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THE STUDY ON CONSUMER ATTITUDE TOWARDS SOLAR ENERGY DEVICES WITH SPECIAL REFERENCE TO POLLACHI

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ABSTRACT
This study investigates consumer attitudes toward solar energy devices in Pollachi, Tamil Nadu, focusing on factors influencing their adoption. With growing awareness about the environmental impact of conventional energy sources, the research explores how consumers in this rural area perceive solar energy in terms of cost, government incentives, and long-term benefits. Using surveys and interviews, the study identifies key drivers such as financial incentives, government policies, and environmental concerns, alongside barriers like high initial costs and lack of information on maintenance. The findings highlight a positive attitude toward solar energy, but emphasize the need for increased education, accessibility, and financial support to encourage wider adoption. The research provides valuable insights for stakeholders aiming to promote solar energy solutions in Pollachi and similar regions.
KEYWORDS: *Consumer Attitude, Solar Energy, Renewable Energy, Adoption, Awareness, Government Policies, Environmental Sustainability.*

I.INTRODUCTION

Consumer attitude may be defined as a feeling of favorableness or unfavorableness that an individual has towards an object. As we, all know that an individual with a positive attitude is more likely to buy a product and this results in the possibility of liking or disliking a product.

Consumer attitude basically comprises of beliefs towards, feelings towards and behavioral intentions towards some objects. Belief plays a vital role for consumers because, it can be either positive or negative towards an object. For example, some may say tea is good and relieves tension, others may say too much of tea is not good for health. Human beliefs are not accurate and can change according to situations. Consumers have certain specific feelings towards some products or brands. Sometimes these feelings are based on certain beliefs and sometimes they are not. For example, an individual feels uneasy when he thinks about cheese burst pizza, because of the tremendous amount of cheese or fat it has. Behavioral intentions show the plans of consumers with respect to the products. This is sometimes a logical result of beliefs or feelings, but not always. For example, an individual personally might not like a restaurant, but may visit it because it is the hangout place for his friends.

II. REVIEW LITERATURE

1.Kevin Bullis (2013) in his study "Why solar companies should fail" focuses on the solar panel industry and the need for a number of solar manufacturers to go into bankruptcy. It states that the glut of solar panels is due partly to significant government-backed investments in solar panel factories in China, which has resulted in a 60 percent drop in the price of solar panels from 2011 to 2013. It comments that solar manufacturers have been unable to make profits or invest in new equipment to reduce costs and improve product performance." *Kevin Bullis (2013), "Why More Solar Companies Should Fail", Technology Review, Volume 116 Issue 3, May/June 2013, Pg-24 to 24.*

2.Ramesh Khanna (2010) made his study on "Solar panel powers two-stage lead acid battery charger" revealed that, the working of a solar panel powering two-stage lead-acid battery charger. A solar-powered lead-acid battery charger can ensure that the battery remains fully charged over a wide temperature range. Solar or photovoltaic panels comprise

multiple solar cells that connect in series. A solar cell has limited current generating and-carrying capability, which results in limited current carrying ability for the entire solar panel." *Ramesh Khanna (2010),"solar Panel powers two-stage lead acid battery charger", EDN Europe, Volume 57 Issue 8, August 2010, Pg-18 to 18.*

3.Gene R. Heinze and Fry (1986) in their study " The economics of home solar water heating and the role of solar tax credits" states that, the finances of home solar water heating, using flat plate collectors and a conventional water heater for backup, for 69 cities in 46 states. Natural gas is much cheaper than electric resistance heating in most areas, yet half the homes built in 1978-83 have electric heat, while only 40% use gas. Gas may be unavailable for new homes in many areas. So in this study solar/electric water heaters are compared to electric ones and solar/gas water heaters are compared to gas ones, using the cost difference between a solar/backup system and a conventional water heater." Gene R.Heinze and Fry (1986), "*The Economics of Home Solar Water Heating and the Role of Solar Tax Credits" , Land Economics, Volume 62 Issue 2, May 1986, Pg-134 to 145*.

