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Consumer Decision-Making Rules for FMCG Products—Study of Rural in North India

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Abstract: The present study aims to identify the demographic variables that influence rural customers' decision-making rules in the process of purchasing fast-moving consumer goods (FMCGs) products. Five FMCG personal care products are taken into consideration for the study. A multistage proportionate sampling procedure was adopted and 550 respondents were selected for the study. The regression model enables the marketers to identify the key demographic variables which affect the decision-making rules used by rural people. The study concludes that consumers' decision-making rules are influenced by rural consumer's educational backgrounds and the number of family members under the age of 18 years. In the context of FMCG products, our research assists marketers in designing strategies that take into consideration the needs and demands of rural residents. Further studies possibly will be expanded to include other FMCG product categories such as domestic care, food, and beverages.

Keywords: rural; decision making; consumer behaviour; FMCG; personal care

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1. Introduction

Consumer behaviour (CB) is a research topic that is continually in demand. Marketers must understand consumer behaviour in order to persuade people to buy their goods. Consumer behaviour is a psychological aspect of an individual's decision to purchase goods, services, or anything else (Barmola and Srivastava 2010). CB is a fast-expanding subject of research. It is a broader idea that looks into the factors that influence a customer's decision to buy a product that meets their need or want. CB is defined as "the dynamic interaction of affect and cognition, behaviour, and the environment through which human beings conduct the exchange portions of their lives," according to the American Marketing Association (Vidya and Selvamani 2019). Marketing strategies are used to attract and retain customers, and recognising, serving, and influencing customers is critical to the success of marketing initiatives (Barmola and Srivastava 2010). The objective of the study of decision-making rules in consumer behaviour is to provide theoretical and practical tools to enable the marketer to apply them to both profit and non-profit marketing. Marketers value the study of decision-making rules in consumer behaviour because it allows them to better understand and forecast consumer buying behaviour in the marketplace; it is concerned not just with what people buy, but also with why they buy it and will they continue to buy it.

Over the previous years, behavioural decision analysis has been one of the most prominent academic study fields in the industry. According to behavioural choice theorists, customers make bad decisions in a variety of settings. Soni (2021) reveals that customer behaviour is extremely useful, and the circumstances in which decisions are made are

critical. Marketers must be aware of how these consequences appear in the marketplace. Since, consumers have a limitless number of options. As the products are so comparable and there are no substantial distinctions in quality and price, the decisions are made based on more than just the usual criteria (Willman-Iivarinen 2017). In this context, complex buying behaviour refers to transactions that require a high level of consumer interaction and considerable brand distinctions (Voramontri and Klieb 2019). Decision-making is a critical process that entails a series of well-defined systematic actions and activities that go from the formulation and definition of a problem that needs to be solved in the firm to the objective of selecting the best solution for the problem. As a result, one of the most crucial actions performed by managers in businesses is decision-making (Litvaj et al. 2022). Bounded rationality characterises decision-making; there is a close and crucial link between the nature and constraints of human decision-making and the structure and activities of the organisation. Prior decisions, whether explicit or tacit, limit the breadth of decision-making, as well as moral commitments to individuals and departments (Sousa et al. 2019).

Consumer choice and decision-making have long been the focus of consumer behaviour research, with "how consumers make decisions" being the most central issue (Xu and Shen 2021). The study of consumer behaviour is important in today's context because everyone of us play the role of a customer and makes several purchasing selections every day. It is critical to understand what decision rules influence individual purchasing decisions: a problem/need or a well-planned professional marketing effort (Stankevich 2017). Existing research in this field has primarily focused on customer decision-making norms. There is only a small percentage of studies focused on customer decision-making rules. Therefore, the main focus of the paper is to identify purchase decision-making rules of consumers. Five FMCG personal care products are taken into consideration for the study because personal care has a share of 50 percent which is a leading segment in the FMCG market (Shanthagowri and Vedantam 2018).

The objective of this study is to identify the demographic characteristics which affect the decision-making rules of rural consumers of FMCG products.

