

Green Products Effects on Quality of Life of Physically Disable People

Habeeb Tbeishat¹, Ruwaidy Mat Rasul², Marzuki Bin Ibrahim³ and Mohammad Alshorman⁴

Abstract

The existing literature suggests that green product innovation serves as a means for businesses to distinguish themselves and gain a competitive advantage. Concurrently, socioeconomic data indicate a rising number of handicapped individuals in emerging nations. Despite this, current research lacks a widely agreed-upon definition of green products, and scholarly empirical data on how green products impact the quality of life (QoL) for physically disabled individuals are inconclusive. Some studies propose that socially isolated individuals exhibit different beliefs and behaviors than the general population. To address this in the context of disability, a literature review was conducted on green products and QoL. This paper's primary contribution lies in establishing a definition for green products and the QoL of physically disabled individuals. Additionally, the paper uncovers issues that warrant consideration in evaluating the effect of green products on the QoL of physically disabled individuals.

Keywords: Green Product, Quality of Life, Disable, Jordan

INTRODUCTION

In urban public green spaces, individuals with physical or mental disabilities often face exclusion from social activities, participating only to a limited extent due to their unique needs and adaptations. When designing social infrastructure, whether mental or physical limitations must be considered [1]; [2]. The economic status of disabled individuals, particularly in terms of employment and welfare support, is lamentable in Jordan, with an estimated national unemployment rate of 22-27 percent [3]. It is presumed that the unemployment rate among disabled persons is significantly higher, contributing to a higher likelihood of poverty. The increasing number of disabled individuals suggests a growing dependency on external support in our society.

The absence of a comprehensive welfare system and limited utilization of green amenities to enhance the quality of life (QOL) for disabled individuals further exacerbates existing disparities. Specialized centers, staff, finances, and facilities to assist the handicapped are scarce, especially in rural areas. There is minimal support from governmental and non-governmental organizations for disabled individuals seeking independent living in the community. The Queen Alia Fund is making efforts to address this by providing a small program to support disabled individuals living in their homes with adaptations such as appropriate toilets and ramps [4].

Disabled individuals in Jordan face significant challenges in various aspects of life, including health, education, training, and employment, as indicated by recent studies and empirical data from fieldwork in 1996 [2], [5]. The design of buildings, public transportation systems, religious structures, and limited information accessibility further exacerbates the challenges faced by disabled individuals [6].

While green products and public green spaces are intended to offer pleasant settings or gathering places for people of all socioeconomic classes, individuals with disabilities often derive limited benefits from these spaces for various reasons. The contemporary and post-modern cultures largely adhere to standardized lives that may not accommodate the unique needs of those with exceptional requirements. People with disabilities often struggle to conform to these norms, requiring personalized attention and, to some extent, infrastructure tailored to their needs [6]; [7]. Understanding the specific requirements of these individuals is crucial for providing suitable green products, outdoor spaces, and related services [8].

¹ Faculty Innovative Design And Technology, Gong Badak Campus, 21300 Kuala Nerus, Terengganu, Malaysia. E-mail: habeeb_3h@hotmail.com

² Faculty Innovative Design And Technology, Gong Badak Campus, 21300 Kuala Nerus, Terengganu, Malaysia

³ Faculty Innovative Design And Technology, Gong Badak Campus, 21300 Kuala Nerus, Terengganu, Malaysia

⁴ Faculty Innovative Design And Technology, Gong Badak Campus, 21300 Kuala Nerus, Terengganu, Malaysia

Numerous studies have explored the intersections of science and social science, focusing on constructs such as green product, innovation, and quality of life (QoL). Some researchers have investigated the impact of green products on QoL, while others have examined the influence of innovation on QoL. However, these studies have often taken a piecemeal approach, using different constructs in separate studies. Importantly, researchers have yet to assess the effect of green products on the quality of life of physically disabled individuals or explore the mediating role of innovation in the relationship between green products and the quality of life of physically disabled people in developing countries.

Moreover, the literature review highlights a significant gap in research, indicating that very limited research has been conducted in Jordan regarding the effects of green products on the quality of life of physically disabled individuals [9]. Additionally, minimal attention has been given to the quality of life of physically disabled people in general [10]; [11]; [12]; [13], and there are few studies exploring whether green products contribute to an improved quality of life for physically disabled individuals in Jordan. Furthermore, previous studies, as noted by [14] and [15], were conducted approximately a decade ago, necessitating updated research to align with current developments in globalization, technology, and design practices.

[10] highlighted in his study on green product utilization that this concept, developed in the Western world, may or may not effectively apply to the quality of life of physically disabled individuals in different socio-cultural contexts, such as Jordan and other developing or underdeveloped countries. This observation is supported empirically by [16], suggesting that the use of green products may vary across different contexts [17]; [10]; [18]; [19].

