

Market Landscape and Digital Presence of Cacao-based Products in Bicol Region, Philippines

ABSTRACT

The Philippines stands as one of the world's emerging players in the cacao industry with its potential to contribute substantial impact in the global cacao market. A research study was conducted to determine the market landscape and marketing strategies conducted by cacao farmers and processors in Bicol region, Philippines. Surveys and interviews were conducted to capture diverse perspectives and insights of 70 cacao farmers, processors, traders and retailers. Result of the study showed that demographic characteristics of the group shows the predominance of traditional farming activities combined with a significant involvement in processing and trading which highlights a diversified approach to agriculture. Majority are directly involved in selling goods to consumers, either through retail or a combination of wholesale and retail activities. There is a strong inclination towards digital marketing and direct consumer engagement, alongside traditional wholesale and retail strategies. Market outlet for cacao products in the province suggests that most market activities are locally or provincially focused, with some engagement in regional and international markets. In terms of pricing information, there is a reliance on formal and market-based sources. Likewise, most businesses recognize the value of social media in reaching customers and promoting products. Recommendations include developing targeted marketing campaigns to specific consumer segments within the province, harnessing and further strengthening the power of digital marketing channels, including social media, e-commerce platforms, and influencer partnerships, strengthening collaboration with other stakeholders across the cacao value chain to improve market linkages and promotion and continue conducting market research and consumer preferences and monitor market trends.

Keywords: market strategies, market channel, digital marketing, product promotion, Philippines

1. INTRODUCTION

The Philippines stands as one of the world's emerging players in the cacao industry. It has the potential to contribute substantial impact in the global cacao market due to its good climate and fertile soil.

Cacao farming in the Bicol Region is increasingly seen as a viable livelihood for farmers. The region's climate and soil are conducive to cacao farming, which has led to the growth of small-scale cacao farms and cooperatives. Likewise, Bicol has a rich history of producing unique, high-quality cacao beans, which can be leveraged for premium chocolate production.

As global demand for cacao, particularly organic and ethically sourced cacao, continues to rise, understanding the Bicol region's market position is vital. During the second quarter of 2023, the cacao (dried beans with pulp) production improved to 2.35 thousand metric tons or 4.1 percent from 2.26 thousand metric tons recorded output in the same quarter of 2022. Likewise, during the first half of 2022, the area planted with cacao was estimated at 32.24 thousand hectares. This registers an increase of 1.5 percent from 31.75 thousand hectares area planted in the same period of 2022 [1]. Indeed, cacao farming and production is significantly growing in the country.

The specialty cacao industry is unique in that it is thought to offer higher price premiums and claims to provide cacao farmers with considerably more sustainable resources than traditional cacao systems, prioritizing farmer welfare and environmental resource conservation [2]. Hence, more and more farmers see the potential of this crop to alleviate poverty. More so, cacao production only requires a small monetary investment or start-up capital. This explains why 90% of the growers are of small farm holdings. The suitability of cacao as an intercrop for coconut and banana, the two-week harvest interval, and an early gestation period of 18 months are some of the most valued advantages of this high value crop. Furthermore, the early return of investments and high profitability of the product also ensure good income augmentation potential [3]. This is also supported by a study which showed that cacao production has high return on investment of 77.89% and 160% for the farmer and processor, respectively [4].

In terms of demand for cacao, it has been significantly increasing for the past several years. One main reason is the evolving consumer preferences and an increasing awareness of the health benefits associated with cacao-based products. Cacao, the primary ingredient in chocolate and various other confectionery items, holds great economic potential for producers and traders. However, the journey from cacao bean to a delicious chocolate entails a laborious process, and some challenges and critical issues need to be addressed. Several studies often emphasize the challenges faced by cacao growers, including low productivity, inadequate infrastructure, and limited market access, while also identifying opportunities for improvement through strategic interventions [5]. Identifying these issues is crucial in order to hasten the growth of the Philippine cacao industry and eventually, the chocolate market.

