Section: Research Paper
ISSN 2063-5346

Investigating the Factors Affecting the Profitability of Dairy Brands

Navjot Singh[1]
Research Scholar, MMIM, Maharishi Markandeshwar
(Deemed to be University) Mullana, Ambala
Email- navjotkalra4@gmail.com
Contact No. 8930133835
Sultan Singh[2]
Professor, MMIM, Maharishi Markandeshwar
(Deemed to be University, Mullana, Ambala
Email- dr.sultansingh@mmumullana.org
Contact No. 9996391550

DOI: 10.48047/ecb/2023.12.si4.1655

ABSTRACT

Purpose- The objective of this study was to investigate the Factors Affecting the Profitability of dairy brands.

Theoretical Framework- However studies have been done related to customer preference and this study is framed to explore the factors that affect the profitability of dairy brands.

Design/Methodology/Approach- In this study, the researcher used non-probability sampling techniques by judgmental sampling for data collection. By using a survey questionnaire, data were collected from 118 employees of the Dairy industry working as marketing managers, sales officers, Suppliers, retailers, etc. The IB, SPSS version 25.0 is castoff as an analytical tool in this research.

Findings- It has been found that durability, exporting options, distribution channel, availability of products, quality, customization of products, range of products, demand, word of mouth, and better technology are the factors affecting the profitability of dairy brands.

Research, Practical and Social Implications- Future studies can be considered towards the other indicators for dairy industries and also the researchers conduct the study with more sample size, diverse location, and also with other brands of dairy and future researchers can also analyze the impact of profitability on customer choices to get better and more accurate results.

Implications/Originality/value- It is concluded that profitability is the one dimension that changes due to the changes in customer needs and wants and the level of satisfaction provided by the products they were using.

Key Words: Dairy Brands, Factors, Profitability, Milk, Marketing Strategies.

Introduction-

The production of Dairy Industry products in India has increased over the years even though many households involved in livestock and dairy production have continual improvement. It is supposed that the profitability of the dairy business is restricted by poor business growth caused by certain dairy-related factors *(Ashraf Imam, 2011)*. The dairy industry is awfully focused on the topmost players with a share of fifty percent of the total market value because

they have strong marketing practices along with product range. Still, the competitors in this market are generally similar to one another by functioning a diverse range of dairy products in India. The major distribution channels of the dairy industry are autonomous retailers and the non-organized segment for its revenue share (*Malik,2005).* Profitability measures how well any industry uses its resources to generate profits and value in the market. Profitability is stated as a relation between profit and various types of applied resources (*Tayyaba, 2013).* Profitability is stated as a relation between profit and various types of applied resources. The main aim of financial analysis is to demonstrate the firm's ability and competency to create revenue in relation of profit margin, which displays the volume of profit that the company produces on its sales at the diverse phases of an income statement *(Zakova, 2016).* Cost-effectiveness is generally determined by the well-known Ratio Method. For this reason, the drive of the study is to explore the influences that affect the profitability of any dairy Industry, which is important for marketing purposes *(Ktany, 2015).* In Today's context, the marketing strategy is the wide-reaching plan framed mainly for attaining the marketing goals of the organization. It provides a furnished plan for successful marketing objectives to the companies. It is planned after complete marketing research and the marketing strategy supports an organization in its rare resources on the best probable opportunities so as to increase sales. The marketing strategy is now developing practice used to create a sentimentality that that lies in the formation of Marketing performs and this marketing strategy always established for careful scanning of the environmental factors *i.e.*, internal or external analysis and also with the help of Strength, Weakness, Opportunities, and Threats *(Shinde, 2012).* It has been found that due to the bad production system of the dairy industry, people were facing problems like- lack of investment, employment, and some health-related that also affect their import-export procedure and they also find that 10 countries from India contribute more than 60 percent of total dairy products exports in the world and also Indian dairy industry gives employment to the peoples by opening a new dairy farm *(Madhavan et al. 2020).* The present study introduction contains the background of the research, the research problem, and the objectives of the study, and highlighted the significance of the dairy industry. This is followed by the different theories and literature that show the viewpoints, concept of profitability, and, the factors affecting the brands. Finally, the study presents a discussion on the findings, the theoretical and practical implications as well as limitations of the study with future scope.