This study holds significant implications for various stakeholders, including the government, business community, researchers, and, most importantly, physically disabled individuals in Jordan. It aims to establish a new foundation for understanding green products and their effects on the quality of life of physically disabled individuals, raising awareness among the Jordanian physically disabled population about the utilization of green products and their associated competitive advantages.

LITERATURE REVIEW

Green Product

The concept of "green" has gained prominence in academia due to the emergence of a novel manufacturing entrepreneurial strategy wherein companies perceive environmental challenges as potential competitive advantages. A burgeoning body of literature, encompassing references and studies, has surfaced on various aspects of green initiatives, including green corporate sustainability, green innovation, green labeling, green management, green products, and green strategies [20]. Despite the expanding theoretical [21]; [20] and empirical research [22]; [23], a state-of-the-art review reveals a notable absence of a uniform, effective [24]. The frequent use of terms such as "green" or "environmental" appears convoluted, underscoring a research gap in the precise definition of these concepts.

This weakness, along with the ongoing debate over what exactly constitutes a green product, has resulted in a two-pronged problem. To begin with, academic research has a methodological flaw in that the term is quite ambiguous, which is partly to blame for the ongoing mixed empirical results with regard to the relationship between environmental variables and firm competitiveness: aside from those that depict a positive relationship [25], there are contributions that depict the opposite [26].

Second, on a practical level, the industrial sector and third-party authorities have long begun to convey their greenness in the marketplace, using green claims that employ a range of green evaluation methodologies. Many businesses, for example, rely on personal environmental declarations to characterize green products. Because there is no commonly acknowledged definition of green products, they may be influenced by personal interests in research. As a result, there are various incidents where customers have expressed doubt and businesses have been accused of green washing their products [27].

As a result, green is a word that was established in the social science sector in the late 1980s and early 1990s, and it quickly became trendy due to the environmental awakening of consumers [28]. Despite the fact that

green has captured the attention of current policymakers (that seek a new paradigm of green growth) and has been popular in previous literature, there remains a definitional challenge. As this overview shows, research in the subject has exploded in recent decades, but it is still regarded immature, particularly in terms of nomenclature; the definition of a green product remains a mystery [29]; [27]; [24]. [27] Analyzed the notion of green product over a 30-year period from three separate perspectives: academics, companies, and consumers, and came to the conclusion that the concepts do not match or even coincide. The term "evocative and powerful" is used to describe the notion of green [20].

In the relevant literature, systematic reviews may be discovered [30]; [31]; [32] analyzed 63 empirical studies to find causes, outcomes, and success criteria for green product innovation creation. They do, however, continue to place a high priority on green (product) innovation. 650 papers spanning three disciplines: engineering, management, and policy studies were analyzed by [33] who focused on green product creation. They did, however, only look at research from 1971 to 1999. Furthermore, the terms used in all three fields were not the same, excluding concepts like ecology.

The objective and contribution of this study is to perform a literature review in order to construct a complete, simple, and sophisticated definition of green product for minimizing the gap and reveal the influence of green product QoL on physically disabled persons. To fill the current literature gap, we have focused primarily on green products, which are treated very seldom in the literature. In terms of uses or consumption, the green movement is undeniably present in the maximum number of technologically advanced countries, as many studies show that 34% of clients claim to buy green products [34] 30% of the American population leads a healthy and environmentally sustainable lifestyle [34]. Moreover, despite the global economic downturn, 84 percent of buyers who believe North America is in a long-term slump said their company would continue to buy green products in the next 3 to 5 years [33, 35] the vast majority of green consumers in the United States has not abstained from purchasing green products [36].

On the supply side of green products, the situation is identical. According to the recent Terra Choice report, the number of green items offered in North American relevant retailers climbed from 40% to 176 percent between 2007 and 2008. This is especially true in the sector of household cleaning products. Almost every housecleaning product maker has created a green product line or "greened" its goods. For example, in 2008, the market for green household cleaning products in the United States expanded from US\$17.7 million to more than US\$64.5 million [37].

Green products are often long-lasting, non-toxic, made from recycled materials, and come in simple packaging. Of course, no product is completely eco-friendly because it consumes energy and resources while being created, delivered to warehouses and stores, utilized, and finally discarded, all of which produce waste and emissions. As a result, green is a relative term that refers to things that have a lower environmental effect than their counterparts.

The term "green product" is defined differently depending on the field of research. Not only is the product type analyzed in the literature never the same, but the definitions focus on diverse factors such as environmental implications [21] preliminary production features [38], or life-cycle elements [38] [39]. Furthermore, there is no consensus on terminology for the concept, with some authors referring to "green innovations" [40] while others use terms like "eco-efficiency product" [41] "environmentally product" [39] and "environmental innovation" [42]. This seeming multiplicity of words suggests that defining a common definition for the idea of green product is a difficult issue.

