



Status of E-Commerce as Correlated to the Development of Plant Community

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Abstract

During the time of the pandemic in 2020, it is notable that the trend of plants flourished. However, at present, there is a decline in demand. The Municipality of Bay, Province of Laguna, is recognized as the "Garden Capital of Laguna," brimming with various plants. The local plant community represents the largest community in the Bay. Thus, the Local Government Unit of Bay acknowledges the necessity to empower and develop this plant community. This research aimed to establish a correlation between the status of e-commerce and the sustainable development of the plant community. The study utilized a descriptive research design and employed a self-made questionnaire to gather information and data from the entire population of respondents. The data collected from the survey were tallied and interpreted. The results revealed that ornamental plants significantly correlate with all the factors of sustainable development of plant communities. Furthermore, both home gardening and plant parenting showed a significant correlation with all the factors of sustainable development of plant community. Among the types of e-commerce, business-to-consumer (B2C) was the only one found to have a significant correlation with the factors of sustainable plant community development. Facebook exhibited greater significance concerning the factors of sustainable development of plant community compared to online selling websites/apps.

Keywords *E-commerce, Home Gardening, Local Community, Sustainable Development*

INTRODUCTION

The power of web and electronic enablement has significantly diminished geographical boundaries for enterprises and businesses. With the rapid development of the internet, technologies, and the integration of the digital world, the dynamics of global business competition are undergoing a transformation. Traditional manual operations, such as physical store setups and local competition, are being replaced by online platforms. According to recent research conducted by [Flow Commerce Inc. \(2022\)](#), over the past six months, 76% of online consumers in the top eight global markets have made cross-border purchases. It is projected that global sales of online goods and services will increase by 9.7% in 2022 ([Cramer-Flood, 2022](#)). The country's e-commerce industry sales reached \$17 billion in 2021, boosted significantly by a monthly consumer base of 73 million. It is expected to experience an annual growth rate of 17% through 2025 (Trade.gov, 2022). Prominent e-commerce platforms like Shopee and Lazada offer a wide range of products, including essential items, household goods, beauty products, electronics, and furniture.

The restrictions imposed by the pandemic have given rise to a new way of shopping for necessities through online purchases. Even local farmers and retailers in the provinces have started marketing and selling their products online. In the Municipality of Bay, local gardeners have turned to e-commerce to promote and sell their plants via social media. However, in the year

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2022, wherein lockdown and protocols have been gradually lifted, the popularity of home gardening and plant parenting has been slowly decreasing, leading to a decrease in its sales as well. Given the benefits of e-commerce during the pandemic, it can be perceived as a tool to be utilized by the government to provide support to local communities, especially in promoting their livelihood. However, there has been a lack of study on the implementation and adoption of e-commerce and its types, especially government-to-business (G2B) and government-to-consumer (G2C), to the local community, especially in provinces in the Philippines.

LITERATURE REVIEW

Ornamental plants are in high demand due to their visual appeal and ability to create an aesthetically pleasing environment. According to [Shakya \(2016\)](#), the significant influence of herbal plants and their products on the evolution of medical science is well known. In the Philippines, Herbal plants are commonly used for home treatments of minor ailments such as colds, coughs, and flu.

According to [Rivas and Biana \(2022\)](#), the practice of plant parenting is becoming more and more common on social media in the Philippines. Furthermore, [Coloma \(2022\)](#) claims that as individuals turned to gardening as a stress-relieving hobby, the appeal of decorative plants increased throughout the epidemic. In the statement by [Arambulo \(2020\)](#), it is evident that plant motherhood has become a global phenomenon, with over 650,000 tagged posts on Instagram and various relevant hashtags on the platform alone. [Davies \(2018\)](#) concludes that plants and plant parenthood have taken over the internet. The terms "*plantito*" or "*plantita*," derived from the Filipino words "*tito*" (uncle) or "*tita*" (aunt), were coined by netizens and are now widely used in social media ([Sunga & Advincula, 2019](#)). These terms are used to examine how Filipinos' engagement in home gardening has evolved due to the pandemic. Support groups for plant enthusiasts can be found on Facebook and Twitter, and social media platforms have made online plant sales and purchases more accessible.

According to [Gupta \(2014\)](#), B2C e-commerce provides businesses with cost savings by eliminating the need for a physical distribution network. [Cruz et al. \(2022\)](#) note that the global pandemic has prompted a surge in online businesses, with online vendors using social media and e-commerce platforms to market their products. [Kang et al. \(2021\)](#) further emphasize that the COVID-19 pandemic will have a lasting impact on the prevalence of B2C online commerce across various sectors of the economy and society. In [Deng and Zhang \(2014\)](#), it is revealed that a country's economic growth positively influences both B2B and B2C e-commerce. Services have been recognized as "essential" in the current situation ([Pantano et al., 2020](#)).