LITERATURE REVIEW

An overview and comprehensive examinations of the literature become important for understanding the research topic, including the sample size, sampling techniques and methods employed and some statistical methods used. This section reviews a few kinds of literature about the observations of the study.

Profitability for Milk Production-

Jaksic et al. (2012) analyzed the profitability of milk production companies in the city of Serbia and found there is a substantial difference in the level of cost-effectiveness of companies in different milk industries that can affect the overall image of the industry. *Deshmukh (2014)* examined the trends of the dairy sector in India and it has been originated that dairy cooperative are doing best in improving the standard of living along with providing employment opportunities to the farm families of India. *Alvarez (2018)* investigated the cost-effectiveness of value-added products in dairy farms with different products and different dairy brands. found that there are 9 attributes, which put an impact on the margin of milk and also specified that cheese and yogurt have more margin per liter than fluid milk. *Qadir (2021)* investigated the effectiveness of milk production and information was collected from 100 dairy farmers from two particular villages namely Kalu Khel and Kala and found that as

usual, the animals are producing milk costing Rupees 58220, Rupees 91823, and Rupees 107004 on rural existence and that milk was supplied to the different dairy farms but afterward, the dairy farms are not able to use that milk in the proper manner that can affect their overall market practice.

Profitability for Brand Preference

Siva. et al. (2013) discovered the factors manipulating the brand preferences of milk between rural and urban consumers from 108 villages and 60 towns of Kanya Kumari and found that rural people are not buying any type of ready-made products from the brands because they have their own milk animals So, for this reason, the profitability of the dairy brands are less. *Ktany (2015)* aimed to study the effect of breed on profitability and reproductive and economic efficiency of the dairy farms of the Egyptian country and found that the breed significantly affects the profitability and all the productive traits of dairy brands because different breeds have different taste of milk that can make weak to the segment of products. *Kumar (2016)* analyzed the buying pattern of consumers and which affects the overall profitability of dairy and found that the awareness level of Nandini products is 58 percent among the people of Madhya Pradesh because their products are not up to mark for the customers but only 42 percent are using the products namely Milk on regular due to the reason of urban locality and no availability of the milk. *Rashid (2017)* analyzed the profitability and resource use efficiency of dairy farming and products of 200 dairy farmers from commercial and traditional farmers and it has been found that traditional farmers decreased the cost of production of their milk by decreasing the use of labor and related feed and also it has been found that farming under commercial management was more profitable because it has more herd size, high productivity, and extra care. *Huan Quang (2019)* examined the factors that affect the student's decision-making choice of brand in buying fresh milk through the interview method of 8 experts from two large brands of fresh milk and 520 students from Vietnam and it has been found that five major determinants affect the profitability and the buying decisions of students *i.e.*, Quality of the products, suitable price, product promotion, availability of the products, and the references group that shows the attitude towards milk. If in case those elements are missed out from the list of preferences automatically it will decrease the profitability of the dairy brands. *Kumar (2020)* analyzed the production and the profitability of dairy products among various states and found that the dairy industry has the authority to recover the income of rural areas through the advancement in the dairy sector and exporting of dairy products to the international level. *Jaksic et al (2015)* analyzed the profitability of milk production companies in city of Serbia and it has been found that the profitability of companies elaborates the milk production and milk processing in Serbia and it was done based on individual financial profitability indicators of the company that not possible to get high returns.

RESEARCH METHODOLOGY

This study makes use of both kinds of data *i.e.*, primary and secondary. The primary data was collected from the different employees working in dairy brands. It helps the researcher to collect the data in total from 118 respondents.

Research Objective

The main objective of the present study is to identify the factors affecting the profitability of Vita dairy brands.

Section: Research Paper
ISSN 2063-5346

Research Hypothesis

H_{01}: There is no relationship difference exist among the factors affecting the profitability of Vita dairy brands in Ambala and Gurugram.

H_{0a}: There is a relationship difference exists among the factors affecting the profitability of Vita dairy brands in Ambala and Gurugram.

Population Profile and Sampling method

In this study, the target population is all the employees working in the dairy sector in the districts of Haryana. According to the Indian Dairy Cooperatives Society (2020). The total number of employees working in the Indian dairy sector is 450 in one region. Slovin's formula was used to find the sample size and the sample size was found to be 118. The convenience sampling method was chosen from the study population, who is effectively suitable for the study.