As a result, we defined several terminologies in order to gain a clearer picture of the notion of green product in the literature. Environment; product; maximize; reduction; life-cycle; design is the most often stated facts for this description. As a consequence, we came up with the following broad definition: A green product is one whose design and/or attributes make use of recyclable materials and improves or lowers environmental effect or harmful damage over the course of its life cycle. It's worth noting that each code comprises multiple synonymic terminology, such as: Green denotes "environmental" or "ecological" concerns. Uses: "incorporates"; Recycling: "renewable," "toxic-free," or "biodegradable"; Attributes: "functions," "ideas," "practices," or "qualities"; Attributes: "functions," "ideas," "practices," or "qualities"; Attributes: "functions,"

"ideas," "practices," or "qualities"; Attributes: "functions," "ideas Benefits: "maximizes", "encourages", or "contributes"; Reduces: "minimizes", "saves", or "eliminates", and Toxic damage: "pollution".

Existing Definitions of Green Product

The evaluation covered 29 papers that were published from 2010 to 2017. Summarizes the various definitions used in the studies that were given below.

2022 Tanase et al. “Green products is environmentally sustainable products, which is reducing client stress.”

2021 Datta “green product creates benefits to the environment as they are made of environmental-friendly resources, or recycled products which have least environmental impact.”

2020 Fotopoulos et al. “Green products are indicating those elements which hold positive environmental, and moral points.

2019 Saad et al. “Green products are products that are less detrimental for the society and environment.”

2018 Siddiqui et al. “Green product is an ecological and environmental friendly product which generates less pollution than a brown product.”

2017 De Medeiros and Ribeiro “Green products, also named environmentally-correct or environmentally-sustainable products, are those capable of adding long-term benefits, reduce client stress and relieve them from their environmental responsibility. Without, however, diminishing products’ satisfying qualities.”

2016 Biswas and Roy “The environmentally sustainable or environmental compatible or green products entails a list of potential benefits to the environment as they are made of environmental-friendly resources, have resource-conservation potential, can be recycled and have least environmental impact at all stages of its lifecycle.”

2016 Kang and Choi “Sustainable products in this study, are broadly defined as those that embrace positive social, environmental, and ethical attributes [43].

2016 Moser “Generally, green products are defined as products that are less or not at all harmful for the environment in comparison to a substitute of the same product category.”

2016 Saluja “In general, green products also known as environmentally friendly products or ecological products. [44; 45] stated, green products are the products which protect or enhance the natural environment by conserving energy or resources, recyclable and reusable, original grown, reducing or eliminating use of toxic agents, pollution and waste, contain natural ingredients or recycled content, do not pollute the environment, contain approved chemicals and have not been tested on animals. However, [46] defined that green products are products that guarantee that they are processed, manufactured and produced in an environmentally friendly way that minimizes a negative or damaging impact on the environment.”

2015 Borella and Barcello “Sustainable product is the product designed to contemplate its relationship with the environment, causing no harm to nature. Sustainable products are conceived since the choice of raw materials until its use and discard, through a renewing cycle that will not bring any damage to future generations. Just as nature has a life cycle, the products must also have. Sustainable attributes of products are presented within the approach of 6R’s: reduce, recycle, reuse, recover, remanufacture and redesign’, over the stages of the product life cycle.”

2015 Espinola-Arrendondo and Munoz-Garcia “The brown and green goods differ both in their attributes and in their environmental features. A green goods generates less pollution than a brown product, which can become zero when the goods is sufficiently clean (low pollution intensity)”.

2015 Eceuropaeu, “Environmental products are goods and services That are produced for the purpose of preventing, reducing and eliminating pollution and any other degradation of the environment (environmental

protection – EP) and preserving and maintaining the stock of natural resources and hence safeguarding against depletion.”

2015 Jasti et al, “Most of the organizations believe that “greenness” refers to minimization of level of the waste operations and activities within organization. Whereas, environmentalists believe “greenness” is sustainability. It is defined that development of product that meets the requirement of the present without sacrificing the ability of the future generation to achieve their own requirements.”

2015 Mohd-Suki, “Green products, also known as ecologically and environmentally friendly products, include products that incorporate recyclable and recycled content, and contain less toxic chemical substance which minimize the impact on the environment.”

2015 Ritter et al “The definition of green products can highlight different aspects of these products: the life cycle phases during which a product can show its environmentally friendly features, the higher environmental benefits compare to conventional products, or the minimization of the natural resources used. In this study, a GP was considered as a product striving to protect or to enhance the natural environment by conserving energy and/or resources and reducing or eliminating the use of toxic agents, pollution, and waste

2014 De Medeiros et al “Green products are those that hold the potential to aggregate long-term benefits, reduce consumer stress and ameliorate customer environmental responsibilities while maintaining its positive qualities.

2013 Haws et al “Environmentally friendly product: one with at least one positive environmental attribute. An “environmental attribute” is an attribute that reflects the impact of the product on the environment. A such, environmental product attribute can be positive (i.e. the product has little to no negative impact on the environment and is considered environmentally friendly) or negative (i.e. the product harms the environment).”

