



# Sustainable Energy Consumption Insights: Understanding Electricity-saving Behaviour Drivers among Young Adults in Ho Chi Minh City

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## ABSTRACT

As Vietnam's population continues to grow, there is a growing need for sustainable societal development. The energy-saving behaviour of every citizen plays a crucial role in achieving this sustainability. Therefore, it is necessary to raise awareness among young adults about energy conservation and environmental protection to promote sustainable social development in Vietnam. Hence, this study aims to examine the key factors influencing electricity-saving and habitual energy-saving behaviour. Data were collected from 431 young adults aged 18 to 30 years old in Ho Chi Minh City. The results indicate the significance of the model studied, with all hypotheses being accepted. The findings demonstrate that several factors, including subjective standards, perceived behavioural control, awareness of consequences, sense of responsibility, personal moral norms and cognition of electricity price policy, influence electricity-saving behaviours and habitual energy-saving behaviour related to electricity usage. The findings suggest that young adults are increasingly recognising the importance of saving electricity in modern life to protect the environment and promote sustainable social development in Ho Chi Minh City. Additionally, responsible authorities should initiate programmes aimed at promoting electricity-saving practices. This includes the creation of media articles to raise awareness and enhance the understanding of electricity-saving measures, serving as reminders to increase awareness about conserving electricity among every individual. Furthermore, this study offers theoretical and practical implications for researchers and policymakers alike.

**Keywords:** Electricity-saving Behaviour, Habitual Energy Saving Behaviour, Sustainable Energy, Young Adults

**JEL Classifications:** Q40, Q43, Q49

## 1. INTRODUCTION

Energy usage has emerged as a major factor influencing global warming, capturing the interest of researchers and professionals across the globe (Qalati et al., 2022). The global energy demand is increasing daily due to population growth and rising living standards. Given the restrictions of industrial and technical views, experts have increasingly recognised that a psychological behaviour-oriented approach is essential to achieve energy savings goals (Ahmad et al., 2022). The daily use of electronic devices and machinery such as TVs, refrigerators and other appliances causes energy consumption to continue to increase, underscoring the

necessity for both individuals and organisations to adopt energy-saving behaviours. To address this escalating energy consumption trend, energy conservation is essential, not only in Vietnam but in all countries around the world.

Progressively integrating renewable energy sources into electricity generation reduces dependency on fossil fuels and curbs the release of greenhouse gases (Wang et al., 2020). This fosters a more environmentally sustainable energy environment. Conserving energy is critical for minimising climate change and is the duty of both companies and individuals (Si et al., 2022). Renewable energy not only serves to mitigate the effects of climate change,

but it also promotes technological innovation, job development and energy security. Choosing clean and sustainable energy alternatives protects the environment for future generations and helps make the world a greener, healthier place. Through decreasing the reliance on fossil fuels and lowering greenhouse gas emissions, significant strides are being made towards establishing more sustainable energy sources, ensuring a promising future for both humankind and the natural environment.

Currently, there are three distinct approaches to assist households in conserving electricity: those with an economic focus, those emphasising technology and those centred on psychological and behavioural aspects (Fu et al., 2021; Arawomo, 2017; Da Silva and Cerqueira, 2017; Zhou and Yang, 2016). The rise of industrialisation and urbanisation has led to a worsening of environmental problems, most notably air pollution and other related issues (Shi et al., 2017). Therefore, awareness and protection of the environment it is critical. This includes addressing energy and environmental concerns to ensure a clean planet. According to Słupik et al. (2021), climate change and the increasing demand for energy present significant obstacles to global development efforts. To secure a secure and environmentally responsible future, collaboration among local, national and regional governmental bodies, as well as energy companies, to enhance energy efficiency and advocate for responsible energy consumption, is crucial. Conserving electricity is a humane act that demonstrates the values of ethical living, being responsible for the environment and contributing to society.

Several psychological models for describing individual behaviour have been suggested and employed throughout the last half-century. The theory of planned behaviour is one such model. It suggests that an individual's intentions for behaviour are shaped by three key elements: their attitude, subjective norms and perceived behavioural control. This theory can be applied in the study of electricity-saving behaviour. When an individual's personal norms encompass both the perception and practice of conserving electricity, actions that an individual can control will lead to behaviours aimed at saving electricity. If an individual does not follow through with these actions, they may feel a sense of guilt. However, when an individual engages in electricity-saving behaviour, it will inspire those around them, causing the electricity-saving behaviour to spread.