2. Literature Review

Fast Moving Consumer Goods (FMCG) can be characterized as products with low purchase transaction, risk, and involvement, as well as by high purchasing frequency. FMCG products include personal care products such as toothpastes, soaps, deodorants, shampoos, followed by food and beverage products like chocolates, soft drinks, or can-dies (Mann and Kaur 2013). According to Gopinath (2019), there is a substantial relationship between the factors that influence customer decision-making. The variables are deeply intertwined and positively connected. Only value consciousness has a considerable impact on consumer decision-making. In today's marketing, the customer is king. Kumar and Gowtham (2019) discovered Fast Moving Consumer Goods are a powerful marketing method and critical tools for all business scenarios, as they can combine social networking websites with advertising and marketing strategies consistent with converting and growing client behaviour expectations to benefit organisational goals. Moreover, Pillai and Jothi (2020) found advertisement, cultural orientation, celebrity endorsement, brand influence, and consumer buying behaviour did not show any significant differences between age groups. Furthermore, celebrity endorsement has a negative impact on brand influence, while brand influence has a favourable impact on consumer purchasing behaviour.

The authors (Ali and Muhammad 2021) stated that promotional tools such as free sample offers and price reductions have a significant impact on consumer buying behaviour, with shoppers being more attracted to free sample offers and price reductions on products in which they are interested or stimulated to buy. Bogomolova et al. (2019) argued that the demographics of first-time brand buyers and non-first-time brand buyers are remarkably comparable. First-time brand customers do not have any distinguishing traits and so do not constitute a distinct segment. As a result, anyone on the market could be a new buyer. Furthermore, researchers discovered that the most commonly stated motivation

for first-time brand purchases is packaging, shelf positioning, price promotions, or non-availability of commonly purchased brands. In addition, Hesse et al. (2022) revealed that German FMCG companies are expanding their established brands with new "green" items, as well as the customer perspective that goes along with it. The diversity of scepticism confirms that businesses require broad and comprehensive solutions, rather than a focus on tactical greening. The participants' distrust of FMCG corporations' greening efforts is accompanied by a view of green brand extensions as opportunistic. Qazzafi (2019) found that consumers engage all five stages of the decision-making process when purchasing things that are purchased only once or twice a year with a high level of involvement. If the product is for daily use or is inexpensive, the consumer has little role in the decision-making process. When purchasing everyday items, it is highly likely that one or more steps of the decision-making process will be skipped. When a need arises, individuals purchase commodities or services.

Furthermore, Niedermeier et al. (2021) studied separate consumer groups. This underpins the importance of heterogeneity among bio-based product customers. The study found two segments within these six separate categories that have a definite preference for bio-based all-purpose adhesives. Furthermore, two categories clearly choose low pricing combined with more environmentally responsible options. Shaikh (2020) revealed fast moving consumer goods (FMCG) are products with a low profit margin that are sold in large volumes. Furthermore, the authors came to the conclusion that brand awareness is growing in rural regions, and consumers, both literate and illiterate, prefer branded goods since they know the quality is guaranteed because the manufacturers are well-known corporations. As a result, while purchasing FMCG products, the majority of consumers are influenced by brand and quality. The authors (Nayak and Dash 2021) identified that the majority of FMCG products are sold to middle-class households, with over half of the middle class living in rural India. The sector is ecstatic about the growing rural population, whose salaries are increasing and who are eager to spend on things that will improve their quality of life. Moreover, Nayak and Parija (2020) revealed how a rural consumer decides how to spend their limited resources (time, effort, and money) on consumption-related items, their reactions to different product features, price, and advertising in order to gain a competitive advantage, and their satisfaction level with different FMCG product attributes such as price, quality, availability, and quantity. According to the findings, consumers prefer to buy FMCG brands from a haat or a mandi. The vast majority of customers remain loyal to a single brand for an extended period of time. While purchasing any FMCG brand, advertisements are the most influential aspect. All in all, the demographic profile of rural consumers in India plays an essential role in consumer preference and brand loyalty of health care products (including soaps) purchased from both retail stores and convenience stores. Moreover, rural consumers tend to shift brands if there is low need satisfaction and low product availability in the market (Katiyar and Katiyar 2014).

