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The Feasibility of Establishing a Manufacturing Company in Quezon City Which Produces Corn/Soy Meal to Reduce Malnutrition Among Children in The Philippines

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ABSTRACT

This feasibility study was done to determine the feasibility of establishing a manufacturing company in Quezon City which produces Corn/Soymeal to reduce malnutrition among children in the Philippines. In this feasibility study, both quantitative and qualitative methodology was used to carry out the feasibility studies. In the quantitative methodology, statistical data was gathered from the Department of Education (DepED), the World Food Programme, and other important agencies, both public and private, as well as international organizations whereas for the qualitative methodology, interviews were conducted at the DepEd to get more information about the market, industry. The research paradigm followed an interpretive school of thought. The variables used in this research were independent and dependent variables. Some of the dependent variables were the data gotten from interviews conducted at DepED. The independent variables were the DepED employees and the World Food Programme because the findings of the feasibility studies depended on the data they provided. It was discovered that there is a considerable market opportunity for Corn/Soy meal in Metro Manila and that the utilization of recent and highly advanced types of machinery equipment will give the business a huge potential for success and increased productivity.

Keywords: *Malnutrition, Quantitative Methodology, Qualitative Methodology, Variables, Independent Variables, Dependent Variables.*

I. INTRODUCTION

Malnutrition is very present in underdeveloped countries in the world. The World Health Organization (WHO) defines good nutrition as the adequate, well-balanced intake of food in relation to the body's dietary needs. Malnutrition is an encompassing term for the various forms of poor nutrition, whether it is excess consumption of nutrients (over nutrition) usually afflicting the obese, or inadequate consumption of nutrients (undernutrition) common with those suffering from extreme and prolonged hunger. When assessed along with the Child Growth Standards set by WHO, child undernutrition has three indicators: underweight (low weight-for-age, including low birth weight), wasting (low weight-for-height), and stunting (low height-for-age) (Lina, Joey. 2018). The National Capital Region (NCR) of the Philippines has many depressed areas. Some of these areas include Tondo, San Andres of the City of Manila, Batasan Hills, Bagong Silangan, Payatas of Quezon city, West Rembo of Makati City, and Barangay Sta. Lucia of Pasig City, Libertad of Pasay City, and Kabihasnan area of Paranaque City. Around 31.2% of Filipino children aged 5-10 are underweight, according to a 2015 report made by the Food and Nutrition Research Institute (FNRI) which also said that 31.1 % of the children in the same age group are under height or stunted (Lina, Joey. 2018). The FNRI 2015 data also revealed that among children aged 0-2, around 26.2% or one in four is undernourished – a rate highest in 10 years. And about 33.5% of children below the age of five suffer from stunting. According to the 2016 Global Nutrition Report, (Global nutrition report 2016), the Philippines is among those

