AN EMPIRICAL STUDY OF CONSUMERS INCLINATION FACTORS TO PURCHASE SOLAR ENERGY PRODUCTS - MODERATING ROLE OF SOCIAL MEDIA

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ABSTRACT

The present research focus to determine those elements that affect the intention of buy solar energy items in India in Urban or Metro cities, this is very important for government to promote and motivate to customer to use or adopt green energy which save environment and low dependency on natural resources. Multiple linear regressions were accustomed to analyses quantitative data gathered via an online questionnaire survey. From a convenient sample of household heads, a total of 222 valid responses were collected. This study defines the relationship between consumer mindset and purchase intention is affected by several factors, such as performance expectations, price, and government facilities and perceived behavior control. This study also discusses how social media has affected customer attitude and how people see government services and subsidies in term of facilities. The findings offer empirical proof of key elements that can promote the uptake of solar energy solutions in metro cities in India. This is also identifying the role of social media when government directly or indirectly boosts the solar programme in urban or rural areas.

Keywords: Solar Energy, Customer purchase intention, Social media, Theory of planned Behavior

INTRODUCTION

Individuals possess revered the Sun serving as the origin of all life on Earth since the beginning of time. The industrial eras educated us about the power of sunshine. Solar energy has a great deal of potential in India. Nearly 5,000 trillion kWh are produced annually across The geographical area of India, where most locations get 4–7 kWh per square kilometer/m each day (thesolarlabs, 2022). Effective photovoltaic solar power exploitation enables enormous scalability in India. Moreover, solar energy enables distributed power generation and quick capacity expansion. Decentralized, low-temperature, and off-grid applications can help to satisfy additional energy needs for electricity in both rural and urban places, which will benefit rural electrification (thesolarlabs, 2022). Because it is so widely available, solar energy is the energy source with the highest reliability. In theory, a small fraction of the total solar energy generated —if efficiently captured—could supply all of the nation's energy requirements.

Energy represents an essential player in the development of society and economy since it contributes significantly to a level of life and technical advancement (Katuwal H. Bohara A., 2009). The Sustainable Development Goal (SDG) still depends on attaining dependable and cheap energy use, much as the Millennium Development Goals (MDGs) were intrinsically linked to energy use. [IEA, World Energy Outlook, Paris, France, 2002; P. Mulder and J. Tembe, 2008; Development and Climate Change, World Development Report 2010, Washington, DC, USA, 2010].

The World Bank Group is also planning a number of initiatives in India. Creating solar parks, promoting creative ways to produce and store solar energy, and supporting solar mini-grids are a few of these. With the Bank's support, more private financing will be available, new technologies will be introduced, the capacity for solar rooftop units will be increased, and it will be possible to construct a network of shared infrastructure to support independently built solar parks all throughout India.

India wants to generate by 2030, the goal is to achieve a renewable energy capacity of 175 GW, which consists of 100 GW from solar sources, 60 GW from wind, 10 GW from bio-power, and 5 GW from small hydropower. India now consumes energy at the fourth-highest rate, behind the United States, China, and Russia. This is in accordance with its commitment to the Paris Climate Agreement (Ministry of New and Renewable Energy, 2017). The Ministry of New and Renewable Energy (MNRE) of the Government of India is executing the Remote Village Electrification Plan (RVEP) in all the states.

It's critical to comprehend the numerous elements that influence a solar buyer's desire to buy. Knowing the same will enable suitable legislation, marketing initiatives, and measures aimed at boosting consumer confidence, resulting in more rapid,

efficient, and effective adoption of solar energy. The following goals are the focus of this research within the framework of the problem statement:

• To explore the effects of numerous determinants on customers' buying intentions for solar energy products and to analyze and comprehend the many elements influencing those intentions.

In order to evaluate the behavioural models examined with regard to solar technologies, particularly RT solar, this research reviews the relevant literature. After that, it constructs a conceptual research framework or model for the investigation. Data collected during fieldwork in Lucknow, Greater Noida, Delhi, and Bangalore were submitted to factoranalyse and a multiple regression examination in order to draw conclusions through Smart Pls software and SPSS software.

LITERATURE REVIEW
TPB and Purchase Intention
The acceptance or rejection of consumers, which is determined by purchase intentions, will have a significant impact on the success of different product categories or services related to renewable energy. An individual's intention could be defined as a strategy, commitment, or decision to engage in a specific action or accomplish a specific objective (Masukujjaman et. al., 2021). Ajzen's TPB states that a person's intention plays a significant impact in engaging in a specific behaviour. Consumer purchase intention is the willingness of a person to purchase a specific good after taking into account a number of factors. (Ajzen, 2011).

