for businesses to engage with existing clients and attract new ones in today's increasingly digital world.

According to The World Bank (2022), micro, small, and medium enterprises (MSMEs) play a major role in most economies, most especially for developing countries. It is most businesses worldwide which employ people globally and have a substantial impact on the growth of the international economy. MSME represents about 90% of businesses and more than 50% of employment worldwide. By 2030, 600 million jobs are predicted to be required to accommodate the expanding global workforce. Because of this, MSME is given high priority by governments globally.

About this, here in the Philippines, as part of the developing countries, it is evident that MSME has a great impact on our economy. President Ferdinand R. Marcos, Jr. (2022) reaffirmed that there will be government's full commitment to work together with all stakeholders to ensure that MSMEs are protected and given ample opportunities, not only to recover from these extraordinary times but to grow and thrive in this modern age, during the MSME Summit 2022. Furthermore, the MSME Development Council, which is run by the DTI and is working to enhance five important areas—the business climate, financial access, management and labor, access to technology and innovation, and market access—has the support of the President.

Fostering entrepreneurship has become a core component of economic development in cities and countries around the world. The predominant metaphor for fostering entrepreneurship as an economic development strategy is the entrepreneurial ecosystem. A growing focus of policymakers in emerging and developed economies is the promotion of entrepreneurial ecosystems (EE), the inter-connected system of forces that generate and sustain regional entrepreneurship. Despite intense interest in entrepreneurial ecosystems, the topic is under-theorized. Studies draw attention to the positive effects of entrepreneurial ecosystems on the creation and functioning of early-stage ventures; however, the specific mechanisms through which ecosystems influence entrepreneurs are not clear. To address this issue, we build a dynamic capabilities theory to create a theoretical framework that identifies forces through which ecosystems influence entrepreneurship. (Fayard, 2018). Daniel Isenberg, a professor of entrepreneurship, has made significant contributions to the study of startup ecosystems.

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He developed the "Entrepreneurship Ecosystem Model," which helps identify the components necessary for fostering a thriving environment for startups. His model has been widely adopted and discussed by policymakers, entrepreneurs, and researchers alike. According to Isenberg, this approach potentially 'replaces' or becomes a 'precondition' for the successful deployment of cluster strategies, innovation systems, knowledge economy, or national competitiveness policies (Isenberg, 2011). This was used by the researcher to measure the Entrepreneur's Ecosystem

Entrepreneurial ecosystem (EE) research has contributed to reshaping entrepreneurial policy and practice. Despite significant translational efforts, the gap between theory and actionable policy seems to be widening. While EEs possess self-organizing and emergent properties, policy interventions are a crucial part of a complex socioeconomic system and impact the development of EEs. EE research can and should place more emphasis on providing actionable insights and supporting the translation of EE research into policy. (Sophia Hess, 2025)

Moreover, there are other factors to be considered to foster entrepreneurs, it is their entrepreneurial capability (EC). EC requires entrepreneurs to view opportunity realization in ways that reach beyond the transformation and exploitation of internal capabilities to the dynamic creation and shaping of new knowledge and conjecture, key sources of variety and innovativeness. According to Seggie (2014), entrepreneurs should be focusing on developing the essential dynamic capabilities required of them to stay ahead of the curve and be able to react quickly to the future as it unravels. As it is, a rapidly changing external environment that is almost impossible to predict is observed. In this regard, firms and entrepreneurs must find a way to address these environments. This, however, requires entrepreneurs to change mental models and paradigms to be successful in this dynamic environment.

The implications of this study extend beyond the boundaries of Batangas Province. They contribute to the broader discourse on how ecosystem-based strategies can support entrepreneurship in developing economies, where fostering local enterprises is crucial for economic resilience, job creation, and inclusive growth.

2. Objectives

This study is conducted to link the capabilities of the entrepreneurs and the entrepreneurial ecosystem in the province of Batangas.

Specifically, this study aims to determine:

1. How may entrepreneurial capability be assessed in terms of the following dimensions:
1.1 Sensing.
1.2 Selecting.
1.3 Shaping, and
1.4 Synchronizing?
2. How may the entrepreneurial ecosystem be assessed in terms of:
2.1 Policy.
2.2 Markets.
2.3 Human Capital.
2.4 Supports.
2.5 Culture; and
2.6 Finance?
3. Is there a significant relationship between the entrepreneurial ecosystem and entrepreneurial capability?
4. What model may be developed?

3. Methodology

Descriptive-correlation design is a research approach that aims to describe variables without making causal claims. In this study, the researchers collected data on entrepreneurs' capability and entrepreneurial ecosystem variables from a sample of respondents. They then analyzed the data using statistical techniques to determine the nature and strength of the correlation between these variables.

The respondents of the study were the owners of the registered enterprise in Batangas province. As provided by the DTI Provincial Office, there are 29,482 registered business establishments in Batangas Province. Using the Rao soft calculator, a sample size of 395 respondents was determined with 5% margin of error and a 95% confidence level. A simple random sampling technique was utilized to identify the businesses to be included in the sample. Researchers obtained a list of names registered in the Business Permit and Licensing Office (BPLO) and assigned a unique number to each name. Using a spreadsheet, the researchers randomly selected numbers to determine the final sample of respondents. This sampling design ensured that each online business had an equal chance of being selected, reducing potential bias and increasing the generalizability of the study's findings.

