“IDENTIFY CONSUMER BRAND AFFINITY DURING POINT OF PURCHASE USING SEM TO AID BUSINESS GROWTH”

Research Paper

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“Abstract”

This research is being executed to understand how the consumer perspective of brand equity based on the success achieved through top-of-mind presence resulting in business profitability. The important question is: What are the key drivers to a particular Brand’s success and failure and how it can be course corrected to achieve the desired outcome by tweaking a particular under-performing driver without any bias. The method involved in identifying the key drivers to enhance Brand equity is called Structural Equation Modeling (SEM).

Keywords: SEM, Brand equity, key drivers, bias.

1 Introduction

Among the company's most precious assets are its brand names. The emotional or personal connection that exists between a customer and a certain brand is known as brand affinity. Across all company sectors, revenue expansion tactics have been primarily driven by brand affinity. Any business's main objective is to boost the onboarding of new customers and retain current ones in order to generate additional revenue. In order to improve brand image and meet customer demands, this research takes use of consumer reactions to he brand that are geographic, demographic, and psychographic.

A survey of actual industrial projects is carried out. The introduction of a new product or variation that is based on the results of such an exercise contributes significantly to the value of a brand. This research demonstrates that in the niche retail sector, brand success and return on investment are highly dependent on brand affinity at the moment of purchase.

1.1 Background of the study

Finding out the customers' brand affinity when they visit shops to make purchases is the aim of this research (Point of Purchase). The research identifies the covert direct or indirect factors that affect consumers' perceptions while they are making a purchase. As a consequence, plans are made for future initiatives to launch new goods and variations that address the shortcomings of the current product version. The majority of company goals will be focused on increasing revenue while maintaining customer satisfaction. Typically, meeting the needs of the majority of customers is essential to a business's success. These activities often lead to the tactical announcement that the gap has been addressed or the strategic re-launch of a product with enhanced attributes within the product hierarchy.

When a product hits the tipping point in its sales lifecycle, as seen in Figure below, it must be studied to determine which aspect of the product is responsible for the decline in sales. After this characteristic is fixed after the study, there may be a new, better variety that increases sales after the relaunch. Businesses need to be customer-focused in an environment where competition is escalating. A business may profit from having loyal clients.

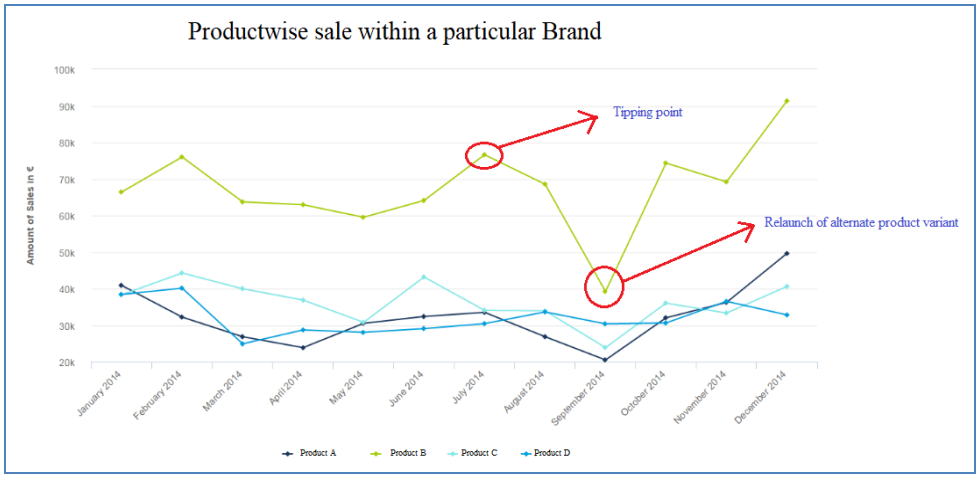


Figure 1. Tipping point of a product within a brand

Figue 2. Brand re-introduction into the market

The firm often makes a few choices, such as the ones listed below, based on the findings of studies like this one. Occasionally, this offers the company an edge and increases sales. Figure above, photos depict a few product modifications made to accommodate customer preference.

