DFL WATER PURIFICATION AND REFILLING PLANT HAPPY HOMES SUBDIVISION, POBLACION ILAYA, ZARRAGA, ILOILO: A FEASIBILITY STUDY

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ABSTRACT

This study was conducted to determine the viability of a water refilling business specifically its marketing, management, technical, legal, taxation, safety and environmental, socio-economic and financial aspects. Specifically, it aims: to determine the personal profiles in terms of age, sex and livelihood; to determine the households' preference according to type of water, size, price, health benefits and taste of water they buy; to determine the number of prospective customers who are willing to patronize the product; to determine the households' actual consumption and frequency of buying water; to present the form of the business, organizational chart, job description of personnel, salaries and privileges; to present the specification of reverse osmosis water system equipment including its flow of processing, functions of the equipment, water purifying system procedure and institutions and policies, deep-well perspective and its cost, site map, vicinity location, floor layout and estimated cost of construction of the store; to determine the mandatory and statutory requirements needed for starting a business and for its continuous operation; to determine the corresponding tax dues and

schedule of payments for a sole proprietorship; to determine the safety requirements and the compliance procedures to protect the environment; to present the contribution of the business to the community and other stakeholders; and lastly, to determine the Net Present Value, Payback Period and Return on Investment of the project as a basis for financial analysis.

This is a descriptive research which involved 123 households of the Happy Homes Subdivision and Mutual Homes Subdivision. Self-administered questionnaire was utilized to obtain data on households' personal profile, preferences, consumption, and acceptability level of the proposed water refilling business. The result of the survey conducted was analyzed using the frequency distribution and percentages.

The data and related facts about water refilling business were obtained through inquiries made to the owners/managers of water industries and actual ocular inspection of nearby Barangay of the proposed business location. The technical and legal part of the study was consulted to the engineers, DOH (Department of Health) personnel, and other competent persons to determine the appropriate equipment to be used and procedures to be applied. While the expenses and assumptions in the financial statements were gathered from actual quotations of various store and current prevailing price.

Findings

The result of the survey conducted points out that most of the households of the two subdivisions are young families residing in a newly established subdivision aging 36 years and below. Majority of them were professionals with 35.8 percent who could be physicians, lawyers or engineers. While the employed and self-employed respondents

had the same rate of 23.6 percent. Thus, it shows that target market residing in a subdivision have their resources that will enable them to buy purified water instead of using unreliable and cheap tap water.

For the taste of water, customers most likely preferred their water with no taste. As expected, customers also preferred water with health benefits and with no added cost. The type of water, on the hand, that was preferred by customers is a little more of mineral water with 52.8 percent and purified water with 44.7 percent. Broadly speaking, "mineral water" is groundwater that has emerged from the ground and flowed over rock. Thus, this product is not feasible for a water purification and refilling plant business considering the water source location and treatment restrictions as its two major setbacks. Opportunely, the product water, based on the physical and chemical test, still has mineral content.

The survey also revealed that 93.5 percent of the respondents answered "Yes" which gives the researchers an idea how many customers are willing to support the proposed water purification and refilling plant business and patronize its product. As for the respondent's consumption, it showed that a low majority or 54.5 percent of the respondents representing each household consumed 1.05 – 1.5 containers of water a day while 26.8 percent of the respondents consumed .5 – 1 container a day. A low proportion of 9.8 percent and 7.3 percent consumed 1.55 – 2 containers and 2.05 – 2.5 containers of water a day, respectively. Lastly, the customers' frequency of buying disclosed that half or 47.2 percent of the respondents buy their water on a weekly basis while the 44.7 percent of the respondents buy their water on a daily basis.

From the data above, the researchers were able to forecast a 5 year market demand with initial selling price of P20 and with consideration of 10% inflation rate per year as follows: year 1, 65,335 containers; year 2, 71,869 containers; year 3, 79,055; year 4, 86,961 and year 5, 95,657.

DFL Water Purification and Refilling Plant is a sole proprietorship. The proposed business will employ 5 persons for its manpower where 4 are regular employees and 1 who is the bookkeeper will be on a retainer arrangement. Everyone will be given their appropriate duties and responsibilities to be supervised by the owner/manager.

The water refilling business will acquire a 6,000 GPD (Gallon Per Day) Reverse Osmosis Water Purifying Unit that will undergo 24 stages of water filtration and the business will be situated at commercial area of Happy Homes Subdivision, Poblacion Ilaya, Zarraga along the provincial road and near town proper.

The legal requirements for the water business that will be secured prior to the operation includes Business Permit, Department of Trade and Industries (DTI) requirements, local government of Zarraga requirements and the Bureau of Internal Revenue (BIR) requirement. In compliance to the labor law, the business will register its employees to Social Security System, PhilHealth Insurance Corporation and PAGIBIG Fund for economic security purposes.

The proprietor as a self-employed individual with business will file annual income tax return through the BIR Form 1701. The sales is subject to 3% percentage tax to be filed monthly using the BIR Form 2551M.

DFL Water Purification and Refilling Plant will offer social and economic contribution by provision of employment and livelihood, increased taxes paid to the

government and producing quality purified water made available to the residents of Zarraga.

The total investment cost of P850,000 will be financed by the sole proprietor. The proposed project costs, as evidenced by the projected financial statements, showed a Net Present Value of P2,032,938, which is greater than the initial outlay of fund, therefore, signifies a desirable investment. While the Payback Period is 1.58 years or 1 year and almost 7 months from the start of its operation indicating that the investment will be recovered this fast. As to its Average Return on Investment, the result of 140% on its five years of operation demonstrates a good measure of performance with the Annual Return on Investment of 48% on year 1, 69% on year 2, 101% on year 3, 145% on year 4 and 1.96% on year 5.

In addition, the sensitivity analysis disclosed that even if there will be a 5% reduction in sales volume and selling price, the net income remains positive for the subsequent four years. Furthermore, the option to build another deep-well or to outsource raw water in case of water shortage from its source will still yield a positive net income for the subsequent four years.

With the given conservative projections and ratio analysis, DFL Water Purification and Refilling Plant is a very profitable venture. The study has provided evidences from the data and/or information gathered and disclosed that the proposed establishment of DFL Water Purification and Refilling Plant is viable and which can be used as reference by future researchers.