3. Methodology

The research was carried out using a descriptive research design. The survey data was gathered from people residing in Northern Himalayas (Himachal Pradesh) rural districts in the Indian subcontinent. When it came to purchasing FMCGs, all of the selected respondents were decision makers. To choose the correct respondents who lived in rural areas, a multistage proportionate sampling procedure was adopted. A total of 650 people took part in the study, with 30 respondents being eliminated owing to missing information, 60 respondents being removed due to inconsistent inputs, and 10 respondents being removed due to contradictory inputs. For analysis, the remaining 550 sample responses were finalized. For this investigation, both primary and secondary data collection methods were used. Primary data came from a survey, while secondary data came from books, company websites, and articles about rural marketing, consumer behaviour, and FMCG. A self-administered questionnaire was used to gather primary data. For the study, five FMCG product categories were chosen: toothpaste, shampoo, soap, hair oil, and face cream.

Five FMCG personal care products are taken into consideration for the study because personal care has a share of 50 percent which is a leading segment in the FMCG market (Shanthagowri and Vedantam 2018).

Statistical Analysis

H1. *There is a significant influence of demographic variables on decision-making rules used by rural consumers on the toothpaste product category of FMCG.*

H2. *There is a significant influence of demographic variables on decision-making rules used by rural consumers on the shampoo product category of FMCG.*

H3. *There is a significant influence of demographic variables on decision-making rules used by rural consumers on the soap product category of FMCG.*

H4. *There is a significant influence of demographic variables on decision-making rules used by rural consumers on the hair oil product category of FMCG.*

H5. *There is a significant influence of demographic variables on decision-making rules used by rural consumers on the face cream product category of FMCG.*

4. Results

The aim of regression analysis is to find out the best predictor of decision-making rules and to identify which demographic variables have significant impact on the dependent variable i.e., decision-making rules used by rural consumers before buying the toothpaste product category of FMCG. In this model, 10 independent demographic variables are taken and decision-making rules are the dependent variable.

The model summary (Table 1) depicts the strength of relationship between all the variables used in the model and the dependent variable. The value of R square (R^2) is the amount of variation in response that is explained by the model. Adjusted R^2 is the adjusted value that takes into account the number of variables in the model, and standard error of estimate explains the estimated variance of the error term in the model. The value of R in our model summary is 0.334, the value of adjusted R^2 is 0.112, and adjusted R^2 is 0.094.

Table 1. Model Summary A.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.334 [a]	0.112	0.094	1.939020

[a]. Predictors: (constant) family members below 18 years, marital status, period of stay, annual income, gender, education background, age, nature of family, occupation, size of family.

Table 2 comprises the dependent variable as decision-making rules and predictor variables (constant) as family members below 18 years of age, marital status, period of stay, annual income, gender, education background, age, nature of family, occupation, and size of family. The value of the ANOVA table is 0.000, which tells us that our overall model is significant, and we are good to proceed further with the analysis. The results of the regression analysis are presented in the Table 3. There are only three variables out of the original ten variables which had significant influence on decision-making rules used by rural consumers. The results show age (0.654), annual income (0.064), gender (0.331), period of stay (0.605), nature of family (0.861), marital status (0.137), and size of family (0.176) did not have any significant impact on decision-making rules used by rural consumers preceding purchase of the toothpaste product category of FMCG. However, education background (0.000), occupation (0.001) and family members below 18 years (0.011) have significant impact on decision-making rules used by rural consumers preceding the purchase of the toothpaste product category of FMCG. Our alternate hypothesis that there is a significant influence of demographic variables on decision-making rules used by rural consumers on the toothpaste product category of FMCG is rejected for the variables

age, annual income, gender, period of stay, nature of family, marital status, and size of family. Moreover, our alternate hypothesis accepts there is a significant influence of demographic variables on decision-making rules used by rural consumers on the toothpaste product category of FMCG: the variables of education background, occupation, and family members below 18 years. Over the course of the past few years, a sizeable amount of time and energy has been invested in the pursuit of better comprehending the procedures by which clients reach a conclusion of some kind (usually a purchase). According to the findings of our research, factors such as a consumer's age, annual income, gender, length of stay, nature of family, marital status, and size have no bearing on the purchase decisions they make or the decision-making principles they follow. In addition, the educational background, occupation, and number of family members under the age of 18 in a household do not have an effect on the purchase decisions or the application of decision-making norms made by rural people.