4.Dr. M. Venkatraman and U. Sheeba (2014)1 in their study on "Customer's Attitude towards Solar Energy Devices" have studied the awareness of the solar energy devices and the ideas, preferences and attitude among respondents. They also examined customer's satisfaction and customer opinion regarding CRM practices of Manufacturers of solar energy devices. Customer's attitude towards solar energy devices is definitely changing and there has been a significant increase in the awareness and benefits of using solar energized devices over electrical devices and also increases the consumer's responsibility towards the environment and eco-friendliness. *Dr. M. Venkatraman and U. Sheeba (2014)1 " A Study on Customer's Attitude towards solar energy Devices" International Research Journal of Business and Management – IRJBM ISSN 2322 – 083X, Volume No – V, May – 2014.*

5.Anupamaa S chavan and Dr. Madhav N Welling (2013)2 "Assessing the Awareness of Government Subsidy for Solar Water Heaters among people of Mumbai (India)". In their study they have examined the significance of Government subsidy on the use of Solar Water Heaters. Other factors which might influence the use of solar water heaters such as product availability, after sale service, credit facility are not considered. Their study concluded that everyone in Mumbai is not aware of Government Subsidies/Incentives and they recommended that the manufacturers should spread awareness regarding the availability of Government Subsidy/Incentives. *Anupamaa S chavan and Dr. Madhav N Welling (2013)2 "Assessing the Awareness of Government Subsidy for Solar Water Heaters among people of Mumbai (India)" American International Journal of Research in Humanities, Arts and Social Sciences – AIJRHASS ISSN 2328-3696, pp. 145-148, May - 2013.*

III. RESEARCH OBJECTIVE

1. To study the awareness of the Customers towards Solar Energy Devices available in the Market.
2. To Study about the Attitude towards Solar Energy Devices.
3. To analyze the factors influencing consumers to buy Solar Energy Devices.
4. To know the reasons for choosing Solar Energy Devices over Electrical Devices

IV. SCOPE OF RESEARCH

Throughout history, humans have discovered ways to take various energy sources and use them to their advantage. From the simple task of burning wood for heat, to the monstrous amount of power created from nuclear energy, we have been determined to find the most efficient and economical ways to make our lives easier. In the present scenario, the world is dominated by the Electrical energy and the electronic devices. The technological improvement in this field is vast and it plays a vital role in day to day lives of people.Solar energy being a renewable energy available in abundance as the natural source sun emits photovoltaic energy in the sun rays. With the invention of solar cells/solar panels used to grasp solar energy and converts into electrical energy for usage. Many companies have come into the markets which are now fast growing in the commercial sales of solar energy based devices. In this aspect, it becomes necessary to find what impact this Solar Energy Devices has made the consumer and the study on customer's attitude towards solar energy devices is identified as the need for the study.

V. HYPOTHESIS

1. There exist no association between income of the respondents and price as an influencer.
2. There exists no association between income of the respondents and after sales service as an influencer.
3. There exists no association between income of the respondents and brand name as an influence.

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VI. RESEARCH METHODOLOGY

Types of Data Collection:

a) Primary Data : Data which are collected fresh and for the first time and thus happens to be original in character. Primary data are gathered for specific purpose.

b) Secondary data : Data that collected from primary data i.e., they are already exit somewhere. For the purpose of the study, I collected both the data.

Sample Size:110

Tools used for Data Collection:

Data is collected through structured questionnaire by way of circulating the questionnaire to the consumers of solar devices in Pollachi.

- **Percentage Analysis**
- **Chi-Square Test**

VII. DATA ANALYSIS AND INTERPRETATION

1.Level of Income and Price as an Influencer

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.814	8	.008
Likelihood Ratio	23.538	8	.003
Linear-by-Linear Association	1.687	1	.194
N of Valid Cases	110		

H_0: There exist no association between income of the respondents and price as an influencer
Calculated $\chi 2$ Value: 20.814, Degree of freedom: 8, Signification level: .008

2.Level of Income and After Sales Service as an Influencer

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	25.217	12	.014
Likelihood Ratio	26.829	12	.008
Linear-by-Linear Association	2.257	1	.133
N of Valid Cases	110		