Human exploitation of natural resources causes global environmental degradation, impacting both the most densely populated and the most remote areas of the globe (Vuong and Bui, 2023; Campos et al., 2021). Thus, fostering a sense of environmental concern among young adults is critical (Si et al., 2022). Understanding the significance of attaining climate neutrality, lowering greenhouse gas emissions and fostering the well-being of the environment and the planet is essential for the younger generation (Chen and Gou, 2022). Furthermore, enhancing awareness among young adults about saving electricity is of utmost importance.

This study adopts several aspects from the theory of planned behaviour to investigate the motivational factors that influence

young adults' intentions to save energy and subsequently lead to habitual energy-saving behaviours. This study explores the reasons why young adults consistently engage in energy-saving behaviours and reveals fascinating insights into their environmental awareness and the factors that influence their eco-friendly practices. The study examines several factors that influence electricity-saving behaviours and habitual energy-saving behaviour. These factors include subjective norms, perceived behavioural control, awareness of consequences, sense of responsibility, personal moral norms and cognition of electricity prices. By investigating the attitudes, beliefs and awareness of young adults, a more comprehensive understanding can be gained of how to stimulate and advocate for sustainable behaviours among younger individuals. This will aid in the creation of a more ecologically sound and sustainable future.

## 2. LITERATURE REVIEW AND THE HYPOTHESIS DEVELOPMENT

### 2.1. Electricity-saving and Habitual Energy-saving Behaviour among the Younger Generation

Energy-saving intention, according to Nguyen et al. (2022a), is a positive and significant predictor of household energy-saving behaviour. Individual norms create the need for pro-ecological conduct (Gkargkavouzi et al., 2019). Environmental sustainability has become a crucial issue for both individuals and businesses (Fatoki, 2020). The principles of environmental sustainability emphasise the significance of people's-especially the young generation's-attitudes and beliefs in forming pro-environmental behaviour, as well as the relevance of individual norms in fostering such behaviour. Electricity-saving behaviours have become increasingly popular among the younger generation due to their heightened awareness of environmental issues and the importance of practicing sustainability. It is essential to support their awareness of environmental concerns and the importance of saving electricity.

Electricity-saving behaviours are the actions taken by individuals to reduce overall power consumption (Fatoki, 2020). According to Al Mamun et al. (2022), today's youth has embraced intensive energy usage as the usual practice. However, consumers have the potential to reduce their energy consumption by cultivating environmental values, attitudes and norms that promote pro-environmental behaviour. This shift towards eco-friendly practices can lead to a decrease in overall energy usage.

Energy-saving habits, also known as daily household routines, focus on minimising energy consumption when it is not essential, thereby mitigating the depletion of energy resources (Duong et al., 2022). Furthermore, various factors impact energy consumption, including the energy usage patterns of occupants and their socio-demographic attributes (Palani et al., 2023). Due to the limitations of economically and technologically centred strategies, an increasing number of researchers are shifting their focus towards investigating energy-saving behaviour from a psychological and behavioural perspective (Fu et al., 2021; Hong et al., 2019; van den Broek et al., 2019; Shi et al., 2017). Energy-saving behaviour and habits pertain to the strong determination and dedication of a young individual or a group to reduce energy usage or use

energy more efficiently. This involves consciously choosing to adopt behaviours, habits, or practices that help conserve energy resources.

## 2.2. The Effect of Subjective Standards on Electricity-saving Behaviours' Contribution to Habitual Energy-saving Behaviour

A subjective norm is a societal influence that impacts an individual's engagement in a specific behaviour (Wang et al., 2014). Subjective norms are the greatest predictors of behaviour (Caputo, 2020). Therefore, subjective norms are the standards of behaviour for people, reflecting the moral values that individuals should strive for. Subjective standards have a significant impact on an individual's inclination to conserve electricity. These standards include people's personal views, attitudes and perceptions, which subsequently influence their energy consumption behaviours and decisions. Thus, subjective standards are an important factor that should be considered when examining the intention behaviour of individuals.

Ajzen and Fishbein (1975) were the pioneers of the theory of reasoned action, which suggests that an individual's intention is influenced by their attitude and subjective norms. Moreover, the perception of social community impact is the sense of social pressure to engage in or refrain from a certain behaviour (Ajzen, 1991). Individuals perceive saving electricity to be a positive behaviour that has the potential to motivate and inspire others in certain situations. Subjective standards play a crucial role in fostering the intention to save electricity, and it is essential to concentrate on them. People's intentions to save electricity are moulded by subjective factors that impact their thoughts, attitudes and societal perspectives. Identifying and leveraging these subjective elements can serve as a potent strategy for promoting energy conservation and sustainable behaviours. Thus, this study postulates the first hypothesis:

H1: There is a significant relationship between subjective standards and electricity-saving behaviours, and this relationship promotes habitual energy-saving behaviour among young adults.

