

**Business Model Canvas and Feasibility Study for Commercialization of La Maria's  
(Empanada with Darag Chicken Filling) Empanada**

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**Abstract**

This study provided background of production and commercialization of La Maria's Empanada by conducting market analysis and financial analysis of the entire business venture considering the proposed investment plan for operation and management. The utmost goal of this study is to present a feasibility that proved the economic viability and commercial value of the product. To this end a comprehensive business model canvass was presented that showed the entire value of empanada with Darag Native Chicken Filling. The market analysis further validate the economic viability of the product based from high profitability and liquidity ratios of the business venture. As main output of the study, a system for making pastry was also subjected for invention application at the Intellectual property Office of the Philippines with hopes to be granted for the use in medium scale production of the product.

**Keywords:** *Business Model Canvas; Feasibility Study; Commercialization; La Maria's (Empanada with Darag Chicken Filling) Empanada*

**Introduction**

Continuous development can only be attained through research (Hallargarda, 2008). Hence, a research output must be delivered and transferred to the community in a form of a product, process, or technology ( Pérez, Hernández, and Ruiz,2014), as a rejoinder towards realization of the University's main thrust and priorities on poverty alleviation. The West Visayas State University's research thrust on poverty alleviation was envisioned through utilization of indigenous raw materials for new projects (Blanza, 2019) . Likewise, putting all research output into the market for commercialization, through innovative and creative ideas, like in the newly developed food product from Darag Native Chicken, the **La Maria's Darag Chicken Empanada.**

Blanza (2019) emphasized that utilization of Darag Native Chicken for various food products is not new to the university. However, the goal for the continuous use of Darag Chicken cannot be sustained if new ideas will not be created. Hence, the project, “The Development of High Value Empanada with Darag Native Chicken Filling” was conducted with five vital phases or studies. As such, this endeavor shall not end in the development of the product, but must continue to be transferred to the community for realization of the goals of the university.

Haddin (2020) commented that the availability of funds to commercialize a newly patented products and technology like La Maria’s Empanada is a critical issue. Patents, like R&D projects, are associated with many costs that mainly are spent to startup operation without any return at early stages, which in part are along with high risks and uncertainty (Riani, 2020). Zhou (2017) also added that technical issues, financial concerns, and resource availability are among the largest problems in R&D and during the commercialization phase, financial needs are more tangible. Therefore, external financing is required to be conducted by private sector and also small firms as well (Khademi & Ismail, 2013).

According to Penzel and Gauthier (2020) the government's role in the early stage of the new product or prototype is highly critical especially by providing grants and sufficient funds. Acharya and Dixit (2019) also stated that government assists founders to look for new ways of commercializing their research-based technologies. Moreover, the government funding is considered as a critical basis for economic prosperity that is mainly because of less risk (Kibler, Kautonen, & Fink, 2014; Motoyama & Knowlton, 2016; ), which helps technology entrepreneurs at spin-off stage (Dziallas & Blind, 2019; NBIA, 2007). On the other hand, it is beneficial for academic researches through collaboration with industries which tend to establish a relationship with knowledge users and mobilize resources for the complement of public research fund( Vidican,2009). In sum, availability of funding is one of the success factors in the commercialization of university research (Pérez, et al., 2014).

Crow (2014) emphasized that universities can make a great contribution to the national economic development. Pogodaeva, Zhaparova, & Efremova (2015) added that generated products and technologies within universities work as an engine of the nation's growth. However, many research ideas and results produced in universities fail to align with firms’ business strategies (Jolly, 2011). According to Masson (2018) this is due to the fear of high-risk in the

technology transfer process since there is no guarantee that a technology development project will result in a successful product launch or the investment will generate sufficient return .

The La Maria's Darag Native Chicken Empanada has great potential to make a hit in the market. Blanza (2019) was able to prove the product's acceptability in terms of sensory qualities such as aroma, color, taste, and texture. Additionally, the author was able to submit the finished product for various intellectual property registrations such as utility model for process, industrial design for its package, and trademark for the label in which ensures the restrictions for disclosure and ownership of such.

