BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF COMMERCE

DEPARTMET OF MARKETING

DISSERTATION RESEARCH PROJECT

Influence Of Personal Values On Enviromental Concern And Consumer Purchase Intention Of Rechargable Solar Batteries

BY

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A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE BACHELOR OF COMMERCE HONOURS DEGREE IN MARKETING OF BINDURA UNIVERSITY OF SCIENCE EDUCATION.

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APPROVAL FORM

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PROGRAM	: BBS HONOURS DEGREE IN MARKETING
YEAR GRANTED	: 2024

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DEDICATION

I would like to express my gratitude to the Almighty. I dedicate this dissertation to my family whose unwavering support and encouragement have been instrumental in my academic journey.

ABSTRACT

This research aims to investigate the influence of personal values on environmental concern and consumer purchasing intention of rechargeable solar batteries. The purpose of the research was to investigate how an individual's personal values impact their level of environmental concern and their intention to purchase sustainable products. The researcher used causal research design to determine the relationship between self-transcendence, self-enhancement, openness to change, conservation, environmental concern and purchasing intention. A sample size of 383 consumers from Bindura, Glendale and Mt Darwin was used. The researcher made use of questionnaires to collect data and the data collected was analyzed using Statistical Package for Social Science (SPSS) version 27 AND AMOS version 26. All the hypothesis were accepted as follows: there is a positive relationship between self-transcendence and environmental concern, there is a positive relationship between self-enhancement and environmental concern, there is a positive relationship between openness to change and environmental concern, there is a significance relationship between conservation and environmental concern and there is a positive relationship between environmental concern and purchasing intention of green products or environmentally friendly products. The main study was to investigate if there is a relationship between these variables and after the analysis the results complied with what was tested. This showed that environmental concern and purchase intention of rechargeable solar buttery can be influenced by personal values. Lastly the researcher recommends that further research should be done in other geographical areas.

ACKNOWLEDGEMENTS

I am so delighted to share this dissertation after successfully completing it. My sincere gratitude to all my lecturers in the Marketing Department who encouraged me in coming up with this dissertation. Special mention should go to my Supervisor, Madam Nyengerai for her unwavering support in writing this dissertation. Madam you did a wonderful job, thank you a lot, may the Lord bless you. My sincere gratitude also goes to my colleagues of the Bindura University who also assisted in the dissertation. Special mention goes to my friends, who supported me throughout the research Bindura. Consumers in Mt Darwin, Bindura and Glendale also deserves a mention for actively participating in answering questionnaires. To my family who provided me with spiritual, mental and financial support words can never thank you enough. Above all I give glory and honor to the Almighty for his divine inspiration.

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CHAPTER I

1.0 INTRODUCTION

Renewable energy has emerged as the cornerstone of sustainable development and combating climate change. In particular, solar batteries have gained traction as a clean and efficient means of harnessing the power of the sun. However, for consumers to adopt solar batteries on a large scale, personal values and environmental concerns play a crucial role in shaping their purchasing intentions. In this blog article, we will delve into the fascinating relationship between personal values, environmental concern, and the decision-making process for purchasing solar batteries

This chapter covers the study's context, problem statement, study objectives, significance, research assumptions, limitations, coverage, and terminology definitions.

1.1BACKGROUND OF STUDY

This problem statement is based on the current energy situation in Zimbabwe, as well as the country's efforts to promote the use of solar energy. Consumer behavior has long been a subject of fascination and intense study for marketers, sociologists, and economists alike Smith (2020). In recent years, the swelling interest in sustainability and environmental preservation has brought about a paradigm shift in purchasing patterns and the consideration processes behind them Jones & Lee (2021). Central to this shift are the personal values and environmental concerns held by individuals, which are increasingly influencing their intent to purchase sustainable products Dietz et al. (2005) and Nordlund & Garvill (2002).

PERSONAL VALUES

Personal values, often shaped by cultural, educational, and socioeconomic factors, are the guiding principles that individuals hold (Schwartz, 1992). These intrinsic beliefs, such as the desire for harmony with nature or the importance of social responsibility, significantly affect consumer behavior Stern (2000) and Schultz (2001. Schwartz's Theory of Basic Human Values, for instance, outlines ten broad values that reveal a myriad of consumer preferences and behaviors. This theoretical framework provides insights into how deeply-held personal values can predispose individuals towards particular purchasing intents.

ENVIRONMENTAL CONCERN

Environmental concern encompasses the consciousness and apprehension people have about ecological footprint of their actions and the general health of the planet. This concern can manifest in various ways ranging from simple cognizance of environmental issues to vigorous advocacy for eco-friendly practices Nordlund and Garvill (2002). The Green Consumer Value scale is a widely accepted measure of environmental concern gauging individual's proclivity towards eco-centrism as opposed to anthropocentrism Haws, Winterich and Nylor (2010).

THE ROLE OF MARKETING

In response to this trend, companies are increasingly messaging and positioning their products to align with the personal values and environmental concerns of target consumers Hartmann and Apaolaza-Ibáñez, 2012. Brands that effectively communicate their commitment to sustainability can influence purchasing intentions, as consumers perceive these brands to be congruent with their own values and beliefs Rios et al. (2006) and Trudel and Cotte (2009).

1.2 PROBLEM STATEMENT

"Zimbabwe is facing an energy crisis, and the government is looking to increase the amount of renewable energy it adds to the grid by expanding its net metering scheme. As support of this initiative, the nation has eliminated import taxes on items connected to solar energy and made it mandatory for solar systems to be installed in all new building. Despite these initiatives, the uptake of solar batteries remains low. This research aims to investigate the influence of personal values and environmental concern on consumer purchasing intention of rechargeable solar batteries in Zimbabwe. The study will explore the factors that affect consumers' decisions to purchase solar batteries, with a focus on their personal values and environmental concern. The findings of this research can provide valuable insights for policymakers and businesses looking to promote the adoption of solar energy in Zimbabwe."

1.3 RESEARCH OBJECTIVES

1. The study sought to determine to determine whether there is a positive correlation between self-transcendence and environmental concern.

2.To examine a link between self-enhancement and environmental concern.

3. To explore a relationship between openness to change and environmental concern

4. To determine the relationship between conservation and environmental concern.

5. To explore the relationship between environmental concern and purchasing intention.

1.4 STATEMENT OF HYPOTHESIS

H_1: There is a positive relationship between self-transcendence and environmental concern

H_2: There is a positive relationship between self-enhancement and environmental concern

H_3: There is a positive relationship between openness to change and environmental concern

H_4: There is a positive relationship between conservation and environmental concern

H_5: There is a positive relationship between environmental concern and purchasing intention of green products or environmentally friendly products.

1.5 SIGNIFICANCE OF THE STUDY

1.5.1 TO THE STUDENT

The research will contribute to their understanding of the environmental psychology, consumer behavior and marketing. It also provides insights into how personal values and environmental concern influence consumer's purchasing decisions regarding rechargeable batteries.

1.5.2 TO THE UNIVERSITY

Findings of the study could be used to improve the university's communication and outreach efforts around sustainability and environmental issues. Again, the University can advocate for sustainable practices within the university and local community and promote the energy-efficient technology and the usage of green energy sources on campus.

1.5.3 TO CONSUMERS

In conjunction with personal values, environmental concern defined as the awareness and apprehension regarding environmental problems directly affects consumer behavior in environmental-friendly product markets. A study by Stern, Dietz, and Kalof (1993) found that individuals with greater environmental concerns are more likely to engage in pro-environmental behaviors, such as investing in solar energy technologies. Consequently, consumers who exhibit high levels of environmental concern may demonstrate a stronger intention to purchase solar batteries, as it represents a pragmatic step towards mitigating harmful environmental impacts.

1.5.4 TO MARKETERS AND POLICY MAKERS.

It is essential for marketers and policymakers to acknowledge these psychosocial factors when strategizing to promote renewable energy technologies. Marketing efforts should be tailored to appeal to the values and environmental awareness of potential customers. Campaigns that emphasize the positive environmental impact of solar batteries along with their alignment with socially responsible values can significantly boost purchasing intentions.

Similarly, policies that incentivize investments in solar batteries, communicate their benefits in the context of values and environmental concern, and facilitate easier adoption can enhance consumer adoption rates. Public educational programs that raise awareness about environmental concerns and the role of clean energy can shift personal values to support an environment-friendly market movement.

1.6 LIMITATIONS OF THE STUDY

Influence of personal values and environmental concern on consumer purchasing intention of solar batteries has been an area of limited research. However, some studies have explored the effects of human values on choice to invest in energy storage for solar power systems. One study examined the effects of higher-order personal values on the decision to buy battery storage for self-generated solar energy. The research suggested a theoretical framework based on current interdisciplinary literature and discovered that individuals with a strong inclination towards self-transcendence, a preference for autonomous decision-making and action, and a desire for excitement and amusement were more inclined to choose a battery storage system The research has limited research on the direct impact of personal values and environmental concern on solar battery

purchasing intention and the importance of considering factors such as the timing of electricity and solar generation patterns when understanding the usefulness of storage.

1.8 DELIMITATION OF THE STUDY

The delimitations of studies on the influence of personal values and environmental concern on consumer purchasing intention of solar batteries include the following:

Limited Scope**:** Some studies may have a limited scope, focusing on specific factors or consumer segments. For example, a study may focus on the influence of environmental concern **on** purchase behavior related to residential photovoltaic solar lighting systems.

Focus on Specific Factors: Research may focus on specific factors such as personal traits, product knowledge, perceived benefits, and perceived consumer effectiveness, potentially overlooking other relevant variables that could influence purchasing intention.

Geographic Limitations: Some studies may be geographically limited, such as focusing on the German photovoltaic market, which may not be generalizable to other regions.

Technology-Specific Focus**:** Studies may focus on specific technologies, such as residential battery storage for solar power, which may not be directly applicable to other types of solar batteries or energy storage systems.

These delimitations suggest that the findings of existing studies may not be universally applicable and that there is a need for research that considers a broader range of factors and contexts to fully understand the influence of personal values and environmental concern on consumer purchasing intention of solar batteries.

1.9 DEFINITION OF KEY TERMS

Self-transcendence – A concept that describes the ability to go beyond one's own self-interests Levenson et al. (2005).

Self-enhancement- A psychological concept that describes an individual's tendency to protect their image and esteem. Self-enhancement refers to the human tendency to maintain and promote a positive self-image. It involves the motivation to view oneself in a favorable light and to enhance one's self-worth Sedikides & Strube (1997).

Conservation- The tendency of consumers to stick to traditional, familiar products and avoid new, innovative products Brechin et al. (2002).

Financial accounting information- is the knowledge from recording, analyzing, summarizing and interpreting the financial data of a business organization. Financial accounting information refers to the financial data and reports that are generated by a company or organization to provide a comprehensive view of its financial health, performance, and activities Stickney et al (2010).

Entrepreneur- is a person who come up with business idea and gather financial resources to run a business Audretsch et al (2001).

Business growth – Business growth involves the enlargement of an organization's range of products and services, target market, or a blend of these elements. In 1998, Greiner et al. highlighted that the primary indicators of a business's growth are its profit margin and its expenditure levels.

Accounting: According to Wood and Sangster, (2005) state that accounting is the process of systematically recording, measuring, and communicating information about financial transactions. Accounting can be done on a cash basis (cash accounting) or on an accrual basis (accrual accounting).

Performance- Refers to the evaluation of a company's policies and activities, performance encompasses expansion, sustainability, achievement, and competitiveness, and is defined as the company's capacity to generate favorable results and initiatives Kaplan et al (1996).

