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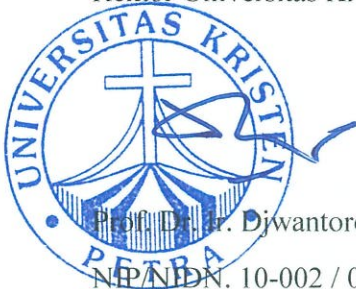
Nama : Ruth Srininta Tarigan, S.Kom., MBA.
NIP/NIDN : 15-018 / 0702118502
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Bersama dengan surat ini saya menyatakan bahwa materi dari karya ilmiah yang berjudul "*Examining Indonesian Consumer Willingness to Adopt Solar PV: The Effect of Green Consumption, Price value, Social Influence, and Facilitating Conditions*" adalah karya asli saya yang ditulis berdasarkan hasil penelitian yang telah dilakukan oleh saya dan tim. Skor kesamaan lebih dari 3% yang terdeteksi oleh perangkat lunak plagiarisme *Turnitin* disebabkan oleh kutipan beberapa variable, dan juga objek yang sama, yakni Solar PV (Photovoltaic). Namun masih ada kebaruan yakni *green consumption value*, yang belum pernah dibahas dalam penelitian sebelumnya. Semua sumber telah saya cantumkan dengan benar sesuai dengan pedoman akademik.

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Mengetahui:

Rektor Universitas Kristen Petra,



Prof. Dr. Djwantoro Hardjito, M.Eng.
NIP/NIDN. 10-002 / 0810126001

Yang membuat pernyataan,

Ruth Srininta Tarigan, S.Kom., MBA.
NIP/NIDN. 15-018 / 0702118502

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CONSUMER INTENTIONS AND SOLAR PV: AN ANALYSIS OF GREEN CONSUMPTION, PRICE VALUE, SOCIAL INFLUENCE, AND FACILITATING CONDITIONS IN INDONESIA

Ancilla Mathilda¹ and Gabriella Theodora²

^{1,2}International Business Management Program, School of Business Management, Petra Christian University
Jl. Siwalankerto 121-131, Surabaya

Corresponding author: ¹ancilla.mathilda@gmail.com, ²gabriellatheodorx@gmail.com

ABSTRACT

Extant solar energy research generally investigates the macroeconomic factors behind Indonesia's slow adoption of solar photovoltaic (PV) systems. Meanwhile, this paper focuses on individual consumers' intention to adopt the technology. It investigates whether price value, green consumption value, social influence, and facilitating condition has any impact towards the behavioral intention. Data from a final sample of 210 valid respondents were collected using simple random sampling and analyzed using PLS-SEM. Price value, green consumption value, and facilitating condition significantly and positively affect intention to adopt solar panels, while social influence has an insignificant role to the decision-making process. These findings provide insights that can aid policy initiatives and marketing strategies in promoting renewable energy solutions in Indonesia.

Keywords: Facilitating Condition, Green Consumption Value, Price Value, Social Influence

INTRODUCTION

Following the increasing awareness of global warming, countries all around the world are transitioning from fossil fuels to clean, renewable energy (RE), one of them being solar energy. Indeed, adoption of solar photovoltaic (PV) technologies has observed remarkable progress. For instance, solar capacity in the US has increased by 94.3% since the last decade (Tabassum et al., 2021), while European countries' have installed 41.4GW of solar power capacity or equivalent to electricity for 12.4 million houses in 2022 (SolarPower Europe, 2022).

As a tropical country with high solar radiation, Indonesia presents a large potential for solar panel adoption (Tarigan, 2020). Unfortunately, the industry itself is still at its infancy, having only grown by 6.4% in the last decade (Abdullah et al., 2023). Even when compared to neighboring countries of similar economic and social condition, such as India and Sri Lanka, RE adoption in Indonesia is considered unprogressive (Burke et al., 2019; Sovacool, 2018). This reflected towards the lack of research as well- while numerous studies on green technology have been done in the context of developed nations (Dharshing, 2017; Feldman et al., 2021; Fernández, Payán, & Santos, 2021) research on green purchase intention in Indonesia is still at a nascent stage (IESR, 2022).

Extant solar PV studies in Indonesia generally focus on technical and socio-regulatory factors (Abdullah et al., 2023; Sumarsono, Wahyuni, & Sudhartio, 2022; Xu et al., 2023) or institutions and powerful stakeholders impeding the country's transition from coal to renewable energy (Burke et al., 2019; Setiawati, 2020). These researches highlighted macroeconomic factors slowing down the adoption rate of solar PV, yet there is a gap in research using a microeconomic approach (i.e. examining intention to adopt solar PV among households). In fact, solar panel usage needs to expand to individual household level if Indonesia wishes to grow its meager solar PV adoption rate. By studying factors influencing consumers' intention to adopt solar PV, this paper makes an original contribution to green marketing in Indonesia and addresses the aforementioned research gap.

