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## **Strategic Management Practice Critical Success Factors and Green Marketing Strategy Status among Solar Energy Technology Dealers in Nairobi County in Kenya**

**Ruth Wayua Kimanthi, Dr. Godfrey K. Makau & Dr. Joyce Amuhaya**

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# Strategic Management Practice Critical Success Factors and Green Marketing Strategy Status among Solar Energy Technology Dealers in Nairobi County in Kenya

<sup>\*1</sup>Ruth Wayua Kimanthi, <sup>2</sup>Dr. Godfrey K. Makau & <sup>3</sup>Dr. Joyce Amuhaya

<sup>1</sup>Jomo Kenyatta University of Agriculture and Technology, Kenya Ph.D. Candidate,  
Department of Business Administration

<sup>2, 3</sup>Lecturer, Department of Business Administration, Jomo Kenyatta University of  
Agriculture and Technology, Kenya

**\*Email:** [rwayuakim72@gmail.com](mailto:rwayuakim72@gmail.com)

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## Abstract

The energy sector in Kenya contributes significantly to the country's economic development by creating employment opportunities and raising people's living standards. However, there is compelling evidence that solar energy technology products end of life e-waste poses great danger to the environment today and hence remains a strategic management challenge, not only for Kenya but the whole world. This study therefore employed strategic management concept in analyzing and understanding the strategic management practice critical success factors explaining green marketing strategy status among solar energy technology dealers in Nairobi County in Kenya. The study was underpinned by Resource Based Theory and Stakeholder Theory. The specific objectives were to establish the influence of Technological CSFs, organizational CSFs, environmental CSFs and individual CSFs on Green Marketing Strategic Management Practices among solar energy technology dealers in Nairobi. Descriptive research design was adopted with a target population comprising of all 521 solar energy dealer business firms situated within the Nairobi city county area according to EPRA (2022) registration records. The sample size comprised 226 respondents selected using purposive sampling method so that only those with at least five years' experience in the solar energy supply business in Kenya were included. Both open and closed ended questionnaires were then administered to them to collect both qualitative and quantitative data for analysis. The data was analyzed into both descriptive and inferential statistics and presented using frequency tables and charts. The study found that technological factors ( $\beta=0.52$ ,  $p=0.0023$ ) and organizational factors ( $\beta=0.99$ ,  $p=0.0002$ ) had a positive and significant effect on GMSS, while environmental factors ( $\beta=-0.47$ ,  $p=0.0615$ ) and individual factors ( $\beta=0.37$ ,  $p=0.0741$ ) had no significant effect, with the model explaining 27.1% of GMSS variance ( $R=0.52$ ,  $R^2=0.271$ ,  $p=0.003$ ). The study recommends that all the technological factor indicators identified in the study be put into consideration when developing and implementing green marketing strategy and associated strategic management practices, especially for the solar energy technology market in Kenya.

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**Keywords:** *Strategic Management Practices, Solar Energy Technology, individual CSFs, Green Marketing, Technological CSFs, organizational CSFs, environmental CSFs*

## 1.0 Introduction

Thompson and Davis (2023) argue that one of the key characteristic of management research is its transdisciplinary nature. They also state that another of its characteristics is the belief that it must be able to develop ideas and relate them to practice. In this regard, this research is in the area of strategic management of technological innovations. The study was motivated by Lee & Gonzalez (2021), observations that if we understand only part of the innovation process, the practices we adopt to manage it will also be likely to be only partially useful. They also add that one of the biggest problems in innovation management is that we need to understand a set of complex, uncertain and high risky phenomena. According to Johnson & Smith (2022), technological innovation is not only the process of introducing new technologies or improving existing ones, it also includes the application of these technologies in new products, services and business models to create unique market value and competitive advantage. Thompson & Davis (2023) assert that technological innovation management is the process of creating new value by developing new technology or improving existing technology. Strategic management of technological innovation process includes the invention, development and commercialization of technologies into products, services and operational processes with the goal of improving efficiency, quality and performance (Thompson & Davis, 2023).

In Kenya, according to George et al (2019), the Ministry of Energy and Petroleum manages energy access overall strategy and provides advice on the production and growth of energy sub-sector, including power, petroleum and renewable energy. According to Kiprop, Matsui, and Maundu (2019), renewable energy in Kenya was first introduced in the early 1970s by foreign investors. Today, the path to access to clean and affordable energy is contained in the national strategy that aims to increase access to energy to all citizens by 2020 (World Bank, 2020). According to George, et al (2019), there still exist various strategies for enhancing accessibility to Solar Energy in Kenya. According to Otieno and Omwenga (2016), a number of general e-waste management guidelines and Acts have been developed in Kenya. For example, the e-waste management guidelines (NEMA, 2010) provide a basis for development of a regulatory framework for identification, collection, sorting, recycling and disposing of e-waste, according to the Environment Management and Coordination Act (EMCA, 1999). In addition, the waste management regulation 2006 and the Procurement and Disposal Act 2015 are other legal instruments that have been developed to address the e-waste menace in Kenya.

According to the Procurement and Disposal Act 2015, MDAs have to bond unserviceable goods where unserviceable ICT devices are part of such goods with competitive tenders for disposal of obsolete invited (NEMA, 2010) and yet there is very little evidence of this happening, close to ten years after the Act. However, the policy is yet to be developed (Otieno & Omwenga, 2016). This lack of clear disposal mechanisms has resulted in excessive accumulation of obsolete electronic devices by Ministries, Departments and Agencies (MDAs) (NEMA, 2010). According to Otieno and Omwenga (2016), this process is also slow in Kenya and often results to tonnes of decommissioned ICT equipment lying in stores, especially in the public institutions thus posing health issues to public servants. Otieno and Omwenga (2016) concludes that there is a gap as most of e-waste is dealt by informal sector.

The Critical Success Factors (CSFs) method has been used in a variety of fields of study to determine the most critical factors that influence an industry's success. The concept of critical success factors (CSFs) was proposed by Rockart (1979) who described that as X- number of

the main areas where an organisation, institution, department, project and so on, must achieve an efficient performance to realise its mission, vision and goals. Specifically referring to the energy sector, Mokaan, Lee and Ramlan (2019) also argue that identification and strategic management of CSFs is critical because they indirectly affect the renewable energy strategies, as their effect is on assertion of goals of the project and as a way to enable success of the project mission. They therefore suggest that knowing CSFs of renewable energy projects will also aid in increasing efficiency of generation, transmission, and distribution of renewable energy (RE) in the power sector.

Given the above background, the present study therefore, attempted to evaluate the critical success factors (CSFs) affecting green marketing strategic management practices pertaining e-waste management among solar energy technology dealers within the developing world contexts. The study comes just at the right time when according to the U. S. Department of Energy (2021), it has been reported that the need for energy continues to rise, forcing communities across the world to increasingly embark on solar energy to meet their demands with its clean, safe, reliable energy. Today, solar energy systems are widely available for home use, allowing home owners to unlock the power of these renewable resources systems (Irfan et al, 2021). The advancement of solar technologies has therefore created gradual changes in the sociotechnical system, including people, business practices, knowledge, and other elements, all of which require adjustments to embrace the new alternative clean energy technologies (Davis et al., 2013). In this regard, today, although born from pure private business sector, the strategic management approach has been highly regarded as the best approach in strategically mitigating over various human challenges in any sector in an effort of promoting sustainable prosperity and development worldwide.