Table 2. ANOVA [a] A.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	254.502	11	23.137	6.154	0.000 [b]
	Residual	2022.771	538	3.760		
	Total	2277.273	549			

[a]. Dependent variable: decision-making rules; [b]. Predictors: (constant) family members below 18 years, marital status, period of stay, annual income, gender, education background, age, nature of family, occupation, size of family.

Table 3. Coefficients A.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	−0.007	2.111		−0.004	0.997
	Age	0.067	0.149	0.023	0.449	0.654
	Annual Income	0.312	0.168	0.078	1.856	0.064
	Gender	0.168	0.173	0.041	0.973	0.331
	Period of stay	0.241	0.464	0.021	0.518	0.605
	Education background	0.265	0.074	0.159	3.592	0.000
	Occupation	0.203	0.061	0.177	3.353	0.001
	Nature of family	0.043	0.245	0.009	0.176	0.861
	Marital status	0.257	0.173	0.068	1.488	0.137
	Size of family	0.201	0.148	0.084	1.355	0.176
	Family members below 18 years	−0.412	0.161	−0.146	−2.554	0.011

The aim of regression analysis is to find out the best predictor of decision-making rules and to identify which demographic variables have significant impact on the dependent variable, i.e., decision-making rules used by rural consumers before buying the shampoo product category of FMCG. In this model, 10 independent demographic variables are taken and the decision-making rules are the dependent variable.

The model summary (Table 4) depicts the strength of relationship between all the variables used in the model and the dependent variable. The value of R square (R^2) is the amount of variation in response that is explained by the model. Adjusted R^2 is the adjusted value that takes into account the number of variables in the model, and standard error of estimate explains the estimated variance of the error term in the model. The value of R in our model summary is 0.351, the value of adjusted R^2 is 0.123, and adjusted R^2 is 0.107.

Table 4. Model Summary B.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.351 [a]	0.123	0.107	2.06997

[a]. Predictors: (constant) family members below 18 years, marital status, period of stay, annual income, gender, education background, age, nature of family, occupation, size of family.

Table 5 comprises the dependent variable as decision making rules and predictor variables (Constant) as Family members below 18 years of age, marital status, period of stay, annual income, gender, education background, age, nature of family, occupation, and size of family. The value of the ANOVA table is 0.000, which tells us that our overall model is significant, and we are good to proceed further with the analysis.

Table 5. ANOVA [a] B.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	323.746	10	32.375	7.556	0.000 [b]
	Residual	2309.492	539	4.285		
	Total	2633.238	549			

[a]. Dependent variable: decision-making rules; [b]. Predictors: (constant) family members below 18 years, marital status, period of stay, annual income, gender, education background, age, nature of family, occupation, size of family.

The results of the regression analysis are presented in the Table 6. There are only three variables out of original ten variables which had significant influence on decision-making rules used by rural consumers. The results show family members below 18 years (0.103), annual income (0.167), gender (0.075), period of stay (0.406), nature of family (0.664), marital status (0.706), and size of family (0.672) did not have any impact on decision-making rules used by rural consumers preceding purchase of the shampoo product category of FMCG. However, education background (0.000), occupation (0.047), and age (0.000) have significant impacts on decision-making rules used by rural consumers preceding the purchase shampoo product category of FMCG. Our alternate hypothesis that there is a significant influence of demographic variables on decision-making rules used by rural consumers on shampoo product category of FMCG is rejected for variables annual income, gender, period of stay, nature of family, marital status, size of family, and family members below 18 years of age. Moreover, our alternate hypothesis there is a significant influence of demographic variables on decision-making rules used by rural consumers on the shampoo product category of FMCG is accepted for variables age, education background, and occupation. Research on consumer decision rules enables healthy indulgences and the prediction of not just purchasers but also of the purchasing motives of customers. According to the findings of our research, factors such as a consumer's annual income, gender, length of stay, nature of family, marital status, size of family, and number of family members younger than 18 years old do not influence their purchasing decisions or their ability to expand decision-making rules. In addition, the educational background, employment, and age of a person do have an impact on the purchase decisions and the application of decision-making principles made by people who live in rural areas. It is possible to come at the conclusion that decision rules are the processes that are followed in order to select an option based on the information that is considered to be subjective.