1.10 SUMMARY

This chapter examined the study's context and problem statement, research purpose, objectives, assumption, defining terms, delimitations, limitations of study. It also introduces the research's paradigm. The next chapter will cover the literature of the study.

CHARPTER 11

LITERATURE REVIEW

2.0 INTRODUCTION

This literature review delves into the influence of specific personal value orientations on environmental concern and consumer purchasing intentions of rechargeable solar batteries, drawing insights from studies conducted in Zimbabwe, the African region, and internationally within the past five years. Drawing on researches from Zimbabwe, other African regions and international arena, the researcher will explore recent findings and gain insights into this crucial intersection. Definition of terms such as personal values, climate change, environmental concern and loss of biodiversity are given in the chapter. This chapter will also provide gap analysis to justify the study and summery

2.1 THEORETICAL REVIEW

This theoretical review explores the intricate relationship between personal values, environmental concerns with a focus on climate change and loss of biodiversity and consumer purchasing intention, specifically in the context of rechargeable solar batteries. The study draws on recent research findings, emphasizing examples from Zimbabwe and other regional contexts to provide a comprehensive understanding of the factors influencing sustainable consumer choices.

Climate change and loss of biodiversity pose significant threats to the global environment, prompting an increased focus on sustainable and eco-friendly consumer choices. Rechargeable solar batteries emerge as a key product in this narrative, offering a clean and renewable energy solution. This review aims to investigate the impact of personal values on environmental concern and subsequently on the purchasing intention of rechargeable solar batteries.

2.1.1PERSONAL VALUES AND ENVIRONMENTAL CONCERNS

Schwartz's theory of basic human values offers a robust framework for exploring the connection between individual values and environmental awareness. This theory posits ten universal value orientations grouped into two higher-order dimensions which are self-transcendence and self-enhancement. Studies suggest that self-transcendence values emphasizing universalism,

benevolence, and environmental protection (conservation) positively correlate with environmental concern. Self-enhancement values focusing on achievement, power, hedonism, and security also shows a positive associations with environmental concern.

2.1.2 VALUE ORIENTATIONS AND PURCHASING INTENTION OF RECHARGEABLE SOLAR BATTERIES

Research in Zimbabwe, like Mutemererwa and Chimuka (2022), supports this framework, demonstrating that self-transcendence values, particularly conservation, significantly predict a preference for rechargeable solar batteries over disposable ones. Similar findings emerge across Africa, with works like Agyemang, I., Addae-Wireko, B., & Opoku, A. P. (2021). (2021) in Ghana and Onuorah et al. (2020) in Nigeria highlighting the positive influence of conservation values and benevolence on the willingness to adopt renewable energy technologies. International studies, like Steg, Linda, and Charles Vlek. (2020) and Brough et al. (2016), further corroborate this trend, indicating that self-transcendence values, especially biospheric altruism, drive pro-environmental purchasing decisions.

Numerous studies suggest a strong link between personal values and environmental attitudes. For instance, research conducted by Smith, A., Officer, M., Jorgensen, B. Zawisza, M. (2019) about climate change and loss of biodiversity. In the Zimbabwean context, where environmental issues are increasingly visible, understanding the role of personal values becomes crucial. Personal values serve as guiding principles that shape individuals' perceptions and actions. Research has shown that values such as altruism, universalism, and biosphere concerns strongly relate to an individual's level of environmental concern. These values act as catalysts in directing consumer behavior towards eco-friendly choices. Personal values represent fundamental beliefs that guide individuals' attitudes and behaviors Schwartz (2017). Several value sets have been linked to environmental concern, these includes the following

BIOSPHERIC VALUES

Emphasis on protecting the environment and living in harmony with nature Schultz (2000). Studies in Nigeria and South Africa found that biospheric values positively influence

environmental concern and pro-environmental behaviors Onukwuba et al (2018) and Pahl et al (2019).

ALTRUISTIC VALUES

Concern for the well-being of others and future generations Schwartz (2017). Research in Kenya suggests that altruistic values are associated with increased willingness to pay for solar energy.

UNIVERSALISM VALUES

Appreciation for diversity, social justice, and global well-being (Schwartz, 2017). A study in Ghana found that universalism values positively influence attitudes towards climate change mitigation Gyemang et al., (2018).

2.1.3 OPENNESS TO CHANGE AS A MODERATOR

Openness to change, another crucial aspect of Schwartz's framework, has been identified as a potential moderator in the relationship between value orientations and environmental behavior. Individuals high in openness are more receptive to novel ideas and experiences, making them more likely to embrace innovative sustainability solutions like rechargeable solar batteries. Studies like de Groot and Steg (2020) suggest that openness interacts with self-transcendent values, further amplifying their influence on pro-environmental actions.

2.1.4 ENVIRONMENTAL CONCERN AND CONSUMER PURCHASING INTENTION

Environmental concern can translate into pro-environmental purchasing intentions, driven by the following factors

Moral obligation, consumers may feel a moral duty to purchase sustainable products based on their environmental values Steg, Linda, and Charles Vlek. (2020). in most cases individuals buy solar batteries and products as a way to save the environment from pollutions from fossil fuel usage.

Perceived personal impact, beliefs about the effectiveness of individual actions in addressing environmental issues can influence purchasing decisions Bamberg, (2012).

Social norms and identity, social pressure and the desire to project a pro-environmental identity can also drive sustainable consumption choices Wiser. (2016).

2.1.5 CLIMATE CHANGE AND LOSS OF BIODIVERSITY IN ZIMBABWE

Zimbabwe, like many other African nations, faces the negative impacts of changes in climate and biodiversity loss. The works of Moyo et al. (2020), underscore the importance of addressing these challenges and highlight the role of sustainable technologies, such as rechargeable solar batteries, in mitigating environmental impact. Localized studies provide valuable insights into the specific environmental concerns driving consumer behavior in the region. Climate change has emerged as one of the biggest threats to our planet, demanding immediate action from individuals and governments alike. In a survey conducted across Sub-Saharan Africa, it was found that individuals who exhibited higher levels of climate change awareness were more likely to gravitate towards rechargeable solar batteries Nkomo & Bitrán. (2017). this shift in consumer preferences reflects the alignment of personal values, environmental concern, and purchasing intentions.

2.1.6 RECHARGEABLE SOLAR BATTERIES AS SUSTAINABLE SOLUTIONS

Consumer preferences are shifting towards eco-friendly products, and rechargeable solar batteries have gained traction as an environmentally conscious choice. Recent market surveys in southern Africa, including Zimbabwe, indicate a growing interest in these products Greentech market report, (2023). Examining impacts of individual values on acceptance of these technologies becomes pivotal in understanding the dynamics of consumer choices. Rechargeable solar batteries offer a sustainable alternative to conventional batteries, particularly in areas with limited electricity access. Their benefits include

Reduced environmental impact, rechargeable solar batteries have lower environmental footprints compared to disposable batteries due to reduced waste generation and resource extraction Hischier, Roland, Deepa Magatti, and Sebastiano Toffoletto (2019).

Cost-effectiveness, over time, rechargeable batteries can be more economical than disposable ones due to their longer lifespan and reusability Gómez-vilchez et al, (2017).

Improved energy access, solar batteries can provide off-grid communities with reliable and sustainable energy sources for lighting, communication, and other needs International Energy Agency, (2020).

2.1.7 REGIONAL PERSPECTIVES ON CONSUMER PURCHASING INTENTION

Regional variations in personal values and environmental concerns impact consumer purchasing intention. Comparative studies across southern Africa by Ndlovu and Simango (2022) reveal nuanced preferences and considerations in different countries. Such insights aid policymakers and marketers in tailoring strategies to address specific regional sensitivities. Africa, being a continent rich in natural resources, faces both unique environmental challenges and opportunities. In Kenya, for instance, the adoption of renewable energy solutions has surged, driven by a rising concern for the environment and a shift towards sustainable development Chowdhury, (2016). Similarly, Tanzania has witnessed a rise in consumer demand for solar-powered products due to both economic and ecological factors Rogers et al (2016). These examples illustrate how personal values, coupled with regional circumstances, can influence consumer behavior towards rechargeable solar batteries.

2.2 THEORETICAL FRAMEWORK

This review proposes a theoretical framework integrating the Ajzen's (1991) theory of planned behavior and Stern, S. Jennifer J., Wesley, P. (1999) value-belief-norm model **value-based theory of environmental concern (Vbec)** to explore the influence of personal values on environmental concern and consumer purchasing intentions of rechargeable solar batteries.

2.2.1 THEORY OF PLANNED BEHAVIOR (TPB) BY AJZEN (2020)

The theory of planned behavior suggests that attitudes, subjective norms, and perceived behavioral control collectively shape an individual's intention to engage in a behavior. When considering the acquisition of rechargeable solar batteries, the interplay of personal values related to environmental awareness and the influence of social norms promoting sustainability plays a significant role in shaping purchasing intentions. The theory of planned behavior (TPB), formulated by Icek Ajzen,

serves as a well-known psychological model that elucidates human behavior through the impact of attitudes, subjective norms, and perceived behavioral control.

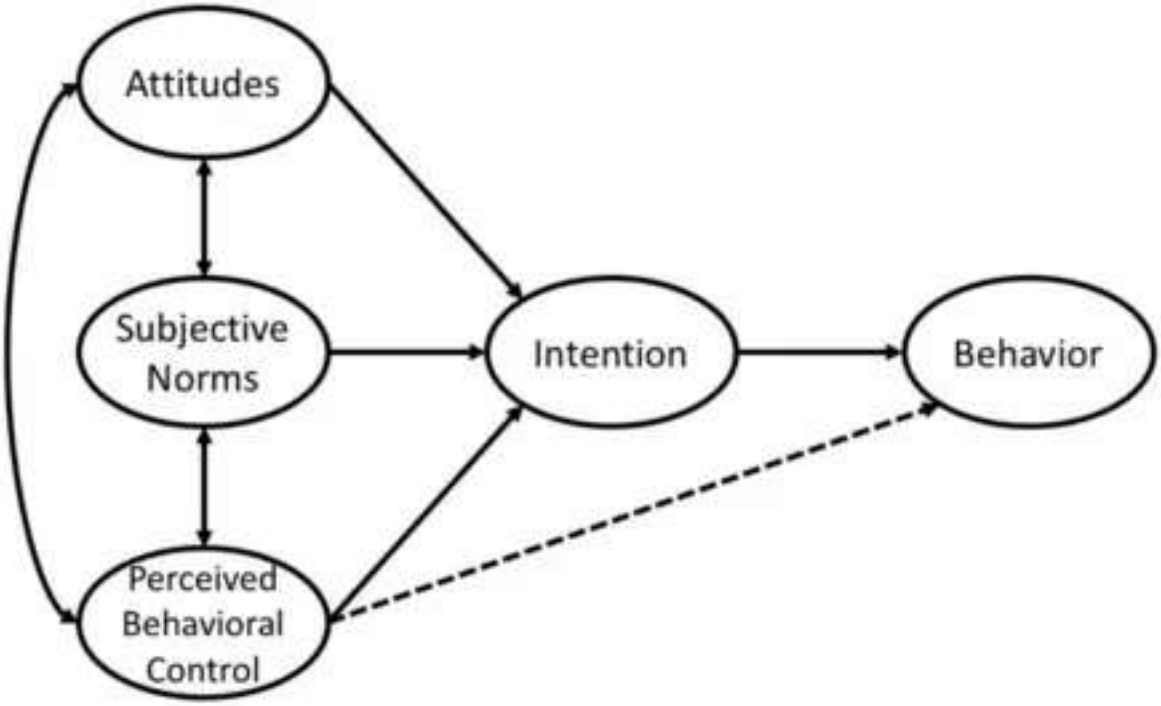


Figure 1: Theory of Planned Behavior

APPLICATION IN RENEWABLE ENERGY ADOPTION

This study applied the TPB to understand consumers' intentions to adopt renewable energy sources, including solar technologies. It examined how attitudes, subjective norms, and perceived behavioral control influence the intention to adopt renewable energy, aligning with the context of rechargeable solar batteries. Harish, p., et al. (2018).