## 2.3. The Effect of Perceived Behavioural Control on Electricity-saving Behaviours' Contribution to Habitual Energy-saving Behaviour

Perceived behavioural control aims to encourage people to conserve electricity by enabling them to set objectives, monitor their behaviour, challenge harmful ideas, manage their activities, raise environmental awareness and promote good efforts. Ajzen (1991) proposes that the components related to behavioural control directly influence an individual's intention to perform a certain behaviour. Moreover, when these components are accurately perceived by the individual, they can also forecast tangible behaviour. Consequently, young adults possessing cognitive behavioural control exhibit an increased consciousness of their capability to regulate their actions in terms of electricity conservation, which could manifest in their day-to-day routines.

Controlling the behaviour related to young adults' perceptions of their ability to carry out specific actions in their daily lives. For example, when they realise that saving electricity is necessary

and their responsibility, this realisation becomes a driving force for them to conserve energy and remind others around them to do the same. When an individual is aware that they should be saving electricity, they will feel guilty or uncomfortable if they do not do so. Thus, drawing from the discussion above, the second hypothesis is as follows:

H2: There is a significant relationship between perceived behavioural control and electricity-saving behaviour, and this relationship promotes habitual energy-saving behaviour among young adults.

## 2.4. The Effect of Consequence Awareness on Electricity-saving Behaviours Contribution to Habitual Energy-saving Behaviour

The concept of "awareness of consequence" pertains to situations where individuals refrain from participating in pro-social behaviour due to their understanding of the adverse impact such behaviour can have on people or objects (De Groot and Steg, 2009). The significance of consequence awareness lies in fostering the inclination to conserve electricity and encouraging consistent energy-saving behaviours among young adults. Consequence awareness involves understanding the environmental, economic and social implications of one's energy consumption choices. When young adults fully grasp the impacts of their actions on the environment and society, they become more motivated to embrace energy-saving practices.

Understanding the consequences of energy consumption is a crucial factor in cultivating a sense of purpose towards electricity-saving practices, which ultimately leads to the adoption of regular energy-saving behaviours by young adults. To encourage broader participation in energy-saving efforts, it is imperative to increase knowledge and raise awareness about the impacts of energy usage. Equipping young adults with the necessary tools and incentives to embrace sustainable habits in their daily activities can further support and sustain these positive behaviours. Thus, based on the preceding analysis, the third hypothesis is as follows:

H3: There is a significant relationship between consequence awareness and electricity-saving behaviours, and this relationship promotes habitual energy-saving behaviour among young adults.

## 2.5. The Effect of Sense of Responsibility on Electricity-saving Behaviours Contribution to Habitual Energy-saving Behaviour

Moral responsibility can be defined as an individual's sense of duty or obligation to make moral choices when faced with ethical dilemmas. This is typically reflected through personal standards and is commonly associated with the concept of responsibility (Kaiser and Shimoda, 1999). The act of saving electricity and using it efficiently is the duty and responsibility of every individual, family and organisation in society. Saving electricity can be considered a matter of ethics in protecting the environment for the community. Furthermore, they are practical measures for safeguarding human health and protecting the environment.

Ru et al. (2018) emphasise the essential role of moral standards in influencing an individual's motivation to conserve energy. In

the context of increasingly scarce resources and social changes, saving electricity and adopting sustainable practices are not merely moral considerations; they are responsibilities that each individual in the modern world should undertake. Saving electricity should become a habit for everyone in their daily lives. Based on practical evidence and analysis, the fourth hypothesis is as follows:

H4: There is a significant relationship between sense of responsibility and electricity-saving behaviours, and this relationship promotes habitual energy-saving behaviour among young adults.

## 2.6. The Effect of Personal Moral Norms on Electricity-saving Behaviours Contribution to Habitual Energy-saving Behaviour

A personal moral norm, also called a personal norm, pertains to an individual's moral responsibility or duty to participate in particular activities (Maleksaeidi and Keshavarz, 2019). Moral principles can exert a substantial influence on an individual's inclination to conserve energy and cultivate consistent energy-saving habits. Multiple studies into energy consumption behaviour have indicated that subjective norms play a constructive role in fostering energy-saving intentions (Ru et al., 2018). Therefore, personal moral norms are regarded as a fundamental standard of human beings in their everyday lives. Standards concerning lifestyle, attitudes and behaviours should be self-regulated by each individual to avoid engaging in wrongful actions and instead benefit society. Conserving electricity is considered a personal moral norm that fulfils the responsibilities of protecting the environment and managing personal and family finances.

