Exploring Millennials Consumer Behaviours, Attitudes, and Barriers of Sustainability in Malta

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Abstract

Sustainable consumption has become a defining issue in both academic and policy discourse, with millennials often portrayed as a generation committed to environmental responsibility. Yet, empirical evidence frequently demonstrates a persistent attitude–behaviour gap, whereby positive intentions fail to translate into consistent purchasing practices. This study investigates the attitudes and sustainable purchasing behaviours of Maltese millennials, focusing on the barriers that hinder action and the role of social media in shaping consumption decisions.

A quantitative research method was adopted, with data analysed using regression and non-parametric tests in SPSS. The findings reveal that familiarity with sustainability concepts significantly predicts sustainable purchasing, while motivation alone does not. Structural barriers, particularly high price and limited product availability, emerged as the main inhibitors of sustainable consumption, reinforcing international evidence but highlighting their acute relevance in Malta's small, import-dependent market.

Social media analysis demonstrated that trust in influencers, awareness campaigns, and intentional following of sustainability-oriented accounts strongly predicted sustainable purchases, whereas frequency of platform use had no significant impact. These results reinforce the centrality of knowledge, trust, and structural accessibility in bridging the attitude–behaviour gap.

The study contributes to theoretical frameworks by refining the role of familiarity in sustainable behaviour models, contextualising barriers in small-market economies, and demonstrating the credibility-dependent nature of digital persuasion. Policy and business implications include reducing cost barriers, enhancing accessibility, promoting targeted sustainability education, and leveraging influencer credibility to authentically engage young consumers.

Keywords: Sustainable consumption, millennial, social media influence, consumer behaviour

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Chapter 1 Introduction

1.1 Sustainability and Millennials

Sustainability is defined as “the ability to satisfy social, environmental, and economic needs of current and future generations without depleting the natural resource base or degrading environmental quality” (Brundtland, 1987). A green product (GP) is defined as a product that is durable, long-lasting, and designed with the preservation of Earth's resources in mind (Hill and Lee, 2012). This multidimensional concept, often referred to as the Triple Bottom Line of corporate social responsibility, encompasses environmental, social, and economic dimensions (Simpson and Redford, 2014). Despite its complexity, sustainability has profoundly impacted consumer shopping behavior and decision-making processes, with many consumers perceiving added value in purchasing eco-friendly or sustainable products (Ritch, 2015). Anyone born between 1981 and 1996 (ages 29 to 44 in 2025) is classified as a Millennial (Dimock,2018). 29 - 34 years old are younger millennials born from 1991 till 1996 and 35 - 44 years old are older millennials born from 1981 till 1990. Non-millennials are individuals who fall outside the millennial generational cohort, typically referring to members of Generation X (born approximately 1965–1980) and Baby Boomers (born approximately 1946–1964) (Dimock, 2019).

1.2 Environmental Concern

The influence of environmental concern on consumer behavior, particularly the observed gap between environmental beliefs and actions, has garnered significant attention in research (Davies, Foxall, & Pallister, 2002; Sparks & Shepherd, 1992). While consumers claim to be concerned about the environment (Ginsberg & Bloom, 2004), their adoption of green products remains slow (Lin & Chang, 2012). Factors such as perceptions of lower quality, high prices, and limited availability contribute to this gap (Bonini & Oppenheim, 2008). Additionally, a lack of

awareness and ecological knowledge hinders sustainable consumption (Bamberg & Möser, 2007; Chan, 2001).

1.3 Sustainable Consumer Behaviour

Efforts to promote sustainable consumer behaviour often face barriers, including high costs and poor product quality (Yamoah and Acquaye, 2019). These barriers are exacerbated by inauthentic corporate messages and a lack of transparency from companies (Meise et al., 2014). Research highlights that consumers demand more transparency and information regarding sustainable products, yet many organisations fail to provide this (Meise et al., 2014). Addressing these barriers is essential to bridging the attitude-behaviour gap and encouraging sustainable consumption.

1.4 Use of Social Media

Social media has emerged as a powerful tool for promoting sustainability and influencing consumer behaviour. Younger consumers, who are avid users of social media, often rely on these platforms for information about sustainable initiatives (Men and Tsai, 2012; Sogari et al., 2017). Through engaging content and shared ideas, social media enables marketers to communicate valuable information about sustainability, raising awareness and fostering positive attitudes toward green products (Lazaris et al., 2017; Saeed et al., 2019). However, despite positive attitudes, consumers often perceive green products as too expensive, leading to continued purchases of non-green alternatives (Creyer and Ross, 1997). Further research into leveraging social media to address these barriers and influence consumer behaviour is necessary (Denegri-Knott, 2006).

1.5 Marketing Strategies

Sustainability-related marketing strategies, such as green marketing and eco-marketing, have grown in importance due to increasing public interest in social and environmental responsibility

(Ciletti, 2011). However, firms often struggle to turn these strategies into profitable ventures, as most green marketing efforts fail to yield significant results (Lubin & Esty, 2010). This struggle reflects a broader issue of understanding the characteristics of green consumers and the factors that drive sustainable consumption. While psychological variables like outcome beliefs and subjective norms have been linked to environmental attitudes (Barr, 2007; Milfont & Duckitt, 2010), these attitudes do not consistently predict green behaviour.

1.6 Barriers to sustainable consumption

The research shows the need for an understanding of consumer attitudes, behaviours, and barriers to sustainable consumption (Jacobs et al., 2018; Vergragt et al., 2014). Addressing the attitude-behaviour gap requires strategies to strengthen sustainability-oriented values in society and target diverse consumer segments. Young adults, in particular, represent a critical demographic for fostering change, as they are more open to new ideas and act as agents of transformation (Percy-Smith and Burns, 2013). By focusing on this demographic and leveraging tools like social media, businesses can promote sustainable practices and encourage wider adoption of green products. Social media and global initiatives provide valuable tools for fostering sustainable consumption and shaping a greener future for generations to come.

1.7 Motivation/ Aim of the Study

The motivation for this study stems from the urgent global challenge of sustainability and the specific role of consumer behaviour in achieving environmental goals. Millennials are often characterised as environmentally conscious and digitally connected, making them a critical cohort for advancing sustainable consumption. Yet, research consistently highlights a gap between positive attitudes and actual behaviour, raising questions about the factors preventing intention from becoming practice. Malta provides a particularly compelling case, as its small, import-reliant market intensifies structural barriers such as price and availability. Moreover, the increasing reliance of millennials on social media platforms for information and purchase

decisions introduces new dynamics in consumer influence that remain underexplored in small economies. This study was therefore motivated by the need to understand not only what shapes Maltese millennials' sustainable consumption, but also how structural and digital factors interact to either constrain or enable pro-environmental behaviour.

This study aims to examine consumer behaviour regarding sustainability, focusing on the gap between attitudes and actual shopping behaviour, the barriers preventing consumers from shopping more sustainably, and the influence of social media on the shopping behaviour of Maltese millennials. The research adopts a quantitative methodology, incorporating descriptive analysis, Spearman correlations, and regression analysis.

1.8 Statement of the problem

Understanding environmental and social changes is vital for collectively addressing these challenges. Companies and large corporations possess significant power to drive environmental change. Their practices can either harm the environment or foster its improvement through the promotion of green products (GPs) and social initiatives. With operations spanning multiple countries, these corporations have a substantial impact on global social, environmental, and economic issues.