### **1.1 Statement of the Problem**

Strategic management practices have been recommended in various industries including the renewable power energy due to their critical role in promoting not only sustainable development efforts but also production and supply of eco-friendly products and services (Mokaan, Lee and Ramlan, 2019; Guarnieri et al., 2020). In the solar energy sector, this effort has been motivated by the realization that about 75 MT (metric tonnes) of solar waste has been generated for every 1 MW of solar PV installed capacity (Weckend et al., 2016). It was also projected that this renewable waste would grow to about 60 million tonnes globally by 2030 as reported by IRENA (2019). Therefore, solar e-waste management has become a global hot issue because of global environmental degradation, the international community, the efforts of governments, the green movement and the impact of public media (Mokaan, Lee & Ramlan, 2019). The UN itself has suggested a green marketing strategy approach to address the e- waste problem by linking e-waste to three of its SDGs and supporting the sustainable consumption and quantification of e-waste (Bhutta, Omar & Yang, 2011). Today, according to Vilkaite-Vaitone and Skackauskiene (2019), there are many well-known international solar energy technology companies attaching importance to Green marketing strategy as a sustainable development strategy for them. Yet in Kenya, none of solar companies are so far reported or known to practice Green marketing strategy, and if any exist, then there is lack of such vital research information, especially the strategic management practices which would determine its success or failures. Due to lack of this vital knowledge, some recent searchers such as Guarnieri, et al. (2020) have even suggest adoption of other e- waste management strategies to make development sustainability more meaningful.

Given the above situation, this study was therefore born with the assumption that green marketing strategy is the best option in managing solar energy technology EOL e-waste in Kenya but its adoption and practical applications can only work if its strategic management



practice CSFs are determined. In this regard, Vilkaite-Vaitone and Skackauskiene (2019) suggest that successful green marketing strategy implementation should be reflected in an organization's engagement in strategic, tactical, and operational marketing activities and processes that have a holistic aim to create, communicate and deliver products with the minimal environmental impact. Such a conceptualization was adopted in this study so as to hook in all the solar energy dealership stakeholders in determining their strategic management practice CSFs and their influence on green marketing strategy status. So far, no existing study has been done to examine such relationships in the solar energy technology area, leave alone in the Kenyan context. This study sought to therefore bridge the knowledge gaps by investigating strategic management practice critical success factors (CSFs) of green marketing strategy status among solar energy technology dealers in Nairobi.

## 1.2 Research Objective

- i. To establish the influence of Technological strategic management practice CSFs on Green Marketing Strategy status among solar energy technology dealers in Nairobi.
- ii. To assess the influence of Organizational strategic management practice CSFs on Green Marketing Strategy status among solar energy technology dealers in Nairobi.
- iii. To examine the influence of Environmental strategic management practice CSFs on Green Marketing Strategy status among solar energy technology dealers in Nairobi.
- iv. To determine the influence of Individual strategic management practice CSFs on Green Marketing Strategy status among solar energy technology dealers in Nairobi.

## 1.3 Significance of the Study

The Government which has the sole role and obligation of protecting its citizens' rights by providing a clean and health environment as well as eliminating any process and activity that may endanger the environment as per article 42 and 69 of the Kenyan constitution 2010, will benefit from the study as it first unravelled the strategic management practice CSFs for green marketing strategy as an effective e-waste management measure. The study also highlighted the effectiveness of the existing green marketing measures and initiatives. The findings of the study and its recommendation will also be useful in informing the UN regarding achievement of the e-waste management SDGs through green marketing strategy. The research findings acted as a source of reference for scholars who would want to undertake the studies in the area of green energy and particularly green marketing status and its contributing strategic management practice CSFs which is deemed the most effective way of e-waste management in the solar energy technology sector. The study will be of benefit to other solar energy technology dealers and their merchandise consumers who will learn the most effective ways of managing solar equipment e-waste through practicing green marketing ideals.

## 2.1 Theoretical Review

### 2.1.1 Resource Based Theory (RBT)

The key proposition of the RBT was that the exploitation of a firm's unique bundle of valuable rare, inimitable and non-substitutable resource was the fundamental source of superior long-term performance (Barney, 2011). The firm's resources are either tangible or intangible. Tangible resources include equity capital, retained earnings, plant and equipment debt capital, computer hardware and software, geographical location, robots or buildings. Intangible resources are such resources as human capital, organizational structure, organizational culture and organizational strategy & reputation (Barney, Corte, Sciarrelli & Arikan, 2012). There are two main assumptions of the RBT applied in this study. Firstly, RBT assumes that solar energy dealer firms and solar energy technology potential consumer households possess heterogeneous bundles of resources for deployment in green marketing strategy

implementation. Secondly, RBT assumes that the resources endowed by a firm and households are either inelastic in supply or costly to imitate (Barney, 2011). RBT proponents argue that from a technology supplier firm's perspective, RBT takes an inside resource perspective of explaining the drivers of sustainable competitive advantage (Kraaijenbrink et al., 2010). In this way, the RBT was useful in explaining the solar energy dealer firm managers' exploitation of resources to drive long term customer technology adoption loyalty and subsequently create and capture incremental customer lock ins in the solar energy competitive market through green marketing strategy implementation.

Resource Dependence Theory on the other hand was a useful complementary lens through which to examine resource deployment (Bass & Chakrabarty, 2014), consumer and dealer dependence on new solar energy technology (Dunford, 1987), and the new value chain network interdependencies created by the long-term energy transition (Rossignoli & Lionzo, 2018). In contrast, while RBT assisted in mapping the critical resources deployed in support of green marketing strategy implementation, Resource Dependence Theory stresses the interdependence of solar energy stakeholders, as well as the power dynamics and resource-seeking motives of diverse actors (Cuervo-Cazurra & Li, 2020; Mohr et al., 2016). Solar module users depend on their distributors who in turn depend on the manufacturers for supplies and the government for regulation of the industry (Boute & Zhikharev, 2019). Resource Dependence Theory will therefore provide novel insights into the green marketing strategy implementation interdependence issues as far as resources sharing are concerned and also the strategic roles dependence relationships.

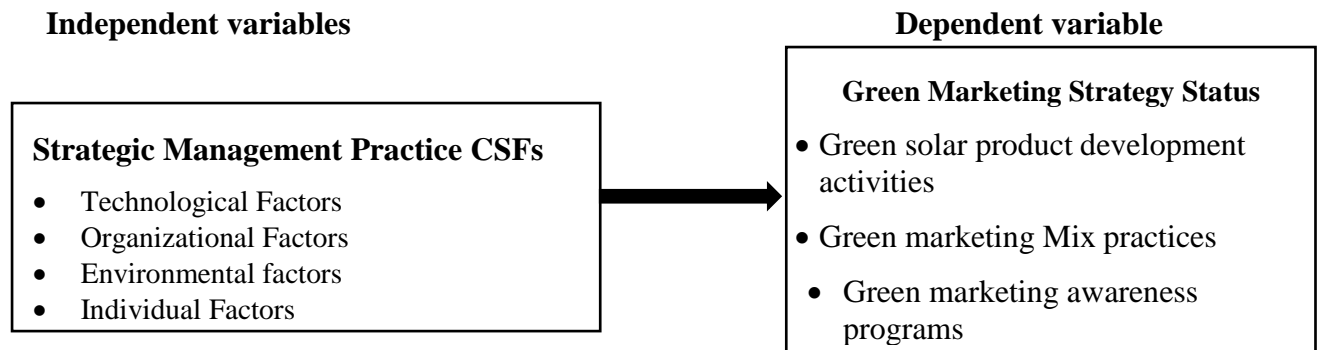
The Dynamic Capabilities literature will also be used in looking at how solar energy dealers adapt to changing business environments in terms of competition, innovation and green energy policy and regulatory frameworks (Luo, 2000; Teece, 2014). Dynamic Capabilities Theory suggests that solar energy dealers can achieve competitive advantage if they can concurrently develop and deploy green marketing strategic capabilities for adapting in changing local, regional and global solar energy market landscape (Riviere et al., 2020). Given that the solar energy dealers green marketing strategy transition represents a global shifts based on environment protection dynamics and green marketing strategy implementation interdependencies, understanding how the solar energy dealers develop and deploy green marketing strategy capabilities is an important part of the puzzle.