Data Collection

The data were collected using different research tools and both kinds of data were collected for the study *i.e.*, primary (main) and secondary(minor). The primary data were collected from the respondents of Ambala and Gurugram through a questionnaire on a five-point Likert scale and then unloaded the questionnaire into SPSS. On the other hand, the secondary data were collected from recognized journals, various websites and magazines.

Data Analysis Tools

The SPSS software is used for the study to analyze the data collection in order to answer the study questions and hypothesis. Descriptive and inferential statistics were used to test the hypothesis.

The following are the statistical tools used-

1. Differential Statistics (means and standard deviations)

2. T-test

3. Simple linear regression to forecast the future values of dependent variables, and to measure the influence of independent variables on dependent variables.

RESULTS AND DISCUSSION

The majority of the sample size is from the Haryana region with 6 marketing managers, 10 sales officers, 46 suppliers, and 56 retailers. Out of this maximum sample was collected from the Ambala Division because it is having its own Production site and the employees are easily available. The descriptive and inferential statistics of respondents' viewpoints of Ambala and Gurugram regarding the factors affecting the profitability of the Vita brand are shown in Table- 1. The results show that in the case of Ambala, durability (Mean=3.90, SD=1.109) of the product is the most significant factor affecting the profitability of the Vita brand, followed by exporting option (Mean=3.75, SD=1.3), distribution channel (Mean=3.63, SD=1.473), availability of the products (Mean=3.58, SD=1.673), quality (Mean=3.54, SD= 1.194). customization of products (Mean=3.49, SD=1.685), range of products (Mean=3.47, SD=1.406), demand (Mean= 3.47, SD= 1.331), word of mouth (Mean=3.39, SD=1.204), Better technology (Mean=3.14, SD= 1.408). On the other hand, in case of Gurugram, exporting (Mean=3.80, SD=1.471) of the product is the most significant factor affecting the profitability of Vita brand, followed by durability (Mean=3.64, SD=1.310), availability of products (Mean=3.61, SD=1.497), range of products (Mean=3.51, SD=1.419), distribution channel (Mean=3.47, SD=1.490), Word of mouth (Mean=3.47, SD=1.223), demand

(Mean=3.34, SD=1.538), customization (Mean= 3.34, SD=1.560), quality (Mean= 3.20, SD= 1.448), better technology (Mean=2.93, SD= 1.298). As a whole, it has been found that durability (Mean=3.37, SD=1.215) of the product is the most significant factor affecting the profitability of both the locations *i.e.*, Ambala and Gurugram followed by exporting (Mean=3.37, SD=1.423), availability of products (Mean=3.59, SD=1.581), distribution channel (Mean=3.55, SD=1.477), range of products (M=3.49, SD=1.407), word of mouth (Mean=3.43, SD=1.209), customization of products (Mean=3.42, SD=1.619), demand (Mean=3.41, SD=1.434), quality of products (Mean=3.37, SD=1.434), technology (M=3.03, SD=1.352). Statistically, the outcomes of the t-test display that there is a significant difference in the viewpoints of respondents towards durability (p=0.038) as a factor affecting the profitability of the vita brand, hence the null hypothesis is accepted.

Table:1- Factors affecting the Profitability of Vita Brand

Sr. No.	Statements	Location	N	Mean	SD	t-statistics	
						t-value	Sig. value
1	Exporting	Ambala	59	3.90	1.109	1.138	0.699
		Gurugram	59	3.64	1.310		
		Total	118	3.77	1.215		
2	Durability of the products	Ambala	59	3.75	1.385	0.193	0.038*
		Gurugram	59	3.80	1.471		
		Total	118	3.77	1.423		
3	Distribution Channel	Ambala	59	3.63	1.473	0.559	0.794
		Gurugram	59	3.47	1.490		
		Total	118	3.55	1.477		
4	Availability of Products	Ambala	59	3.58	1.673	0.116	0.161
		Gurugram	59	3.61	1.497		
		Total	118	3.59	1.581		
5	Quality	Ambala	59	3.54	1.194	1.388	0.111
		Gurugram	59	3.20	1.448		
		Total	118	3.37	1.332		
6	Customization of Products	Ambala	59	3.49	1.685	0.510	0.274
		Gurugram	59	3.34	1.560		
		Total	118	3.42	1.619		
7	Range of Products	Ambala	59	3.47	1.406	0.130	0.925
		Gurugram	59	3.51	1.419		
		Total	118	3.49	1.407		
8	Demand	Ambala	59	3.47	1.331	0.136	0.136
		Gurugram	59	3.34	1.538		
		Total	118	3.41	1.434		
9	Word of Mouth	Ambala	59	3.39	1.204	0.379	0.717
		Gurugram	59	3.47	1.223		
		Total	118	3.43	1.209		

