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Factors Affecting the Economic Viability of the Coffee Industry in Ifugao

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Abstract: ***The study primarily aimed on finding out the factors affecting coffee viability in Ifugao and aimed on establishing a baseline research on the said industry. The study used primary data from 306 coffee growers in the province of Ifugao and quantified problems through means and percentages in their operational, marketing and financial practices. In terms of operational practices, the Ifugao growers propagated a variety of coffee in a relatively wide farm. Majority has acquired storage rooms & shade houses; the sprayer was used to water the plants. They acquired seedlings from propagators within and outside the province, and majority of the growers do not use herbicides. In terms of Marketing Practices, price changes during peak season and generally depends on the market's running price. Wholesalers, individual consumers, cooperatives and institutional buyers frequent buyers, growers sold their harvest as freshly picked, personally repackage, dried and milled/grinded; and were classified according to variety and class. And in terms of Financial Practices, most growers initially got their capital from loans from cooperatives and from their own savings, initial investment depended on equipment used and area of propagation and growers find coffee production a profitable venture.***

Keywords: Operational, Marketing, Financial Practices, Coffee

1. Introduction

Coffee is the second international commodity being traded in the world market next to oil. There are four commercial coffee varieties and these are: Arabica, Robusta, Excelsa and Liberica. At present the Robusta variety comes in great demand because of its cheaper price. (Wallstreet Journal, 2013)

Reports from the International Coffee Organization (2013), totaled exports in July 2013to have reached 9.1 million bags, 6.6% less than July 2012, but totalexports for the first ten months of the coffee year are still up 3.6% at 94.5million bags. In terms of coffee consumption, an increase of 2.1% is estimated in calendar year 2012 to around 142 million bags, compared to 139.1 million bags in 2011. Most of this increase can be attributed to strong growth in exporting countries and emerging markets, which grew by 2.5% and 4.7%, respectively. The Philippines accordingly contributes around .012% of the world's coffee supply.

According to the Euromonitor International (2013), Philippine production in 2012 is still in disequilibrium with the coffee demand in the country– its coffee demand according to Pacita Juan, chairperson of the Philippine Coffee Board is more than double of what is being produced. Present consumption is at 65,000 Metric Tons (MT) a year, while production is only at 30,000 MT (PIA, July 2012).The country imports the rest of its coffee requirements from Vietnam, Indonesia and other Asian countries, although the Philippines is one of the few countries worldwide where the four commercially-viable varieties are found. According to the Bureau of Agricultural Statistics (BAS), Robusta accounts for 72 percent of the country's production. Arabica, Excelsa, and Liberica share the remaining 28 percent.

The Cordillera Autonomous Region (CAR) is very much blessed as it is one of the few regions in the country where the four commercially-viablevarieties of coffee are grown.According to the 2010 data from the BAS - 6,866 hectares of land in the CAR are planted with coffee. In Ifugao, a total land area of 2,520 hectares currently is used for planting coffee – accounting for around 1/3 of the total production area of CAR. There are also 2,417 growers and processors collectively from the provinces of Apayao, Benguet, Ifugao, Kalinga, and Mountain Province. Ifugao alone has 1,421 households involved in coffee production. Statistics from BAS show that in 2012, the province of Benguet produced 403 MT of Arabica coffee, Kalinga produced 56.50 MTandIfugao who has the biggest land area used in the coffee production produced 16.9 MT only.

Interviews with local folks of Ifugao attested the abundance of the coffee beans in the province and have been capitalized early on by most farmers. Dialogues with some personnel from BAS-Ifugao, DTI-Ifugao and the Provincial Agriculture and Environment & Natural Resources (PAENRO-Ifugao) also attested the abundance of coffee beans in the province. Ms. Eleanor B. Saludares of DTI-Ifugao was even quoted by the researchers that sometime in 1994, NESCAFE Philippines has seen the province's potentials as a coffee producer and has conducted seminars on coffee production at the Ifugao State College of Agriculture and Forestry (now IFSU). Productions though, in the 90's declined and accordingly, land areas for coffee wereconvertedfor production of other organically-grown crops (BAS-Ifugao).In the mid-1990s to early 2000s – farmers were also encouraged by the government (DENR) to plant Melina trees.