The data gathering instrument used in this study was a questionnaire consisting of three parts. The first part aimed to gather the profile information about the respondents. The second part of the questionnaire aimed to capture the description of the entrepreneur's capability. The third part of the questionnaire aimed to capture the assessment of the entrepreneurial ecosystem. These high Cronbach's alpha values indicate strong internal consistency and reliability of the questionnaire items, suggesting that the items accurately measure the intended constructs. Statistical treatments include frequency, percentage, mean, ANOVA, Pearson r, and Kruskal-Wallis Test were employed to analyze the data.

4. Results and findings

This portion presents the result of the primary data gathered after appropriate statistical tools have been applied. Likewise, it also presents the analyses of significant findings and compares them with facts found in literature and related studies.

4.1 Assessment of the Entrepreneur's Capability

Table 1: entrepreneurs' capability of the entrepreneurs in terms of sensing

	Weighted Mean	Verbal Interpretation
1. Seeing possibilities within and beyond the company.	3.31	Capable
2. Seeing or envisioning market and technological opportunities.	3.28	Capable
3. Sensing trends and technology.	3.20	Capable
4. Sensing for the right partners to establish a linkage.	3.11	Capable
5. Sensing the environmental change.	3.25	Capable
6. Sensing events and trends in my market environment.	3.24	Capable
7. Seeing the future and developing the products and processes to meet ever-changing markets.	3.35	Capable
Composite Mean	3.25	Capable

The composite means of 3.25 indicated that the respondents are capable in terms of sensing. They can see the future and developing the products and processes to meet ever-changing markets, and they are capable of seeing possibilities within and beyond the company. The study of Ella (2016) shows that entrepreneurial orientation and product innovativeness have a positive and significant effect on SMEs' performance but market sensing capability and speed to market have no significant effect. Market sensing capability has a significant effect on speed to market and product innovativeness success, but entrepreneurial orientation has no significant effect on product innovativeness success.

Table 2: The entrepreneurs' capability of the Entrepreneurs in terms of selecting

	Weighted Mean	Verbal Interpretation
1. Identifying potential opportunities.	3.31	Capable
2. Choosing what potential opportunities to focus on and to pursue.	3.28	Capable
3. Bringing out new ideas from existing ideas.	3.30	Capable
4. Analyzing situations logically and comprehensively for formulating a strategy.	3.26	Capable
5. Selecting the right information before decision-making.	3.31	Capable
6. Identifying good practices through a process that screens and evaluates existing practices	3.25	Capable
7. Selecting new capabilities needed by an organization	3.24	Capable
8. Making sure that the right choices are made.	3.33	Capable
Composite Mean	3.28	Capable

Results revealed in Table 2 show that entrepreneurs in terms of selecting are capable, with a composite mean of 3.28. Entrepreneurs can make sure that the right choices are made. One of the burdens of being an entrepreneur is having to make tough decisions. But since opportunities often come disguised as decisions, it's something business owners must get used to if they want to experience growth. According to Wadichar et al. (2024), entrepreneurs in developing economies often face structural and cognitive challenges that can hinder the quality of their decision-making. Their systematic review highlights that overconfidence bias may lead entrepreneurs to overestimate their ability to make the right choices, particularly in environments where access to accurate and timely information is limited. Furthermore, the uneven distribution of support systems such as mentorship, advisory services, and training can compromise entrepreneurs' ability to critically evaluate and prioritize opportunities. In this light, while entrepreneurs may perceive themselves as capable, these perceptions may be shaped by biases or constrained by the ecosystem's limitations.

Table 3: entrepreneurs' capability of the Entrepreneurs in terms of shaping

	Weighted Mean	Verbal Interpretation
1. Arranging the sequence of possible sources of inputs/ resources.	3.26	Capable
2. Building a connection with other institutions	3.19	Capable
3. Ensuring people and systems are in place.	3.27	Capable
4. Guiding and supporting issues related to the sourcing of raw materials and supplies.	3.22	Capable
5. Coaching and building a team, so that it is more effective at achieving the vision.	3.17	Capable
6. Creating opportunities for new uses or usage.	3.18	Capable
7. Communicating the benefits of new products to a variety of stakeholders.	3.13	Capable
8. Gaining support from a variety of stakeholders.	3.13	Capable
Composite Mean	3.19	Capable

In terms of shaping, Table 3 shows that entrepreneurs are capable with a 3.19 composite means. Effective mentoring is also vital to your business success. It's through mentoring that your most valued employees can realize their full potential and take their skills to the next level. Great talent is hard to find and harder to keep — and mentoring improves employee retention, because individuals who are growing and developing on the job are less likely to leave. It can be deduced from the results that the entrepreneur was able to describe the valuable contributions of a venture and create the design of a business model that can be sustained by a competitive advantage. The venture team had created a road map (strategy) that can, with a good chance, effectively lead to the commercialization of the new product or service in the marketplace. Finally, the venture team built an innovation strategy that fosters the sustainable advantage of the technology venture (http://web.stanford.edu/group/techventures/resources/dor29222_ch01.pdf)

