YANGON UNIVERSITY OF ECONOMICS

DEPARTMENT OF MANAGEMENT STUDIES

MBA PROGRAMME

INFLUENCING FACTORS ON HOUSEHOLD ELECTRICITY SAVING BEHAVIOR

NAING WIN

EMBA II - 78

EMBA 18th BATCH

NOVEMBER, 2022

YANGON UNIVERSITY OF ECONOMICS

DEPARTMENT OF MANAGEMENT STUDIES

MBA PROGRAMME

INFLUENCING FACTORS ON HOUSEHOLD ELECTRICITY SAVING BEHAVIOR

ACADEMIC YEAR (2019-2022)

Supervised By:	**Submitted By:**
Dr. Hla Hla Mon	Naing Win
Professor	EMBA II - 78
Department of Management Studies	EMBA 18th Batch
Yangon University of Economics	2019-2022

YANGON UNIVERSITY OF ECONOMICS

DEPARTMENT OF MANAGEMENT STUDIES

MBA PROGRAMME

INFLUENCING FACTORS ON HOUSEHOLD ELECTRICITY SAVING BEHAVIOR

A thesis submitted to the Board of Examiners in partial fulfillment of the requirements for the degree of Master of Business Administration (MBA)

Supervised By:

Dr. Hla Hla Mon

Professor

Department of Management Studies

Yangon University of Economics

Submitted By:

Naing Win

EMBA II - 78

EMBA 18th Batch

2019-2022

ACCEPTANCE

This is to certify that the thesis entitled "**Influencing Factors on Household Electricity Saving Behavior**" has been accepted by the Examination Board for awarding Master of Business Administration (MBA) degree.

Board of Examiners

(Chairman)

Dr. Tin Tin Htwe
Rector
Yangon University of Economics

(Supervisor)

(Examiner)

(Examiner)

(Examiner)

November, 2022

ABSTRACT

This study mainly pay attention to find out the influencing factors on intention to save electricity, and check the effect of intention to save electricity on electricity saving behavior. In addition, it tests the moderating effect of espoused individualism and faith in other on the relationship between intention to save electricity and electricity saving behavior. Both primary data and secondary data are referred in this study. Among the 33 townships in Yangon, 6 townships are selected by using simple random sampling method of first stage. 397 electric users are selected as the sample population out of 72,542 residents in selected 6 townships in Yangon by simple random sampling. Primary data are collected by using structured questionnaire with 5-point Likert scale. Among three influencing factors (attitude, subjective norm, and perceived behaviour control), the results show that subjective norm and perceived behavioral control have significant positive effect on intention to save electricity of the residents. Intention to save electricity has a significant effect on electricity saving behaviour. Espoused individualism does not have moderation effect on the relationship between intention to save electricity and electric saving behavior. Similarly, faith in others does not have moderation effect on the relationship between intention to save electricity and electric saving behavior. Residents should replace their old electrical devices with energy saving devices. They need to accept the advice of service technicians and install energy efficient devices if they want to switch to energy saving devices from tradition ones.

ACKNOWLEDGEMENTS

First and foremost, I would respectfully express my thanks and gratitude to Prof. Dr. Tin Tin Htwe, Rector of Yangon University of Economics for her kind permission for the opportunity to undertake the study as a partial fulfillment towards the Master Degree of Business Administration.

My deepest thanks to Professor Dr. Myint Myint Kyi, Head of Department of Management Studies for her extensive and constructive suggestions, her supporting excellence lectures, kind supports and comments to complete the thesis.

I would like to express my special gratitude and thanks to my supervisor, Professor Dr. Hla Hla Mon, Department of Management Studies of the Yangon University of Economics, for her guidance and providing necessary information regarding the thesis.

In addition, I would like to express my sincere appreciation to all the professors, associate professor, lecturers, my family members and friends for their kind supports and encouragement.

Moreover, my EMBA-18 friends and all persons who gave valuable lecture notes, kind encouragement, valuable comments and helpful advices from the beginning to the end of my thesis paper. Additionally, a special thanks to my wife for her relentless support throughout my study. Finally, I would like to thank all the officials from YESC and people who filled the survey.

Naing Win

EMBA II-78

EMBA 18th Batch

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATION

CFLs	- Compact fluorescent lights
EIND	- Espoused individualism
FIO	- Faith in others
LEDs	- Light-emitting diode bulbs
LPG	- Liquid Petroleum Gas
MOEP	- Ministry of Electric Power
MW	- Mega Watts
NAM	- Norm Activation Model
PBC	- Perceived Behavior Control
SN	- Subjective norm
TPB	- Theory of Planned Behavior
YESC	- Yangon Electricity Supply Corporation

CHAPTER 1

INTRODUCTION

Consumer behavior is mainly concerned with psychology, motivations, and behavior. Schiffman et al. (1997) defined that the behavior that consumers display in searching for, purchasing, using, evaluating, and disposing of products and services that they expect will satisfy their needs as consumer behavior. Energy-saving behaviors are defined as the daily and habitual practices of households that focus on specific reductions in energy use. Electricity saving behavior is the act of shutting down when not needed, using high-efficiency electricity, investing in energy-saving devices to reduce electricity consumption. Effective use is to use the least amount of energy and still satisfy the demand. The intention of saving electricity is an important and positive predictor of household energy saving behavior (Wang et al., 2018).

Theory of Planned Behavior (TPB) has received empirical support in predicting behavioral intentions across various sustainability contexts including energy conservation (Carrico & Reimer, 2011). According to TPB, the factor that drives actual behavior is the intention to perform that behavior. Intention is determined by three factors: attitude, subjective norm and perceived behavior control. Attitude refers to the degree to which a person has a favorable or unfavorable evaluation of the behavior of interest. It needs a consideration of the outcomes of performing behavior. Subjective norm refers to the belief about whether most people approve or disapprove of the behavior. A person's perception of the ease or difficulty of performing the behavior of interest.The theory holds that the stronger the attitude toward the behavior, subjective norm and perceived behavioral control, the more likely the person will engage in the behavior. As a general rule, the stronger the intention to engage in a behavior, the more likely a person will be to actually perform the behavior.

Bertoldo and Castro (2016) confirmed that personal moral norm is an individual to take action based on their moral responsibility. In the Norm Activation Model (NAM) model, personal moral norm is considered core elements. The individual's environmental behavior is determined by personal ethical standards and social ethical standards. The more personal ethical standards will motivate the individual to engage in environmental behavior

and vice versa, when an individual has a low personal moral standard, it will hinder environmental behaviour (Wang & Huo, 2019).

Espoused individualism (EIND) captures an individual's tendency to subordinate individual interests in pursuit of group interests with the less individualistic (or more collectivistic) people being expected to be more willing to advance group interests even at the expense of their personal interests (Srite & Karahanna, 2006). EIND should be relevant to individuals' green behaviors because it may result in costs/inconvenience to them but benefits to the public at large. According to Berger and Corbin (1992), Faith in others (FIO) is defined as an individual's perception of the efficacy of others (e.g., governments, companies) to perform the desired behaviour.

With the rapid development of the economy, along with the process of industrialization, modernization and population growth, the demand for electricity use is rocketing. Households are regarded as an important target group that can help reduce energy consumption and mitigate several environment and sustainability concerns. Undeniably, energy is a fundamental element of human society and has always played a key role in the development and urbanization of communities. However, with the incessant population growth, the technological booming, as well as the development of societies which strive for the best and highest quality of life; energy problems are inevitable. The rapidly growing demand for energy in all sectors of the economy - including the residential sector - has already raised several social, economic, and environmental concerns.

The country's electricity originates from 83 power plants, including 62 hydropower stations, 20 gas-fired plants, and one coal power plant. Currently, Myanmar only has one utility-scale solar power project, the 170 MW Minbu solar project located in Magwe Region. According to Myanmar government and Ministry of Electric Power (MOEP), Maximum Electricity Generation on 6 January 2022 is 3079 MW and Total Generation Unit is 59997 MWhr per day. Yangon Region, consisting of Myanmar's commercial capital and its hinterland, usually consumes 1500-1600 Mega Watts (MW) per day, while Mandalay, over 500 MW, Nay Pyi Taw, over 150 MW, other regions, nearly 1,500 MW.

1.1 Rationale of the Study

Energy is a key element for development, as it allows the progress of companies, the generation of jobs and the flow of investments; however, it is one of the most polluting

industries. Energy saving, in this sense, represents a benefit for the environment, as well as for the preservation of non-renewable resources. Electrical energy is a fundamental element in daily lives. In a digitalized and industrialized world, it is unthinkable not to have electricity, since everyone depends on it to carry out a large part of daily activities and to have a better quality of life.

The lack of electricity not only threatens the economic growth of the country but also prevents the expansion of infrastructure and industrial development. According to the regime's Ministry of Electric Power (MOEP), the annual need for power consumption in Burma is increasing annually from 15 percent to 17 percent. Guaranteed access to a stable and adequate electricity supply in Myanmar is still challenging.

Ensuring energy supply has become an essential issue for the economy and households. Demand for electricity continues to increase, but Myanmar's potential to develop electricity supply faces many limitations such as environmental problems, out of resources, sustainable development, etc. As a result, saving energy becomes a priority in all sectors of the economy, including residential areas. Nowadays, Myanmar government and Ministry of Electric Power (MOEP) give electricity based on shifts as there are not enough resources. Officials request households to reduce the consumption of electricity. Currently, SMEs and Factories run their process by generators, thus, all prices go up in the market.

Power lines are temporarily cut in some townships due to gas supply. Currently, the maximum power consumption of the Yangon city is up to 1500 MW representing approximately 40 percent of the whole country. The intensity of energy consumption in Yangon is among the highest in Myanmar (mmtimes, 2021). Since the supply falls short of the demand and there is a continuous increase in electricity consumption, it is highly desirable to conduct a demand-side analysis regarding Yangon consumers of electricity, as they constitute the largest group of electricity users. Therefore, policy makers have paid particular policy and research attention to household energy consumption, conservation, and efficiency behaviors, as well as the various determinants that may influence these electricity saving behaviors.

In order to study the energy saving behaviors of individuals, planned behaviour theory becomes vital. The Theory of Planned Behavior (TPB) predicts an individual's intention to engage in a behavior at a specific time and place. It can explain all behaviors

over which people have the ability to exert self-control. The TPB has been used successfully to predict and explain a wide range of behaviors and intentions. Therefore, this study is mainly done by focusing planned behaviour of individuals.

There are five main electric distribution factories in Yangon. Total electric supplies from those factories are 2044.1 MW. However, currently, those factories can produce only 601 MW representing only 29.4 percent of the total capacity of the factories. Therefore, electricity blackouts have expanded across the country, including in the business hub cities such as Yangon and Mandalay. It is critical for Myanmar to improve the efficiency of energy use and encourage energy conservation of the residents. Energy-saving efforts help avert power blackout. There is a great potential to relieve the pressure of electricity shortage by further encouraging residents' electricity-saving behavior. Therefore, it is important to study the factors affecting household electricity-saving behavior in Yangon in order to reduce electricity waste.

1.2 Objectives of the Study

The major intentions of the study are:

1) To examine the influencing factors on intention to save electricity of Yangon residents;
2) To analyze the effect of intention to save electricity on electricity saving behavior of Yangon residents; and
3) To analyze the moderating effect of espoused individualism and faith in other on the relationship between intention to save electricity and electricity saving behavior.

1.3 Scope and Method of the Study

This study primarily focuses on influencing factors on intention to save electricity and electricity saving behavior of Yangon residents. Descriptive and analytical research methods are applied to achieve the above objectives. Both primary data and secondary data are used in this study.

The study uses the two-stage random sampling method. Among the 33 townships in Yangon, 6 townships are selected and this study covers approximately 21 percent of total

townships in Yangon by using simple random sampling method of first stage. At the second stage, according to Yamane method, 397 electric users are selected as the sample size out of 72,542 residents in selected 6 townships in Yangon by simple random sampling. Structured questionnaire with 5-point Likert scale is used to collect the primary data. Secondary data are from documents from MOEP, previous research papers, textbooks, websites and other related information resources. Data are collected from April 2022 to May 2022.

1.4 Organization of the Study

This study is structured by five different chapters. Chapter one presents introduction of the study, and it includes rationale of the study, objectives of the study, scope and method of the study, and organization of the paper. Chapter two consists of about theoretical background of theory of planned behaviour, antecedent factors on energy saving behaviour, intention to save electricity, previous studies, and conceptual framework of the study. Chapter three presents profile and electricity consumptions in Yangon. Analysis on electricity saving behavior of Yangon residents is presented in chapter four. Finally, chapter five describes the findings and discussions, suggestions, recommendations, and the need for future study.

CHAPTER 2

LITERTURE REVIEW

This chapter presents Theory of Planned Behavior (TPB), antecedent factors on energy saving behavior, and intention to save electricity. It includes previous studies, conceptual framework of the study.