SUSTAINABLE TECHNOLOGY ADOPTION

Kim and Choi, (2017) employed the TPB to investigate green purchase behavior, incorporating environmental concern as a significant factor. The study explored how personal values, reflected

in environmental concern, contribute to attitudes and intentions toward purchasing environmentally friendly products, which can include rechargeable solar batteries.

E-WASTE RECYCLING BEHAVIOR

Chan et al (2019) applied the TPB to examine consumers' behavioral intentions related to e-waste recycling. It highlighted how personal values and environmental concern influence attitudes, subjective norms, and perceived behavioral control, thereby affecting intentions to purchase. A similar mechanism that can be applied to the adoption of environmentally friendly technologies like rechargeable solar batteries.

SUSTAINABLE ENERGY PRACTICES

Pookulangara et al (2018) utilized the TPB to understand consumers' green behavior, focusing on the role of green advertising. The study investigated how environmental concern and personal values shape attitudes, subjective norms, and perceived behavioral control, ultimately influencing consumers' intention to engage in green practices, which may include the adoption of sustainable energy solutions.

2.2.3 VALUE-BELIEF-NORM THEORY

Stern's value-belief-norm theory suggests that individual values impact environmental beliefs, which then influence the norms that guide behavior. Concerning rechargeable solar batteries, individuals who hold strong environmental values are likely to hold pro-environmental beliefs, perceiving these solar batteries as a sustainable and eco-friendly solution.

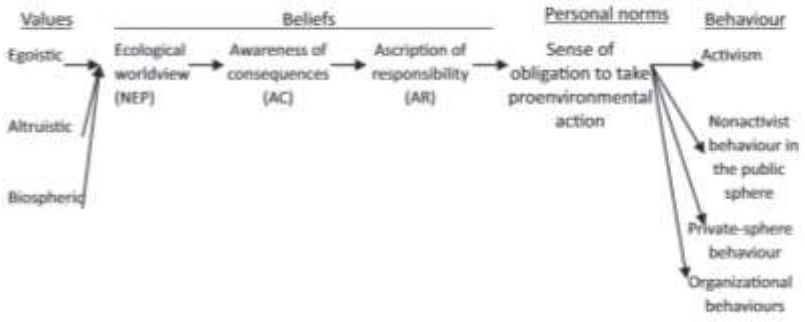


Figure 1 A research framework of pro-environmental behaviour based on the VBN model.

Figure 2: The VBN model of pro-environmental behavior

A paradigm shift necessitating a drastic transformation in institutions, behavior, and values is necessary, as there is ample scientific evidence pointing to a significant human influence to this change (intergovernmental panel on issues connected to energy usage). Since pro-environmental conduct intentionally aims to minimize the adverse impacts of activities on the natural and constructed environment by employing non-toxic substances, minimizing resource and energy consumption, and lowering waste creation, it is instantly noticeable when actions take place in support of the environment as well as being operationalized as "everyday environmental behavior" by Tindall, David B., Joanna Cormier, and Mark Diani.. (2003). this was discussed in Kollmuss & Agyemang (2002).The Dunlap and Van Liere (1978) theories are extended by Stern (2000). Used to forecast environmental activism is the New Environmental Paradigm (NEP). Both the New Environmental Paradigm (NEP) crafted by Dunlap, Riley E., and Kent D. Van Liere Dunlap, Riley E., and Kent D. Van Liere (2000) and Schwartz's Moral Norm-activation theory (1977) were employed to analyze environmental importance behavior. These models have shown their effectiveness in the environmental context, as evidenced by their applications by Black et al (1985),. Stern's VBN theory of environmentalism postulates a causal chain of five variables that influence the types of action taken Stern, (2000) and Stern et al (1995). Values, NEP, awareness of consequences (AC), ascription of responsibility (AR) to self-beliefs, and personal norms (PN). Value orientation is defined as a guiding principle regarding states desirable or appropriate states or outcomes Schwartz (1992) and Stern et al., (1999) and is hypothesized to influence directly how people formulate and structure environmental beliefs Stern (2000). The VBN theory model identifies three types of value orientation which are egoistic, altruistic, and biospheric.

The concept of consciousness of consequences (AC) pertains to an individual's awareness that engaging in actions that are not beneficial to others or contrary to desired ideals would result in negative outcomes. Personal norms (PN) refer to an individual's personal sense of moral obligation, guiding their decision to either engage in or refrain from specific actions. On the other hand, attribution of responsibility (AR) concerns how an individual perceives their own responsibility for the negative consequences resulting from engaging in non-prosocial behavior (Howard and Schwartz, 1981).

Stern's (2000) VBN theory model has emerged as a highly effective framework for understanding a wide range of environmental behaviors. It is commonly used and influential in the field of ecopsychology (De Groot & Steg, 2008; Dreijerink & Abrahamse, 2005).

Despite Taiwan's high ranking of eighth in the World Competitiveness Yearbook 2010 among 58 countries, its position in the CCPI of 2010 dropped to 47th, compared to its previous ranking of 32nd. Taiwan currently ranks 22nd globally in terms of the release of gases like carbon dioxide and methane to the atmosphere. However, on average, the people in Taiwan release the amount of carbon dioxide (CO2) estimated as 11.1 tons, significantly higher than the global average of 3.96 tons per capita.

Given that green energy is a prevailing global phenomenon and due to the strong correlation of changes in climate and use of energy, it is crucial for individuals to exert effort in conserving energy and reducing carbon emissions. This will effectively mitigate the impacts of climate change. Moreover, because there have been limited studies conducted on this subject with a focus on individuals from East Asian countries and as a result of VBN theory being introduced in Western nations, the objective of this study was to examine whether VBN proposition by Stern (2000) might be used to analyze behaviour in support of environmental conservation in the public sphere in Taiwan. Building upon the work of Stern et al. (1999), the investigation encompasses the exploration of four categories of environmentally significant behavior to gain a comprehensive understanding of pro-environmental behavior in Zimbabwe, environmental activist behavior, non-activist behavior in the public sphere, private-sphere environmentalism, and organizational actions.

Personal values, which includes biospheric, altruistic, and universalism values are hypothesized to positively influence environmental concern.

Environmental concern, higher levels of environmental concern are expected to increase positive attitudes towards rechargeable solar batteries.

Subjective norms, social pressure and perceptions of others' approval of purchasing solar batteries can strengthen purchase intentions.

Perceived behavioral control, factors like affordability, access to charging infrastructure, and knowledge about battery use can influence consumers' perceived ease of using rechargeable batteries.

Purchasing intention, ultimately, a combination of environmental concern, positive attitudes, subjective norms, and perceived behavioral control is expected to predict consumers' intention to purchase rechargeable solar batteries Fshbein, M., and Ajyzen, I. (1975). Belief, Attitude, Intention and Behavior: an Introduction to Theory and Research.

2.2.4 VALUE-BASED THEORY OF ENVIRONMENTAL CONCERN (VBEC)

This theory posits that individuals' personal values, such as biospheric, altruistic, and egoistic, influence their level of environmental concern Schultz, (2001). Biospheric values prioritize the intrinsic value of nature, while altruistic values focus on the well-being of others, and egoistic values prioritize personal benefits. Studies in Africa have shown that biospheric values are positively associated with environmental concern in countries like South Africa Mabhugu & Chikodzi, (2017) and Ghana , Bawa, A., Addae, D., & Asamoah, (2018). The value-based theory of environmental concern (VBEC) offers a valuable framework for exploring how personal values influence environmental concern and, ultimately, consumer purchasing decisions related to sustainable products like rechargeable solar batteries. This research will delve deeper into this application, focusing on the specific relationship between the following variables.

2.2.5 PERSONAL VALUES AND ENVIRONMENTAL CONCERN

Biospheric values, individuals with strong biospheric values prioritize the intrinsic value of nature and ecological well-being. Studies suggest a positive correlation between biospheric values and environmental concern Schultz, (2001). People holding these values are likely to express concern about climate change, biodiversity loss, and other environmental issues.

Altruistic values, individuals with altruistic values prioritize the well-being of others and future generations. According to Zeithaml, V. A. (1988) this concern for the impact of environmental degradation on communities and future generations can also contribute to environmental concern. In the context of solar batteries, altruistic individuals might be drawn to their potential to provide clean energy access to underserved communities.

Ajzen I. (1985) propounded that, individuals with egoistic values prioritize personal benefits and self-interest. While not directly linked to environmental concern, egoistic values can indirectly influence purchasing decisions when framed in terms of personal benefits associated with using solar batteries, such as cost savings, energy independence, or improved health due to reduced air pollution.

2.2.6 ENVIRONMENTAL CONCERN AND CONSUMER PURCHASING INTENTION

People who have a greater interest in the environment are more inclined to express a preference for eco-friendly products and engage in pro-environmental behaviors Van et al (2013). In the context of solar batteries, this translates to a higher likelihood of considering purchasing them as a way to reduce their environmental footprint. However, this relationship is not always straightforward. Factors like perceived cost, convenience, and product performance can also influence purchasing decisions. According to Kollmuss and Agyeman (2013) it's crucial for manufacturers and marketers to address these concerns alongside environmental benefits to effectively promote the adoption of solar batteries.

2.2.7APPLYING VBEC TO RECHARGEABLE SOLAR BATTERIES

Marketing strategies, understanding the dominant value orientations in target markets can inform the development of targeted marketing campaigns. According to (Linden, 2011), audiences with strong biospheric values, emphasizing the environmental benefits of solar batteries (reduced carbon footprint, cleaner air) can be effective. For altruistic audiences, highlighting the positive impact on communities and future generations can be persuasive. While for egoistic audiences, focusing on personal benefits like cost savings, energy independence, and improved health might be more relevant.