H_0: There exists no association between income of the respondents and after sales service as an influencer. Calculated $\chi 2$ Value: 25.217, Degree of freedom: 12, Signification level: .014

3.Level of Income and Brand Name as an Influencer

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.827	8	.451
Likelihood Ratio	10.171	8	.253
Linear-by-Linear Association	1.313	1	.252
N of Valid Cases	110		

H_0: There exists no association between income of the respondents and brand name as an influence.
Calculated $\chi 2$ Value: 7.827, Degree of freedom: 8, Signification level: .451

VIII. FINDINGS

1. As the calculated $\chi 2$ value (20.814) is significant (.008) at five percent level, there exist a significant association between income of the respondents and price as an influence. Hence, the null hypothesis is rejected.
2. As the calculated $\chi 2$ value (25.217) is significant (.014) at five percent level, there exists a significant association between income of the respondents and after sales service as an influence. Hence, the null hypothesis is rejected.
3. As the calculated $\chi 2$ value (7.827) is not significant (.451) at five percent level, there exist no association between income of the respondents and brand name as an influence. Hence, the null hypothesis is accepted.

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IX. SUGGESTIONS AND RECOMMENDATIONS

- Most of the respondents are found to be using emergency lights during power cut. The company may take initiative to make the public understand that, emergency light may be comfortable and portable but does not help in bringing down the electricity bill which the general consumer fails to understand.
- From the study it is learned that, majority of the respondents are aware of solar power products and are also willing to use the same. Hence, it is the right time for the management to pitch in and try aggressive marketing technique to make the consumers buy the solar power products.
- The company must try to target on spreading positive word-of-mouth through the purchase influencers. It is learned from the study that, before purchasing a product, most of consumers are found to have discussion to get guidance or advice from their friends. Hence, word-of-mouth is considered very important.
- Since periodic maintenance is considered very important by the respondents, efforts may be taken to have a separate team of employees who always updates the due date for maintenance and inform the same to their clients. This will help the company to built a very positive rapport with their customers.
- Majority of the respondents are found to be considering warranty as an important feature. Hence, the company must try to help the consumers in case a problem occurs during the warranty period.
- From the study it is understood that, there exists a signification association between price of the product and income of the consumers. Hence, the company may try to keep this in mind and should work out a pricing strategy so as to enable all consumers to buy the product.
- The company may consider using their in-house experts to run an awareness rally in the rural and semi urban areas and provide basic awareness and understanding on solar power products. These areas are found to have a great scope for marketing the solar power product.
- Today, the state Government provides various subsidies to those who are willing to establish solar power products in their house. The subsidies and the procedure for getting the subsidies may be educated to the consumers in the rural as well as semi urban areas.
- Company may appoint a separate team of executives who are good in local language to go and meet farmers in the local taluk and educate them on the benefits of using solar power water pumps for agriculture.

X. CONCLUSION

"The customer is always precise" is a prominent business slogan. The fundamental fact behind this statement understands that, customers are the life blood for any business. Keeping this in mind, this study has been conducted at Pollachi Taluk to identify customers attitude towards solar power products. From this study, it can be concluded that customers' attitude towards solar power products is definitely changing due to may valid reasons and also there has been a significant increase in the awareness of solar power products. Most of the consumers are aware about solar power products through their friends and most of them are willing to purchase. There is a significant scope in future for direct energy through the installation of solar power products.

In order to boost up the usage of solar energy, the government must increase the subsidy to install the solar power devices in the homes for domestic purpose. This will not only help to conserve energy but also have a pollution free environment. From a personal perspective, the overall experience of completing the full time Master of Business Administration course was rewarding. The personal rewards and added value that this experience will provide to my future professional prospects will be noteworthy. Despite my learning style and preferences identified earlier, the course has provided me with an educational culture and promoted diverse learning spaces regularly contributing greatly to my personal development as a whole. Therefore, the successful completing of this project concluded an extraordinary learning experience in SIIMS which will help push my professional career to the next level, and will remain as valuable asset for the rest of my life.

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