Ajzen (2005) suggested that three elements shape behavioral intention: personal factors (including values and attitudes which influence the individual's assessment of the behavior), societal influences (arising from expectations within social groups), and control aspects (comprising self-efficacy and external elements that affect the simplicity of executing the behavior). To investigate factors affecting behavioral intention towards solar panels, four factors are chosen: (1)

price value and (2) green consumption value (GCV), to reflect the individual attitude and evaluation of solar panels; (3) social influence, to reflect normative beliefs on solar panel adoption; and (4) facilitating conditions, to reflect the consumer's perceived control over adoption of solar panels.

In the field of consumer behaviour studies, price is an essential component, often seen as a significant aspect of a consumer's perceived value (Parasuraman & Grewal, 2000). On the other hand, studies focusing on eco-friendly products and services typically include environmental concern or consciousness as a precursor to the intention to purchase green products (Risitano, Romano, La Ragione, & Quintano, 2023; Sun, Wang, Huang, & Ho, 2018). Indeed, there is a complex interrelationship between price and environmental values, which shapes an individual's disposition towards green products. For instance, a socio-cultural investigation into frugality and ecological consciousness conducted by Chen, Ren, Gu, and Zhang (2019) discovered that environmental awareness influences an individual's assessment of whether a product's monetary cost is justified. Consequently, while previous research has evaluated these elements individually, our work aims to explore their combined impact specifically within the Indonesian context

This study will also leverage aspects of normative and control belief, specifically focusing on social influence and facilitating condition. The theoretical framework for these two elements was developed by Venkatesh, Morris, Davis, and Davis (2003), who drew upon prior technology acceptance theories by eminent researchers such as Ajzen (1991), Thompson, Higgins, and Howell (1991), and Moore and Benbasat (1991). These two consolidated variables are chosen due to their enhanced predictive capabilities compared to previous models (Rondan-Cataluña, Arenas-Gaitán, & Ramírez-Correa, 2015). Furthermore, Venkatesh, Thong, and Xu (2012) have enriched their paper by introducing a series of measurement items that can assist in forming the research design.

The purpose of this paper is twofold. Academically, this research contributes to extant literature on green behavioral intention, especially in the context of a developing country. Practically, the research aims to highlight the most influential antecedents of green behavioral intention. It will guide both businesses and policymakers in crafting the most appropriate strategies to encourage adoption of solar PV among Indonesian consumers.

In the following sections, this paper will lay out the theoretical background and research hypotheses, research methodology, result and its implications, as well as research limitations and recommendations.

LITERATURE REVIEW

Behavioral intention

Behavioral intention refers to the degree in which a user has made a conscious decision in using a technology (Ajzen, 2005; Venkatesh et al., 2003). The latter researcher has also found that intention is a critical predictor of actual behavior. In the context of solar PV technology, behavioral intention refers to customers' willingness to adopt this alternative energy, which will then lead to the actual purchase and installation of solar panels in their house (Lau et al, 2020).

Generally, "intention to use" and "plan (to use the product) in the future" are identified elements of behavioral intention (Castillo, Cabanillas, & Ramos, 2023; Sun & Wang, 2019). In addition, researchers have also used word-of-mouth (WOM) as an element of behavioral intention (Abu-Taieh et al., 2022; Li, Tse, Zhang, & Phi, 2023; Nguyen & Phan, 2022). Since recommending a product symptomizes a consumer's positive perceived value towards it, positive WOM is found to be closely linked to actual purchase (Abu-Taieh et al., 2022; Anderson, 1988; Nguyen & Phan, 2022). Thus, the present authors define behavioral intention as a person's intention to adopt, future plan to use, and likelihood of recommending solar PV technology.

Price value

According to ⁵ Dodds, Monroe, and Grewal (1991), price value is the ¹⁵ tradeoff between perceived benefits of a product with the perceived cost of using them (Dodds, Monroe, & Grewal, 1991). In the present study, an example of a benefit from using solar energy would be the electricity bill savings, while costs refer to the technology's capital investment and maintenance (Hasheem, Wang, Ye, Farooq, & Shahid, 2020; Schulte, Scheller, Sloot, & Bruckner, 2022). Currently, there are conflicting findings in regards to the role of price value on behavioral intention. For instance, in studies on health or finance related technology acceptance, some found that price value positively impacts intention to use (Barua & Barua, 2023; Kilani, Kakeesh, Al-Weshah, & Al-Debei, 2023) while others found it had no significant influence (Gansser & Reich, 2021; Sebastián, Antonovica, & Guede, 2023).