Table 4: Entrepreneur's Capability of the Respondents in terms of Synchronizing

	Weighted Mean	Verbal Interpretation
1. Deep understanding of the firm's culture and those of the larger ecosystem.	3.25	Capable
2. Learning through different methods.	3.24	Capable
3. Integrating and standardizing business processes.	3.27	Capable
4. Organizing processes of in-house learning and knowledge development	3.22	Capable
5. Bringing together the skills needed to do the job.	3.24	Capable
6. Building an organization's human capital, then motivating individuals to take concerted action.	3.23	Capable
Composite Mean	3.24	Capable

The data in Table 4 reveals that entrepreneurs are capable in terms of synchronizing with a composite mean of 3.24. For your company to prosper, you must figure out how to build a team that works well together. That can be a difficult task. After all, creating a team means

bringing together people with different skillsets and varied personalities to work towards a common goal--a complex undertaking. Realize that just as your team members have different skills, they probably respond to different incentives, so rotating through the types of incentives you provide or allowing for flexibility is key to the success of an incentive. If a start-up is going to commercialize an invention based on academic research, having relevant scientists on the founder team enhances the chances of success (Fuller and Rothaermel, 2012). A star scientist can be highly beneficial for an entrepreneurial startup, but the relationships between the star and the rest of the team need to be managed carefully (Kehoe and Tzabbar, 2015).

4.2 Assessment of Entrepreneurial Ecosystem

This part shows the assessment of entrepreneurs of their entrepreneurial ecosystem.

Table 5: Assessment of the Respondents on the Entrepreneurial Ecosystem in terms of Policy

	Weighted Mean	Verbal Interpretation
1. Government policies consistently favor business establishments.	3.04	Favorable
2. The support for business establishment is a high priority for national policy.	2.99	Favorable
3. The support for business establishment is a high priority for local policy.	3.01	Favorable
4. A business establishment can get most of the required permits and licenses in about a week.	2.75	Favorable
5. The amount of taxes is NOT a burden for a business establishment.	2.55	Favorable
6. Taxes and other government regulations are applied to business establishments predictably and consistently.	2.74	Favorable
Composite Mean	2.85	Favorable

On the assessment of the entrepreneurial ecosystem in terms of policy, Table 6 shows that it is favorable. They agree that Government policies consistently favor business establishments with the highest weighted mean of 3.14. This aligns with Isenberg's (2011) assertion that enabling policy frameworks can foster productive ecosystems by removing bureaucratic barriers and promoting opportunity creation. The Philippines' emphasis on MSMEs, as reaffirmed by President Marcos (2022), underlines the nation's commitment to entrepreneurship as a development strategy. However, literature by Fayard (2018) and your empirical findings indicate that while policy plays a supportive role, it must operate in tandem with market dynamics, cultural norms, and human capital investments to enhance entrepreneurial capabilities.

Table 6: Assessment of the Respondents on the Entrepreneurial Ecosystem in terms of Markets

	Weighted Mean	Verbal Interpretation
1. The markets for consumer goods and services changed from year to year.	3.07	Favorable
2. There is an availability of market information.	2.99	Favorable
3. There is access to International Markets.	2.91	Favorable
4. The market for business-to-business goods and services changes from year to year.	3.01	Favorable
5. Business establishments can easily enter new markets.	2.94	Favorable
6. Business establishments can afford the cost of market entry.	2.97	Favorable
7. Business establishments can enter markets without being unfairly blocked by established firms.	2.96	Favorable
Composite Mean	2.98	Favorable

Entrepreneurial Ecosystem in terms of Market shows a 2.98 composite meaning with a verbal interpretation of Favorable. Markets for finance and labor are equally important because they can provide the necessary capital and skills needed for innovation. Access to international markets may be affected by tariff and non-tariff barriers (e.g., quotas, administrative entry procedures) and other legal conditions that limit or encourage foreign firms' entry. Similarly, barriers to accessing national markets are often in place. Agyapong et al. (2024) show direct links between market dynamism and SME innovation. Zawislak et al. (2012, 2018) underscore that in such environments, transaction and managerial capabilities are equally pivotal for commercial success.

Table 7: Assessment of the Respondents on the Entrepreneurial Ecosystem in terms of Human Capital

	Weighted Mean	Verbal Interpretation
1. Colleges and universities have enough courses and programs on entrepreneurship.	3.08	Favorable
2. Skilled and Unskilled workers are available in the area.	3.04	Favorable
3. There are immediate applicants whenever a vacant position is posted.	2.97	Favorable
4. College graduates meet the needs of the industry.	3.04	Favorable
5. There are business schools in the province.	3.13	Favorable
Composite Mean	3.05	Favorable

In terms of Human Capital, the table shows a 3.05 composite meaning with a verbal interpretation of Favorable. The study of Perez et. Al 2015 shows that graduate students and industry representatives differ in their assessment of the relevance of business graduate programs with reference to basic/foundation/core courses and electives, co-curricular activities, seminars and trainings attended, and teaching strategies. An Industry-Based Curriculum for Master of Business Administration was developed to address the needs of the industries and the academy as well.