TPB has been used to date to forecast the intention of consumers and behaviour across a broad spectrum of industries, comprising energy saving, green hotels, and electric automobiles (Wang, S.Y. et al., 2016), among others (Macovei, 2015). TPB was also thought to be a very effective paradigm for elucidating environmentally friendly behaviour or ecologically sustainable goods (Bamberg, 2003). (Kumar, B. et. al., 2017). For example, Maichum, Parichatnon, and Peng (Maichum, K., et al., 2017) examined Thai consumers' purchase intentions for solar items and confirmed this attitude, subjective norm, and perceived behavioural had control substantial favourable effects on such intentions.

It has also been found that a person's intention is influenced by their attitude to use solar energy. The degree to which a person views or evaluates the activity in question in a favourable manner or negatively is termed their attitude (Ajzen, 1991). According to several studies (Abreu et al., 2019; Jabeen et al. (2019); Kim et al., 2014; Korcaj et al., 2015; Lundheim et al. (2021); Perri et al., 2020; Ru et al., 2018), attitudes frequently predict whether or not individuals would utilize solar power systems.. The significance of attitude in the willingness to adopt renewable energy technology appears to have received significant validation from the body of existing literature. Hence, given its significance, attitude still merits investigation as a key predictor of behavioural intention.

Ajzen (1970, 1985, 1991 and 2008) defines PBC as the sense of control a person has over circumstances that could otherwise inhibit them from performing a behavior. It is crucial for behavior prediction, founded on the premise that the more control individuals have over elements that might otherwise hinder them from doing so, the greater their likelihood of engaging in a certain behavior in the future. Some studies indicate that PBC has a strong effect on Zambian families' intention to adopt solar energy solutions (Jabeen et al., 2019; Lundheim et al. (2021); Perriet al., 2020; According to Ru et al. (2018) and Lundheim et al. (2021), PBC was found to significantly influence individuals' intentions to adopt solar energy solutions.

According to Huang et al. (2020), who conducted the study in which PBC was extremely likely to be low, PBC had no impact on solar energy usage. Groups with low levels of PBC may exhibit little to no influence on behavioral intention, while those with high levels of PBC may demonstrate a strong behavioral intention. The results of Ru et al. appear to back this assertion (2018). Abreu et al. (2019) demonstrated that, in a demographic sample from America where PBC was expected to be high, PBC did not affect the intention to adopt solar products, thereby refuting this claim.

The assertion that the degree of PBC might be the reason for differing findings about its effect on the intention to adopt solar energy solutions only partly accounts for the still-unclear results. This study contributed to assessing the potential impact of PBC on the intention to adopt solar energy solutions in a country where PBC is expected to be low.

(H1): Customer attitude toward purchasing solar products exerts a beneficial influence on buying intention.

(H2): Perceived behavioral control exerts a beneficial influence on buying intention of solar products.

Incorporation of Additional Constructs into the TPB
Performance Expectancy is defined as a person's beliefs in the advantages of using a specific technology towards their work performance. Performance Expectancy (PE) and Purchase Intention (Venkates, V., et. al., 2003). Performance expectancy in this study relates to the conviction that rooftop solar energy will benefit normal life. Moreover, comparable research demonstrated that PE positively affects purchasing intention (Aggarwal, A.K., et. al., 2019). The PE is a metric concerning the beliefs families hold regarding the use and safety of rooftop solar, as indicated by various studies. A multitude of studies have exceptionally demonstrated the contribution of PE to behavioural intention. When PE is promoted as the most effective tool for gaining user acceptance, behavioural studies are seen to bear the imprint of PE even more strongly; this

idea has been supported by multiple studies. The PE definition and four questions from are used in the current study to measure PE. Thus, the following hypothesis is made:

H3: Customer attitudes towards the utilization of solar energy have a considerable positive association with performance expectations.

Price and purchase intention-

The price idea takes into account a trade-off between the expenses and benefits of using a particular technology (Dodds, W.B. et. al., 1991). According to (Venkates, V. et al., 2012), the pricing value exhibits a favorable effect when the advantages of employing technology outweigh the associated costs. The following hypothesis was therefore put forth:

H4. Customer attitudes towards solar energy consumption have a considerable positive association with price range (PR).

Government facilities and purchase intention-

Several researches indicate that governmental assistance programmes play a significant role in the markets for solar PV systems. Solar roof top system installation is hampered by high costs, hence capital incentives with lower investment costs are strongly preferred. One of the main forces behind the global adoption of solar PV systems is subsidies and incentives. Financial incentives, government-sponsored programs, and lower investment costs are key drivers of the embrace of solar energy systems.