- Re-introduce a product
- Improved labeling of a product package
- Alter ingredients and highlight them
- Change in logo of a product
- Other change not covered above.

"Brand names are among the most valuable assets" (Rangaswamy, Burke and Olivia, 1993, pp.61-75). When customers feel that a brand and they share similar values, brand affinity often rises. These shared ideals often increase brand affinity and keep devoted clients for extended periods of time.

2 Literature review

Many Organizations have been building a strong brand as the top priority. Identifying the brand affinity using Structural Equation Modeling is an integral part of any business / Brand managers (Dinnie, 2008, p.216). This idea may be crucial to the brand's ability to endure in the marketplace and against rivals. To create a successful brand, achieving brand affinity and resonance are the most crucial requirements. A tried-and-tested method for determining consumer intentions and the reasons behind their preference for certain brands at the time of purchase is structural equation modeling. The research contributes significantly to the development of a brand identity in the market in addition to revenue growth. These kinds of programs, which have been in place for many years, are the foundation of corporate expansion. Although SEM is generally acknowledged as the best technique for determining brand affinity, which encourages consumer loyalty, there are other methods that support this theory. A little setback might have an influence on the data collecting and manipulation process, which could alter the final goal. Getting a workable result might be the USP of a well-thought-out and planned strategy.

2.1 Literature related to brand equity model to achieve brand affinity

A person's preference for a brand within a product category is known as brand affinity. Building a powerful brand is the key to achieving Brand Affinity. Usually, the Consumer Centered Brand Equity Model is used to achieve this. Every stage in this process is designed to achieve specific goals with both current and future customers. One way to think about brand development to promote brand affinity is as a series of stages, each of which relies on the successful completion of the one before it. These may be divided roughly into four stages. Determining customer brand awareness is the first stage. Establishing a strong brand meaning among customers is the second phase. Getting feedback from customers on the concrete and intangible brand connections is the third stage. Converting customer feedback into a strong customer-brand relationship is the fourth stage.

2.1.1 Four levels of brand building to achieve brand affinity

Forming a successful brand involves four main stages: raising brand value, raising brand recognition, getting consumer feedback on the brand, and putting the feedback into practice with actionable insights. Figure below of the Brand Equity Pyramid defines this. The Pyramid supports the strategy for building customer brand equity. The Brand Equity Pyramid was used throughout the development of the Survey Questionnaire.

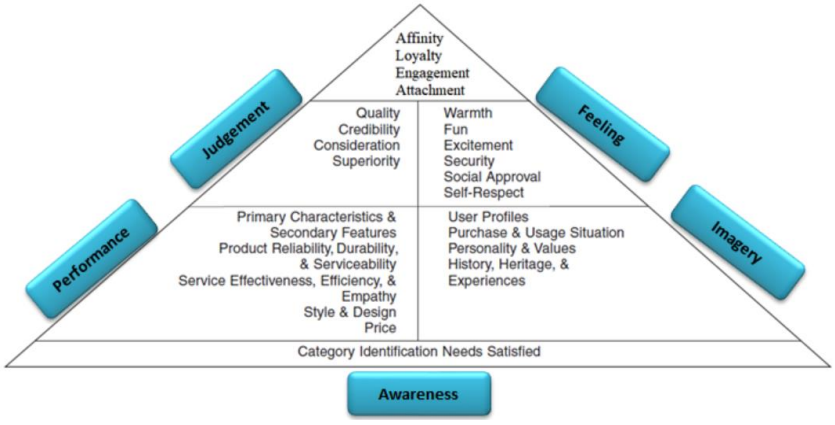


Figure 3. Source: (Keller, 2003, p. 7) Sub-divided themes for Brand Equity Pyramid

There are related aspects of both physical and intangible rewards for customers inside each step of the Brand Equity Pyramid. The themes that are broken down into subtopics in the figure below were taken into consideration while creating the survey questionnaire.