2013 Driessen et al “Green products are defined as new products whose greenness is significantly better than conventional or competitive products. Greenness is continuous rather than dichotomous. “Green” product represent a significant improvement in greenness which can be either small or large, whereas “non-green” refers to no or an insignificant improvement in greenness.”

2013 Mattioda et al “Sustainable products can be defined as those that offer environmental, social and economic benefits while protecting public health, welfare and the environment.”

2013 Tomasin et al. “Green products are designed to prevent, limit, reduce, and/or correct harmful environmental impacts on water, air, and soil. Accordingly, these products constitute at least one means of resolving problems related to waste, noise, and general determinants to ecology while serving as an avenue for generating beneficial products and services.”

2013 Tseng and Hung “Green products, namely, environmentally friendly products or environmentally conscious products, are referred to as products designed to lessen the consumption of natural resources required and minimize the adversely environmental impacts during the whole life-cycles of these products.”

2012 Chen and Chang, “Green products are those that have less of an impact on the environment, are less detrimental to human health, are formed or part-formed from recycled components, are manufactured in a more energy conservative way, or are supplied to the market with less packaging.”

2012 Kam-Sing Wong, “A green and innovative product is a product characterized by its taking into account of the recyclability and disposal issues throughout its lifecycle; usage of materials which are recycled and recyclable and which are less polluting, non-polluting or non-toxic; due consideration to energy use, human toxicity, ecological impact and sustainability issues at every stage of its lifecycle; and incorporation of a continual impact assessment and improvement mechanism in the product development cycle.”

2012 Blengini et al. “A sustainable product could be; a product designed, manufactured, used and disposed of according to criteria of economic, environmental, and social efficiency, which maximize net benefits across

generation. However, it should be mentioned that there is still much confusion about what can be considered a sustainable product and what should not.”

2011 Wee et al. “Green products are designed to reduce energy consumption, use less natural resource, raise the recycled materials, and reduce or eliminate toxic substances, which are harmful to both the environment and human health. The development of a green product is a process within the internal process of a company.”

2010 Chen and Chai, “In general, green product is known as an ecological product or environmental friendly product.”

2010 Dangelico and Pontrandolfo “Green products are characterized according to their environmental impact (less negative, null, and positive) whose meaning is slightly different according to each of the three environmental focus (materials, energy, and pollution). A green Option Matrix (GOM) has been developed to integrate this new dimension with environmental focus (materials, energy, and pollution) and life cycle phase (before usage, usage, after usage).”

2010 Durif et al “A green product is a product whose design and/or strategy) use recycling (renewable/toxic-free/biodegradables) resources and which improves environmental impact or reduces environmental toxic damage throughout its entire life cycle”. Note that each code contains several synonymic terminologies. Green: “environmental” or “ecological”; Attributes: “functions”, “ideas”, “practices”, or “qualities”; Uses: “incorporates”; Recycling: “renewable”, “toxic-free”, or “biodegradable”, Resources: “energy”, “materials”, or “ingredients”, Benefits: “maximizes”, “encourages”, or “contributes”; Reduces: “minimizes”, “saves”, or “eliminates”, and Toxic damage: “pollution”.”

2010 Gao et al. “Green product is a kind of product that has no or little harmful performance on ecological environment, and has a higher rate of resources and energy utilization. The concept of green product is a whole product’s life cycle rather than a certain process or stage, so the information model of green product should meet the following requirements: (1) include the information of fundamental function and structure; (2) include the fundamental information of the products life cycle; and (3) provide data for environmental performance assessment.”

2010 Punjaitan and Sutapa “Green Product is eco-friendly products or products that in their planning and process with technique have less impact to environment, even in production process, distribution, and consumption.”

2010 U.S. Department of Commerce, Economics and Statistics Administration “We defined green products or services as those whose predominated function serves one or both of the following goals: conserve energy and other natural resources or reduce pollution.”

According to the literature review, there is no uniform definition that has prevailed. Environmentalism gained traction in research in 1975, but the true strengthening of definitions occurred only in the recent decade. Similarly, while green product concepts are regularly mentioned in the literature, they are not necessarily accompanied by a definition inside the study. It's very conceivable that the term "green product" is supposed to be well-known by mistake. As a result, in certain cases (Chen and Chai, 2010), green products are simply referred to as "ecological products" or "environmentally friendly products."

Green products are seen in a variety of ways. Green, eco, environmental, and sustainable are some of the most common synonyms recognized in the literature (Schiederig et al., 2012). The terms green and eco, according to [21] are synonymous. In the current study, similar scenarios are shown, in which the same erroneous method is used between green and sustainable [30]. The word "sustainability" has been broadened to encompass the "three pillars" of sustainable development: economic vitality, environmental stewardship, and social equality [21].