On previous surveys conducted by DTI-Ifugao, they were also able to identify issues and problems on the coffee industry of the province – among which are; limited supply of coffee beans and limited coffee nurseries, insufficient technical and entrepreneurial skills of growers, lack of access to the coffee industry market, and industry support and advocacy.

Thus, the potential of the coffee industry of Ifugao, thenumerous comparative economics studies on the topography and agricultural practices of Ifugao and its' sister provinces like Benguet and Kalinga, and the common issues or problems determined earlier has interested the researcher to conduct a study on the aforementioned. This paper also serves as baseline research on the coffee industry of Ifugao.

The research would start off with the profiling of the coffee beans growers, finding out their operational, marketing and financial practices and finally ascertaining and verifying the problems encountered by the growers in terms of the production, marketing and financial aspects.

The collated data on the growers' profiles, their practices and problems encountered will be used as bases in finding out the factors affecting the economic viability of the coffee industry. The feedback loops indicate measures on how to directly solve the problems across areas, improving the practices, and eventually enhancing the profile of the growers.

2. Statement of the Problem

The overall purpose of this research is to find out the different factors affecting the economic viability of the coffee industry of Ifugao based on the growers' profile, their operational, marketing and financial practices.

Specifically, this study attempts to answer the following questions:

1) What is the profile of the coffee growers in terms of the following?
   1.1. Personal Variables
      1.1.1Civil Status
      1.1.2Gender
      1.1.3Age
   1.2 Professional variables
      1.2.1 Highest Educational Attainment
      1.2.2 Occupation
      1.2.3Trainings/Seminars attended in the coffee business
   1.3Organizationalvariables
      1.3.1 Number of people employed in the coffee business
2) What are the operational practices employed in each of the following areas?
   2.1 Length of operation
   2.2 Types of the varieties of coffee beans grown
   2.3 Area of propagation
   2.3 Planting media and equipment used
   2.4 Source of planting materials
   2.5 Farm operation practices
   2.6 Chemical inputs and utilization practices
   2.7 Post harvest Practices
3) What are the marketing practices applied in terms of the subsequent areas?
   3.1 Pricing mechanism
   3.2 Packaging
   3.3 Type of buyers
   3.4 Selling areas
4) What are the financial practices used in terms of the following variables?
   4.1 Sources of finances
   4.2 Capital investment
   4.3 Revenue generation
5) What are the problems encountered in each of the following variables?
   5.1 Operational aspects
   5.2 Marketing aspects
   5.3 Financial aspects

3. Research Method

To answer the main problem of this research, the descriptive research was used as a major research design. The researcher conducted a survey with the use of questionnaires. The questionnaire was exclusively designed for this study.The questionnaire have three parts; Part I, which sought to determine personal, professional and organizational data of the respondents; Part II, which aimedon finding out the different operational, marketing and financial practices of the coffee growers; and Part III, which dealt on the identification of problems on the different practices of the growers.

This study was undertaken in the province of Ifugao. The municipalities included in the study are the top coffee-producing municipalities of Ifugao namely: Lagawe, Asipulo,Banaue,Hingyon, Kiangan and Lamut. The subjects of the study were mainly the coffee growers of Ifugao. The probability sampling techniquewasused whileoperating onstratifiedsampling.Out of the 1,421 households involved in the coffee production in Ifugao, 306 farmersbecame the respondents.This paper made use of frequency counts, means and percentages to establish a baseline study on the factors affecting the coffee industry of Ifugao.The collated data on the growers' profiles, their practices and problems encountered were used as bases in finding out the factors affecting the economic viability of the coffee industry and as indicators on how to directly solve the problems across areas, improving the practices, and eventually enhancing the profile of the growers.

4. Results and Discussion

Section 1: Profile of the Ifugao Coffee Growers

Personal Description: The personal factors which were deemed pertinent considering the purpose of the study were: (1) gender, (2) civil status, and (3) age.

Majority of the growers are male, which comprises 70.59 percent of the total number of respondents and the remaining are female (29.41 percent). And it is evident that the Ifugao coffee growers are predominantly married, representing as much as 87.58 percent. The remaining proportion consisted of those who are single (9.80 percent), widowed (2.29 percent) and separated (0.33 percent). Inadvertently, it also indicates that the age ranges 41-50 and 51-60 had the highest proportions (29.08 percent and 24.84 percent respectively). Data further shows that 15.36 percent belonged to ages 31-40, 15.03 percent to ages 61-70 years old, 7.52 percent to

ages 20-30 years old and 6.21 percent to ages 71-80 years old while almost 2 percent were from 81-90 years old.