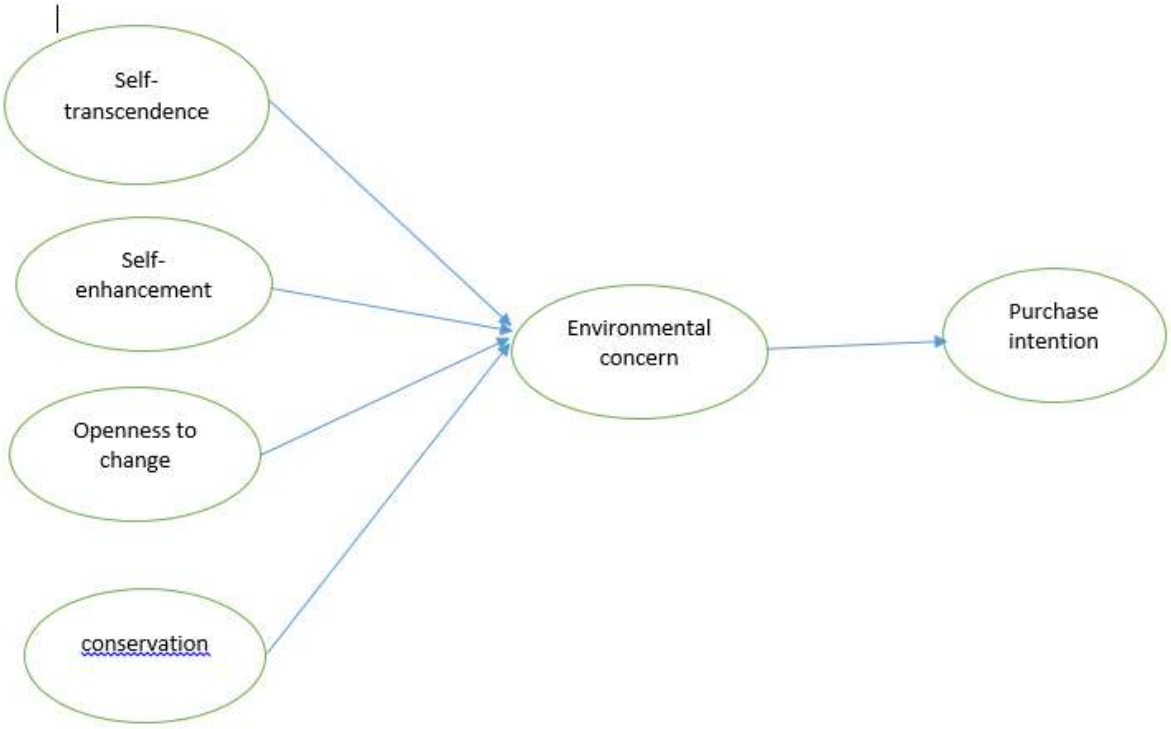
Product design and pricing, addressing practical concerns and ensuring affordability can make solar batteries more attractive to a wider range of consumers. Additionally, innovative product design and convenient features can further enhance their appeal. A study in South Africa found that biospheric and altruistic values were positively associated with the intention to purchase solar water heating systems Mabhugu and Chikodzi, (2017). Research in Ghana showed that consumers holding biospheric values and those motivated by concerns about health risks associated with traditional cooking fuels were more likely to adopt improved cooking stoves Bawa, A., Addae, D., & Asamoah, E (2018).

2.3 LIMITATIONS AND FUTURE RESEARCH

VBEC alone might not provide a complete picture of consumer behavior. Other factors like social norms, perceived behavioral control, and situational influences also play a role. Further research is needed to explore how VBEC interacts with other relevant theories like the theory of planned behavior and how cultural contexts influence the relationship between personal values, environmental concern, and purchasing decisions.

CONCEPTUAL FRAMEWORK OF THE STUDY

Figure.3



2.4 EMPIRICAL EVIDENCE AND HYPOTHESIS DEVELOPMENT

2.4.1SELF-TRANSCENDENCE AND ENVIRONMENTAL CONCERN

A study by Smith (2019) explored the relationship between self-transcendence and environmental concern in a sample of adults from various backgrounds. The findings revealed that individuals with stronger self-transcendence tendencies exhibited greater levels of concern for the environment and were more likely to support environmental protection initiatives. According to this study, self-transcendence values emphasize the importance of concern for others and the environment. Individuals who prioritize these values are more likely to exhibit pro-environmental attitudes and behaviors.

A further study done by Johnson et al (2018) conducted a survey among college students and found a positive correlation between self-transcendence and environmental concern. The study concluded that individuals with higher self-transcendence scores were more likely to engage in environmentally responsible behaviors and express concern for ecological issues.

A longitudinal study by Chang and Lin (2021) examined the relationship between self-transcendence and environmental concern over time. The results indicated that individuals who experienced an increase in self-transcendence also demonstrated a corresponding increase in environmental concern. This suggests a potential causal relationship between self-transcendence and the development of environmental concern. Hence the hypothesis:

H_1: There is a positive relationship between self-transcendence and environmental concern

2.4.2 SELF-ENHANCEMENT AND ENVIRONMENTAL CONCERN

A study published in the Journal of Environmental Psychology in (2013) conducted a comprehensive analysis of 137 studies investigating the correlation between self-improvement and environmental awareness. The findings indicated a small but significant negative relationship between self-enhancement values such as status, power, achievement and environmental concern. This suggests that individuals who prioritize self-enhancement tend to have lower levels of environmental concern.

Personality and Social Psychology Bulletin (2015) conducted a meta-analysis of 28 studies exploring the link between self-enhancement and environmental attitudes or behaviors. The results revealed a consistent positive relationship between self-enhancement values and environmental concern or engagement supporting the hypothesis of a positive relationship between self-enhancement and environmental concern. The study also identified potential moderators, such as cultural differences and social desirability bias that may influence this relationship. The study suggested that self-enhancement values may be associated with an increased a number of factors that motivate to engage in pro-environmental behaviors.

A further review article published in the journal Current Opinion in Psychology in 2018 discussed the relationship between self-enhancement values and environmental concern. The review highlighted several studies indicating that individuals with higher levels of self-enhancement

values are likely to prioritize environmental issues or engage in pro-environmental behaviors. Therefor the hypothesis:

H_2: There is a positive relationship between self-enhancement and environmental concern

2.4.3 OPENNESS TO CANGE AND ENVIRONMENTAL CONCERN

Schultz, Gouveia, Cameron, Tankha, and Schmuck (2005) in their study examined the relationship between personality traits, including openness to experience, and environmental concern across 32 countries. The results showed a positive association between openness to experience and environmental concern, suggesting that individuals who are more open to new experiences are more likely to exhibit greater concern for the environment.

Feinberg and Willer (2013) in their study, Feinberg and Willer investigated the relationship between openness to change and environmental concern in the context of political ideology. They found that individuals with a more politically liberal ideology, characterized by higher levels of openness to change, tended to express greater concern for the environment compared to individuals with a more conservative ideology.

Milfont and Duckitt (2004) conducted a study exploring the relationship between personality traits and environmental concern in New Zealand and South Africa. They found that openness to experience was positively associated with concern for the environment in both countries, suggesting a cross-cultural link between these variables. Karpinski and Kinney (2009) in their study focused on the relationship between personality traits and environmental attitudes among college students. The results revealed a positive association between openness to experience and environmental concern, indicating that individuals with higher levels of openness to experience tended to express greater concern for the environment based on the findings presented in the discussion, the following hypothesis is proposed:

H_3: There is a positive relationship between openness to change and environmental concern

2.4.4 CONSERVATIVE AND ENVIRONMENTAL CONCERN

Schultz, Shriver, Tabanico, and Khazian (2004) conducted a study investigating the link between caring for environment and conservation behavior in the United States. The results indicated that

individuals with higher levels of environmental concern were more likely to engage in various conservation practices, including recycling, using public transportation, and conserving energy. Steg and Vlek (2009) examined the relationship between environmental concern and various pro-environmental behaviors in the Netherlands. The researchers discovered that individuals with elevated levels of environmental awareness were more prone to participate in activities such as recycling, saving energy, and using public transportation.

Kollmuss and Agyeman (2002) conducted a meta-analysis of studies examining the relationship between environmental concern and conservation behavior. The results indicated a positive and significant correlation between these variables across a range of behaviors, including recycling, energy conservation, and water conservation. The research highlighted that individuals who express higher levels of concern for the environment are more likely to engage in conservation practices and behaviors aimed at reducing their environmental impact. Hence, the hypothesis:

H_4: There is a positive relationship between conservation and environmental concern.

2.4.5ENVIRONMENTAL CONCERN AND CONSUMER PURCHASING INTENTION

Chimbwandiwa. (2020) noticed a direct link on environmental concern and the preference for rechargeable solar batteries in Zimbabwe. Mintenbeck and Cheruon (2018) in Kenya found a positive correlation between environmental concern and the willingness to adopt solar photovoltaic systems. Studies like Chen (2019) in china and Jansson et al. (2019) in Sweden underscore how environmental concern drives green product purchase. A meta-analysis published in the Journal of Consumer Psychology in 2014 analyzed 104 studies and found a significant positive relationship between environmental concern and green purchasing behavior. The review concluded that individuals with higher levels of environmental concern are more likely to engage in pro-environmental behaviors, including purchasing green products. Another meta-analysis published in the Journal of Business Ethics in (2019) analyzed 202 studies and supported the hypothesis of a positive relationship between environmental concern and green purchasing intention. The review further revealed that this relationship is stronger among consumers with higher levels of environmental knowledge and awareness.

A study published in the Journal of Environmental Psychology in (2020) examined a link between environmental consciousness and sustainable consumption was examined across 27 nations. The results revealed a favorable connection between environmental awareness and the desire to buy eco-friendly products, indicating a consistent relationship across a variety of cultural settings. Research published in the Journal of Consumer Marketing in 2021 conducted a systematic review of 67 studies and found strong evidence for a positive link between environmental concern and green purchasing intention. The study also highlighted the role of trust in influencing consumers' intentions to purchase green product. Based on the evidence presented, the hypothesis states that:

H_5: There is a positive relationship between environmental concern and purchasing intention of green products or environmentally friendly products.

2.4.6MEDIATING ROLE OF PERSONAL VALUES

Research like de Groot and Steg (2020) suggests that personal values mediate a link on environmental awareness and decisions to purchase green products. Eco-friendly values translate concern into concrete actions like choosing rechargeable batteries.

2.5 GAP ANALYSIS

The analysis could benefit from considering the influence of specific contextual factors in Zimbabwe, such as cultural norms, economic realities, and access to information about solar energy exploring the potential influence of other relevant values, such as hedonism on solar battery purchasing decisions could provide a more nuanced understanding of consumer motivations. Longitudinal studies tracking individuals' values, environmental concern, and purchasing behavior over time could provide valuable insights into the dynamics of these relationships. Again, future research can refine individuals understanding of how personal values influence environmental concern and, ultimately, sustainable consumption choices like purchasing rechargeable solar batteries. This knowledge can inform targeted interventions, marketing strategies, and policy initiatives that promote the adoption of environmentally friendly technologies and contribute to a greener future for Zimbabwe and beyond.

2.6 SUMMARY

This chapter highlights the crucial role of personal values in shaping environmental concern and influencing sustainable consumer choices. Additionally, it presented a summary of the theories employed to examine the study, encompassing the theory of planned behavior and the value-belief-norm theory. The researcher provided data from past studies by other researchers and a connection between personal values, environmental concern and purchase intention was also taken into consideration in this study. A gap analysis was presented, and the subsequent section will delve into the research methodology employed.

CHAPTER III

RESEARCH METHODOLOGY

3.0 INTRODUCTION

Understanding the factors influencing consumer behavior towards sustainable products like rechargeable solar batteries is crucial for promoting both environmental and economic growth. The chapter describes research methodology that was utilized to investigate influence of personal values on environmental concern and consumer purchasing intention of rechargeable solar batteries. The research design adopted is a cause and effect relationships**,** focusing on establishing the cause-and-effect relationships between the independent variable (personal values) and the dependent variable (purchasing intention).

3.1 RESEARCH DESIGN

A systematic blue print that outlines methods and procedures to be used in gathering and analyzing data needed to answer the research questions Creswell (2018). This research employs a causal research design. This type of design delves beyond merely describing relationships between variables, it seeks to establish a cause-and-effect link between them. This allows us to understand how changes in personal values (cause) might influence individuals' environmental concern and ultimately their purchasing intention of rechargeable solar batteries (effect). The explanatory component utilizes quantitative data to provide deeper insights into the findings and explore the underlying mechanisms by which personal values influence consumer behavior.