Currently, there is limited research measuring the consumer's perceived monetary value of green technology. For example, Aggarwal, Syed, and Garg (2019) researched on "price value" and adoption of rooftop solar PV, but their measurement items reflected that they do not adopt Dodds et al (1991) definition on the variable, as they investigated the consumers' opinion on whether "electricity should be affordable" and "economic viability of rooftop solar PV is important". Meanwhile, most research on green technology uses terms such as perceived economical return (Jayaraman, Paramasivan, & Kiumarsi, 2017) and relative advantage (Alam, Ahmad, Othman, Shaari, & Masukujaman, 2021) instead of price value. These variables would measure "environmental performance" and whether "credit/loans are needed", instead of solely focusing on how the individual would 'balance' the perceived benefit and cost of solar PV. Hence, the authors hypothesize the following:

H1. Price value positively impacts consumers' intention to adopt solar PV technology.

Green consumption value

As solar PV is a clean, renewable energy, research on the topic often studies environmental concern as one of its predictor variables. This construct is commonly called "environmental concern" (Chen & Zhang, 2021; Hasheem et al., 2022; Pandey & Yadav, 2023), though there are studies using the term "environmental beliefs" (Aggarwal et al., 2019) and "green concern" (Zhang, Li, Cao, & Huang, 2018). These terms essentially measure the awareness and importance of environmental issues for the consumer.

Conversely, this research will use green consumption value (GCV), which is ¹⁰ the tendency to express the value of environmental protection through one's purchases and consumption behaviors (Haws, Winterich, & Naylor, 2013). GCV not only implores the consumers' environmental concern ¹³g. "I am concerned about wasting the resources of our planet"), but it also measures the extent to which the consumer is willing to carry out environmentally responsible behavior ("I am willing to be inconvenienced in order to take actions that are more environmentally friendly"). Through Haws et al (2013) theoretical and empirical study, it was revealed that the GCV six-item measure significantly predicts consumers' preference for greener products. Henceforth, the authors arrive at the second hypothesis: ¹¹

H2. GCV positively impacts consumers' intention to adopt solar PV technology.

⁶**Social influence**

Social influence is the extent to which consumers perceive important others, such as family and friends, would advocate the use of a certain technology (Venkatesh et al., 2012). Studies in India (Aggarwal et al., 2019) and Kenya (Opiyo, 2019) found that social influence is a significant predictor of behavioral intention: if people within his social circle install a solar panel, the consumer would be more likely to adopt the technology as well. In contrast, research done in Germany and the US found this independent variable to have negligible effect on intention to adopt (Schmitz, Díaz-Martín, & Yagüe Guillén, 2022).

These conflicting findings suggest cross-country differences in levels of collectivism, which would justify the need to replicate this research in Indonesia. To confirm the significance of social ²⁴ influence among Indonesian consumers, the authors hypothesize the following:

H3. Social influence positively impacts consumers' intention to adopt solar PV technology.

Facilitating condition

As seen in the survey items of Venkatesh et al. (2012), facilitating condition was derived from 4 root constructs which were synthesized from previous scholars' theories. Namely, they are: Resource (Ajzen, 1991), Knowledge and skills (Ajzen, 1991), Ability to get support from others (Thompson et al., 1991), and Compatibility of the new technology with existing technology or conditions (Moore & Benbasat, 1991). Studies utilizing one of these root constructs generally show that it positively and significantly impacts behavioral intention. For example, consumers who perceive favorable resource factors (i.e. has time and money to purchase and maintain solar PV) are more willing to shift to solar energy (Akroush, Zuriekat, Al Jabali, & Asfour, 2019; Tanveer, Zeng, Irfan, & Peng, 2021). Highly compatible solar PV technology fits with the consumer's current lifestyle or rooftop condition has also been shown to affect intention (Hasheem et al., 2022; Sun et al., 2018).

In contrast, when these four aspects are measured collectively under the variable facilitating condition, several research shows that facilitating condition plays an insignificant role in behavioral intention (Kilani et al., 2023; Schmitz et al., 2022; Sebastian et al., 2023). Noting this variability, the authors thereby hypothesize the following:

H4. Facilitating conditions positively impacts consumers' intention to adopt solar PV technology.

METHODOLOGY

A cross-sectional research design with a quantitative approach was utilized. Data from the intended participants was gathered through online questionnaires made in Google Form and shared through various social media platforms. This study targeted people who have the following criterias: (1) above 20 years old; (2) living in a house; (3) have graduated middle school; (4) earning above Rp10M monthly. The criterias are set to target people who possess purchasing power for solar PV systems and have a roof onto which installing solar panels is possible. Participants were provided with essential information to assist them in completing the questions, such as average solar panel pricing before answering price value questions. Participants were selected through simple random sampling method. This study requires respondents to answer a 1 (strongly disagree) to 6 (strongly agree) Likert scale, with items seen in Table 1. Note that PV 4 & PV 5 are reversed questions.