In Malta, research on consumer attitudes and behaviours toward sustainability remains limited. While global studies offer valuable insights, the specific Maltese context is underexplored. Existing studies and reports on sustainability in Malta often prioritise environmental challenges over consumer attitudes and behaviours. For example, Farrugia (2020) examined green advertising credibility and its connection to willingness to pay but did not delve into broader consumer behaviour. Similarly, a more recent study by Camilleri (2024) focused on barriers to eco-labelling adoption in Maltese hotels, this highlights the scarcity of research specifically addressing consumer behaviour toward sustainability in Malta.

Given the increasing relevance of sustainability, further research is necessary to understand the attitudes of Maltese consumers, particularly millennials, toward sustainability and the obstacles they face in adopting more sustainable shopping practices. This study would provide critical insights into the local context and help bridge the gap in understanding sustainable consumer behaviour in Malta.

This paper addresses the discrepancies between consumer attitudes and actual purchasing behaviour concerning GPs (Boulstridge and Carrigan, 2000; Jacobs et al., 2018). It also investigates the barriers to sustainable consumption, aiming to provide effective answers to the research questions.

1.9 Hypothesis and Research Questions

The primary objective of this research is to examine the attitudes and behaviours of Maltese millennials toward sustainability from environmental, economic, and social perspectives. It aims to identify any discrepancies between attitudes and behaviours, explore the reasons behind them, and assess the role of social media in influencing sustainable consumption. Additionally, the research seeks to uncover the social values, barriers, and motivations that shape consumer attitudes and behaviours through a targeted questionnaire.

This study investigates the dimensions of sustainable consumption among Maltese millennials, focusing on the impact of social media on purchasing behaviour, attitude-behaviour dissonance, and the barriers contributing to these gaps.

1.9.1 Research questions

1. What are the attitudes and purchasing behaviours of Maltese millennials regarding sustainable consumption?
2. If an attitude-behavior gap exists, what barriers prevent millennials from engaging in sustainable consumption?

3. How does social media influence the sustainable purchasing behaviours of Maltese millennials?

Chapter 2 Literature Review

2.1 Sustainability

Sustainability is increasingly recognised as a vital framework for addressing global challenges, including population growth, resource overconsumption, water scarcity, climate change, and economic uncertainties. The forecasted escalation of these issues suggests that without significant changes to current human behaviour, the planet's natural resources and ecosystems will fail to sustain such levels of global development (WBCSD, 2010). According to the Global Risks Report by the World Economic Forum (WEF, 2020), extreme weather events and failures in climate action represent some of the most significant risks in terms of both likelihood and impact, emphasising the urgency of sustainability and sustainable development as critical strategies for the future. Shaker (2015) defines sustainability as "humanity's target goal of human-ecosystem equilibrium (homeostasis)," while sustainable development is viewed as a holistic and temporal approach to achieving this balance. Barbier (1987) further emphasises that sustainable development is founded on the interrelation of three systems: environmental, social, and economic, a perspective echoed by Chang et al. (2017).

2.2 Sustainable Development Goals

It is defined by the United Nations as “meeting the needs of present generations without jeopardising the ability of future generations to meet their own needs” (Brundtland, 1987, p.24). Essentially, it seeks to “ensure a better quality of life for everyone, both now and in the future” (International Institute for Sustainable Development, 2021).

The European Union has committed to implementing the 17 Sustainable Development Goals (SDGs) outlined in the 2030 Agenda, which was adopted during the United Nations (UN) Sustainable Development Summit in 2015. These goals emphasise achieving “a life of dignity for all within the planet's limits” by balancing economic efficiency, social inclusion, and environmental responsibility (European Commission, 2016, p.2).

Divided into five key themes, the SDGs reflect the Triple Bottom Line of Corporate Social Responsibility (CSR). They aim to “create a sustainable world where people can escape poverty and secure decent work without depleting essential ecosystems or resources”; where individuals have access to adequate food, water, and healthcare; where clean energy is available without exacerbating climate change (Ki-moon, 2014).

Moreover, the SDGs serve as a universal call to action to address issues such as poverty, environmental protection, and global peace and prosperity by 2030 (Pradhan et al., 2017). They are designed to align the efforts of all nations, setting a common path toward sustainability across social, economic, and environmental dimensions (Dang and Serajuddin, 2020). Collaborative approaches and performance analyses of the SDGs are crucial to understanding the interconnectedness of these pillars and ensuring effective policy interventions (Barbier and Burgess, 2019). Chang et al. (2017) further emphasise that sustainability has become a critical perspective for holistic business management, requiring firms to address economic, environmental, and social dimensions simultaneously.

2.2.1 Three Pillars of Sustainability

Recent research on the United Nations' Sustainable Development Goals (SDGs) has highlighted that the "Three Pillars of Sustainability" concept is embedded in the formulation of these goals (Purvis et al., 2019). Sustainability is viewed as an integrative concept, encompassing environmental, social, and economic dimensions as its core elements (Hansmann et al., 2012). These dimensions are often represented as overlapping circles, with sustainability at their intersection (Purvis et al., 2019). According to Purvis et al. (2019), these three pillars play a crucial role in sustainable development and are influenced by cultural, political, and economic factors. Munasinghe (1993) emphasises that the three pillars of sustainability are interlinked, with each addressing different aspects: the environmental pillar focuses on biological and physical systems, the social pillar emphasises equity and

participation, and the economic pillar aims to maximise profits while preserving capital.. However, pursuing all three pillars often leads to conflicts, requiring systematic efforts to integrate them effectively. This integration is essential for balancing the ecological, economic, and social dimensions of sustainability (Hansmann et al., 2012).

From a business perspective, corporate sustainability is defined as "meeting the needs of a firm's direct and indirect stakeholders without compromising its ability to meet the needs of future stakeholders" (Dyllick & Hockerts, 2002, p.131). The win-win paradigm, which suggests that businesses can benefit economically while addressing sustainability, is a common theme in corporate sustainability research (Hahn et al., 2010). Many scholars have explored the "business case" for sustainability (Dyllick & Hockerts, 2002), and recent studies have demonstrated a positive correlation between environmental sustainability and improved economic performance (Kashyap & Lakhanpal, 2019). However, questions remain about how businesses can balance economic growth with addressing social and environmental challenges (Dyllick & Hockerts, 2002). Hahn et al. (2010) argue that corporate sustainability must go beyond the three pillars concept, acknowledging that the pillars are mutually reinforcing while also addressing the trade-offs that businesses face. Trade-offs occur when economic, environmental, and social goals cannot be simultaneously achieved, highlighting the need for integration of these pillars as a crucial step in corporate sustainability (Hahn et al., 2010; Dyllick & Hockerts, 2002).

