



A Study on Customer Perception towards Chemical Products Manufactured At Thoothukudi

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ABSTRACT

Accidents with chemical products are prevalent worldwide and often involve young children. Previous research has shown that consumers use both analytical factors (e.g., warning symbols) and potentially misleading heuristics to evaluate the riskiness. However, it remains unclear whether consumers intuitively think of the specific risks of these products when handling them. We conducted an online survey with consumers (N = 150) aiming to investigate consumer's spontaneous and prompted risk perception of chemical products. First, we asked them about their free associations to catalytic applications, paper, plastics, paint printing inks. While participants were aware of the risks when prompted about them, they did not name them intuitively, but mainly thought of the possible uses and attributes of the product. Next, we examined prerequisites to safe handling of chemical products. This included applied knowledge about the products, but also factors like perceived barriers to safe use. Finally, we assessed the predictors of perceived severity of accidents in order to estimate the potential behavioural changes that these predictors might elicit. For interventions, particular attention should be accorded to personal risk awareness and the perception of potential barriers, which were significantly related to the perceived severity of accidents

I. INTRODUCTION OF THE STUDY

A customer perception refers to how customer view a certain product based on their own conclusion. These conclusions are derived from a number of factors, such as price and overall experience. A marketing concept that encompasses a customer impression, awareness or consciousness about a company or its offerings. Customer perception is typically affected by advertising, reviews, public relations, social media, personal experience and other channels. Perception is one of

the objects studied by the science of customer behaviour. Analysing the work of scientists studying the customer behaviour, it is possible to make a conclusion that perception is presented as one of personal factors, determining customer behaviour.

DEFINITION

Customer perception refers to the process by which a customer selects, organizes and interprets information / stimuli inputs to create a meaningful picture of the brand or the product. Three stage process that translates raw stimuli into meaningful information.

1. To Identify factors that cause customers dissatisfaction.
2. To determine the gap between customer perception and expectation regarding the quality of service.

Marketing

Marketing describes how a company chooses what types of products and services to offer and how it distributes, prices and promotes those products and services. Consumer perceptions often determine the types of products and services companies offer. For example, if consumers expect to be able to eat for \$5 at a fast chemical restaurant, restaurants might be compelled to offer products that are profitable at a price of \$5 or less. Businesses create advertisements to make consumers aware of their products and services and influence how consumers perceive those products and services.

Branding

A trademark is a name, phrase, symbol or combination of words and symbols that a company uses to distinguish its identity or brand or its products from others. Businesses spend large amounts of resources to build up brand name recognition and to get consumers to associate certain positive qualities with their brands. Consumers may be more trusting



of more recognizable brands, which can influence buying behaviour.

Considerations

Businesses often conduct market research to gain insight into consumer perceptions and preferences. Understanding how and why consumers make the choices they do is integral to providing products and services that will be in demand and promoting those products and services effectively.

IMPORTANCE OF CUSTOMER PERCEPTION

Customer perception is an important component of our relationship with our customers. Customer's satisfaction is a mental state which results from the customer's comparison of expectation prior to a purchase with performance perception after a purchase. A customer may make such comparisons for each and every part of a called "domain – specific satisfaction" moreover, this mental state, which we view as a cognitive judgment, is conceived of as falling somewhere on a bipolar continuum bounded at the lower end by a low level of satisfaction where expectation exceed performance perceptions and at the higher end by a high level of satisfaction where performance perception exceeds expectations. The lowest level at which an individual can experience a sensation a difference between something and nothing is referred as absolute threshold for example notice of bill board car, point at which you notice vibrating sound of tongs, point at which you feel cold etc., as our exposure to the stimulus increases, we notice it less for example taking bath cold water everyday no shivering / cold as "getting used to". In the field of perception, the term refers specially to "getting used to" certain sensations.

STATEMENT OF THE PROBLEM

The problem in customer perception towards chemical products is the negative perception that some customers may have regarding the safety, effectiveness, and environmental impact of chemical products. Customers may be concerned about the potential health risks associated with exposure to chemicals, or they may be suspect of the claims made by manufacturers regarding the benefits of these products. Additionally, customers may be wary of the impact that chemical products have on the environment, including concerns about pollution, climate change, and sustainability. These perceptions can impact the purchasing decisions of customers, as well as their overall satisfaction with chemical products.

OBJECTIVES OF THE STUDY

- To identify the reason for selecting chemical products
- To identify the factors influencing the products
- To determine the customer's satisfaction with the chemical products.
- To examine the level of awareness towards chemical products in Thoothukudi.
- To examine the consumers perception and behaviour towards chemical products in Thoothukudi
- To assess and evaluate the factors facilitate the consumption of chemical products in the study area.