Entrepreneurs' assessment on the entrepreneurial ecosystem in terms of support has a composite mean of 2.94 with a verbal interpretation of favorable. There are service providers of the necessary of every business establishment. However, at times, there are a lot of interruptions with regards to these services, and it causes bottlenecks and delays, most especially to the business establishment that electricity is the lifeblood of the operation. There are times when there will be no production because of a power interruption. Further supporting this view, Goswami et al. (2021) emphasized the rise of accelerators and incubators globally, noting their effectiveness in offering not just funding, but also mentorship, access to networks, and knowledge transfer elements often underappreciated in early-stage ecosystems. These findings are also echoed in Cohen et al. (2019), who highlight how mentorship-driven and entrepreneur-led programs create environments for collaborative learning and opportunity discovery.

Table 8: Assessment of the Respondents on the Entrepreneurial Ecosystem in terms of Support

	Weighted Mean	Verbal Interpretation
1. A wide range of government assistance for business establishments can be obtained through contact with a single agency.	2.84	Favorable
2. Science parks and business incubators provide effective support for business establishments.	2.80	Favorable
3. There are adequate numbers of government programs for business establishments.	2.84	Favorable
4. The people working for the government agencies are competent and effective in supporting business establishments.	2.88	Favorable
5. Almost anyone who needs help from a government program for a new and growing business can find what they need.	2.86	Favorable
6. Government programs aimed at supporting business establishments are effective.	2.96	Favorable
7. The physical infrastructure (i.e., roads, utilities, communications, and waste disposal) provides good support for business establishments.	3.05	Favorable
8. It is not too expensive for business establishments to get good access to communications (phone, Internet, etc.).	3.01	Favorable
9. A business establishment can get good access to communications (telephone, internet, etc.) in about a week.	3.07	Favorable
10. Business establishments can afford the cost of basic utilities (i.e., gas, water, electricity, and sewer)	3.08	Favorable
Composite Mean	2.94	Favorable

Table 9: Assessment of the Respondents on the Entrepreneurial Ecosystem in terms of Culture

	Weighted Mean	Verbal Interpretation
1. Culture is highly supportive of individual success achieved through own personal efforts.	2.97	Favorable
2. The culture emphasizes self-sufficiency, autonomy, and personal initiative.	2.99	Favorable
3. Culture encourages entrepreneurial risk-taking.	3.05	Favorable
4. Culture encourages creativity and innovation.	3.11	Favorable
5. Culture emphasizes the responsibility that the individual (rather than the collective) has for managing his or her own life.	3.04	Favorable
Composite Mean	3.03	Favorable

The assessment of the entrepreneurial ecosystem in terms of culture got a composite mean of 3.03 and a verbal interpretation of favorable. Culture has an important role in the development process of capability, and it's hard to change. Many micro enterprises have a command and control culture. Owners control everything in the organization, and employees do what the owners say. This prevents micro companies from developing capabilities such as learning and innovation, and continues improving capabilities. To create a better organizational culture, we suggest that micro enterprises pay particular attention to empowerment, reward and recognition, idea generation, continuous learning, and open communication routines. Thai and Mai (2023) conducted a systematic literature review and concluded that entrepreneurial culture plays a foundational role in shaping behavior, particularly through institutional theory and social cognitive frameworks. They assert that cultures emphasizing autonomy, personal responsibility, and innovation are more likely to produce successful entrepreneurs. Similarly, a 2024 meta-analysis in Small Business Economics confirmed that cultural factors—such as societal support for entrepreneurs, tolerance for failure, and the presence of entrepreneurial role models—have a statistically significant positive impact on entrepreneurial activity.

Table 10: Assessment of the Respondents on the Entrepreneurial Ecosystem in terms of Finance

	Weighted Mean	Verbal Interpretation
1. There is sufficient funding available for business establishments.	2.83	Favorable
2. There are sufficient government subsidies available for business establishments.	2.77	Favorable
3. There is sufficient funding available from private individuals (other than founders) for business establishments.	2.73	Favorable
4. There are sufficient angel investors available for business establishments.	2.67	Favorable
5. There is not much collateral needed in availing of loans.	2.56	Favorable
Composite Mean	2.71	Favorable

Data reveals that entrepreneurs, assessing the entrepreneurial ecosystem in terms of finance, got a composite mean of 2.71, and favorable as verbal interpretation. All start-up businesses have difficulties with finance, and especially innovative companies, since they appear riskier and could put investment at risk if the enterprise fails. The capital investment required by innovative start-ups may be higher than that required by non-innovative start-ups, since the former typically need to invest in R&D and in other innovation-related activities. Access to finance is a key driver in the creation, survival, and growth of innovative new ventures. Lack of finance typically prevents new ventures from investing in innovative projects, improving their productivity, financing their growth, covering working capital requirements and meeting market demand.