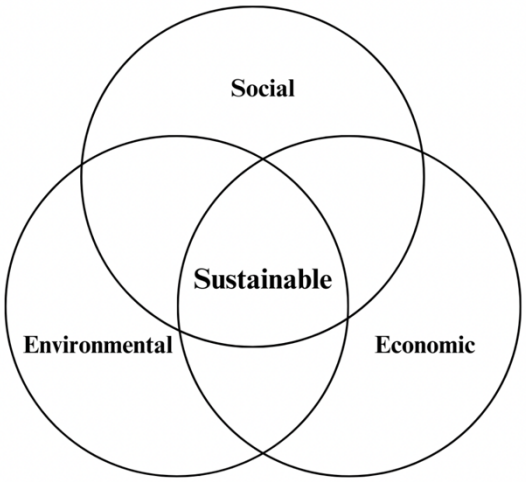

Figure 1: Three Pillars of Sustainability. (Purvis et al., 2019)

2.2.2 CSR

The development of the Corporate Social Responsibility (CSR) concept gained prominence during the modern era of CSR, which began in the 1950s (Carroll, 1999). Archie Carroll, a leading figure in the CSR field, referred to Howard Bowen as the "Father of CSR" in his 1999 article (Carroll, 1999).

In Bowen's 1953 book *Social Responsibilities of the Businessman*, he emphasised that large corporations wielded significant power within society, meaning their actions had the potential to profoundly impact the lives of citizens (Carroll, 1999). Bowen argued that businesses should integrate societal concerns into their decision-making processes.

Bowen also introduced a pioneering definition of CSR: “It [CSR] refers to the obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society” (Carroll, 1999, p. 270). He posed a critical question that remains central to the CSR discourse: “What responsibilities to society may businessmen reasonably be expected to assume?” (Carroll, 1999, p. 270).

2.2.3 The Triple Bottom line of CSR

This framework incorporates three key dimensions of sustainability: economic success, environmental responsibility, and social justice, often referred to as the "3Ps" – people, planet, and profit (Slaper & Hall, 2011). For a business activity to be deemed sustainable, it must address all three of these pillars. However, striking a balance between them presents a significant challenge for companies (Langdon, 2010). If it serves both people and profit, it is regarded as equitable, while an alignment between the planet and profit is seen as viable (Elkington, 2013). In the context of CSR, the Triple Bottom Line seeks to integrate these three dimensions in a manner that results in a "win-win" scenario for the company, where profitability is achieved through socially and environmentally responsible practices. In essence, a company can enhance its reputation and increase profits by acting responsibly (Kuhlen, 2005).

Figure

Figure 2: Triple Bottom Line (Source: Video Details - ClickView Library of Educational Videos, 2019)

2.2.3.1 Economic Prosperity

This focuses on generating long-term profit through the efficient use of resources, with an emphasis on preserving capital (Elkington, 1997). While profitability is traditionally viewed as a measure of a company's financial strength and value, the concept of economic prosperity within the Triple Bottom Line framework extends beyond mere financial performance.

2.2.3.2 Environmental Quality

The environmental dimension of sustainability highlights the impact of business activities on the natural environment, shifting the focus from economic growth to the preservation and protection of ecosystems (Simpson & Radford, 2012). Within this framework, companies are expected to comply with legal requirements, adhere to environmental standards, and respond to increasing consumer demand for organic and eco-friendly products (Simpson & Radford, 2012). Over recent years, issues such as global warming have become critical, prompting businesses to engage in both internal and external environmental initiatives. Key activities under the environmental pillar include reducing negative environmental impacts, developing sustainable policies, and producing eco-friendly goods and services (Henriques & Richardson, 2004).

2.2.3.3 Social Justice

This dimension of sustainability pertains to managing human and social aspects to ensure fairness, promote community well-being, and apply best practices in human resource and community management (Issa, 2017). It emphasises long-term societal development by fostering community growth, ensuring equality, and combating poverty. Businesses are expected to create positive working environments, prioritise employee development, and address their needs.

2.3 Stakeholder Theory in Sustainability

Stakeholder theory offers a relational approach to understanding businesses by analysing the interactions between organisations and the various groups and individuals who can affect or are affected by their activities (Freeman, 1984; Jones, 1995; Walsh, 2005). Unlike traditional shareholder-centric models, which prioritise financial returns for investors, stakeholder theory argues that businesses function as networks of relationships among customers, suppliers, employees, financiers, communities, and managers, all of whom jointly contribute to value creation and exchange (Freeman, 1984). Executives, therefore, have the responsibility not only to manage these relationships but also to distribute value in a way that benefits multiple stakeholders while addressing potential conflicts (Harrison et al., 2010).

2.3.1 Balancing Stakeholder Interests vs. Managing Trade-offs

A fundamental challenge within stakeholder theory is balancing diverse stakeholder interests. Freeman (1984) contends that when conflicts arise, executives should seek creative solutions that address the needs of multiple parties rather than defaulting to zero-sum trade-offs. This approach is supported by Harrison et al., (2010), who argue that resolving stakeholder conflicts in an inclusive manner can lead to greater overall value creation. However, critics such as Jensen (2000) and Marcoux (2000) argue that trade-offs are inevitable and must be managed explicitly. Freeman et al., (2007) acknowledge that trade-offs sometimes occur but suggest that the role of executives is to minimise their negative impact and continuously work toward improving outcomes for all stakeholders involved.

2.3.2 Stakeholder Theory as a Moral Endeavor vs. Managerial Opportunism

Beyond its practical business implications, stakeholder theory is often framed as a moral framework that emphasises values, ethical decision-making, and the equitable distribution of benefits and harms (Phillips, 2003). This contrasts with the shareholder-centric view, which critics argue is more transparent in evaluating managerial performance. Opponents such as

Sternberg (2000) suggest that stakeholder theory provides a pretext for managerial opportunism, as it expands the number of groups that executives can claim to serve, potentially allowing them to justify self-serving decisions. In contrast, Phillips, et al., (2003) refute this claim by pointing out that major corporate scandals such as those involving Enron and WorldCom occurred under the guise of shareholder value maximisation rather than stakeholder theory. They further argue that stakeholder theory imposes a higher level of accountability on managers by requiring them to consider the interests of multiple constituencies, thereby reducing the likelihood of self-dealing.

2.3.3 Financial Distribution vs. Procedural Justice

Another critique of stakeholder theory is that it is primarily concerned with the distribution of financial resources among various groups, leading to an inherent conflict between shareholders and other stakeholders (Marcoux, 2000). This perspective assumes a fixed pool of financial surplus and positions stakeholder and shareholder theories as competing models for wealth allocation. However, Phillips et al., (2003) argue that stakeholder theory is not solely about financial distribution but also about procedural justice. They emphasise that stakeholders should have a say in how resources are allocated and that fair processes contribute to greater acceptance of outcomes. Moreover, they highlight that stakeholder engagement in decision-making can lead to new opportunities for value creation, effectively "enlarging the pie" rather than simply redistributing existing wealth.

2.3.4 Equal Treatment of Stakeholders vs. Differentiated Consideration

A common misconception about stakeholder theory is that it requires treating all stakeholders equally (Gioia, 1999; Marcoux, 2000; Sternberg, 2000). Critics argue that this approach lacks practical feasibility, as different stakeholders contribute differently to a business and may require different levels of engagement. However, Phillips et al. (2003) clarify that stakeholder theory does not mandate equal treatment but rather emphasises fairness. They propose that

firms can adopt meritocratic principles, where benefits are distributed in proportion to stakeholders' contributions. Furthermore, different firms may apply stakeholder theory in varied ways, depending on their specific industry, business model, and stakeholder relationships.