For example, the Sustainable Rooftop Implementation for Solar Transfiguration of India (SRISTI) scheme 2017, Pradhan Mantri Sahaj Bijli har Ghar (PM-SAUBHAGVA) Yojna 2017, Kisan Urja Suraksha Evam Utthaan Mahabhiyan (KUSUM) yojna 2018, Sun One World One Grid' (OSOWOG) plan 2020, and other schemes such as Several schemes namely (i) Defence strategy (ii) scheme (iii) of Central Public Sector Undertakings (CPSUs) Bundling scheme (iv) Canal bank/ Canal top scheme (v) VGF Scheme (vi) Solar park project (vii) Solar rooftops, have been initiated/launched by the Ministry under NSM are under implementation (Anupama Khare Saxena, et.al. ,2020).

Rai and Mc Andrews discovered that during the past several years, the adoption of roof top solar technology has rapidly increased in the residential sector in numerous states in India as a result of a combination of alluring government and state level financial incentives. In most research, rooftop PV government incentives are discussed in terms of energy policy. In contrast, from the perspective of customer behaviour research, this study interested in how customers evaluate government benefits.

The TPB by Ajzen11 suggests that a person's attitudes toward behavior, subjective norms, and perceived behavioral control influence their behavioral intentions. In other words, behavioural intention is directly influenced by perceived behaviour control rather than attitude. Beliefs on the existence of requisite resources and chances to participate in a specific behaviour are referred to as perceived behaviour control. This study explain government benefits as perceived behaviour control, which affects a customer's behaviour intention (in this case, the intention to install rooftop PV) directly and not through attitudes. Benefits from the government provide financial assistance and motivate consumers to install rooftop PV. As a result, the following hypothesis is presented.

H5: The government's benefits will positively influence the customer attitude regarding solar energy.

MODERATING ROLE OF SOCIAL MEDIA-

The research employs social media as a moderating variable to enhance understanding of and improve the relationship between pro-environmental behaviour and other elements, such as the consumer's personal responsibility to the environment (Jaini, A,et. al. ,2019).

Media organizations are crucial in supplying the public with appropriate and correct information to raise awareness of their shared environmental issues (Yu, T.Y.; Yu, T.K.; Chao, 2017. Social media is increasingly being used as a means of communication, interest expression, and information gathering. People from all around the world can communicate with one another and learn where and what is happening. The widespread use of social media affects consumer behaviour in addition to individual interests (Wang, T., 2017). Others are influenced to behave similarly by the social justifications for green consumption behaviour put forward by social organizations. Using social media, the general public can easily observe the consequences of environmentally friendly behaviour, inspiring others to take part in environmental initiatives.

Additionally, it has been discovered that social media can enhance self-efficacy and comparison psychology, and that these qualities eventually help to promote pro-environmental behaviour (Grevet, C.; Mankoff, J, 2020) (van Leeuwen, E.; Täuber, S., 2011)(Xu, J.; Han, R, 2019). It was discovered that media outlets directly affect how consumers feel and act about several environmental challenges, including greenhouse gases, energy difficulties, and environmental deterioration (Muralidharan, S., 2016). The effectiveness of digital media in implementing environmental reforms or safeguarding the environment activities or policies remain being studied (Senbel, M, et. al., 2014) (Grainger, M.J.; Stewart, G.B, 2017) (Young, C.W. et .al. 2017), despite the fact that it is quickly becoming a very popular and remarkable medium for

immediate actions or motions. Electronic word of mouth (e-WOM) has recently been proven to have a moderating effect on pro-environmental conduct, as per a study (Jaini, A,et. al. ,2019). As a result of the debate above, it may be assumed that:
H6: Social media influences the interaction between government facilities and consumer attitudes towards solar energy in a favorable way.

METHODOLOGY
Because the aim of the study is to assess a pretesting theory, the study used a quantitative research approach. Customers that like solar energy and are considering buying solar energy equipment like solar panels filled out a customized version of the questionnaire.

Data collection and Sampling
The main goal of this study was to determine the direct and indirect impacts of social media marketing on customers' decisions to buy solar energy. Household consumers and potential customers in the cities of Delhi, Greater Noida, and Lucknow make up the study's population, but its target demographic also includes business people, students, and salaried individuals, among others. The intention is to specifically target consumers who reside in Indian cities where power usage is higher than in other Indian cities.
In order to acquire data from those people who are most suitable for the study, a convenience sampling method of non-probability was chosen as the strategy for the current investigation.
Using the Krejcie and Morgan sample method, a sample dimension of 277 was determined, at a confidence level and error assumption of 95% and 5%, respectively. Finally, 222 full replies were used for the study. Also, the agreement from the research participants was secured prior to the initiation of the data collection process, the data for this paper were collected in accordance with ethical principles and norms.

MEASUREMENT
The construct measurement items used in the questionnaire that was created for data collection were modified from earlier studies. Seven Likert scales taken from previously published research studies are used to examine the variables.