2.1 Consumer Behavior

Consumer behavior theory is the study of how people make decisions when they purchase, helping businesses and marketers capitalise on these behaviours by predicting how and when a consumer will make a purchase. It helps to identify what influences these decisions, as well as highlight strategies to proactively manipulate behavior. Consumer buying behavior is a choice made by a customer in buying a product. The choice is made based on collection of information that enables a customer to either reject or buy a product (Raji, 2007).

There are several and diverse substantive spheres of human development (physical, perceptual, cognitive, linguistic, personality, and social), assuming that behavior can be defined as a response that is observed directly or indirectly (Esposito et al., 2017). Understanding the stimuli that motivate this reward and loss aversion requires analyzing and working on the motivational elements of Emotion, Attention, Cognition, and Memory (Oehring & Schulte, 2014). People decide based on habits, personal experience, and simplified practical rules (Kahneman, 2011). Engel et al. (1986) defined consumer behaviour as “those acts of individuals directly involved in obtaining, using, and disposing of economic goods and services, including the decision processes that precede and determine these acts.

Having the correct information at the right time about the consumer allows the identification of competitive advantages in business relationships between brand and consumers, identifying and understanding the motivations that arise with indispensable in the current moment (Krzyk & Kunst, 2012). To understand the indicators of consumer behavior, the Theory of Planned Behavior (TPB) is most often used as a theoretical base.

2.2 Theory of Planned Behavior

The Theory of Planned Behavior (TPB) a cognitive theory by Azjen (1985) that proposes that an individual's decision to engage in a specific behavior such as gambling or stopping gambling can be predicated by their intention to engage in that behavior. Intentions are assumed to capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior. As a general rule, the stronger the intention to engage in a behavior, the more likely should be its performance (Ajzen, 1991).

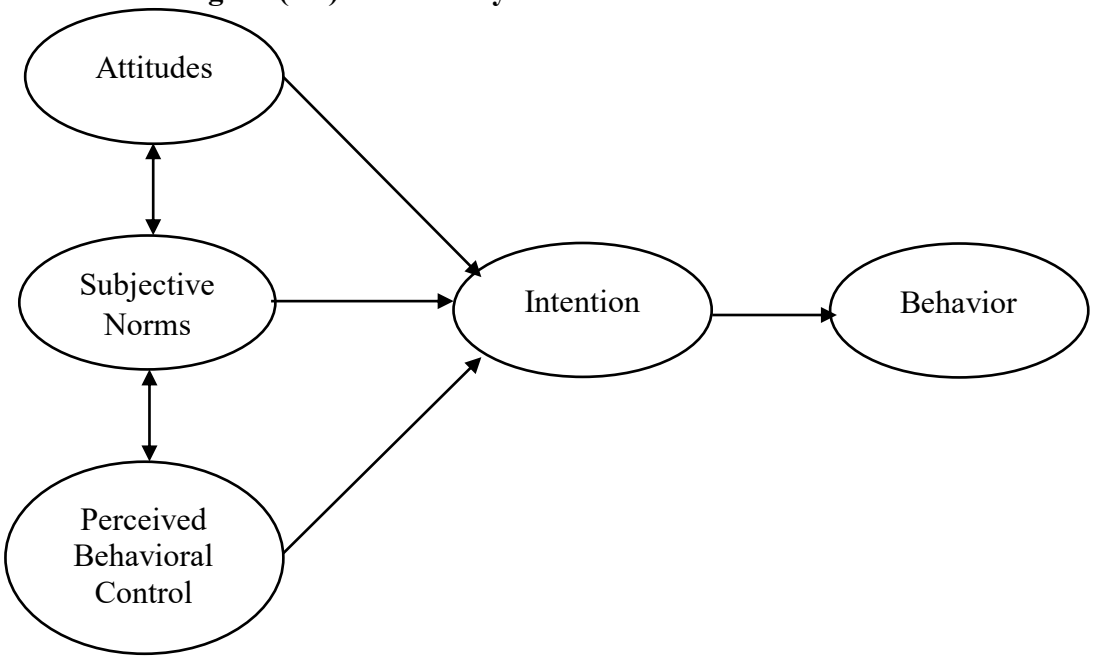
In Ajzen's original article he describes this theory using an example where a father intends to bring his children fishing. In Ajzen's example, the intention is to make time for this activity, prepare the equipment and the fishing license that is needed. The success of this intention depends on the person's individual control of all the different factors that go into this action (Ajzen, 1985).

The application of this theory can be used in all different sorts of fields and industries ranging from the healthcare field, politics, and even general businesses and organizations. This theory is based around understanding and predicting human behaviors, which allows for such a wide range of uses. Within the healthcare field, it can be used to study disease prevention, pharmacology companies, birth control, and even family planning (Martin, 2017).

The Theory of Planned Behavior is broken down into a person's attitude, their perceived behavioral control, and the subjective norms of society which all influence a person's intention and ultimately the final behaviour (Joshi & Rahman, 2015). It uses a person's personal attitude and opinion in combination with their perceived control of the behavior and societies' subjective norms to influence their behavioral intention which will lead to the behavior or action. In some cases, if someone has a negative attitude and feel that they do not have control of this action that will lead to the person being less likely to carry out that action. Also, if people within society do not approve of this action, then it would have a negative impact on a person's intention for the action. An individual's attitude and perceived behavioral control can have a positive or a negative impact on their intention and the action of the behavior depending on that individuals' personal views (Sarma et al., 2019).

The theory of planned behaviour (TPB) is the most frequently used theory to predict pro-environmental intentions and behaviours (Ru et al., 2018). The TPB by Ajzen (1991) posits that intention positively affects actual behaviour and behavioral intention is influenced by three factors namely attitude, subjective norms and perceived behavioural control. Chen and Tung (2014) argued that despite the broad effectiveness of the TPB in explaining pro-environmental behavior, many studies have enriched the explanatory effect of the theory by adding other constructs. This study extends the TPB by adding two new constructs (environmental concern and organisational climate) to develop a model of electricity saving purchase intention for hotel employees. (Sobiegalla et al., 2018). Because of this, the TPB variables may be especially relevant in explaining behaviors involving relatively high cost (in terms of cost, effort, convenience), such as car use or energy use (Lindenberg & Steg, 2007).

Figure (2.1) The Theory of Planned Behavior model



Source: Ajzen, (2005)

Theory of planned behavior (Ajzen, 1991) has been regarded as one of the most influential models to explain different kinds of human behavior in particular, those concerning environmental protection such as energy saving and green purchase (e.g., Han & Stoel, 2017). Within the context of TPB, attitude refers to a person's overall positive or negative evaluation of performing the focal behavior. It is also generally believed that the more favorable the attitude toward behavior is, the stronger the behavioral intentions will be (Ajzen, 1991). Prior pro-environmental research also reported that attitude is an

independent predictor of the corresponding behavioral intentions (Bamberg & Moser, 2007).

2.3 Antecedent Factors on Energy Saving Behaviour

There is a wide variety of energy-saving behavior within households, involving all of the energy-consuming activities such as lighting, cooking, air-conditioning, refrigerating, and entertainment (Leighty & Meier, 2011).

The main factors that can influence household energy consumption are human behavior together with the household properties of the demographic characteristics, dwellings, household income, appliance ownership, and use, lifestyle, and climate (Biresselioglu et al., 2019). Indeed, variations in residents' behaviors can cause significant differences in energy consumption between households with otherwise similar characteristics (e.g., dwelling types, income, and building energy performance) (Vassileva, et al., 2013). Generally speaking, residential energy-saving behavior can be divided into two types: habituation behavior and investment behavior (Barr et al., 2005).

Habituation behavior, which is also known as curtailment behavior, refers to the direct reduction of household energy consumption by adjusting or changing certain behaviors such as turning off lights when they are not needed, unplugging power outlets, and closing the refrigerator door promptly (Wang et al., 2018). Investment behavior, which is also known as efficiency behavior, refers to the indirect reduction of household energy consumption through investment in energy-saving equipment or technological transformation (Trotta, 2018). Examples of this behavior are the purchase of efficient air conditioning and installation of efficient heating systems (Jia et al., 2018). Some studies have only been conducted on a certain type of energy-saving behavior (Wang et al., 2019). However, the differences in the impact of psychological behavior factors, such as environmental concern and attitude towards electricity saving, on the two types of energy saving behaviors cannot be ignored (Zhao et al., 2019).

Theoretical models such as the theory of planned behavior (TPB), theory of social cognition, and norm activation model (NAM), are widely used to study the impact of psychological behavior factors on residential electricity-saving behavior. Among them, the TPB is considered to be the most influential theory in explaining pro-environment intentions and behaviors (Wang et al., 2019).

According to Canova and Manganelli (2020), cognitive attitude, subjective norm, perceived behavioural control, and habit were significantly related to intentions, and perceived behavioural control was the strongest predictor.

An antecedent refers to a factor that precedes a specific attitude or behavior, while an outcome is the result of this attitude or behaviour. The antecedents for behaviours requiring direct energy use performed by humans need to be investigated to construct suitable and tailored interventions and, consequently, decrease energy consumption (Abrahamse et al., 2007).

(a) Attitude

Attitude was first used as a psychological concept by Thomas and Znanieckie (1918) at the beginning of the 20th century. Since attitude is a frequently used term in everyday life, almost everyone has an idea about the meaning of this term. However, it is important to clearly define the concepts used by science educators. For example, the concepts of attitudes based on beliefs and experiences of individuals, learnable and related to behaviors, do not have the same meaning. An attitude which is not a general statement can be defined as a emotion felt towards a person, situation, group, issue or idea. Belief combines some qualifications or features with an object (Koballa & Crawley, 1985).

The term "attitude" is defined as a state of mind and a psychological perception learned and formed through experience founded on an individual's attitude toward people, situations, and objects (Ivancevich et al., 2008). As per TPB, attitudes indicate how positively or negatively a person evaluates behavior (Hill et al., 1977). Attitude towards the behavior determines the extent to which a person has a favourable or an unfavourable assessment of a certain behavior. A more favorable attitude towards a certain behavior by an individual should lead to a stronger intention to perform the behavior (Lin et al., 2015).

Attitudes toward the performance of a particular behavior are a function of beliefs around the outcomes of that behavior (i.e. whether it is a 'good thing to do', or not), and an assessment of whether or not they are likely to perform it. Most studies encountered supported attitudes as a valid determinant of intentions to save energy (Papagiannakis & Lioukas, 2012), whether these originated from managers or lower-level staff. However, the level of influence of attitudes in relation to other antecedent factors is known to vary across different types of pro-environmental behavior (Greaves et al., 2013).

Regarding attitude, two components have been distinguished: cognitive or instrumental and affective or experiential. The cognitive component reflects the act's perceived instrumentality (i.e., its anticipated positive or negative consequences, perceived benefits and costs of the behavior), whereas the affective component reflects the positive or negative experiences with the behavior, as well as any emotion-based judgements about the behavior (Fishbein & Ajzen, 2010).

According to the TPB, attitude is the view that people take of certain events (Ajzen, 1991). Residents' concepts of energy consumption are important subjective factors impacting house-hold energy consumption, the principal aspects of which are awareness of energy saving and environmental protection. The more positive the attitude of residents toward energy-saving, the more effectively they are able to reduce their energy consumption (Oikonomou et al., 2009). Wang et al. (2019) established that attitudes positively impact consumers' intention to purchase energy-saving products. Likewise Ali et al. (2019) showed the impact of specific contributors and inhibitors on attitudes toward energy-saving products and how those attitudes positively impact intentions to buy energy saving products.

(b) Subjective Norms

A subjective norm is the social pressure that exerts an influence on the implementer of a certain behavior. Ajzen (1991) postulated that there were two important factors behind whether or not a person committed an act, namely, a behavioral intention and the degree of recognition given by other people to a certain kind of behavior. Subjective norms indicate the social pressure felt by an individual to perform a particular behavior, and their perception of how well they perform that behavior in the eyes of their social group. This construct is seemingly the most hotly-debated in terms of its explanatory power, compared to Attitudes and Perceived Behavioral Control. The importance of norms in an organisational setting is supported by observations of comparative feedback in energy-saving intervention studies; Siero et al. (1996) observed a substantial increase in the amount of energy saved when participants were aware of the savings made by a rival manufacturing site. However, according to a meta-analysis by Armitage and Conner (2001), subjective norms are typically the weakest predictor of intention to perform a behaviour.

Subjective norms are the views considered important by individuals who advise the individual to perform or not perform certain behaviors and motivation accompanied by a willingness to do or not do something that is considered important (Wedayanti & Giantari, 2016). According to Maulana (2009), subjective norms or socially referred to a person's beliefs on how and what to think about people considered important and motivated to follow the thought. Subjective norm is a norm which departed from the inner element or the human conscience (Sumaryono, 2012).