2.4 Consumer Attitudes and Behaviour

Consumers are influenced by various factors that shape their purchasing decisions. The term "consumer" is often associated with responsibility and commitment, implying a sense of moral obligation (Wallenborn, 2007). However, consumers differ in their level of moral responsibility, with some demonstrating a stronger ethical commitment than others. Wallenborn (2007) highlights the complexity of defining a "green consumer," as it raises the question of whether consumers are considered ethical or environmentally conscious based on their actions or their attitudes. Attitudes, being more deeply ingrained than opinions, shape an individual's behavior and mindset when faced with decisions, making them resistant to change (Wallenborn, 2007).

From a psychological perspective, this conflict between beliefs and actions is referred to as "cognitive dissonance." Crane and Matten (2016, p. 367) define ethical consumption as "the conscious and deliberate choice to base consumption choices on personal moral beliefs and values." These values, often tied to social and environmental concerns, drive ethical consumers to make purchasing decisions that align with their commitment to sustainability and social justice. The misalignment between intentions and actions is known as the "attitude-behavior gap" (Boulstridge & Carrigan, 2000), which serves as a significant barrier to sustainable consumption.

2.4.1 Barriers to Sustainable Consumption

Consumption choices, whether direct or indirect, significantly impact the environment and influence both individual well-being and the collective welfare of society. Briceno and Stagl (2006), Frey and Stutzer (2010), Hume (2010), and Paavola (2001) have examined this relationship, sparking widespread interest among academics and policymakers in

understanding sustainable consumption. Hume (2010) and Mont and Plepys (2008) highlight that the term is often used as an umbrella concept encompassing various issues such as resource utilisation, waste reduction, quality of life, equitable resource distribution, and the fulfillment of human needs.

One perspective on sustainable consumption focuses on technological advancements as a means of addressing consumption-related environmental challenges. Advocates of the technocentric approach argue that unsustainable consumption is primarily a production problem and that implementing pro-environmental production processes can mitigate these issues. Scholars such as Easterbrook (1995), Geyer and Jackson (2004), Gladwin et al., (1995), and Guide and Van Wassenhove (2009) assert that technological innovation is the key to developing eco-friendly, efficient, and sustainable solutions. However, this reliance on technology is perceived as beyond individual control, leading to the emergence of 'Faith in Technology' as a barrier to sustainable consumption.

Jackson (2005) and Mont and Plepys (2008) have criticised the technocentric approach, arguing that it alone cannot achieve sustainable development. Despite improvements in production efficiency, overall consumption continues to rise. Research by Brännlund et al., (2007) and Greening et al., (2000) indicates that increased affluence, consumer advocacy, and inclusivity have led to a rebound effect, where efficiency gains encourage higher consumption levels. In response, scholars such as Abela (2006), Belk (1985), and Csikszentmihalyi (2000) emphasise the need to shift focus from production-based solutions to consumption behavior and conservation strategies.

Despite the recognition of overconsumption as a fundamental issue, addressing it remains a contentious topic. Mont and Plepys (2008) note that material goods serve not only functional purposes but also symbolic roles, contributing to social identity, status, and cohesion. Douglas and Craig (1997) argue that consumption is a means of establishing a social identity, reinforcing

materialism as a deeply ingrained behavior. This consumption-driven mentality, termed materialism by Belk (1985), Borgmann (2000), and Mont and Plepys (2008), has been linked to unsustainable living practices (Barnaby & Reizenstein, 1976). Furthermore, empirical evidence suggests that materialism is significantly related to energy consumption behaviors and negatively impacts conservation efforts.

The evolving debate on sustainable consumption has increasingly emphasised conservation over behavioral changes alone. Studies by Csikszentmihalyi (2000) and Zinkhan (1994) demonstrate that reducing consumption levels leads to meaningful environmental benefits. Policymakers have responded by implementing awareness campaigns, incentivising conservation, and penalising excessive consumption (Abrahamse et al., 2005; Daub & Ergenzinger, 2005).

However, interventions promoting behavior modification often face opposition. Firat and Venkatesh (1995) and Mujtaba and Jue (2005) argue that policy-driven restrictions on consumption infringe upon economic freedoms. This opposition is frequently accompanied by cynicism and distrust, as noted by Gordon and Richardson (1989) and Newman et al., (1995). Bonino et al., (2012) and McKenzie-Mohr (2000) highlight that consumers often resist information-driven campaigns due to skepticism about underlying political motives. Hobson (2004) and Newman et al. (1995) further report that many consumers view conservation initiatives as mechanisms for creating artificial resource shortages to benefit corporate interests.

2.4.2 Knowledge and Awareness

The significance of knowledge in sustainability management literature suggests that individuals and organisations must understand how their activities impact the environment and socio-economic systems and what measures they can adopt to mitigate negative effects (Howell, 2018; Garbie, 2015; Horng et al., 2013).

One of the primary concepts in this discourse is sustainability awareness. Kollmuss and Agyeman (2002) define it as knowledge and perception of sustainability and its associated issues. However, sustainability awareness has been interpreted differently across disciplines, such as information technology (Chou & Chou, 2012), manufacturing (Garbie, 2015), and tourism (Horng et al., 2013). Additionally, several related terms, such as green awareness, environmental awareness, carbon literacy, energy literacy, and ecological literacy, are often used interchangeably. Among these, carbon literacy has gained popularity, though Howell (2018) notes that it lacks a formal definition. Horng et al. (2013) conceptualise low-carbon literacy as an understanding of energy conservation and carbon reduction, integrating these principles into daily life. However, Howell (2018) differentiates between literacy and awareness, arguing that many definitions, such as ecological literacy and energy literacy, focus on knowledge acquisition rather than emotional engagement with sustainability issues.

Measuring sustainability awareness remains a complex challenge due to inconsistencies in assessment methodologies (Garbie, 2015). Various approaches have been proposed across different contexts. For instance, Shokri et al. (2014) measured sustainability awareness in the UK fast food supply chain using a 24-item scale. However, their methodology leaned more toward assessing aptitude than awareness. Similarly, Suki (2013) conceptualised green awareness through four dimensions: environmental concerns, awareness of green products, price awareness, and brand image awareness. While this model has merit, it presents conceptual challenges. Environmental concerns reflect a state of worry, which likely emerges after awareness rather than constituting a part of it. Meanwhile, awareness of green products, price, and brand image aligns more closely with consumer behavior than sustainability awareness per se.

Garbie (2015) introduced an industrial sustainability awareness framework based on the triple bottom line; economy, society, and environment, along with a general sustainability dimension. However, the study faced limitations due to the lack of specific measurement items, relying

instead on broad questionnaire templates. In contrast, Horng et al. (2013) developed a comprehensive low-carbon literacy scale tailored to the tourism sector, incorporating seven dimensions: knowledge of low-carbon issues, ecological concepts, attitudes and values, locus of control, sensitivity, action intent, and action strategy. Howell (2018), however, differentiates between awareness and literacy, suggesting that only knowledge of low-carbon issues, ecological concepts, and sensitivity are directly relevant to awareness. Rashid (2009) further refines this idea by categorising perceived environmental knowledge into three dimensions: knowledge of green products, knowledge of environmental issues (general sustainability awareness), and concrete knowledge (industry-specific sustainability practices).