10	Better Technology	Ambala	59	3.14	1.408	0.816	0.473
		Gurugram	59	2.93	1.298		
		Total	118	3.03	1.352		

Source: Compiled from Primary Data.
Note: * Significant at five percent level of significance.

Regression Analysis:
Regression analysis is the relationship between the dependent variable Y and X variables observed by using linear and quadratic forms (*Ishwari, 2017)* It is done stepwise through the SPSS. This independent variable is included in the equation starting from the highest correlated variable with an independent variable that is statistically significant at $p< 0.05$. Multiple regression models were used to examine the factors affecting dairy brands.
The constructed regression model is:

$$\mathbf{Y= a+b_1X_{1+}\ b_2X_{2+}\ b_3X_{3+}ei}$$

Y= a (X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, X_{10})
Where, Y= Exporting, X_1: Durability of the products, X_2: Distribution channel, X_3: Availability of products, X_4: Quality, X_5: Customization of Products, X_6: Range of products, X_7: Demand, X_8: Word of mouth, X_9: Better technology
Table 2 gives the values of R, R^2, adjusted $R^{2,}$ and the standard error of the estimate, which can be used to determine how to fit a regression model sets the data. The value of R is 0.768, which can be considered as a degree of the value for an estimate the dependent variable and the value of R is above 0.7 which shows a good level of estimation. R^2 is the variance explained at 0.590 which shows the variability of the dependent variable.

TABLE-2 MODEL SUMMARY

Model Summary				
Model	**R**	**R^2**	**Adjusted R^2**	**Std. Error**
1	0.768	0.590	0.525	1.101
Predictors: (Constant), Customization of products, Distribution channel, Availability of products, Use of better technology, Government initiatives, Quality, Storage facility, CRM, Loyalty, Special offers, Demand, Range of products, Pre-testing, Word of Mouth, Durability, Eco-friendly Packaging.				

Source: Compiled from Primary Data.

Table 3 describes the ANOVA results and test whether the regression model is a good fit or not. Results show that independent variables significantly forecast the dependent variable. So, it is concluded that there is a significant influence of factors on Exporting option (p=0.000).

TABLE-3 ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig. Value
1 Regression Residual	175.915	16	10.995	9.071	0.000[b]

Total	122.424 298.339	101 117	1.212		
Dependent Variable- Availability of Exporting					

Source: Compiled from Primary Data.

Table 4 shows whether the unstandardized and standardized coefficients are equal to zero. P-value is less than 0.05 in the case of durability and customization of products, which means coefficients are statistically significant. Unstandardized constants require how considerable the dependent variable differs from independent variables when all the other independent variables are constant. Beta coefficient means with the increase in the independent variables, the mean of the dependent variable tends to increase, so one unit change in Factor-1 will bring a -0.057 change in demand for exporting option, and one unit increase in Factor-2 will bring a -0.052 unit increasing the exporting options for the dairy brands and likewise one unit increase in Factor-3 will bring a 0.199 unit increasing the exporting options and Factor-5 will bring a -0.003 unit increasing the exporting option and one unit increase in Factor-6 will bring a 0.019 unit increase in the exporting option and also the Factor-7 will bring -0.031unit increasing the exporting option and Factor-8 will bring a -0.129 unit increase in the exporting option Likewise, Factor-9 will bring a 0.548 unit increase in the exporting option. A standardized Beta coefficient equivalences the strong point of the effect for each independent variable on the dependent variables to the dependent variables. Factor-1 has the highest standardized coefficients (0.125) which describes the demand as the most important factor connected with the exporting of products. All the factors were significant predators of the dependent variables. Factor-9 has the highest input (t=6.64), followed by Factor-3 (t=2.00) and Factor-6 has the highest input (t=0.179), Factor-5 has the highest input (t=-0.032), Factor-7 has the highest input (t=-0.335), Factor-1& Factor-4 has input (t=-0.456), Factor-2 has input (t=-0.558), Factor-8 has the least value (t=-0.124).