with the highest wasting and stunting prevalence. Of a total of 130 countries ranked lowest to highest on wasting prevalence, the Philippines is ranked 93rd at 7.9% prevalence. This data on wasting is bothersome amid a published report that, according to the WHO, wasting prevalence that exceeds five percent is "alarming given a parallel increase in mortality that soon becomes apparent. Provided there is no severe food shortage, the prevalence of wasting is usually below five percent, even in poor countries." On stunting, the Philippines has a 30.3% prevalence and is at 88th spot out of 132 countries also ranked lowest to highest in the 2016 Global Nutrition Report. This is also quite alarming amid the warning from health experts that "chronic undernutrition leads to stunted growth, which is irreversible and is associated with impaired cognitive ability and reduced school performance, as well as poor work capacity and productivity." An exhaustive 54-country study of maternal and child undernutrition published in 2010 in The Lancet, one of the world's oldest and prestigious weekly peer-reviewed general medical journals, "found that height-for-age at two years was the best predictor of human capital and that undernutrition is associated with lower human capital." It also stressed that "it is during the child's first 1000 days when the most pronounced growth reduction is observed compared to other stages in a child's development." There's also a World Bank study that found out that "a one-percent loss in adult height as a result of childhood stunting is linked with a 1.4-percent loss in economic productivity, resulting in 20 percent less earnings as adult." It added that stunting "is associated with up to 3 percent GDP losses annually." The non-government organization, Save the Children Philippines, also made an in-depth study in 2016 which revealed that "education and productivity losses as a result of child undernutrition amounted to a total of 1,328 billion in 2013." The amount was equivalent to 2.84 % of the Philippines' GDP that year. The study pointed out that of the 330,418 students who repeated a grade level in 2013, about 15% or 48,597 students "had repeated a grade level as a result of under-five stunting. An additional 11.23 billion was required to cover the costs of grade-level repetitions for these stunted children." It said that stunting costs the Philippines some 1,326.5 billion in lost productivity. To address undernutrition among public school students, the Department of Education in 2016 asked schools to establish the Gulayan sa Paaralan Program (GPP) "as a source of ingredients for the School-Based Feeding Program and encourage families of beneficiaries to have their own home garden for the continuous nutritional improvement at home." The F. Serrano Sr. Elementary School in Parañaque City is among the best to implement GPP. "The school boasts some fruit-bearing trees, urban vertical gardening, containerized gardening, aquaponics, circulating and non-circulating hydroponics, and fishponds. The non-circulating hydroponics will be seen on every floor of the school building. The school harvests organic vegetables such as pechay, mustard, and eggplants which are used as ingredients for the school's feeding program," DepEd said. The successful implementation of GPP in the most impoverished areas of the country will go a long way in battling undernutrition (Lina, Joey. 2018). But a lot more needs to be done. The invaluable help of the private sector and more NGOs will certainly boost efforts to rid the menace plaguing Filipino children. And foremost among these efforts ought to be poverty reduction." In the year 2013 my sister who was a Registered State Nurse working in a Gynecology and Obstetrics hospital in Yaoundé, Cameroon, saw cases of malnutrition in the pediatric ward of the hospital. After some months of experimenting and research, she and another partner came up with a perfect blend of soy/corn meal named SIM & NAMY –Bouillie de Royaume au Soja which was validated as nutritious by a government-owned laboratory in Cameroon known as the Cameroun Laboratoire d'analyse Physiochimiques (The Cameroon Laboratory for Physiochemical Analysis). Associating my knowledge of the soy/corn meal business back in Cameroon with the feasibility studies in Metro Manila, I came up with a business plan on how to establish a soy/corn meal-producing factory in Metro Manila in 2019, called SOYCO, Inc. The products of the soy/corn meal are intended to be sold to the Department of Education, Department of Social Welfare and Development (DSWD), non-government institutions, charitable organizations, and local municipalities, all of which have feeding programs to help address malnutrition of public-school students. To objective is to determine the feasibility of establishing a manufacturing company in Quezon City which produces Corn/Soy meals to reduce malnutrition among children in the Philippines.

II. RESEARCH METHODS

The secondary data used in this study was gathered from the Department of Education (DepEd), the World Food Programme, and other important agencies, both public and private, as well as international organizations. Interviews were conducted at the DepEd in order to get more information about the market and the industry. In this feasibility study, both quantitative and qualitative methodology was used to carry out the feasibility studies. In the quantitative methodology, statistical data was gathered from the Department of Education (DepED), the World Food Programme, and other important agencies, both public and private, as well as international organizations whereas for the qualitative methodology, interviews were conducted at the DepEd to get more information about the market and the industry. The variables used in this research were independent and dependent variables. Some of the dependent variables were the data gotten from interviews conducted at DepED meanwhile the independent variables were the DepED employees and the World Food Programme. In this feasibility study, SWOT analysis, demand analysis, ratio analysis, and sensitivity analysis were used.