2.4.2.1 Comparison and Contrast

While sustainability awareness and sustainability literacy share commonalities in their focus on knowledge and engagement, key distinctions exist. Awareness primarily relates to perception and understanding, while literacy extends to practical application and informed decision-making (Howell, 2018). Conceptually, different disciplines emphasise various aspects of sustainability awareness. For instance, tourism studies (Horng et al., 2013) integrate attitudinal and behavioral factors, whereas industrial studies (Garbie, 2015) focus on broader economic, social, and environmental considerations. Measurement techniques also vary significantly; while some models (Shokri et al., 2014; Suki, 2013) assess awareness through consumer behavior metrics, others (Horng et al., 2013) offer more structured multi-dimensional frameworks.

Despite these differences, a common challenge remains: defining and accurately measuring sustainability awareness. Many studies (Garbie, 2015; Howell, 2018) struggle with ambiguous definitions and inconsistent assessment criteria. Additionally, some conceptualisations conflate awareness with other constructs, such as material concerns (Suki, 2013) or behavioral responses (Horng et al., 2013). As research progresses, refining the distinctions between

awareness, literacy, and behavior will be crucial in developing more effective sustainability education and management strategies.

2.4.2.1 Low Product Quality and Limited Product Availability and Variety

Green products (GPs), often marketed as sustainable alternatives to conventional products, exhibit distinct characteristics that influence consumer perception and purchasing behavior. A key point of differentiation between GPs and regular products is their perceived quality. While conventional products are generally associated with higher and more consistent quality, some consumers believe that GPs are inferior in performance or durability, which acts as a significant barrier to sustainable consumption (D'Souza et al., 2006). However, this perception is not uniform, certain environmentally conscious consumers are willing to accept lower quality in exchange for sustainability benefits, as long as they have access to clear environmental information on product labels (D'Souza et al., 2006).

The emphasis on quality is a consistent trend across consumer studies. Research by Carrigan et al. (2004) found that quality is the most influential factor in purchasing behavior, a finding further reinforced by the European Commission, which reports that European citizens prioritise product quality above all else when making purchasing decisions (Stolz & Bautista, 2015). Similarly, Tseng and Hung (2013) confirm that both the intention to buy and actual purchasing behavior are directly impacted by the perceived quality of GPs. This contrasts with the assumption that sustainability alone is a strong enough motivator to drive purchasing decisions, while some consumers may prioritise eco-friendliness, the majority remain quality-driven.

Beyond quality concerns, the availability and variety of GPs also present challenges. Compared to conventional products, sustainable options are often limited in range, making it difficult for consumers to find alternatives that meet their needs. This issue is particularly pronounced in the sustainable fashion industry, where the selection of clothing styles, categories, and sizes remains constrained (Hill & Lee, 2015).

For those who place sustainability at the core of their values, transparency in environmental labeling may compensate for quality concerns (D'Souza et al., 2006). However, for the average consumer, high product quality and variety remain non-negotiable, making conventional products the default choice (Carrigan et al., 2004; Stolz & Bautista, 2015).

2.4.3 Labelling and Information

Businesses use these labels not only to differentiate their products but also to communicate sustainability messages and position themselves within the green market (D'Souza, 2000). Studies indicate that consumers rely on product labels to assess environmental benefits, particularly when purchasing unfamiliar products (Ferguson et al., 2017). Marketers use specific terminology such as "eco-friendly," "biodegradable," and "recyclable" to convey a product's sustainability attributes (Morris et al., 1995). However, while labels are intended to simplify information, they often lead to confusion. Consumers frequently misunderstand or misinterpret claims, reducing their trust in environmental messaging (Chase & Smith, 1992).

A survey by Dagnoli (1991) found that while 83% of respondents preferred purchasing environmentally safe products, only 15% found environmental claims highly believable. This contradiction underscores a significant challenge in the effectiveness of eco-labeling: while demand for such information exists (Wessells et al., 1999), the way it is presented determines whether it genuinely influences purchasing behavior.

Consumers increasingly consider a company's social and environmental commitments when making purchase decisions (Forte & Lamont, 1998). Dagnoli (1991) found that 77% of surveyed consumers were influenced by a company's environmental reputation when choosing brands. Moreover, misleading or exaggerated environmental claims have resulted in consumer distrust, reinforcing negative attitudes toward green products (Chase & Smith, 1992). In some cases, companies have presented products as fully sustainable when only certain components met environmental standards, further diminishing consumer confidence (West, 1995).

Consumers differ in their reliance on labels based on their level of environmental consciousness. Green consumers actively seek eco-labels and use them to make informed purchasing decisions, whereas conventional consumers, defined as those who do not prioritise sustainability, tend to ignore environmental information altogether (D'Souza, 2004). Despite this, there is evidence that labels can influence mainstream consumers when presented effectively. For instance, companies that provide additional sustainability-related details, such as fair wages, organic sourcing, and recycled packaging, have found that consumers are willing to pay a premium for such products (Meise et al., 2014). However, labeling alone is not enough; consumer motivation plays a crucial role in determining whether they engage with and trust the information provided (Silva et al., 2017).

Although eco-labels are intended to facilitate sustainable consumption, their impact is often limited by how consumers process information. Many consumers struggle to understand green product labels (D'Souza et al., 2006), and purchasing behavior is still heavily influenced by product experience and sensory factors. For instance, Silva et al. (2017) found that while sustainability and quality labeling influenced consumer perceptions of chocolate, taste remained a dominant factor in purchasing decisions. Similarly, in the broader market, product attributes such as quality and price often outweigh sustainability considerations (Stolz & Bautista, 2015).

2.4.4 Higher Prices and Willingness to Pay

Willingness to pay (WTP) is a critical factor in consumer decision-making, particularly in the context of sustainable products as it represents the maximum amount a consumer is willing to pay for a good or service, reflecting the value they place on it (Lusk & Hudson, 2004). Research indicates that a significant portion of consumers is willing to pay more for sustainable products. For instance, Bjerke (1992) found that 42% of respondents expressed a willingness to pay a premium for ecological products, while Grunert (1992) reported an even higher figure of 60%. Other studies suggest that WTP varies across different markets and product categories. In

Spain, Gil et al. (2000) found that only actual and likely organic consumers were willing to pay a 15–25% premium for organic food. Similarly, Canavari et al. (2003) discovered that nearly 66% of Italian respondents accepted higher prices for organic peaches and apples. However, despite these promising figures, the reality of purchasing behavior does not always align with stated preferences. Bjerke (1992) highlighted a disparity where over 30% of consumers who claim to have positive attitudes toward ecological products fail to translate this into actual purchases. Additionally, around 16% express willingness to pay a premium but do not follow through, indicating a gap between intention and behavior. The primary reason for this inconsistency is often the high price of sustainable goods, which can be perceived as excessive (Aryal et al., 2009).

2.4.5 Price as a Barrier vs. Added Value as an Incentive

One of the most significant obstacles to sustainable consumption is the higher cost of green products. While research suggests that consumers expect sustainable products to be more expensive, they do not necessarily accept this price premium without additional benefits (Simpson & Radford, 2012).

For instance, Auger et al. (2008) found that while consumers are open to paying a slight premium for products with social and environmental attributes, they are unwilling to compromise on functionality. This suggests that sustainability alone is not enough to justify higher prices, green products must also meet conventional quality expectations. The European Commission supports this view, ranking price as the second most important factor in consumer purchasing decisions, just behind quality (Stolz & Bautista, 2015).