Blanza (2019) also claimed that, empanada itself had been the researcher's life saver in tough times of financial crises. Much more now that it has already been "dressed" with the packaging and label, and thinking big is sound as it is a wastage not to commercialize the product in large scale ( Blanza, 2019). Placing projects of this kind into place for commercialization to establish its economic viability and feasibility for production and commercialization, likewise needs a very strenuous study (Andelic & Vesic, 2017). Thus, financial analysis, detailed description of process flow and an assembly line for the production of Darag Native Chicken Empanada shall also be part of this research endeavor's output. For this, capitalization is needed and it can be extended to outside funding through a good business proposal that can be manifested through a convincing business model canvas and feasibility study, hence this study.

The influence of university researchers' perceptions toward commercialization manipulate propensity to engage in this activity. On the other hand, some features influence the perception of feasibility towards commercialization. The researcher state the presence of confidence, commitment and stress act as an inoculation to self-efficacy, so that perceptions of feasibility and those aforementioned variables interact and influence each other continuously either to strengthen the research thrust on poverty alleviation and economic development of the community and country as a whole.

### **1.1 Objectives of the Study**

This study aimed to provide the background for production and commercialization of La Maria's Empanada by conducting market analysis and financial analysis of the product. The utmost goal of this study is to present a feasibility that will prove the economic viability and commercial value of the product.

Specifically, the study has the following objectives:

1. To conduct market analysis to determine the economic viability of La Maria's Empanada among specific type of consumers (consumer profiling and market scheming);
2. To conduct cost analysis on La Maria's Empanada;
3. To create a business model canvas that will provide an overview for market analysis on La Maria's Empanada ;
4. To create a process flow and assembly line for production of La Maria's Empanada ( This part can produce a patentable output which is assembly line).
5. To conduct a five-year financial analysis on La Maria's Empanada by determining the;
  - a. Profitability Ratio (Gross profit margin, net profit margin, return of investment)
  - b. Liquidity Ratio

### **Methodology**

This research comprises phases uncommon to other research processes because it included applications of both business planning and applied research. The first phase of the study was the market research applying basic research approach with the use of survey technique in consumer profiling and market scheming. With this survey questionnaire was administered to gather data among 262 (initially 384 but only 262 survey questionnaires were retrieved which is 68% retrieval rate ) respondents in the Province of Iloilo grouped according to the following category; students, working individuals, non -working individuals . The survey was conducted among school cafeterias, restaurants, and bus terminals. The respondents will be grouped by cluster; Cluster 1-City Proper and Cluster 2-Provincial Area. From the results a business model canvas will be created. Administration of the survey questionnaire was within the period of 12 months from January 2019 – December 2019 (but other survey questionnaires were retrieved later).

The second phase comprises several steps; such as cost analysis of the product; formulation of the process flow of production; designing of the assembly line for production, and five year financial analysis that ultimately will result to the formulation of a feasibility study on La Maria's Darag Chicen Empanada. As such, each of the outputs will need experts such as business analyst, food technologists, mechanical engineer, and an architect.

### **Results and Discussion**

### 3.1 Market analysis through consumer profiling an market scheming to determine the economic viability of La Maria's Empanada

Data in Table 1 presents the consumer profile in terms of sex, civil status, age group, type of consumer, and cluster group. Results revealed that majority or 65.89 % (N=170) of the probable consumers of La Maria's Darag Native Chicken Empanada are male, while the remaining percentage of 35.11 % (N=90) are female. It was also revealed that majority or 59.54 (N=156) of the consumers are single, while the rest are married individuals (40.46 % or N=106).