Subjective norms generally express the degree of approval or disapproval of certain behaviors by people, society or other important persons (Sultan et al., 2020). As per the TPB framework, Subjective Norms (SN) referred to a person's feeling of societal stress regarding whether or not a person should do something (Finlay et al., 1999). John and Alice (2010) stated that family members influenced each other regarding their energy-saving efforts. Midden and Ritsema (1983) also found that social norms and personal ethical standpoints were important influencing factors regarding household energy-saving behavior. Supporting their view, Black (1985) argued that households' energy-saving behaviors were largely affected by norms. However, personal and social relations with family, friends, and colleagues are also important factors affecting residential energy consumption behaviors. Subjective norms had a significant impact on household energy-saving behavior. Disseminating electricity-saving achievements is thus an effective way of improving household energy saving and affecting residential expectations.

Subjective norms indicate the possibility that individuals or groups that are important to an individual will like or dislike the performance of a particular behavior (Ajzen, 1991). Greaves et al. (2013) found that SNs positively affect employees' intention to switch off computers when leaving their desk for more than one hour and recycle waste at work. Zierler (2017) argued that the relationship between SNs and intentions and behaviors is a subject of much debate with varying empirical findings and Armitage and Conner (2001) remarked that SNs tend to vary considerably across behaviors. Abrahamse and Steg (2011) found that SNs do not contribute to the explanation of intentions when attitudes and perceived behavioral control are controlled for.

Li et al. (2020) expressed those societal pressures, such as subjective norms, are even more visible in the circumstance of Asian culture. When faced with new things, it is easier for consumers to be affected by the words and actions of others and to change their original views and initial intention.

(c) Perceived Behavioral Control

Perceived Behavior Control (PBC) defines the degree to which an individual observes a willingness to connect in a particular kind of behavior (Ajzen, 1991). PBC has been explored as a significant antecedent of behavioral intentions in the context of green consumption (Chen & Tung, 2014). PBC is also distinguished in the green literature as the ease or difficulty of executing a specific behavior (Bamberg et al., 2007). Research-oriented more specifically toward energy-saving behaviors by Wang et al. (2014) or energy-saving intentions Alam et al. (2014) came to similar conclusions. Closer up, PBC has been found to considerably impact consumers' intentions to purchase energy-efficient products at the household level (Tan et al., 2017). Indeed, in addition to intention, studying PBC is valuable to predict behavior directly. As part of eco-friendly products, it has been empirically confirmed that consumer PBC influences adoption intention and behavior (Wang et al., 2016). Mamun et al. (2019) established that PBC is a fundamental determinant of intention and behavior.

Perceived Behavioral Control indicates the level to which an individual feels they can influence their own behavior, in light of external controlling factors. Perceived Behavioral Control has previously been observed to have the strongest influence over the intentions and performance of energy saving behaviors (such as switching off lights) in an office setting (Littleford, 2013). Contrasting with this, Cordano and Frieze (2000) observed positive relationships between attitudes and intentions, subjective norms and intentions, and past behaviors and intentions, but NOT perceived behavioral control and intentions, across a sample of US manufacturing facilities.

Perceived behavioral control is an important variable affecting behavioral intentions. Perceived behavioral control is the degree of difficulty experienced by an individual in maintaining rationality when perceiving a certain event (John & Alice, 2010). This concept entails two meanings: the perceived ability to control (whether or not people believe that they have the ability to control a certain behavior); and the perceived degree of difficulty (whether or not it is difficult to perform a particular behavior). Convenience, time duration, and economic condition are the main restrictions affecting perceived behavioral control. The higher the level of the perceived behavioral control relating to energy-saving is, the better the response of residents to saving energy (Oikonomou et al., 2009). Anker-

Nilssen (2003) confirmed the decisive role of time-saving, convenience, comfort, and mobility in an individual's energy-saving decisions. Scarpa and Willis (2010) also indicated that economic incentives have important influences on energy-saving behaviors.

Perceived behavioral control (PBC) refers to the extent to which individuals perceive themselves to be ready to engage in a specific form of behavior. In fact, stronger behavioral control is supposed to enhance consumers' willingness to perform a given behavior (Ajzen, 1991). PBC has also been defined as the perceived level of ease or difficulty of performing a specific type of behavior (Bamberg, 2003).

Perceived behavioral control refers to the extent of control that an individual perceives over performing a certain behavior. It is concerned with a person's perceived ease or difficulty to perform the focal behavior and such perception is subject to influence of Perceived behavioral control refers to the extent of control that an individual perceives over performing a certain behavior (Kang et al., 2006). It is concerned with a person's perceived ease or difficulty to perform the focal behavior and such perception is subject to influence of perceived behavior control on the corresponding behavioral intentions (Chan & Lau, 2001). In a similar vein, more recent studies also revealed that perceived inconvenience and barriers significantly deters intentions to purchase green products (Barbarossa & Pelsmacker, 2016). Given that saving electricity involves personal inconvenience and discomfort (e.g., use less air-conditioning or hot water) as well as a certain amount of environmental knowledge for practicing this behavior (Wang et al., 2017), individuals are unlikely to have full volitional control over it.

2.4 Intention to Save Electricity

Intentions refers to an individual's disposition to perform a certain behavior and whether the behavior can be performed depends much on the relative strength of the disposition (Ajzen, 1991).

Energy in general or electricity in particular is a specific product necessary for daily life. Like it or not, every family has to buy and use it. Electricity saving intention can be described as the self-commitment of an individual to participate in electricity saving behavior. Power saving behavior is the act of shutting off electricity when not needed, using electricity highly efficiently, investing in power-saving devices to reduce electricity consumption. Efficient use is using the least amount of energy and still satisfying the needs

of use. Energy saving intention is a positive and important predictor of household energy saving behavior (Wang et al., 2018).

According to Ajzen (1991), behavioral intention is considered as a combination of motivational factors that influence the behavior of each individual, which shows the willingness or effort that each individual will spend to perform the behavior. Most human behaviors are predictable based on intentions because behaviors are obeyed to the will and under the control of intention. Intention of behavior to be seen as an intermediate premise of behavior. Energy in general or electricity in particular is a specific product needed for everyday life. Whether you like it or not, every family must buy and use. The intention of the behavior is considered as the intermediate antecedent of the behavior. It is understandable that in most studies of consumer behavior, intention and behavior are considered as one factor, or if there is a difference, the relationship between them is also very close.

The intention of saving electricity is an important and positive predictor of household energy saving behavior (Wang et al., 2018). It is implied that in most studies about consumer behavior, intention and behavior are considered as one factor or if there are differences, the relationship between them is also very close.

2.5 Electricity Saving Behavior

Electricity saving behavior can be described as the behaviors performed by individuals to reduce overall electricity use and can be broadly divided into two categories. (1) Habitual energy-saving behaviors: These focus on continuous efforts to reduce electricity use by curtailment measures. Examples of habitual electricity saving behavior include reducing or avoiding the usage of air-conditioners and turning the power off when appliances are not used (2) one-shot purchasing behaviors: This involves the replacement of old technology with high electricity use with new technology with low energy use and the purchase of more-efficient technology (Stankuniene, 2021).

Energy (Electricity) saving behaviour refers to the behaviours that an individual performs to reduce overall energy (electricity) use (Sweeney, et al., 2013). Electricity saving behaviour includes the following: (1) Curtailment behaviour. This kind of behaviour saves energy through reduced use. Curtailment behaviour includes activities such as turning off lights, reducing appliance usage, and unplugging appliances. These activities must be

repeated repeatedly for consistent energy savings. (2) Efficiency behavior. This approach is related to the purchase of more efficient appliances. (3) Maintenance behaviour. This involves saving energy by better maintaining appliances as this improves their performance and efficiency (Azizi, et al., 2019).

Electricity saving behavior is the act of shutting down when not needed, using high-efficiency electricity, investing in energy-saving devices to reduce electricity consumption. Effective use is to use the least amount of energy and still satisfy the demand. There are many energy-saving behaviors in households, including all energy consuming activities such as lighting, cooking, air conditioning, refrigeration and entertainment (Leighty & Meier, 2011).

2.6 Social-Cultural Values

According to Chan (2020), there are two social-cultural values, which are espoused individualism (EIND) and faith in others (FIO).

(a) Espoused Individualism (EIND)

Espoused individualism (EIND) on the intentions-behavior link in the context of saving electricity. EIND captures an individual's tendency to subordinate of individual interests in pursuit of group interests with the less individualistic (or more collectivistic) people being expected to be more willing to advance group interests even at the expense of their personal interests (Chan, 2001).

Espoused individualism refers to an individual's preference in a social atmosphere, where the person cares. Hofstede (2001) explained that individualism suggests a lifestyle in which the person tries to be self-sufficient and not dependent on others. Those who value individualism rely more on media and less on their social networks for information. Because of such cultural attributes, people from collectivistic cultures tend to show higher levels of conformity, whereas individualistic cultures place higher emphasis on individual initiative (Bond & Smith, 1996). Triandis (1989) argued that people who hold individualistic values have a private self. As such, their own goals, beliefs, and values are more salient. They tend to focus on the development and maintenance of a separate personal identity (Oyserman, 1993).

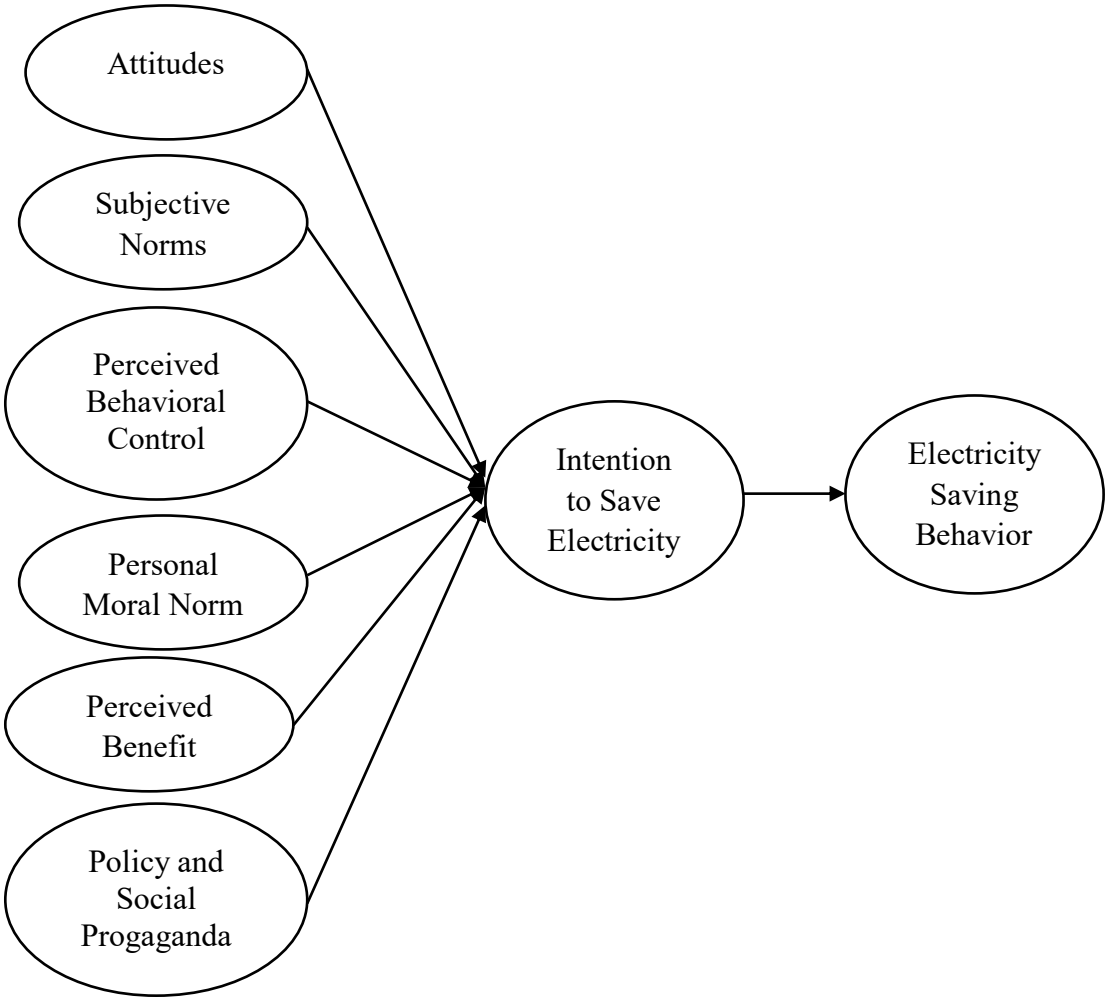
(b) Faith in Others (FIO)

Faith is defined as an unquestioning belief that does not require proof or evidence. According to Berger and Corbin (1992), faith in others (FIO) is defined as an individual's perception of the efficacy of others (e.g., governments, companies) to perform the desired behavior. It could be conceived as the opposite of perceived self-efficacy which refers to an individual's perception of his own ability to perform the desired behavior (Parkinson et al., 2017).