SCOPE OF THE STUDY

1. This study is required to know the present customer perception at VVTI Chemical industries with reference to Thoothukudi.
2. Acknowledging the importance of customer perception and putting it into practice are two different things.
3. Customer perception is the opinions of customers have about your brand of chemical products. It plays an important role in building customer loyalty and retention as well as brand reputation and awareness of the chemical products.

LIMITATIONS OF THE STUDY

- This study has been confined to the consumers of Thoothukudi.
- The study will be conducted on chemical product only
- The study is limited to chemical industry for collecting data.
- The data collected for the study may subject to bias.
- Due to lack of awareness, the respondents give only limited information
- The interpretation drawn will be purely on the responses obtained from the respondent in the study area.

II. REVIEW OF LITERATURE



Bitner, M.J.(2019)¹ to examine the level of service quality as perceived by customers of commercial industry working in Jordan and its effect customer satisfaction. Service quality measure is based on proposed by, which involve five dimensions namely reliability, responsiveness, empathy, assurance and tangibles. Customer satisfaction was measured by item adapted.

Engel, J. F., Blackwell, R. D. & Mimard, P. W. (2020)² assessed to determine the dimensions of service quality in the industry in Iran. The study empirically examined Groonor's model suggesting that service quality dimensions like modified scale like tangible, assurance, responsiveness, reliability and empathy were used to measure functional quality, technical quality service items were developed by image, customer satisfaction and overall service quality. A standard questionnaire was used for collecting the data and 287 customers were selected through cluster sampling for the study. Tools like confirmatory factor analysis and chi-square test was utilized to verify the construct of validity and reliability test. The results reveals that the overall service quality is influenced more by a consumer's perception of technical quality than functional quality.

Daing Maruak Sadek et al., (2021)³ whether to identify the factors affecting the customer's perception on service quality of industry in Islam and to measure the mean scores of dimensions in service quality of industry and to determine the difference in means of service quality in industry comprises 33 items named with six dimensions compliance, assurance, reliability, tangible, empathy and responsiveness which customised for suitability of industry Convenience sampling was used and questionnaire used was structured and close-ended question were distributed to any customers of account holder of the industry. Service quality of 5 gap model was derived as understanding, service standards, service performance, communications and service quality. Statistical tools like one-way ANOVA, t test and ranking method was used and the results indicated that compliance issues are very important

for industry customers, and the customers seemed more appreciate industry for its religious provision rather than its service quality offered.

Rajagopal, (2022)⁴ states that there are many evidences to believe that customers select their products based on brand name. In this paper, researchers have present an empirical study to determine important factors influencing customers' purchasing intend for cellular phones in capital city. The result of the study show that there are some positive relationships between exclusive name and quality perception, between exclusive name and word of mouth advertisement, between quality perception and fidelity, between word of mouth advertisement and brand name and between brand name image and brand name.

Andreasen, A. R. (2022)⁵ Perception is the most important psychological factor that affects human behaviour. It is a process consisting of several sub-processes. Perceptions are built depending upon the role of an individual in conceiving and understanding communication. One person's perceptions may be faulty or idiosyncratic. For this reason, marketers should take this into account. Perception influences the evaluation of a sport experience through acquiring, interpreting, selecting, and organizing sensory information. Perception occurs when an individual interprets information through the sensory system and a cognitive filter that selects certain information from a vast array of stimuli. Perception depends upon the person, situation, and the object and sport consumers are constantly interpreting cues about sport products and services (e.g., attributes, benefits, risk of an activity or purchase).

III. RESEARCH METHODOLOGY

It refers to the process used to collect information and data for the purpose of making business decision. The methodology may include publication research, interview, surveys and other research techniques, and could include both present and historical information.

DEFINITION

¹ **Bitner, M.J.(2019)**. Servicescapes: the impact of physical surrounding on customers and employees. Journal of marketing 56(April), 57-71

² **Engel, J. F., Blackwell, R. D. & Mimard, P. W. (2020)**. Consumer Behaviour, The Dryden Press 6th edition, USA, p.383.

³ **Daing Maruak Sadek et al., (2021)** On Becoming A Consumer, The Development Of Consumer

Behavior Patterns In Childhood, , Elsevier Inc., USA, p. 19

⁴ **Rajagopal, (2022)**. Marketing Dynamics, Theory and Practice, New Age International (P) Ltd, New Delhi, p.240.

⁵ **Andreasen, A. R. (2022)**. Marketing Research That Won't Break the Bank, A Practical Guide to Getting the Information You Need, Jossey-Bass, San Francisco, p. 102.



According to industrial research institute in research methodology, research always tries to search the given question systematically in our own way and find out all the answers till conclusion. If research does not work systematically on problem, there would be less possibility to find out the final result. For finding or exploring research questions, a researcher faces lot of problems that can be effectively resolved with using correct research methodology.