Another big issue is an effective product promotion and marketing strategy of locally produced chocolates to be able to compete at the global market. By identifying effective promotional and marketing strategies tailored to the Philippines as well as global market dynamics, this will promise great economic opportunities for farmers and entrepreneurs and will contribute to rural development and poverty alleviation in the country. As such, this study seeks to underscore the importance of sustainable growth in the context of cacao-based product promotion and marketing.

2. REVIEW OF RELATED LITERATURE

Cacao significantly contributes to poverty alleviation and inclusive growth through livelihood and job generation. This is because cacao production only requires a small monetary investment or start-up capital. The early return of investments and high profitability of the product also ensure good income augmentation potential. Moreover, cacao is considered one of the world's most valuable crops. It is a multi-million-dollar industry that has an increasing global and domestic market demands. Cacao's diversified usage as food and non-food warrants sustainable market opportunity [3].

Undoubtedly, cacao production has high return on investment. In a previous research study, it showed that the Return on Investment is about 77.89% and 160% for the farmer and processor, respectively but a low return on investment of 13% for traders [4]. The value added from farmer to processor is Php 590.00/kilogram, and Php 125.00/kilogram from processor to trader. Various opportunities and prospects for cacao production had been identified such as increased technical and production support from the government, presence of R & D programs, increasing trend towards wellness & healthy lifestyle, and increasing businesses offering cocoa-based products.

A key strategy of chocolate manufacturers is the promotion of sustainable farming practices amongst their supplying cocoa producers. A growing body of micro-economic literature has analyzed factors influencing the adoption of such practices, yet broadly disregarded value chain factors. Information on how factors *within* single value chains increase the adoption of sustainable farming practices can help direct chocolate companies' investments and increase return of investments in sustainability [6].

Interestingly, pricing of locally produced cacao-based products such as chocolates should be given priority attention. A research study using Van Westendorp Price Sensitivity Meter tool showed that the acceptable price range of the locally produced chocolate is between the point of marginal cheapness (PMC) at Php 1.20 per gram (or \$2.16/100grams) and point of marginal expensiveness (PME) at Php 2.00 per gram (or \$3.60/100grams). The values outside these range will result in declining number of potential buyers because the locally produced chocolate is either too cheap or too expensive. Furthermore, the optimal price where respondents feel the locally produced chocolate is not too expensive and will not question the quality of the product is Php 1.60 per gram (or \$2.88/100grams). This provides valuable insights on the potential marketability of locally produced chocolates and make informed pricing decisions [7].

A research study posited that there are five primary pathways that define characteristics for specialty cacao and these are (1) quality, (2) genetics, (3) origin, (4) certification, and (5) direct trade. This research shows that there is variability in farm gate prices for specialty cacao, as well as an average price 95.13% higher than commodity cacao, demonstrating the critical role that specialty cacao can play in developing a more sustainable chocolate industry. Cacao farmers are agricultural entrepreneurs managing complex businesses that require reasonable access to independent, unbiased, and objective farmer-driven information on price transparency, market averages, and quality grading systems [2].

While the cacao industry poses high profitability, various challenges have been identified. Various studies have documented the historical evolution and current status of the cacao industry in the Philippines, highlighting its potential for growth and development [5]. These studies often emphasize the challenges faced by cacao growers, including low productivity, inadequate infrastructure, and limited market access, while also identifying opportunities for improvement through strategic interventions.

Farmers face numerous challenges, the most significant of which were the high cost of routine maintenance (such as cleaning/brushing) and shortage of laborers. The accessibility from the farm to the market road was also seen as a challenge among them. The province's cacao agricultural stakeholders extended to support services to farmers such as free planting materials, credit assistance, cacao production seminars, and post-harvest facilities, which were all considered valuable to farmers in addressing the challenges they faced on cacao farming and production [8].

In terms of product promotion of cacao-based products, there is an increasing trend towards the use of online platforms and digital marketing. A study posited that consumers had outgrown their desire to buy chocolates in the traditional market outlet of souvenir shops and utilization of innovative social media marketing is highly predominant [9]. Likewise, inclination in the use of digital platforms has been established and widely employed resulting to the dwindling utilization of traditional media.