Table 6. Coefficients B.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.919	2.221		0.864	0.388
	Age	0.691	0.158	0.220	4.360	0.000
	Annual Income	0.248	0.179	0.058	1.383	0.167
	Gender	−0.329	0.184	−0.075	−1.784	0.075
	Period of stay	−0.412	0.495	−0.034	−0.831	0.406
	Education background	0.417	0.079	0.232	5.307	0.000
	Occupation	0.129	0.065	0.105	1.993	0.047
	Nature of family	−0.114	0.262	−0.023	−0.434	0.664
	Marital status	0.070	0.185	0.017	0.377	0.706
	Size of family	0.067	0.158	0.026	0.424	0.672
	Family members below 18 years	−0.281	0.172	−0.092	−1.632	0.103

Regression analysis aims to determine the best predictor of decision-making rules and to identify which demographic variables have a substantial impact on the dependent variable, i.e., decision-making rules employed by rural people before purchasing FMCG soap products. To construct this model, ten distinct demographic variables were considered, with the decision-making rules serving as the sole dependent variable.

The model summary (Table 7) depicts the strength of relationship between all the variables used in the model and the dependent variable. The value of R square (R^2) is the amount of variation in response that is explained by the model. Adjusted R^2 is the adjusted value that takes into account the number of variables in the model, and standard error of estimate explain the estimated variance of the error term in the model. The value of R in our model summary is 0.331, the value of adjusted R^2 is 0.109, and adjusted R^2 is 0.093.

Table 7. Model summary C.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.331 [a]	0.109	0.093	1.94265

[a]. Predictors: (constant) family members below 18 years, marital status, period of stay, annual income, gender, education background, age, nature of family, occupation, size of family.

Table 8 comprises the dependent variable as decision-making rules and predictor variables (constant) as family members below 18 years of age, marital status, period of stay, annual income, gender, education background, age, nature of family, occupation, and size of family. The value of the ANOVA table is 0.000, which tells us that our overall model is significant, and we are good to proceed further with the analysis.

Table 8. ANOVA [a] C.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	249.530	10	24.953	6.612	0.000 [b]
	Residual	2034.123	539	3.774		
	Total	2283.653	549			

[a]. Dependent Variable: decision-making rules; [b]. Predictors: (constant) family members below 18 years, marital status, period of stay, annual income, gender, education background, age, nature of family, occupation, size of family.

The table below (Table 9) shows the regression analysis's findings. Only three of the original ten variables had a substantial impact on rural customers' decision-making rules. Among the FMCG decision-making criteria used by rural people before purchasing soap, the researchers found no effect on their findings from age (r = 0.660), annual income (0.106), gender (r = 0.286), length of stay (r = 0.645), family type (r = 0.914), marital status (r = 0.111), or family size (r = 0.231). Although education (0.000), occupation (0.001), and

family members under the age of 18 (0.024) have a significant impact on rural customers' decision-making rules prior to the purchase of FMCG soap, this is not the case for urban consumers. For age, annual household income, gender, length of residence, type of family, marital status, and family size, we reject the alternative hypothesis that demographic factors have a substantial impact on decision-making rules used by rural people in the soap FMCG category. Decision-making guidelines for soap products used by rural consumers in FMCG's soap category are strongly influenced by demographic variables like education, occupation, and the ages of family members under the age of 18. The decision-making task encompasses establishing a choice set and specifying a decision rule by which the separate utilities of the attributes are combined to arrive at a choice. Our analysis reveals that a consumer's age, annual income, gender, period of stay, nature of family, marital status, and size of a family do not matter when making purchasing decisions and expanding decision-making rules. Likewise, education background, occupation, and family members below 18 years of age do not impact purchasing decisions and the use of decision-making rules by rural folks. The conclusion can be drawn out that decision rules are the procedures by which the subjective information is processed to arrive at a choice. However, the probability of choosing an alternative is a decreasing function of the distance between the decision maker's location and the choice alternatives' location.