### **2.1.2 Stakeholder Theory**

Stakeholders can be defined as the range of actors who are likely to use a system or be influenced either directly or indirectly by its use (Macharis and Stevens, 2003). Stakeholder Theory centers on how organizations create value for a broad range of stakeholders, including local communities, customers, suppliers, governments, and shareholders (Crilly, 2011; Devinney et al., 2013; Freeman, 1984). Stakeholders can provide local knowledge, information, ideas, and opinions that can inform project design and allow interventions and technologies to be better adapted to local conditions (Cogan and Sharpe, 1986; Renn et al., 1993), which may lead to decisions that are more durable because they are based on more complete information (Beierle, 2002; Koontz & Thomas, 2006). In this study, green marketing strategy implementation bear characteristics of various stakeholders involved. The diverse stakeholders ranging from company shareholders and consumers to public policymakers and NGOs have a fundamental influence on implementation of green marketing strategies by the dealers. These interconnections of stakeholders within the solar energy green marketing strategy implementation framework therefore provide fertile ground for theorizing (Kazmi et al., 2021).

According to Mendelow (1991), green marketing strategic activities that work with, rather than against, their stakeholders tend to accumulate goodwill and cooperation for the necessary business activities and roles. In this study, therefore, the stakeholder theory will be used in analyzing solar energy industry strategic management practice stakeholders in Kenyan market, the critical roles each play, and capabilities in green marketing strategy implementation. Along with it, Resource based Theory, which holds that firms develop capabilities for managing specific stakeholders, such as regulators (Rugman & Verbeke, 1998), Stakeholder Theory will be used to analyse the critical resource required and deployed for each stakeholder category and actor.

## 2.2 Conceptual Framework



**Figure 1: Conceptual Framework**

## 2.4 Empirical Review

### 2.4.1 Technological Strategic Management Practice CSFs

**Relative advantage:** Generally, many researchers (Urmee, 2016; Silk, et al., 2014) have found that people are more likely to adopt technological innovation when it has a relative advantage over alternatives; i.e., that it is found superior or better than the idea that it supersedes. To have a relative advantage, an innovation must be perceived as better than the idea that it supersedes. Caird, Roy and Herring (2008) and Caird and Roy (2010) found that the main drivers for adopting micro energy generation technologies were (perceived) energy savings and lowering of fuel bills. The main barriers were uncertainty about reliability of the technology and performance, long payback periods, high system costs and limited roof space in multi-story buildings. These studies concluded that consumers found environmentally friendly household products to have an advantage over conventional products commonly used in households.

**Compatibility:** According to Rogers (2003), when any innovation fits with the lifestyles of potential adopters, stays in line with their preferences, and matches similar technologies that they may have adopted in the recent past, the innovation becomes more appealing to them. The innovation must therefore be compatible, which implies the degree to which it is perceived as being consistent with past experiences and needs of potential adopters (Silk, et al., 2014). Previous studies on green innovation have found that compatibility significantly influences the attitudes and use intention of the potential adopter (Alam et al., 2014; Muller & Rode, 2013).

**Complexity:** In using any given technological innovation, an individual's knowledge about that innovation, and the related skills required to use that innovation, often determine the perception of complexity associated with the use of that innovation for the individual. The more comfortable an individual is with using a given innovation, the more attracted they will become to that innovation (Rogers, 2010). Therefore, a new idea or innovation is less likely to be adopted if it is perceived to be complicated and challenging to use (Rogers, 2003). Thus, if a

technology is viewed by stakeholders as complex, it becomes less likely to be adopted by them (Silk, et al., 2014). Researchers have found that too complex or difficult processes and technical interoperability influence implementation, adoption and use of new technologies (Ahmad et al., 2012; Makau, et al, 2015).

**Observability:** Observability concerns the degree by which the results of an innovation are visible in practice and demonstrations to potential adopters (Rogers, 2003). The underlying idea is that the innovation under consideration is already in use by other consumers, and the outcomes/results of using that innovation are available to be observed by potential users (Ahmad et al., 2012). The decision to adopt an innovation is greatly influenced by an individual's ability to observe the operations and even impact of the innovation on others who have already adopted it (Makau, et al, 2015). Some previous studies on the adoption of solar energy systems (Tapaninen et al., 2009a) and renewable energy systems (Sardianou & Genoudi, 2013), observability had a non-significant effect on attitudes and behavioral intention. However, several studies on the adoption of green practices have reported a significant influence on the consumers' use intention (Claudy et al., 2011; Plotz et al., 2014).

**Trialability:** Trialability is the degree to which an innovation can be tested on a limited scale (Rogers, 2003). Regarding this predictor, Silk et al. (2014) found that the absence of the opportunity to test an innovation decrease the likelihood of adoption. However, at the individual level, trialability was difficult to implement based on the financial costs associated with the renewable energy systems (Labay and Kinnear, 1981).

**Technical Capacity and Quality Standard:** In Nigeria, researchers reported that there was a lack of skilled personnel to meet a code of standard procedure, to install and maintain solar PV in the country which prevented adoption by potential customers of solar energy (Purohit and Purohit, 2017; Ohunakin, et al., 2014). Consequently, lack of standard and quality control cropped in as constraint in the development and promotion of solar energy initiatives among the potential users, retailers, and promoters for solar energy (Shukla, et al. 2018; Kumar, et al., 2020). Furthermore, research has shown that the solar market is flooded with substandard solar panels, batteries and accessories, resulting in lack of trust and guarantee to the promoters (Shukla, et al. 2018). Inadequate standard and quality control for the solar energy product is a constraint that can lead to low access to the market penetration, especially the rural areas (Kumar, et al., 2020). In line with the above factors, the following hypothesis is proposed:

H1: Technological Strategic Management Practice CSFs will not have influence on Solar Energy Green Marketing Strategy Status in Kenya.

#### **2.4.2 Organizational Strategic Management Practice CSFs**

According to Sudhakar (2012), various organizational factors influencing green marketing strategy have been explored and measured in previous studies such as Heikell (2020), Ørsted (2020), Feiler & Teece (2014), Shuen et al. (2014) and Shead (2020) among others. Those that are relevant to solar energy green marketing are adopted in this study and discussed below:

**Firm-level capabilities:** It should be noted that organizational ability to develop and implement successful green marketing strategy rests on the assumption of enough resources endowments (Heikell, 2020). Therefore, researchers have found that green marketing strategic activities are influenced by firm-level capabilities (Ørsted, 2020; Feiler & Teece, 2014; Shuen et al., 2014; Shead, 2020). Those capabilities may be highly valuable for deploying some vital organization resources critically required at given stages of green marketing strategy implementation process (Shuen et al., 2014). In that case, they can leverage on each other's knowledge and capabilities to "augment the skills-base, bridge any resource gaps, and gain complementarities" (Shakeel et al., 2017; Burke et al., 2019).



Assertive Green Marketing Strategy (also called Aggressive Strategy) is the alternative to a Defensive Strategy (McDaniel and Rylander, 1993). This strategy requires company being a “first mover” on environmental issues and making more effort than government regulations and consumers’ expectations, which means marketers should respond to market incentive rather than to regulations. McDaniel and Rylander (1993) claimed that assertive strategy can provide company a sustainable competitive advantage and emphasized the importance of being a “first mover” in green marketing. They argued that the “first mover” image is the key to profiting from green marketing while the latecomers may be seen as imitators and even be doubted of its true intent by consumers. A company which adopts an assertive green marketing strategy will be more likely regarded as a sincere environmental activist and this positive public image can bring a sustainable competitive advantage. McDaniel and Rylander (1993) further stated that besides increased profitability, the company with an assertive green marketing strategy leadership position may avoid public scrutiny and government regulation by doing more than required.