4.3 Relationship between entrepreneurial ecosystem and entrepreneurial capability

Table 11: Relationship between the entrepreneurial ecosystem and capabilities of the entrepreneurs (sensing)

Entrepreneurial ecosystem	p-values	Computed r-values	Decision on Ho	Verbal Interpretation
Policy	.005	.14	Reject	Significant
Finance	.000	.23	Reject	Significant
Culture	.000	.32	Reject	Significant
Support	.000	.24	Reject	Significant
Human Capital	.000	.26	Reject	Significant
Market	.000	.33	Reject	Significant

Table 11 shows the test for the significant relationship between the entrepreneurial ecosystem and the sensing capability of the entrepreneur. Looking at their p-values, it was found that all the components of the entrepreneurial ecosystem have a significant relationship to sensing.

Sensing involves identifying opportunities and threats in the environment. The strength of the relationships is: Market (r = .33) and Culture (r = .32) show the strongest relationships with sensing capability, suggesting that dynamic market conditions and a supportive cultural environment greatly influence entrepreneurs' ability to perceive opportunities. Finance (r = .23), Support (r = .24), and Human Capital (r = .26) also have moderate relationships, indicating that financial resources, institutional support, and skilled people moderately help entrepreneurs sense opportunities. Policy (r = .14) shows the weakest relationship, implying government policies have the least, though still significant, effect on sensing.

Table 12: Relationship between the entrepreneurial ecosystem and capabilities of the entrepreneurs (selecting)

Entrepreneurial ecosystem	p-values	Computed r-values	Decision on Ho	Verbal Interpretation
Policy	.002	.15	Reject	Significant
Finance	.004	.15	Reject	Significant
Culture	.000	.36	Reject	Significant
Support	.006	.14	Reject	Significant
Human Capital	.000	.22	Reject	Significant
Market	.000	.29	Reject	Significant

Table 12 shows the result of the test for the significant relationship between the entrepreneurial ecosystem and the selecting capability of the entrepreneur. Looking at their p-values, it was found that all the components of the entrepreneurial ecosystem have a significant relationship to selection. Selecting refers to prioritizing and choosing the best opportunities. Culture (r = .36) and Market (r = .29) have the strongest impact, suggesting cultural norms and market demands play a key role in how entrepreneurs choose among opportunities. Human Capital (r = .22) and Finance (r = .15) indicate a moderate effect. Policy (r = .15) and Support (r = .14) show relatively weak but still significant influence.

Table 13: Relationship between the entrepreneurial ecosystem and capabilities of the entrepreneurs (shaping)

Entrepreneurial ecosystem	p-values	Computed r-values	Decision on Ho	Verbal Interpretation
Policy	.000	.20	Reject	Significant
Finance	.000	.26	Reject	Significant
Culture	.000	.29	Reject	Significant
Support	.000	.30	Reject	Significant
Human Capital	.000	.32	Reject	Significant
Market	.000	.32	Reject	Significant

Table 13 shows the result of the test for the significant relationship between the entrepreneurial ecosystem and the selection capability of the entrepreneur. Looking at their p-values, it was found that all of the components of the entrepreneurial ecosystem have a significant relationship in shaping. Shaping means the entrepreneur's ability to mold or influence the business environment. Human Capital and Market (r = .32) and Support (r = .30) show relatively strong relationships, highlighting that skilled individuals, market conditions, and external support play major roles in helping entrepreneurs shape their ventures. Culture (r = .29) and Finance (r = .26) follow closely. Policy (r = .20) is again the weakest, though still meaningful.

Table 14: Relationship between the entrepreneurial ecosystem and capabilities of the entrepreneurs (synchronizing)

Entrepreneurial ecosystem	p-values	Computed r-values	Decision on Ho	Verbal Interpretation
Policy	.000	.26	Reject	Significant
Finance	.000	.34	Reject	Significant
Culture	.000	.37	Reject	Significant
Support	.000	.39	Reject	Significant
Human Capital	.000	.35	Reject	Significant
Market	.000	.36	Reject	Significant

Table 14 shows the result of the test for the significant relationship between the entrepreneurial ecosystem and the synchronizing capability of the entrepreneur. Like the other components of entrepreneurial capability, it was found out that all the components of entrepreneurial ecosystems have a significant relationship to synchronizing. This is based on their p-values. Synchronizing is about aligning resources and activities to ensure effective execution. Support (r = .39), Culture (r = .37), and Human Capital (r = .35) show the strongest relationships. This implies that effective synchronization requires a strong support network, a conducive culture, and capable people. Finance (r = .34) and Policy (r = .26) also have a solid impact.

4.4 Proposed Model

After the derivation of the dimensions of the entrepreneurial capability through factor analysis, the researcher used multiple regression to derive the new model of entrepreneurial capability as shown in Figure 1. The model will be known as the IHM Entrepreneurial Ecosystem Drivers of Entrepreneurial Capability. This was derived from the initials of the researcher, and since the model shows the components of the entrepreneurial ecosystem that affect or drive the capability of the entrepreneur.