2.7 Previous Studies

To get the basic idea of conceptual framework, 2 previous studies are referenced. Hien and Chi (2020) did the research titled the factors affecting household electricity saving behavior: a study in Vietnam. Their study incorporated elements of planned behavior theory (TPB) and norm activation model (NAM) as the basis for developing and extending key assumptions. In addition, expansion TPB is used to study influence factors affecting electricity saving behavior. The aim is to clearly understand the factors affecting consumers' electricity saving behavior. The results of this research emphasize the importance of the benefits, policies and propaganda to the intention and behavior of saving electricity of residents. Through a sample of 395 randomly selected residents in Tay Ninh Province and Ho Chi Minh city in Vietnam, the proposals were checked using a structural equation model (SEM).

Figure (2.2) Conceptual Framework of Hien and Chi

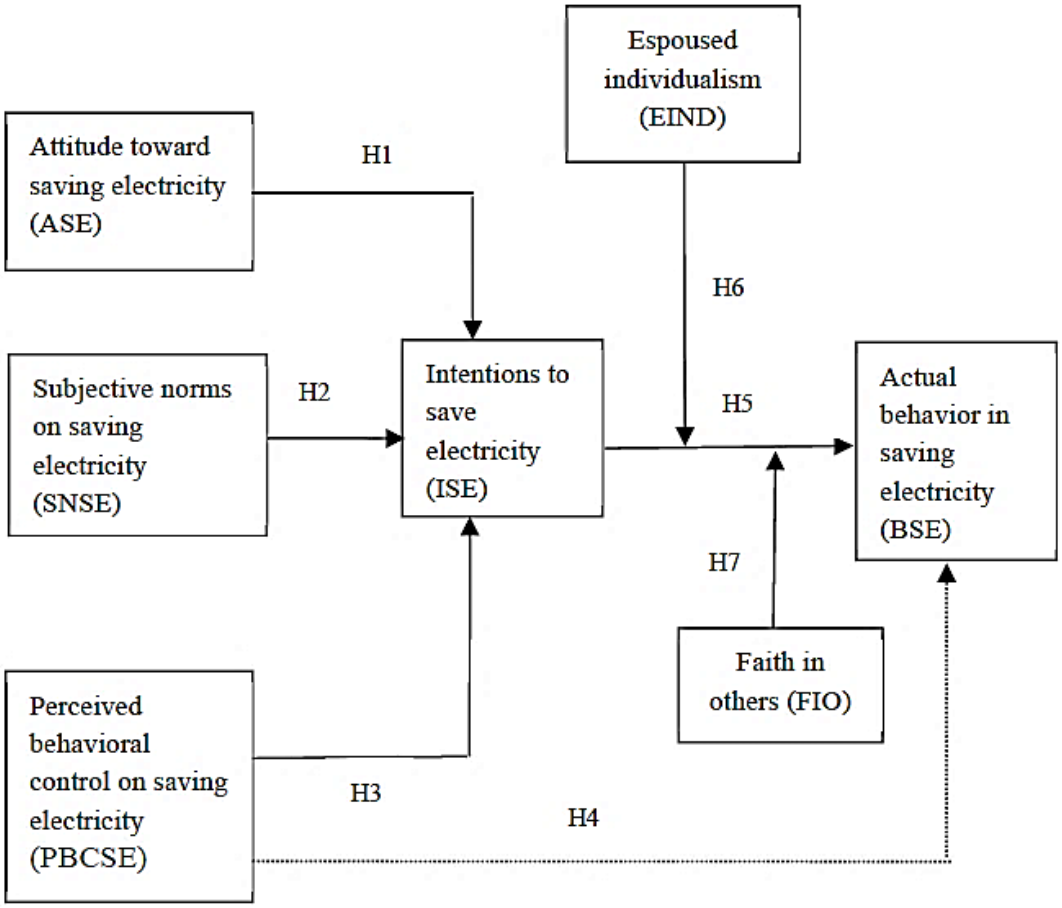


Source: Hien & Chi (2020)

The results showed that the factors in TPB and NAM (such as perceived behavioral control, subjective norm, attitude, personal moral norm) and additional factor (perceived benefit) are the important factors that influence resident's intention of saving electricity. Moreover, electricity saving behavior is strongly influenced by the intention of saving electricity, perceived benefit, policy and social propaganda.

Koon et al. (2020) conducted the research titled Moderating effects of socio-cultural values on pro-environmental behaviors. Their study aimed to explain the discrepancy between pro-environmental intentions and behaviors with moderating effects of two socio-cultural values (espoused individualism and faith in others) on the link between intentions and actual behaviors to save electricity. An online survey of 303 consumers in Hong Kong with a structured questionnaire was used to collect the data to test all the hypothesized relationships.

Figure (2.3) Conceptual Framework of Koon et al.



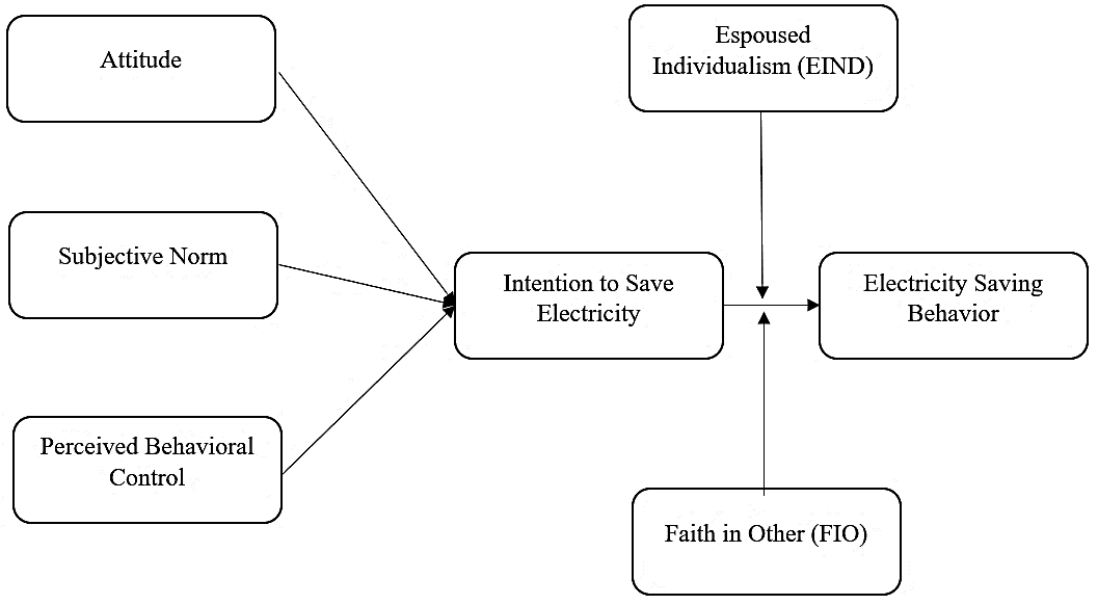
Source: Koon et al. (2020)

The study found that attitude toward saving electricity has a significant positive effect on the intentions to save electricity but subjective norms and perceived behavioral control have no such effect on intentions but do positively affect the actual electricity saving behavior. Finally, the link between intentions and behavior to save electricity is negatively moderated by espoused individualism and positively by faith in others.

2.8 Conceptual Framework of the Study

This section presents the conceptual framework of the study based on the theoretical background and previous studies. Figure (2.4) presents the conceptual framework of the study.

Figure (2.4) Conceptual Framework of the Study



Source: Own Compilation (2022)

The conceptual framework of study is developed by referring two previous studies of (Hien & Chi, 2020) and (Koon et al., 2020). Independent variables include attitudes, subjunctive norms and perceived behavioural control. In addition, there are two social-cultural values known as espoused individualism and faith in other. This study is intended to find out whether antecedent factors affect on intention to save electricity. Furthermore, it also analyses the effect of intention to save electricity on electricity saving behavior.

CHAPTER 3

PROFILE OF YESC AND ELECTRICITY CONSUMPTIONS IN YANGON

This chapter presents the profile of YESC followed by electricity consumptions of Yangon residents. In addition, it presents electricity sources and supplies and rate of electricity consumption. And then the profile of respondents and reliability tests are shown in this chapter.

3.1 Profile of Yangon Electricity Supply Corporation (YESC)

Yangon District Electric Head Office managed by Myanmar Electric Power Enterprise under Ministry of Electric Power was established as new board namely "Yangon City Electricity Supply Board" on 1st April 2006. Corporatization of YESB into YESC has been appointed to start on 1st April 2015 in accordance with the order no. 58/2/7/ president office dated on 29th January 2015 (www.moee.gov.mm).

To stand with owned budget separate from State's budget, YESC has formed on 1st July 2015 in accordance with the office of the union minister order no.(126/2015) of Ministry of Electric Power.

YESC distributes the required electric power to the domestic and commercial consumers by connecting with 66 kV, 33 kV, 11 kV, 6.6 kV and 0.4 kV low voltage distribution lines received from the National Grid transmitted via 230 kV High Voltage transmission line from Northern part of Myanmar. YESC intends to fulfill the annual load increased in the area of Yangon Region.

3.2 Electricity Consumption of Yangon Residents

According to the Ministry of Electric Power (MOEP), the annual need for power consumption in Myanmar is increasing annually from 15 percent to 17 percent. To fill the gap in energy needs, the government plans to implement an energy mix including hydropower, natural gas, coal, and renewable energy to provide electrical access to approximately ten million households as part of the National Electrification Plan (NEP)

which envisions 100 percent nationwide electricity access by the year 2030. The consumption of electricity in Yangon Region keeps rising by 13 percent annually. Sometimes, electricity has to be supplied on an alternate basis to regions in Yangon and other major cities where electricity consumption is high. Table (3.1) presents the electricity consumption in Yangon division from 2016 to 2022.

Table (3.1) Electricity Consumption in Yangon Division from 2016 to 2022

Unit in (MW)

Month/ Year	2016	2017	2018	2019	2020	2021	2022
1	1000.31	1150.48	1306.21	1410.5	1479.2	1527.3	1275.0
2	138.41	1174.10	1336.28	1463.50	1574.70	1420.9	1325.47
3	1125.25	1124.83	1395.07	1589.1	1534.6	1431.0	1307.92
4	1138.1	1281.05	1497.32	1563.60	1477.10	1426.0	1348.95
5	1188.0	1351.10	1548.23	1423.50	1550.70	1642.0	1348.44
6	1183.5	1259.81	1430.86	1480.2	1541.1	1544.0	
7	1160.6	1242.93	1415.15	1442.4	1531.0	1486.1	
8	1152.5	1292.31	1421.13	1449.7	1516.1	1457.0	
9	1165.28	1326.64	1474.55	1565.5	1582.1	1433.9	
10	1204.89	1310.5	1470.48	1529.4	1599.3	1455.4	
11	1144.86	1354.68	1520.16	1514.6	1527.6	1495.9	
12	1156.44	1316.12	1491.65	1479.2	1699.4	1376.9	
Highest	**1204.89**	**1354.68**	**1548.23**	**1589.1**	**1699.4**	**1642.0**	**1348.95**

Source: www.yesc.org.mm (2022)

According to Table (3.1), the consumptions of electricity in Yangon is generally increasing. However, the consumption of electricity in 2021 was decreased because some factories shut down and saved electricity usage.

At present, households that cook with electricity in Myanmar tend to use a rice cooker, kettle and an electric frying pan. These products tend to be affordable and widely available. Yangon residents do not always use the Liquid Petroleum Gas (LPG) gas stoves since LPG is currently a more expensive option for cooking when compared to electricity. It is cheaper to cook Myanmar dishes on a range of electrical appliances than it was on firewood, charcoal and LPG stoves (Parsons & Price, 2021).

3.3 Electricity Sources and Supplies

The country's electricity originates from 83 power plants, including 62 hydropower stations, 20 gas-fired plants, and one coal power plant. For Yangon region, electricity supplies get from 5 stations in Thilawar, Hlawga, Ahlone, Ywama, and Tharkayta regions. Each station has more than one generator with different power supplies. Table (3.2) presents the available electric supplies from each station.