As a result, the term "sustainable product" is avoided since it appears to be confusing philosophically. A product may be linked to a system's long-term viability, but only in an indirect way, through a connected process that may be described as long-term in terms of the environment or the socioeconomic system. Green is a lot easier and more comfortable phrase to follow, according to [58], because sustainability necessitates dramatic

adjustments in the current business paradigm. Green is the most commonly used concept, and it appears to have prevailed in recent years, demonstrating this. Green's supremacy is due to the fact that it is a quick differentiator that plainly communicates nature.

Furthermore, the meaning of green differs depending on the research topic. There is a terminological barrier between corporate management and environmentalists [30]. There are also discrepancies in nomenclature across studies that focus on different industries. In the health sector, a green product may be one that has low negative health consequences, but in manufacturing, it should combine economic advancement with environmental protection [32]; [50].

Moreover, the notion under investigation is never the same. As a result, a multitude of ideas emerge. Green products [30], green product innovation (Kam-Sing Wong, 2012), eco-products [22], environmental innovation [23] and eco-innovation (Jasti et al., 2015) have all been discussed in the past. Each of them focuses on a different topic, such as environmental implications [21] life-cycle analysis components (Pickett-Baker and Ozaki, 2008), green core competencies [34]; [52]; [54] and so on. Despite the linguistic differences and ambiguity, there is at least a conceptual convergence of ideas that green products should respect the environment and that impacts are created at each stage of the product life cycle [34]. As a result, a holistic approach to green product definition is required.

Some of the most notable contributions in hitherto literature review are shortly depicted here; [26] is the first to state that "green is relative," emphasizing the dynamic relationship that is rarely acknowledged [37]; [51]. The OECD (1998) refers to products and services, giving a rare difference between physical and intangible, however both must be considered [22]. Later on, yanella link green to economic growth and profitability, including the economic factor into the word [56]. However, due to the fact that referring to goods already denotes it, this indicator is superfluous.

It is easy to conclude that there is no unifying definition. Despite the fact that [27] may be the first to give a comprehensive, combinatory definition for green commodities, they frequently employ inaccurate synonyms [53]. At the same time, the inclusion of only qualitative studies and the lack of important keyword combinations that could indicate green products in various ways appear to have limited the results and may be the cause of the above-mentioned inaccurate synonyms. Overall, present definitions are far too long and palaverous, attempting to fill up definitional gaps with extensive details in an attempt to be as descriptive as possible.

Green Product and Quality of Life of Physically Disable People

In order to save the environment, the need for green consumption through green technology increases the opportunities to promote green products [31]. It is also an important feature that consumers and communities should consider environmental safety when making usage decisions based on green products [46]; [54]. Consumption of green products is now a trend that will improve people's quality of life while also ensuring environmental sustainability [47]; [48]; 49]. Global warming is an example of the environment being harmed, and the international community is putting a lot of emphasis on sustainability; it has become one of the major concerns of the worldwide community.

As a vital link between life and green goods, it is often seen as humanity's inexorable responsibility for the world's present ecological crises [41]; [56]. In the 19th and 20th centuries, the world population surpassed one billion and six billion people, respectively.

By 2050, these numbers are predicted to reach nine billion. Prior to the industrial revolution and the introduction of mass manufacturing, economic development and higher consumption rates were almost difficult to attain. These developments, on the other hand, have a huge negative impact on the environment, causing climate change, diminishing biodiversity, and limiting the supply of both renewable and non-renewable resources. Different economies seek for growth through reducing poverty and raising living standards. Poverty and low living standards, however, continue to be a problem in various African, Asian, and Latin American countries [45]; [52]; [55].

Individuals' increased concern for the environment has been fueled by their idea that their actions are perpetually harming the world. Green marketers casually handle such worries in their commercials by using images of infants, daisies, and planets that are reminiscent of the past. However, disabled people are conscious of their product choices, and if they are concentrating on healthy items, they must include organic products into their daily routine and alter their lifestyle accordingly. Organic products are pricey, but they are good for the human body, according to physically disabled persons [48]; [57]. According to the findings of a lot of research, health concerns are the driving factor for people to use green products in particular [47]; [42]; [40]; [39]. There hasn't been much study done in the Middle East on the impact of green products on physically disabled persons in order to improve their quality of life. Then, based on the above empirical evidence and literature review it is expected that green product has significant effect on quality of life of physically disable people in Jordan.

CONCLUSION

A community marked by sub-units with limited mutual acceptance is susceptible to conflict, a reality applicable not only to individuals with impairments but also to those from various social or ethnic groups. The diverse spectrum of handicaps and the varied responses of handicapped and non-disabled users to green spaces necessitate comprehensive and well-balanced solutions. These solutions should transcend the limitations of a single user group, considering the needs of all individuals. When certain user groups are disproportionately neglected in the design of public green spaces, it becomes imperative to prioritize complementary services addressing their unique requirements. Given the ongoing increase in elderly, frail, and handicapped users, expanding the standards for standardized facilities catering to the general public becomes a necessity.