Professional Description: The professional factors, which were deemed pertinent considering purpose of the study were: (1) educational attainment, (2) occupation, and (3) trainings/seminars attended in the coffee business.

With respect to academic degree, 23.20 percent or 71 have not finished grade school and 16.67 percent were elementary graduates. Almostnineteen percent did not go beyond high school, and 8.50 percent finished high school, while the others reached and/or were degree holders (totaling about 17.32 percent) and 7.52 percent have no formal education.Concerning occupation, vast majority of the growers are farmers having 67.32 percent while the others worked with the government (12.75%), are engaged in business (2.61%), private offices (1.96%), self-employed (2.61%) unemployed (8.82%). Some are retired and the senior citizens having four percent of the total.

Majority of the Ifugao coffee growers who have attended coffee propagation seminar tallied for 40.36 percent, breeding techniques seminar having 24.10percent, 20.48 percent have attended the post-harvest techniques seminar, 7.23 percent have attended marketing seminar, almost five percent have attended tissue culture seminar, and only two(1.81%) have attended coffee orientation seminar whiletwo(1.20%) have also attended the seminar on fertilizer application.

As observed, majority of the reason for not attending seminars/trainings by the growers are due to lack of information having 83.26 percent of the total number of growers, accessibility due to distance having 8.37 percent and trainings are expensive having 3.08 percent while five percent said that no trainings/seminars are conducted in their place.

Organizational Description: The organizational factors which were considered related in view of the purpose of the study were: (1) the Employment of Laborers and Number of Workers Employed by the growers, and (2) Length of operation.

It appears from the survey that a substantial number of growers do not employ laborers in the propagation of coffee (80.06%) while almost twenty percent employ a maximum of 16 workers. Accordingly, most of the growers do not employ laborers because their coffee farms are quite manageable. Those who employ workers in their farms are said to be employed themselves, as some of the workers are working in either government or private institutions. The data also shows the distribution of the respondents according to the length of operation in the coffee business. That is, almost 70 percent are in the business for more than 10 years. 23.53 percent has been operating for one to three years, 4.90 percent has been propagating for four to six years and 1.63 percent account for those in the business for seven to nine years.

Section 2: Operational, Marketing and Financial Practices of the Ifugao Coffee Growers

This section delineates the specific practices assumed by the growers of Ifugao in each of the three aspects covered in this study. Their practices cover Operational, Marketing and Financial position.

Operational Practices

Results indicate that relative to the varieties of coffee propagated; the highest percentage of the respondents cultivated Robusta (77.13%), Arabica and Excels a follow next (19.51% and 2.13% respectively). Liberica are grown by around 0.30 percent and only 1 percent propagated Barako. It can also be gleaned from the same result that majority of the growers propagated coffee in an area of less than 1000 square meters (35.29 percent). 14.05 percent of the growers have a total propagation area of 4100 to 5500 square meters, 11.44 percent and 11.11 percent,while almost one-half of the respondents grow coffee in an area of more than 1100 square meters.

Conversely, majority of the coffee growers reproduced via propagation by seeds having 69.57 percent, propagation by cutting having 13.33 percent, nursery propagation having 9.57 percent while only 1.16 percent reproduce via propagation by grafting. Lastly, 6.38 percent or twenty-two respondents maintained the trees.

Survey reveals that 13. 06 percent of the growers have built storage rooms, 9 percent have shade house, and 4.05 percent have nursery, while roughly 3.15 percent have green house. In watering their plants, most of the growers have acquired manual sprayer (20.95 percent), automatic sprinkler (8.56 percent) and manual sprinkler (6.76 percent).But majority of the growers have not acquired any farm equipment having 34.46 percent.

It is also evident that 33.33 percent obtain seeds from propagators within their area if there are no available seeds that could be used for planting. Places where seeds are acquired: Cudog, Banaue, DA-CAR, Hingyon, Caba, Pob.EastLagawe, Boliwong, Kiangan, Burnay, Halimutok, Bakir, Bimpal, Beligon's Farm, Riverside Payawan, Regmental, Ambasa, Magulon, Panopdopan, and Jolowon. 19.44 percent and 3.09 percent of respondents purchase it from agricultural supply centers and from commercial gardens respectively; and around fifteen percent obtain it from government agencies.