Personal norms are an important psychological aspect that impacts energy-saving goals favourably. Personal norms have a favourable impact on energy-saving intentions (Si et al., 2022). Corporations and communities may utilise young adults' norms to promote and maintain energy-saving intents and actions among the population by appealing to people's personal values and beliefs, increasing environmental awareness and fostering a feeling of responsibility. Young adults are aware that having good morals and acting positively in their lives can lead to a positive mindset and constructive behaviour in their lives. Personal norms also establish subjective standards that have a significant impact on achieving energy-saving goals in their lives. Based on the facts and the analysis presented above, the fifth hypothesis is as follows:

H5: There is a significant relationship between moral standards and electricity-saving behaviours, and this relationship promotes habitual energy-saving behaviour among young adults.

## 2.7. The Effect of the Cognition of Electricity Price Policy on Electricity-saving Behaviours Contribution to Habitual Energy-saving Behaviour

Cognition of the energy price policy pertains to how residents comprehend and approve of the tiered electricity pricing approach (Fu et al., 2021). Therefore, young adults are more likely to understand the connection between their consumption habits and power costs when they possess a thorough understanding of the tiered pricing system, which includes different price levels based

on energy consumption. This awareness empowers individuals to adjust their behaviour, making better choices in energy usage, and potentially reducing their electricity expenses.

According to several researchers, rising energy costs dramatically lower people's energy use (Nguyen et al., 2022b). Generally, a price is a fluctuating factor tied to the costs that people need to pay for acquiring products or services. Moreover, instances where the supply and demand for electricity are almost equal result in the price aligning with the electricity's value, yet such occurrences are infrequent. Furthermore, through the implementation of economic incentives, heightened awareness campaigns, the shaping of social norms and advancements in technology, electricity prices have the potential to significantly impact the inclination of young individuals to save electricity and cultivate habitual energy-saving practices in their daily lives. Thus, the sixth hypothesis is as follows:

H6: There is a significant relationship between the cognition of electricity price policy and electricity-saving behaviours, and this relationship promotes habitual energy-saving behaviour among young adults.

## 2.8. The Effect of Electricity-saving Behaviours on Habitual Energy-saving Behaviour

Habitual energy-saving behaviour refers to routine actions aimed at conserving energy in daily life, resulting in a direct reduction of energy consumption. Moreover, habitual energy-saving behaviour involves modifying specific actions, like switching off lights, decreasing air conditioning usage, appropriately setting air-conditioner thermostats and turning off all electrical devices when not in use, all of which lead to a direct decrease in energy consumption.

Renewable energy conservation initiatives have recognised the significance of habitual energy-saving behaviours and have focused on adapting and altering these behaviours (Van den Broek et al., 2019). When young adults pay attention to their electricity-saving behaviour, they develop a habit that will remain with them throughout their daily lives. Encouraging energy-efficient actions is crucial in fostering a regular habit of conserving electricity. Through cultivating a societal norm centred around energy preservation and embracing sustainable approaches, young adults can actively contribute to an eco-friendly and sustainable future. Based on the aforementioned facts and analysis, the seventh hypothesis is as follows:

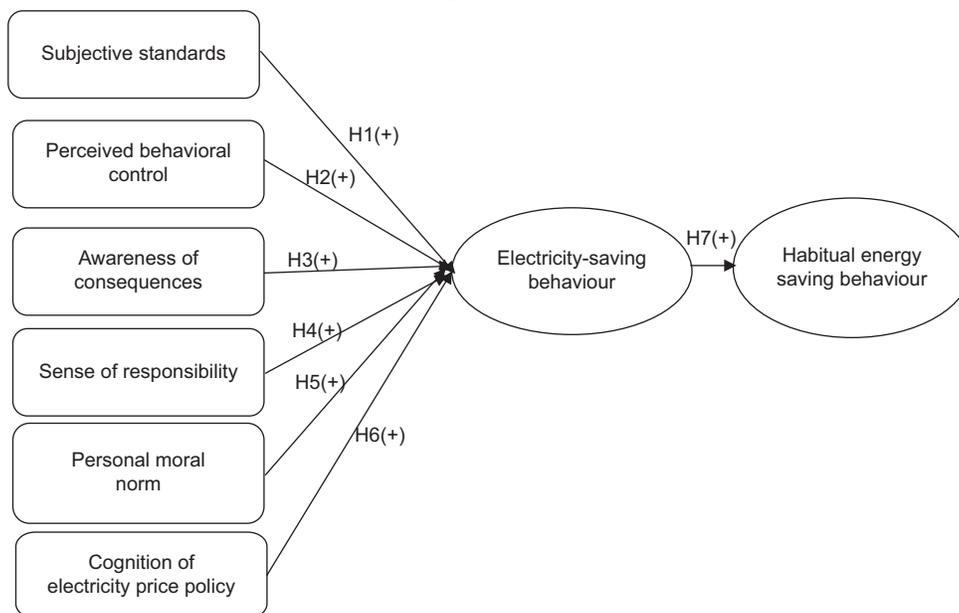
H7: There is a significant relationship between electricity-saving behaviours and habitual energy-saving behaviour among young adults.