Table (3.2) Available Electric Supplies from Each Station

No.	Factory Name	Type	Installed Strength (Megawatts)		
			Installed (MW)	Units (nos)	Total (MW)
1.	Hlawga	GT	33.2	3	99.9
		STG	54.3	1	54.3
		IPP-MCP1	(1.025+1.5)	(25+3)	30.1
		IPP-MCP2	90	3	27.0
2.	Ywarma	EGAT	120	2	240
		GT	18.45	2	36.9
		IPP-UPP	4	13	52
3.	Ahlone	GT	33.3	3	99.9
		SGT	54.3	1	54.3
		IPP-CEEC GT	100	1	100
		IPP-CEEC STG	51.5	1	51.5
		IPP-Toyo Thai GT	47	2	94
		IPP-Toyo Thai STG	27.6	1	27.6
4.	Thaketa	GT	19	3	57
		STG	35	1	53
		IPP-MAX	3.349	16	53.6
		IPP-U Energy GT	75	1	75
		IPP-U Energy STG	31	1	31
		IPP-Vpower LNG	400	1	400
		TM-2500(HSD)	25	1	25
5.	Thilawa	GT	25	2	50
		IPP-Vpower LNG	350	1	350
	Total				2044.1

Source: YESC (2022)

According to Table (3.2), there are five main electric distribution main factories in Yangon. Hlawga generator division can supply 211.3 MW while Ywarma division provides 328.9 MW. Ahlone, Thaketa, and Thilawa divisions can supply electricity supplies by 427.3 MW, 694.6 MW, and 400 MW respectively. Total electric supplies from those four factories are 2044.1 MW. However, currently, those factories can produce only 601. MW representing only 29.4 percent of the total capacity of the factories.

Since early 2022, electricity blackouts have expanded across the country, including in the business hub cities of Yangon and Mandalay. Power generation declined and the ministry has been working on damage control measures and attracting new foreign investment to stabilize country's energy sector, while attempting to resuscitate Myanmar's energy sector despite outgoing foreign investments, local currency depreciation, the Central Bank's restrictions on foreign currencies, and rising global fuel prices. Peak demand is expected to reach 12.6 GW by 2030, up 3.5 times from the current level.

Blackouts usually only get worse as hydroelectric power plants further reduce output until the monsoon season starts in June. Global fuel shocks and currency fluctuations will continue to keep domestic fuel prices volatile. In Yangon, the country's biggest city, there have been rolling blackouts of four to six hours a day since late April. It is estimated that the peak electric usage will reach 1800 megawatts in the summer time 2022 (YESC, 2022).

3.4 Rate of Electricity Consumption

The electricity bill comes with monthly charges in post-paid system. It contains the amount of monthly charges and monthly maintenance fee. Table (3.3) presents the rate for electricity power consumption based on units and type of consumers.

Table (3.3) Rate for Electricity Power Consumption

Sr. No.	Type of Consumer	Rate	
		Units	Kyats Per Unit
1.	Residents/ Religious	1-30	35
		31-50	50
		51-75	70
		76-100	90
		101-150	110
		151-200	120
		201 and Above	125
2.	Factory/ Business	1-500	125
		501-5,000	135
		5,001-10,000	145
		10,001-20,000	155
		20,001-50,000	165
		50,001-100,000	175
		Over 100,000	180

Source: YESC (2022)

Rate for Electricity Power Consumption based on consumption units and type of consumer. Under the new rates, residential households and religious buildings will continue to pay at the previous rate at 35 Kyats, but only for up to 30 units. Consumers will be charged 50 Kyats for 31-50 unit, 70 Kyats for 51-75 unit, 90 Kyats for 76-100 unit, 110 Kyats for 101-150, 120 Kyats for 151-200, and 125 Kyats for over 200.

As shown in Table (3.3), for business consumers including companies, factories, government buildings, embassies, and international organisations, they will have to pay 125 Kyats per unit up to 500 units, increasing by 10 Kyats until 50,001-100,000 units. 180 Kyats per unit will be charged for over 100,000 units.

3.5 Profile of Respondents

This section presents the profiles of 397 respondents who filled and returned the structured questionnaire. Profile of the respondents is expressed by frequency and percentage in Table (3.4).

Table (3.4) Profile of Respondents

Sr. No.	Particular	Frequency	Percentage
	Total	**397**	**100.0**
1	**Gender**		
	Male	183	46.10
	Female	214	53.90
2	**Age (Years)**		
	18 – 20	6	1.51
	21 – 25	41	10.33
	26 – 30	68	17.13
	31 – 35	70	17.63
	36 – 40	155	39.04
	41 – 45	57	14.36
3	**Salary (Kyats)**		
	150,001 ~ 300,000	309	77.83
	300,001 ~ 500,000	76	19.15
	500,001 ~ 700,000	12	3.02
4	**Life Arrangement**		
	Alone	91	22.92
	Not alone	306	77.08
5	**Position**		
	High school	93	23.43
	Graduate	37	9.32
	Post Graduate Diploma	223	56.17
	Master	34	8.56
	Other	10	2.52

Source: Survey Data (2022)

The majority of respondents, according to the survey's findings, are females. The survey was mostly answered by the female respondents for energy consumption, and the majority of the respondents were between the ages of 36 and 40. The respondents between the ages of 31 and 35 make up the second-largest group, and young people between the ages of 18 and 20 make up the minority group. The majority of respondents possess a post-graduate diploma, with high school graduates making up the second-largest category. They are living with their families in the same house. The majority of respondents earn between 150,001 and 300,000 depending on their professions.

3.6 Reliability Test

Reliability is a measure of the stability or consistency of the variable in the structured questionnaire. Questions are developed by using 5-point Likert scale. The result of the reliability test by Cronbach's Alpha is presented in Table (3.5).

Table (3.5) Reliability Test

Sr. No.	Variable	No. of Items	Cronbach's Alpha	Reliability Level
1	Attitude	5	.726	Reliable
2	Subjective Norm	5	.865	Reliable
3	Perceived Behavior	5	.780	Reliable
4	Intention to Save Electricity	5	.779	Reliable
5	Electricity Saving Behavior	5	.769	Reliable
6	Espoused Individualism (EIND)	5	.798	Reliable
7	Faith in Others (FIO)	5	.715	Reliable

Source: Survey Data (2022)

According to Table (3.5), Cronbach's alpha values for all variables show that all the scores are greater than 0.7. Therefore, it is said to have good reliability and the findings are valid for this study.

CHAPTER 4

ANALYSIS ON ELECTRICITY SAVING BEHAVIOR OF YANGON RESIDENTS

This chapter presents the analysis on the effect of influencing factors on intention to save electricity. In addition, it includes the analysis of the effect of intention to save electricity on electricity saving behavior of Yangon residents. Finally, to analyze the moderating effect of EIND and FIO on the relationship between intention to save electricity and electricity saving behavior.

According to the Best (1977), the means were interpreted as follows: strongly disagree in the point rage of 1.00 to 1.80, disagree 1.81 to 2.60, neutral 2.61 to 3.40, agree 3.41 to 4.20 and strongly agree 4.21 to 5.00.

4.1 Analysis on the Influencing Factors on Intention to Save Electricity

This section finds out the effect of influencing factors on intention to save electricity. Influencing factors are attitude, subjective norm, and perceived behavioral control. Structured questionnaire are collected from 397 residents in Yangon.

This section firstly presents the influencing factors include attitude, subjective norm, and perceived behavioral control.

(a) Attitude

Customer attitudes are a complex of a person's attitudes, intentions, and behavior toward intention to save electricity. Table (4.1) presents findings relating to the attitude of Yangon residents.

Table (4.1) Attitude

Sr. No	Attitude	Mean Score	Std. Dev
1.	Saving electricity able to save environment	3.76	1.05
2.	Reducing energy consumption in the home tackling climate change	3.67	0.98
3.	Important to conserve electricity at home	4.18	0.61
4.	Switching off air conditioning and lights when nobody is in the room	4.25	0.50
5.	Importance of saving electricity in addressing the issue of energy shortage	4.04	0.84
	Overall Mean	**3.97**	

Source: Survey Data (2022)

According to Table (4.1), the respondents understand the significance of preventing continuous use of the air conditioner by turning it off when no one is in the room because it consumes a lot of energy and raises electricity costs. The respondents also agree that it's crucial to reduce energy use at home. Hence, they turn off unnecessary lights, shut down computer, turn off TV when no one is in the room. Since the cost of electricity has increased recently, apart from that, residential townships are provided electricity with proportion so that if reducing electricity individually can save more energy for other places. The overall mean score (3.97) indicates the agree level of respondents. It means that the respondents have knowledge about electricity use since they were old enough. Respondents know that they have to turn it off when they go out because if the wires are too hot and it can cause fire.

(b) Subjective Norm

Subjective norms are the influences or the perceptions of social pressure to behave in a particular way. The characteristic of subjection norms of energy consumption is shown in Table (4.2).

Table (4.2) Subjective Norm

Sr. No	Subjective Norm	Mean Score	Std. Dev
1.	Close people urging to save electricity usage	3.42	1.07
2.	Time to save electricity thought by colleagues	3.07	1.20
3.	Need to use energy saving devices advised by close friends	3.31	1.16
4.	Valuing the opinion of the people while making a decision on energy conservation	3.48	1.14
5.	Family members advising to save electricity in the coming month	3.33	1.09
	Overall Mean	**3.32**	

Source: Survey Data (2022)

Based on the Table (4.2), the respondents value the opinions of others when it comes to making decisions about energy conservation because the respondents have a characteristic of caring and following advice from friends, family, and peers. Besides, the respondents accept the advice from peers when they are asked to reduce energy usage which leads to lower living expenses. The overall mean score (3.32) states the neutral level of agreement. It shows that the respondents are influenced neither by their family members nor close people as they know to switch off electric breakers when nobody is at home.

(c) Perceived Behavioral Control

Perceived behavioural control refers to a person's perception of the ease or difficulty of performing the behavior of interest. It varies across situations and actions, which results in a person having varying perceptions of behavioral control depending on the situation. Table (4.3) presents the perceived behaviour control towards electricity saving behaviour.

Table (4.3) Perceived Behavioral Control

Sr. No	Perceived Behavioral Control	Mean Score	Std. Dev
1.	Able to save electricity when at home	3.85	0.88
2.	Able to make the decision to install energy saving devices in my household	3.77	0.89
3.	Having knowledge and skills to save energy at home	3.73	0.99
4.	Able to do electricity saving as own will	4.03	0.72
5.	Saving electricity being a good way of reducing costs	4.27	0.76
	Overall Mean	**3.93**	

Source: Survey Data (2022)

According to Table (4.3), the respondents think that saving electricity is a good way of reducing costs because they can save money from paying electric bills, increasing energy security, reducing pollution, and able to maintain electrical equipment which can perform better for longer. Additionally, the respondents believe that they can do electricity saving according to their will as they can adjust day to day behavior, and make a practice of reducing energy consumption such as unplug electrical devices, turn off laptop, air con, switch off the lights if no need to use them. According to overall mean score (3.93), the respondents show their agreement level because they already have the knowledge to pay when they use electricity.

This section secondly presents the intention to save electricity. Residents intend to save the electricity at their house for many reasons. Table (4.4) presents the degree of intention of the residents to save the electricity.

Table (4.4) Intention to Save Electricity

Sr. No	Intention to Save Electricity	Mean Score	Std. Dev
1.	Planning to use less energy in household.	3.37	1.09
2.	Considering to turn on home entertainment only when required	3.73	1.19
3.	Planning to reduce the use of electric items (water heater) to save electricity at home	3.75	0.80
4.	Planning to turn off computer after the job is finished	3.98	0.91
5.	Considering to set the comfortable temperature for aircon	3.93	0.83
	Overall Mean	**3.75**	

Source: Survey Data (2022)

According to Table (4.4), the respondents are confident that they can endeavor to save electricity at home since they realize that saving electricity is a good way of reducing costs. The respondents use energy-saving devices like LED light bulbs, solar energy, and energy-efficient appliances. It shows that respondents can choose the right equipment to save electricity. These devices are crucial for lowering electricity costs, preserving the environment, and improving quality of life. Based on the overall mean score (3.75), the respondents' perception shows the agreement level. They have an intention to save electricity.

This section finally presents the regression analysis results of factors influencing intention to save electricity. The effects of influencing factors on intention to save electricity are explored based on survey data analysed by multiple regression. The findings of the analysis are shown in Table (4.5).

According to Table (4.5), among three influencing factors, subjective norm and perceived behavioral control have significant positive effect on intention to save electricity of the residents. In contrast, attitude does not have significant effect on intention to save electricity of the residents.

Table (4.5) Influencing Factors on Intention to Save Electricity

Variable	Unstandardized Coefficients		Standardized Coefficients Beta	T	Sig
	B	Std Error			
(Constant)	1.664	.249		6.695	.000
Attitude	.030	.056	.025	.541	.589
Subjective Norm	.388***	.038	.497	10.176	.000
Perceived Behavioral Control	.173***	.051	.151	3.419	.001
R Square	.341				
Adjusted R Square	.336				
F Value	67.656***				

Source: Survey Data (2022)

*** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level

Subjective norm has the expected positive sign, and the coefficient of the variable is strongly significant at 1 percent level. The positive effect means that the increase in subjective norm leads to more intention to save electricity of the residents. Respondents follow advice from friends, family, and peers. They usually discuss with peers about energy saving devices.