The COVID-19 pandemic has led to increased adoption of B2B e-commerce by end-users, as noted by [Global Information, Inc. \(2022\)](#). According to [Gupta \(2014\)](#), B2B e-commerce is expected to continue growing faster than the B2C segment, accounting for approximately 80% of all e-commerce. Hence, registering your business has its benefits, including protection, penalty avoidance, and the ability to engage in B2B transactions ([Feliciano, 2017](#)). According to [Alghamdi, Drew, and Alkhalaf \(2012\)](#), government support for businesses and consumers is the main factor influencing the growth of online retailing.

The popularity of social networking sites (SNSs) has skyrocketed in the past decade. For example, according to data from the [Statista Research Department \(2023\)](#), Facebook is the most popular social network globally. Recently, Facebook introduced a new feature called Facebook Marketplace, which allows users to buy and sell various products. [Rauniar et al. \(2014\)](#) suggest that Facebook is a successful platform for marketers to promote goods and establish brands. In the Philippines, gardening-related searches and the number of gardening-related social media groups increased from February to May 2020, as reported by [Montefrio \(2020\)](#). According to the

study by [Bhattacharyya & Bose \(2020\)](#), Facebook likes have an impact on users' decisions to buy and recommend products, showing that they not only spur more consumer interest in the product but also help to nurture it.

Due to the convenience and accessibility of online shopping, Filipino customers prefer it. Everything is available online, and products can be delivered to their doorsteps. Particularly during the pandemic, people prefer to shop online to minimize the risk of contracting COVID-19 by going outside. The in-store retail experience has become less accessible due to increased health concerns, leading to a significant increase in online shopping during the COVID-19 pandemic ([Pantano et al., 2020](#)). Searches for "purchase plants online" surged when retailers and retail gardens closed their doors during the initial wave of COVID-19 ([Winter, 2021](#)). [Fonseka et al. \(2022\)](#) revealed that e-commerce adoption has had a significant impact on the business performance of SMEs.

According to [Sutawa \(2012\)](#), community empowerment is key to successful tourism development as it actively involves the local area in preserving its culture and natural environment. [Ahmad and Talib \(2015\)](#) highlight the importance of community involvement and empowerment in strengthening local capacity, improving living conditions, reducing poverty, and fostering development at the grassroots level. Southeast Asian countries have recognized tourism as a crucial industry for long-term economic success ([Minh & Bach, 2019](#)). [Shahzad et al. \(2017\)](#) highlight tourism as one of the industries with rapid development potential, capable of supporting economic recovery and growth.

In the Philippines, it is important to note that all legally operating businesses, unless exempted, are required to apply for and obtain a business permit, also known as the Mayor's Permit. This permit serves as a legal document granting businesses the authority to operate and conduct business within a specific jurisdiction ([CloudCfo, 2021](#)). SMEs play a significant role in sustainable economic growth by generating employment and promoting entrepreneurship ([Erdirin & Ozkaya, 2020](#)). Small businesses also contribute to local economies by fostering development, innovation, and job opportunities within their communities ([Brown, 2017](#)).

RESEARCH METHOD

The researcher employed a quantitative-descriptive method in this study. Self-made questionnaires were used as instruments to gather data from the organization of plant growers, sellers, and small-scale businesses in Bay, Laguna. A total of 250 respondents were selected. The respondents were asked to indicate their level of agreement on a four-point scale. To qualify the indicators, the following will be utilized:

Table 1. The Interpretation of The Computed Mean

Scale	Range	Result	Interpretation
4	3.26 – 4.00	Strongly Agree	Very High
3	2.51 – 3.25	Agree	High
2	1.76 – 2.50	Disagree	Low
1	1.00 – 1.75	Strongly Disagree	Very Low

FINDINGS AND DISCUSSION

Table 2 indicates that most of the members of the SMB offer ornamental plants. The study highlights that ornamental plants are highly favored by plant enthusiasts and have gained significant popularity during the pandemic, thanks to the trend of home gardening. According to

Coloma (2022), the popularity of ornamental plants has grown during the pandemic as people have devoted themselves to gardening as a stress-relieving hobby.