3. METHODOLOGY

The research study employed a mixed-methods research design, using both quantitative and qualitative approaches to gather significant data on market landscape and product promotion of cacao-based products in Bicol region, Philippines. It involved surveys and interviews to capture diverse perspectives and insights from stakeholders. Respondents were 70 cacao farmers, processors, traders and retailers involved in cacao production, processing, distribution, and marketing.

A structured questionnaire was administered to collect quantitative data on market trends and marketing channels, and promotional strategies on cacao-based products. In-depth interviews were conducted with selected stakeholders to gather qualitative insights into their experiences, perspectives, and challenges related to promoting and marketing cacao-based products.

Likewise, secondary data including industry reports, market studies, and government statistics were analyzed to assess market dynamics and competitive landscape shaping the cacao industry in the region.

4. RESULTS AND DISCUSSION

4.1 Socio-demographic Profile of Respondents

The data below provides an overview of the demographic characteristics of cacao farmers/processors in Bicol region (Figure 1). The occupational distribution among the 70 respondents revealed that majority are engaged in farming, with 67% identifying solely as farmers. This indicates that the primary livelihood for most of them is traditional farming. A small percentage, 24% combines farming with processing, suggesting that their agricultural products are given additional value. The smallest group, at 9% expands their roles to include trading as well, making their agricultural activities more diverse.

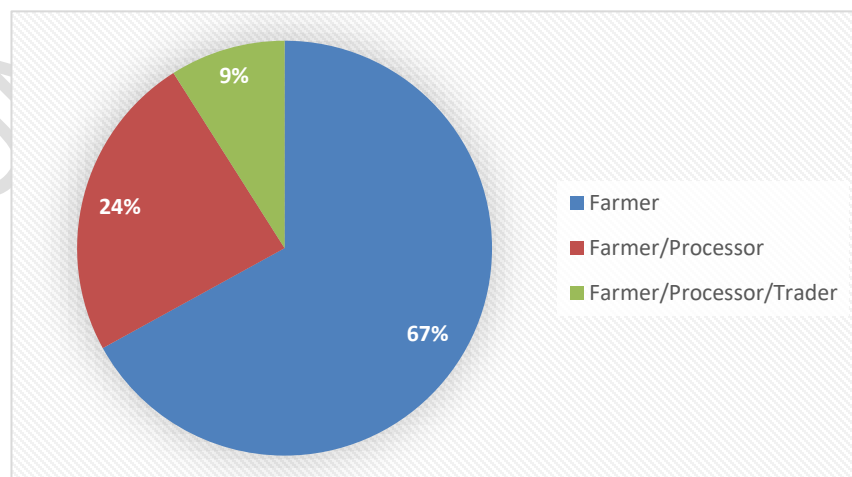


Figure 1. Type of Respondents

In terms of age distribution, there is a concentration in the middle age brackets (Figure 2). Respondents aged 31-50 years compose the largest group at 40%, followed by aged 51-65 years at 39%. This indicates that the majority of the respondents are in their prime working years, with a great deal of experience to their agricultural activities. Younger respondents aged 18-30 years make up 17% suggesting that there is some level of youth involvement in farming, though not as prevalent. The smallest group is those above 65 years, accounting for just 4% highlighting a lesser degree of elderly participation which might reflect the physically demanding nature of agricultural work or a trend towards retirement at this age.