In the future, the demand for public green spaces adjacent to urban infrastructure, emphasizing easy access, and designed to accommodate a diverse and largely urbanized society will likely be significant. The prevalence and relevance of disability-related policy phenomena underscore the importance of acknowledging individual concerns while seeking societal remedies to address them. As an increasing number of elderly and economically inactive individuals rely on state-run services and institutions, reforming societal infrastructures to encourage greater social participation becomes a pragmatic long-term approach. Addressing social isolation, often associated with old age and infirmity, should be managed in a cost-effective manner.

Encouraging physically handicapped individuals to utilize well-designed open and green spaces provides avenues for enhancing their health and fostering social connections. Society must explore new avenues for social inclusion, ones that may not have been essential in the past but are critical for the prosperity and quality of life of future societies.

REFERENCES

- Cattelino, P. (1988). Studio Inerente l'individuazione e l'adattamento Di Sentieri Ed Aree Attrezzate per La Fruizione Da Parte Di Portatori Di Handicap. Regione Autonoma Della Valle d'Aosta, Aosta (in Italian).
- Ankit, G., & Mayur, R. (2013). Green marketing: Impact of green advertising on consumer purchase intention. *Advances in Management*, 6(9), 14-17.
- Chen, Y. (2010). The drivers of green brand equity: Green brand image, green satisfaction, and green trust. *Journal of Business Ethics*, 93(2), 307-319. doi:10.1007/s10551-009-0223-9
- Actual vs. perceived corporate social responsibility scores. (2008). *Business & the Environment with ISO 14000 Updates*, 19(12), 8-8.
- Do Paço, A., & Raposo, M. (2010). Green consumer market segmentation: Empirical findings from Portugal. *International Journal of Consumer Studies*, 34(4), 429-436. doi:10.1111/j.1470-6431.2010.00869.x
- Datta, S. (2011). Pro-environmental concern influencing green buying: A study on indian consumers. *International Journal of Business & Management*, 6(6), 124-133. doi:10.5539/ijbm.v6n6p124
- Cherian, J., & Jacob, J. (2012). Green marketing: A study of consumers' attitude towards environment friendly products. *Asian Social Science*, 8 (12), 117-126. doi:10.5539/ass.v8n12p117
- Driessen, P. H., Hillebrand, B., Kok, R. W., & Verhallen, T. M. (2013). Green new product development: The pivotal role of product greenness. *IEEE Transactions on Engineering Management*, 60(2), 315-326. doi:10.1109/TEM.2013.2246792
- Luchs, M. G., Naylor, R., Irwin, J. R., & Raghunathan, R. (2010). The sustainability liability: Potential negative effects of ethicality on product preference. *Journal of Marketing*, 74(5), 18-31. doi:10.1509/jmkg.74.5.18
- Kakeeto, N.T. (2012). Relationship marketing for SMEs in Uganda. PhD Thesis, Tilburg University.