Methods for analyzing data
Just 277 participants filled out and returned the questionnaire, as was discussed in the section above. It was discovered that 222 of these were valid responses that could be used for data analysis. Before beginning the real data analysis, the acquired data were first coded and inspected to find any missing values, and then those values were replaced. Smart PLS software was used in this investigation to estimate the measurement and structural models. In particular, the measurement model was applied to validate the scales' accuracy and reliability. To calculate reliability, Cronbach's alpha and composite reliability were employed, while convergent and discriminant validity methods were applied to evaluate the instrument's validity. Once acceptable values were reached, the final structural model was produced to confirm the projected hypotheses.

ANALYSIS OF RESULTS
222 valid responses from the participants in this study were collected and considered appropriate for data analysis. Males make up 61 percent of them, while females make up 39 percent, according to the demographic data. Regarding age distribution, the data showed that 36.2 percent of people were under the age of 25, 40.1 percent were in the 26–35 year age range, 24.4% belonged to the 36–46 age group, while only 2.3% were above 46. Moreover, based on the demographic information, 23.7% of the survey participants held a graduate or postgraduate degree, 7.6% had a diploma background, and 67.9% had a bachelor's degree. Last but not least, the statistical analysis of the answers revealed that every single one of them uses solar panels for household energy and has some knowledge of solar energy. They employ various electric consumption units up to and including 300. Most responders have monthly incomes between 40,000 and 50,000 rupees.
Under the study of Factor analysis, each variable value study base on KMO and Bartlett's test which benchmark is above 0.60 and here the value is 0.890 which define all variables under the study were excellent and valid. The principal component analysis showed that factor loadings across all items likewise went beyond the necessary worth of 0.5, and all diagonal components of the matrix for all variables under consideration were discovered to be more than 0.5.
Table 1 show number of factors like customer attitude, Government facilities, performance expectancy, purchase intention and price etc. with outer loading

Construct	Item	AT	GF	PBC	PE	PI	PR	SM	SM x GF
Attitude (AT)	**AT1**	0.992							
	AT2	0.981							
	AT3	0.992							
Government Facility(GF)	**GF1**		0.938						
	GF2		0.954						
	GF3		0.930						
	GF4		0.940						
Perceived Behavior control (PBC)	**PBC1**			0.921					
	PBC2			0.918					
	PBC3			0.887					
Performance Expectancy (PE)	**PE1**				0.946				
	PE2				0.961				
	PE3				0.875				
	PE4				0.974				
Purchase Intention (PI)	**PI1**					0.878			
	PI2					0.845			
	PI3					0.862			
	PI4					0.932			
Price (PR)	**PR1**						0.861		
	PR2						0.895		
	PR3						0.859		
	PR4						0.896		
Social Media (SM)	**SM1**							0.912	
	SM2							0.963	
	SM3							0.946	
Social media * Government Facilities	**SM x GF**								1

Table 1: Factor analysis: Outer loading of variables

Reliability and validity analysis
As shown in Table 2, the reliability coefficients for the scale items are presented. All variables have Cronbach's coefficients that are considerably above the 0.7 threshold. Pearson's correlation coefficient is used to calculate the degree of correlation between the variables. The correlation coefficient value, significance level, and Discriminant validity are presented in Table 3. The constructs of intention to purchase, customer attitude, government facility, perceived behavior control, price and social media all show strong positive connections and reliable for model.

The discriminant and convergent validity were utilized to ascertain the measurement model's validity (Hair et al. 2014a, 2014b). Convergence validity was assessed using the composite reliability (CR) and the extracted average variance (AVE). This illustrates the connection between the objects (Erkan and Evans 2016; Fornell and Larcker 1981). All measures' factor loadings and all variables' CR exceeded the recommended threshold values of 0.50 (Hair et al. 2014b; Quoquab et al. 2017). Every AVE exceeding 0.5 meets the Average Variance Extracted (AVE) of the latent variable (Kaffashi and Shamsudin Mad, 2019).

	Cronbach 's Alpha	Composite reliability(rho_a)	Composite reliability(rho_c)	Average variance extracted (AVE)
Attitude (AT)	0.988	0.988	0.992	0.977
Government Facility (GF)	0.956	0.957	0.968	0.884
Perceived Behavior Control (PBC)	0.895	0.897	0.934	0.826
Performance Expectance (PE)	0.956	0.965	0.968	0.883
Acquisition Intention (AI)	0.902	0.909	0.932	0.774
Price (PR)	0.901	0.91	0.931	0.771