Figure 1 illustrates the conceptual framework, outlining the pivotal factors influencing electricity-saving behaviours that contribute to the development of habitual energy-saving behaviour.

## 3. METHODOLOGY

This study conducted a survey of young adults in Ho Chi Minh City aged from 18 to 30 years old regarding their awareness of

Figure 1: The conceptual framework of the study



saving electricity and their electricity-saving habits in their daily lives. This study follows the extant literature and analyses the contributing factors influencing the electricity-saving habits of the youth.

The assessment of variables within the research framework was adapted and cited from prior research while being customised to align with the Vietnamese context. The modifications are as follows: Subjective standards (SST) is gauged through three items: SST1, SST2 and SST3, which were adapted from Wang et al. (2021). Perceived behavioural control (PBC) was adapted from Fu et al. (2021) and includes three items: PBC1, PBC2 and PBC3. Awareness of consequences (AOC) encompasses four items: AOC1, AOC2, AOC3 and AOC4. These items were adapted from a study conducted by Wang et al. (2018). Sense of responsibility (SOR) is assessed using four items: SOR1, SOR2, SOR3 and SOR4. Personal moral norm (PMN) was drawn and modified from a study carried out by Fu et al. (2021) and is assessed through three items: PMN1, PMN2 and PMN3. Cognition of electricity price policy (CEP) is comprised of three components: CEP1, CEP2 and CEP3. These components were adapted from research conducted by Fu et al. (2021). Electricity-saving behaviours (ESB) involves four elements: ESB1, ESB2, ESB3 and ESB4. These elements were also adapted from research conducted by Fu et al. (2021). Habitual energy-saving behaviour (HESB) is evaluated using four indicators: HESB1, HESB2, HESB3 and HESB4. These indicators were adapted from a study by Wang et al. (2018).

Data were collected from young adults in Ho Chi Minh City, with 431 samples selected for the analysis. The collected samples underwent data cleaning, removing those with incomplete or inappropriate responses that did not meet the requirements. Next, the data were imported into the Smart PLS software for further analysis.

Table 1: Demographic profile of the sample population

Dimensions	Gender			
	Frequency	Percent	Valid Percent	Cumulative Percent
Male	238	55.2	55.2	55.2
Female	190	44.1	44.1	99.3
Other	3	0.7	0.7	100.0
Total	431	100.0	100.0	
Age				
18–20	56	13.0	13.0	13.0
21–23	158	36.7	36.7	49.7
24–26	150	34.8	34.8	84.5
27–30	67	15.5	15.5	100.0
Total	431	100.0	100.0	

Table 1 reports the demographics of the study sample and shows that 55.2% of respondents are male and 44.1% of respondents are female. The remaining 0.7% of respondents identify as other. The age range of the sample population is between 18 and 30 years old. Additional regarding the sample population is also provided in Table 1.

#### 4. FINDINGS

According to Hulland (1999), if all the observed variables are >0.7, then they are statistically significant. According to the outcomes of the data analysis, the observed variables for the factors all surpass 0.7, thus satisfying the statistical requirement. Table 2 reports the construct reliability and validity of the findings.

According to DeVellis (2012), a Cronbach’s Alpha value exceeding 0.7 for all scales indicates the reliability of the measurement scales. Likewise, as outlined by Bagozzi and Yi (1988), when the composite reliability (CR) for all scales surpasses 0.7 and the average variance extracted (AVE) is >0.5, it signifies the existence of convergent validity across all scales. The statistical findings from Table 2 demonstrate that the scales are both reliable and

statistically significant. Table 3 reports the heterotrait-monotrait ratios.

Henseler et al. (2015) state that when all heterotrait-monotrait values are below 0.9, it confirms the presence of discriminant validity.

The data presented in Table 4 indicates that all the  $P < 0.05$ . Therefore, all the hypotheses are accepted in this study (with a statistical confidence level of 95%). Figure 2 presents the SEM diagram.