Table 1

Operational Definition of the Variables

Behavioral Intention (Alam et al., 2021)

1. I am willing to purchase solar PV technology
2. I plan to purchase solar PV technology in the future
3. I would highly recommend PV Solar technology for other people to use

Green Consumption Value (Risitano et al., 2023)

1. It is important to me that the products I use do not harm the environment
2. I consider the potential environmental impact of my actions when making many of my decisions
3. My purchase habits are affected by my concern for our environment.
4. I am concerned about wasting the resources of our planet
5. I would describe myself as environmentally responsible
6. I am willing to be inconvenienced in order to take actions that are more environmentally friendly

Price Value (Lau et al., 2020)

1. Solar PV system is reasonably priced
2. Solar PV system has good value for money
3. Solar PV system is a good investment for future generations
4. Cost of investment in solar PV is higher than the benefits it can generate
5. Investment in solar PV system is not worth it
6. Solar PV system is less expensive compared to conventional electricity consumption
7. Solar PV system installation should be made cheaper to encourage usage
8. Maintenance of solar PV system is affordable

Social Influence (Aggarwal et al., 2019)

3. I always ask a friend about his/her experience with a new product before I buy it
2. If people around me has a positive experience with solar PV, I will be inclined to buy it as well
3. People who matter to me (friends, families, neighbors) think that I should install solar PV
4. I value the opinions of people who matter to me

Facilitating Condition (Lau et al., 2020)

1. I have the resources (money, time, effort) necessary to use the solar PV system
2. I have the knowledge necessary to support the use of solar PV system
3. I have the knowledge and expertise necessary to maintain the solar PV system
4. I would heavily rely on after-sales service to maintain my solar PV system
5. I think that using solar PV system fits into my living environment
6. I know where to seek assistance if I were to use solar PV system
7. I am given timely assistance If I were to use solar PV system
8. I can get assistance from others when I have difficulties using the solar PV system

This research utilizes a self-administered questionnaire segmented into two primary sections: The first section collects the respondents' profile while the second evaluates each construct using the designated items. The first section was further divided into two parts; filtering questions (age, housing tenure, last education, and monthly income) and introductory (gender and monthly electricity bill). The questionnaire items were primarily taken from validated empirical studies.

The questionnaire was first shared to 10 respondents for piloting, as it is necessary to improve the quality of the main study (Lau et al., 2017). After incorporating feedback from pilot respondents, the real questionnaire was spread. Partial least squares (PLS) structural equation modeling was applied through Smart PLS Version 4 to explore the research hypotheses and the research model. Each construct underwent convergent validity, discriminant validity, and reliability testing. It was further assessed by processing the data through three important steps which are model specification, outer model evaluation, and inner model evaluation (Hair, Hult, and Ringle, 2017). In the structural model, green consumption value, price value, social influence, and facilitating conditions serve as exogenous constructs, while behavioral intention is an endogenous construct.

ANALYSIS AND DISCUSSION

Out of the 247 responses collected, 210 fulfilled the aforementioned criteria and became the final sample size. Table 2 shows the 20 retained items of the final model, which passed the 0.707 cutoff value (Hair et al., 2017) and met the minimum threshold value of 0.500 for the average variance extracted (AVE) (Barclay, Thompson, & Higgins, 1995). There are five items that were excluded from the final model due to insufficient factor loadings: one from social influence (SI 4), three from price value (PV 3, PV 4, PV 5), and one from facilitating conditions (FC 4). Furthermore, composite reliability of each construct exceeded the recommended 0.700 cutoff value, affirming the model's convergent validity.

Table 2
Convergent Validity (n = 210)

Construct	Items	Outer Loadings	Cronbach's Alpha	AVE	rho A	rho C	VIF
Behavioral Intention	BI1	0.868	0.805	0.719	0.808	0.885	1.851
	BI2	0.855					1.872
	BI3	0.820					1.587
Green Consumption Value	GCV1	0.756	0.867	0.600	0.879	0.900	1.974
	GCV2	0.814					2.306
	GCV3	0.840					2.375

	GCV4	0.757					1.907	
	GCV5	0.745					1.751	
	GCV6	0.727					1.514	
7	Price Value	PV1	0.806	0.771	0.518	0.803	0.841	2.176
		PV2	0.828					2.265
		PV6	0.682					1.424
		PV7	0.606					1.403
		PV8	0.651					1.480
	Social Influence	SI1	0.523	0.626	0.560	0.770	0.785	1.146
		SI2	0.786					1.392
		SI3	0.887					1.314
	Facilitating Condition	FC1	0.661	0.898	0.623	0.905	0.920	1.565
		FC2	0.744					2.341
		FC3	0.768					2.482
		FC5	0.786					1.987
		FC6	0.879					3.927
		FC7	0.829					2.755
		FC8	0.838					2.887