Lean Green marketing strategy is adopted by companies that can be regarded to be good corporate citizens. They are usually in a small green market where there is no substantial profitability. They seek long-term pre-emptive solutions and want to comply with legislation, but their major interest is cost reduction and efficiency improvement through pro-environmental initiatives, with the goal of achieving a lower-cost competitive edge rather than a green one. Lean Greens are frequently cautious to publicize or advertise their green projects because they lack the ability to distinguish themselves from competitors in terms of greenness and cannot afford to be held to a higher environmental standard (Ginsberg and Bloom, 2004). Protective Companies that appreciate the importance and profitability of green market segments use green marketing strategies. They typically employ green marketing as a reactionary approach or precautionary measure to respond to government regulations, consumers’ claims and competitors’ actions, and defend their environmental records with public relations. Defensive Greens have sincere environmental initiatives but seldom promote and publicize these initiatives and only make minimum green because they are unable to distinguish themselves from competitors in terms of greenness.

Extreme Environmental Marketing Greenness has been a primary driving force behind the company because strategy companies are those in a significant and profitable green market area. They can also distinguish themselves from competitors because they are guided by holistic environmental philosophies and principles, and environmental challenges are fully incorporated into the business and product lifecycle processes. Some extreme green practices include lifecycle pricing, complete quality environmental management, and environmentally friendly manufacturing. Extreme green companies are more likely to attain sustainable competitive advantage. They often focus on niche markets and choose boutique stores or specialty channels to gain profitability (Ginsberg & Bloom, 2004).

Green Product: Green products are products that are made in an environmentally friendly way, have few negative effects, are recyclable, save resources, and are prepared on the spot. These products are biodegradable, recyclable, have little packaging and are made with organic processes, so they can be said to be environmentally friendly products (Alharthey, 2019). Green products are alternatives chosen by customers to address environmental issues. The presence of green products will increase customer drive to generate value in the minds of consumers, influencing purchase decisions (Kirgiz, 2016). Moreover, environmentally conscious consumers are intrinsically motivated to be aware of the product's environmental qualities (Al-Majali & Tarabieh, 2020; Hossain & Khan, 2018; Humairoh & Elfani, 2020; Rasaputra & Choon-yin, 2015).

**Green Price:** Green Prices according to Sharaf and Perumal (2018), have been defined as costs in traditional economics, but recent studies recognize that prices serve to inform people about the value of goods or services. The green price is the price that consumers pay for environmentally friendly products. In determining the price of eco-friendly products, marketers account for the environment, people, and profit (Solaiman et al., 2015). In most instances, the prices for green commodities are mostly higher than those for conventional items (Widyastuti & Santoso, 2016). Solaiman et al. (2015) found that some individuals are willing to pay a price that is up to 20 percent higher than that of non-green products while other don't. For instance, Singhal & Malik (2018) found that people are willing to pay a higher price for greener products because they want to recognise themselves with brands that are green compliant. Furthermore, Sima (2014) found that the real manifestation of consumer attitudes and behaviors toward paying premiums for green products vary during cost considerations. Some researchers call for green marketing campaigns to promote intrinsic ethics and moral intensity in order to realize the goals of green pricing (Sima, 2014; Foster, 2013).

**Green Promotion and Communication:** Companies that use a green promotion strategy to consumers and their environment will apply continuous communication intensively in increasing public knowledge of the environmentally friendly products they sell. Thus it will create value in the minds of consumers, thus having an impact on purchasing decisions. The green product marketers use different promotion tools to sensitize their potential clients on the advantages of their products (Foster, 2013). Direct marketing, sales promotions, public relations, and advertising are some of the means of conveying to the customers the core message of greenness (Eneizan et al., 2015). The aim of such campaigns should be to persuade consumers to modify their consumption behaviours and perception concerning green commodities. Green environmental awareness is one of the key components of green education. Lee (2017) defines environmental awareness as the degree to which consumers understand environmental issues in terms of facts, or concepts, and the relationship about the environment. Environmental awareness expresses a green consumer's interest in the environment. It impacts an individual willingness to participate in pro-environmental activities (Zoric and Hrovatin, 2012). Green environmental awareness influence behaviour towards green products (Ogiemwonyi and Harun, 2020a).

**Green Promotional activities** have been well achieved through the social media channel. Social Media is basically online or electronic media which has opened up for effective and fast communication amongst online users. Social media use for green initiatives can benefit the organizations in knowing the clients' needs, building the green brands, and enhancing green customer relationship (Williams, Page, & Petrosky, 2014). Social media also is considered as the key channel for consumers to become familiar with the green marketing strategy, green products and develop consumer awareness in the green situation (Siddique & Hossain, 2018; Williams, Page, & Petrosky, 2014). Some previous research has shown that social media like green blogging motivated and positively influenced the adoption of green choice behaviour (Biswas, 2016; Biswas & Roy, 2014). **Green Marketing Strategy Team Behaviour:** It is widely accepted that organizational marketing team behavior affect overall achievements of the set objectives of overall projects (Dvir et al.1998). According to Prabhakar (2008) and Sudhakar (2012), seven team attribute factors that can affect projects and hence green marketing strategy implementation include: 1) team capability/competence, 2) teamwork, 3) select right project team, 4) project team coordination, 5) task orientation, 6) team commitment, 7) team empowerment. In line with the above factors, the following hypothesis is proposed:

H2: Organizational Strategic Management Practice CSFs will not have influence on Solar Energy Green Marketing Strategy Status in Kenya.

### 2.4.3 Environmental Strategic Management Practice CSFs

Competitive Pressure and Related Contextual Issues: Research have pointed out that sometimes competitive pressure pushes the entire industry to adjust its environmental behavior (Chan, 2013; Polonsky, 1994; Shi and Yang, 2008). According to certain studies, business stakeholders and partners' pressure may also encourage organizations to implement green marketing (Shi and Yang, 2008). Such pressure may be tied to partners' participation in green initiatives, which in turn encourages other supply chain players to become greener. According to Stern (1999), there are many business contextual factors which can facilitate or constrain green behaviour, especially in emerging countries where green behaviour is more convoluted than previously thought. Research has identified the solar technology business contextual green marketing factors to include volatility of the business environment, weather and climate conditions and the technology security (Stern, 1999). For developed countries, it has been observed that people have higher environmental knowledge, but their purchase decisions have even further variation (Dahlstorm, 2011). For instance, Pickett-Baker and Ozaki (2008) found that in developing countries, usually a low level of environmental awareness has been found, but even the low level of environmental concerns has a direct impact on green consumers buying behavior.

Political and technological factors are also important ingredients of the environmental factors to alter green project's destiny (Westerveld, 2003), whereas environmental factor is identified as a macro factor (Hayfield, 1979). Particularly, the existing policies and regulatory frameworks that have been designed to protect the reliability of non-renewable energy supplies can be extended to protect renewable energy supplies (Stegen et al., 2012). Weather and climate Conditions can also negatively affect the efficiency and effectiveness of solar panels and batteries which could lead to low output of the initiative. For instance, Aliyu, et al. (2015) found that northern part of Nigeria is extremely hot concluding that the potential for solar energy panels and storage cannot be efficiently and effectively achieved due to the adverse effect temperature of the weather in the region (Ramli, 2016). The solar panel efficiency is negatively affected by temperature more than 250c, as such the effectiveness of the panels can be reduced by 10% - 25% whilst the battery storage needs cooling mechanism to enable its functionality (Jacobson & Jadhav, 2018).