The Ifugao Coffee growers weed their plants having 35.33 percent. 23.09 percent of the growers perform stem supporting which is practiced with the use of a rope tied to both ends of the plot, and is pulled up to support the plants from stem sagging, 18.36 percent did pruning, 18.08 percent perform disbudding which is the removal of unwanted buds and auxiliary shoots, the center bud is maintained to grow into big fowlers and 2.92 percent practice watering and the rest (2.225) practices pinching which is to induce the formation of buds and self-supporting of the coffee trees.83.33 percent of coffee growers harvesttwice a year, during the months of January and October, while 3.59 percent harvest twice a year and 1.64 percent mentioned that

the trees are abandoned or self-supporting while 11.44 percent did not harvest yet. The Ifugao coffee growers harvest the coffee beans. 87.91 percent harvest by handpicking, 1.31 percent by winnowing while only one (0.33%) by machine harvesting, the rest, are self-supportingand no harvest yet (0.65 percent and 9.80 percent respectively). Also, 37.38 percent of coffee growers harvest less than 100 kilos; 19.02percent have a volume of harvest of 100 kilos, 18.03 percent have a volume of harvest of 110-200 kilos while 14.10 percent have a volume of harvest of 201 kilos and above. But 0.98 percent do not harvest and 10.49 percent have no harvest yet.

Majority of the Ifugao coffee growers do not apply fertilizers on coffee trees having 81.64 percent while 18.36 percent or 56 only apply fertilizer.Of the growers who applied fertilizers, 73.21 percent used the basal application, while 19.64 percent made use of foliar spraying and 7.14 percent made use of drill/hole method.73.77 percent of those who are using fertilizers made use of organic fertilizers, 14.75 percent made use commercial fertilizers, while 11.48 percent made use of inorganic fertilizers. Majority of the Coffee growers of Ifugao do not apply chemical inputs in their propagation and only 17.32 percent made use of chemical inputs. Results show that almost 93 percent of the coffee growers only apply chemicals as the need arise while 4(7.55%) apply chemical inputs every cropping. Coffee growers of Ifugao perform drying as their post-harvest practice.

5. Marketing Practices

Coffee growers bared that 34.71 percent sold their produce as freshly picked(raw), 18.24 as personal repackage, 12.06 percent sold as milled/grinded coffee beans, 9.71 percent sold as dried beans, the rest, did not harvest yet, for home consumption and the trees are non-bearing yet.

Price of coffee in Ifugao ranges from 16-30 pesos per kilo for freshly picked coffee beans, while dried coffee ranges from 40-60 pesos per kilo and milled coffee ranges from 50-200 pesos per kilo. 94 percent of the coffee growers in Ifugao sold freshly picked Robusta coffee beans to buyers. 72.73 percent of the coffee growers said that price is affected by season of growing coffee Data revealed that price of coffee change because of the change in weather, although 18.29 percent of the growers claimed that price also changes because of the difference in the quality of produce or yield including class or grade of coffee beans, while12.35 percent averred that prices vary because of the demand or change in the market price or supply increase. 4.51 percent is due to change in the wage of workers, 1.66 percent because of the change in the price of the raw materials, 1.66 percent due to change in the price of equipment and the rest 22.03 percent are due to home consumption, first time to plant, lack of management and black beans.

Coffee growers sell their produce to wholesalers, individual consumers, cooperatives, institutional buyers, retailers and for home consumption (with percentage of 47.58 percent, 17.56 percent, 8.65 percent, 0.76 percent, 2.04 percent and 13.74 percent respectively). Only 9.67 percent did not harvest yet.

6. Financial Practices

Coffee growers primarily got their financial resources from savings, from loan from cooperatives, from lending companiesand from farm earnings (with percentages of 78 percent, 12.33 percent, 0.67 percent, 11.63 percent and 0.67 respectively). It is interesting to note that some of them just maintain the coffee trees. Almost 58 percent of the Ifugao coffee growers took it from their savings, the rest, which comprises 30.03 percent ran to cooperatives and private lenders for loans in case of unexpected expenses on their coffee business. The capital investment of the growers are below Php10,000 and Php10,000 – Php20,000 had the highest proportions (61.76 percent and 11.11 percent), aggregately comprising over half of the 306 respondents. Data further showed that some 1.31 percent had investments ranging from Php20,001 – Php50,000, 0.98 percent invested Php50,000- Php100,000, while 8.50 percent and 16.34 percent respectively, inherited the coffee farm and did not spend anything. Majority of the coffee grower in Ifugao agree that the coffee is a profitable venture, only 6.21 percent said that it is not a profitable venture and 3.59 percent have no experience in coffee business yet.