2.4.6 Contextual and Demographic Variations in Willingness to Pay

WTP for sustainable products is not uniform across all consumers; it varies depending on context, product type, and demographic factors. Schäufele & Hamm (2017) found that higher prices for organic wine, for example, are not a deterrent for committed buyers. Age also

influences price sensitivity. Research indicates that younger consumers tend to be more price-sensitive than older consumers (Stolz & Bautista, 2015).

Aryal et al. (2009) found that a lack of information, alongside high prices and inconsistent supply, discourages sustainable consumption. While WTP research has traditionally focused on public goods such as parks and forests, studies on consumer products, particularly non-food items, remain limited. Prior research has largely concentrated on measuring WTP (Miller, 2011), and the influence of consumer knowledge (Bechwati, 2011) or product design (Kristensen, 2012) on purchasing decisions. However, self-reported WTP studies often suffer from a disconnect between declared intentions and real-world actions, as seen in research on organic and non-organic wine (Thøgersen, 2002) and ecological behaviors (Harland et al., 1999).

2.5 Social Media

Defined broadly, social media encompasses digital platforms that emphasise user-generated content and interaction (Kaplan & Haenlein, 2010; Terry, 2009). While there is no universally agreed-upon definition, it is widely recognised as a medium that facilitates networking, collaboration, and digital engagement (Russo et al., 2008; Kaplan & Haenlein, 2010). Its emergence has significantly impacted business strategies, especially in marketing, allowing brands to reach highly targeted audiences at a relatively low cost (Sheehan & Atkinson, 2016). Research suggests that social media marketing is particularly effective in promoting sustainable products, as it enables direct engagement with consumers who are interested in specific lifestyles, including sustainability (Sheehan & Atkinson, 2016). A key advantage of social media marketing is its perceived credibility. Consumers often view content shared on social platforms as more persuasive than conventional advertising (Hung, Li, & Tse, 2011). One of the most impactful aspects of social media marketing is influencer endorsement. Social media influencers, individuals with large followings who create content within niche communities, serve as intermediaries between brands and consumers (De Veirman et al., 2017). Social media

introduces new dynamics into consumer decision-making, for example, younger consumers who are typically more price-sensitive are also the most active users of social media (McCann Truth Central, 2013).

2.5.1 Social Media Marketing and Millennials

According to Nielsen (2014), millennials spend a significant amount of time on social media, approximately six hours per week, and perceive technology as a tool that enhances their lives and keeps them connected. This shift has necessitated changes in marketing strategies, as brands must now focus on social media marketing (SMM) to engage with this generation effectively (Schroer, 2016).

Research indicates that millennials prefer online brand communities over traditional advertisements, as these communities align with their self-image and foster greater engagement (Chi, 2011). De Vries et al. (2012) further emphasise that social media allows brands to create direct connections with consumers through interactive content and brand fan pages. Additionally, Kim and Ko (2012) identify key SMM attributes such as entertainment, interaction, trendiness, customsation, and word of mouth, all of which play a significant role in shaping consumer perception and purchase intention. Godey et al. (2016) support this by showing that these SMM elements positively impact brand equity and customer engagement.

Millennials' reliance on social media extends beyond entertainment, as they frequently use these platforms to search for information and make purchasing decisions (Lempert, 2006; Vollmer & Precourt, 2008). Companies invest heavily in SMM, yet the full impact of these efforts on consumer behavior remains an area for further exploration (Hoffman & Fodor, 2010).

2.5.2 Millennials and Sustainability

Millennials are widely regarded as the most sustainability-conscious generation, demonstrating a strong preference for environmentally responsible consumption habits (Saussier, 2017).

Sustainability plays a key role in their purchasing decisions, with 63% of millennials willing to pay a premium for sustainable goods over conventional alternatives (Piggott, 2022). Additionally, 88% of young consumers, including millennials, prefer to buy from brands that are committed to sustainability (Berg et al., 2019). However, despite their desire to shop sustainably, challenges such as high prices and limited access to information often act as barriers to sustainable consumption (Wood, 2022).

Sustainability also influences millennials' food choices, as health and environmental impact are among their top concerns (Cheng, 2019). Many millennials are shifting toward plant-based diets and veganism, recognising the link between their dietary habits and the planet’s well-being (Saussier, 2017). Their strong awareness of social and environmental issues extends beyond personal consumption habits to broader societal concerns such as gender and racial equality, reflecting a deep commitment to ethical and sustainable lifestyles (Deloitte, 2017; Valentine & Powers, 2013).

Furthermore, millennials’ reliance on social media has made it a powerful tool for shaping their sustainability behaviors. They are more likely to trust and engage with messages about sustainability when communicated through digital platforms, including advertisements promoting eco-friendly labeling and sustainable packaging (Sogari et al., 2017).

2.5.3 Social Media Marketing and Sustainability

In recent years, businesses have faced increasing pressure to adopt sustainable practices and embrace eco-friendly initiatives. Consumers are not only purchasing products to fulfil their needs but also to reflect their social status. Research has demonstrated a strong link between social influence and consumer attitudes toward buying sustainable products (Vermeir & Verbeke, 2006; Kim & Chung, 2011). Social media has become a crucial platform for businesses to engage with consumers, foster communication, and build relationships with the

public (Kim & Chung, 2011). While social media has pushed organisations toward greater transparency, sustainability marketing remains a relatively unexplored area of study (McDonagh & Prothero, 2014). Given social media's influence on consumer behaviour, attitudes, and purchasing decisions, companies are adapting their strategies to align with the growing demand for environmentally responsible consumption, using these platforms to promote their sustainability efforts (Williams & Cothrell, 2000). As a result, social media is not only shaping consumer attitudes toward sustainability but also compelling businesses to become more environmentally and socially responsible (Pop et al., 2020).

2.6 Summary and Contribution to the Literature

Sustainability has become a critical global priority, with the Sustainable Development Goals (SDGs) guiding efforts to balance environmental, social, and economic considerations. The Three Pillars of Sustainability; economic, environmental, and social**,** serve as a foundational framework for sustainable development. Businesses are increasingly incorporating sustainability into their strategies through Corporate Social Responsibility (CSR**)** and the Triple Bottom Line framework (People, Planet, Profit)**,** aiming to achieve long-term growth while minimizing environmental and social harm. However, despite increasing awareness, a significant attitude-behaviour gap persists, where consumers express positive attitudes toward sustainability but fail to translate these intentions into actual purchasing decisions. This disconnect is influenced by several barriers**,** including high costs, limited availability, perceived lower product quality, and a lack of knowledge or trust in sustainability claims. While some consumers are willing to pay a premium for sustainable products, the perceived price-performance trade-off remains a major obstacle. Additionally, many consumers struggle with eco-labels and greenwashing, leading to skepticism about companies' sustainability commitments.

Millennials are often regarded as the most sustainability-conscious generation, yet their purchasing behaviours do not always align with their environmental and ethical values. Factors such as economic constraints, convenience, and product familiarity play a significant role in determining their consumption patterns. The role of social media in shaping millennials' attitudes and purchasing decisions is also gaining attention, as platforms like Instagram, TikTok, and Facebook provide direct exposure to sustainability-related content. Research suggests that social media influencers, brand campaigns, and peer networks significantly affect consumer preferences. However, the extent to which social media marketing truly influences sustainable purchasing behaviour remains inconclusive, particularly in the Maltese context.