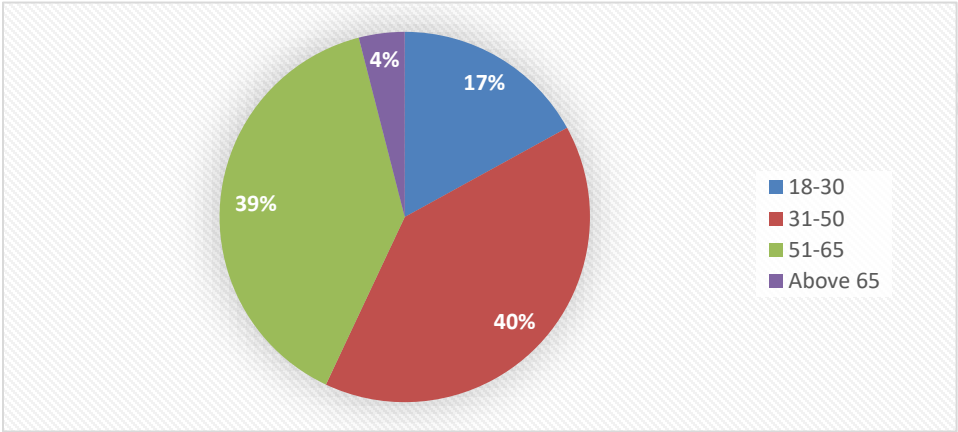


Figure 2. Age of Respondents

Gender distribution shows a higher representation of females, with 60% compared to 40% males (Figure 3). This female majority could reflect gender roles within the community where women are actively engaged in agricultural activities. It may also suggest a shift towards more gender-inclusive practices in farming.

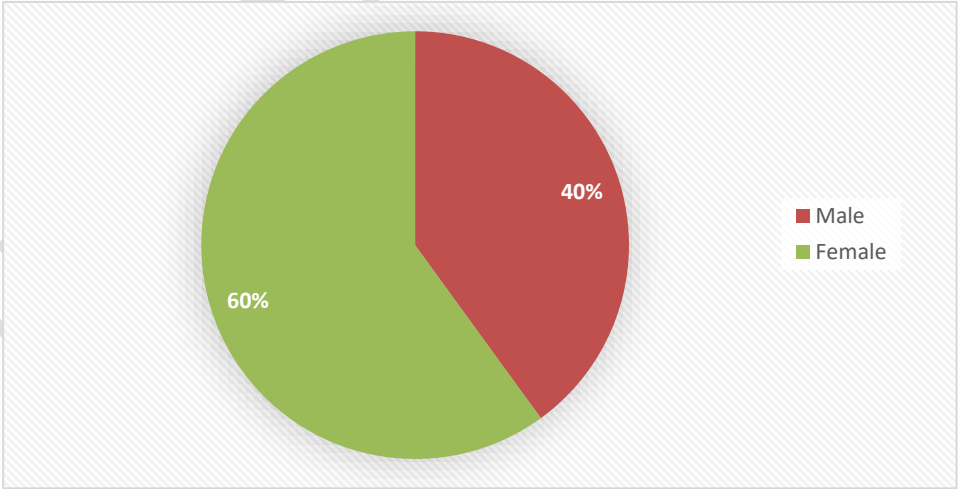


Figure 3. Gender of Respondents

Civil status data reveals that the majority of the respondents are married, comprising 56% (Figure 4). This is followed by single individuals at 36%, indicating a significant number of unattached or possibly younger individuals within the farming community. The presence of separated and widowed at 4% each is minimal.