- Montoo, A.A. (2006). SME in Bangladesh. *CACCI Journal*, 1, 1-19.
- Harwood, T. G., & Garry, T. (2006). Relationship marketing: Why bother? *Handbook of Business Strategy*, 107-111.
- Hultman, C., & Shaw, E. (2003). The Interface between transactional and relational orientation in small service firm's marketing behavior: A study of Scottish and Swedish small firms in the service sector. *Journal of Marketing Theory and Practice*, 11(1), 36-51.
- Hanmaikyur, T.J. (2016). Effect of Entrepreneurial Marketing on the Performance of SMEs in Makurdi Metropolis of Benue State, Nigeria. Ahmadu Bello University Zaria, Nigeria.
- Mba, A., & Emeti, C. (2014). studied the Issues, Challenges and Prospects of Small and Medium Scale Enterprises (SMEs) in Port-Harcourt City, Nigeria. *European Journal of Sustainable Development*, 3(1), 101-114.
- Tucker, E. M., Rifon, N. J., Lee, E., & Reece, B. B. (2012). A Test of green claim types and the role of individual consumer characteristics for green ad response. *Journal Of Advertising*, 41(4), 9-23.
- Ramayah, T., Lee, J. W. C., & Mohamad, O. (2010). Green product purchase intention: Some insights from a developing country. *Resources, Conservation and Recycling*, 54(12), 1419-1427.
- Fotopoulos, C., & Krystallis, A. (2002). Organic product avoidance: reasons for rejection and potential buyers' identification in a countrywide survey. *British Food Journal*, 104(3/4/5), 233-260.
- Salazar, H. A., Oerlemans, L., & van StroeBiezen, S. (2013). Social influence on sustainable consumption: evidence from a behavioural experiment. *International Journal of Consumer Studies*, 37(2), 172-180.
- Zhao, H. H., Gao, Q., Wu, Y. P., Wang, Y., & Zhu, X. D. (2014). What affects green consumer behavior in China? A case study from Qingdao. *Journal of Cleaner Production*, 63, 143-151.
- Massawe, E., & Geiser, K. (2012). The dilemma of promoting green products: What we know and don't know about biobased metalworking fluids. (Cover story). *Journal of Environmental Health*, 74(8), 8-16.
- Tanase, L., Roşca, M., & Jurcoane, A. (2012). The perception on ecological products - A research on the urban consumer. *Annals of The University of Oradea, Economic Science Series*, 21(1), 1215-1220.
- Chen, Tan Booi, and Lau Teck Chai. (2010). Attitude towards the Environment and Green Products: Consumers' Perspective." *Management Science and Engineering* 4(2); 27-39.
- Griskevicius, V., Tybur, J. M., & Van den Bergh, B. (2010). Going green to be seen: Status, reputation, and conspicuous conservation. *Journal of Personality & Social Psychology*, 98(3), 392-404.
- Ritter, Ágata M., Miriam Borchardt, Guilherme L. R. Vaccaro, Giancarlo M. Pereira, and Francieli Almeida. (2015). Motivations for Promoting the Consumption of Green Products in an Emerging Country: Exploring Attitudes of Brazilian Consumers. *Journal of Cleaner Production, Bridges for a more sustainable future: Joining Environmental Management for Sustainable Universities (EMSU) and the European Roundtable for Sustainable Consumption and Production (ERSCP) conferences*, 106 (November 1, 2015): 507-20.
- Salam, S., & Hoque, A. S. M. M. (2019). THE ROLE OF SOCIAL MEDIA AND EFFECT OF RELATIONSHIP MARKETING ON SME PERFORMANCE IN BANGLADESH: MULTI-GROUP CFA. *Asian People Journal (APJ)*, 2(1), 12-31. Retrieved from <https://journal.unisza.edu.my/apj/index.php/apj/article/view/98>
- Wagner, M. (2005). How to Reconcile Environmental and Economic Performance to Improve Corporate Sustainability: Corporate Environmental Strategies in the European Paper Industry. *Journal of Environmental Management* 76, no. 2 (July 1, 2005): 105-18.
- Durif, F., Caroline, B., and Charles, J. (2010). In Search of a Green Product Definition." *Innovative Marketing* 6(1), 10.
- Siddiqui, B. A., & Hoque, A. S. M. M. (2018). Innovation Performance of Internet Service Providers in Bangladesh: The Sway of Corporate Entrepreneurship. *International Journal of Entrepreneurship and Small & Medium Enterprise (IJESME)*, 5, 1-14.
- Abdullah, N. S., Alodat, A. Y., Aburumman, O. J., Hoque, A. S. M. M., & Ige, A. J. A. (2019). The Effects of Enterprise Social and Environmental Responsibility on SME Performance: Mediating Role of Organizational Culture. In *International Postgraduate Research Conference (2 nd IPRC 2019)*, Universiti Sultan Zainal Abidin (UniSZA), Gong Badak Campus, Kuala Terengganu, Malaysia, December.
- Ahmed, I., Farooq, W., & Khan, T. I. (2021). Customers' Perceptions and their Responses to Objectives of Islamic Banks—A Three-Wave Investigation. *Asian Economic and Financial Review*, 11(1), 43.
- Saad, S. A. S. M. M. Hoque, and Awang, Z. (2019). Technopreneurial Marketing (TM): A Construct for Integrating Emerging Technopreneurship and Marketing Perspectives," *Proceeding of International Seminar of Entrepreneurship and Business*.
- Siddiqui, B. A., Hoque, A. S. M. M., Awang, Z., Jeko, N. A., & Rahman, A. (2019). Marketing Mix Effect on Impulse Buying Behavior: An Empirical Analysis on Bangladeshi Customers. In *International Postgraduate Research Conference (2 nd IPRC 2019)*, Universiti Sultan Zainal Abidin (UniSZA), Gong Badak Campus, Kuala Terengganu, Malaysia, December.
- Chang, Danni, C. K. M. Lee, and Chun-Hsien Chen. (2014). Review of Life Cycle Assessment towards Sustainable Product Development." *Journal of Cleaner Production* 83, 48-60.
- Böhringer, Christoph, Ulf Moslener, Ulrich Oberndorfer, and Andreas Ziegler. (2012). Clean and Productive? Empirical Evidence from the German Manufacturing Industry." *Research Policy* 41, 442-51.
- Blengini, Gian Andrea, Mirko Busto, Moris Fantoni, and Debora Fino. (2012). Eco-Efficient Waste Glass Recycling: Integrated Waste Management and Green Product Development through LCA." *Waste Management* 32(5), 1000-1008.