Table 2. Status of the Plants Available in the Municipality of Bay, Laguna in terms of Ornamental Plants

Statements	Mean	SD	Remarks	Verbal Interpretation
1. I offer ornamental Plants for sale.	3.72	0.52	Strongly Agree	Very High
2. My customers prefer ornamental plants.	3.55	0.59	Strongly Agree	Very High
3. Ornamental plants have been already in demand before the pandemic.	2.49	1.03	Disagree	Low
4. Ornamental plants became more in demand during the time of pandemic.	3.59	0.64	Strongly Agree	Very High
5. Ornamental plants are still in-demand at present.	3.30	0.78	Strongly Agree	Very High
Overall	3.33	0.71	Strongly Agree	Very High

Table 3 implies that the pandemic has served as a catalyst for raising awareness and increasing the demand for herbal plants. As stated by Rivas and Biana (2022), the trend of plant parenting has grown in popularity on social media in the Philippines.

Table 3. Status of the Plants Available in the Municipality of Bay, Laguna in terms of Herbal Plants

Statements	Mean	SD	Remarks	Verbal Interpretation
1. I offer Herbal Plants for Sale.	2.46	0.97	Disagree	Low
2. My customers prefer herbal plants.	2.37	0.96	Disagree	Low
3. Herbal plants have been already in demand before the pandemic.	1.84	0.86	Disagree	Low
4. Herbal plants became more in demand during the time of the pandemic.	2.67	1.08	Agree	High
5. Herbal plants are still in demand at present.	2.37	0.95	Disagree	Low
Overall	2.34	0.96	Disagree	Low

Table 4. Status of the Trends Occurred during the Pandemic in the Point of View of the Respondents in terms of Home Gardening

Statements	Mean	SD	Remarks	Verbal Interpretation
1. Home gardening was already known before the pandemic.	2.44	1.19	Disagree	Low

2. The trend of Home Gardening during the pandemic has helped my business.	3.52	0.62	Strongly Agree	Very High
3. Most of my customers are doing home gardening during the pandemic.	3.484	0.62	Strongly Agree	Very High
4. I believe that the social media trend of home gardening has helped us gain more tourists and visitors during the pandemic.	3.59	0.57	Strongly Agree	Very High
5. Home Gardening is essential and very useful not just as a hobby but as a necessity.	3.62	0.54	Strongly Agree	Very High
Overall	3.33	0.69	Strongly Agree	Very High

The finding supports the idea that home gardening became a trend during the pandemic and aided not only small plant-selling enterprises but also the municipality by attracting tourists and visitors. This result aligns with a study by [Soga et al. \(2017\)](#), which found that gardeners generally had greater wellness than non-gardeners. This could be attributed to the fact that gardening develops healthy habits by engaging in physical activity and fostering interactions with other community members.

Table 5. Status of the Trends Occurred During the Pandemic in the Point of View of the Respondents in terms of Plant Parenting

Statements	Mean	SD	Remarks	Verbal Interpretation
1. Plant parents were already known before the pandemic.	2.25	1.07	Disagree	Low
2. The trend of plantito/plantita during the pandemic has helped my business.	3.46	0.66	Strongly Agree	Very High
3. During the pandemic, most of my customers are plantito/plantita.	3.47	0.66	Strongly Agree	Very High
4. At this time, I still encounter new customers that are Plantito/plantita?	3.10	0.81	Agree	High
5. I believe that the social media trend of being a plantito/plantita has helped us gain more tourists and visitors during the pandemic.	3.50	0.63	Strongly Agree	Very High
6. At this time, the plantito/plantita are still on the trend.	2.68	0.83	Agree	High
Overall	3.08	0.78	Agree	High

Table 5 suggests that the municipality has confirmed an increase in visitors and customers who are engaged in the Plantito/Plantita trend as a result of the popularity of plant parenting. This outcome is supported by the research of [Sunga and Advincula \(2021\)](#), which found that social media posts inspired individuals to explore their interest in gardening, sparking the idea to start such a hobby after seeing posts about home gardening and the "Plantito/Plantita" craze.