Country and regional infrastructure development disparity has been found to play a role in renewable energy technology marketing with some vendors recognizing the more opportunities for improving access to renewable energy sources among the emerging economies and low-income communities (Doh, 2019). The advantages available to those already having an abundance of solar energy technology will accrue to those who currently lack it high-quality jobs and expanding business opportunities among them (Sovacool & Drupady, 2016). Internet can be called as an environmentally friendly distribution channel because it offers unmatched convenience to customers while of course this can save costs for producers in various intermediaries (Bhalerao & Deshmukh, 2015). The dealer company creates its own website featuring merchandise, so that customers order online and get the desired product within days (Bhalerao & Deshmukh, 2015). Bhalerao and Deshmukh (2015) states green places are also critical and are generally referred to as distribution channels or distribution networks, the place can be a physical store (building) or a virtual store (Bhalerao & Deshmukh, 2015). According to Bhalerao and Deshmukh (2015), the green places are used to improve the transport system by lowering emissions and energy usage.

Environmental Sustainability Concerns: According to Robert and Bacon (1997), environmental concern is defined as "the degree of emotionality, the amount of specific factual knowledge, and the level of willingness as well as the extent of actual behavior on

pollution-environmental issues. Researchers argue that when being green is perceived as a response to ease environmental calamity, a market that supplies green products and pricing systems influences consumer engagement in adopting pro-environmental behaviour (Van Diepen & Voogd, 2001; Vining & Ebreo, 1992). Matthes and Wonneberger (2014) in a study conducted on US and Austrian consumers found that consumers who possess more environmental awareness tend to behave in a more pro- environmental way thereby putting pressure on the industry players to go green. The relationship between consumer buying behavior and environmental awareness has been further examined by Kianpour, Jusoh and & Asghari (2014) in the Indian context.

**Government Legislation, Policy and Market Regulations:** Lack of policies and regulations for the development of solar energy has been found to hinder the adoption of the initiative (Aly, et al. 2019). For solar energy initiative to thrive in in a country, clear policies, procedures, and predictable mission for investors need to be stipulated (Ozoegwu, et al. 2017). The ability of regulators to encourage firms to embrace green marketing strategy varies across locations (Backman et al., 2017). Based on AlFuqaha and AlSaifi, (2015), factors that impact green marketing adoption, include environmental protection legislation, shortage of natural resources, changes in consumer behavior, and the attitudes of senior management towards green marketing. Therefore, government agencies are pressuring businesses to become more socially responsible in order to protect their customers and society (Chan, 2013; Jain and Kaur, 2004; Polonsky, 1994; Mahamuni & Tambe, 2014; Mishra & Sharma, 2014). Governments, for example, provide legal regulation for waste management and grant environmental licenses to compel green marketing strategy behaviors (Talebi, Omid & Lashgarara, 2018).

**Social Environment Pressure and Subjective norms:** Consumer purchasing intentions for green products are influenced not just by individual variables, but also by the social environment and other individuals (Guerin, 2017). Individual behavior decisions are influenced by social forces in a variety of ways, including peer pressure and collectivist views (Bong Ko & Jin, 2017). Subjective norms are the societal pressures that individuals sense while deciding whether to engage in or refrain from a particular conduct (Ajzen, 1991). Individuals are frequently impacted by the people around them when making decisions. It represents how individuals are affected in society, i.e., how their reference group perceives them if they engage in specific actions. Previous research has revealed that people comply with subjective norms because they are fearful of social pressure from main referents, or because their referents advise them on appropriate or good social actions. Therefore, the concept of collectivism has an important influence on consumers' green purchase intentions. In line with the above factors, the following hypothesis is proposed:

H3: Environmental Strategic Management Practice CSFs will not have influence on Solar Energy Green Marketing Strategy Status in Kenya.

#### **2.4.4 Individual Strategic Management Practice CSFs**

Because consumers and vendors are diversified, with distinctions in their green marketing role intents and demographic features influencing market green marketing strategy concerns. There have been few studies on the association between personality qualities and environmentally friendly actions (Dezdar, 2017). Demographics: Marketing literature (Alharthey, 2019; Baktash and Talib, 2019; Rex and Baumann, 2007; Talebi, Omid and Lashgarara, 2018) acknowledges that demographic features play a substantial role in intent to concerning environmentally friendly products. First, the marketers' demographic profiles, particularly their age, gender, and academic subject of study, have been discovered to be significant predictors of internal practices and marketing complexity in organizations (Dief & Font, 2010). On the other hand, Nwokolo and Ogbulezie (2018) found that affordability was a critical factor



hindering power generation and access in Nigeria. Particularly, the rural dwellers who are small scale farmers and herders, with low-incomes cannot afford the deployment of solar energy initiative (Purohit & Purohit, 2017). Rex and Baumann (2007) found out that young girls and persons with a relatively high income and education are more likely to engage in green behavior, according to the findings. This discovery allows us to identify age, gender, income, and education as crucial criteria that may influence customers' decisions to choose a greener company.

Environmental consciousness, green product consciousness, and social responsibility: Environmental awareness is described as the sum of people's knowledge about ecological issues, as well as their ability to examine and assess their impact on the environment and the community (Alamsyah, Othman & Mohammed 2020). According to recent research, the level of environmental issues awareness puts substantial influence on the consumer green purchase intent (Xu, Wang, and Yu, 2020). Environmental awareness results to environmental concerns. Both individual and stakeholder groups's concern towards the environment as well as environmental problems is termed environmental concern (Kim and Choi, 2005). Environmental concern is defined as the level of concern about environmental issues, as well as measures to address these issues (Dunlap and Jones, 2002). For studying human features of green marketing, environmental concern is regarded as a crucial environmental component. In response to rising customer awareness about environmental problems as argued by many authors (Lee and Lim, 2020; Situmorang, et al., 2021; Wu, et al., 2021; Wang, et al., 2021), different firms have advertised themselves as environmentally friendly by marketing their greening products and services due to environmental concern pressure from both consumers and environmental protection crusade stakeholders.

Level of green product awareness refers to the ability of the consumer to identify the product with green recognition and recall (Siddique & Hossain, 2018). Some studies found that green product awareness has correlated with green purchase decisions (Siddique & Hossain, 2018). And some studies claim that green product awareness has a strong correlation with green product consumption (Sharma & Trivedi, 2016). In addition, Shrestha (2016) reported that the green advertising (a promotional message that attracts the environmental needs and desires of consumers (Rizqiyana & Wahyono, 2020), eco- labeling (is the food and consumer's product labeling schemes that have been shown to be environmentally preferable products (Khan et al., 2020), and green branding (Gong, et al., 2020).

Zubair (2014) conducted a study in Pakistan, to measure the influence of green branding on green satisfaction by taking 207 customers. The findings indicate an overall strong correlation and effect between green ads, green brand recognition and customer trust. Moreover, the Papista and Dimitriadis (2019) conducted a study in Greece on green branding and consumer outcomes by taking 269 customers. The results suggest that the advantage of the trust has the greatest effect on quality, relationships and green product loyalty have a major influence on behavioral results. Thus, many companies see 'green' as a source of competitive advantage (Kane, 2011). The companies and entrepreneurs try to produce green or eco-friendly products to serve consumers' needs and satisfy them in this green. Greener business will become more trusted in the marketplace, attract customers who value environmental performance (Kane, 2011). And also it can convince consumers to believe in the good thing what company do for the society and environment (Kotler & Keller, 2012). Past researches on green marketing indicate green product trust positively influences consumer buying behaviour (Schlosser et al., 2006). The green consumer avoids using those products that cause harm to the nature or the living thing through the manufacturing process (Gilal, et al., 2020).