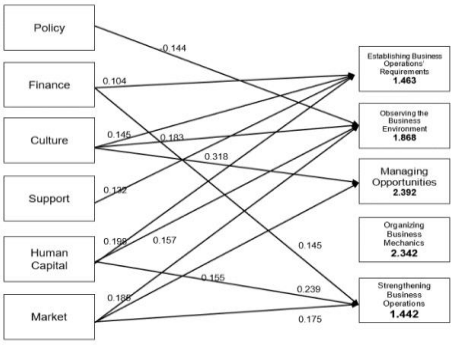


Fig. 1: IHM Entrepreneurial Ecosystem Drivers of Entrepreneurial Capability

To better explain the model, the researcher presented the econometric model, which is the basis of Figure 1. There are five (5) econometric models as the output of the regression analysis.

Equation 1 Establishing = 1.463 + 0.104finance + 0.145culture + 0.132support + 0.198human + .39775

R^2 = 0.241 *F-value = 20.481* *p-value = .000^b*

Equation 1 presented the drivers of entrepreneurial capability in terms of establishing the business operation's requirements. Based on the model, it has an F-value of 20.481 and a p-value of 0.000, which is less than the critical value at 5 percent. This implies that the whole model is significant. On the other hand, the model has an R-squared value of 0.241, which means that 24.1 percent of the variation in the assessment of the respondents in their capability of establishing business operation's requirement can be explained by the changes in the components of the entrepreneurial ecosystem.

Analyzing the components of equation 1, it has a constant value or intercept equal to 1.463. This means that if the value of the assessment of the respondents towards entrepreneurial ecosystem is equal to zero (0), the entrepreneurial capability of the respondents in terms of establishing business operation's requirement is equal to 1.463 and can be verbally interpreted as highly capable. Meanwhile, finance has a coefficient value equal to 0.104, which means that as the assessment of the respondents in the entrepreneurial ecosystem in terms of finance increases by one (1) point, their assessment of their capability of establishing business operations' requirements will increase by 0.104 points. Similarly, culture was also found out also as the driver of entrepreneurial capability in terms of establishing business operations' requirements. As shown in equation 1, it has a coefficient of 0.145, which connotes that as the respondents' assessment towards culture increases by one (1) point, the respondents' assessment regarding their capability of establishing business operations' requirements also increases by 0.145 points. Another component of the entrepreneurial ecosystem that drives entrepreneurial capability in terms of establishing business operations' requirements is the support. It has a coefficient equal to 0.132, which implies that as the respondents' assessment towards support ecosystem is favorable by one (1) point, their assessment regarding the capability of establishing business operations' requirements will also increase by 0.132. Lastly, the human capital component of the ecosystem was found to also drive entrepreneurial capability in terms of establishing business operations' requirements. It has a coefficient of 0.198, which implies that as the respondents' assessment towards human capital increases by one (1) point, their assessment of their capability in terms of establishing business operations' requirements will be driven up by 0.198 points.

The model shows that the drivers of capability in terms of establishing business operations' requirements are finance, culture, support, and human capital in a positive aspect. Furthermore, the model proposed that to enhance the capability of the entrepreneur, entrepreneurial actors such as private individual, organization and government need to provide harmonious facilitation of money and other financial transaction which is favorable to the entrepreneur, establish a culture that promotes individual development, provide a support and program to enhance human capital from the government and private sector which is very evident to the entrepreneur.

Equation 2 Observing = 1.868 – 0.144policy + 0.183culture + 0.157human + 0.185market + 0.47142

R^2= 0.146 *F-value = 11.092* *p-value = .000^b*

Equation 2 depicts drivers of entrepreneurial capability in terms of observing the business environment. Based on the model, it has an F-value of 11.092 and a p-value of 0.000. The p-value is less than the critical value at 5 percent, which connotes that the whole model is significant. Furthermore, the model has an R-squared value of 0.146, which means that 14.6 percent of the variation in the assessment of the respondents in their capability of observing the business environment can be explained by the changes in the components of the entrepreneurial ecosystem.

Examining the specific components of equation 2, it has a constant value, or intercept equals to 1.868 and manifested that if the value of the assessment of the respondents towards entrepreneurial ecosystem is equal to zero (0), the entrepreneurial capability of the respondents in terms of observing business environment is equal to 1.868 and has a verbal interpretation of highly not capable. On the other hand, policy has a coefficient value equal to -0.144, which means that as the assessment of the respondents in the entrepreneurial ecosystem in terms of policy by one (1) point, their assessment about their capability observing the business environment will decrease by 0.144 points. In contrast, culture was also found out also as a drivers of entrepreneurial capability in terms of observing the business environment. As shown in equation 2, it has a coefficient of 0.183, which connotes that as the respondents' assessment towards culture increases by one (1) point, the respondents' assessment regarding their capability of observing the business environment also increases by 0.145 points. Another component of the entrepreneurial ecosystem that drives entrepreneurial capability in terms of observing the business environment is the human capital. It has a coefficient equal to 0.157, which infers that as the respondents' assessment towards human capital ecosystem is favorable by one (1) point, their assessment regarding the capability of observing the business environment will also increase by 0.157. Lastly, the market component of the ecosystem found out that it also drives entrepreneurial capability in terms of observing the business environment. It has a coefficient of 0.185, which denotes that as the respondents' assessment of market increases by one (1) point, their assessment of their capability in terms of observing the business environment will be driven up by 0.185 points.