The findings also showed that most (41.22 % ; N= 108) of the consumers belong to age group of 18- 30 years old. This was followed by consumers with age group which fell within 31-50 years old and 50 years old and above as indicated in their respective obtained percentages and frequencies of 33.96 (N= 89) and 24.82 % (N= 64).

Further, data also revealed that most of the probable consumers of the products are students, followed by the working and non working individuals. This was revealed by the obtained respective percentages and frequencies of 47.71 % (N=125); 38.17 % (N=100); and 14.12 % (n= 37). Furthermore, the data showed that majority or 60.31 % (N= 158) of this consumers are from the Province. The remaining percentage of 39.69 % (N= 104) are city based.

The results imply that the potential consumers of Darag Native Chicken Empanada are single, young males although there are also potential consumers that are married and female who belong to age group that ranges from 31- years old and above. Results also imply that potential consumers of the product are students from the Provincial area.

**Table 1 Consumer Profile**

Respondent Categories	Frequency (N)	Percentage (%)
Entire Group	262	100
Sex:		
Male	170	64.89
Female	90	35.11
Civil Status		
Single	156	59.54
Married	106	40.46
Age Group		
18-30 years old	108	41.22

31-50 years old	89	33.96
51- and above	64	24.82
Type of Consumer		
Student	125	47.71
Working	100	38.17
Non-Working	37	14.12
Cluster		
Provincial	158	60.31
City	104	39.69

Market scheming was also undertaken to determine the capabilities of probable consumers of La Maria's Darag Native Chicken Empanada. The results were shown in Table 2.

Data revealed that majority or 68.70 % (N= 180) of the consumers are spending P 50 or less for their daily snacks, while the 27.48 % ( N= 72 ) and 3.82 % ( N= 10) are spending the amount of P51-100 or P 100 and above. Majority or 70.23 % ( N=184) prefer to eat their snacks at home, while only 29.77 % ( N=78) prefer to eat their snacks outside home.

It was also revealed that most of the snacks eaten outside home were bought from food stalls ( N=122; 46.56 %). The rest of the consumers buy their snacks from restaurants and fast foods ( N=45; 17.18 %) and peddling vendors ( N=95; 36.26 %).

Majority or 55.34 % ( N=145) of the consumers prefer to have bread and a drink for snacks, while the rest prefer to have pasta or noodles with a drink ( N=28; 10.69 %) and chips with a drink ( N=89; 34.32 %).

Data also revealed that majority or 83.21 % ( N=218) of the consumers like empanada for snack, while the remaining 16.79 % ( N= 44) is not favorable of it. It was also notable that majority or 78.62 % ( N= 206) of the consumers prefer empanada over other snacks while only 21.38% ( N= 17 ) prefer other snacks. The result likewise revealed that majority or 93.51 % ( N= 245) of the consumers do like native chicken while only 6.49 % (N=17) do not like native chicken.

Finally, results in Table 2 revealed that majority or 82.82 % ( N=217) of the consumers like native chicken for empanada while only 17.18 % (N=45) consumers do not like native chicken for empanada.

Based from the foregoing results of market analysis it can be deduced that most of the consumers pay less for their snacks which are usually eaten outside their

home. Results also imply that most of the consumers are fond of buying from food stalls rather than restaurants or peddled snacks. This might be due to the fact that food from the food stalls are presentable and sanitary but affordable compared to those that are bought in the restaurants.

The survey also revealed that majority of the consumers like empanada for snacks and like native chicken as filling for empanada which imply that La Maria's Darag native chicken empanada have high possibility to make a hit in the market. Such results supported the findings and claims of Blanza (2019) that the La Maria's Darag Native Chicken Empanada has great potential to make a hit in the market because the product's acceptability was already in terms of sensory qualities such as aroma, color, taste, and texture. In addition to this, Blanza also reiterated that the packaging and label of the product as well the Intellectual Property registrations in various categories have added value to the product.