Socio-cultural Concerns: Several behavioural researchers found that some non-financial factors influence household green energy adoption and use. For instance, values and environmental self-identity strengthen awareness of energy issues and lead to consequences in households' action and create a feeling of moral obligation to jointly addressing energy problems (Stern, et. 2019; Steg, Perlaviciute & van der Werff, 2015). Some researchers have called this aspect subjective norm which dictate behavioural intention. A vast number of studies (Biswas & Roy, 2015; Ritter et al., 2015; Zhao et al., 2014) have previously suggested that social pressure encourages consumers to buy environmentally friendly products. Subjective norm is recognized as a predictor of consumer willingness to purchase environmentally friendly products (Biswas & Roy, 2015). Wahid et al. (2011) agree with this viewpoint, stating that one of the dominant factors influencing behavioural intention. Mulugetta, Nhete and Jackson (2000) found that sustainable energy development programmes required multi-faceted intervention that was well-coordinated.

H4: Individual Strategic Management Practice CSFs will not have influence on Solar Energy Green Marketing Strategy Status in Kenya.

### 3.0 Research Methodology

The research design used in this investigation was descriptive. The research design demonstrated effectiveness through its positive results from empirical studies about technological innovation adoption as reported in Tyce (2020); Ouma (2019); Wawire (2020) and Makau et al. (2015). The research drew its foundation from the positivist research philosophy. Babbie (2016) defines positivism as an epistemological framework which promotes systematic and structured scientific techniques from natural sciences for social phenomena research with the intention of performing experimental replication of findings. The target population of the study comprised of all the 991 solar energy dealers in registered with Electrical and Petroleum Regulatory Authority (EPRA) as at May 2021 in Kenya categorized into technicians (463) and contractors (528). However, the study population was 521 (technicians (214) and contractors (307) solar energy dealers in registered with EPRA with offices in Nairobi City County. The target population therefore comprised of the 521 dealers' solar energy product and services sales/ marketing personnel who provided the strategic management practice CSFs data due to their experience in the field. A stratified purposive sampling method selected 226 respondents by ensuring the participants possessed at least five years of continuous solar energy technology experience as well as exposure to green marketing strategy CSFs in Kenya.

Data analysis was conducted using SPSS version 21, employing a variety of methods. The first step involved performing diagnostic tests. Next, descriptive statistical analysis was carried out to assist in making statistical decisions, utilizing measures such as the mean and standard deviation. The third method involved factor analysis, which was used to transform correlated variables into a set of linearly uncorrelated explanatory variables (Kothari & Garg, 2014). Qualitative data analysis was conducted through content analysis, which, according to Hsieh and Shannon (2005), is a research method for the subjective interpretation of text data by systematically classifying, coding, and identifying themes or patterns.

### 4.0 Research Findings and Discussion

During the fieldwork, a total of 226 questionnaires were distributed, but only 210 questionnaires were returned having been dully filled. This translated to 92.9%. A response rate of 70% and above is considered excellent according to Mugenda and Mugenda (2013). Demographic results revealed that there were more males (73.8%) than females (26.2%) who participated in this study. In terms of age, majority (45.7%) of the respondents were between

31-40 years of age, with 37.6% being between 20-30 years of age; about one in ten (15.2%) were between 41-50 years and the rest (1.5%) of the respondents were above 51 years of age. In terms of respondents' education level, a large proportion (43.3%) have Diploma/Certificate, followed closely by those with Bachelor's degree at 33.3%. This means that a majority of the respondents had diplomas and bachelor's degree. In terms of the length of service in solar dealership in the county, this study established that most (57.6%) of the respondents had been in solar dealership for between 21-25 years, followed by a few (35.2%) who had been there for 26-30 years, and very few (4.8%) who had been there for less than 5 years. This implies that the respondents were able to give informed and factual opinions concerning GMS status in this industry. The study also established that a majority of the respondents were in operational (technical) level (73.3%), with minority (21.9%) in the middle level management and very few (4.8%) in top management level. Furthermore, the study also showed that most of the respondents (87.6%) were from the branches where GMS is implemented but with some (12.4%) from the headquarters where the strategic decisions are made.

#### 4.1 Descriptive Analysis

##### *Individual Strategic Management Practice CSFs of Green Marketing Strategy Status (GMSS) in Solar Business Dealers in Kenya*

Respondents were asked to give their level of agreement with various statements to examine the importance of various their individual strategic management practice CSFs in affecting adoption status of green marketing strategy among solar energy technology dealers in Nairobi County.

**Table 1: Descriptive Statistics on Individual Strategic Management Practice**

Statements	Disagree	Neutral	Agree	Mean	Std. Dev.
I always promote Green Consumer Behaviour and green products purchase attitudes in my company all the time	7	29.6	63.5	3.78	1.29
I practice Green Marketing in my company all the time	5.2	32.2	62.6	3.72	0.98
I am satisfied with Green Marketing activities practiced in my company now.	6.1	31.3	62.6	3.72	1.09
I am aware of importance of green marketing strategy in reducing environmental degradation with solar e-waste and commit to the practices in the solar technology industry	9.6	33	57.4	3.53	1.16
Most of the solar technology products I promote, stock and deal in are Green Products so as to save the environment	8.1	30.7	61.2	3.69	0.87
Most of my customers are now embracing the culture of green marketing and green product consumption in solar industry in Kenya.	6.9	32.3	61.8	3.7	0.92
<b>Average</b>	<b>7</b>	<b>31.5</b>	<b>61.5</b>	3.69	1.05

The findings in the Table 1 shows that 63.5% of the respondents agreed that they always promote Green Consumer Behaviour and green products purchase attitudes in their company all the time. In addition, 62.6% of the respondents affirmed that they practice Green Marketing in their company all the time and are satisfied with Green Marketing activities practiced in their company now. Approximately three in five (57.4%) of the respondents were in agreement that

they are aware of importance of green marketing strategic management practices in reducing environmental degradation with solar e-waste and commit to the practices in the solar technology industry; 61.2% of the respondents agreed that most of the solar technology products they promote, stock and deal in are Green Products so as to save the environment; 61.8% of the respondents agreed that most of their customers are now embracing the culture of green marketing and green product consumption in solar industry in Kenya. From the findings, it can be observed that most of the respondents were in agreement. This implies the critical nature of Individual factors in affecting adoption of green marketing strategy and associated strategic management practices in the solar technology business in Kenya.

### ***Technological Strategic Management Practice CSFs of GMSS among Solar Business Dealers in Kenya***

Respondents were asked to give their level of agreement with various statements to examine the importance of various technological strategic management practice CSFs in affecting adoption status of green marketing strategy among solar energy technology dealers in Nairobi County.