The model suggests that the policy is a negative driver of observing the business environment capability of the entrepreneur, thus government needs to maintain the status of its policy towards entrepreneurial activity. This may be since policy hinders information about what

is happening in the business environment. Most entrepreneurs merely rely on the available policy implemented by the government; thus, observing business environment capability tends to be driven down. Furthermore, the model suggests that entrepreneurs must not merely rely on what the government may provide and do to their enterprise, since there are a lot of environments that may also affect their business operations. In addition, both the government and the private sector must enhance the culture, human capital, and market to enhance the capability of entrepreneurs in terms of observing the business environment.

Equation 3 Managing = 2.392 + 0.318culture + 0.155market + 0.45304

R^2= .117 *F-value = 8.589* *p-value = .000^b*

Equation 3 shows the drivers of entrepreneurial capability in terms of managing opportunities. Based on the model, it has an F-value of 8.589 and a p-value of 0.000. Since the p-value is less than the critical value at 5 percent, the researcher rejected the null hypothesis that the whole model is not significant. Thus, it can be said that the whole model is significant, and it is appropriate to interpret the specific components. Moreover, the model has an R-squared value of 0.117, which means that 11.7 percent of the variation in the assessment of the respondents in their capability of managing opportunities can be explained by the changes in the components of the entrepreneurial ecosystem.

Exploring the specific components of equation 3, it has a constant value, or intercept equals to 2.392 and exhibited that if the value of the assessment of the respondents towards entrepreneurial ecosystem is equal to zero (0), the entrepreneurial capability of the respondents in terms of managing opportunities is equal to 2.392 and has a verbal interpretation of capable. More so, culture has a coefficient value equal to 0.318, which means that as the assessment of the respondents in the entrepreneurial ecosystem in terms of culture by one (1) point, their assessment about their capability managing opportunities will also increase by 0.318 points. In addition, it was found that the market is also a driver of entrepreneurial capability in terms of managing opportunities. Presented in equation 3, it has a coefficient of 0.155, which presages that as the respondents' assessment towards market increases by one (1) point, the respondents' assessment regarding their capability of managing opportunities also increases by 0.155 points.

The model suggests that to drive entrepreneurial capability in terms of managing opportunity upward, the government and private sector need to enhance or make the culture and market more favorable. Thus, they must provide a program that provides a venue for the product to be bought and transacted, and at the same time, make the culture more individual growth-oriented.

Equation 4 Organizing = 2.342 + 0.49981 or simply Organizing = 2.84181

R^2= .0259[a] *F-value* = 4.667 *p-value = .000^b*

Equation 4 shows the drivers of entrepreneurial capability in terms of organizing business mechanics. Based on the model, it has an F-value of 4.667 and a p-value of 0.000. Since the p-value is less than the critical value at 5 percent, the researcher rejected the null hypothesis that the whole model is not significant. Thus, it can be inferred that the whole model is significant, and it is appropriate to interpret the specific components. Moreover, the model has an R-squared value of 0.0259, which means that 2.59 percent of the variation in the assessment of the respondents in their capability of organizing business mechanics can be explained by the changes in the components of entrepreneurial ecosystems.

However, analyzing the specific components of the model, it was found that none of the entrepreneurial ecosystem components have a significant effect on the entrepreneurial capability in terms of organizing business mechanics. Thus, the model suggests that entrepreneurial ecosystems do not drive capability in terms of organizing business mechanics, and they are already capable. This is based on the constant value presented in equation 4, which is equal to 2.84181.

Equation 5 Strengthening = 1.442 + 0.145finance + 0.239human + 0.175market + .42155

*R^2= 0.*219 *F-value* = 18.184 *p-value = .000^b*

Equation 4.7.5 presents the drivers of entrepreneurial capability in terms of strengthening business operations. Based on the model, it has an F-value of 18.184 and a p-value of 0.000, which is less than the critical value at 5 percent. This implies that the whole model is significant. On the other hand, the model has an R-squared value of 0.219, which means that 21.9 percent of the variation in the assessment of the respondents in their capability of strengthening business operations can be explained by the changes in the components of entrepreneurial ecosystems.

Analyzing the components of equation 5, it has a constant value or intercept equal to 1.442. This means that if the value of the assessment of the respondents towards entrepreneurial ecosystem is equal to zero (0), the entrepreneurial capability of the respondents in terms of strengthening business operations is equal to 1.442 and can be verbally interpreted as not capable. Meanwhile, finance has a coefficient value equal to 0.145, which means that as the assessment of the respondents in the entrepreneurial ecosystem in terms of finance increases by one (1) point, their assessment of their capability of strengthening business operations will increase by 0.145 points. Similarly, the human capital component of the ecosystem was found to it also drive entrepreneurial capability in terms of strengthening business operations. It has a coefficient of 0.239, which implies that as the respondents' assessment towards human capital increases by one (1) point, their assessment of their capability in terms of strengthening business operations will be driven up by 0.239 points. Lastly, another component of the entrepreneurial ecosystem that drives entrepreneurial capability in terms of strengthening business operations is the market. It has a coefficient equal to 0.175, which implies that as the respondents' assessment towards the market ecosystem is favorable by one (1) point, their assessment regarding the capability of strengthening business operations will also increase by 0.175.