Social Media (SM)	0.934	0.934	0.958	0.884

Table 2: Reliability and validity analysis

	AT	GF	PBC	PE	PI	PR	SM	SM x GF
AT	0.988							
GF	0.822	0.940						
PBC	0.744	0.731	0.909					
PE	0.912	0.789	0.724	0.940				
PI	0.851	0.776	0.766	0.825	0.880			
PR	0.901	0.776	0.717	0.867	0.817	0.878		
SM	0.693	0.770	0.726	0.702	0.700	0.679	0.940	
SM x GF	-0.893	-0.772	-0.691	-0.821	-0.811	-0.828	-0.699	

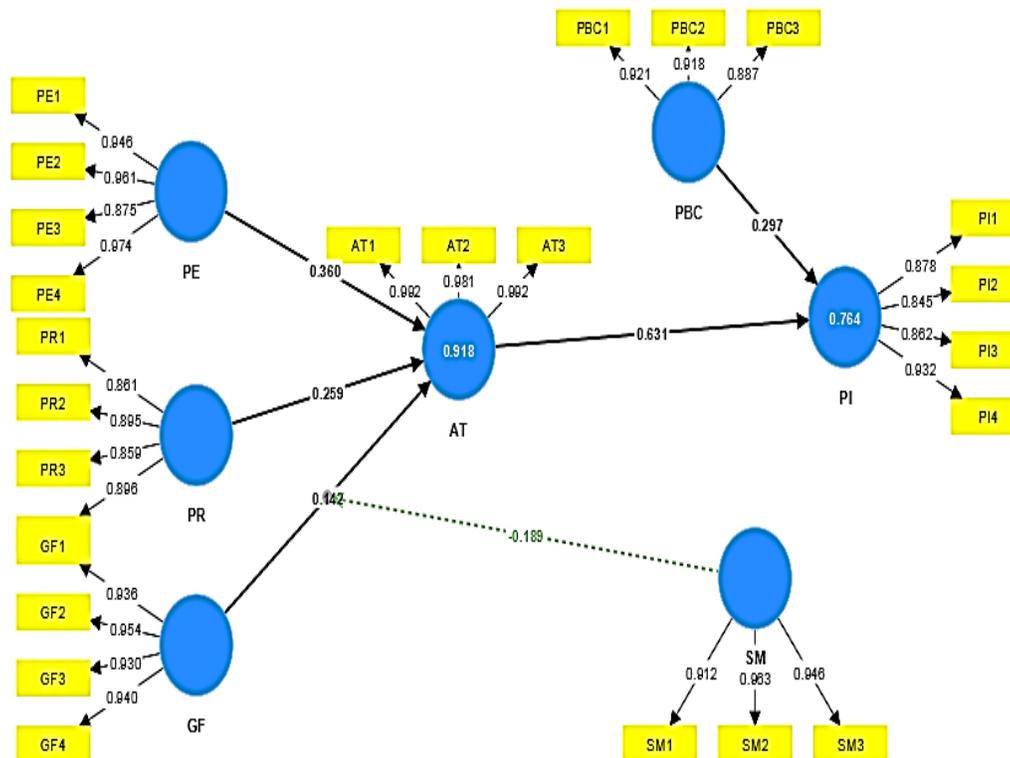**Table 3: Discriminant analysis**

Fig1: Model analysis

Model 1- this model justify the impact of independent variable like performance expectancy of solar panels (PE1,2,3), PR(PR1, 2,3,4), Government facilities or subsidy(GF1,2,3,4), customer attitude regarding products (AT 1,2,3) perceived behavior control(PBC1,2,3), Social media (SM1, 2, 3) fully impact on customer Purchase intention (PI 1,2,3,4), It define with P values, outer loading value and R^2 value . This model define the Performance expectancy, Price and government facility directly impact customer attitude regarding solar products, it also define the role social media when government already provide number of facilities in solar products. Perceived behavior control and attitude directly impact of customer purchase intention. This model also discuss number of indirect effects of these variables in customer purchase intention. So Hypothesis H1 which indicate the positive influence of customer attitude towards solar energy purchase intention, H2 indicate positive influence of perceived behavior control towards purchase intention, H3 indicate positive influence of perceived benefits towards customer attitude regarding solar energy, H4 indicate positive influence of price towards

customer attitude, H5 indicate positive influence government facility to customer attitude and H6 indicate moderate role of social media to aware about government facility to make customer attitude for solar energy. These all are hypothesis accept and support to this model.