Table 3
HTMT Criterion Result

Construct	FC	GCV	BI	PV	SI
FC					
GCV	0.569				
BI	0.890	0.646			
PV	0.732	0.519	0.862		
SI	0.546	0.530	0.621	0.545	

14 Discriminant validity is measured using cross-loadings, Fornell and Larcker criterion, and the Heterotrait-Monotrait (HTMT) criterion. Each item's cross-loadings value was at least 0.100 smaller than its factor loading value. Moreover, this study aligns with Fornell and Larcker (1981) recommendation where the square root of the AVE for each construct should be greater than the correlation values. Table 3 shows that the HTMT for each construct was below the 0.85 (Clark & Watson, 1995; Kline, 2011), confirming discriminant validity.

Based on the findings' structural model, three variables were found to positively and significantly influence Behavioral Intention, namely: Price Value (beta = 0.321, $p < .01$), Green Concern Value

(beta = 0.155, $p < .01$), and Facilitating Condition (beta = 0.436, $p < .01$). However, the direct effects of Social Belief (Beta = 0.77, $p = 0.296$) on Behavioral Intention was not significant. Meanwhile, ANOVA results reveal R^2 of 0.683 and R^2 adjusted of 0.677.

Discussion

Aligned with our first hypothesis, price value positively impacts consumers' intention to adopt solar PV technology. This finding confirms Lau et al. (2020) and Kilani et al. (2023) findings. A report by McKinsey (2022) states that Indonesian consumers are highly price sensitive. This is despite the country's increasing average income levels. Indonesians are known to hunt for bargains and are often influenced by promotional offers. Practically, this also suggests that implementing the right pricing strategies is very important. Promotional pricing or attractive installment schemes could be utilized to increase perceived affordability of solar PV technology.

Next, GCV positively impacts solar PV adoption which supports H2. This finding is aligned with Risitano et al. (2023) and Chatterjee, Sreen, Sadarangani, and Gogoi (2021), which means that consumers with more concern towards the environment are showing more willingness in adopting solar PV. In this case, raising consumers' awareness about the scarcity of non-renewable energy and educating people about the negative impact of using coal to generate electricity will positively influence solar PV adoption rate in Indonesia.

H3 is unsupported as social influence does not significantly affect intention to adopt solar PV technology among Indonesian consumers. This unexpected finding that social influence displays a weak effect in a collectivist country like Indonesia provides intriguing theoretical implications. One plausible explanation is the limited peer adoption in the status quo- Indonesia's solar PV adoption rate has decreased by 78% from 2020 (IESR, 2022). Hence, social influence may be undermined by the uncertainty or skepticism around the technology due to the lack of success stories of household solar PV. Future research could further investigate why social influence did not significantly impact intention by studying people who have adopted solar PV as their sample.

Lastly, results show that facilitating conditions positively impact intention to adopt solar PV, supporting H4. This confirms the results of Akroush et al. (2019), Lau et al. (2020), as well as Tanveer et al. (2021). The result suggests that facilitating conditions like high accessibility to solar PV sellers or getting the support needed when having troubles with the system will highly encourage people to try out solar PV. Sellers of solar PV systems should place importance on highlighting their after-sales services and guarantee. Future research could identify what kind of facilitating condition impacts customers' willingness to adopt solar PV the most.

CONCLUSIONS AND RECOMMENDATIONS

This research is conducted to analyze consumer intention on using solar PV. Four variables, namely green consumption value, price value, social influence, and facilitating conditions, are used as variables impacting intention to purchase solar PV. A total of 210 valid responses are analyzed using PLS-SEM. The finding shows that price value, green consumption and facilitating conditions positively and significantly affect intention to purchase. Social influence, however, does not significantly impact intention to adopt solar PV among Indonesian consumers.

These findings have several managerial implications that can help boost the national adoption rate of solar technology. Offering discounted prices or special offers can make solar technology more affordable and attractive to potential customers. Working in collaboration with government agencies to provide financial incentives, such as tax credits or subsidies, can further reduce the cost of adopting solar technology. Introducing flexible payment options, such as installment plans or subscription models, can make it easier for individuals and businesses to afford and transition to solar technology. In addition to these strategies, raising awareness among the general public is crucial. This can be achieved through effective awareness campaigns and school programs that educate people about the environmental benefits of solar PV and how it works. By increasing

public knowledge and familiarity with solar technology, more individuals will be inclined to consider adopting it.

While this study has shed valuable insights, the authors acknowledge its limitations. First, reliance on self-reported data potentially leads to response bias especially in the case of GCV. Next, the present study has a limited geographic scope focusing on one sole province (i.e East Java), which limits the generalizability of the findings. Future researchers should increase the sample size and replicate the study in other regions of Indonesia, to improve study robustness. Finally, to enrich the literature, comparative studies can be done among different demographic groups, using factors such as age, education, and income as moderating variables.