The four steps to achieving brand affinity are divided into smaller topics in Figure 4, which is seen above, in order to create the survey questions. The first and fundamental level of brand awareness is achieved by asking consumers about their awareness of the brand in both assisted and unassisted forms. The performance and imagery questions, which pertain to the product's concrete attributes including dependability, durability, efficiency, cost, values, heritage, and experiences, are covered in the second level. The third level consists of questions meant to elicit intangible consumer feedback about the brand, such as its superiority, credibility, enjoyment, security, and self-respecting qualities. The dependent variables that influence brand affinity and loyalty, such as purchase intent and overall rating, are determined using all three levels.

Level 1-Brand Awareness: It is critical to raise brand awareness among customers in order to make the brand name memorable and top-of-mind. This further demonstrates the brand's power in the marketplace. Customers' knowledge of a brand extends much beyond their recognition of its name or previous exposure. Connecting the brand to its attributes, such as its name, advertisement, logo, symbol, and product line, is known as brand awareness. The development of brand equity and brand affinity starts with brand awareness. Knowing the breadth and depth are the requirements for awareness. Depth has to do with how quickly a consumer can identify or remember a brand.

Level 2: Significance of Brand: This is the next stage of brand development, when the brand's meaning is connected to its image and performance. These opinions about the item may be established by the consumer directly experiencing it or by hearing about other people's experiences indirectly. A brand's performance component has to do with how well its goods or services attempt to satisfy the demands of its users. A few examples of performance qualities or survey questions include features, serviceability, efficiency, style & design, and cost. The product or services imagery component is related to its external features. This is the brand's more ethereal side. Survey questions and imagery features may be related to experiences, heritage, values, circumstances, and profiles.

Level 3: Reactions from brands: These layers address the consumer's reaction to brand information and marketing campaigns. This pertains to the assessment that the consumer makes about the brand and its emotions. Brand evaluations are based on the brand's excellence, quality, credibility, and consideration. Warmth, enjoyment, security, social acceptance, and self-respect are all connected to a brand's emotion element.

Step 4: Brand Relationship: The most crucial area of the pyramid for determining brand affinity is this one. For the purpose of fostering customer brand relationships, the last three tiers are all crucial. Numerous techniques, including SEM, regression, and analysis of variance, may be used to identify this. ANOVA, or analysis of variance, and covariance, or ANCOVA. Modeling the survey data identifies a number of important brand drivers. A few traits that matter to businesses include feeling of community via brand rating or buy intent, behavioral loyalty, brand affinity and attitude attachment, and brand affinity.

2.2 Summary of literature review

In situations where business stakeholders require information about consumer brand affinity and that can be converted into loyal positive brand references, as well as for determining how well a particular brand is performing in comparison to other brands that are in the same industry, the utilization of structural equation modeling is still relevant. A large number of research papers and journals have been examined from a variety of perspectives in order to get a comprehensive grasp of SEM in order to better comprehend customers. In every piece of material that was examined, the emphasis was placed on the use of the Equity Model for businesses that are always undergoing change

and making consistent attempts to remain ahead of the competition. These attempts to respond to the demands of consumers have led to the adoption of the most effective strategy for putting such a premise into action. There will be a comparison done between different methodologies, software, published research papers, and journals based on the data that was acquired via the survey. The goal of this comparison is to determine which methodology is the most effective and provides the most pertinent insights. SEM is the method that is used and utilized the most often for determining brand affinity. The method may differ from one individual to another depending on the circumstances at hand; it may include using a simple regression or an analysis of variance (ANOVA), or it may need incorporating a more complicated framework such as structural equation modeling (SEM) in order to get superior outcomes. The use of structural equation modeling (SEM) to build brand affinity has been adopted in a variety of industries, including retail, banking and finance, travel and entertainment, and manufacturing, respectively. On the other hand, the most important criteria would be a survey that is well-designed and gets responses from a sample that is representative of the population enough.

3 Methodology

The methodology of the research will be described in depth as the foundation for the study, and it will illustrate the progression of processes in the many stages. The strategy is a staggered approach that is carried out in a sequential way in order to accomplish the desired goals. In this part, we will discuss the several stages that comprise the analysis. Steps such as research design, survey, finalization of datasets, merging of data from various sources, exploratory data analysis, conceptual model, and model finalization will be included in this process. Including business or brand information in the study is accomplished by the use of this strategy, which entails having frequent talks with business stakeholders. During the period of model development, there are several iterations that take place. The demand may be to adjust the hyperparameters, factor formations, or reorganize the model relations.