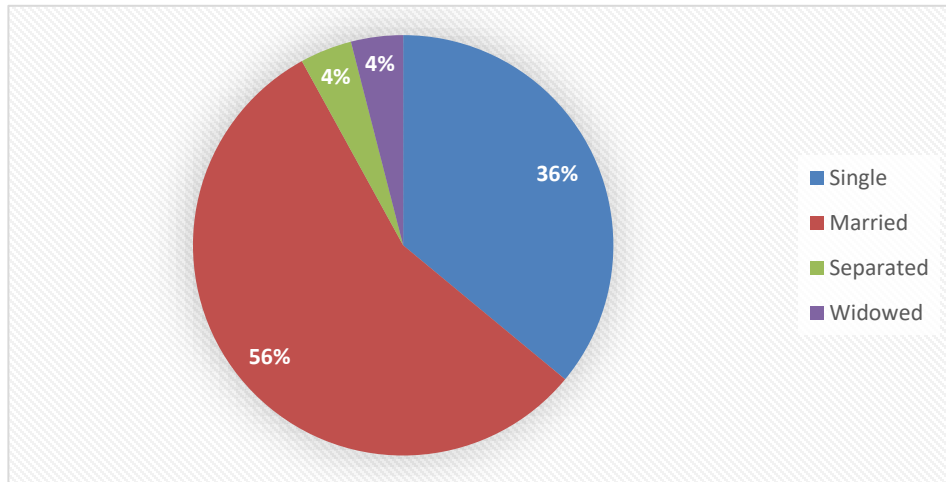


Figure 4. Civil Status of Respondents

Educational attainment among the respondents shows a high level of education, with 48% having completed college (Figure 5). This suggests a well-educated demographic that could influence farming practices with better knowledge and skills. High school graduates form 19% and college undergraduates constitute 16%, indicating a strong foundation of secondary education among the participants. Only a small percentage, 6% have completed elementary education, and an even smaller group, 4% have vocational training. The presence of 3% with postgraduate education also suggests that there is access to advanced learning, which could benefit the agricultural practices through research and innovation.

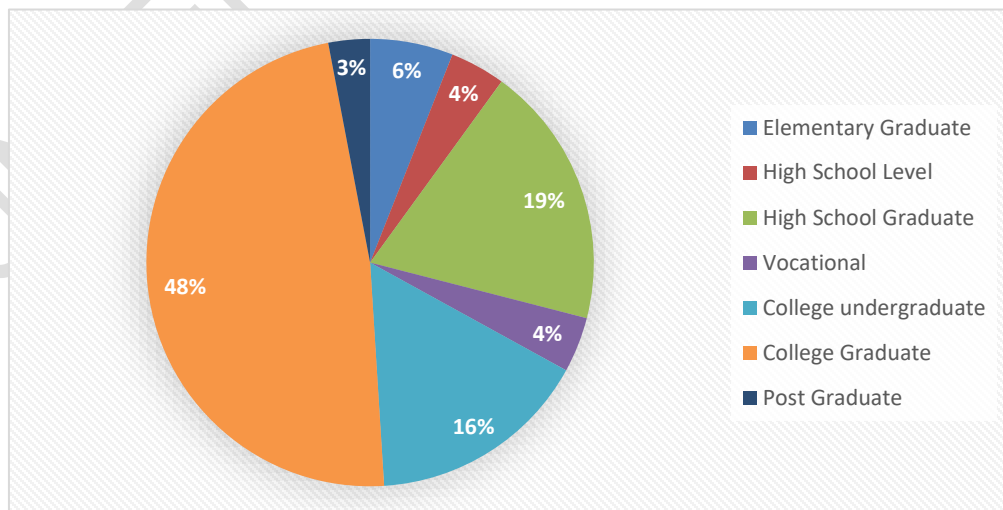


Figure 5. Educational Attainment of Respondents

4.2 The Cacao-based Products and Enterprises

Table 1 presents the cacao-based products which are made available by the various business enterprises in the Bicol region. The data suggests that dried non-fermented beans are the most prevalent cacao-based product, which reflect their primary role in cacao processing and trade. Tablea and cacao pods also feature prominently, indicating their importance in local markets or traditional uses. Interestingly, chocolate bars and candies, which are highly popular in retail markets, have the lowest frequency in this table. This may mean that most of the processors have limited capability in terms of cacao processing and adding value to raw cacao beans.

Table 1. Types of Cacao-based Products in the Market

Type	Frequency	Rank
Cacao Pods	8	3
Dried non-fermented beans	12	1
Tablea	10	2
Chocolate Bars	1	5.5
Candies	1	5.5
Processed Products	7	4

The table below illustrates that Camarines Sur province has the highest number of cacao-based businesses listed, followed by Camarines Norte, and Sorsogon (Table 2). Interestingly, there are four (4) enterprises which are located in the cities of Iriga and Naga. These businesses are dispersed throughout different towns and cities within these provinces, indicating a vibrant local cacao industry across the region.