REFERENCES

- Abdullah, I., Warviyan, D., Safrina, R., Utama, N. A., Tirta, A., Veza, I., & Irianto, I. (2023). Green fiscal stimulus in Indonesia and Vietnam: A reality check of two emerging economies. *Sustainability*, *15*(3), 2174. doi:10.3390/su15032174
- Abu-Taieh, E. M., AlHadid, I., Abu-Tayeh, S., Masa'deh, R., Alkhaldeh, R. S., Khwaldeh, S., & Alrowwad, A. (2022). Continued intention to Use of M-banking in Jordan by Integrating UTAUT, TPB, TAM and Service Quality with ML. *Journal of Open Innovation: Technology, Market, and Complexity*, *8*(3), 120. doi:10.3390/joitmc8030120
- Aggarwal, A. K., Syed, A. A., & Garg, S. (2019). Factors driving Indian consumer's purchase intention of Roof top solar. *International Journal of Energy Sector Management*, *13*(3), 539–555. doi:10.1108/ijesm-07-2018-0012
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211. doi:10.1016/0749-5978(91)90020-t
- Ajzen, I. (2005). *Attitudes, Personality and Behavior* (2nd ed.), Berkshire, UK: Open University Press-McGraw Hill Education.
- Akroush, M. N., Zuriekat, M. I., Al Jabali, H. I., & Asfour, N. A. (2019). Determinants of purchasing intentions of energy-efficient products. *International Journal of Energy Sector Management*, *13*(1), 128–148. doi:10.1108/ijesm-05-2018-0009
- Alam, S. S., Ahmad, M., Othman, A. S., Shaari, Z. B., & Masukujjaman, M. (2021). Factors affecting photovoltaic solar technology usage intention among households in Malaysia: Model Integration and empirical validation. *Sustainability*, *13*(4), 1773. doi:10.3390/su13041773
- Anderson, E. W. (1998). Customer Satisfaction and Word of Mouth. *Journal of Service Research*, *1*(1), 5–17. doi:10.1177/109467059800100102
- Barclay, D., Thompson, R., & Higgins, C. (1995). The Partial Least Squares (PLS) Approach to Causal Modeling: Personal Computer Adoption and Use an Illustration. *Technology Studies*, *2*(2), 285–309.
- Barua, Z., & Barua, A. (2023). Modeling the predictors of mobile health adoption by Rohingya refugees in Bangladesh: An extension of UTAUT2 using combined SEM-neural network approach. *Journal of Migration and Health*, *8*, 100201. doi:10.1016/j.jmh.2023.100201
- Burke, P. J., Widnyana, J., Anjum, Z., Aisbett, E., Resosudarmo, B., & Baldwin, K. G. H. (2019). Overcoming barriers to solar and wind energy adoption in two Asian giants: India and Indonesia. *Energy Policy*, *132*, 1216–1228. doi:10.1016/j.enpol.2019.05.055
- Castillo, E. H., Cabanillas, F. L., & Ramos, Á. V. (2023). Intention to use e-commerce vs physical shopping: difference between consumers in the post-COVID era. *Journal of Business Research*, *157*, 113622. doi:10.1016/j.jbusres.2022.113622
- Chatterjee, S., Sreen, N., Sadarangani, P. H., & Gogoi, B. J. (2021). Impact of Green Consumption Value, and Context-Specific Reasons on Green Purchase Intentions: A Behavioral Reasoning Theory Perspective. *Journal of Global Marketing*, *35*(4), 285–305. doi:10.1080/08911762.2021.1996670
- Chen, K., Ren, C., Gu, R., & Zhang, P. (2019). Exploring purchase intentions of New Energy Vehicles: From the perspective of frugality and the concept of "Mianzi." *Journal of Cleaner Production*, *230*, 700–708. doi:10.1016/j.jclepro.2019.05.135
- Chen, M., & Zhang, W.-H. (2021). Purchase intention for hydrogen automobile among Chinese citizens: The influence of environmental concern and perceived social value. *International Journal of Hydrogen Energy*, *46*(34), 18000–18010. doi:10.1016/j.ijhydene.2020.11.099
- Clark, L. A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment*, *7*(3), 309–319. doi:10.1037/1040-3590.7.3.309