Table 6. Level of the Types of E-Commerce that is Utilized by the Respondents in Terms of Business to Consumer (B2C)

Statements	Mean	SD	Remarks	Verbal Interpretation
1. I am using a business-to-consumer type of e-commerce.	3.28	0.73	Strongly Agree	Very High
2. I am aware of the Business-to-consumer type of e-commerce.	3.25	0.73	Agree	High
3. I would like to know more about B2C types of e-commerce.	3.38	0.69	Strongly Agree	Very High
4. I think B2C will help me promote my business.	3.44	0.62	Strongly Agree	Very High
5. I think B2C will help me generate more revenue.	3.49	0.60	Strongly Agree	Very High
Overall	3.37	0.67	Strongly Agree	Very High

Table 6 suggests that a majority of respondents *Strongly Agree* with using B2C e-commerce and express a desire to become more knowledgeable about it. As [Gupta \(2014\)](#) stated, B2C e-commerce is beneficial as it relieves businesses of the extra expense associated with a physical distribution network.

Table 7. Level of the Types of E-Commerce that is Utilized by the Respondents in Terms of Business to Business (B2B)

Statements	Mean	SD	Remarks	Verbal Interpretation
1. I am using business-to-business type of e-commerce.	2.19	0.95	Disagree	Low
2. I am aware of the business-to-business type of e-commerce.	2.21	0.93	Disagree	Low
3. I would like to know more about B2B types of e-commerce.	3.31	0.64	Strongly Agree	Very High
4. I think B2B will help me promote my business.	3.33	0.68	Strongly Agree	Very High
5. I think B2B will help me generate more revenue.	3.33	0.67	Strongly Agree	Very High
Overall	2.88	0.77	Agree	High

Table 7 reveals that respondents *Strongly Agree* with the idea of learning more about B2B, as they believe it would benefit them and their business. [Alsaad and Taamneh \(2019\)](#) noted that the B2B type of e-commerce, which encompasses a collection of technological inventions designed to facilitate business among partners, is expanding globally.

Table 8. Level of the Types of E-Commerce that is Utilized by the Respondents in Terms of Consumer to Consumer (C2C)

Statements	Mean	SD	Remarks	Verbal Interpretation
1. I am using consumer-to-consumer types of e-commerce.	2.00	0.91	Disagree	Low
2. I am aware of the consumer-to-consumer type of e-commerce.	2.06	0.86	Disagree	Low
3. I would like to know more about C2C types of e-commerce.	3.03	0.79	Agree	High
4. I think C2C will help me promote my business.	3.01	0.76	Agree	High
5. I think C2C will help me generate more revenue.	3.01	0.78	Agree	High
Overall	2.62	0.82	Agree	High

This suggests that the willingness to learn this type of e-commerce is high among respondents. According to a study by [Dachyar and Banjarnahor \(2017\)](#), C2C e-commerce enhances the participation and relationships of sellers. Through C2C websites, individual sellers or small and medium-sized businesses (SMEs) have opportunities to expand their target audience and distribution network, thus making it a good type of e-commerce to utilize.

Table 9. Level of the Types of E-Commerce that is Utilized by the Respondents in Terms of Government to Business (G2B)

Statements	Mean	SD	Remarks	Verbal Interpretation
1. I am using a government-to-business type of e-commerce.	1.83	0.87	Disagree	Low
2. I am using government-to-business type of e-commerce.	1.82	0.83	Disagree	Low
3. I would like to know more about G2B type of e-commerce.	3.03	0.97	Agree	High
4. I think G2B will help me promote my business.	3.05	0.93	Agree	High
5. I think G2B will help me generate more revenue.	3.04	0.95	Agree	High
Overall	2.55	0.91	Agree	High

The results show that respondents are eager to learn more about G2B and believe that it will support them and their businesses. As [Turban et al. \(2018\)](#) pointed out, governments aim to improve their communication with businesses. As G2B, e-commerce refers to transactions where the government purchases goods from businesses or provides services to them, and vice versa.

Table 10. Level of the Types of E-Commerce that is Utilized by the Respondents in Terms of Government to Consumer (G2C)

Statements	Mean	SD	Remarks	Verbal Interpretation
1. I am using government-to-consumer type of e-commerce.	1.84	0.88	Disagree	Low
2. I am using government-to-consumer type of e-commerce.	1.84	0.86	Disagree	Low
3. I would like to know more about G2C type of e-commerce.	2.94	0.96	Agree	High
4. I think G2C will help me promote my business.	2.99	0.96	Agree	High
5. I think G2C will help me generate more revenue.	2.99	0.97	Agree	High
Overall	2.52	0.93	Agree	High

Table 10 suggests that respondents believe G2C will help them generate more revenue. As [Matthiesen-Jones \(2021\)](#) noted, G2C occurs when the government uses electronic technologies to provide services to citizens as well as to purchase goods and services that governments need to interact with the general public, and vice versa.