The income earned ranges less than Php10,000 and Php10,000 – Php20,000 had the highest proportions (51.16 percent and 32.56 percent respectively), aggregately comprising two-thirds of the 43 respondents. Data further showed that some 16 percent had earnings ranging from Php20,001 – Php50,000.

Section 3: Problems Encountered by the Growers

This section discusses the problems encountered by the Ifugao coffee growers in terms of the operational, marketing, and financial aspects.

9.82 percent of the growers had lack of technical know-how, some 8.96 percent of the total respondents had limited area of propagation, 8.11 percent had insufficient production technology, 7.11 percent had lack of transport facilities while 5.12 percent inefficient post-harvest handling and problem on costly farm supplies, 4.69 percent had limited planting materials and inadequate breeding technology. Other problems such as old trees, pest & diseases, climate, weeds, animals (rats, bats, ants, borers, squirrels), time, maintenance & management and low production also contributed a lot to the operational problems having 46.38 of the total.

The researcher found out that the growers of the province have sufficient knowledge on the propagation of existing coffee varieties. However, the growers have inadequate breeding technology on asexual reproduction (vegetative propagation) of coffee that would aid them in producing other varieties produced at present by other growers from outside the province. Based on follow-up questions by the researcher, the deficiency in breeding techniques could also be attributed to the growers' lack of trainings/seminars. Some have attended trainings more than five years ago.

Marketing problems encountered by the coffee growers of Ifugaowere: there is no specific market outlet, insufficient linkage capabilities, inadequate access to market information on market demand, low market price or price control, inefficient marketing network and high cost of packaging materials(with percentages of 17.05 percent, 16.02 percent, 14.73 percent, 13.18 percent, 9.82 percent and 6.20 percent respectively) that is why most of them use it for home consumption. Others, like drying process and no marketing experience (1.55 percent and 1.81 percent respectively) and interestingly to note is nineteen (4.91%) of the total have not encountered marketing problems.

The Department of Trade & Industry (DTI) also helps in the promotion of the coffee as a product of the province, it does not however, suffice the linkage capabilities that the industry needs because the growers are not associated with each other and neither are most growers connected with the said office. According to some growers after the researcher made follow up questions with regards to government tie-ups; it is easier and more convenient to sell their produce individually.While it is true that the government has put up the different public markets, however, it caters to the buy and sell of vegetables only; hence, there is no particular area for the trading of coffee.

Results of the study revealed that 35.45 percent of the Ifugao coffee growers said that one of the financial constraints that they lack capital for expansion, and that access to credit sources is also another major problem confronting the growers. Another major problem they are having is high transport cost due to far distance from the farm to the market place. 14.55 percent agree that coffee have high investment costs. Although coffee are grown even without sheds, some coffee seedling need greenhouses to be able to yield quality tree before it will be transplanted, which eat up most of the investment costs. High labor cost and maintenance is also another problem having 5.91 percent.

Other financial constraints they are having are the insufficiency of strategic alliances or cooperatives, as most of them are not affiliated with any associations that might help them in the financial position of the business. Most growers sustain their gardens by borrowing from their cooperatives. Lack of cut flowers associations then, impede them to expand on the business.The interest rates on loans offered by institutions are high. Growers of coffee are in need of financial support during the initial stages of production. Collateral requirements demanded by lending agencies are rarely met and the grower faces the dilemma of whether to continue coffee growing or not.

7. Recommendations

1) Growers should attend more trainings/seminars within and outside the province on breeding of coffee for new varieties and tie up with other growers for alternative methods or equipment that are not so expensive in the propagation of coffee.
2) Growers should put up associations to aid them in their financial needs in the procurement of raw materials and in their expansion plans.
3) Government agencies should come up with local trade fairs showcasing coffee and invite local growers as well as growers from other provinces to participate on such fairs.

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