- Dharshing, S. (2017). Household Dynamics of Technology Adoption: A spatial econometric analysis of residential solar photovoltaic (PV) systems in Germany. *Energy Research & Social Science*, 23, 113–124. doi:10.1016/j.erss.2016.10.012
- Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, Brand, and store information on buyers' product evaluations. *Journal of Marketing Research*, 28(3), 307. doi:10.2307/3172866
- Feldman, D., Ramasamy, V., Fu, R., Ramdas, A., Desai, J., & Margolis, R. (2021). Retrieved from <https://www.nrel.gov/docs/fy21osti/77324.pdf>
- Fornell, C., & Larcker, D. F. (1981). Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and statistics. *Journal of Marketing Research*, 18(3), 382. doi:10.2307/3150980
- Gansser, O. A., & Reich, C. S. (2021). A new acceptance model for artificial intelligence with extensions to UTAUT2: An empirical study in three segments of application. *Technology in Society*, 65, 101535. doi:10.1016/j.techsoc.2021.101535
- Goodstats.id. (2023). Retrieved from <https://data.goodstats.id/statistic/adelandilaa/rata-rata-pendapatan-gaji-di-indonesia-2023-68Yxg>
- Hasheem, M. J., Wang, S., Ye, N., Farooq, M. Z., & Shahid, H. M. (2022). Factors influencing purchase intention of solar photovoltaic technology: An extended perspective of technology readiness index and theory of planned behaviour. *Cleaner and Responsible Consumption*, 7, 100079. doi:10.1016/j.clrc.2022.100079
- Hair, J. F., Hult, G. T. M., & Ringle, C. M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). Sage.
- Haws, K. L., Winterich, K. P., & Naylor, R. W. (2013). Seeing the world through green-tinted glasses: Green consumption values and responses to environmentally friendly products. *Journal of Consumer Psychology*, 24(3), 336–354. doi:10.1016/j.jcps.2013.11.002
- IESR (2022). *Indonesia Solar Energy Outlook 2023*. Jakarta: Institute for Essential Services Reform (IESR).
- In, J. (2017). Introduction of a pilot study. *Korean Journal of Anesthesiology*, 70(6), 601. doi:10.4097/kjae.2017.70.6.601
- Jayaraman, K., Paramasivan, L., & Kiumarsi, S. (2017). Reasons for low penetration on the purchase of photovoltaic (PV) panel system among Malaysian landed property owners. *Renewable and Sustainable Energy Reviews*, 80, 562–571. doi:10.1016/j.rser.2017.05.213
- Kilani, A. A.-H. Z., Kakeesh, D. F., Al-Weshah, G. A., & Al-Debei, M. M. (2023). Consumer post-adoption of e-wallet: An extended UTAUT2 perspective with trust. *Journal of Open Innovation: Technology, Market, and Complexity*, 9(3), 100113. doi:10.1016/j.joitmc.2023.100113
- Kline, R. B. (2011). *Principles and practice of structural equation modeling*. New York, New York: Guilford Press.
- Lau, L. S., Choong, Y. O., Wei, C. Y., Seow, A. N., Choong, C. K., Senadjki, A., & Ching, S. L. (2020). Investigating nonusers' behavioural intention towards Solar Photovoltaic Technology in Malaysia: The role of knowledge transmission and price value. *Energy Policy*, 144, 111651. doi:10.1016/j.enpol.2020.111651
- Li, X. W., Tse, Y. K., Zhang, M. H., & Phi, H. D. (2023). Impact of relocation strategy on brand trustworthiness and word-of-mouth: Experimental vignette research on the US fashion industry. *International Journal of Production Economics*, 257, 108775. doi:10.1016/j.ijpe.2023.108775
- McKinsey. (2022). Survey: Indonesian consumer sentiment during the coronavirus crisis. McKinsey&Company
- Moore, G. C., & Benbasat, I. (1991). Development of an instrument to measure the perceptions of adopting an information technology innovation. *Information Systems Research*, 2(3), 192–222. doi:10.1287/isre.2.3.192
- Nguyen, T. T., & Phan, H. T. (2022). Impact of COVID-19 anxiety on functional foods consuming intention: Role of electronic word of mouth. *Heliyon*, 8(11). doi:10.1016/j.heliyon.2022.e11344
- Opiyo, N. N. (2019). Impacts of neighbourhood influence on social acceptance of small Solar Home Systems in rural Western Kenya. *Energy Research & Social Science*, 52, 91–98. doi:10.1016/j.erss.2019.01.013
- Pandey, M., & Yadav, P. S. (2023). Understanding the role of individual concerns, attitude, and perceived value in green apparel purchase intention; the mediating effect of consumer involvement and moderating role of Generation Z&Y. *Cleaner and Responsible Consumption*, 9, 100120. doi:10.1016/j.clrc.2023.100120
- Parasuraman, A., & Grewal, D. (2000). The impact of technology on the quality-value-loyalty chain: A research agenda. *Journal of the Academy of Marketing Science*, 28(1), 168–174. doi:10.1177/0092070300281015
- Risitano, M., Romano, R., La Ragione, G., & Quintano, M. (2023). Analysing the impact of green consumption values on brand responses and behavioural intention. *Business Ethics, the Environment & Responsibility*, 32(3), 1096–1112. doi:10.1111/beer.12543