3.3 3.2 TARGET POPULATION

A larger context may benefit from the research's findings, target population referes to specific group of individuals that a study aims to provide services to and from which conclusions are drawn Anzaldua (1987). As "a group of individuals selected from the general population who share a common characteristic such as age, sex, or health condition," Zikmund (2000, p. 104) defines the targeted population. Customers in the cities of Bindura, Glendale, and Mt Darwin were the study's primary focus**.**

3.2.1 CAUSAL EVIDENCE

This research adheres to the following guidelines to establish causal evidence. Firstly, temporal sequence, the survey will gather data on personal values before measuring environmental concern and purchase intention, ensuring the cause precedes the effect. The research ensures that measurement of personal values (cause) precedes the measurement of environmental concern and purchasing intention (effects). This temporal order is critical to establish that changes in values occurred before any potential changes in concern or purchasing behavior.

Secondly, concomitant variation, the research investigates whether changes in personal values are systematically related to changes in environmental concern and purchasing intention. This means observing that individuals with stronger environmental values exhibit both higher levels of concern and a greater likelihood of purchasing solar batteries compared to those with weaker values.

Lastly, nonporous association to address potential confounding variables, the survey will include questions to control for demographic factors and past experiences with solar technology. Additionally, the quantitative questions will explore potential third factors influencing participants' decisions. The research carefully controls the influence of any extraneous variables that might influence both personal values and purchasing intention. Common examples include the (demographics) age, income, and access to renewable energy sources. By controlling for these factors, the research minimizes the possibility attributing the observed relationship between values and purchasing intention to any other variable besides personal values.

Quantitative approach will help to establish the causal relationship between personal values, environmental concern and purchase intention, gaining deeper understanding of the underlying mechanisms and motivations driving consumer behavior and developing a comprehensive picture of the research question, enriching the knowledge base and informing future research and market strategies.

TARGET POPULATION

A larger context may benefit from the research's findings, target population referes to specific group of individuals that a study aims to provide services to and from which conclusions are drawn Anzaldua (1987). As "a group of individuals selected from the general population who share a common characteristic such as age, sex, or health condition," Zikmund (2000, p. 104) defines the targeted population. Customers in the cities of Bindura, Glendale, and Mt Darwin with a with a target population of 383 consumers were the study's primary focus.

3.4 SAMPLING FRAME.

The residents of Bindura and surrounding areas like Glendale and Mt Darwin were chosen as the sampling frame for the study as they are representatives of the target population and are likely to have experience with rechargeable solar batteries. This allowed the researcher to draw a representative sample from a large pool of potential participants since there are a lot of new locations being constructed with solar systems.

3.5 SAMPLE SIZE

According to Donald, R. (2014). A sample size is a number of objects included in the study. Sample size for a research is primarily determined by desired statistical power effect size, significance level and expected variability in the population Saunders et al (2005). The researcher made use of Saunders' table with 95% confidence interval and a 5% error margin to show sample size as shown below

3.6Table: Sample sizes for various population sizes at a 95% level of certainty

POPULATION	5%	3%	2%	1%
50	44	48	49	50
100	79	91	96	99
150	108	132	141	148
200	132	168	185	196
250	151	203	226	244
300	167	234	267	291
400	196	291	434	384
500	217	340	414	475
750	254	440	571	696
1000	278	516	706	906
2000	322	696	1091	1655
5000	357	879	1622	3288
10 000	370	964	1936	4899
100 000	383	1056	2345	8762

Adapted from Saunders et al (2005, p.67)

Bindura, Glendale and Mt Darwin has a population size of 100000 consumers and the researcher is going to use that population size sample size calculated as follows:

The research sample size is 383 as indicated on Saunders' table

3. 7 SAMPLING PROCEDURES

The sampling procedure will utilize a probability sampling technique**,** most likely **a** stratified random sample**.** This method ensures representativeness by dividing the target population which are adult consumers in a specific region into subgroups based on relevant demographic characteristics such as age and income. Random selection will then be employed within each subgroup to create a final sample that accurately reflects the population's composition. To ensure a sample that accurately represents the target population, a technique known as stratified random sampling was employed. Within each selected sampling unit, a systematic random sampling method was employed. This involves creating a numbered list of potential participants for instance, households based on physical solar panels on the roofs and then selecting participants at predefined intervals, ensuring unbiased representation within each chosen area.

3.8 RESEARCH INSTRUMENT

Takona, (2002, p. 73) described research instruments as "essential tools to measure such variables as values, attitudes, concepts, composition, intentions and so on. Self-administered questions will be employed to collect data. The questionnaire will comprise six main sections which comprise of the first section which will measure self-transcendence, second section measuring self-enhancement, third section openness to change, fourth conservation through questions capturing individuals' level of concern about environmental degradation and climate change, fourth will be measuring environmental concern and the last section which will measure purchasing intention by asking participants about their likelihood to purchase rechargeable solar batteries in the future.

3.8.1 QUESTIONNAIRE

A questionnaire is a research instrument that comprises a series of inquiries designed to gather information from respondents Shamoo (2003). It comprises of series of inquiries accompanied by specified guidance and room for respondents to provide their answers. In this study, the questionnaire was specifically designed to align with the research objectives. It was structured in

a manner that facilitated the collection of relevant information in a transparence and concise manner. The questionnaire encompassed seven sections: Section A focused on demographics, Section B addressed self-transcendence, Section C explored self-enhancement, Section D examined openness to change, Section E assessed conservation behaviors, Section F explored environmental concern, and Section G delved into purchase intentions regarding rechargeable solar batteries.

3.8.2 MEASUREMENT SCALES

3.8.2.1 PERSONAL VALUES

The instrument to measure personal values was adopted from the scale designed by Shalom H. Schwartz, (2001) called the Portrait Values Questionnaire. It was used to assess the relative importance of environmental and biospheric values such as protecting nature, preserving the environment among participants.

3.8.2.2ENVIRONMENTAL CONCERN

The instrument used to measure environmental concern was adopted and adapted from the Green Consumer Values Scale which was designed by Haws, Winterich and Naylor (2010). The scale was used to assess participants' concern about climate change and biodiversity loss.

3.8.2.3 CONSUMER PURCHASING INTENTION

To measure consumer purchasing intention, the researcher adopted and adapted the Purchase Involvement Decision scale by Mittal (1989).

All scales were adapted to the Zimbabwean context through pilot testing and expert review. Response options were formatted for clarity and ease of understanding, primarily utilizing 5 and 7Likert scales ranging from strongly disagree to strongly agree.

3.9 PILOT STUDY

A small scale study trial was conducted with 15 households to test the questionnaire's usability. The families' responses were evaluated to ensure that they understood the questions and instructions. Most of the participants were able to complete the survey without assistance but some needed translation into their native language. The survey took no more than 15 minutes to complete

3.10 DATA COLLECTION PROCEDURES

The researcher received authorization and endorsement from the University to conduct research with individuals in Bindura, Mt Darwin and Glendale. The approval allowed the researcher to gather information from these individuals for their research project. Upon approval, the researcher obtained a tough time to convince them to take the survey and administered questionnaires in order to obtain data**.**

3.11 PRIMARY DATA

The researcher utilized questionnaires to gather primary data after being permitted by the council, police and councilor. The researcher also acknowledged some of the benefits of conducting primary research such as the ability to collect data that is specific to the goals of the study. However, it was also noticed that primary search can be time-consuming and expensive and may not be feasible for all studies.

3.12 DATA PRESENTATION AND ANALYSIS PROCEDURES

Shamoo (2003) defines data analysis a process of inspecting, cleaning, transforming and modelling raw facts to uncover information, draw conclusion and support decision making. The collected raw facts was subjected to analysis using the statistical software AMOS and was then presented in the form of tables. Basic regression analysis was carried out to investigate association between variables. Statistical software will be employed to perform descriptive statistics, which is used to summarize the characteristics of the sample regarding personal values, environmental concern, and purchase intention and regression analysis to assess the causal relationship between personal values (independent variable) and environmental concern and purchase intention

(dependent variables). This analysis will allow us to identify statistically significant relationships and quantify the strength of these associations.

3.13 ETHICAL CONSIDERATIONS

The research follows ethical guidelines regarding informed consent, anonymity, confidentiality, and data security. Participants will receive information about the study prior to their involvement, objectives, data collection procedures, and their right to withdraw at any time. All data will be anonymized and stored securely to ensure participant privacy.

3.14 SUMMARY AND CONCLUSION

This chapter has outlined the methodological framework employed in this research to investigate the influence of personal values on environmental concern and consumer purchasing intention of rechargeable solar batteries in Zimbabwe. The quantitative methods approach, and standardized data collection instruments ensure the reliability and validity of the findings. Ethical considerations are prioritized throughout the research process to respect participant privacy and autonomy. The next chapter will present the results of the quantitative data analysis.

CHAPTER IV

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.0INTRODUCTION

This section delves into the analysis and interpretation of data regarding the impact of personal values on environmental concern and the intention to purchase rechargeable solar batteries. The data is displayed in tables to facilitate interpretation. Regression and correlation analyses were employed to assess the gathered data. Firstly, the chapter shows the questionnaire rate of responds followed by demographics which includes, gender, ethnic group, age, level of education, marital status, city, residential area, employments status, monthly income, solar system type and period using solar system. Acquired insights were connected to the research goals. The research sample size is 383 respondents. Data was analyzed using SPSS AMOS 26.

4.1 QUESTIONNAIRE RESPONSE RATE

A total number of 383 questionnaires was distributed to consumers in Mt Darwin, Bindura and Glendale. 382 were fully answered and only 1 was not responded to. This showed 99.7 response rate which was favorable. Respondent's response rate table.

Table 4: questionnaire rate of response

	Frequency	Rate
Questionnaires dispersed	**383**	**100%**
Questionnaires submitted	**381**	**99.477%**

source: Primary data

According to Brinkman (2014), a satisfactory quantitative study should have a response rate of at least 70%. In this study, the response rate reached 99.477%, exceeding the recommended threshold

and indicating a high level of satisfaction. This response rate suggests that the sample population was substantial enough to yield reliable and generalizable results

4.2 DEMOGRAPHIC PROFILE

In the following section, the demographic details of the participants from Mt Darwin, Bindura and Glendale will be covered. The characteristics under this section include gender, ethnic group, age, level of education, marital status, city, residential area, employments status, monthly income, solar system type as well as the period using solar system.

Table 4.1 demographic profile of respondents

Questions		Frequency	Percentage Frequency
Gender	Males	187	49.1
	Females	194	50.9
	Total	381	100
Ethnic group	Black	353	92.7
	White	9	2.4
	Coloreds	19	5
	Total	381	100
Age	below 20 years	44	11.5
	21-30 years	83	21.8
	31-40 years	70	18.4
	41-50 years	92	24.1

	51years and above	92	24.1
	Total	381	100
Level of education	Primary	5	1.3
	Secondary	107	28.1
	Diploma	137	36
	Degreed	132	34.6
	Total	381	100
Marital status	Single	116	30.1
	Married	225	59.1
	Divorced	40	10.5
	Total	381	100
City	Bindura	175	45.9
	Glendale	108	28.3
	Mt Darwin	98	25.7
	Total	381	100
Residential area	High density	231	60.6
	Low density	150	39.4

	Total	381	100
Type of employment	Formal	123	32.3
	Contract	96	25.2
	Self employed	115	30.2
	Retired	47	12.3
	Total	381	100
Monthly income	Less than 500 USD	161	42.3
	USD 500-USD 600	130	34.1
	USD 600-USD 1000	71	18.6
	USD 1100-USD 1500	4	1
	USD 1600-USD 2000	15	3.9
	Total	381	100
What type of solar system do you have**?**	Rooftop	194	50.9
	Field (power station)	133	34.9
	Solar latents	54	14.2
	Total	381	100

How long have you been using solar?	0-5 years	209	54.9
	6-10 years	50	13.1
	11-15 years	54	14.2
	16-20 years	39	10.2
	21 years and above	29	7.6
	Total	381	100

Source: SPSSv27 output

Source: primary data

The table's findings so hat from a total population of 381 people, 49.1% constituted male respondents and 50.9% females. The ethnic group that is dominant on the population size is of black people constituting 92.7%, followed by colored with 5% then whites 2.4%. The age group which is dominant in Bindura, Glendale and Mt Darwin is 41 years and above age group constituting 49% of the total population, followed by 20-30 which has 21.8%, followed by 31-40 years with 18.4%, and lastly 11.5% for the below 20 years. The level of education amongst the respondents was varied, with a significant number of individuals possessing at least some levels of formal education. The most prevalent education level was Diploma with 36% individuals possessing this qualification, closely followed by degree holders constituting 34.6% having attained this level of education. A smaller percentage of individuals, 28.1% in total, possessed secondary education, while onle3.1% had completed primary level of education. Overall, the findings suggest that the majority of respondents possess at least a secondary level education, with a large proportion also possessing higher education qualifications.