TABLE-4 COEFFICIENTS

Model	**Unstandardized Coefficients**		**Standardized Coefficients**	t	Sig.
	B	**Standard Error**	**Beta**		
(Constant)	-.274	1.066		-.257	.797
Demand	-.057	.125	-.034	-.456	.649
Quality	-.052	.093	-.044	-.558	.578
Elongated Durability	.199	.099	.165	2.007	.047
Distribution channel	-.039	.085	-.034	-.456	.649
Range of products	-.003	.080	-.002	-.032	.975
Use of better technology	.019	.107	.014	.179	.858
Word of Mouth	-.031	.093	-.028	-.335	.738
Availability of products	-.129	.103	-.088	-1.248	.215

Customization of products	.548	.082	.535	6.647	.000
Dependent Variable: Exporting option					

Source: Compiled from Primary Data.

CONCLUSION

To explore the factors affecting the dairy brands can be estimated from the different viewpoints of the employees working in the organization *(Srivastav, 2012)*. This study estimated factors affecting the profitability of dairy brands in Haryana, India by using the questionnaire method. Some Critical factors indicate the various components that used a prescribed budget in the dairy sector. The results show whether the unstandardized and standardized coefficients are equal to zero. P-value is less than 0.05 in the case of durability and customization of products, which means coefficients are statistically significant. Unstandardized constants require how considerable the dependent variable differs from independent variables when all the other independent variables are constant. Beta coefficient means with the increase in the independent variables, the mean of the dependent variable tends to increase, so one unit change in Factor-1 will bring a -0.057 change in demand for exporting option, and one unit increase in Factor-2 will bring a -0.052 unit increasing the exporting options for the dairy brands and likewise one unit increase in Factor-3 will bring a 0.199 unit increasing the exporting options and Factor-5 will bring a -0.003 unit increasing the exporting option and one unit increase in Factor-6 will bring a 0.019 unit increase in the exporting option and also the Factor-7 will bring -0.031unit increasing the exporting option and Factor-8 will bring a -0.129 unit increase in the exporting option Likewise, Factor-9 will bring a 0.548 unit increase in the exporting option. A standardized Beta coefficient equivalences the strong point of the effect for each independent variable on the dependent variables to the dependent variables. Factor-1 has the highest standardized coefficients (0.125) which describes the demand as the most important factor connected with the exporting of products. All the factors were significant predators of the dependent variables. Factor-9 has the highest input (t=6.64), followed by Factor-3 (t=2.00) and Factor-6 has the highest input (t=0.179), Factor-5 has the highest input (t=-0.032), Factor-7 has the highest input (t=-0.335), Factor-1& Factor-4 has input (t=-0.456), Factor-2 has input (t=-0.558), Factor-8 has least value (t=-0.124). It has been concluded that the exporting of the goods was found to be the factor which has the highest impact on profitability showing a coefficient of 0.129. This shows the significant value for the availability of products is at a profitable point. The availability of products has a significant impact on profitability because it varies according to availability and the different products to export. The customization of products has a high positive impacting factor on profitability with a coefficient of 0.548. The other investigated factors vary in their impact on profitability. So, finally, the results of the study show that the basic factors have the power to affect the profitability of the dairy brands, and also, the brands will focus on the distribution channel and availability of products as much as they can diverge into the market with exporting procedures. In conclusion, this study indicates that dairy brands need to take action for suitable production so that their profitability cannot be affected and also not consumer satisfaction.

SUGGESTIONS

Indian Dairy Brands must emphasize on their increasing market prospects and areas of product development because directly or indirectly, market prospects put an impact on profitability. It is recommended that they should improve their working capital situations by sustaining more of the assets and liabilities. Dairy brands should also recommend improving

their policies or strategies that have been made to attain profits and also to get more consumers. They should also maintain their liquidity positions by showing their true results in their financial statements. While selling the products or exporting the goods, majorly the number of factors affect the profitability *i.e.,* the durability of the products, distribution channel, availability of products, quality, customization of products, range of products, demand, word of mouth and better technology. So, the brand should create its Unique Selling Proposition (USP), which will help them to achieve good profitability. They are also suggested to create proper marketing strategies so that every consumer can afford the products along with the suitable price. They are suggested to come up with customization of products because it is a more expected factor for consumers which will also enable the brands to increase their profitability. The dairy brands should strategically plan the production and economic suggestions for the dairy business and also the brands should focus on the rules and regulations while exporting the products.