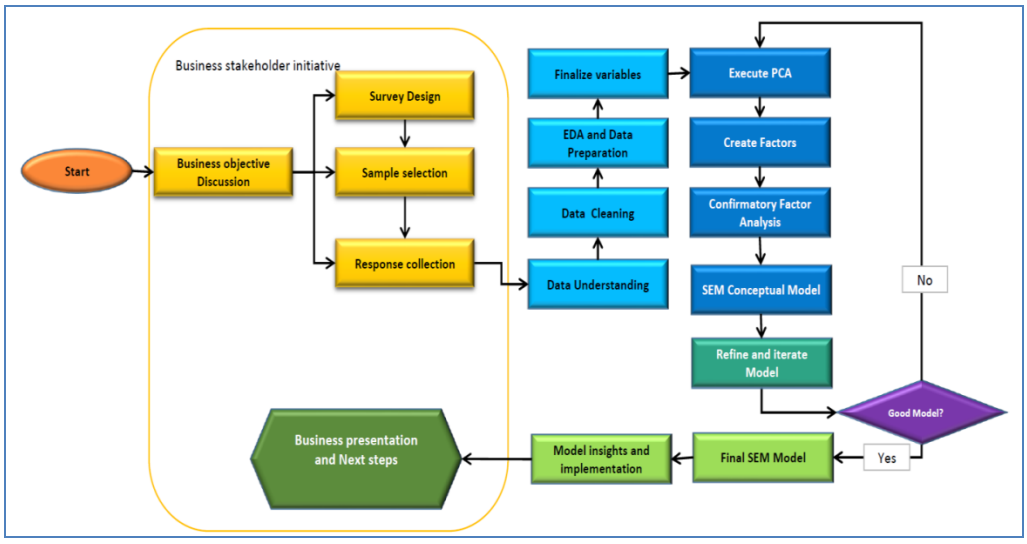


Figure 4. Research methodology flow diagram

A comprehensive and in-depth look is provided into the methodical approach that has been taken to the development of this research. A visual depiction of the precise processes is thus provided at the beginning of this chapter for the purpose of making those procedures simpler to grasp. According on the information provided in the parts that are relevant, the questionnaire for the survey will be developed. A number of different approaches, including univariate analysis, descriptive statistics, bivariate and multivariate analysis, and visual analytics via the use of Excel and Power BI,

would be used in order to analyze the data that has been gathered. Iterating and refining the SEM model several times allows for the preparation of the conceptual model as well as the creation of the final SEM paths. In light of the fact that this is an industrial initiative, all of the appropriate permissions and ethical compliance rules are followed.

4 Results

The purpose of this section is to provide an explanation of the need of this study, which involves collecting real-time data from the industry and then putting the research technique into action in order to determine the factors that influence customer brand affinity at the point of purchase. These are the respondents who have consented to the use of the survey answers in order to carry out the study. Without introducing any kind of bias, the purpose of this experiment is to demonstrate that the survey data that is now available would be of assistance in determining the intentions of customers and the position of the Brand in focus when compared with other brands in the market.