According to Hair et al. (2011), when all inner variance inflation factor (VIF) values are  $< 5$ , it indicates the absence of multicollinearity in the model. Table 5 shows that the statistical findings reveal that all VIF values are  $< 5$ , implying the model is free from multicollinearity concerns.

**Table 2: The construct reliability and validity**

Dimensions	Cronbach's Alpha	rho_A	Composite reliability	Average variance extracted
AOC	0.832	0.836	0.888	0.665
CEP	0.809	0.814	0.887	0.723
ESB	0.878	0.880	0.916	0.732
HESB	0.899	0.901	0.929	0.767
PBC	0.773	0.774	0.869	0.688
PMN	0.734	0.744	0.849	0.652
SOR	0.808	0.812	0.874	0.635
SST	0.787	0.793	0.876	0.702

**Table 3: Heterotrait-monotrait ratios**

Dimensions	AOC	CEP	ESB	HESB	PBC	PMN	SOR
AOC							
CEP	0.430						
ESB	0.663	0.581					
HESB	0.518	0.440	0.798				
PBC	0.414	0.263	0.592	0.564			
PMN	0.434	0.455	0.492	0.350	0.200		
SOR	0.577	0.456	0.672	0.607	0.417	0.492	
SST	0.384	0.239	0.618	0.563	0.551	0.226	0.434

**Table 4: Mean, STDEV, T values, P values**

Dimensions	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T Statistics ( O/STDEV )	P-values
AOC→ESB	0.228	0.227	0.035	6.542	0.000
CEP→ESB	0.219	0.218	0.036	6.025	0.000
ESB→HESB	0.710	0.713	0.030	23.673	0.000
PBC→ESB	0.184	0.184	0.035	5.324	0.000
PMN→ESB	0.097	0.098	0.031	3.144	0.002
SOR→ESB	0.197	0.199	0.043	4.627	0.000
SST→ESB	0.241	0.240	0.035	6.878	0.000

**Table 5: Inner VIF values**

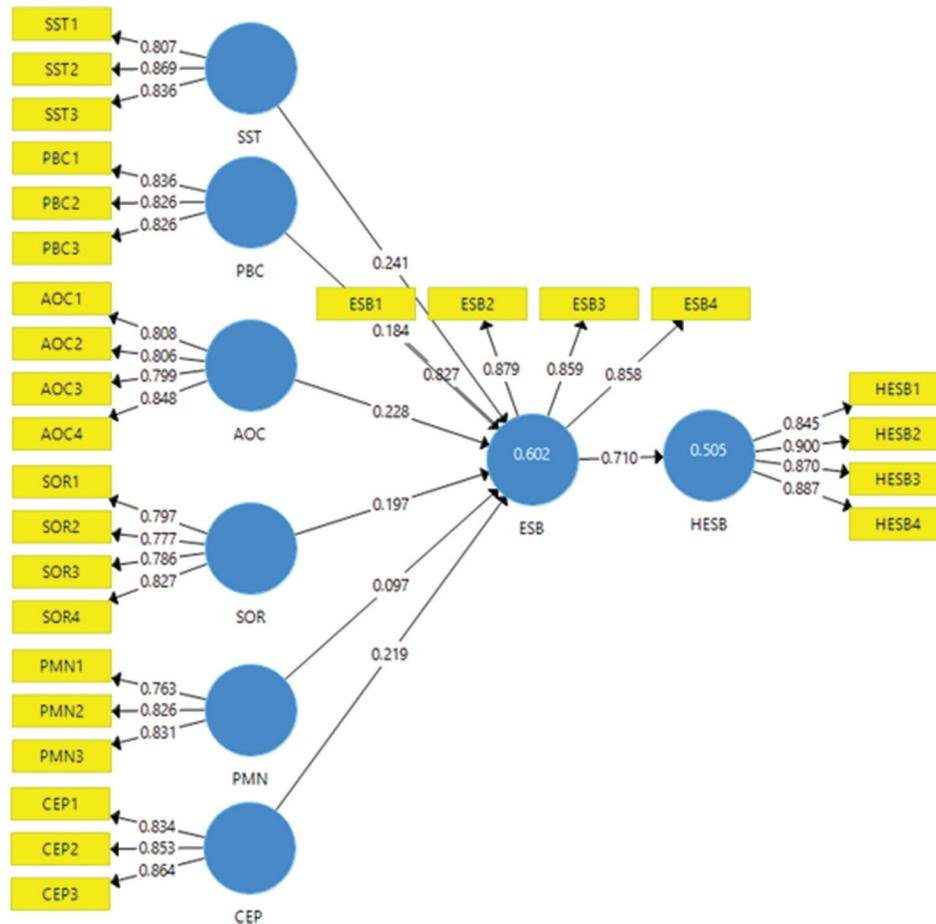
Dimensions	AOC	CEP	ESB	HESB	PBC	PMN	SOR	SST
AOC			1.460					
CEP			1.281					
ESB				1.000				
HESB								
PBC			1.324					
PMN			1.283					
SOR			1.542					
SST			1.316					