***Table 2 Profile of Respondents in terms of Market Capability***

Market Scheming Inquiries	Frequency (N)	Percentage (%)
Amount Spent for Snacks		
P50 or less	180	68.70
P51- P100	72	27.48
P100- or more	10	3.820
Place Snacks are Eaten		
At home	78	29.77
Outside Home	184	70.23
Source of Food Eaten Outside Home		
Food Stalls	122	46.56
Restaurants/ FastFood	45	17.18
Peddling Vendors	95	36.26
Food Eaten for Snacks		
Bread and Drinks	145	55.34
Pasta or Noodles / Drinks	28	10.69
Chips/ Drinks	89	34.32
Do you like Empanada for Snacks?		
Yes	218	83.21
No	44	16.79
Prefer empanada over other food for snacks		
Yes	206	78.62

No	56	21.38
Do you like native Chicken?		
Yes	245	93.51
No	17	6.49
Do you like native chicken for empanada		
Yes	217	82.82
No	45	17.18

### 3.2 Cost Analysis of La Maria’s Darag Native Chicken Empanada

Data in Table 3 revealed the actual food cost and total food cost of La Maria’s Darag Native Chicken Empanada as follows:

**Table 3 Cost Analysis of Darag Native Chicken Empanada**

Cost	Cost /piece in Pesos	per recipe (80 pieces/recipe)
Food Cost	7.00	560.00
Packaging and label	0.40	32.00
Total Food Cost	7.40	592.00

### 3.3 The Business Model Canvas for La Maria’s Darag Native Chicken Empanada

The business model canvas(Appendix A) was created to provide an overview and guide the research how to start the commercialization of La Maria’s empanada. The business model canvas specifically showed the supply chain framework for the product based from the perspective of a start-up by which specifically presents the product’s: Key Partners; Key activities; Value Propositions; distributions mode and channels; resources; customer relationship; target market; and Cost Structure ( Section 3.2 ). The business model canvas for La Maria’s Darag Native Chicken Empanada was also created considering the market analysis that showed the consumer profile as well as the product’s viability in the market ( Section 3.1).

The business model canvas for the commercialization of La Maria’s Darag Native Chicken Empanada is a representation of continuous product development which was according to Hallagarda (2008) can only be attained through research. Also, the said business canvas model is a proof that a research output must be delivered and transferred to the community. The



outputs for this projects was able to meet the expectations of Pérez, Hernández, and Ruiz (2014) intruding that a research project should have an output in a form of a product, process, or technology (as a rejoinder towards realization of the University's main thrust and priorities on poverty alleviation. In this case, the researcher was able to deliver a product, a process, and technology at the same time.

The business model canvas that was presented also provided a tacit but clear overview of the value chain for La Maria's Darag Native Chicken Empanada and the market strategy that was proposed. In this business model it is also clear that the concept of Segmentation, Targeting, and Positioning (STP) strategy was employed which has proved the potential of the business to make a hit in the market. Such outputs have been in accordance to the claims of Crow (2014) emphasizing that universities can make a great contribution to the national economic development and arguments raised by Pogodaeva, Zhaparova, & Efremova (2015) reiterating that generated products and technologies within universities work as an engine of the nation's growth.

#### 3.4 The Process Flow of and Assembly- Line for Production of La Maria's Darag Native Chicken Empanada

This objective has produced a patentable output dubbed as "System for Making Pastry". As such, they said output was submitted for registration as an invention at the Intellectual Property Office of the Philippines (IPOPhil) with Application No. 1/2019/000309, filed on 14 August 2019. Said invention was applied under the name of West Visayas State University with the researcher as the inventor. The said invention, was now published and can be viewed online at IPOPhil Gazette under invention publication category ( Volume 24, Number 23- March 1, 2021).

Although the design of the invention was conceptualized by the researcher based from the " concept of process flow and assembly line in production of pastry" ( as prior art), the completion of the work was done with the help a mechanical engineer (technical ) and an architect for the design ( perspective and all view drawings).