Table 2: Number of cacao-based businesses list

Business Name	Address/Location
Criolo and Davao Pods	Iriga City
Calyn Food Products	Naga City
ChocoLaThea	Daet, Camarines Norte
Verdant Cacao	Minalabac, Camarines Sur
Bean & Bean Cacao Products	Vinzons, Camarines Norte
Sweet Agnes	Libmanan, Camarines Sur
Crave Cacao	Calabanga, Camarines Sur
Corcy Natural Food Production Manufacturer	Iriga City
Claudia's Tsokolate Tablea	Tigaon, Camarines Sur
Haliyas Ice Cream	Naga City
Ningning Handcrafted Tablea	Baao, Camarines Sur
Pinky's Tablea	Bulan, Sorsogon
Kim's Cacao Peanut Spread	Bulan, Sorsogon

4.3 Market Landscape and Environment

In terms of market roles, the largest group of participants are retailers, with 27 individuals ranking first (Table 3). This is followed by wholesaler-retailers at 11 individuals, ranking second, and wholesalers at 3 individuals, ranking third. The smallest group, with only 1 individual, is the "viajero," ranking fourth. This indicates that most participants are directly

involved in selling goods to consumers, either through retail or a combination of wholesale and retail activities.

Given the above data and information, the following insights can be deduced relative to the market environment. Retailers of cacao products represent the largest segment which means that there is a significant market opportunity for businesses which focus on retail channels. Strategies should then be tailored to address the unique needs of the type of customer. For instance, bulk discounts may be offered for wholesalers whereas personalized services may be offered to retailers. However, a previous study found out that there is no significant difference in convenience between retail and wholesale businesses [10]. But in terms of financial ratio, retailers have a slight advantage on their Gross Profit Margin while wholesalers have slight advantage in Net Profit Margin.

The most frequently used marketing strategy is online sales, with 20 individuals ranking it first. Wholesale-retail and market outlet strategies both rank second with 10 individuals each. On-farm sales come next, with 8 individuals, ranking fourth. Contracts with buyers are used by 6 individuals, ranking fifth, while made-to-order sales are the least common, with only 2 individuals, ranking sixth.

This data suggests a strong inclination towards digital marketing and direct consumer engagement, alongside traditional wholesale and retail strategies. This is to be expected considering that online marketing appears to be the most utilized with the boom of ecommerce especially during the pandemic. To capitalize on this trend, cacao business owners should invest in the utilization of online platforms and digital marketing campaigns. This finding is in consonance with a research study that recommended for the use of a robust ecommerce strategy. Consumers had outgrown their desire to buy chocolates in the traditional market outlet of souvenir shops and utilization of innovative social media marketing is highly predominant. Likewise, inclination in the use of digital platforms has been established and widely employed resulting to the dwindling utilization of traditional media [9].

Table 3. Market Roles and Strategies of Cacao-based Processors

Type	Frequency	Rank
Wholesaler	3	3
Retailer	27	1
Wholesaler-Retailer	11	2
Viajero	1	4
Market Strategy		
Online	20	1
Wholesale-Retail	10	2.5
Contract with Buyers	6	5
On-farm sale	8	4
Market Outlet	10	2.5
Made-to-order	2	6

The most common mode of transportation for these individuals is commuting, used by 19 individuals and ranking first (Table 4). This is followed by those using their own car, with 16 individuals ranking it second. Courier services are used by 4 individuals, ranking third, and vehicle rental is the least common, used by 2 individuals and ranking fourth. Motorcycles are the most frequently used means of transportation, with 12 individuals ranking it first. Cars follow, used by 10 individuals, ranking second. Tricycles, used by 9 individuals, rank third,

while jeepneys are used by 7 individuals, ranking fourth. Trucks are used by 3 individuals, ranking fifth, and other unspecified means are used by 2 individuals, ranking sixth.

This variety of transportation shows a preference for more affordable and flexible transport options like motorcycles and tricycles. With this trend, it is necessary to consider offering delivery services or partnering with courier companies to enhance convenience for customers who rely on commuting or personal vehicles. Also, offering flexible delivery options and optimizing route planning can minimize transportation costs and improve service efficiency.