Table 11. E-commerce Platforms Used by the Respondents to Market and Sell in Terms of Facebook

Statements	Mean	SD	Remarks	Verbal Interpretation
1. I sold/promoted plants online before the pandemic.	1.84	0.93	Disagree	Low
2. I started to sell/promote plants online during the pandemic.	3.12	0.89	Agree	High
3. I sell/promote plants through Facebook feed posting and market groups.	3.03	0.89	Agree	High
4. I sell/promote plants through Facebook live selling.	2.28	0.96	Disagree	Low
5. I earned more revenue through selling/promoting on Facebook.	3.07	0.89	Agree	High
6. My customers learned about my business through my Facebook account.	3	0.88	Agree	High
Overall	2.72	0.91	Agree	High

In Table 11, the respondents *Agreed* that they began selling and promoting plants online during the pandemic. The study of [Bhattacharyya and Bose \(2020\)](#) showed the impact of Facebook likes on users' decisions to purchase and recommend a product.

Table 12. E-commerce Platforms Used by the Respondents to Market and Sell in terms of Online selling websites/apps (Shopee, Lazada, etc.)

Statements	Mean	SD	Remarks	Verbal Interpretation
1. I sell plants on online selling sites before the pandemic.	1.64	0.79	Strongly Disagree	Very High
2. I started to sell/promote my plants on online selling sites during the pandemic.	2.48	1.07	Disagree	Low
3. My customers prefer shopping plants on online selling sites.	2.26	0.93	Disagree	Low
4. I prefer selling/promoting plants on online selling sites.	2.25	0.91	Disagree	Low
5. I still sell/promote plants on online selling sites right now.	2.23	0.95	Disagree	Low
Overall	2.17	0.93	Disagree	Low

In Table 12, the respondents *Strongly Disagreed* that they were selling plants on these platforms prior to the pandemic. In connection to this, [Hsu et al. \(2014\)](#) noted that the reputation of the website and sellers significantly impacts trust in both the website and the sellers.

Table 13. Level of Development of Plant Community in the Municipality of Bay as Perceived by the Respondents in Terms of Community Empowerment and Inclusivity

Statements	Mean	SD	Remarks	Verbal Interpretation
1. Our community is still underdeveloped and has to be strengthened.	3.14		Agree	High
2. I want our plant community to be empowered.	3.46	0.60	Strongly Agree	Very High
3. Our community lacks in being active and engaged in different activities.	2.99	0.72	Agree	High
4. I want our plant community to be included and be represented in the different councils and be a partner in local development.	3.5	0.59	Strongly Agree	Very High
5. Our plant community has to be established to be able to stand for a long period of time.	3.56	0.53	Strongly Agree	Very High
Overall	3.33	0.59	Strongly Agree	Very High

The respondents perceived that the plant community has to be well-established to be able to stand for a long period of time. [Sutawa \(2012\)](#) mentioned that the key to successful tourism development is community empowerment because it allows the area where tourism is being developed to actively participate in preserving its culture and natural environment.

Table 14. Level of Development of Plant Community in the Municipality of Bay as Perceived by the Respondents in Terms of Recognition of Plant Community

Statements	Mean	SD	Remarks	Verbal Interpretation
1. I had new customers during the pandemic.	3.33	0.59	Strongly Agree	Very High
2. Our Plant Community lacks recognition from the municipality as well as outside the municipality.	2.90	0.81	Agree	High
3. I want our plant community, <i>Samahan ng Maghahalamang Bayeños</i> , to be recognized not just in our municipality.	3.56	0.57	Strongly Agree	Very High
4. I want the Municipality of Bay to be fully recognized as the Garden Capital of Laguna.	3.65	0.51	Strongly Agree	Very High
5. Our municipality was recognized by the Plant Lovers during the time of the pandemic due to the plants available in the municipality.	3.56	0.53	Strongly Agree	Very High
Overall	3.40	0.60	Strongly Agree	Very High

The survey participants *Strongly Agreed* that they want the Municipality of Bay to be fully recognized as the garden capital of Laguna. According to [Hussey \(2021\)](#), Sustainable decisions are supported by recognizing and addressing the community. In order to build a strong and lasting partnership with the community, they must communicate its needs and interests.