Perceived behavioral control has the expected positive sign, and the coefficient of the variable is strongly significant at 1 percent level. The positive effect means that the increase in perceived behavioral control leads to more intention to save electricity because respondents can make the decisions to save electricity by switching off electric devices that are not in use.

According to the standardized coefficient (Beta) score, subjective norm has the largest value among three significant explanatory variables. It means that subjective norm is the most effective factor for intention to save electricity of the residents in Yangon.

Respondents have knowledge about environmental impact and the climate change cause of generating electricity. Moreover, they understand the importance of conserve electricity at home and want to switch off air conditioning and lights at nobody in the room. They also accept the advice of their friends and family members to save the energy at their

homes. They intend to control their behaviour to save energy because of electricity costs and concerning the reducing use of electricity.

4.2 Analysis on the Effect of Intention to Save Electricity on Electricity Saving Behavior

It is important to find out whether intention to save electricity can lead to actual electricity saving behavior. In order to analyse the relationship, 397 residents living in Yangon are surveyed.

4.2.1 Electricity Saving Behavior

Energy- saving behaviors are the willingness of individuals to expend energy-saving efforts, and it is the behaviors which people try to lessen overall energy use. Table (4.6) presents the electricity saving behavior.

Table (4.6) Electricity Saving Behavior

Sr. No	Electricity Saving Behavior	Mean Score	Std. Dev
1.	Using thick curtains to reduce room temperature	3.42	1.16
2.	Always turning off electrical appliances when there is nobody in the room	4.37	0.58
3.	Always switching off electrical appliances completely instead of standby mode	4.12	0.83
4.	Replacing old devices with energy-saving devices	3.69	0.88
5.	Going to definitely repurchase energy-saving devices in the future	3.93	0.81
	Overall Mean	**3.90**	

Source: Survey Data (2022)

According to Table (4.6), respondents use think curtains to reduce the room temperature in order to save electric usage. They used to open the aircon by setting at convenient temperate level and saves consumption of aircon. In addition, respondents turn off electrical equipment fully rather than leaving them in standby mode because numerous household items, including rice cookers, laptop chargers, and mobile phone chargers, could be damaged by an unanticipated power surge. The responders are also aware that electricity is still consumed in standby mode. The overall mean score (3.90) indicates the agreement

level of respondents. It point out that the respondents usually practice electricity saving behavior.

4.2.2 Effect of Intention to Save Electricity on Electricity Saving Behavior

In this section, the effect of intention to save electricity on electricity saving behavior is analysed by multiple regression. This study assessed the role of behavioural intentions for actual behaviour. The findings of the analysis are shown in Table (4.7).

Table (4.7) The Effect of Intention to Save Electricity on Electricity Saving Behavior

Variable	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig
	B	Std Error			
(Constant)	2.255	.131		17.200	.000
Intention to Save Electricity	.439***	.034	.541	12.800	.000
R Square	.293				
Adjusted R Square	.291				
F Value	163.840***				

Source: Survey Data (2022)

*** Significant at 1% Level, ** Significant at 5% Level, * Significant at 10% Level

According to Table (4.7), intention to save electricity has the expected positive sign, and the coefficient of the variable is strongly significant at 1 percent level. The positive effect means that the increase in intention to save electricity leads to more electricity saving behaviour. Hence, it is found that most residents in Yangon used to proceed according to their intention regarding electricity saving. They used to turn off electrical appliances instead of standby when there is nobody in the room.

4.3 Analysis on the Moderating Effects of Espoused Individualism and Faith In Others on the Relationship between Intention to Save Electricity and Electricity Saving Behavior

This section focuses moderating effects of espoused individualism on the relationship between intention to save electricity and electricity saving behaviour by analysing primary data of 397 residents.

4.3.1 Espoused Individualism

Espoused Individualism pays more attention to individualism success or gain without considering much the group success. Table (4.8) presents the Espoused Individualism characteristics of the respondents.

Table (4.8) Espoused Individualism

Sr. No	Espoused Individualism	Mean Score	Std. Dev
1.	Having autonomy and independence is more important than be member of a group	2.98	1.11
2.	Individual success being more important than group success	2.91	1.21
3.	Individual gain is more important than loyalty to a group.	2.63	1.18
4.	Individual rewards being more important than group welfare	2.51	1.15
5.	Individual gain being more important than loyal to a group	2.54	1.15
	Overall Mean	**2.75**	

Source: Survey Data (2022)

According to Table (4.8), the majority of respondents consider that independence and autonomy are not more important than member to a group because they accept their friends or family members' suggestions to make decision. Respondents who possess low EIND are inclined to behave more high priority on group interest when it comes to making their decisions to take steps towards saving electricity. The respondents believe that success on group is more important than that of individuals as they pay more attention to group's interest. The overall mean score (2.75) states the neutral level of agreement as respondents know that turning off the lights and electric items can save utility bill and reduce fire accidents when they leave the room.

4.3.2 Moderating Effect of Espoused Individualism on the Relationship between Intention to Save Electricity and Electricity Saving Behavior

This section explores whether moderation effect of Espoused Individualism exists between intention to save electricity and electricity saving behavior of residents in Yangon. Table (4.9) presents the regression result to find out the above objective.

Table (4.9) Moderating Effect of Espoused Individualism on the Relationship between Intention to Save Electricity and Electricity Saving Behavior

Variables	Model 1				Model 2			
	Unstandardized Coefficients		Standardized Coefficients (Beta)	Sig	Unstandardized Coefficients		Standardized Coefficients (Beta)	Sig
	B	Std. Error			B	Std. Error		
(Constant)	2.196	.155		.000	1.702	.400		.000
Intention to Save Electricity	.440***	.034	.543	.000	.574***	.105	.707	.000
IS_EN					-.050	.037	-.319	.180
ΔR Square Change	.003							
R Square	.294				.297			
Adjusted R Square	.290				.292			
F Value	82.066***				55.424***			

Source: Survey Data (2022)

*** Significant at 1% Level, ** Significant at 5% Level, * Significant at 10% Level

As shown in Table (4.9), espoused individualism has no moderation effect on the relationship between intention to save electricity and electric saving behaviour. Thus, the study suggests that espoused individualism does not have significant impact on their electric saving behaviour since majority of the respondents have a strong attitude regarding to save electricity. They have to balance their electric usage with their income. Moreover, the focused region is downtown of Yangon. Therefore, the majority of people live in apartment, and condo etc. People use electricity as little as possible for their way of life to balance the living expense. Instead of opening many air conditioners, they used one aircon or fan that can reduce the temperature of the room. People used to cook for all family

members only one time to save electricity. In addition, people sometimes have to suppress or repress emotions for their families. They used to reduce the electricity consumption by switching off non-essential electrical appliances to lower the electric bill. Hence, espoused individualism does not have moderation effect on the relationship between intention to save electricity and electric saving behaviour.

4.3.3 Faith In Others

Believing other people enables people to make a decision. Faith in others can affect the behaviors of people. Table (4.10) presents the faith in other characteristic of electric users in Yangon.

Table (4.10) Faith In Others

Sr. No	Faith In Others	Mean Score	Std. Dev
1.	Science and technology able to identify ways for energy saving devices	3.93	0.78
2.	Today generation more careful about the energy saving than earlier generations	3.72	1.05
3.	Government able to find renewable and cheap energy sources	3.52	0.99
4.	Trusting the effectiveness of energy saving devices	3.80	0.79
5.	Believing other people in attempting to reduce energy waste	3.46	0.96
	Overall Mean	3.69	

Source: Survey Data, (2022)

According to Table (4.10), the respondents believe that science and technology will develop ways for energy saving devices because today energy-efficient appliances can now be easily purchased such as LEDs, and inverter type aircon etc. In addition, respondents believe in the efficiency of energy-saving devices as they experience the fewer electric usage of those energy saving devices. The overall mean score (3.69) state that the respondents have some degree of faith in others.

4.3.4 Moderating Effect of Faith In Others on the Relationship between Intention to Save Electricity and Electricity Saving Behavior

This section explores whether moderation effect of Faith In Others exists between intention to save electricity and electricity saving behavior of residents in Yangon. Table (4.11) presents the regression result to find out the above objective.

Table (4.11) Moderating Effect of Faith In Others on the Relationship between Intention to Save Electricity and Electricity Saving Behavior

Variables	Model 1				Model 2			
	Unstandardized Coefficients		Standardized Coefficients (Beta)	Sig	Unstandardized Coefficients		Standardized Coefficients (Beta)	Sig
	B	Std. Error			B	Std. Error		
(Constant)	1.521	.138		.000	2.487	.691		.000
Intention to Save Electricity	.200***	.039	.247	.000	-.062	.188	-.077	.740
IS_FI					.074	.052	.567	.154
∆R Square Change	.003							
R Square	.439				.442			
Adjusted R Square	.436				.438			
F Value	154.155***				103.720***			

Source: Survey Data, (2022)

*** Significant at 1% Level, ** Significant at 5% Level, * Significant at 10% Level

As shown in Table (4.11), Faith In Others does not have moderation effect on the relationship between intention to save electricity and electric saving behavior. Thus, the study suggests that whether the respondents have high or low Faith In Others, there is no effect on their electric saving behaviour since residents use the electric amount by paying attention to electric usage charges and their income. The Ministry of Electric Power (MOEP) sets the different prices depending on the consumption range and types of consumers. Therefore, residents used to adjust their electric usage according to their affordable consumption range. In addition, YESC do not educate people what kinds of

devices should be used. In addition, YESC do not sell low cost energy saving appliances to the residents in order to reduce the energy consumption rate. As the result, although science and technology have been developing, the respondents are still lag behind the advanced technologies. Residents cannot rely on others as they do not have enough knowledge and clear guides for energy saving. On the other hand, respondents used to switch off breakers when they leave home reduce home energy use and electric shocks. Therefore, Faith In Others (FIO) does not have moderation effect on the relationship between intention to save electricity and electric saving behaviour.

CHAPTER 5

CONCLUSION

This chapter is composed of three sections. First section is the findings and discussions. The second section contains suggestions and recommendations based on survey findings. The last section presents limitation and need for further research.

5.1 Findings and Discussions

This study aims to examine the influencing factors on intention to save electricity, analyze the effect of intention to save electricity on electricity saving behavior, and analyze the moderating effect of espoused individualism and faith in other on the relationship between intention to save electricity and electricity saving behavior. Both primary data and secondary data are used in this study. Among the 33 townships in Yangon, 6 townships are selected by using simple random sampling method of first stage. 397 electric users are selected as the sample population out of 72,542 residents in Yangon by selecting randomly. For primary data, structured questionnaire with 5-point Likert scale is collected from 397 residents.

Relating to first objective, among three influencing factors (attitude, subjective norm, and perceived behaviour control), the results show that subjective norm and perceived behavioral control have significant positive effect on intention to save electricity of the residents. In contrast, attitude does not have significant effect on intention to save electricity of the residents. Yangon residents used to switch off their household electric items while they are away to save electric bill. They also acknowledge the importance of saving the electric and use the electric when it is necessary.

Relating to second objective, intention to save electricity has a significant effect on electricity saving behaviour. Hence, it is found that most residents in Yangon practice energy saving behaviour if they have intention to save electricity. Thus, the stronger is the intention electric saving of an individual, the higher the probability of implementing that electric saving behavior.

Relating to third objective, espoused individualism (EIND) does not have moderation effect on the relationship between intention to save electricity and electric

saving behaviour because majority of the respondents have a strong attitude to save electricity to balance their electric usage by focusing their income levels.

Relating to fourth objective, faith in others (FIO) does not have moderation effect on the relationship between intention to save electricity and electric saving behaviour since residents do not totally rely on others regarding electric usage. In addition, electric charges per unit are increased, hence, although residents have neighbours, and friends, residents used to adjust their electric usage according to their affordable range.

5.2 Suggestions and Recommendations

Consuming less energy or cutting back on the electricity use will lessen the need for the production of energy. Then, there will be a lesser carbon dioxide emissions that will contribute to the climate change. By lowering energy use, energy efficiency reduces monthly energy bills and makes energy more affordable for businesses and families.

Concerning the attitude of the residents, residents should switch off their fan, air conditions and electrical devices before leaving their room. They should be aware the climate change due to electricity consumptions because excessive electric usage can harm the environment and lead to global warming. Residents should change the energy saving appliances like using solar system.

Energy conservation can be as simple as turning off lights or appliances when these appliances are not used. Residents should value the opinions of their friends and family members such as using low voltage distribution system and energy-efficient luminaries while making a decision on energy conservation. They should use energy-intensive appliances less by performing household tasks manually, such as hang-drying their clothes instead of putting them in the washing machine.