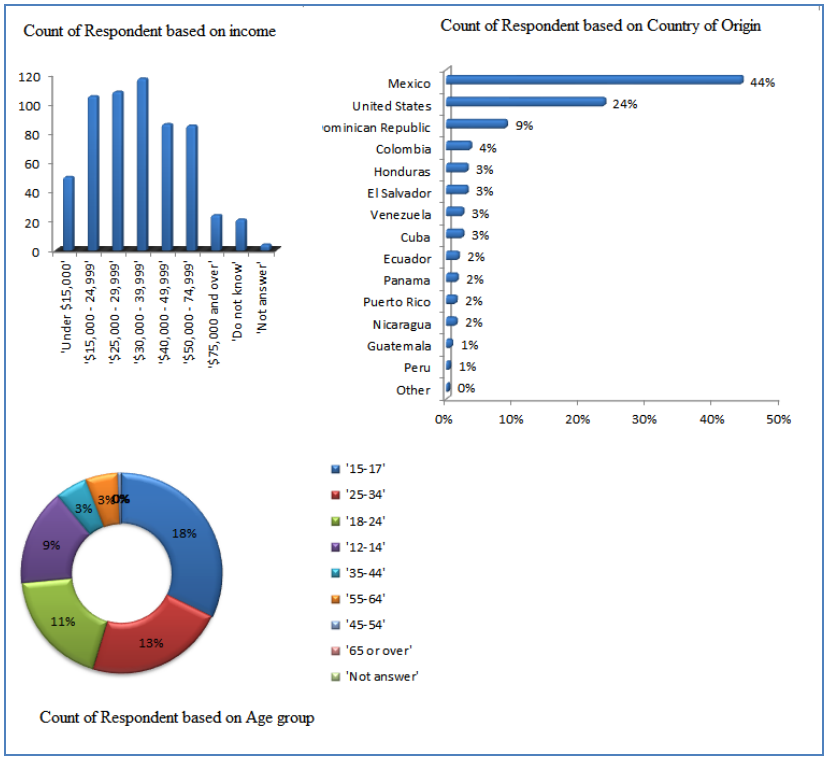


Figure 5. Respondent demographics details.

Factor Definition	Variables
Smart Shopper	Fe11
	Fe5
	Fe2
Doing the Best for Myself/Feel in Control	Fe13
	Fe12
	Fe10
	Fe9
	Fe7
Makes Me Feel Better	Fe6
	Pe9
	Pe5
	Fe14
	Fe8
	Fe4
	Fe3
	Fe1
	Img2

Factor Definition	Variables
Heritage	Img7
	Img6
	Img5
	Img4
	Img1
Appealing Ads	Jd3
Value	Jd1
	Jd5
	Jd2
	Jd8

Factor Definition	Variables
Absorbency/Texture	Pe15
	Pe4
	Pe11
	Pe3
Thick/Strong	Pe7
	Pe12
Soft	Pe8
Use Less	Pe14
	Pe13
Strength in use	Pe16
	Pe10
	Pe1
	Pe2

Table 1. Final factor formation and composition of variables

The Factor definition is created based on the kind of variables that are included in the formation of the factor as shown in Table. The final set of Factor formation is based on multiple iteration of factor analysis and business consultation to see if it makes business sense. This dimensionality reduction method of this study has two main steps, one in the stacking of variables according to the brands and the second the formation of factors. These steps are very necessary as we are dealing with a dataset of around 3500 variables. This important step of Dimensionality reduction is necessary to avoid the "Curse of Dimensionality". As the number of features increase the model adds more complexity.

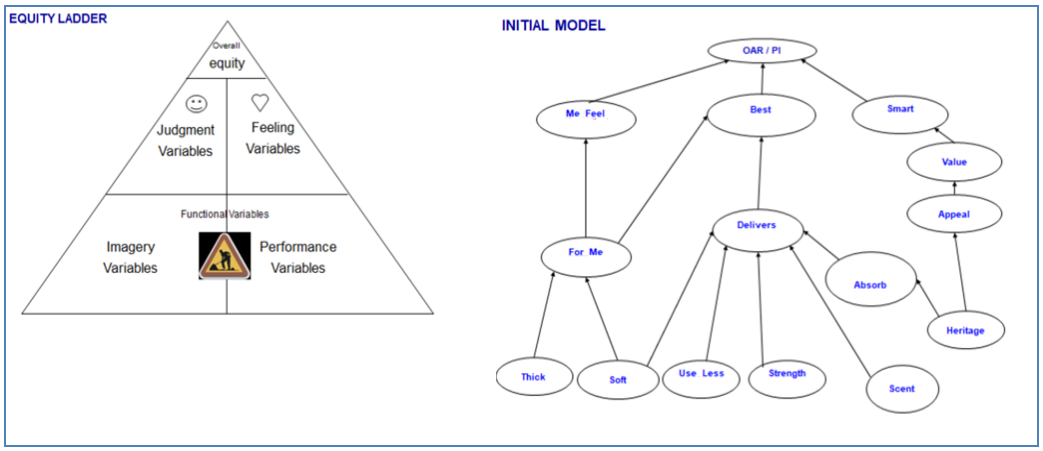


Figure 6. SEM model creation.