**Table 2: Descriptive Statistics on Technological Strategic Management Practice**

Statements	Disagree	Neutral	Agree	Mean	Std. Dev.
The solar technology we sell most in Kenya have higher relative advantage compared to other existing energy solutions	31.3	14.8	53.9	3.52	1.08
The solar technology we sell most in Kenya are those more compatible with consumers' energy utilization practices such as lighting, heating etc.	20	27.8	52.2	3.55	0.932
The solar technology consumers in Kenya buy more of the simple to use solar equipment and reject the complex ones	34.8	25.2	40	3.6	0.822
The solar technology consumers in Kenya buy more of the solar technologies when they first observe them working elsewhere before buying	21.7	23.5	54.8	3.51	0.707
The solar technology consumers in Kenya buy more of the solar technologies when they are first taken through some trial demonstrations of how they work and are used before buying	14.8	28.7	56.5	3.38	1.432
In Kenyan market, the solar technology sold here is of international quality standards and has enough technical capacities for support	21.7	37.4	40.9	3.56	1.155
<b>Average</b>	<b>24.1</b>	<b>26.2</b>	<b>49.7</b>	<b>3.52</b>	<b>1.02</b>

The results in Table 2 shows that 53.9% of the respondents agreed that the solar technology they sell most in Kenya have higher relative advantage compared to other existing energy solutions. Roughly, a half (52.2%) of the respondents affirmed that the solar technology they sell most in Kenya are those more compatible with consumers' energy utilization practices such as lighting, heating etc. Two in five (40.0%) of the respondents were in agreement that the solar technology consumers in Kenya buy more of the simple to use solar equipment and reject the complex ones. In addition, 54.8% of the respondents agreed that the solar technology consumers in Kenya buy more of the solar technologies when they first observe them working elsewhere before buying. Approximately, 56.5% of the respondents agreed that the solar



technology consumers in Kenya buy more of the solar technologies when they are first taken through some trial demonstrations of how they work and are used before buying and about 40.9% of the respondents were in agreement that in Kenyan market, the solar technology sold is of international quality standards and has enough technical capacities for support. From the findings, it can be observed that most of the respondents were in agreement. This implies the critical nature of technological factors in affecting adoption of green marketing strategy and associated strategic management practices in the solar technology business in Kenya.

#### *Organizational Strategic Management Practice CSFs of GMSS among Solar Business Dealers in Kenya*

Respondents were asked to give their level of agreement with various statements to examine the importance of various organizational strategic management practice CSFs in affecting adoption status of green marketing strategy among solar energy technology dealers in Nairobi County.

**Table 3: Descriptive Statistics on Organizational Strategic Management Practice**

Statements	Disagree	Neutral	Agree	Mean	Std. Dev.
My company has green marketing activities implementation capabilities to practically implement the strategy	53.9	22.6	23.5	1.91	1.08
My company management highly supports green marketing activities	39.1	34.8	26.1	3.13	0.73
My company has elaborate green marketing strategy in place which is also fully implemented in Kenya	13.9	57.4	28.7	3.54	0.92
We have an elaborate green marketing mix policy touching on all the classic marketing mix aspects for the solar energy systems marketing management in Kenya	21.7	44.3	33.9	3.46	0.71
My company team has fully embraced and support green marketing in solar dealing in Kenya	38.3	40	21.7	3.41	0.70
<b>Average percentages</b>	<b>33.4</b>	<b>39.8</b>	<b>26.8</b>	<b>3.09</b>	<b>0.83</b>

The findings in Table 3 below provide the output of the analysis organizational factors importance in affecting the adoption of green marketing strategy and implementation of associated strategic management practices among solar energy technology dealers in Nairobi County. Slightly above a half (53.9%) of the respondents disagreed to the statement that their company has green marketing activities implementation capabilities to practically implement the strategy; 39.1% of the respondents disagreed to the idea that their company management highly supports green marketing activities. However, 57.4% remained neutral on the statement that their company has elaborate green marketing strategy in place which is also fully implemented in Kenya; 44.3% were undecided whether there was elaborate green marketing mix policy touching on all the classic marketing mix aspects for the solar energy systems marketing management in Kenya or not. Similarly, 40.0% of the respondents did not take their stand on the idea that their company team has fully embraced and support green marketing in solar dealing in Kenya. From the findings, it can be observed that most of the respondents were neutral but closely followed by simple majority in disagreement. This implies the critical nature

of organizational factors in affecting adoption of green marketing strategy and associated strategic management practices in the solar technology business in Kenya.

### ***Environmental Strategic Management Practice CSFs of GMSS among Solar Business Dealers in Kenya***

Respondents were asked to give their level of agreement with various statements to examine the importance of various environmental strategic management practice CSFs in affecting adoption status of green marketing strategy and associated strategic management practices among solar energy technology dealers in Nairobi County.

**Table 4: Descriptive Statistics on Environmental Strategic Management Practice CSFs**

Statement	Disagree	Neutral	Agree	Mean	Std. Dev.
My company is under a lot of competitive pressure to deal with green products and embrace green marketing strategy in Kenya	82.6	7	10.4	1.11	0.98
The Kenyan solar business technology distribution channels promote green marketing and products	60	22.6	17.4	2.57	1.09
Kenyan solar technology consumers don't show much concern about the technology's e-waste harm to the environment during and after usage	81.7	11.3	7	1.15	1.16
There are no clear regulatory and policy guidelines regarding green marketing in Kenyan technology market	66.1	25.2	8.7	2.33	0.87
There is no specific solar energy technology e-waste management regulation in Kenyan market	64.3	28.7	7	2.19	0.92
There is low level of awareness about solar energy technology e-waste and environmental sustainability in Kenya.	53.9	29.6	16.5	2.05	0.81
<b>Average</b>	<b>68.1</b>	<b>20.7</b>	<b>11.2</b>	<b>1.9</b>	<b>0.97</b>

The results in Table 4 below provides a summary analysis of the environmental factors affecting adoption of green marketing strategy and associated strategic management practices among solar energy technology dealers in Nairobi County. Nearly eight in ten, (82.6%) of the respondents were not in agreement with the statement that their company is under a lot of competitive pressure to deal with green products and embrace green marketing strategy in Kenya. Three in five (60.0%) of the respondents agreed that the Kenyan solar business technology distribution channels promote green marketing and products. Approximately 81.7% were in agreement that Kenyan solar technology consumers don't show much concern about the technology's e-waste harm to the environment during and after usage. Roughly three in five (66.1%) of the respondents also agreed that there are no clear regulatory and policy guidelines regarding green marketing in Kenyan technology market. In addition, 64.3% of the respondents agreed that there is no specific solar energy technology e-waste management regulation in Kenyan market. Approximately a half (53.9%) of the respondents agreed that there is low level of awareness about solar energy technology e-waste and environmental sustainability in Kenya. From the findings, it can be observed that most of the respondents were in disagreement. This implies the critical nature of environmental factors in affecting

adoption of green marketing strategy and associated strategic management practices in the solar technology business in Kenya.

*Overall Strategic Management Practices CSFs of GMSS among Solar Business Dealers in Kenya*

Respondents were asked to give their level of agreement with various statements to examine the importance of various Strategic Management Practices CSFs explaining Green Marketing Strategy status among the solar energy technology dealer business in Nairobi County, Kenya. The results in Table 4.18 shows that 47.0% of the respondents agreed that they only deal in green and environment-friendly products in their company supplies and services everywhere. In addition, 44.3% were in agreement that they only deal in green and environment-friendly products in their company supplies and services in Kenya. Approximately 41.7% of the respondents were contented with green solar products development activities and level their accessibility in the world. Also, 46.1% of the respondents affirmed that they were satisfied with green solar products development activities and level their accessibility in Kenya. Approximately 44.3% of the respondents accepted that they are satisfied their company green marketing strategy implementation activities for solar technology in Kenya. About 39.1% were contented with their company green marketing mix activities for solar technology in Kenya. In addition, 47.8% were satisfied with their company green marketing activities awareness program for solar technology in Kenya it. Also, 42.6% of the respondents were confirmed that the level of environmental concerns and green marketing awareness in Kenya is high enough among technology dealers and consumers. It is observed that 40.9% of the respondents agreed that they are in full support of green marketing and commit to continue embracing it in their solar business. From the findings, it can be observed that most of the respondents were in agreement. This implies the critical nature of the GMSMPS factors captured in the study in assessing outcome status of Green Marketing Strategic Management Practices among solar technology business dealership in Kenya. These results are as shown in table 5.