## 5. RECOMMENDATIONS

Energy consumption has become a significant contributor to global warming, capturing the attention of researchers and practitioners worldwide (Qalati et al., 2022; Liu et al., 2020a). The scholarly community has also become increasingly intrigued by individuals' energy-saving behaviour, especially in developing nations (Qalati et al., 2022). Personal characteristics, corporate regulations, energy-saving awareness, personality traits, norms and situational factors all exert a substantial influence on energy-saving intentions and actions. Consequently, this provides strong motivation to investigate the key factors affecting electricity-saving behaviour and habitual energy-saving practices among the younger generation in Ho Chi Minh City. Based on the gathered statistics, this study will present the following recommendations:

The results from this study indicate that subjective standards (SST) have a significant relationship with electricity-saving behaviours (ESB) ( $\beta = 0.241, P < 0.001$ ). Therefore, subjective standards play a crucial role in shaping the energy-saving behaviours of young individuals. When positive subjective factors like environmental consciousness, perceived benefits and education come into play, they can effectively encourage and nurture consistent energy-saving habits. Therefore, fostering favourable subjective norms through education, awareness campaigns and promoting environmental responsibility can greatly aid in motivating young adults to incorporate electricity-saving practices into their daily lives. Nguyen et al. (2022a) discover that subjective norms wield a significant influence on the intention to conserve energy. This suggests that when families experience societal pressures from their community or influencers, they are more inclined towards energy-saving behaviours. Following this logic, the youth in Ho Chi Minh City are also influenced by those around them when it comes to electricity conservation. Therefore, effective communication by authoritative organisations regarding awareness of electricity conservation should be implemented to educate the youth on the importance of saving electricity in their daily life.

Figure 2: The SEM diagram



Perceived behavioural control (PBC) is a psychological term that pertains to an individual’s belief in their ability to successfully carry out a particular action. Nguyen et al. (2022a) find that perceived behavioural control is as a crucial factor influencing the inclination to practice energy conservation within households. Moreover, perceived behavioural control also plays a crucial role in influencing young adults’ engagement in energy-saving activities. This holds true for young adults adopting electricity-saving practices in Ho Chi Minh City. Moreover, the findings of this study indicate that there is a positive influence of perceived behavioural control on electricity-saving behaviours, with a beta coefficient ( $\beta$ ) of 0.184 and a P value of less than 0.001. This suggests that young adults in Ho Chi Minh City should actively engage in electricity conservation and be vigilant about their actions, such as switching off electrical devices when they are not being utilised. It is necessary to remind all members of society that conserving electricity is an essential and standard practice. Young adults should consider daily electricity monitoring as a positive action. When they are conscientious about adhering to this practice, it will become a habit that is ingrained in their daily life.

This study shows that awareness of consequences (AOC) has a significant relationship with electricity-saving behaviours, ( $\beta = 0.228, P < 0.001$ ). Therefore, young adults should recognise that electricity conservation is essential for everyone, especially at a time when natural resources are becoming scarce. In

addition, young adults in Ho Chi Minh City should understand the significance and importance of electricity conservation for their lives and societal development. Once young adults form the habit of saving electricity and conserving energy, it will become an essential life skill for everyone and the practice will become commonplace in every community.

The results of this study reveal the positive impact of a sense of responsibility (SOR) on electricity-saving behaviours among young adults in Ho Chi Minh City. Specifically, the sense of responsibility demonstrates a significant positive effect on electricity-saving behaviours with a beta coefficient ( $\beta$ ) of 0.197 and a  $P < 0.001$ . This underscores the importance of young adults perceiving electricity conservation as a personal obligation and incorporating it into their daily practices. Being conscious of electricity-saving is not just an abstract idea but a practical action that can be taken by everyone. It is also a responsibility in terms of conserving energy to protect the environment, avoiding wastage and saving money. This responsible behaviour should be sustained and maintained consistently.