Apart from the hypothesis some other direct and indirect effect show table 4 and 6. This indicate the role of government facility which did not directly affect the customer attitude and customer purchase intention due to some reason but when social media include between these two factors it directly impact to customer attitude and purchase intention regarding solar panels. This is also indicating the importance of social media and customer knowledge regarding solar products which directly depend on social media.
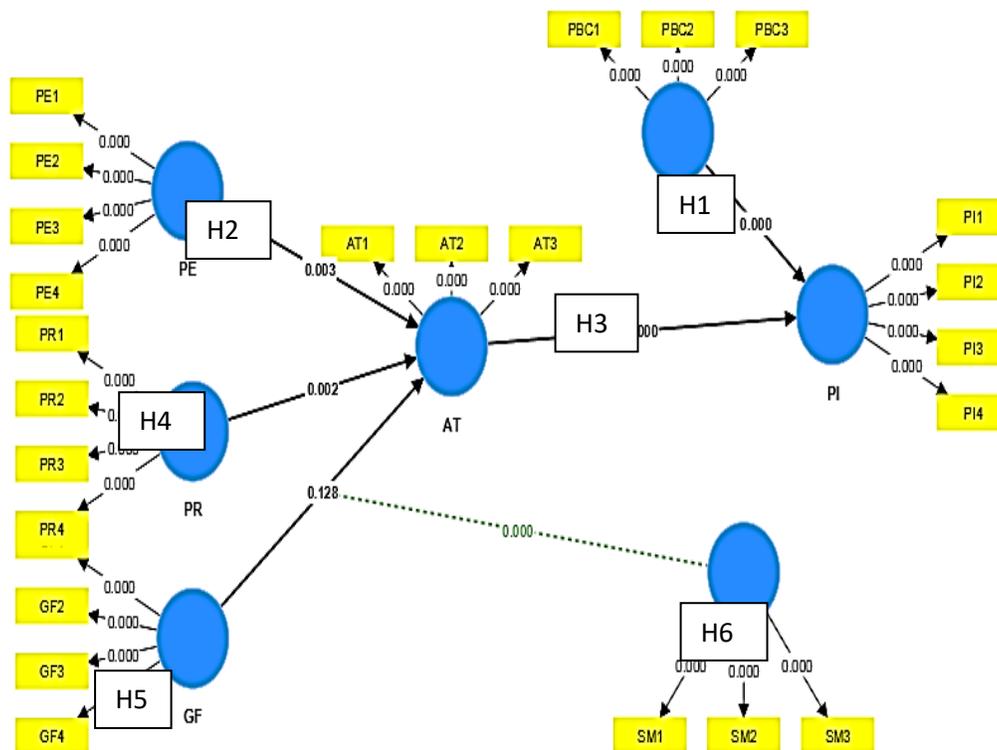
Fig 2: P-value analysis
This analysis also indicate the role of government here , people always concern that which type of plans and facilities government make for the customer when they purchase solar products and mostly customers gain this type of information through social media. So importance of government and social media both are define in this analysis.

Hypothesis	Variable	original sample (O)	Sample means (M)	Standard Deviation (STDEV)	T statistics (O/STDEV)	P values	Result
H1	AT>PI	0.631	0.627	0.09	7.023	0.0000	Support
H5	GF>AT	0.142	0.121	0.093	1.521	0.1280	Reject
	GF>PI	0.09	0.075	0.059	1.529	0.1260	Reject
H2	PBC>PI	0.297	0.298	0.08	3.690	0.0000	Support
H3	PE>AT	0.36	0.369	0.121	2.973	0.0030	Support
	PE>PI	0.277	0.23	0.078	2.90	0.0040	Support
H4	PR>AT	0.259	0.255	0.084	3.07	0.0020	Support
	PR>PI	0.163	0.16	0.059	2.772	0.0060	Support
	SM>AT	-0.071	-0.058	0.065	1.079	0.2810	Reject
	SM>PI	-0.045	-0.034	0.04	1.122	0.2620	Reject
	SMXGF>AT	-0.189	-0.189	0.052	3.607	0.0000	Support
H6	SMXGF>PI	-0.119	-0.119	0.038	3.121	0.0020	Support

Table 4: Direct Effect Result analysis (Variable impact to customer purchase intention and attitude)
This table illustrates the direct influence of all variables on consumer perceptions of and intentions for purchasing solar energy. Here, red color P values indicate rejection of the hypothesis that government facilities directly do not affect consumer attitudes and purchase intentions in urban areas for a variety of reasons, just as social media promotion of solar energy does not directly affect consumer attitudes and purchase intentions. Green color P values define the support of all the hypotheses that we define in the literature review.

R Squared Value
R square (R^2) quantifies the extent to which the variable impacting it can explain the variation in the value of the affected variable. When a study includes more than two independent variables, the adjusted R square (adjusted R^2) is used. The adjusted r square value is consistently lower than that of the r square. Here R square of both factors customer attitude (AT) and Customer Purchase intention (PI) represent substance of model is strong.

	R-square	R-square adjusted
AT	0.918	0.914
PI	0.764	0.759

Table 5: R square analysis
Model validity
This table7 the statistical measure of the model fit, represented mathematically in the research, is the SRMR value of 0.54 and the NFI value of 0.905, which confirm that the aforementioned model fits well. (Pineda et al., 2021).