Table 15. Level of Development of Plant Community in the Municipality of Bay as Perceived by the Respondents in Terms of Tourism Promotion

Statements	Mean	SD	Remarks	Verbal Interpretation
1. Our plant community and the municipality need to be more promoted.	3.54	0.52	Strongly Agree	Very High
2. Most of our tourist visitors visit the municipality because of the Plants available here.	3.47	0.59	Strongly Agree	Very High
3. The number of tourist visitors has declined during the onset of the pandemic.	3.25	0.68	Agree	High
4. The number of tourist visitors increased during the middle of the pandemic through the trend of planting and home gardening.	3.44	0.63	Strongly Agree	Very High
5. I want our Municipality to be visited by tourists from different municipalities and provinces.	3.61	0.51	Strongly Agree	Very High
Overall	3.46	0.59	Strongly Agree	Very High

The respondents supported the statement of wanting to be visited by tourists from different municipalities and provinces. The result of the study by [Mathew and Sreejesh \(2017\)](#)

recommends that most communities observe responsible tourism in terms of aspects, including public awareness, job opportunities, community participation, and skill development initiatives.

Table 16. Level of Development of Plant Community in the Municipality of Bay as Perceived by the Respondents in Terms of Business Registration to the LGU

Statements	Mean	SD	Remarks	Verbal Interpretation
1. My revenue declined during the onset/start of the pandemic.	3.18	0.67	Agree	High
2. Selling online has helped me earn more revenue.	3.12	0.84	Agree	High
3. I have more revenue selling online than onsite (physical store).	2.48	0.84	Disagree	Low
4. My revenue became higher during the middle of the pandemic with the help of the Trend and influence of plantito/plantita in social media.	3.32	0.68	Strongly Agree	Very High
5. If my revenue increases further, I will register my business in the LGU.	3.42	0.54	Strongly Agree	Very High
6. I consider business registration as necessary.	3.50	0.53	Strongly Agree	Very High
Overall	3.17	0.68	Agree	High

The respondents *Strongly Agree* that they consider business registration as necessary. In relation to this, [Feliciano \(2017\)](#) claimed that there are benefits to registering your business for the purpose of protection, avoiding penalties, and it allows engaging in business-to-business (B2B) transactions.

Table 17. Level of Development of Plant Community in the Municipality of Bay as Perceived by the Respondents in Terms of Economic Contribution to the Municipality

Statements	Mean	SD	Remarks	Verbal Interpretation
1. I am planning to expand my business in the near future.	3.62	0.52	Strongly Agree	Very High
2. If given support by the LGU, I will register my business in return.	3.62	0.52	Strongly Agree	Very High
3. I want to contribute to the economic development of the Municipality.	3.62	0.51	Strongly Agree	Very High
4. I think that the growth and recognition of our plant community shall contribute to the economic development of the municipality.	3.67	0.50	Strongly Agree	Very High
5. The micro business of the members of the <i>Samahan ng Maghahalamang Bayeños</i> can contribute to the progress and development of our municipality.	3.65	0.50	Strongly Agree	Very High
Overall	3.64	0.51	Strongly Agree	Very High

Table 17 shows that the respondents *strongly agree* that the recognition of their plant community shall contribute to the economic development of the municipality. According to [Brown \(2017\)](#), small businesses boost local economies by encouraging development and innovation in the area where they are located; also, consumers purchasing at community small businesses effectively supports the local economy.

Table 18. Significant Correlation between the Ornamental Plants and the Sustainable Development of Plant Community in the Municipality of Bay

	r-value	p-value	Analysis
Community Empowerment and Inclusivity	.261	.000	Significant
Recognition of Plant Community of the Municipality	.291	.000	Significant
Tourism promotion	.240	.000	Significant
Business Revenue and Registration	.289	.000	Significant
Economic Contribution to the municipality	.141	.026	Significant

The data shows that ornamental plants have a significant correlation to all the factors of sustainable development of plant communities. To further support this, [Zheng et al. \(2021\)](#) state that Ornamental plants, an essential aspect of farming and gardening, are considered to have a key role in improving the living environment, developing human emotion, and promoting structural improvements in the field of agriculture.

Table 19. Significant Correlation between the Herbal Plants and the Sustainable Development of Plant Community in the Municipality of Bay

	r-value	p-value	Analysis
Community Empowerment and Inclusivity	.129	.042	Significant
Recognition of Plant Community of the Municipality	.087	.170	Not Significant
Tourism promotion	.007	.907	Not Significant
Business Revenue and Registration	.291	.000	Significant
Economic Contribution to the municipality	-.177	.005	Significant

Table 19 shows that herbal plants have a significant correlation with the factors of sustainable development of plant community, such as Community Empowerment and Inclusivity, Business Revenue and Registration, and Economic Contributions to the municipality. It is also supported that most people purchase herbal plants, which are frequently used at home to treat mild illnesses. Medical herbs play a significant part in preventing diseases, and their use is compatible with all current methods of disease prevention ([Sofowora et al., 2013](#)).