The model proposed that to enhance the capability of the entrepreneur in terms of strengthening business operations, entrepreneurial actors such as private individual, organization and government need to provide harmonious facilitation of money and other financial transaction which is favorable to the entrepreneur, provide a program to enhance human capital from the government and private sector which is very evident to the entrepreneur and market that will be the venue of the products to be bought and transacted.

5. Conclusions

This study underscores the strong interplay between entrepreneurial capability and the entrepreneurial ecosystem in Batangas Province. Entrepreneurs in the region exhibit a commendable level of capability across the four key dimensions, sensing, selecting, shaping, and synchronizing, reflecting their readiness to recognize, evaluate, and act upon business opportunities in a dynamic environment.

Simultaneously, the entrepreneurial ecosystem was assessed as favorable, indicating that the external conditions, including policy, markets, human capital, support systems, culture, and finance, are conducive to entrepreneurial growth. Significantly, the study confirms that each dimension of entrepreneurial capability is positively influenced by various elements of the entrepreneurial ecosystem. This relationship reinforces the notion that a supportive environment enhances an entrepreneur's capacity to navigate and respond to market demands and operational challenges effectively. The proposed IHM Entrepreneurial Ecosystem Drivers of Entrepreneurial Capability Model offers a strategic framework that aligns specific ecosystem components with entrepreneurial capabilities. It serves as a valuable tool for stakeholders' government agencies, academic institutions, private sector actors, and development organizations to design targeted interventions that empower entrepreneurs and stimulate regional economic development. Ultimately, fostering entrepreneurship is not solely about individual initiative but also about cultivating an ecosystem that nurtures innovation, resilience, and sustainable growth. The findings of this research contribute to a deeper understanding of how strategic alignment between internal capabilities and external conditions can catalyze entrepreneurial success.

6. Recommendations

Based on the findings and conclusions of the study, the following recommendations are proposed:

1. **Enhancing Entrepreneurial Education and Capacity Building** is vital to nurturing a generation of capable entrepreneurs. For schools and universities, this involves integrating entrepreneurship across all academic levels, starting as early as elementary school. Curriculum content should be tailored to include experiential learning, innovation challenges, and business simulations to foster dynamic entrepreneurial capabilities. In higher education institutions, partnerships with local businesses should be developed to offer mentorship programs, internships, and entrepreneurial incubators that strengthen students' real-world business competencies.
2. **Strengthening Local Entrepreneurial Ecosystem Support** plays a crucial role in facilitating entrepreneurial growth. Local Government Units (LGUs) are encouraged to establish centralized support hubs or "one-stop shops" that provide access to essential services such as permits, business advisory assistance, funding, and market linkages. National agencies, such as the Department of Trade and Industry (DTI) and the Department of Science and Technology (DOST), should expand and streamline their programs to ensure that entrepreneurs receive timely and efficient access to financial support, technical training, and innovation resources.
3. **Promoting a Culture of Entrepreneurship** can inspire resilience and innovation across communities. For communities and media, this means organizing regular forums, entrepreneurship fairs, and campaigns that showcase success stories of local entrepreneurs. These efforts aim to foster a culture of inspiration, creativity, and persistence. Civil society organizations and non-governmental organizations (NGOs) can contribute by launching community-based entrepreneurship programs that emphasize values formation, risk-taking, and self-reliance, particularly in underserved or rural areas.
4. **Improving Access to Finance** is essential for enabling MSMEs and startups to grow and sustain their operations. Financial institutions should design inclusive lending programs with relaxed collateral requirements, ensuring broader access to funding. Moreover, increasing awareness of funding options such as angel investors and venture capital can empower entrepreneurs. The government is encouraged to boost subsidy programs and facilitate access to credit through government-backed financing windows specifically targeted at high-potential ventures.
5. **Developing Human Capital and Skill Alignment** is imperative to meet the evolving needs of entrepreneurial ventures. Workforce development agencies should offer training and certification programs that align with current industry demands. Upskilling and reskilling initiatives will ensure that both skilled and unskilled workers can contribute meaningfully to entrepreneurship. Employers and entrepreneurs should also invest in their teams by providing coaching, mentoring, and performance-based incentives that enhance productivity and innovation.
6. **Leveraging Market Opportunities and Infrastructure** will support business expansion and competitiveness. Policymakers and planners should prioritize investments in infrastructure, such as logistics, communication networks, and utilities, especially in rural and high-potential economic zones. Entrepreneurs, on their part, must harness the power of digital platforms and e-commerce to access wider markets both locally and globally. Continuous innovation in products and services is essential to remain competitive in today's fast-changing market landscape.
7. **Use the IHM Model** as a tool for developing countries to strengthen their support for entrepreneurs. The model highlights the key ecosystem factors—finance, culture, support, human capital, and market access—that influence an entrepreneur's ability to succeed. Governments, schools, and private sectors can apply this model to design programs that improve training, funding access, business networks, and a positive mindset toward entrepreneurship. By using the IHM Model, developing countries can create a more supportive environment that helps entrepreneurs grow their businesses and contribute to economic development.

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