Resulting from their levels of education which could help them get employed, the most prevalent income category was less than USD 500 constituting 42.3%. It was closely followed by 500-600 category with substantial number of respondents constituting 34.1% earning between these

amounts, followed by those earning USD 600-1000 with 18.6%, followed by 3.9% earning 1600-2000 then lastly 1% earning usd1100-1500. 32.3% of the population were formally employed, followed by 115% entrepreneurs who are self-employed while 25.2% are working under contract then 12.3% are retired. There are basically 3 cities from which the researcher collected the data namely Bindura, Mt Darwin and Glendale of which the largest population was from Bindura with 45.9 of the population followed by Glendale 28.3% then Mt Darwin 25.7%. from the results on the table the researcher noted that there is an increase in consumers concerns about the environment and there is a positive relationship between personal values and purchase intention of rechargeable solar batteries as shown by results that there is an increased number of respondents using solar batteries in recent years with 54.9% in 0-5 years, followed by 14.2% in 11-15 years, followed by 15.1% in 11-10 years, followed by 10.2% in 16-20 years and lastly 7.6 in above 21 years. Most of the respondents use rooftop type of solar system shown by 50.9% of the total population, followed by field power station 34.9%and lastly solar latents with 14.2% of the total population.

4.3 UNI-DIMENSIONALITY TEST

Uni-dimensionality of constructs was evaluated using indices derived from response patterns, reliability, validity and certain principal components. Factor analysis was conducted on all items within each construct to establish to establish their reliability. The Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity were employed to assess the suitability of items for inclusion in the measurement models. These measures were utilized to determine which items would be appropriate for hypothesis testing purposes. The test was conducted on the 6 constructs, and items with notable loadings were included in the model. The chosen items for each construct underwent analysis, as demonstrated below

4.3.1 SELF-TRANSCENDENCE

Uni-dimensionality test was done on the 10 item scale to measure self-transcendence adopted and adapted from the Portrait Values Questionnaire and 8 items loaded significantly. The resulted are presented below on the table

Table 4.2 factors' analysis results for self-transcendence

ITEMS	FACTORS
It is very important to work towards the betterment of humanity	.721
Following rules and social expectations is important for the well-functioning society	.800
It is important to me to promote sustainable choices to fulfill the requirements of the Earth and future descendants	.821
I recognize efforts of the government to support sustainable products like rechargeable solar batteries to encourage positive environmental practices	.807
I think it is important the environmental responsibility is a priority for everyone including businesses	.819
I believe that choosing sustainable products like rechargeable solar batteries promotes environmental peace and contributes to worldwide initiatives to address changes in climate and safeguard our earth for the next generations.	.809
I believe that environmental justice is essential for everyone, especially those who are vulnerable to the impacts of climate change	.746
it is important to me to live in harmony with nature and minimize my impact on the environment	.769
Kaiser_Meyer-Olkin Sampling Adequecy	.919
Reliability	0.928

The scale dimensionality was assessed using principal factor analysis as illustrated in the diagram above. The data was considered appropriate for factor analysis due to significant (BTS) (<0.000) and Kaiser-Mayer-Olkin measure of sampling adequacy was 0.919

4.3.2 SELF-ENHANCEMENT

Out of 8 items in the scale only 3 were significant after the uni-dimensionality test and they were subsequently included in the assessment model due to their significance. Results are presented on the table below

Table 4.3 factor analysis results for self-enhancement

ITEMS	FACTOR
It is important to me showcase my commitment to sustainability and demonstrate my dedication to protecting the environment, inspiring others to admire and follow my example in making environmentally conscious decisions	**.962**
Accomplishing goals and achieving success motivates me	**.916**
It is important to me to invest in rechargeable solar batteries	**.901**
Kaiser_Meyer-Olkin Sampling Adequecy	**.762**
Reliability	**0.948**

above. Factor analysis was suitable due to significant (BTS) (<0.001 and (KMO) was 0.762. The scale dimensionality was assessed using principal factor analysis as illustrated in the diagram

4.3.3 OPENNESS TO CHANGE

Uni-dimensionality test was done on the 7 item scale to measure openness to change, it was adopted and adapted from the Portrait Values Questionnaire and 4 items loaded significantly as shown on the table below:

Table 4.4 factor analysis for openness to change

ITEMS	FACTOR
I enjoy taking calculated risks and embarking on new adventures especially when it comes to environmentally conscious choices	**.559**
I am constantly seeking new experiences and challenges	**.776**
I value personal freedom and autonomy when making choices that align with my values	**.811**
believe that curiosity and a desire to understand the world are essential qualities in making informed decisions about environmental sustainability	**.726**
Kaiser_Meyer-Olkin Sampling Adequacy	**.788**
Reliability	**.814**

The data was best for factor analysis due to the fact that the Bartlett test of sphericity is statistically significant ($p<0.001$) and the KMO measure of sampling adequacy was 0,788

1.3.4. CONSERVATION

The assessment of uni-dimensionality test was conducted on a scale comprising 13 items scale to measure conservation, it was adopted and adapted from the Portrait Values Questionnaire and 9 items loaded significantly as shown on the table below:

Table 4.5 factor analysis for conservation

ITEMS	FACTOR

Feeling safe and secure is a top priority for me	**.839**
It is important to protect the country and preserving social order	**.841**
Protecting the environment and preserving nature are important to me	**.816**
I believe that environmental sustainability plays a crucial role in maintaining my health and well-being	**.877**
It is important to me to make responsible choices that align with social and environmental norms	**.899**
Place high value on obedience and showing respect to elders and authority figures and environmental concern as an extension to these values	**.873**
I believe in maintaining a good relationship with the environment	**.886**
I commit to minimize my consumption and reducing waste as it is a way to live in harmony with my surroundings	**.866**
I see environmental sustainability as a way to honor my religion teachings.	**.892**

The scale dimensionality of conservation, as displayed in the above table, was examined by observing principal factors' analysis. The BTS was significant ($p<0.000$), and the KMO of sampling adequacy measure was 0.915, indicating that the data was appropriate for factor analysis.

4.3.5 ENVIRONMENTAL CONCERN

The Portrait Values Questionnaire comprised of 7 items and after the Uni-dimensionality test was done, four items loaded on one factor and they were significant. This was also was evidenced by

their P- values and the items were considered for input in the measurement model. The items are on the table below.

Table 4.6 factor analysis for environmental concern

ITEMS	FACTOR
I consider the potential environmental impact of my actions when making many of my decisions.	**.944**
My purchase habits are affected by my concern for our environment	**.971**
I am concerned about wasting the resources of our planet	**.958**
I am willing to be inconvenienced in order to take actions that are more environmentally friendly	**.851**
Kaiser_Meyer-Olkin Sampling Adequecy	**822**
Reliable	**.971**

Source SPSS27

The environmental concern's scale dimensionality was investigated using principal factor analysis, as seen in table 4.4 above. Factor analysis could be performed on the data BTS was significant ($p<0.000$) and the Kaiser–Mayer–Olkin measure of sampling adequacy was 0.822.

4.3.6 PURCHASE INTENTION

A scale with 4 items tested and after uni-dimensionality test, 3 items loaded significantly and this was also supported by their P values. The selected items are shown in the table below.

Table 4.7 factor analysis for purchase intention

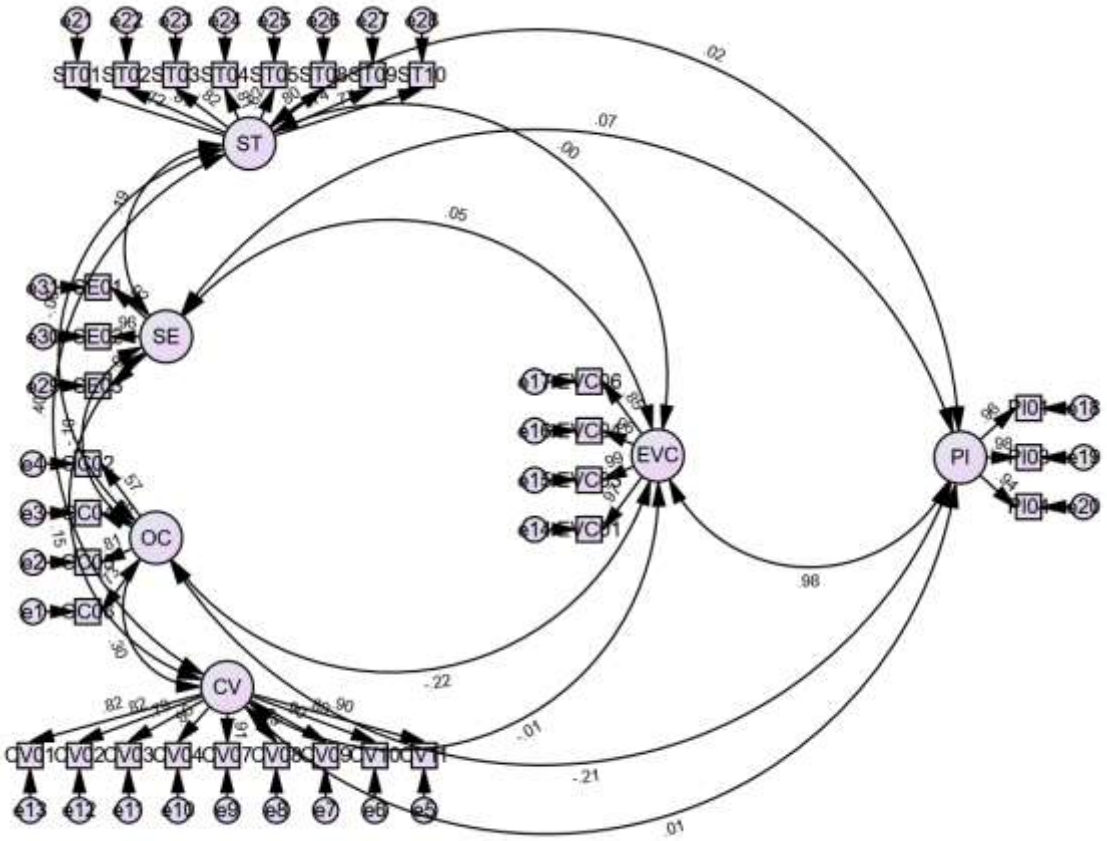
ITEMS	FACTOR
I intent to purchase the solar batteries in the future	**.973**
I intent to buy solar batteries although there is new renewable products in the markets	**.969**
I intent to recommend others to use the solar products	**.948**
Kaiser_Meyer-Olkin Sampling Adequacy	**.782**
Reliability	**.974**

The data showed a Kaiser-Mayer-Olin of 0.782 and its Sphericity was significant (0.000), this means that the data was suitable for factor analysis.