Table 20. Significant Correlation between the Trend and Influence of Home Gardening and the Sustainable Development of Plant Community in the Municipality of Bay

	r-value	p-value	Analysis
Community Empowerment and Inclusivity	.293	.000	Significant
Recognition of Plant Community of the Municipality	.299	.000	Significant
Tourism promotion	.288	.000	Significant
Business Revenue and Registration	.384	.000	Significant
Economic Contribution to the Municipality	.179	.005	Significant

The data shows that home gardening has a significant correlation to all the factors of sustainable development of plant communities. Furthermore, [Eng et al. \(2019\)](#) claimed that home gardens have good benefits: the connection between mental wellness and giving people the opportunity to display their distinct aesthetic identities and reflect their values. This justifies the reason for its trend during the time of the pandemic, when most people are dealing with the negative effects of the lockdown.

Table 21. Significant Correlation between the Trend and Influence of Plant Parenting (plantito or plantita) and the Sustainable Development of Plant Community in the Municipality of Bay

	r-value	p-value	Analysis
Community Empowerment and Inclusivity	.324	.000	Significant
Recognition of Plant Community of the Municipality	.306	.000	Significant
Tourism promotion	.279	.000	Significant
Business Revenue and Registration	.475	.000	Significant
Economic Contribution to the municipality	.136	.031	Significant

The data shows that Plant parenting (plantito/plantita) has a significant correlation to all the factors of sustainable development of plant community. [Davies \(2018\)](#) claimed that the internet has been completely taken over by plants or plant parenting. However, unlike other consumer trends like fashion and beauty, growing houseplants have many advantages that far outweigh the likes we could get on social media.

Table 22. Significant Correlation between the Business to Consumer (B2C) E-commerce and the Sustainable Development of Plant Community in the Municipality of Bay

	r-value	p-value	Analysis
Community Empowerment and Inclusivity	.150	.017	Significant
Recognition of Plant Community of the Municipality	.295	.000	Significant
Tourism promotion	.241	.000	Significant
Business Revenue and Registration	.353	.000	Significant
Economic Contribution to the municipality	.142	.025	Significant

Table 22 shows that B2C e-commerce has a significant correlation to all the factors of sustainable development of plant communities. As stated by [Kang et al. \(2021\)](#), the COVID-19 pandemic is expected to have a long-term influence on the prevalence of B2C online commerce in all facets of the economy and society.

Table 23. Significant Correlation between the Business to Business (B2B) E-commerce and the Sustainable Development of Plant Community in the Municipality of Bay

	r-value	p-value	Analysis
Community Empowerment and Inclusivity	.031	.621	Not Significant
Recognition of Plant Community of the Municipality	.135	.033	Significant
Tourism promotion	.089	.159	Not Significant
Business Revenue and Registration	.149	.018	Significant

Economic Contribution to the municipality	.112	.076	Not Significant
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Table 23 shows that B2B e-commerce has a significant correlation to the factors of sustainable development of plant community, such as Recognition of Plant Community of the Municipality and Business Revenue and Registration. As stated by [Global Information, Inc. \(2022\)](#), end-user adoption of B2B e-commerce has increased as a result of the pandemic. Businesses all around the world are concentrating on implementing a multi-channel strategy with a focus on Internet channels.

Table 24. Significant Correlation between the Consumer to Consumer (C2C) E-commerce and the Sustainable Development of Plant Community in the Municipality of Bay

	r-value	p-value	Analysis
Community Empowerment and Inclusivity	.113	.074	Not Significant
Recognition of Plant Community of the Municipality	.196	.002	Significant
Tourism promotion	.143	.024	Significant
Business Revenue and Registration	.172	.006	Significant
Economic Contribution to the municipality	.071	.261	Not Significant

Table 24 reveals that C2C e-commerce has a significant correlation to the factors of sustainable development of plant community such as Recognition of Plant Community of the Municipality, Tourism promotion and Business Revenue and Registration. [Saarijärvi et al. \(2018\)](#) mentioned that despite the fact that a significant portion of C2C e-commerce takes place on social media platforms, this field of study has not been thoroughly investigated.