RESEARCH DESIGN

To make the research systemized the researcher has to adopted certain method. The method adopted by the researcher for completing the project is called research methodology. Research is a process in which the researcher wishes to find out the end result for a given problem and thus the solution helps in future course action. The research has been defined as “A careful investigation or enquire especially

through search for new facts in any branch of knowledge”. To give more additional to the old research new ones are conducted.

SAMPLING SIZE

A sample size is guaranteed to its temperament of information assortment. Information assortment depends on the essential information is 150 respondents are taken as the example for this investigation.

SOURCES OF DATA

The following techniques were adopted for data collection.

Primary data

Primary data was collected through face to face interviews while filling up questionnaires

Secondary data

Relevant information was gathered from magazines, newspapers and project reports that formed the secondary data.

TOOLS AND TECHNIQUES

SIMPLE PERCENTAGE

In this project percentage analysis test was use. The percentage method is used to know the accurate percentage of the data we took. The following formula was used

$$\text{Percentage of respondents} = \frac{\text{No of respondents}}{\text{Total no of respondents}} \times 100$$

From the above formula, we can get percentage of the data given by the respondents.

CHI-SQUARE ANALYSIS

The Chi- square test is one of the simplest and most wickedly used non-parametric tests in statistical work. The quantity χ^2 describes the magnitude at the discrepancy between theory and observation.

Chi – square test

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

O = Observed Frequency , E = Expected Frequency

In generated expected frequency for any cell can be calculated from the following equation.

$$E = \frac{RT * CT}{N}$$

E = Expected frequencies, RT = The Row Total for the Row containing the cell

CT = The Column Total for the Column containing the cell, N = The total number of observation.

The calculated value at Chi-square. Is compacted with the table value χ^2 given degrees of freedom at a creation specific level of significance. If at the stated level the calculated value χ^2 is more than the table value of χ^2 , the difference between to be significant, otherwise it is insignificant.

CORRELATION

Correlation is computed into what is known as the correlation coefficient, which ranges between -1 and +1. Perfect positive correlation (a correlation co-efficient of +1) implies that as one security moves, either up or down, the other security will move in lockstep, in the same direction. Alternatively, perfect negative correlation means that if one security moves in either direction the

security that is perfectly negatively correlated will move in the opposite direction. If the correlation is 0, the movements of the securities are said to have no correlation; they are completely random.

$$r = \frac{\sum XY}{\sqrt{(\sum X^2) (\sum Y^2)}}$$



ANOVA

Appraisal of progress, or ANOVA, is a solid certified method that is utilized to show capability between at any rate two systems or parts through importance tests. It likewise shows us an approach to manage make various appraisals a few group induces. The Anova test is performed by seeing two sorts of grouping, the variety between the model derives, comparatively as the combination inside the entirety of the models. Under alluded to equation watches out for one way Anova test encounters:

$$F = \frac{MST}{MSE}$$

IV. SUGGESTIONS

The results suggest that chemical traceability systems may increase consumer confidence in chemical safety, in particular with regard to reducing the potential vulnerability of specific chemical chains to contamination, and to improve the coordination between various actors across chemical chains and with consumers. The results also suggest that, if communicated properly, product recalls can have a positive influence on consumer confidence in chemical safety management, because they are seen as indicators of effective risk management by consumers. However, global harmonization of chemical traceability regulation may be required given the increasing globalization of chemical chains. The results suggest that chemical traceability systems may increase consumer confidence in chemical safety, in particular with regard to reducing the potential vulnerability of specific chemical chains to contamination, and to improve the coordination between various actors across chemical chains and with consumers. The results also suggest that, if communicated properly, product recalls can have a positive influence on consumer confidence in chemical safety management, because they are seen as indicators of effective risk management by consumers. However, global harmonization of chemical traceability regulation may be required given the increasing globalization of chemical chains.

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Further investigation of efficient communication strategies to inform consumers about traceability and its applications in improving chemical safety is needed.

V. CONCLUSION

The customer perception is one of the basic opportunities this help to improve customer relationship and understand what customer like about your company and also what they need for your company. So, organization will be understanding customer overall experience and take suitable decision making.

The field survey helps me acquiring more practical knowledge relating to the research. During the data collection I come to know about art of communicating with the respondents. The analytical knowledge of me is improved by this research project. Hope all the knowledge gained by me during this research will very helpful to me for my higher studies and future carrier. Through the research paper entitled, "A study on customer perception and satisfaction towards chemical products" It is concluded that the demographic variables such as age group, gender, occupation are having less Impact on the factors of customer perception and satisfaction. The research outcome also indicates that, most of the customers were satisfied towards chemical products with respect to the chosen factors. This study also indicates that the customer's loyalty towards the chemical products is also good.

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