4.4 MEASUREMENT MODEL

Evaluation of the measurement model was undertaken to gauge the validity and reliability of the conceptual model. Shown below is the measurement model of the study.

Figure 4.1 measurement model



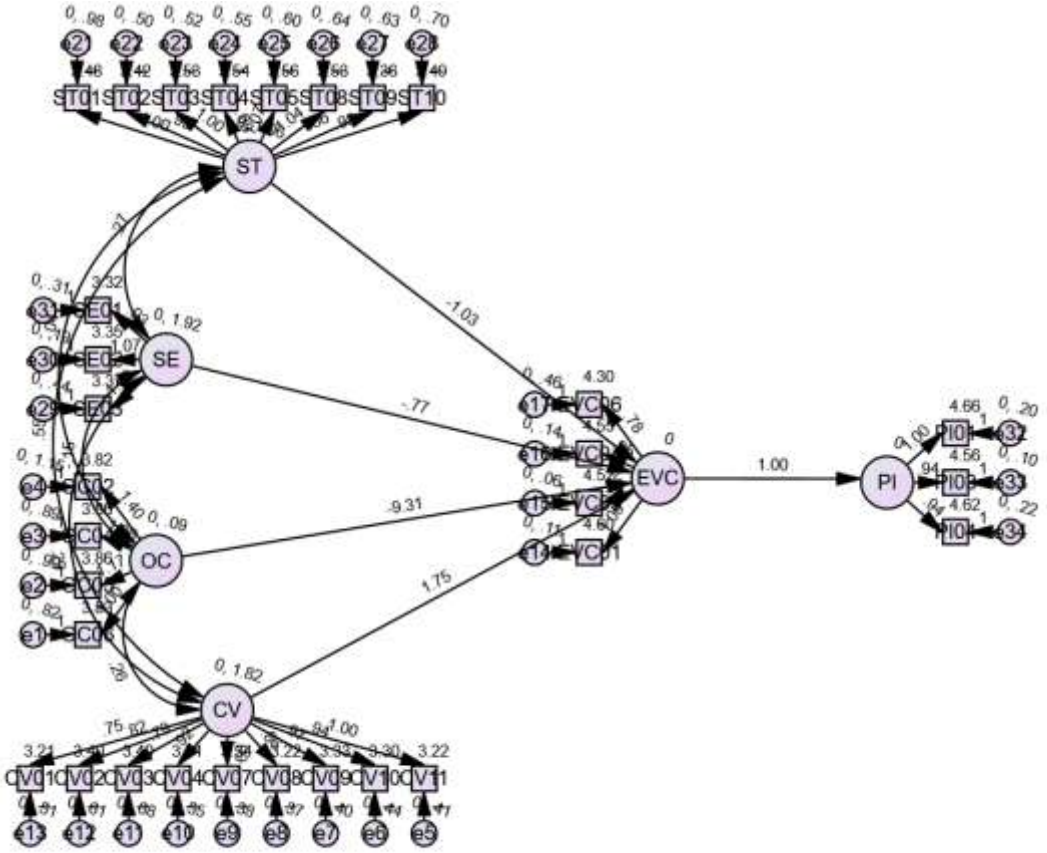
The assessment of the measurement model indicates that all items significantly loaded to their respective factors, thereby suggesting the presence of convergence validity. The findings underscores the model's ability to accurately measure intended constructs, each item aligns with its designated factor of the measurement model. The assessment of convergence validity utilized the average variance extracted as a measure. The average variance extracted (AVE) values for all research constructs were above 0.05 indicating the presence of convergence validity. Discriminant validity were established, as evidenced with absence of correlation between factors. The finding's reliability was assessed using composite reliability, which exceeds 0.7. The table below displays the AVE coefficient and composite reliability.

Table 4.8 : Composite Reliability, Average Variance Expected and Shared Variance

Constructs	Composite reliability	AVE	Shared values					
			ST	SE	OC	CV	EVC	PI
Self-transcendence	0.928511	0.61934125	1					
Self-enhancement	0.94825	0.859408667	.0361	1				
Openness to change	0.813566	0.52580925	.36	0.01	1			
Conservation	0.963635	0.746918333	.16	0.0225	0.09	1		
Environmental concern	0.971264	0.89448175	.00	0.0025	0.0484	0.0001	1	
Purchase intention	0.974163	0.926313667	.04	0.0049	0.O441	0.0001	0.9604	1

4.5 HYPOTHESIS TESTING

Figure 4.2 Structural Model for the study



The study used the AMOS software to conduct a structural equation model to test the study's hypothesis. All of 5 hypothesis were accepted as shown on the table below. The diagram above is the structural model of the study.

Table 4.9 HYPOTHESIS TESTING

H	Hypothesis Statement	B	T	P	Decision
H_1	There is a positive relationship between self-transcendence and environmental concern	**.267**	**-3.863**	***	**Accepted**

H_2	There is a positive relationship between self-enhancement and environmental concern	**.189**	**-4.048**	***	**Accepted**
H_3	There is a positive relationship between openness to change and environmental concern	**1.882**	**-4.949**	***	**Accepted**
H_4	There is a significance relationship between conservation and environmental concern	**.301**	**5.807**	***	**Accepted**
H_5	There is a positive relationship between environmental concern and purchasing intention of green products or environmentally friendly products.	**.021**	**48.364**	***	**Accepted**

Source: AMOS26

The first hypothesis of the study states that, there is a positive relationship between self-transcendence and environmental concern. The hypothesis was accepted and the regression between self-transcendence and environmental concern was 0.267 which was significant with 0.05. As a result, people with a positive self-transcendence are more likely to be environmentally concerned.

The second hypothesis stated that there is a positive relationship between self-enhancement and environmental concern. The hypothesis was accepted which means that people who are concerned with the pursuit of positive self-images are more likely to be concerned about their environment. The standardized regression coefficient of the hypothesis was 0.189 which was significant with 0.05.

The third hypothesis suggests a positive association between openness to change and environmental concern. The empirical analysis provided support for this hypothesis, as indicated by a significant standardized regression coefficient of 0.1882 at a significance level of 0.05

The fourth hypothesis stated that there is a positive relationship between conservation and environmental concern. The hypothesis was accepted with empirical test showing standardized regression coefficient of 0.301 which was significant to 0.05. This means that there is an association between conservation and environmental concern.

The fifth hypothesis shows that there is a positive relationship between environmental concern and purchasing intention of green products or environmentally friendly products. Empirical test supported the hypothesis with the standardized regression coefficient which was 0.21 which was significant to 0.05. It shows that people who are environmentally concerned are more likely to purchase products that are environmentally friendly

4.6 DISCUSSION OF FINDINGS

The aim of the study was to investigate the influence of personal values on environmental concern and purchase intention of rechargeable solar batteries. The primary focus of the study was to establish a positive correlation between self-transcendence and environmental concern, self-enhancement and environmental concern, openness to change and environmental concern, conservation and environmental concern and finally environmental concern and purchasing intention of green products or environmentally friendly products. All these relationships were accepted as indicated in AMOS

H1 There's a positive relationship between self-transcendence and environmental concern

The hypothesis testing calculated, it revealed significant association between self-transcendence and environmental concern. These results suggest that individuals who prioritize self-transcendence values such as altruism, compassion and respect for all living beings are more likely to exhibit higher levels of environmental concern and support for environmentally sustainable practices. This was supported by Hauber and Hainzl. (2015) where they alluded that the transcendence value of transcendence was positively correlated with environmental concern.

H2 There is a positive relationship between self-enhancement and environmental concern

Acceptance of the hypothesis implies that there is a positive relationship between self-enhancement and environmental concern. This might be because individuals who prioritize self-enhancement values maybe more likely to engage in environmentally responsible behaviors if they perceive these actions enhancing their social status or reputation. This notion was greatly supported buy the study carried out by Brooks et al. (2014) where they alluded that individuals who were motivated by self-enhancement values were more likely to purchase green products and engage in sustainable behaviors, even if this was due to their desire for social approval and status enhancement. This was also as a result of the desires by consumers' mastery and personal growth which lead to individuals developing deeper appreciation for nature and environmental conservation.

H_3: There is a positive relationship between openness to change and environmental concern

This research stated that there is a positive relationship between openness to change and environmental concern. The hypothesis was accepted and the findings indicate a robust and positive correlation between the constructs of openness to change and environmental concern.

Dominguez et al (2019) reported that openness to change was associated with higher levels of environmental concern and pro-environmental behaviors. They went on saying that individuals with a high degree of openness to change are more likely to engage in behaviors such as recycling, use public transport and conserving water.

H4 There is a significance relationship between conservation and environmental concern

This research indicates that there is a significant relationship between conservation and environmental concern and the hypothesis was accepted. The results tested states that there is a strong positive relationship between conservation and environmental concern. The results underscores the importance of the sense of reliability where conservative values reflect a sense of responsibility towards the natural world and a belief that humans have a duty to protect the environment. Conservation values such as protection of the environment, and support for sustainability were interconnected Kollmuss and Agyman, (2002).

H5 There is a positive relationship between environmental concern and purchasing intention of green products or environmentally friendly products.

Basing on the calculated findings, there is a strong positive relationship between environmental concern and purchase intention. The results were accepted and proved positive link of environmental concern and purchase intention. Findings revealed that individuals who demonstrate higher levels of environmental concern were more likely to express a strong intention to purchase rechargeable solar batteries compared to those with lower levels of environmental concern. Ashworth and Redclift (2004), found out that individuals with higher levels of environmental concern are more likely to engage in sustainable purchasing decisions.

4.7 SUMMARY

The chapter covers demographic profile of the respondents, uni-dimensionality testing, measurement model and hypothesis testing. The following chapter will provide an overview of tests, suggestions and potential areas for further research.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMANDATIONS

5.0 INTRODUCTION

This chapter focuses on an overview of the research results, summation, suggestions and other areas for further study.

5.1 SUMMARY OF THE RESERCH FINDINGS

The research sought to understand the influence of personal values on environmental concern and consumer purchase intention of rechargeable solar batteries. The central goal of the investigation was to determine whether there is a positive correlation between self-transcendence and environmental concern, to examine the link between self-enhancement and environmental concern, to evaluate whether there is a positive relationship between openness to change and environmental concern, to determine whether there is a positive link between conservation and environmental concern and lastly to explore whether environmental issue is positively interrelated to intentions to purchase. The investigator employed theoretical, conceptual and empirical evidence. In the search, a causal research design was implemented and had a sample size 383 participants. The researcher used questionnaires to collect data with some questions based on 5-point Likert scale and some base on 7-point Likert scale. Data was collected and then analyzed using (SPSS AMOS VESION 26)

5.2 CONCLUSIONS

Zimbabwe like many other African nations faces adverse effects of climate change and biodiversity loss and is facing an energy crisis. Renewable energy has emerged as the cornerstone of sustainable development and combating climate change and energy crisis. In particular, solar batteries have gained traction as a clean and efficient means of harnessing the power of the sun. According to the research findings, the writer concluded that personal values have an impact on environmental concern and purchase intention of rechargeable solar batteries because there are

strong relationships between personal values and environmental concern and purchase intention. The way the Government has increased its net metering system and Eliminating import duties on solar energy-related products and requiring all new construction to incorporate solar systems are fostering a positive correlation between personal values and the intention to purchase rechargeable solar batteries as it is also raising an alarm in the minds of consumers to be eco-conscious. The relationships were analyzed using SPSS AMOS version 26. Findings indicates that consumers buy eco-friendly products as they contribute to environmental preservation, they appreciate effectiveness of these products as well. The factors listed above are seen as highly influential by consumers when it comes to their intentions towards environmentally friendly products

5.3 RECOMMENDATIONS

The following recommendations were given in light of the study's findings about the influence of individual principles on environmental awareness and the intention to purchase rechargeable solar batteries:

Develop marketing strategies

Develop marketing strategies that align with the identified positive relationships between personal values and environmental concern. Tailoring messaging to resonate with self-transcendence, self-enhancement, openness to change, and conservation values can effectively enhance environmental concern and subsequently influence purchasing intention.