Table 9. Coefficients C.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	−0.496	2.085		−.238	0.812
	Age	0.066	0.149	0.022	0.441	0.660
	Annual Income	0.322	0.168	0.081	1.913	0.056
	Gender	0.185	0.173	0.045	1.069	0.286
	Period of stay	0.214	0.465	0.019	0.461	0.645
	Education background	0.274	0.074	0.164	3.723	0.000
	Occupation	0.212	0.061	0.185	3.491	0.001
	Nature of family	0.027	0.246	0.006	0.109	0.914
	Marital status	0.277	0.173	0.073	1.599	0.111
	Size of family	0.177	0.148	0.074	1.199	0.231
	Family members below 18 years	−0.364	0.161	−0.129	−2.257	0.024

The aim of regression analysis is to find out the best predictor of decision-making rules and to identify which demographic variables have significant impact on the dependent variable, i.e., decision-making rules used by rural consumers before buying hair oil product category of FMCG. In this model, 10 independent demographic variables are taken, and decision-making rules are the dependent variable.

The model summary (Table 10) depicts the strength of relationship between all the variables used in the model and the dependent variable. The value of R square (R^2) is the amount of variation in response that is explained by the model. Adjusted R^2 is the adjusted value that takes into account the number of variables in the model, and the standard error of estimate explain the estimated variance of the error term in the model. The value of R in our model summary is 0.329, the value of adjusted R^2 is 0.108, and adjusted R^2 is 0.092.

Table 10. Model summary D.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.329 [a]	0.108	0.092	1.94342

[a]. Predictors: (constant) family members below 18 years, marital status, period of stay, annual income, gender, education background, age, nature of family, occupation, size of family.

Table 11 encompasses of dependent variable as decision-making rules and predictor variables (constant) as family members below 18 years of age, marital status, period of stay, annual income, gender, education background, age, nature of family, occupation, size of

family. The value of the ANOVA table is 0.000, which tells us that our overall model is significant, and we are good to proceed further with the analysis.

Table 11. ANOVA [a] D.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	247.574	10	24.757	6.555	0.000 [b]
	Residual	2035.737	539	3.777		
	Total	2283.311	549			

[a]. Dependent variable: decision-making rules; [b]. Predictors: (constant) family members below 18 years, marital status, period of stay, annual income, gender, education background, age, nature of family, occupation, size of family.

The results of the regression analysis are presented in the Table 12. There are only two variables out of original ten variables which had significant influence on decision-making rules used by rural consumers. The results show age (0.567), annual income (0.052), gender (0.273), period of stay (0.637), nature of family (0.834), marital status (0.090), size of family (0.349), and family members below 18 years of age (0.69) did not have any impact on decision-making rules used by rural consumers preceding purchase of hair oil product category of FMCG. However, education background (0.000) and occupation (0.000) have a significant impact on decision-making rules used by rural consumers preceding the purchase of the hair oil product category of FMCG. Our alternate hypothesis that there is a significant influence of demographic variables on decision-making rules used by rural consumers on the hair oil product category of FMCG is rejected for the variables age, Annual income, gender, period of stay, nature of family, marital status, size of family, and family members below 18 years. Moreover, our alternate hypothesis there is a significant influence of demographic variables on decision-making rules used by rural consumers on the hair oil product category of FMCG is accepted for the variables of education background and occupation. When customers participate in the marketplace, they display moderately reliable decision-making styles by commissioning specific purchasing strategies and rules. The decision-making task incorporates establishing a choice customary and the description of a decision rule by which the different utilities of the attributes are pooled to reach a choice. Our analysis reveals that consumers' age, annual income, gender, period of stay, nature of family, marital status, size, and family members below 18 years of age do not matter when making purchasing decisions and expanding decision-making rules. However, education background and occupation impact purchasing decisions and the use of decision-making rules by rural folks. Explicitly, consumer decisions are influenced by the number of positive and negative attributes associated with a brand or by the magnitude of magnitudes on which one product outperforms another.