Parameter	Fit recommendation	Model with estimates reached
SRMR	<0.080	0.54
NFI	>0.90	0.90
RMS Theta	<0.12	0.09

Table 7: Model fit table

Variable	original sample(O)	Sample means(M)	Standard Deviation (STDEV)	T statistics(O/STDEV)	P values	Result
SMXGF>AT>PI	-0.119	-0.119	0.038	3.121	0.0020	Support
GF>AT>PI	0.09	0.075	0.059	1.529	0.126	Reject
PE>AT>PI	0.227	0.23	0.078	2.9	0.0040	Support
PR>AT>PI	0.163	0.16	0.059	2.772	0.0060	Support
SM>AT>PI	-0.045	-0.034	0.04	1.122	0.2620	Reject

Table 6: Indirect effect analysis
This table also explains how social media works with government institutions and how that connects with consumer attitudes and solar product purchasing intentions. This outcome also demonstrates that without the involvement of the government, social media has no influence on consumer purchase intentions; this may be due to consumer distrust or the high cost of solar items.

CONCLUSION AND SUGGESTIONS
This paper's main objective is to identify the factors that have a direct influence on Indian urban consumers' purchase decision solar panels. The connection between consumer the attitude and intention to purchase are affected by various factors, such as performance expectations, customer attitudes, price, and government facilities. This paper also discusses how social media has affected customer attitude and how people see government services and subsidies in term of facilities. The characteristics were evaluated on their behalf importance when it comes to forecasting the desire to purchase solar power products by means of multiple linear regression analysis. The study also makes comments on several results that seem to be contradictory.

The strongest factor influencing a person's decision to accept solar energy solutions was their attitude about those options. Therefore, customers are more likely to have adoption intentions when they have a good attitude about solar energy alternatives. This agrees with the TPB and numerous other research (Abreu et al., 2019; Jabeen et al., 2019; Kim et al., 2014; Korcaj et al., 2015; Lundheim et al., 2021; Perri et al., 2020; Ru et al., 2018).

According to the study, in India, attitudes regarding solar energy products are the most significant predictors of the desire to accept or purchase solar panels, and this predictor has been influenced by the cost, availability of public infrastructure, and expected performance of solar panels. Customers frequently inquire about government subsidies, discounts, and government loans when using public services, and this is a key indicator of their attitudes.

Because solar energy base equipment is so expensive in India due to technology, production, and other factors, it is difficult for Indian customers to accept and use solar products directly. Price is another factor that directly influences customer attitude.

Another important factor that directly affects customer expectations of solar panels is performance expectancy. This factor also depends on how much the customer knows about solar products, how to use them, and how long they last. Without technical expertise and post-sale services, the customer cannot predict or expect the performance of solar products. Due to government interference, many businesses offer a number of years of warranties on their solar products, but customers are hesitant or do not put their trust in these products. Therefore, it is imperative that businesses and the government provide all pertinent information about solar energy so that consumers will put their trust in these products. Therefore, if solar energy adoption solutions are for increase, more focus should be placed on changing people's attitudes regarding solar energy options. In positioned to concentrate on the significance of benefits and trust on the desire to purchase solar panels, it is also important to use powerful individuals in society while marketing solar energy solutions.

The study also explains the social media's moderating role in influencing consumer attitudes. Social media always highlights the level of government support and the types of benefits offered for the installation of solar energy equipment, but their marketing never increases consumer trust or awareness of solar energy's advantages. Therefore, the business and government must work to increase awareness and confidence in solar products. This report also explains why it is impossible to change consumers' attitudes toward green energy without the usage of social media.

PBC possesses a negligible influence on consumer plans to purchase solar products. This indicates that individuals' intentions are influenced by the degree of control they believe they have over real or imagined barriers to buying solar items. The finding does not seem to support the claim that people with poor PBC will have low buying intentions.

Government agencies responsible with promoting solar energy adoption as well as business organizations and groups involved in providing solar energy solutions can start these initiatives. Due to the fact that most SSA nations and developing nations in general frequently experience very similar conditions, such as acute power shortages that result in load-shedding, these solutions are applicable to the majority of developing nations.

LIMITATION OF STUDY

The results are nevertheless with some restrictions. The study simply collected data from those
persons who had access to email or mobile devices, which is the most significant factor. The
results are consequently somewhat biassed in favour of more wealthy people in a nation that is otherwise low income.
Moreover, the results lack external validity and might not be generalizable to India's bigger population. So, it is advised to u
se caution when following the directions. Future research can focus on finding the underlying causes of the inconsistencies between the results in the published literature
such as the impact of cost and the goal of using solar energy in government buildings, in addition
to eliminating the restrictions.