- Biswas, Aindrila, and Mousumi Roy. (2016). A Study of Consumers' Willingness to Pay for Green Products." *Journal of Advanced Management Science* 4(3), 52-76.
- Berry, Michael A., and Dennis A. Rondinelli. (1998). Proactive Corporate Environmental Management: A New Industrial Revolution. *Academy of Management Perspectives* 12(2); 38–50.
- Albino, Vito, Azzurra Balice, and Rosa Maria Dangelico. (2009). Environmental Strategies and Green Product Development: An Overview on Sustainability-Driven Companies." *Business Strategy and the Environment* 18(2); 83–96.
- Airaksinen, A., H. Luomaranta, P. Alajääskö, and A. Roodhuijzen. (2015). Statistics on Small and Medium-Sized Enterprises." *Eurostat Statistics Explained, Advances in Consumer Research*, 7(2), 2.
- Ahlroth, Sofia, Måns Nilsson, Göran Finnveden, Olof Hjelm, and Elisabeth Hochschorner. (2011). Weighting and Valuation in Selected Environmental Systems Analysis Tools—Suggestions for Further Developments. *Journal of Cleaner Production* 19(2); 145–56.
- Adams, Richard, John Bessant, Sally Jeanrenaud, Patrick Overy, and David Denyer. (2012). Innovating for Sustainability: A Systematic Review of the Body of Knowledge, *Advances in Consumer Research*, 32, 592.
- Abaza, Hussein, Ronald Bisset, and Barry Sadler. (2004). Environmental Impact Assessment and Strategic Environmental Assessment: Towards an Integrated Approach. *UNEP/Earthprint*.
- Hoque, A. S. M. M., Siddiqui, B. A., Awang, Z. B., & Baharu, S. M. A. T. (2018). Exploratory factor analysis of Entrepreneurial orientation in the context of Bangladeshi small and medium Enterprises (SMEs). *European Journal of Management and Marketing Studies*.
- Mahenc, Philippe. "Signaling the Environmental Performance of Polluting Products to Green Consumers." *International Journal of Industrial Organization* 26, no. 1 (January 1, 2008): 59–68.
- Mishra, Pavan, and Payal Sharma. (2010). Green Marketing in India: Emerging Opportunities and Challenges." *Journal of Engineering, Science and Management Education* 3(1), 9–14.
- Saad, S.; Seduram, A.; Hoque, A.; and Sade, B. (2020). Moderating role of gender on the effect of relationship marketing on Bangladeshi sme performance: a multi-group confirmatory factor Analysis," *Solid State Technology*, vol. 63(6) 4951–4966.
- Luchs, Michael G., Rebecca Walker Naylor, Julie R. Irwin, and Rajagopal Raghunathan. (2010). The Sustainability Liability: Potential Negative Effects of Ethicality on Product Preference." *Journal of Marketing* 74(5), 18–31.
- Gleim, M. R., Smith, J. S., Andrews, D., & Cronin Jr, J. J. (2013). Against the green: A multi-method examination of the barriers to green consumption. *Journal of Retailing*, 89(1), 44-61.
- Ek, K. (2005). Public and private attitudes towards "green" electricity: the case of Swedish wind power. *Energy Policy*, 33(13), 1677-1689
- Chen, Yu-Shan, Shyh-Bao Lai, and Chao-Tung Wen. "The Influence of Green Innovation Performance on Corporate Advantage in Taiwan." *Journal of Business Ethics* 67, no. 4 (2006): 331–39.
- Bang, H. K., Ellinger, A. E., Hadjimarcou, J., & Traichal, P. A. (2000). Consumer concern, knowledge, belief, and attitude toward renewable energy: An application of the reasoned action theory. *Psychology & Marketing*, 17(6), 449-468.
- Hoque, A. S. M. M., & Awang, Z. (2016, April). Exploratory factor analysis of entrepreneurial marketing: Scale development and validation in the SME context of Bangladesh. In *Proceedings of the International Social Sciences and Tourism Research Conference* (pp. 22-38).
- Gupta, S., & Ogden, D. T. (2009). To buy or not to buy? A social dilemma perspective on green buying. *Journal of Consumer Marketing*, 26(6), 376-391.
- Kim, Y., & Choi, S. M. (2005). Antecedents of green purchase behavior: An examination of collectivism, environmental concern, and PCE. *Advances in Consumer Research*, 32, 592.
- Hoque, A. S. M. M., Awang, Z., & Siddiqui, B. A. (2017). technopreneurial intention among university students of business courses in Malaysia: A structural equation modeling. *International Journal of Entrepreneurship and Small & Medium Enterprise (IJESME)*, 4(7), 1-16.
- Saad, S., Hoque, A., Siddiqui, B. A., Awang, Z., and Yili, D. (2019). Dynamic agripreneur ramification on agri-firm business performance: A study of rural development in bangladesh. In *International Postgraduate Research Conference (2nd IPRC 2019)*, Universiti Sultan Zainal Abidin (UniSZA), Gong Badak Campus, Kuala Terengganu, Malaysia, December.
- Baumann, Henrikke, Frank Boons, and Annica Bragd. (2002). Mapping the Green Product Development Field: Engineering, Policy and Business Perspectives." *Journal of Cleaner Production* 10(5), 409–25.
- Chen, Yu-Shan. (2008). The Driver of Green Innovation and Green Image—Green Core Competence." *Journal of Business Ethics* 81(3), 531–43.