RAW-MATERIAL COST AND PRODUCTIVITY OF MANUFACTURING FIRMS IN UGANDA; A CASE OF HOME CARE HERBAL BATHING SOAP ENTERPRISES WAKALIGA BRANCH

KIFANTA SUNDAY

Lecturer Ndejje University-Faculty of Business Administration and Management

LULE SIMON

Lecturer Victoria University, Faculty of Business Administration and Management

KAKUNDWA NAOMI

Lecturer, Victoria University, Faculty of Humanities and Social Sciences

ABSTRACT

The study focused on the relationship between raw material costs and productivity (in terms of production levels, market share, customer satisfaction, and employee count) of Home Care Herbal Soap Enterprises. The study's particular aims were to determine the effect of transportation costs on productivity, to investigate the influence of packaging costs on production, and to investigate the impact of indirect taxes on productivity. The study followed a descriptive and cross-sectional research design. The researchers employed a cross-sectional design to measure variations between or among various responses from all departments. The study targeted a population of 105 employees. The researchers selected 100 informants from a total of 105 employees. Data were obtained utilizing questionnaires, an interview guide, and an observation checklist. The researchers employed Statistical Techniques for Data Analysis (SPSS) to investigate the relationship between raw material cost and productivity. The study concluded that there is a significant positive association between transportation costs and production, with a correlation coefficient of $r = 0.436$ and $p = .000$. Since $p > 0.01$, the association was significant. The study concluded that the association between packaging costs and productivity was positive and significant, with a correlation coefficient of $r = 0.570$ and $p = .000$, indicating an increase in extrinsic motivation. The researchers found a significant positive association ($r = 0.650^{**}$, $p = 0.000$) between indirect tax and production. The researchers suggested that Home care herbal soap avoid spending too much money on transportation for raw materials, completed products, and personnel in order to boost productivity in terms of market share and output levels.

Keywords: Raw-Material Cost, Productivity, Manufacturing Firms.

1.0 INTRODUCTION

Cost of raw material being the costs related to making or acquiring goods and services that directly generates revenue for a firm. It comprises of direct costs and indirect costs. In the late 1980s, most manufacturing industries relied on agricultural products for raw materials and machinery and as a result the problem plaguing the agricultural sector hampered both

production and marketing in manufacturing industries. Home Care Herbal Soap Enterprises also experienced the high commodity and raw. Materials like Turmeric, Neem, Avocado, and Citronella. Home Care Herbal Soap Enterprises also witnessed an increase in operational costs and import costs of raw materials especially during this time leading to increase in the price of the final product in order to maintain their profit margins.

Børing, 2019, defined productivity as a ratio of some measure of output to some index of input use. Put differently, productivity is nothing more than the arithmetic ratio between the amount produced and the amount of any resources used in the course of production. This conception of productivity goes to imply that it can indeed be perceived as the output per unit input or the efficiency with which resources are utilized (Samuelson and Nordhaus, 2019). The problem of increase in cost of raw materials is likely to result into forcing the country's manufacturing firms to rely on imports of raw material and Home Care Herbal Soap Enterprises is no exception. The country failing to grow its capacity, low economic growth, lower government revenue, poor standard of living, high unemployment. Many factors are responsible for the increase in cost of raw materials in manufacturing industries in Kampala Uganda. These include, increase quality of raw materials, inflation, increase transportation, multiple function of the product. While many studies have investigated on the causes of rise in cost of raw materials in manufacturing industries producing bathing soap no single study has been concluded on cost of raw materials that is why the research in this study will opt to investigate on the relationship between cost of raw materials and productivity in terms of production levels, market share, customer satisfaction and number of employee.

It was propounded by the German economist and later on many economists like Karl Mcnger, Walras, Wickstcad, Edgeworth and Clark. According to this theory, remuneration of cache factor of production tends to be equal to its marginal productivity. The marginal productivity theory states that under perfect competition, price of each factor of production will be equal to its marginal productivity. The price of the factor is determined by the industry. The firm will employ that number of a given factor at which price is equal to its marginal productivity. Thus, for industry, it is a theory of factor pricing while for a firm it is a factor demand theory. Therefore, increase in the cost of raw materials will equally to marginal productivity.

The internal audit report of Home Care Herbal Soap Enterprises 2020/2021 established that the procurement plans for raw materials for the year were not complete due to high costs, (some contracts were not included in the plan), this affect the availability as well as their prices thus affect productivity of soap in terms of production levels, customer satisfaction, market share. The report further notes that some customers were not given desirable quantity due to reduced levels of production as which affect their satisfaction these impact on the market share, the highlighted concerns are likely to be results of cost of raw materials.