Moreover, residents should change their old electric devices with energy saving devices. They should replace halogen incandescent bulbs with compact fluorescent lights (CFLs), and light-emitting diode bulbs (LEDs). Lighting accounts for a significant amount of energy costs and using light from the sun is an intuitive way to reduce energy consumption. Therefore, residents should open their windows in the day time.

For perceived behavioral control, residents in Yangon should improve the intention to save electricity by focusing the use of energy saving equipment. They should also share knowledge of saving electricity to their close friends, family members and colleagues etc.

They need to accept the advice of service technicians and install energy efficient devices if they want to switch to energy saving devices from tradition ones. The more resources and fewer obstacles individuals perceive, the greater their perceived behavioral control and the stronger their intention to perform behaviors. Then, residents will have enough support and can control energy use.

5.3 Needs for Further Research

This study mainly focuses on influencing factors on intention to save electricity and electricity saving behavior of Yangon residents. Thus, this study does not cover the whole country. Hence, future study should explore the perceptions of residents in the regions across the country. In addition, this study should be extended by conducting the moderating variables such as Covid-19 to reflect the more update situations. Finally, the further study should also consider the role of social demographics variables on intention to save electricity and electricity saving behavior of residents.

REFERENCE

Abrahamse, W., & Steg, L. (2011). Factors Related to Household Energy Use and Intention to Reduce It: The Role of Psychological and Socio-Demographic Variables. *Human ecology review, 18*(1), 30-40.

Abrahamse, W., Steg, L., Vlek, C., & Rothengatter, T. (2007). The effect of tailored information, goal setting, and tailored feedback on household energy use, energy-related behaviors, and behavioral antecedents. *Journal of environmental psychology, 27*(4), 265-276.

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhi, & J. Beckmann, *Action-control: From cognition to behavior* . Heidelberg: Springer.

Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes, 50*(2), 179-211.

Ali, S., Ullah, H., Akbar, M., & Akhtar, W. (2019). Determinants of Consumer Intentions to Purchase Energy-Saving Household Products in Pakistan. *Sustainability, 11*(5), 1462.

Anker-Nilssen, P. (2003). Household energy use and the environment–A conflicting issue. *Applied Energy Journal, 76*, 189–196.

Armitage, C. J., & Conner, M. (2001). Efficacy of the Theory of Planned Behaviour: A meta-analytic review. *British Journal of Social Psychology, 40*(4), 471-499.

Aslam, M., & Ahmad, E. (2018). Impact of ageing and generational effects on household energy consumption behavior: Evidence from Pakistan. *Energies*, 20-23.

Azizi, Z. M., Azizi, N. S., Abidin, N. Z., & Mannakkara, S. (2019). Making Sense of Energy-Saving Behaviour: A Theoretical Framework on Strategies for Behaviour Change Intervention. *Procedia Computer Science, 158*(1), 725-734.

Bamberg, S., & Moser, G. (2007). Twenty years after Hines, Hungerford, and Tomera: a new meta-analysis of psycho-social determinants of pro-environmental behavior. *Journal of Environmental Psychology, 27*(1), 14-25.

Bamberg, S., Hunecke, M., & Blöbaum, A. (2007). Social context, personal norms and the use of public transportation: Two field studies. *Journal of Environmental Psychology, 27*(3), 190–203.

Barbarossa, C., & Pelsmacker, P. (2016). Positive and negative antecedents of purchasing eco-friendly products: a comparison between green and non-green consumers. *Journal of Business Ethics, 134*(2), 229-247.

Barr, S., Gilg, A. W., & Ford, N. (2005). The household energy gap: Examining the divide between Habituation—And purchase-related conservation behaviours. *Energy Policy, 33*, 1425–1444.

Berger, I. E., & Corbin, R. M. (1992). Perceived consumer effectiveness and faith in others as moderators of environmentally responsible behaviors. *Journal of Public Policy and Marketing, 11*(2), 79-89.

Berger, I. E., & Corbin, R. M. (1992). Perceived consumer effectiveness and faith in others as moderators of environmentally responsible behaviors. *Journal of Public Policy and Marketing, 11*(2), 79-89.

Bertoldo, R., & Castro, P. (2016). The outer influence inside us: Exploring the relation between social and personal norms. *Resources, Conservation and Recycling, 112*, 45-53.

Biresselioglu, M. E., Demir, M. H., Gonca, A., Kolcu, O., & Yetim, A. (2019). How vulnerable are countries to resource curse?: a multidimensional assessment. *Energy Research and Social Science, 47*, 93-101.

Black, J. S., Stern, P. C., & Elworth, J. (1985). Personal and contextual influences on household energy adaptation. *Journal of Applied Psychology, 70*(1), 3–21.

Bond, R., & Smith, P. B. (1996). Culture and conformity: A Meta-Analysis of Studies Using Asch's. *line judgment task. Psychological Bulletin, 119*(1), 111–137.

Canova, L., & Manganelli, A. M. (2020). Energy-saving behaviours in workplaces: Application of an extended model of thetheory of planned behaviour. *Europe's Journal of Psychology, 16*(3), 384-400.

Carrico, A., & Reimer, M. (2011). Motivating energy conservation in the workplace: An evaluation of the use of group level feedback and peer education. *Journal of Environmental Psychology, 31*, 1-13.

Chan, R. Y. (2001). Determinants of Chinese consumers' green purchase behavior. *Psychology and Marketing, 18*(4), 389-413.

Chan, R. Y., & Lau, L. B. (2001). *Journal of International Consumer Marketing, 14*(2), 9-40.

Chen, M., & Tung, P. (2014). Developing an extended Theory of Planned Behaviour model to predict consumers' intention to visit green hotels. *International Journal of Hospitality Management, 36*, 221-230.

Considine, M. (1994). *Public Policy: A Critical Approach.* South Melbourne: Macmillan.

Cordano , M., & Frieze, I. H. (2000). Pollution reduction preferences of US environmental managers: applying Ajzen's theory of planned behavior. *Academy of Management Journal, 34*, 627–41.

Engel, J. F., Kollat, R. D., & Miniard, P. W. (1986). *Consumer Behavior* (5th ed.). Hinsdale: Dryden Press.

Esposito, G., Setoh, P., Shinohara, K., & Bornstein, M. H. (2017). The development of attachment: integrating genes, brain, behavior, and environment. *Behavioural Brain Research Journal, 325*, 87–89.

Finlay, K. A., Trafimow, D., & Moroi, E. (1999). The importance of subjective Norms on intentions to perform health behaviors. *Journal of Applied Social Psychology, 29*(11), 2381–2393.

Fishbein, M., & Ajzen, I. (2010). *Predicting and changing behavior: The reasoned action approach.* New York: Psychology Press.

Greaves, M., Zibarras, L. D., & Stride, C. (2013). Using the theory of planned behavior to explore environmental behavioralintentions in the workplace. *Journal of Applied Psychology, 34*, 109–120.

Greaves, M., Zibarras, L. D., & Stride, C. (2013). Using the theory of planned behaviour to explore environmental behavioural intentions in the workplace. *Journal of Environmental Psychology, 34*, 109-120.

Habich-Sobiegalla, S., Kostka, G., & Anzinger, N. (2018). Electric vehicle purchase intentions of Chinese, Russian and Brazilian citizens: An international comparative study. *Journal of Cleaner Production, 205*(8), 188–200.

Han, T. I., & Stoel, L. (2017). *Journal of International Consumer Marketing, 29*(2), 91-103.

Hien, N. N., & Chi, P. H. (2020). The factors affecting household electricity saving behavior: A study in Vietnam. *International Journal of Sustainable Development and Planning, 15*, 1241–1250.

Hien, N. N., & Chi, P. H. (2020). The Factors Affecting Household Electricity Saving Behavior: A Study in Vietnam. *International Journal of Sustainable Development and Planning, 15*(8), 1241-1250.

Hill, R. J., Fishbein, M., & Ajzen, I. (1977). Belief, attitude, intention, and behavior: An introduction to theory and research. *Philosophy and Rhetoric, 6*(2), 244.

Hofstede, G. (2001). *Culture's Consequences.* Thousand Oaks: Sage Publications.

Ivancevich, J. M., Matteson, M. T., & Konopaske, R. (2008). *Organizational behavior and management.* New York: McGraw-Hill.

Jia, J. J., Xu, J. H., Fan, Y., & Ji, Q. (2018). Willingness to accept energy-saving measures and adoption barriers in the residential sector: An empirical analysis in Beijing, China. *Journal of Renewable and Sustainable Energy, 95*, 56–73.

John, T., & Alice, G. (2010). Electricity saving in households–A social cognitive approach. *Energy Policy, 38*, 7732–7743.

Joshi, Y., & Rahman, Z. (2015). Factors affecting green purchase behaviour and future research directions. *International Strategic Management Review Journal, 3*, 128–143.

Kahneman, D. (2011). *Thinking, Fast and Slow.* London: Penguin Books.

Kang, H., Hahn, M., Fortin, D., & Hyun, Y. J. (2006). *Psychology & Marketing, 23*(10), 64-81.

Koballa, T. R., & Crawley, F. E. (1985). The influence of attitude on science teaching and learning. *School Science and Mathematics, 85*(3), 222-232.

Koon, O., Chan, R., & Sharma, P. (2020). Moderating effects of socio-cultural values on pro-environmental behaviors. *Marketing Intelligence & Planning* , 1-27.

Leighty, W., & Meier, A. (2011). Accelerated electricity conservation in Juneau, Alaska: A study of household activities that reduced demand 25%. *Energy Policy, 39*(5), 2299–2309.

Li, L., Long, X., Laubayeva, A., Cai, X., & Zhu, B. (2020). Behavioral intention of environmentally friendly agricultural food: The role of policy, perceived value, subjective norm. *Environmental Science and Pollution Research International, 27*(51), 18949–18961.

Lindenberg, S., & Steg, L. (2007). Normative, gain and hedonic goal frames guiding environmental behavior. *Journal of Social Issues, 63*(1), 117-137.

Litvine, D., & Wüstenhagen, R. (2011). Helping "light green" consumers walk the talk: Results of a behavioural intervention survey in the Swiss electricity market. *Ecological Economics, 70*(3), 462-474.

Mamun, A., Masud, M. M., Fazal, S. A., & Muniady, R. (2019). *Environmental Science and Pollution Research, 26*(26), 27305–27318.

Maulana, H. D. (2009). *Promosi Kesehatan.* Jakarta: Promosi Kesehatan.

Midden, C. J., & Ritsema, B. S. (1983). The meaning of normative processes for energy conservation. *Journal of Economic Psychology, 4*, 37–55.

Oehring, E. M., & Schulte, T. (2014). Cognition, emotion, andattention. *Handbook of Clinical Neurology, 125*, 341 – 354.

Oikonomou, V., Becchis, F., Steg, L., & Russolillo, D. (2009). Energy saving and energy efficiency concepts for policymaking. *Energy Policy, 37*, 4787–4796.

Orbell, S., Crombie, L., & Johnston, G. (1996). Social cognition and social structure in the prediction of cervical screening uptake. *British Journal of Health Psychology, 1*, 35-50.

Oyserman, D. (1993). The lens of personhood: Viewing the self and others in a multicultural society. *Journal of Personality and Social Psychology, 65*(5), 993–1009.

Papagiannakis, G., & Lioukas, S. (2012). Values, attitudes and perceptions of managers as predictors of corporate environmental responsiveness. *Journal of Environmental Management, 100*, 41-51.

Parkinson, J., David, P., & Rundle-Thiele, S. (2017). Self-efficacy or perceived behavioral control: which influences consumers' physical activity and healthful eating behavior maintenance? *Journal of Consumer Behavior, 16*, 413-423.

Parsons, H., & Price, M. (2021). Cooking with Electricity in Myanmar: Barriers and. *MECS programme working paper*, 1-33.

Raji, P. T. (2007). *Consumer Buying Secret Revealed: A Marketer's Guide for Business.* Cragwood : eFortune US.

Ru, X., Wang, S., & Yan, S. (2018). Exploring the effects of normative factors and perceived behavioral control on individual's energy-saving intention: an empirical study in eastern China. *Resource Conservation and Recycling, 134*, 91–99.

Sarma, U., Karnitis, G., Zuters, J., & Karnitis, E. (2019). District heating networks: enhancement of the efficiency. *Insights into Regional Development, 1*(3), 200-213.

Scarpa, R., & Willis, K. (2010). Willingness-to-pay for renewable energy: Primary and discretionary choice of British house-holds' for micro-generation technologies. *International Journal of Energy Economics and Policy, 32*, 129–136.

Schiffman, L. G., & Kanuk, L. L. (1997). *Consumer Behavior* (6th ed.). New Jersey: Prentice Hall.

Siero, F. W., Bakker, A. B., Dekker, G. B., & Van Den Burg, M. T. (1996). Changing organizational energy consumption behaviour through comparative feedback. *Journal of Environmental Psychology, 16*(3), 235-246.