REFERENCES
1. Aggarwal, A.K.; Syed, A.A.; Garg, S. Factors Driving Indian Consumer's Purchase Intention of Roof Top Solar. Int. J. Energy Sect. Manag. 2019, 13, 539–555
2. Ajzen, I. From intentions to actions: A theory of planned behavior. In Action Control; Springer: Berlin/Heidelberg, Germany, 1985; pp. 11–39
3. Bamberg, S. How does environmental concern influence specific environmentally related behaviors? A new answer to an old question. J. Environ. Psychol. 2003, 23, 21–32.

4. Dodds, W.B.; Monroe, K.B.; Grewal, D. Effects of Price, Brand, and Store Information on Buyers' Product Evaluations. J. Mark Res. 1991, 28, 307–319.

5. Grainger, M.J.; Stewart, G.B. The jury is still out on social media as a tool for reducing food waste a response to Young et al. (2017). Resour. Conserv. Recycl. 2017, 122, 407–410.

6. Gerpott, T.J.; Paukert, M. Determinants of willingness to pay for smart meters: An empirical analysis of household customers in Germany. Energy Policy 2013, 61, 483–495.

7. Grevet, C.; Mankoff, J. Motivating Sustainable Behavior through Social Comparison on Online Social Visualization. Available

8. Jaini, A.; Quoquab, F.; Mohammad, J.; Hussin, N. 'I buy green products, do you…?': The moderating effect of eWOM on green purchase behavior in Malaysian cosmetics industry. Int. J. Pharm. Healthc. Mark. 2019.

9. Kumar, B.; Manrai, A.K.; Manrai, L.A. Purchasing behaviour for environmentally sustainable products: A conceptual framework and empirical study. J. Retail. Consum. Serv. 2017, 34, 1–9.

10. Macovei, O.-I. Applying the theory of planned behavior in predicting pro-environmental behaviour: The case of energy conservation. Int. J. Approx. Reason. 2015, 54, 701–716.

11. Maichum, Parichatnon, and Peng [Maichum, K.; Parichatnon, S.; Peng, K.-C. Application of the extended theory of planned behavior model to investigate purchase intention of green products among thai consumers. Sustainability 2016, 8, 1077.

12. Muralidharan, S.; Rejón-Guardia, F.; Xue, F. Understanding the green buying behavior of younger Millennials from India and the United States: A structural equation modeling approach. J. Int. Consum. Mark. 2016, 28, 54–72

13. Ringle, C. M., Wende, S., and Becker, J.-M. 2022. "SmartPLS 4." Oststeinbek: SmartPLS GmbH, http://www.smartpls.com.

14. Senbel, M.; Ngo, V.D.; Blair, E. Social mobilization of climate change: University students conserving energy through multiple pathways for peer engagement. J. Environ. Psychol. 2014, 38, 84–93.

15. The Remote Village Electrification Programme in India: Assessment of Experience in Assam, Jharkhand and Meghalaya,, National Council of Applied Economic Research, A project report submitted to Ministry of New and Renewable Energy, 2008.

16. The Remote Village Electrification Programme in India: Assessment of Experience in Odisha, Madhya Pradesh and Chhattisgarh, National Council of Applied Economic Research, A project report submitted to Ministry of New and Renewable Energy, 2010.

17. Venkates, V.; Morris, M.G.; Davis, G.B.; Davis, F.D. User Acceptance of Information Technology: Toward A Unified View. MIS Q. 2003, 27, 425–478

18. Venkates, V.; Thong, J.Y.L.; Xin, X. Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. MIS Q. 2012, 36, 157–178.

19. Wang, S.Y.; Fan, J.; Zhao, D.T.; Yang, S.; Fu, Y.G. Predicting consumers' intention to adopt hybrid electric vehicles: Using an extended version of the theory of planned behavior model. Transportation 2016, 43, 123–143

20. Wang, T. Social identity dimensions and consumer behavior in social media. Asia Pacific Manag. Rev. 2017, 22, 45–51.

21. Yu, T.Y.; Yu, T.K.; Chao, C.M. Understanding Taiwanese undergraduate students' pro-environmental behavioral intention towards green products in the fight against climate change. J. Clean. Prod. 2017, 161, 390–402.

22. Van Leeuwen, E.; Täuber, S. Demonstrating knowledge: The effects of group status on outgroup helping. J. Exp. Soc. Psychol. 2011, 47, 147–156.

23. Xu, J.; Han, R. The influence of place attachment on pro-environmental behaviors: The moderating effect of social media. Int. J. Environ. Res. Public Health 2019, 16, 24.

24. Young, C.W.; Russell, S.V.; Barkemeyer, R. Social media is not the 'silver bullet' to reducing household food waste, a response to Grainger and Stewart (2017). Resour. Conserv. Recycl. 2017, 122, 405–406.