2.0 RESEARCH METHODOLOGY

This chapter presents the methodology that the researchers used to conduct the study. It outlines the research design, study area, target population, sample size and selection, sampling technique, data type and source, data collection method, validation and reliability test, data analysis and presentation.

2.1 Research Design

This study adopted a correlation research design. Quantitative approach was be used. A research design functions as the research blue print for measurement and analysis of data. Kothari (2004) describe a research design as a plan and a structure of investigation conceived to find answers to research questions. According to Mugenda and Mugenda (2003), correlational research design is connected with providing solutions to the problems. It is found suitable for examining effect.

2.2 Data collection methods

Data was collected by using Questionnaire and interview methods as explained below;

2.2.1 Questionnaire method

A questionnaire method is a structured form, either written or printed, consists of a formalized set of questions designed to collect information on some subject or subjects from one or more respondents and it is a data collection method wherein the respondents are asked to give answers to the series of questions, written or verbal about a pertinent topic (Saris and Gallhofer, 2014). The researchers designed the open ended questions and statements concerning to the study topic. From statements, respondents were expected to pick a response from a 5 Likert rating-scale questions and from open- ended questions, they were expected to give their own opinions from open ended questions. The researchers used the questionnaires to get a wide and variety of ideas and opinions from different respondents.

2.2.2 Interview method

Interview method is defined as a qualitative research technique which involves "conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular idea, program or situation (Jamshed, 2014). The researchers used interviews on respondents who may not have time to fill or read questionnaires. This helped the researchers to get or to generate first-hand information by fixing an appointment with the respondents to meet them face to face and utilize time.

2.2.3 Data Analysis

Data Analysis is the process of systematically applying statistical and/or logical techniques to describe and illustrate, condense and recap, and evaluate data (Groover, 2020). The researchers used Statistical Techniques of Data Analysis (SPSS and Excel) which was used to determine the relationship between raw material cost and productivity in order to generate frequency tables, analyze data to answer questions, test hypotheses or disprove theories. Data was analyzed by both quantitative and qualitative data analysis.

3.0 RESULTS

3.1 The influence of packaging costs on productivity of Home Care Herbal Soap

3.1.1 Descriptive statistics on packaging costs and productivity

The findings in table 4.12 above show that 47% of the respondents strongly agreed that Packaging always protects the product of Herbal Care Soap Enterprises, 38% agreed, 7% were

not sure, 6% disagreed and only 2% strongly disagreed. The mean values were at 3.91 and the standard deviation at 1.287, this implies that Packaging always protects the product of Herbal Care Soap Enterprises. The findings in table 4.12 above on show that 44% of the respondents strongly agreed that Packaging usually keeps the product from going bad in Herbal Care Soap Enterprises, 41% agreed, 5% were not sure, 5% disagreed and 6% strongly disagreed. The mean values were at 4.16 and the standard deviation at 1.045, since the mean values are above 3. The findings in table 4.12 above show that 61% of the respondents strongly agreed that Packaging always decreases costs of production in Herbal Care Soap Enterprises, 21% agreed, 6% were not sure, 7% disagreed, and 5% strongly disagreed. The mean values were at 3.91 and the standard deviation at 1.359, this implies that Packaging always decreases costs of production in Herbal Care Soap Enterprises. The findings in table 4.12 above show that 71% of the respondents strongly agreed that the usage details written on the packaging material provides convenience to the consumer and 21% agreed. The mean values were at 4.44 and the standard deviation at 0.606.

3.1.2 Correlation results

The correlation between the variables was examined using Pearson correlation. The following present the Pearson correlation for the variables hypothesized in this study. The study sought to establish a regression model to show the relationship between packaging costs and productivity. From table 4.13, it can be observed that the relationship between packaging costs and productivity was positive and significant with correlation coefficient, r = 0.570 and p = .000, with an increase in extrinsic motivation. Since p > 0.01, this means that the relationship was significant. Therefore, the null hypothesis that "there is no significant relationship between packaging costs and productivity in home care soap enterprises" was rejected. This means that packaging costs has relationship with productivity. Thus, the relationship is predictive, which means that if packaging costs increases, also productivity will decrease and if packaging costs decreases then productivity will also increase accordingly.