Despite extensive global research on sustainable consumption, there is limited empirical evidence on the attitudes and behaviours of Maltese millennials toward sustainability. Furthermore, while studies highlight the attitude-behaviour gap, little research has explored the specific barriers preventing sustainable consumption in Malta. Additionally, while social media is recognized as a powerful marketing tool, its actual impact on sustainability-related purchasing decisions among Maltese millennials is underexplored. This study aims to address these gaps by examining how millennials in Malta perceive sustainable consumption, the obstacles they face in adopting sustainable behaviours, and the role of social media in influencing their purchasing decisions.

Chapter 3 Methodology

3.1 Research Design

This study employs a quantitative research approach to achieve its objectives, focusing on exploring behaviors, attitudes, and barriers to sustainability among millennials in Malta. The quantitative method is well-suited for this research as it facilitates a broader understanding of participants' perspectives and experiences (Jensen et al., 2017). Additionally, utilising self-administered questionnaires helps minimise social desirability bias, ensuring more accurate responses (Fowler, 2014).

The research design incorporates descriptive statistics to analyse the current state of consumer attitudes and behaviors. Regression analysis, along with Spearman and Pearson correlation tests, is applied to investigate relationships between variables.

The study also delves into sustainable consumption patterns, focusing on participants' preferences and inclinations toward specific sustainable products. Shopping experiences are examined, particularly regarding sustainable food products, which are often closely associated with sustainability issues (Ritch, 2015).

The theoretical framework is built upon relevant literature on sustainability, consumer attitudes, and behaviours. These sources were accessed through Google Scholar. Keywords such as “attitude-behaviour,” “sustainability,” “willingness to pay,” and “ethical consumption” were used to identify pertinent studies and literature. This foundation ensures that the research is grounded in established theories while addressing the specific context of millennials in Malta.

3.2 Sample

The sample for this study consists primarily of young consumers, with a focus on millennials as the target age group. Before administering the survey, participants are provided with a clear explanation of the study's purpose. The sample included both male and female participants, all of whom fall within the millennial age range, defined as individuals born between 1981 and 1996.

This age group was also chosen due to its familiarity and active engagement with social media platforms, which are central to the study's examination of the impact of social media on consumption behaviour. Social media has fostered the growth of self-branding, enabling marketers to use influencers to promote products. Influencer promotions are often perceived as a credible form of word-of-mouth marketing compared to traditional paid advertisements (De Veirman et al., 2017). These promotions are seamlessly integrated into influencers' narratives, effectively driving sales for businesses. As a result, social media plays a significant role in shaping consumer behaviours, making millennials an ideal demographic for studying these effects.The study aims to explore how social media influences millennials' purchasing decisions and its relationship with buying behaviours.

3.3 Data Collection Method

Online survey distribution was employed. Online surveys are effective in generating statistical data about a target population (Fowler, 2014). The researcher uploaded the survey on social media like Facebook, LinkedIn and Instagram so that the required sample size could be gathered. Participants were assured of anonymity and confidentiality to minimise social desirability bias. Factors such as age, gender, and education level were considered in the analysis.

3.4 Construction of the Questionnaire

A sample of the questionnaire given to the participants can be found in appendix 1. The questionnaire was self-administered, requiring respondents to participate voluntarily and independently answer the questions. In the online survey, any incomplete responses were excluded from the analysis. As noted by Fowler (2014), valid and reliable measurement depends on clear and appropriate questions. To ensure this, the questions were designed to be simple, easy to understand, and consistent, providing respondents with clear answer options.

This study adopts the Green Consumer Value Scale, as proposed by Bhatia and Jain (2013) and Haws et al. (2010), to measure the value consumers place on environmental considerations during purchase decisions. The questionnaire focuses on both respondents' attitudes and behaviors toward sustainable consumption. It includes questions on past purchasing habits, attitudes toward barriers to sustainability, willingness to pay premium prices, and the influence of factors such as availability, variety, and knowledge on buying behavior related to sustainable products.

A Likert scale was used to measure responses, with “strongly disagree” to “strongly agree”. The questionnaire included a mix of multiple-choice questions and scaled responses to capture nuanced data. It started with demographic questions to gather information on participants’ background characteristics.

3.5 Data Analysis

The literature frequently identifies behavior as the key indicator being influenced, making it a suitable dependent variable for this study. As supported by Basha et al. (2015), Basha and Lal (2019), Wang et al. (2014), and Akehurst and Goncalves (2012), consumer behaviour will serve as the dependent variable in this research. It is specifically tested to determine its relationship with attitude and social media use. Consumer behaviour in this context reflects actual purchasing actions, which may or may not align with consumers' stated environmental or social

values. Data analysis was carried out using SPSS. To assess the internal consistency of the scales used in the questionnaire, reliability testing was conducted using Cronbach's alpha, supported by item–total correlations. According to Hulin et al., (2001), a Cronbach's alpha value above 0.70 is generally considered to indicate an acceptable level of internal consistency, while values above 0.80 are regarded as good and those above 0.90 as excellent. Normality tests indicated that the data were not normally distributed; therefore, non-parametric methods were applied where appropriate. Spearman's rank correlation was used to examine relationships between ordinal variables derived from Likert-scale items, as this test is robust to violations of normality. Spearman correlation is suitable since the data in the study is on an ordinal scale (Zikmund et al.,2012). Group comparisons were analysed using the Mann–Whitney U test for two independent groups and the Kruskal–Wallis test for more than two groups. These tests are non-parametric tests and are suitable for testing data that is not normally distributed (Field, 2009). while chi-square tests were applied to explore associations between categorical variables. Regression analysis was employed to investigate the predictive influence of demographic, attitudinal, and social media factors on sustainable purchasing behaviour. Prior to conducting regressions, assumptions of linearity, homoscedasticity, and multicollinearity were checked to ensure validity of results. A significance threshold of $p < 0.05$ was adopted throughout, with $p < 0.01$ indicating strong significance. This combination of descriptive, correlational, non-parametric, and regression analyses ensured that the data were examined rigorously and in direct alignment with the research questions posed in this study.

3.6 Ethical Consideration

Research often involves ethical concerns, particularly when sensitive topics are addressed. In this study, ethical practices were carefully followed throughout the research process. Participants were assured of their anonymity and were provided with clear information about the study before consenting to participate. Online posts promoting the survey included a headline, a description, and a link, ensuring respondents were to be well-informed before participating.

This approach aligns with ethical research practices, emphasising voluntary participation and transparency (Fowler, 2014). Respondents were made aware of the research objectives and how their input would contribute to fulfilling them. Additionally, confidentiality was guaranteed, as no personal identifying information was collected, allowing respondents to answer independently and without bias (Creswell, 2014).

3.7 Validity and Reliability

The survey questions are designed to assess consumer attitudes and behaviors, with a focus on ensuring reliability and validity. Since consumer attitudes are inherently subjective and lack external, independent validation (Fowler, 2014), particular care is taken to enhance the reliability of the responses. Fowler (2014) emphasises that subjective questions achieve validity when they are reliable, which was addressed by structuring questions to be universally understood and consistent across all respondents. Furthermore, multiple questions addressing the same attitude in varying forms were included to improve reliability. Cronbach's alpha was used to assess the internal consistency of the survey, the yielding value should fall above 0.6 to be within the acceptable range for reliability.