Based from the concept and design, the amount of P500,000.00 for the machine was estimated as capital outlay which will used as an entry in the five year financial analysis for commercialization of La Maria's Darag Native Chicken Empanada.

#### 3.5 Five Year financial analysis on la Maria's Darag Native Chicken Empanada

Appendix B presented the feasibility study and business plan for commercialization of La Maria's Darag Native Chicken Empanada, in which the five year projection of financial analysis is shown. Data showed that the La Maria's Darag Native Chicken Empanada is a profitable business venture as indicated in the following profitability ratios: the a gross profit margin of 76.56 % for the period of five years; net profit margin of 42.42 % for the first three consecutive years and 49. 29 % for the fourth and fifth year of operation; and return of investment ratio of 2.41 for three years starting from first year of operation and 2.67 for the fourth and fifth year of implementation. This means that payback period for all the investments such as facilities and equipment and capitalization for operation was guaranteed a return of 241 % for the first three years and 267 % in the fourth and fifth year. This results also insured profitability of the product.

The result of financial analysis also proved the profitability of the business venture for it showed a high ratio of liquidity with respective values of 1.77, 2.58,3.39,3.99, and 4.20 for five years. High liquidity ratio profess the capability of the business venture to managed the short term obligations or its daily operational expenses. However, as new venture, the requirement to finance business is very huge and requires outside funding. In the case of West Visayas State University, allocating funds for this kind of projects is very tough. The risk for fund allocation is often equated with the bureaucratic and accounting procedures that has a very long lag time.

This arguments is similar to the one posited by Haddin (2020) emphasizing that making funds availability to commercialize a newly patented products and technology like La Maria's Empanada is a critical issue. Similarly, Riani (2020) stated that patents, like R&D projects, are associated with many costs that mainly are spent to startup operation without any return at early stages, which in part are along with high risks and uncertainty. These claims was supported by Zhou (2017) who added that technical issues, financial concerns, and resource availability are among the largest problems in R&D and during the commercialization phase, financial needs are more tangible. In this regard Khademi (2013) suggested that outsourcing of funds is required.

### **Conclusions**

Based from the results the following conclusions were intruded:

1. That La Maria's Darag Native Chicken Empanada has a market potential especially among young individuals because it is affordable and delicious.

Considering the results of market profiling and market scheming, it was also concluded that more likely La Maria's Darag Native Chicken can gain competitive advantage.

2. The cost of La Maria's Darag Native Chicken Empanada is expected to suit the budget of the consumers who are mostly students from the Provincial Areas.

3. Having seen the business model canvas for commercialization of La Maria's Darag Native Chicken Empanada, it was conclusively that the venture has a sustainable value chain starting from the production to distribution process. The marketing strategy also profess the STP ( Segmentation, Targeting, and Positioning ) principle which is best to maximize opportunities in the market.

4. It was also conclusive that La Maria's Darag Native Chicken Empanada have a high competitive advantage not only for having a patented assembly line but also registered processes, label and package design. The assembly line is also expected to provide a sustainable produce that will cope the demand of prospect consumers not only in the Province of Iloilo but the country at large.

5. The La Maria's Darag Native Chicken empanada is profitable and can be a good business venture as a rejoinder to issues underlying the use of Darag Native Chicken for production of marketable byproducts.

### **Recommendations**

Based from the results and conclusions, the following recommendations were drawn:

Having proven the potential marketability, and profitability of La Maria's Darag Native Chicken Empanada, outsourcing for external funding is highly recommended. For this, the support of the URDC as well as the Green Business Technology Institute of the university to look for investors are also suggested.

Meanwhile, having it proposed for external funding, it is also recommended that the pursuant of this project be extended to the communities in the Municipality of Lambunao. To this extent, the process of outsourcing of manpower will be given to the Research, Extension, and Training Office (RETO) of the West Visayas State University- Lambunao Campus for thorough supervision.

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