Apparently, the role of transportation is crucial in the business chain. The result of the study indicates a mix of reliance on personal and public transportation methods for business operations. This is because there is a need to transfer the product immediately to the consumer. While the use of personal and/or public transportation is common in Bicol region, this can be further improved by tapping the utilization of external and digital mobile deliveries. A research study posited that the speedy deliver products to consumers' hands is a common consensus of operators. Towards this end, integration of logistics and e-business is the future trend. In order to get more advantageous position and build a complementary and dependent relationship, networking industries, such as Yahoo and e-Bay, usually cooperate with logistics industries [11]. The integration could reduce the middle-level procedures. The producers could immediately give the products over to the terminal customers. This could reduce expenses and also administer sources more efficiently. In Bicol region, cacao-based producers and entrepreneurs need to tap and connect with external delivery vendors such as Lazada or Shopee.

Table 4. Transportation Methods and Approaches for Cacao-based Products

Type	Frequency	Rank
Commute	19	1
Vehicle Rental	2	4
Own Car	16	2
Courier	4	3
Means of Transportation		
Jeepney	7	4
Tricycle	9	3
Motorcycle	12	1
Truck	3	5
Car	10	2
Others	2	6

The location of market outlets shows a tie for the most frequent locations within the barangay and within the province, both used by 16 individuals, ranking first (Table 5). Following closely is within the municipality, used by 15 individuals, ranking third. Outside the Bicol region (Region V), 14 individuals use this location, ranking fourth. Within Region V is used by 7 individuals, ranking fifth, and export is the least common, with 5 individuals, ranking sixth. This means that distribution of customers across different market outlet locations highlights opportunities for geographic expansion and market penetration. The research result also clearly shows the geographic distribution that businesses should prioritize market outlet locations within barangays, municipalities, and provinces where customer concentration is high.

Marketing of the local chocolate is important because it can inform potential consumers about what is this new product, its value and what sets it apart from existing similar products in the market. Marketing is also the gateway for developing the identity for the locally-produced chocolate and strategize ways to position it in the market [9]. Market outlet for cacao products in the province suggests that most market activities are locally or provincially focused, with some engagement in regional and international markets. One critical factor for the choice of market outlet is its accessibility and immediate conversion of the product into monetary terms.

A previous study suggested that marketing started in grocery stores, one of the best places to spot chocolate lovers [12]. The founders would casually speak with individuals buying chocolates to inform them about their chocolate company and leave them business cards. Word of Mouth (WoM) has also helped them introduce the brand. In addition to this, they used social platforms such as Facebook, Twitter and Instagram as well as a sophisticated website to appeal the customers. All these tools and techniques paved the way to establish their brand [12].

However, one study suggests that there are other factors that affect the choice of market outlet. It suggested that sex of the household head, age of the household head, educational level of the household head, the quantity of the product, size of the land allocated for production, use of market information, credit access, livestock holdings, and distance to the nearest market are all statistically and significantly influencing factors in the market outlet choice behavior of producers [13]. The study further recommended that the government and other concerned organizations should take action to improve the efficient marketing of mango producers in all outlets by providing market information, expanding and following up on extension services, increasing credit access, and building roads and other marketing infrastructure in the study area.

For price information, the Department of Trade and Industry (DTI) is the most common source, cited by 13 individuals, ranking first. Market vendors follow, with 12 individuals using this source, ranking second. Organizations are used by 9 individuals, ranking third, and the cost of production is used by 6 individuals, ranking fourth. Neighbors are a source for 5 individuals, ranking fifth, and information by barangay is the least used, with only 1 individual, ranking sixth.

This shows a reliance on formal and market-based sources for pricing information. A study found that new product pricing practices have significant impact on the relative price level of the product in the market as well as on the new product's market performance [14]. Depending upon product and market conditions, entrepreneurs should place the right emphasis on value, competition, and cost-informed pricing. In many cases, they need to emphasize competition or even cost-informed pricing in addition to value-informed pricing. The use of the latter is found to be always beneficial.