Srite, M., & Karahanna, E. (2006). The role of espoused national cultural values in technology acceptance. *MIS Quarterly, 30*(3), 679-704.

Stankuniene, G. (2021). Energy saving in households: A systematic literature review. *European Journal of Interdisciplinary Studies, 13*(1), 45–57.

Sultan, P., Tarafder, T., Pearson, D., & Henryks, J. (2020). Intention-behaviour gap and perceived behavioural control behaviour gap in theory of planned behaviour: Moderating roles of communication, satisfaction and trust in organic food consumption. *Food Quality and Preference, 81*, 103-838.

Sumaryono, E. (2012). *Etika Profesi Hukum.* Yogyakarta: Kanisius.

Sweeney, J. C., Webb, D. A., Soutar, G., & Mazzarol, T. (2013). Energy saving behaviour: Development of a practice based model. *Energy Policy, 61*, 371–381.

Thomas, W. I., & Znaniecki, F. (1918). *The Polish Peasant in Europe and America.* New York: Alfred A. Knopf.

Triandis, H. C. (1989). The self and social behavior in diVering cultural contexts. *Psychological Review, 96*(3), 506–520.

Trotta, G. (2018). Factors affecting energy-saving behaviours and energy efficiency investments in British households. *Energy Policy, 114*, 529–539.

Tsujikawa, N., Shoji, T., & Takamasa, S. (2016). Changes in the Factors Influencing Public Acceptance of Nuclear Power Generation in Japan Since the 2011 Fukushima Daiichi Nuclear Disaster. *Risk Analysis: An International Journal, 36*(1), 98–113.

Vassileva, I., Dahlquist, E., Wallin, F., & Campillo, J. (2013). Energy consumption feedback devices' impact evaluation on domestic energy use. *Applied Energy Journals, 106*, 314–320.

Wang, E., & Huo, N. (2019). Does Life Satisfaction Matter for Pro-environmental Behavior? Empirical Evidence from China General Social Survey. *Quality & Quantity: International Journal of Methodology, 53*(1), 449–469.

Wang, P., Liu, Q., & Qi, Y. (2014). Factors influencing sustainable consumption behaviors: A survey of the rural residents in China. *Journal of Cleaner Production, 63*, 152–165.

Wang, S., Fan, J., Zhao, D., Yang, S., & Fu, F. (2016). Predicting consumers' intention to adopt hybrid electric vehicles: Using an extended version of the theory of planned behavior model. *Transportation, 43*(1), 123–143.

Wang, S., Lin, S., & Li, J. (2018). Exploring the effects of non-cognitive and emotional factors on household electricity saving behavior. *Energy Policy, 115*, 171–180.

Wang, Z., Sun, Q., Wang, B., & Zhang, B. (2019). Purchasing intentions of Chinese consumers on energy-efficient appliances: Is the energy efficiency label effective? *Journal of Cleaner Production, 238*, 117-896.

Wang, Z., Wang, X., & Guo, D. (2017). Policy implications of the purchasing intentions towards energy-efficient appliances among China's urban residents: do subsidies work? *Energy Policy, 102*, 430-439.

Wedayanti, N. P., & Dan Giantari, I. (2016). Peran Pendidikan Kewirausahaan Dalam Memediasi Pengaruh Norma Subyektif Terhadap Niat Berwirausaha. *E-Jurnal Manajemen Universitas Udayana, 5*(1), 533-560 .

Yuan, Z., Lau, A. K., Shao, M., Louie, P. K., Liu, S. C., & Zhu, T. (2009). Source analysis of volatile organic compounds by positive matrix factorization in urban and rural environments in Beijing. *Journal of Geophysical Research, 114*, 15.

Zhao, X., Cheng, H., Zhao, H., Jiang, L., & Xue, B. (2019). Survey on the households' energy-saving behaviors and influencing factors in the rural loess hilly region of China. *Journal of Cleaner Production, 230*, 547–556.

Zierler, R. (2017). Energy-saving attitudes and behavioural influences in large organisations: The case of Network Rail. *Energy Policy*, 104 .

APPENDIX A

Structured Questionnaire

Part (A) Demographic Data

1. Gender

☐ Male ☐ Female

2. Age

☐ <18 ☐ 18 – 20 ☐ 21 – 25

☐ 26 – 30 ☐ 31 – 35 ☐ 36 – 40

☐ 41 – 45 ☐ Above 45

3. Salary (Kyats)

☐ 150,001 ~ 300,000 ☐ 300,001 ~ 500,000

☐ 500,001 ~ 700,000 ☐ 700,001 ~ 1,000,000

☐ Above 1,000,001

4. Living Arrangement

☐ Alone

☐ Not alone

5. Education

☐ High school ☐ Graduate

☐ Post Graduate Diploma ☐ Master

☐ Other……..

PART (B) INFLUENCING FACTORS

Instruction: Please choose one of the following numbers on each line according to the index.

Index: 1 = Strongly disagreed

2 = Disagreed

3 = Neutral

4 = Agreed

5 = Strongly agreed

Please rate your influencing rate over the following items.

Influencing Factors

No.	Attitude	1	2	3	4	5
1	I believe that saving electricity can save environment.					
2	I believe reducing electricity consumption in the home has an effect in tackling climate change.					
3	It is important to conserve electricity at home.					
4	Doing things like switching off air conditioning and lights when I am not in my room is important in reducing electricity wastage.					
5	Saving electricity is very crucial in the effort to address the issue of energy shortage.					
	Subjective Norm					
1	People who are important to me think that I should save electricity usage.					
2	My colleagues think that I need to start saving electricity.					
3	My close friends think I should use electricity saving products.					
4	I value the opinion of people when it comes to making a decision on energy conservation.					
5	My family members think that I should save electricity in the coming month.					
	Perceived Behavioral Control					
1	I can save electricity when at home.					
2	I can make the decision to install energy saving devices in my household.					

3	I have the knowledge and skills to save energy at home.					
4	I can do electricity saving according to my will.					
5	Saving electricity is a good way of reducing costs.					

PART (C) INTENTION TO SAVE ELECTRICITY

Instruction: Please choose one of the following numbers on each line according to the index.

Index: 1 = Strongly disagreed

2 = Disagreed

3 = Neutral

4 = Agreed

5 = Strongly agreed

Please rate your intention to save electricity over the following items.

No.	Intention to Save Electricity	1	2	3	4	5
1	I intend to use less lighting because it save electricity.					
2	I will consider to turn on home entertainment only when required, e.g., TV.					
3	I intend to reduce the use of electricity when using the electric items, e.g., electric water heater.					
4	I plan to turn off the computer when it is not in use.					
5	I will consider to pre-set the air-conditioner to a comfortable energy-efficient temperature.					

PART (D) ELECTRICITY SAVING BEHAVIOR

Instruction: Please choose one of the following numbers on each line according to the index.

Index: 1 = Strongly disagreed

2 = Disagreed

3 = Neutral

4 = Agreed

5 = Strongly agreed

Please rate your influencing rate over the following items.

No.	Electricity Saving Behavior	1	2	3	4	5
1	I use curtains to reduce room temperature.					
2	I always turn off electrical appliances when there is nobody in the room.					
3	I always turn off electrical appliances completely instead of in standby.					
4	I have replaced old devices with energy-saving devices recently.					
5	I will definitely repurchase energy-saving devices in the future.					

PART (E) ESPOUSED INDIVIDUALISM (ENID) AND FAITH IN OTHERS (FIO)

Instruction: Please choose one of the following numbers on each line according to the index.

Index: 1 = Strongly disagreed

2 = Disagreed

3 = Neutral

4 = Agreed

5 = Strongly agreed

Please rate your influencing rate over the following items.

No.	ESPOUSED INDIVIDUALISM (ENID)	1	2	3	4	5
1	Having autonomy and independence is more important than be member of a group.					
2	Individual success is more important than group success.					
3	Individual gain is more important than loyalty to a group.					
4	Individual rewards are more important than group welfare.					
5	Individual gain is more important than being loyal to a group					
	FAITH IN OTHERS (FIO)	**1**	**2**	**3**	**4**	**5**
1	Science and technology will come up with ways for energy saving devices.					
2	The generation today will be more careful about the energy saving than earlier generations.					
3	Government will be able to find renewable and cheap energy sources.					
4	I trust the effectiveness of energy saving devices.					
5	I believe that other people will save electric usage to reduce energy waste.					

APPENDIX B

The Influencing Factors on Intention to Save Electricity

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.584[a]	.341	.336	.58027

a. Predictors: (Constant), Perceived Behavioral Control Mean, Attitude Mean, Subjective Norm Mean

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	68.342	3	22.781	67.656	.000[b]
	Residual	132.329	393	.337		
	Total	200.671	396			

a. Dependent Variable: Intention to Save Electricity Mean

b. Predictors: (Constant), Perceived Behavioral Control Mean, Attitude Mean, Subjective Norm Mean

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.664	.249		6.695	.000
	Attitude Mean	.030	.056	.025	.541	.589
	Subjective Norm Mean	.388	.038	.497	10.176	.000
	Perceived Behavioral Control Mean	.173	.051	.151	3.419	.001

a. Dependent Variable: Intention to Save Electricity Mean

Effect of Effect of Intention to Save Electricity on Electricity Saving Behavior

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.541[a]	.293	.291	.48638

a. Predictors: (Constant), Intention to Save Electricity Mean

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38.760	1	38.760	163.840	.000[b]
	Residual	93.445	395	.237		
	Total	132.204	396			

a. Dependent Variable: Electricity Saving Behavior Mean

b. Predictors: (Constant), Intention to Save Electricity Mean

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.255	.131		17.200	.000
	Intention to Save Electricity Mean	.439	.034	.541	12.800	.000

a. Dependent Variable: Electricity Saving Behavior Mean

Moderating Effects of Espoused Individualism (EIND) on the Relationship between Save Electricity and Electricity Saving Behavior

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.542[a]	.294	.290	.48669	.294	82.066	2	394	.000
2	.545[b]	.297	.292	.48620	.003	1.805	1	393	.180

a. Predictors: (Constant), Espoused Idividualism (EIND) Mean, Intention to Save Electricity Mean

b. Predictors: (Constant), Espoused Idividualism (EIND) Mean, Intention to Save Electricity Mean, IS_EN

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38.878	2	19.439	82.066	.000[b]
	Residual	93.326	394	.237		
	Total	132.204	396			
2	Regression	39.304	3	13.101	55.424	.000[c]
	Residual	92.900	393	.236		
	Total	132.204	396			

a. Dependent Variable: Electricity Saving Behavior Mean

b. Predictors: (Constant), Espoused Idividualism (EIND) Mean, Intention to Save Electricity Mean

c. Predictors: (Constant), Espoused Idividualism (EIND) Mean, Intention to Save Electricity Mean, IS_EN

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.196	.155		14.158	.000
	Intention to Save Electricity Mean	.440	.034	.543	12.809	.000
	Espoused Idividualism (EIND) Mean	.020	.028	.030	.707	.480
2	(Constant)	1.702	.400		4.257	.000
	Intention to Save Electricity Mean	.574	.105	.707	5.462	.000
	Espoused Idividualism (EIND) Mean	.204	.140	.304	1.459	.145
	IS_EN	-.050	.037	-.319	-1.343	.180

a. Dependent Variable: Electricity Saving Behavior Mean

Effects of Espoused Individualism (FIO) on the Relationship between Save Electricity and Electricity Saving Behavior

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.663[a]	.439	.436	.43387	.439	154.155	2	394	.000
2	.665[b]	.442	.438	.43330	.003	2.038	1	393	.154

a. Predictors: (Constant), Faith in Others (FIO) Mean, Intention to Save Electricity Mean

b. Predictors: (Constant), Faith in Others (FIO) Mean, Intention to Save Electricity Mean, IS_FI

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	58.037	2	29.018	154.155	.000[b]
	Residual	74.167	394	.188		
	Total	132.204	396			
2	Regression	58.420	3	19.473	103.720	.000[c]
	Residual	73.785	393	.188		
	Total	132.204	396			

a. Dependent Variable: Electricity Saving Behavior Mean

b. Predictors: (Constant), Faith in Others (FIO) Mean, Intention to Save Electricity Mean

c. Predictors: (Constant), Faith in Others (FIO) Mean, Intention to Save Electricity Mean, IS_FI

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.521	.138		11.053	.000
	Intention to Save Electricity Mean	.200	.039	.247	5.173	.000
	Faith in Others (FIO) Mean	.443	.044	.482	10.120	.000
2	(Constant)	2.487	.691		3.601	.000
	Intention to Save Electricity Mean	-.062	.188	-.077	-.332	.740
	Faith in Others (FIO) Mean	.163	.201	.177	.810	.419
	IS_FI	.074	.052	.567	1.428	.154

a. Dependent Variable: Electricity Saving Behavior Mean