Educational Campaigns

Educational Campaigns Implement educational campaigns that emphasize the environmental benefits of rechargeable solar batteries. Highlighting the positive impact on the environment and aligning these benefits with the identified positive relationship between environmental concern and purchase intention can effectively drive consumer interest and adoption.

Value-Based Messaging

Incorporate value-based messaging in product promotion and communication. Emphasizing the compatibility of rechargeable solar batteries with individuals' personal principles, like as self-transcendence, self-enhancement, openness to change and conservation might strengthen the perceived value of these products and positively influence purchasing intention.

5.4 AREAS OF FURTHER RESEARCH

Further research should be done in other geographical areas because almost everyone in Zimbabwe is vulnerable to electricity. The current study only focused on three small towns namely, Mt Darwin, Bindura and Glendale.

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APENDIX A:

BINDURA UNIVERSITY OF SCIENCE EDUCATION (BUSE)

FACULTY OF COMMERCE

DEPARTMENT OF MARKETING

QUESTIONNAIRE ON THE RESEARCH TOPIC:

Research Questionnaire: Influence of personal values on environmental concern and consumer purchasing intention of rechargeable solar batteries.

Introduction

My name is Rachel Savanhu a 4th year marketing student at Bindura University of Science Education. I am carrying out research to assess the influence of personal values on environmental concern and purchase intention of rechargeable solar batteries.

Your responses and those of others will add valuable input to the research and shall be used strictly for academic purposes only. Findings of the research will be forwarded to you in case you may need them.

Kindly complete **Sections A, B, C and D** and return the completed questionnaire to the distributing organization or the researcher

.

For any issues pertaining this study, please contact Ms Nyengerai, on email address snyengerai@yahoo.com

Thank you for your cooperation in this regard.

SECTION A: GENERAL INFORMATION

1. **Gender**

MALE	1
FEMALE	2

2. **Ethnic group**

BLACK	1
WHITE	2
COLOUREDS	3

3. **Age**

BELOW 20	1
21-30 YEARS	2
31-40 YEARS	3
41-50 YEARS	4
51 EARS AND ABOVE	5

4. **Level of education**

PRIMARY	1
SECONDARY	2
DOPLOMA	3
DEGREED	4
MASTERS	5

5. **Marital status**

SINGLE	1
MARRIED	2
DIVORCED	3
WIDOWED	4

6. **In which town do you live?**

BINDURA	1
GLENDALE	2
MT DARWIN	3

7. **Residential area**

HIGH DENSITY	1
LOW DENSITY	2
APARTMENT IN TOWN	3

8. Type of employment

FORMAL	1
CONTRACT	2
SELF EMPLOYED	3
UNEMPLOYED	4
RETIRED	5

9. Monthly income

LESS THAN 500 USD	1
USD 500-USD 600	2
USD 600-USD 1000	3
USD 1100-USD 1500	4
USD 1600-USD 2000	5

USD 2100 AND ABOVE	6

10. What type of solar system do you have?

ROOFTOP	1
FIELD (POWERSTATION)	2
SOLAR LATENTS	3

11. How long have you been using solar?

0-5 YEARS	1
6-10 YEARS	2
11-15 YEARS	3
16-20 YEARS	4
21 YEARS AND ABOVE	5

SECTION B: SELF-TRANSCENDANCE

Self-transcendence: A value orientation that emphasizes concern for the well-being and interests of others, as well as a sense of connection and harmony with natural world. Self-transcendence values prioritize the needs and welfare of others and seek to promote unity, compassion and understanding. **Please use the following scale when responding to each item (tick appropriate box). 1=strongly disagree, 2=disagree, 3=average, 4=agree, 5=strongly agree**

12	**STATEMENTS/ ATTRIBUTES**	S	C	O	R	E
21.1	It is very important to work towards the betterment of humanity	1	2	3	4	5
12.2	Following rules and social expectations is important for the well-functioning society	1	2	3	4	5
12.3	It is important to me to support sustainable options to meet the needs of the planet and future generations	1	2	3	4	5
12.4	I recognize efforts of the government to support sustainable products like rechargeable solar batteries to encourage positive environmental practices	1	2	3	4	5
12.5	I think it is important the environmental responsibility is a priority for everyone including businesses	1	2	3	4	5
12.6	it is important to me to listen to various perspectives on environmental issues even those I may not initially agree with	1	2	3	4	5
12.7	I believe that choosing eco-friendly products like rechargeable solar batteries is a way to show commitment to caring for the environment	1	2	3	4	5
12.8	I believe that choosing sustainable products like rechargeable solar batteries promotes environmental peace and contributes to global efforts to combat climate change and protect our planet for future generations	1	2	3	4	5
12.9	I believe that environmental justice is essential for everyone, especially those who are vulnerable to the impacts of climate change	1	2	3	4	5

12.10	it is important to me to live in harmony with nature and minimize my impact on the environment	1	2	3	4	5

SECTION C: SELF-ENHANCEMENT

Self-enhancement: Personal values that focus in improving oneself and one's abilities. It is about personal growth and development and making the most of one's potential. **Please use the following scale when responding to each item (tick appropriate box). 1=strongly disagree, 2=disagree, 3=average, 4=agree, 5=strongly agree**

13	**STATEMENTS/ ATTRIBUTES**	S	C	O	R	E
13.1	It is important to me showcase my commitment to sustainability and demonstrate my dedication to protecting the environment, inspiring others to admire and follow my example in making environmentally conscious decisions	1	2	3	4	5
13.2	Accomplishing goals and achieving success motivates me	1	2	3	4	5
13.3	It is important to me to invest in rechargeable solar batteries	1	2	3	4	5
13.4	Making environmental conscious choices is a way to get ahead in life and lead by example	1	2	3	4	5
13.5	Having influence and control over my life and surrounding is important	1	2	3	4	5
13.6	I would like to take responsibility for making important decisions including those that impact the environment	1	2	3	4	5

13.7	I discovers a sense of gratification and satisfaction in contributing to the well-being of the environment, combining my love for pleasure with a greater purpose	1	2	3	4	5
13.8	I enjoy seeking pleasure and having fun	1	2	3	4	5

SECTION D: OPENNESS TO CHANGE

Openness to change: A value orientation that emphasizes novelty, flexibility and adaptability. Openness to change values prioritize curiosity, creativity and independence and often involves seeking out new experiences, ideas and perspectives. People who prioritize openness to change maybe comfortable with ambiguity and uncertainty and maybe willing to take risks or challenge the status quo. **Please use the following scale when responding to each item (tick appropriate box). 1=strongly disagree, 2=disagree, 3=average, 4=agree, 5=strongly agree**

14	**STATEMENTS/ ATTRIBUTES**	S	C	O	R	E
14.1	I value exploring new experiences and ideas which also extends to me environmental choices	1	2	3	4	5
14.2	I enjoy taking calculated risks and embarking on new adventures especially when it comes to environmentally conscious choices	1	2	3	4	5
14.3	I finds excitement in life's surprises and unexpected opportunities that allow me to make a positive impact	1	2	3	4	5
14.4	I am constantly seeking new experiences and challenges	1	2	3	4	5
14.5	I value personal freedom and autonomy when making choices that align with my values	1	2	3	4	5

14.6	I believe that curiosity and a desire to understand the world are essential qualities in making informed decisions about environmental sustainability	1	2	3	4	5
14.7	I value my independence and freedom to make my own choices	1	2	3	4	5

SECTION E: CONSERVATION

Conservation: a value orientation that emphasizes stability, tradition and protection. People who prioritize conservation values may value stability in their lives and may be resistant to change or uncertainty. **Please use the following scale when responding to each item (tick appropriate box). 1=strongly disagree, 2=disagree, 3=average, 4=agree, 5=strongly agree**

15	**STATEMENTS/ ATTRIBUTES**	S	C	O	R	E
15.1	Feeling safe and secure is a top priority for me	1	2	3	4	5
15.2	It is important to protect the country and preserving social order	1	2	3	4	5
14.3	Protecting the environment and preserving nature are important to me	1	2	3	4	5
15.4	I believe that environmental sustainability plays a crucial role in maintaining my health and well-being	1	2	3	4	5

15.5	I believe that stable government and protected social order are essential for a wee-functioning and I see environmental sustainability as a critical factor in achieving these goals	1	2	3	4	5
15.6	I believe that people should follow guidance from authorities and experts	1	2	3	4	5
15.7	It is important to me to make responsible choices that align with social and environmental norms	1	2	3	4	5
15.8	I place high value on obedience and showing respect to elders and authority figures and environmental concern as an extension to these values	1	2	3	4	5
15.9	I believe in maintaining a good relationship with the environment	1	2	3	4	5
15.10	I commit to minimize my consumption and reducing waste as it is a way to live in harmony with my surroundings	1	2	3	4	5
15.11	I see environmental sustainability as a way to honor my religion teachings.	1	2	3	4	5
15.12	I believe that sustainable practices are an integral part of my tradition and established customs	1	2	3	4	5
15.13	I place high value on humility and modesty preferring to keep a low profile	1	2	3	4	5

SECTION C: ENVIRONMENTAL CONCERN

Environment, Refers to the surroundings in which life exists on earth. It is made up of components like humans, animals, sunlight, water, trees and air. **Please use the following scale when responding to each item (tick appropriate box)**.

1=strongly disagree, 2=disagree, 3= somewhat disagree, 4=neither agree nor disagree, 5= somewhat agree, 6= agree and 7=strongly agree

16	**STATEMENTS/ATTRIBUTES**	**S**	**C**	**O**	**R**	**E**		
16.1	I consider the potential environmental impact of my actions when making many of my decisions.	1	2	3	4	5	6	7
16.2	It is important to me that the products I use do not harm the environment.	1	2	3	4	5	6	7
16.3	My purchase habits are affected by my concern for our environment	1	2	3	4	5	6	7
16.4	I am concerned about wasting the resources of our planet	1	2		4	5	6	7
16.5	I would describe myself as environmentally responsible	1	3	3	4	5	6	7
16.7	I am willing to be inconvenienced in order to take actions that are more environmentally friendly	1	2	3	4	5	6	7

SECTION D: PURCHASE INTENTION

Purchase, the acquisition by the payment of money or its equivalent. **Please use the following scale when responding to each item (tick appropriate box)**.

1=strongly disagree, 2=disagree, 3= somewhat disagree, 4=neither agree nor disagree, 5= somewhat agree, 6= agree and 7=strongly agree

17	**STATEMENTS/ATTRIBUTES**	S	C	O	R	E		
17.1	I intent to purchase the solar batteries in the future	1	2	3	4	5	6	7
17.2	I am very likely to purchase the products which uses solar energy	1	2	3	4	5	6	7
17.3	I intent to buy solar batteries although there is new renewable products in the markets	1	2	3	4	5	6	7
17.4	I intent to recommend others to use the solar products	1	2	3	4	5	6	7

THANK YOU FOR YOUR COOPERATION

TURNITINREPORT