3.1.3 Regression results

To establish the extent to which packaging costs influences productivity, a simple regression analysis was conducted using the ANOVA techniques of adjusted R2 values, standardized beta values, t-values and the significance measured at 0.05 levels. From Table 4.14, it is noted that packaging costs for 54.0% (R2 = 0.540) of the variation in levels of productivity, the other 6% was due to other factors. Implying that packaging costs affects productivity by 54.0%, at this rate it means that packaging costs is conducted effectively; other activities will affect productivity by a smaller percentage. Therefore, the researchers observed that the independent variables and the dependent variable are mutually exclusive.

These findings were subjected to ANOVA test to determine if they can be accepted or rejected. The regression results show that the Fisher\s ratio (F = 1.3053) has a significant value of Sig = .000, which is greater than the critical significance at .05. Thus, the findings were accepted. A p-value less than 0.05 (typically ≤ 0.05) is statistically significant. It indicates strong evidence against the null hypothesis, as there is less than a 5% probability the null is correct (and the results are random). Therefore, we reject the null hypothesis, and accept the alternative hypothesis. Findings were also subjected to the coefficients results to confirm the relationship

as shown in the following table, at this rate it implies that packaging costs is conducted effectively, other activities will affect productivity by a smaller percentage.

It is evident from Table 4.16 that if packaging costs was increased by one standard deviation, then perceived scores in level of productivity would increase by 57% standard deviation units. Similarly, if the attitudes of the packaging costs increase by one unit then their level of adjustment would improve by .570 units. This is a sizable effect from one independent variable. The standardized coefficient beta that one-unit increase in productivity is caused by 0.971unit increase in packaging costs on the equation $Y = \beta X + C$, where Y is equal to productivity (dependent variable), X= packaging costs, then $\beta = 0.970$ and C= constant, the equation is productivity is equal to packaging costs plus constant. Therefore, packaging costs is very significant in predicting productivity.

4.0 CONCLUSION

The researchers concluded that the relationship between packaging costs and productivity was positive and significant with correlation coefficient, $r = 0.570$ and $p = .000$, with an increase in extrinsic motivation. Since $p > 0.01$, this means that the relationship was significant. Therefore, the null hypothesis that "there is no significant relationship between packaging costs and productivity in home care soap enterprises" was rejected. This means that packaging costs has relationship with productivity. Thus, the relationship is predictive, which means that if packaging costs increases, also productivity will decrease and if packaging costs decreases then productivity will also increase accordingly.

5.0 RECOMMENDATIONS

The researchers recommend that Herbal Care Soap Enterprises should continue packaging its products in order to protect them from hitting so as to improve sales volume and output levels. The researchers also recommends that Herbal Care Soap Enterprises should make sure that it uses standard packaging; that is, what you pack the product in the box, void fillers, any printed covers, and more. The type of packing you choose and whether you customize is has the biggest impact on the "direct" packaging cost. The researchers recommended that Herbal Care Soap Enterprises should consider packing and storage, in other words it should know how much space each box takes, and whether it's difficult to pack and store the product impacts the costs of inbound logistics, storage, and fulfillment. The researchers recommended that Herbal Care Soap Enterprises should consider inserts to include in the package that isn't the product. Things like business cards, booklets, user manuals, and more. It may be cheaper to buy more expensive packaging materials from local manufacturers because of a reduction in freight costs. thank him for his help and encouragement. May God reward all your efforts abundantly!

REFERENCES

Børing, P. (2019). The relationship between firm productivity, firm size and CSR objectives for innovations. Eurasian Business Review, 9(3), 269-297.

Daily, Herman e and cob, Jonathan (2018). For the common good redirecting the economy towards community, the environment and sustainable future Boston beacon press

González-Benito, J., Reis da Rocha, D. and Queiruga, D., (2018). The environment as a determining factor of purchasing and supply strategy: An empirical analysis of Brazilian firms, International Journal of Production Economics, 124, p. 1-10.

Groover, M. P. (2020). Fundamentals of modern manufacturing: materials, processes, and systems. John Wiley & Sons.

Marshall, Alfred (2020). Principles of economics. New York. Macmillan Marx, Karl (1867 /1977) capital, Vol. New York: vintage books

Ricardo David (2021). The principles of political economy and taxation London everyman's library Schumpeter. Joseph (2018). History of economic analysis New York oxford university press

Schandl, H., Fischer-Kowalski, M., West, J., Giljum, S., Dittrich, M., Eisenmenger, N., ... & Fishman, T. (2018). Global material flows and resource productivity: forty years of evidence. Journal of Industrial Ecology, 22(4), 827-838.