Table 12. Coefficients D.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	−0.784	2.086		−0.376	0.707
	Age	0.085	0.149	0.029	0.573	0.567
	Annual Income	0.329	0.169	0.082	1.952	0.052
	Gender	0.190	0.173	0.047	1.096	0.273
	Period of stay	0.220	0.465	0.019	0.472	0.637
	Education background	0.282	0.074	0.169	3.819	0.000
	Occupation	0.216	0.061	0.188	3.554	0.000
	Nature of family	0.052	0.246	0.011	0.210	0.834
	Marital status	0.294	0.173	0.077	1.697	0.090
	Size of family	0.139	0.148	0.058	0.938	0.349
	Family members below 18 years	−0.294	0.161	−0.104	−1.821	0.069

The aim of regression analysis is to find out the best predictor of decision-making rules and to identify which demographic variables have significant impact on the dependent variable, i.e., decision-making rules used by rural consumers before buying the face cream product category of FMCG. In this model, 10 independent demographic variables are taken, and decision-making rules are the dependent variable.

The model summary (Table 13) depicts the strength of relationship between all the variables used in the model and the dependent variable. The value of R square (R^2) is the amount of variation in response that is explained by the model. Adjusted R^2 is the adjusted value that takes into account the number of variables in the model, and standard error of estimate explain the estimated variance of the error term in the model. The value of R in our model summary is 0.308, the value of adjusted R^2 is 0.095, and adjusted R^2 is 0.078.

Table 13. Model summary E.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.308 [a]	0.095	0.078	2.02531

[a]. Predictors: (constant) family members below 18 years, marital status, period of stay, annual income, gender, education background, age, nature of family, occupation, size of family.

Table 14 encompasses of dependent variable as decision-making rules and predictor variables (constant) as family members below 18 years of age, marital status, period of stay, annual income, gender, education background, age, nature of family, occupation, size of family. The value of the ANOVA table is 0.000, which tells us that our overall model is significant and we are good to proceed further with the analysis.

Table 14. ANOVA [a] E.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	231.917	10	23.192	5.654	0.000 [b]
	Residual	2210.921	539	4.102		
	Total	2442.838	549			

[a]. Dependent variable: decision-making rules; [b]. Predictors: (constant) family members below 18 years, marital status, period of stay, annual income, gender, education background, age, nature of family, occupation, size of family.

The results of the regression analysis are presented in the Table 15. There are only four variables out of original ten variables which had significant influence on the decision-making rules used by rural consumers. The results show annual income (0.132), gender (0.284), period of stay (0.460), nature of family (0.728), marital status (0.253), and size of family (0.468) did not have any impact on decision-making rules used by rural consumers preceding purchase of face cream product category of FMCG. However, age (0.005), education background (0.001), occupation (0.001), and family members below 18 years (0.017) have significant impact on the decision-making rules used by rural consumers preceding the purchase of the face cream product category of FMCG. Our alternate hypothesis that there is a significant influence of demographic variables on decision-making rules used by rural consumers on face cream product category of FMCG is rejected for the variables age, annual income, gender, period of stay, nature of family, marital status, and size of family. Moreover, our alternate hypothesis that there is a significant influence of demographic variables on decision-making rules used by rural consumers on the face cream product category of FMCG is accepted for the variables age, education background, occupation, and family members below 18 years.

Table 15. Coefficients E.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	−1.420	2.173		−0.654	0.514
	Age	0.442	0.155	0.146	2.849	0.005
	Annual Income	0.265	0.176	0.064	1.509	0.132
	Gender	0.194	0.180	0.046	1.072	0.284
	Period of stay	0.358	0.485	0.031	0.739	0.460
	Education background	0.262	0.077	0.152	3.409	0.001
	Occupation	0.218	0.063	0.183	3.442	0.001
	Nature of family	−0.089	0.256	−0.019	−0.348	0.728
	Marital status	0.207	0.181	0.053	1.145	0.253
	Size of family	0.112	0.154	0.045	0.727	0.468
	Family members below 18 years	−0.403	0.168	−0.138	−2.395	0.017