Table 5. Distribution Channel and Pricing Source

Channel	Frequency	Rank
w/in Barangay	16	1.5
w/in Municipality	15	3
w/in Province	16	1.5
w/in Region V	7	5
Outside Region V	14	4
Export	5	6
Pricing Source		

Neighbors	5	5
Organizations	9	3
DTI	13	1
Market Vendors	12	2
Cost of Production	6	4
By barangay	1	6

4.4 Product Exposure and Digital Presence

The primary medium for product promotion is the Internet, used by 28 individuals, indicating a strong emphasis on digital marketing (Table 6). Print media is used by 5 individuals, and support media by 1 individual. No individuals reported using broadcast media, showing a clear preference for online and print channels. A significant majority, 25 individuals, report having a social media presence, emphasizing the importance of digital platforms in business operations. This indicates that most businesses recognize the value of social media in reaching customers and promoting products. Only 2 individuals reported having a business website, highlighting a potential area for growth in digital infrastructure.

The absence of a larger number of websites suggests that while social media is widely adopted, comprehensive digital strategies involving dedicated websites are not as prevalent. Interestingly, more cacao entrepreneurs are now using the digital platform for marketing their products.

A study posited that the traditional media and the social media have their pros and cons. Traditional media generally offers a wider audience pool but information can be delayed due to press times [15]. It is more final and offers a one-way conversation. Social media on the other hand, allows for more targeted distribution, immediate, more dynamic, offers more control over the message and a two-way conversation. Furthermore, the findings of the study revealed that although social media has become the most convenient and prevalent communication channel with the ability to reach a broader audience, and although the rise of social media has put a danger to the survival of some traditional media outlets and reduced their readership and viewership, traditional media is still a relevant source of information for society and a wide audience who are looking for the credibility and reliability of the news that is circulated on social media [15].

In a previous study conducted by involving a total of 96 SMEs from the province of Camarines Sur, Philippines, it showed that all have access to the internet but only 4 have websites for the promotion of their products [16]. Further t-test analysis showed that there is no significant difference in ecommerce adoption between men and women. About half have no definite plans of establishing their websites within the next 2 to 5 years. However, 67 of the SMEs are already doing online business through the use of social networking sites such as Facebook, Twitter and Instagram. Traditional media is still a popular way of promoting their products especially through their participation in trade fairs.

Table 6. Product Promotion and Digital Visibility

Types of Media	Frequency
Traditional Media	
• Print	5
• Broadcast	0

• Support Media	1
Digital/social media	28

5. SUMMARY AND CONCLUSION

Demographic characteristics of the group shows the predominance of traditional farming activities combined with a significant involvement in processing and trading which highlights a diversified approach to agriculture. The age distribution suggests a workforce concentrated in the middle age ranges, with substantial female participation. The high level of educational attainment underscores a well-educated group that is likely to engage in informed and progressive farming practices.

Most participants are directly involved in selling goods to consumers, either through retail or a combination of wholesale and retail activities. There is a strong inclination towards digital marketing and direct consumer engagement, alongside traditional wholesale and retail strategies. Market outlet for cacao products in the province suggests that most market activities are locally or provincially focused, with some engagement in regional and international markets. In terms of pricing information, there is a reliance on formal and market-based sources. Finally, most businesses recognize the value of social media in reaching customers and promoting products.

6. RECOMMENDATIONS

By examining various facets of product promotion and marketing strategies for cacao-based products, the following recommendations are hereby given:

1. Develop targeted marketing campaigns to specific consumer segments within the province, considering factors such as demographics, lifestyle preferences, and purchasing behaviors.
2. Harness and further strengthen the power of digital marketing channels, including social media, e-commerce platforms, and influencer partnerships, to reach a broader audience and drive consumer engagement.
3. Strengthen collaboration with other stakeholders across the cacao value chain, including farmers, cooperatives, processors, retailers, and government agencies, to strengthen market linkages and promotion.
4. Continue conducting market research and consumer preferences and monitor market trends. This will be crucial in making strategic decision-making and adapt marketing strategies accordingly.

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Author(s) hereby declare that generative AI technologies such as ChatGPT have been used during the writing or editing of manuscripts.

Details of the AI usage are given below:

1. improvement of the research title

2. improved interconnectivity of the review of literature

3. enhancement of the Results and Discussion

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