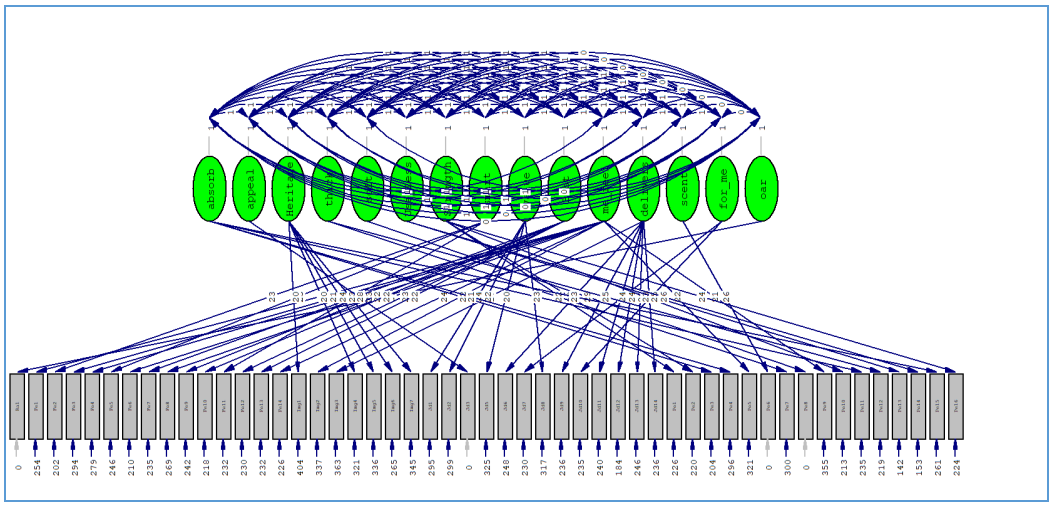
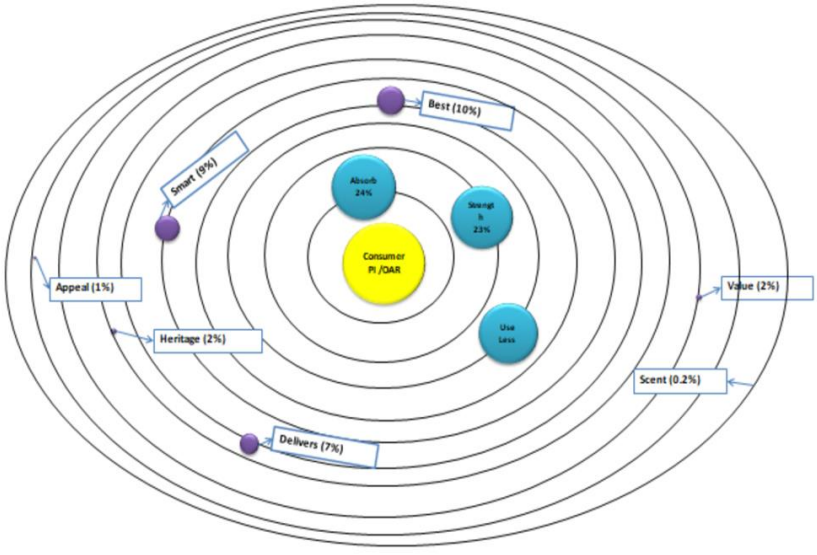


Figure 7. Path Diagram output from Lisrel version 10.20.

Overall, SEM provides a comprehensive framework for analyzing brand affinity by simultaneously examining the complex interrelationships between multiple latent constructs and their observed indicators. By applying SEM techniques, researchers can gain valuable insights into the factors driving consumer loyalty and emotional attachment to brands.