LIMITATIONS OF THE STUDY & FUTURE SCOPE

The limitation lies with the sample size as more or less the sample size would give wide-ranging results. The choice of selected location would bring a difference in the theoretical approach. This study is only limited to the factors that affect the profitability of dairy brands which also might give different results. There is extensive scope for the researchers to conduct the study with more sample size, diverse location, and also with other brands of dairy and future researchers can also analyze the impact of profitability on customer choices to get better and
more accurate results.

REFERENCES

Ashraf Imam, L. D. (2011, January). Dairy Marketing Strategies in context of Globalisation Issues and Challenges. *IJTEF, 2*, 138-143.

Aubin. (2018). External factors affecting the profitability of dairy brands in the Atlantic area. *Journal of Agriculture and Horticulture management.*, 1-15.

Alvarez, A. (2018). The profitability of value-added products in dairy farm diversification initiatives. *Spanish Journal of Agricultural Research, 16*(2), 1-9.

Bhavya, (2012) Analysing the customer preference for Dairy products in Trivandrum City, India. *IJSET, 6*(1), 650-654.

Deshmukh, M. S. (2014). Growth and Performance of Dairy Sector in India. *ISSN, 3*(2), 2277-7733.

Eswari, P. (2017). A Study on Profitability Ratio Analysis of Britannia Biscuit Ltd. *International Journal of Innovative Science and Research Technology, 6*(2), 223-228.

Huan Quang, T. Q. (2019). Factors affecting Brand and Students Decision Buying Fresh Milk: A Case in HO Chi Minh City, Vietnam. *JAFEB, 6(3),* 247-258.

Jakšić, D,(2015). Comparative profitability analysis of milk production companies to milk processing companies in Serbia. *ISSN, 11*(3), 206-226.

Ktany, E. (2015). Some Factors affecting Profitability of Dairy Farms. *Alexandria Journal of Veterinary Sciences, 45*, 119-126.

Kumar Rajiv, M. A. (2018). Factors leading to customer satisfaction in Dairy Industry: A Study in Indian Perspective. *International Journal on Customer Relations, 6*(1), 21-30.

M. Madhavan, K. K. (2020). Performance of dairy industry in India: An analysis. *Xi'an University of Architecture and Technology, XII*(VI), 1610-1619.

M.Ganesan.(2013, June). The economic contribution of dairy farming in India. *Shanlax International Journal of Economics(SIJE),* 49-48.

Malik, B. M. (2005). Study of existing Dairy Farming Practices in Uttar Pradesh. *ICAR, 24(2),* 91-95.

Nurakhova, B. (2017). An Effiecent marketing strategy for competitiveness of milk and dairy industry: Case of Kazakhastan. *ISSN, 38,* 37-47.

Pramod Kumar Mishra, R. (2012). Evaluating supply chain risk in Indian dairy industry; A case study. *IJDSRM, 4,* 77-91.

Qadir, F. (2016). Profitability Analysis of Milk Production in district Peshawar. *JRSP, 53*(2), 56-78.

Rashid, M. (2015). Financial Analysis of Dairy farming in selected areas of Bangladesh. . *ISSN 1025-482X, 19,* 11-21.

Rashtrarakshak, D. S. (2017). Study of Economic feasibility of dairy farming under IFS in NEK region of Karnataka. *Research Journal, 12,* 1578-1582.

Sivagami (2019). Consumer behavior with reference to the Thirmulla milk products Pvt Ltd Chennai. *IJARIIE, 5*(2), 2851-2858.

Tayyaba, K. (2013). An Analysis and Its Impact On Profitability With Reference To Selected Oil And Gas Companies. *International Journal of Business and Management Invention, 13*(7), 2319 – 8028.

Zakova, Z. (2016). Profitability development of Czech dairy farms . *Agriculture Economics , 62*(6), 269–279 .