Table 25. Significant Correlation between the Government Business (G2B) E-commerce and the Sustainable Development of Plant Community in the Municipality of Bay

	r-value	p-value	Analysis
Community Empowerment and Inclusivity	.276	.000	Significant
Recognition of Plant Community of the Municipality	.280	.000	Significant
Tourism promotion	.120	.059	Not Significant
Business Revenue and Registration	.427	.000	Significant
Economic Contribution to the municipality	-.045	.477	Not Significant

Table 25 reveals that G2B e-commerce has a significant correlation to the factors of sustainable development of plant communities, such as Community Empowerment and Inclusivity, Recognition of Plant Community and Business Revenue and Registration. As stated by [Gupta \(2014\)](#), in contrast to other e-commerce channels, it enables the automation of transaction procedures, which speeds up their implementation.

Table 26. Significant Correlation between the Government Consumer (G2C) E-commerce and the Sustainable Development of Plant Community in the Municipality of Bay

	r-value	p-value	Analysis
Community Empowerment and Inclusivity	.241	.000	Significant
Recognition of Plant Community of the Municipality	.240	.000	Significant
Tourism promotion	.138	.029	Significant
Business Revenue and Registration	.413	.000	Significant

Economic Contribution to the municipality	-.003	.959	Not Significant
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Table 26 shows that G2C e-commerce has a significant correlation to all the factors of sustainable development except Economic Contribution. According to Alghamdi et al. (2012), government support for consumers is the main element affecting the rise of online retailing that benefits both retailers and potential customers. Government intervention is most needed for the small business to develop.

Table 27. Significant Correlation Between the Use of Facebook as an E-commerce Platform and the Sustainable Development of Plant Community in the Municipality of Bay

	r-value	p-value	Analysis
Community Empowerment and Inclusivity	.173	.006	Significant
Recognition of Plant Community of the Municipality	.222	.000	Significant
Tourism promotion	.180	.004	Significant
Business Revenue and Registration	.527	.000	Significant
Economic Contribution to the municipality	-.055	.388	Not Significant

The data shows that Facebook has a significant correlation to all the factors of sustainable development of plant community except Economic Contribution. In the study of Rauniar et al. (2014), the majority of study participants chose Facebook as their preferred social media network and used it daily. It is a successful platform for marketers to advertise products and establish businesses.

Table 28. Significant Correlation between the Use of Online Selling Websites/apps (Shopee, Lazada, etc.) as E-commerce Platforms and the Sustainable Development of Plant Community in the Municipality of Bay

	r-value	p-value	Analysis
Community Empowerment and Inclusivity	.100	.115	Not Significant
Recognition of Plant Community of the Municipality	.177	.005	Significant
Tourism promotion	.129	.042	Significant
Business Revenue and Registration	.374	.000	Significant
Economic Contribution to the municipality	-.007	.914	Not Significant

Table 28 shows that online selling websites/apps have a significant correlation to the factors of sustainable development of plant community such as Recognition of Plant Community, Tourism promotion and Business Revenue and Registration. In the study of Cruz et al. (2022), due to the global pandemic, a large number of people have started online enterprises. Online sellers hope to be around for a very long time and sell their items utilizing social media and e-commerce platforms.

CONCLUSIONS

Based on the findings of the study, the following conclusions were drawn: (1) The researcher concluded that there is a significant correlation between the ornamental plants in the locality and all the aspects of the sustainable development of plant communities in the Municipality of Bay. However, herbal plants have a significant correlation only with the following aspects of sustainable development of plant community: Community Empowerment and Inclusivity, Business Revenue and Registration, and Economic Contribution to the Municipality.

(2) There is a significant correlation between the trend and influence of Home Gardening and Plant parenting (*plantito/plantita*) and all the aspects of the Sustainable Development of the Plant Community in Bay. (3) Out of the 5 types of e-commerce, only B2C e-commerce has a significant correlation with all the aspects of the Sustainable Development of the Plant Community in Bay. (4) It is therefore concluded that using Facebook as an e-commerce platform showed a more significant correlation with the sustainable development of the plant communities in the Municipality of Bay.

LIMITATION & FURTHER RESEARCH

The researcher employed a quantitative-descriptive method in this study. Self-made questionnaires were used as the primary instrument for data collection from a total of two hundred fifty (250) members of the *Samahan ng mga Maghahalamang Bayeños*. Moreover, this study scope is only limited to the Local Plant Community in the Municipality of Bay, Province of Laguna.

Moreover, this researcher suggests further research on the implementation of advanced technologies in governance in rural areas and provinces. The efficacy of the use of types of e-commerce that are not well-known, such as government-to-consumer (G2C) and government-to-business (G2B), should be prioritized in the undertaking so it can be adopted as a tool of support from the government to its people.

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