The below chart is unique Solar Chart in Figure where the SEM effects of each and every factor on the Purchase Intent and Overall rating is depicted as the planets and the central Sun as the Brand product. The bubble size is conjured with the impact percentage and is also shown as a percentage in the label. The bigger the bubble it is closer to the central product and consumers feel they are its stronghold. The farthest smaller bubbles are the ones that the brand is failing to deliver and needs immediate attention.



Factors	Percentage
absorb	24%
Strength	23%
Use_Less	22%
Best	10%
smart	9%
delivers	7%
Heritage	2%
value	2%
appeal	1%
scent	0.2%

Figure 8. Solar chart of SEM Effects for the Factor loadings

5 Conclusion

The use of structural equation modeling is widely recognized as one of the most effective approaches for determining the level of brand loyalty or affinity shown by consumers. As technological innovation continues, it is inevitable that the procedures that are now being used will undergo changes. Through the use of advanced analytics techniques, this study was carried out with the intention of expanding the use of search engine marketing (SEM). During the course of the research, a unique dataset was used, and the relevant ethical permissions and procedures were accomplished. It is important to note that the data acquired via the Survey contains important demographic information about the users; however, for reasons of security, this information has been pseudonymized. Because structural equation modeling is such a comprehensive framework, a number of different pieces of literature were examined in order to develop a framework for this research. During the course of the literature study, it was discovered that the basics of structural equation modeling have not changed. This is because the formation of profiles is mostly accomplished by analyzing similarities between the demographic, psychographic, geographic, and social behaviors of customers. The Internet of Things (IoT) and Artificial Intelligence (AI) are two technologies that are being used to gather data and provide outcomes in real time as part of the progression of technology. For the purpose of ensuring that this research is carried out in a manner that is well-organized, the research method that was chosen for this study was implemented. When it comes to accomplishing the goals that have been set without making any concessions, the structure and framework are of utmost importance. Execution that is flawless is of the highest significance in order to ensure that the findings acquired are accurate. Data analysis techniques, data pre-processing methods, modeling, and result interpretation are all components of the planning process. The planning process also involves the selection of software. Following the stacking of metrics and non-metrics and the cleaning of the data, a total of 3523 variables were analyzed and reduced to a set of 51 variables and 1096 observations for the purposes of the structural equation modeling study. Microsoft Excel and Power BI were the tools that were used in the process of data visualization. Based on the relevance of the variables and the relationships that have been verified a definitive version of the SEM Model was generated. Taking into account the findings, suggestions were also made in order to ensure that the product or brand in question is improved in order to prevent the Consumer Brand Shift Index (CBSI) from increasing as a consequence of the low lying components of the model.

6 Future implecations and recommendations

The development of the three "T" (Technology, Technique, and Transmission Speed) has been a pivotal factor in determining the direction of future research. For the purpose of this research, a challenging circumstance was envisioned, and the bulk of the results were approached from the viewpoint of developed countries. Despite the fact that some of the findings in the research are in conflict with the most recent evidence and methodologies, it is possible to disregard them as provisional until they are confirmed by subsequent and subsequent investigations. A new group of items, nations, and samples might be used in the future to validate the study route, which is available for future validation.

One of the main techniques for determining the consumer's brand affinity or loyalty is said to be gauged by structural equation modeling. It is inevitable that the techniques employed will change as technology advances. This study was carried out to employ advanced analytics techniques to enhance the use of SEM. By obtaining the required ethical permissions and conditions, a fresh dataset was employed in the investigation. The Internet of Things (IoT) and artificial intelligence (AI) are being used in technological advancement to collect data and provide real-time results. This study's research methodology was used to guarantee that the investigation is carried out in an orderly manner. To accomplish the targeted goals without sacrificing any quality, the framework and structure are crucial. The precision of the outcomes is contingent upon flawless implementation. The planning process

entails selecting the software, modeling, data pre-processing, data analysis, and result interpretation. Recommendations were also provided in light of the findings for how to strengthen the brand or product in order to stop the Consumer Brand Shift Index (CBSI) from rising as a result of the model's low-lying determinants.

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