- Fernández, J. M., Payán, M., & Santos, J. M. (2021). Profitability of household photovoltaic self-consumption in Spain. *Journal of Cleaner Production*, 279, 123439. doi:10.1016/j.jclepro.2020.123439
- Rondan-Cataluña, F. J., Arenas-Gaitán, J., & Ramírez-Correa, P. E. (2015). A comparison of the different versions of popular technology acceptance models. *Kybernetes*, 44(5), 788–805. doi:10.1108/k-09-2014-0184
- Schmitz, A., Díaz-Martín, A. M., & Yagüe Guillén, M. J. (2022). Modifying UTAUT2 for a cross-country comparison of telemedicine adoption. *Computers in Human Behavior*, 130, 107183. doi:10.1016/j.chb.2022.107183
- Schulte, E., Scheller, F., Sloot, D., & Bruckner, T. (2022). A meta-analysis of residential PV adoption: The important role of perceived benefits, intentions and antecedents in Solar energy acceptance. *Energy Research & Social Science*, 84, 102339. doi:10.1016/j.erss.2021.102339
- Sebastián, M. G. de B., Antonovica, A., & Guede, J. R. S. (2023). What are the leading factors for using Spanish peer-to-peer mobile payment platform Bizum? the applied analysis of the UTAUT2 model. *Technological Forecasting and Social Change*, 187, 122235. doi:10.1016/j.techfore.2022.122235
- Setyawati, D. (2020). Analysis of perceptions towards the rooftop photovoltaic Solar System Policy in Indonesia. *Energy Policy*, 144, 111569. doi:10.1016/j.enpol.2020.111569
- SolarPower Europe. (2022). *European Market Outlook for Solar Power 2022-2026*.
- Sovacool, B. K. (2018). Success and failure in the political economy of solar electrification: Lessons from World Bank Solar Home System (SHS) projects in Sri Lanka and Indonesia. *Energy Policy*, 123, 482–493. doi:10.1016/j.enpol.2018.09.024
- Sumarsono, N., Wahyuni, S., & Sudhartio, L. (2022). A paradigm shift of energy sources: Critical Review on competitive dynamics of solar PV industry in Indonesia. *Renewable Energy Focus*, 41, 236–245. doi:10.1016/j.ref.2021.12.001
- Sun, P. C., Wang, H. M., Huang, H. L., & Ho, C. W. (2018). Consumer attitude and purchase intention toward rooftop photovoltaic installation: The roles of personal trait, psychological benefit, and government incentives. *Energy & Environment*, 31(1), 21–39. doi:10.1177/0958305x17754278
- Sun, Y., & Wang, S. (2019). Understanding consumers' intentions to purchase green products in the social media marketing context. *Asia Pacific Journal of Marketing and Logistics*, 32(4), 860–878. doi:10.1108/apjml-03-2019-0178
- Tabassum, S., Rahman, T., Islam, A. U., Rahman, S., Dipta, D. R., Roy, S., ... Hossain, E. (2021). Solar Energy in the United States: Development, challenges and future prospects. *Energies*, 14(23), 8142. doi:10.3390/en14238142
- Tanveer, A., Zeng, S., Irfan, M., & Peng, R. (2021). Do perceived risk, perception of self-efficacy, and openness to technology matter for solar PV adoption? an application of the extended theory of planned behavior. *Energies*, 14(16), 5008. doi:10.3390/en14165008
- Tarigan, E. (2020). Rooftop PV system policy and implementation study for a household in Indonesia. *International Journal of Energy Economics and Policy*, 10(5), 110–115. doi:10.32479/ijeep.9539
- Thompson, R. L., Higgins, C. A., & Howell, J. M. (1991). Personal computing: Toward a conceptual model of utilization. *MIS Quarterly*, 15(1), 125. doi:10.2307/249443
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425. doi:10.2307/30036540
- Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of Technology. *MIS Quarterly*, 36(1), 157. doi:10.2307/41410412
- Xu, A., Awalin, L. J., Al-Khaykan, A., Fard, H. F., Alhamrouni, I., & Salem, M. (2023). Techno-economic and environmental study of optimum hybrid renewable systems, including PV/Wind/gen/Battery, with various components to find the best renewable combination for Ponorogo Regency, East Java, Indonesia. *Sustainability*, 15(3), 1802. doi:10.3390/su15031802
- Zhang, L., Li, D., Cao, C., & Huang, S. (2018). The influence of greenwashing perception on green purchasing intentions: The mediating role of green word-of-mouth and moderating role of Green Concern. *Journal of Cleaner Production*, 187, 740–750. doi:10.1016/j.jclepro.2018.03.201

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