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III. DISCUSSION

Malnutrition is a problem in the Philippines and so this feasibility study was done to determine the feasibility of establishing a manufacturing company in Quezon City which produces Corn/Soymeal to reduce malnutrition among children in the Philippines. While doing this feasibility study certain key findings were noted. It was discovered that there is a considerable market opportunity for Corn/Soy meal in Metro Manila and that the utilization of recent and highly advanced machineries and equipment gives the business a huge potential for success and increased productivity. Also, a SWOT analysis, demand analysis, ratio analysis, break-even analysis, and sensitivity analysis will be very important for the realization of establishing a manufacturing company in Quezon City which produces Corn/Soymeal to reduce malnutrition among children in the Philippines. In the SWOT analysis, we have strengths like providing the customers with healthy and organic products, which will improve the overall health of children and help malnourished children to gain good weight. The weaknesses include limited capital investment and also the production capacity in the first years of operations cannot satisfy the large demand of the government and charitable organizations. The opportunities on the other hand will include the availability of the raw materials used in making the soy/corn meal in the Philippines, the availability of funds, the constant initiatives and concerns expressed by the Department of Education, Department of Social Welfare and Development (DSWD) to eradicate undernourishment cases in the Philippines (San Juan and Alexandria Dennise 2018) and the presence of charitable organizations who also aim at eradicating malnutrition in the Philippines. Finally, the threats will include bad climatic conditions in the Philippines such as strong typhoons which may reduce the amount of corn or maize harvested thus limiting the production of soy/corn meal in return, and the occurrence of high inflation rates in the Philippines. As for the demand analysis, a projected demand of the number of enrollees of kindergarten and elementary students in the public schools of NCR was done for the year 2018 to 2021 with data provided by DepEd. The gross margin ratio is 83% which implies the company will retain 0.83 pesos for each peso of revenue generated. In addition, the net profit margin ratio is 18% which implies that for every peso generated by SOYCO, Inc. in sales the company will keep 0.18 pesos as profit. As for the return on the investment, the company will make an ROI of 14%. The break-even analysis gives us 74%. Finally, a sensitivity analysis was done in this feasibility study and it took into account the fluctuation in the cost of raw materials (soy and corn). The sensitivity analysis demonstrated that the gross profits made by the company are directly influenced by the prices of the raw materials as well as by the cost of production. It is noticed that as the prices of all raw materials increase the cost of production also increases thereby leading to a constant fall in gross profits. It is noticed that as the prices of all raw materials increase the cost of production also increases thereby leading to a constant fall in gross profits. The feasibility study had some limitations. It did not interview all the employees at the DepEd or make sure that those who were interviewed had sufficient knowledge of malnutrition among children in the Philippines and sufficient knowledge of the market and industry. For the ratio analysis, we can observe certain limitations. For example, the net profit margin does not provide insight as to whether management is managing its production cost. In addition, the return on investment in the ratio analysis does not take into account the time value of money and the break-even analysis does not take into account competitors and it does not also take into account the fluctuation of the prices of raw materials in the future. The feasibility study reveals that there is a huge market for SOYCO, INC. in the growing economy of the Philippines. It is recommended that more entrepreneurs invest in this specific market since there are significant profits to be obtained from this business. We could safely conclude based on the feasibility study that establishing SOYCO, INC. in Matandang Balara, Quezon City is feasible. In addition, the business (SOYCO, INC) has a large potential for growth in the Philippines.

IV. CONCLUSIONS

Based on the findings the following conclusions were drawn:

1. The establishment of SOYCO, INC. in Matandang Balara, Quezon City is feasible.
2. Due to its similar protein content to that of cow's milk, soybean milk can be used to treat malnutrition.
3. When corn and soya beans are combined, malnourished kids can acquire weight and maintain their health extremely quickly. This is one of the main blended foods that the World Food Programme (WFP) distributes to fight malnutrition.
4. The business has a large potential for growth in the Philippines.
5. More entrepreneurs should invest in this specific market since there are significant profits to be obtained from this business.
6. The utilization of recent and highly advanced types of machinery and equipment gives the business a huge potential for success and increased productivity.
7. The creation of this project will be very helpful to the citizens of the Philippines and especially malnourished children in public schools.

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