This study finds that personal moral norms (PMN) have a positive relationship with electricity-saving behaviours, ( $\beta = 0.097, P < 0.001$ ). Saving electricity should be ingrained in the daily activities of each young individual in Ho Chi Minh City, as it is ethically responsible. Young individuals in Ho Chi Minh

City should consider saving electricity to be a virtuous act. It is important to view wasting electricity as an undesirable action. Saving electricity is a morally upright behaviour that protects the environment, helps save money and contributes to safeguarding a green planet for future generations.

The results of this study also reveal a positive correlation between cognition of electricity price policy (CEP) and electricity-saving behaviours, with a beta coefficient ( $\beta$ ) of 0.219 and a P value of less than 0.001. This relationship leads to habitual energy-saving behaviour among young adults in Ho Chi Minh City. Conserving electricity will help reduce monthly expenses for households. In addition to lowering costs, electricity conservation also contributes to minimising greenhouse gas emissions, thereby protecting the environment. Young adults in Ho Chi Minh City should conscientiously make an effort to save electricity by turning off devices such as TVs, air conditioning, computers, and other electrical appliances when not in use. Moreover, Wang et al. (2018) propose that electricity-saving behaviour encompasses actions such as turning off devices when not in use, utilising high-efficiency energy sources and adopting energy-saving devices to minimise overall energy consumption. Monitoring and controlling electricity bills and tracking the monthly electricity consumption of individuals can help people devise strategies to reduce their energy consumption to the lowest possible level. This practical approach will enhance the awareness of daily expenditure savings for young adults in Ho Chi Minh City.

Ahmad et al. (2022) demonstrate the significant influence of energy-saving intention on energy-saving behaviour. Furthermore, in the context of my study, the connection between electricity-saving behaviours and habitual energy-saving behaviour (HESB) is evident, with a substantial relationship observed. The beta coefficient ( $\beta$ ) stands at 0.710, and the  $P < 0.001$ . Therefore, a notable correlation exists between the practice of conserving electricity and habitual energy-saving actions among young adults. The consistent act of conserving energy has the potential to foster ingrained habits, which, in turn, can significantly contribute to the sustained effort of young adults in Ho Chi Minh City to conserve energy over the long term. Acknowledging this connection could provide valuable insight for designing effective strategies aimed at promoting sustainable behaviour among the youth in HCMC and achieving established energy-saving objectives.

## 6. CONCLUSIONS

This research collected data from 431 young adults in Ho Chi Minh City to determine the influence of various factors on energy-saving behaviours and habitual energy-saving behaviour. These factors included subjective standards, perceived behavioural control, awareness of consequences, sense of responsibility, personal moral norm and cognition of electricity price policy. The results of this study indicate that all of the proposed hypotheses were accepted, and the research model is statistically significant. When young adults use energy-saving practices efficiently, it lays the foundation for sustainable development within the community and environmental preservation.

The findings of this research make a significant theoretical contribution to the existing body of literature. This study delves into the factors influencing electricity-saving behaviour, thereby paving the way for future investigations to reference and build upon it. Subsequent studies can utilise this research to expand the theoretical framework, providing a comprehensive perspective on electricity-saving behaviours exhibited by individuals and organisations. The findings of this study suggest that young adults in Ho Chi Minh City should recognise electricity conservation as a personal and societal standard. They should understand that saving electricity is not only financially beneficial for themselves and their families, but it is also a responsibility that involves protecting the environment and ensuring a green planet for future generations. When individuals are aware of the importance of electricity conservation, it leads to action and self-control and eventually becomes a habit that spreads to those around them.

Authoritative organisations, communities and educational institutions should undertake media campaigns to promote electricity conservation as a humanitarian act. They should encourage young individuals and households to not only cultivate good consciousness and behaviour but also save money for themselves. Ultimately, such efforts contribute to preserving a clean and beautiful environment, leading to sustainable and civilised development in society.

### 6.1. Limitations and Future Studies

Due to limitations in time, resources and finances, this study was conducted with a focus on young adults within Ho Chi Minh City. Future research should diversify the study population by including various age groups. In addition, the study did not classify the research subjects based on gender, income or occupation. To gain an objective and comprehensive perspective, future research should conduct these comparative analyses to reveal behaviours among different groups and provide specific solutions for each group. Furthermore, this study only focused on core factors. Future research should conduct more in-depth investigations to identify potential factors that influence electricity-saving behaviour, which were not explored in this study. This study encountered limitations in its sample scope and focus on fundamental factors. To enhance the depth of knowledge, future research should adopt a more inclusive and diverse perspective, delving into a wider range of variables. By doing so, a more comprehensive understanding of the factors influencing electricity-saving behaviour can be attained. Ultimately, this approach will facilitate the development of a diverse array of effective strategies aimed at promoting energy conservation across various demographic segments.

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