**Table 5: Overall Strategic Management Practices CSFs**

	Disagree	Neutral	Agree	Mean	Std. Dev.
I only deal in green and environment-friendly products in my company supplies and services everywhere.	22.6	30.4	47	3.45	0.98
I only deal in green and environment-friendly products in my company supplies and services in Kenya	11.3	44.3	44.3	3.39	0.93
I am satisfied with green solar products development activities and level their accessibility in the world	13	45.2	41.7	3.27	0.87
I am satisfied with green solar products development activities and level their accessibility in Kenya.	13.9	40	46.1	3.42	0.96
I am satisfied with my company green marketing strategy implementation activities for solar technology in Kenya	14.8	40.9	44.3	3.39	0.91
I am satisfied with my company green marketing mix activities for solar technology in Kenya	15.7	45.2	39.1	3.19	0.9
I am satisfied with my company green marketing activities awareness program for solar technology in Kenya	14.8	37.4	47.8	3.51	0.92
I can confirm that the level of environmental concerns and green marketing awareness in Kenya is high enough among technology dealers and consumers	15.7	41.7	42.6	3.32	0.91
I am in full support of green marketing and commit to continue embracing it in my solar business	14.8	44.3	40.9	3.25	0.89
<b>Average</b>	<b>14.8</b>	<b>39.5</b>	<b>45.7</b>	<b>3.35</b>	<b>0.92</b>

## 4.2 Regression Analysis

The regression analysis was done to test the relationship between the dependent (GMSS) and the independent variables (Strategic Management Practices CSFs). The results were used to analyze the Strategic Management Practices CSFs and each of them contribution to the GMSS among different solar technology dealers and finally used to test the research hypothesis.

### Model summary

The summary was used to determine the volume of variation in GMSS that can be explained by changes in IV (technological, organizational, environmental and individual strategic management practice CSFs).

**Table 6: Model Goodness of fit test Summary**

	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>	<b>Sig.</b>
Model	.520 <sup>a</sup>	.271	.244	8.91	.003 <sup>b</sup>

a. Predictors: (Constant), organizational factors, technological factors, individual factors, environmental factors



Considering the Table 6 below, the values of correlation for the model ( $R=0.52$ ) is moderately strong and positive, implying that there was a moderate relationship among the variables. The  $R$  square from the model suggests that 27.1% of GMSS could be explained by changes in IV for the model and the results where significant 0.003. From the results of the Table 18 below, the regression equation model was fitted and used to test  $t$  hypotheses as follows:

**Table 7: Coefficient of Regression Analysis**

	Model Coefficients	Significance
Constant	27.04*	.0043
Technological factors	0.52*	.0023
Environmental factors	-0.47	.0615
individual factors	0.37	.0741
Organizational factors	0.99*	.0002

\*significant at the 0.05 level

Considering the Model,

$$Y = 27.04 + 0.52 X_1 - 0.47 X_2 + 0.37 X_3 + 0.99 X_4$$

The model equation above reveals that holding all the independent variables; technological factors, organizational factors, environmental factors and individual factors to a constant zero, GMSS will be at a constant value of 28.79 and the results are significant.

#### 4.3 Hypothesis Testing

The first Hypothesis of the study was: H01: There is no significant relationship between Technological strategic management practice CSFs and green marketing status (GMSS) among solar energy technology dealers in Nairobi. The findings show that technological strategic management practices CSFs had a significant effect ( $p<0.05$ ) on GMSS hence we reject the null hypothesis and conclude that there is significant relationship between Technological factors and green marketing strategy strategic management practices in the solar technology business in Kenya. The technological factors had a positive and significant effect on the GMSS ( $\beta=0.52$ ) on the model hence emerging as strategic management practice CSFs.

The second Hypothesis in the research study was: H02: There is no significant relationship between Organizational strategic management practices CSFs and green marketing status (GMSS) among solar energy technology dealers in Nairobi. The results show that organizational factors had significant effect on the GMSS therefore we reject the null hypothesis and make a conclusion that there is significant relationship between Organizational factors and GMSS among solar energy technology dealers in Nairobi. The effect on the GMSS is positive and significant ( $\beta=0.99$ ) on the model.

The third hypothesis in the study was: H03: There is no significant relationship between Environmental strategic management practices CSFs and green marketing status (GMSS) among solar energy technology dealers in Nairobi. The findings from the analysis showed that Environmental strategic management practices CSFs had negative ( $\beta=-0.47$ ) but also no significant effect on the GMSS hence we accept the null hypothesis and arrive at a conclusion that there is no significant relationship between Environmental strategic management practices CSFs and GMSS among solar energy technology dealers in Nairobi.

The fourth hypothesis was: H04: There is no significant relationship between Individual strategic management practices CSFs and green marketing status (GMSS) among solar energy technology dealers in Nairobi. From the findings it is evident that individual strategic

management practices CSFs had a positive ( $\beta=-0.37$ ) and again no significant effect on the GMSS, therefore, we accept the null hypothesis and conclude that there is no significant relationship between Individual strategic management practices CSFs and GMSS among solar energy technology dealers in Nairobi, hence individual factors are not critical in green marketing strategy adoption success among solar energy technology dealers in Nairobi.

### **5.0 Conclusions of the Study**

The study had four specific objectives to be tested against their proposed influences on GMSS among solar energy technology dealers in Nairobi. The first objective was to establish the influence of Technological strategic management practices CSFs and GMSS among solar energy technology dealers in Nairobi. It emerged that the Technological strategic management practice CSFs had positive significant influences on GMSS. The findings clearly show that a unit increase in the Technological strategic management practice CSFs result to a unit increase in the green marketing strategy success status. Secondly, the research study sought to assess the influence of Organizational strategic management practice CSFs and GMSS among solar energy technology dealers in Nairobi. At the end, the study revealed that Organizational strategic management practice CSFs had positive significant influences on the GMSS, indicating that a positive change in Organizational strategic management practice CSFs lead to a positive change in the green marketing strategy success status. Thirdly, the research study sought to examine the influence of Environmental strategic management practice CSFs and GMSS among solar energy technology dealers in Nairobi. It emerged that environmental strategic management practice CSFs had a negative and insignificant influence on GMSS success status. Fourthly, the research study sought to examine the influence of individual strategic management practice CSFs and GMSS among solar energy technology dealers in Nairobi. It emerged that although individual strategic management practice CSFs had a positive influence on GMSS success status, the influence was however, insignificant.

### **6.0 Recommendations of the Study**

The research findings clearly show that technological strategic management practices are critical in promoting success of green marketing strategies and overall associated strategic management practices success among solar technology dealers in Kenya as it emerged to positively contribute significantly to the adoption of green marketing strategy and associated strategic management practices overall success. Thus, the study recommends that all the technological factor indicators identified in the study be put into consideration when developing and implementing green marketing strategy and associated strategic management practices, especially for the solar energy technology market in Kenya.

The findings also clearly indicate that organizational factors are critical in promoting green marketing strategies and associated strategic management practices overall success among solar technology dealers in Kenya as it emerged to positively contribute significantly to the adoption of green marketing strategy and associated strategic management practices overall success. Thus, the study recommends that all the organizational factor indicators identified in the study be put into consideration when developing and implementing green marketing strategy and associated strategic management practices, especially for the solar energy technology market in Kenya. However, surprisingly, the findings revealed that both the environmental and individual factors had no significant influence on the adoption of green marketing strategy and associated strategic management practices overall success.

Furthermore, while individual factors influence was positive, that of the environmental factors was negatively correlated to the adoption of green marketing strategy and associated strategic management practices overall success among solar energy technology dealers in Nairobi.

Therefore, it is here recommended that these two variables are of little importance when developing and implementing green marketing strategy and associated strategic management practices, especially for the solar energy technology market in Kenya. However, their further academic study investigations in such relationships are welcome before their consideration while analyzing the CSFs of green marketing strategy and associated strategic management practices among solar energy technology dealers.

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