A task known as decision-making requires the development of a choice set and the measurement of a decision rule. Using this rule, the many merits of the characteristics are weighed against one another in order to arrive at a conclusion. According to the findings of our research, factors such as a consumer's annual income, gender, length of stay, nature of family, marital status, and size of the family do not influence their propensity to make purchase decisions or expand decision-making rules. In addition, the educational background of a person, their career, their age, and the number of family members under the age of 18 do not have an effect on the purchase decisions or the decision-making rules used by rural people. The decision rule is a method that utilizes the presentation of subjective evidence as a means of arriving at a decision. According to the findings of the research, consumers exhibit generally reliable decision-making styles when they interact with the market. This is accomplished by the consumers' maintenance of particular purchasing strategies and rules to direct their decision-making. The process of consumer be-haviour is extremely varied, and our comprehension of it has evolved from a straightforward stimulus–response model to a far more intricate perspective of decision-making in response to various stimuli. According to Wilkins and Ireland (2022) the most decisive factor when purchasing FMCG products is quality, namely due to the fact that consumers are least willing to sacrifice it. The second important factor was the price level. A similar opinion was indicated by Ali et al. (2012). The authors stated that purchases in rural areas are strongly influences by price level; therefore, it is important to apply a low-price strategy in rural marketing. Indian consumers in rural areas prefer to purchase FMCGs from local retailers in their villages. This fact is related to so called "trust factor" which was identified by their consumer research in rural environment situated in South India. Moreover, several other factors were revealed such as product factor, value factor, lifestyle factor, and promotion factor. Another issue is related to growth number of smaller packaging alternatives which are considered as the key factor towards growing the rural market with FMCG products in India. Smaller packaging will lower prices and increase accessibility and affordability for many rural consumers (Tamrakar and Venkatesh 2015). More research conducted in India revealed that consumers do not tend to be loyal for a single brand of personal healthcare products, and the most important factors during purchase were price followed by availability, product quality, and brand reputation. Moreover, significant differences were identified between the preferences of consumers living in rural and urban areas of India (Chauhan and Parmar 2017). In addition, rural consumers in India are becoming more quality-conscious and do not like to purchase new products. The authors stated that there is a need to attract a young segment by capturing their attention via rural events or games (Siddiqui et al. 2017). Marketers may satisfy consumer needs by associating brand with cultural activities, festivals, or celebrations typical for rural areas (Somashekar and Kaboor 2016).

5. Conclusions

The present study aims to identify the demographic variables that influence the rural customers' decision-making rules in the process of purchasing FMCG products. Five FMCG personal care products are taken into consideration for the study because personal care has a share of 50 percent which is a leading segment in the FMCG market (Shanthagowri and Vedantam 2018). Through regression analysis, the study found that education background, occupation, and family members below 18 years of age had significant impacts on decision-making rules in the toothpaste product category. Likewise, age, education background, and occupation had an impact on decision-making rules in the shampoo product category. Education background, occupation, and family members below 18 years had significant impacts on decision-making rules in the soap product category. Furthermore, in the hair oil product category, education background and occupation had significant impacts on decision-making rules. The results were same for face cream product category as for soap product category. Finally, the study concludes that consumers' decision-making rules are influenced by rural consumer's educational background and the number of family members under the age of 18 years. The regression model enables the marketers to identify the key demographic variable which affect the decision-making rules used by rural people. Because 70 percent of India's population live in rural areas (Census), the country's rural marketplaces offer a lot of untapped potential. Companies are gradually seeing the value of expanding into rural India and focusing their efforts there. In the context of FMCG products, our research assists marketers in designing strategies that take into consideration the needs and demands of rural residents.

These findings have significant implications for the understanding of how demographic profiles of rural consumers in North India may influence purchasing decisions of FMCG products such as toothpaste, shampoo, soap, hair oil, and face cream. The results provide important information for FMCG companies in terms of creating effective strategies in rural marketing.

One of the study's limitations is the study area, which was conducted only at the regional level of North India. Further studies possibly will be expanded to include other FMCG product categories, such as domestic care and food and beverages. Moreover, the study area will be extended to the national level.

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