Reliability, in the context of quantitative research, refers to the consistency of results when the study is replicated. According to Bryman (2016), reliability is achieved when another researcher can reproduce the study and obtain similar outcomes. To ensure this, clear and standardised procedures were followed, reducing the potential for errors or biases (Yin, 2018). By providing explicit instructions on the survey process, the study ensures that other researchers can replicate the methodology and obtain comparable results.

In this study, confirmability, a key aspect of reliability is also prioritised by ensuring that the findings are presented objectively, without any influence from the researchers' personal values or biases (Bryman and Bell, 2011). This approach strengthens the dependability of the research and underscores its adherence to quantitative research standards.

3.8 Originality

This thesis can contribute to the growing body of literature on consumer behaviour and sustainability by exploring a unique combination of factors: the attitudes, behaviours, and barriers to sustainable consumption among millennials in Malta. While much of the existing research on sustainable consumption focuses on broader regions or specific nations, this study addresses a gap by examining a relatively underexplored demographic and geographic area.

The originality of the thesis lies in its focus on the interplay between social media use, consumer attitudes, and actual buying behaviour. Previous studies, such as those by Basha et al. (2015), Basha and Lal (2019), and Wang et al. (2014), have examined consumer attitudes and behaviours towards sustainability, but this research specifically highlights the role of social media influencers as a modern form of word-of-mouth marketing (De Veirman et al., 2017). It provides new insights into how these dynamics impact purchasing decisions, particularly among a tech-savvy generation such as millennials, who are active users of social media platforms.

The study further builds on the Green Consumer Value Scale developed by Haws et al. (2010), integrating it to measure how values towards the environment influence purchasing decisions. Unlike some prior studies, this thesis not only explores attitudes but also delves into barriers such as premium pricing, availability, and knowledge, adding depth to the discussion on the attitude-behaviour gap in sustainable consumption.

Additionally, the focus on the Maltese context, a small but rapidly developing European Union member state, adds a fresh perspective to the field. While sustainability challenges are globally recognised, Malta's specific cultural, social, and economic factors create a distinctive environment for examining sustainable consumption behaviour, making this study highly relevant and original.The findings have the potential to inform policymakers, businesses, and marketers seeking to promote sustainable practices, aligning with the broader goals of fostering environmental and social well-being (Simpson and Radford, 2012).

3.9 Limitations

While this thesis makes important contributions, it is essential to recognise its limitations.

The use of self-reported data introduces potential biases, including social desirability bias. Respondents may have overstated their pro-sustainability attitudes or underreported behaviours inconsistent with these values. This could inflate the apparent strength of attitudinal measures.

The cross-sectional design of the study is another limitation. While significant associations were observed between familiarity, barriers, and purchasing behaviour, the data do not establish causality. For example, it cannot be concluded definitively whether familiarity leads to behaviour or whether those who engage in sustainable behaviours seek out more information. Longitudinal or experimental designs would be better suited to determine causal pathways.

Sample representativeness must also be acknowledged as a limitation. Although the sample size was adequate as it was over 600 respondents and efforts were made to ensure diversity, the results cannot be generalised to all Maltese millennials without caution. Respondents may differ systematically from the broader population in terms of education, access to social media, or pre-existing interest in sustainability.

Finally, the non-normal distribution of the data necessitated the use of non-parametric tests. While these tests are robust and appropriate in this context, they are less powerful than parametric alternatives. This may have reduced the ability to detect weaker associations that could nonetheless be meaningful in larger or differently distributed datasets.

Chapter 4 Analysis and Results

4.1 Introduction

This chapter presents the empirical findings derived from the quantitative analysis and interprets them in the context of the research questions outlined earlier. The survey included 616 respondents after excluding those who were not part of the millennial generation. Building upon the methodological framework established in Chapter 3, the results are systematically examined to uncover patterns, test hypotheses, and identify relationships between demographic factors, attitudes, purchasing behaviours, and the barriers influencing sustainable consumption among Maltese millennials. The discussion integrates statistical evidence with theoretical perspectives from the literature review, offering both descriptive and inferential insights.

The chapter is organised into these main sections.

Section 4.2 focuses on the analysis of demographic characteristics of respondents, providing an overview of the sample composition in terms of age, gender, employment status, education level, and other relevant variables. Understanding these characteristics is essential for contextualising subsequent statistical analyses, as demographic factors may influence both sustainability-related attitudes and behaviours.

Section 4.3 presents the initial statistical testing conducted to explore associations between variables, including Mann–Whitney U tests, Chi-square tests, Spearman correlations, and Kruskal–Wallis tests. These analyses address key relationships such as the link between familiarity with sustainability and purchasing frequency, gender differences in willingness to pay, and the influence of employment status on sustainability motivation. This stage serves as a preliminary examination of the hypotheses, identifying which variables demonstrate statistically significant relationships.

Section 4.4 delves into the regression analysis, assessing the predictive power of independent variables, such as attitudes, barriers, and social media trust on sustainable purchasing behaviour. Multiple regression models are employed to quantify the extent to which these factors explain variation in the dependent variables. Statistical significance, model fit, and explanatory power (R^2) are evaluated to determine the robustness of the predictive relationships, with findings compared to the theoretical expectations outlined in earlier chapters.

Section 4.5 provides an in-depth discussion, synthesising the quantitative results with the existing literature reviewed in Chapter 2. Here, the findings are critically examined to identify areas of alignment or divergence from prior research. The discussion addresses each research question in turn, reflecting on the implications of the results for the understanding of sustainable consumption behaviour among Maltese millennials.

4.2 Demographics

4.2.1 Gender

The survey showed a gender distribution with females significantly outnumbering males, comprising 76.95% compared to 23.05%. Although not balanced, this distribution allows for meaningful analysis of gender-related trends or differences within the study's context.

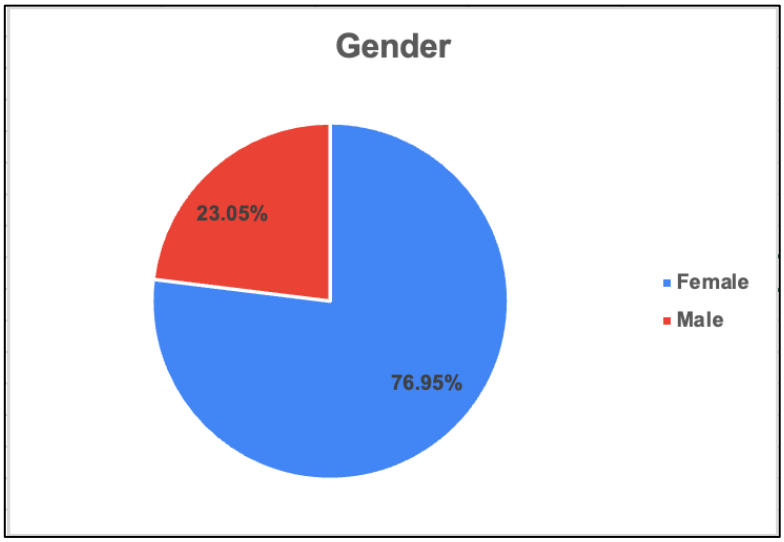

Figure 3: Gender Distribution

4.2.2 Age of Millennials

The demographic profile of respondents in this study is primarily composed of older millennials, with nearly 70% aged between 35 and 44 years and 30% between 29 and 34 years. This concentration within the older segment of the millennial generation may impact the study's findings, especially in areas where attitudes and behaviours differ across age subgroups within millennials.

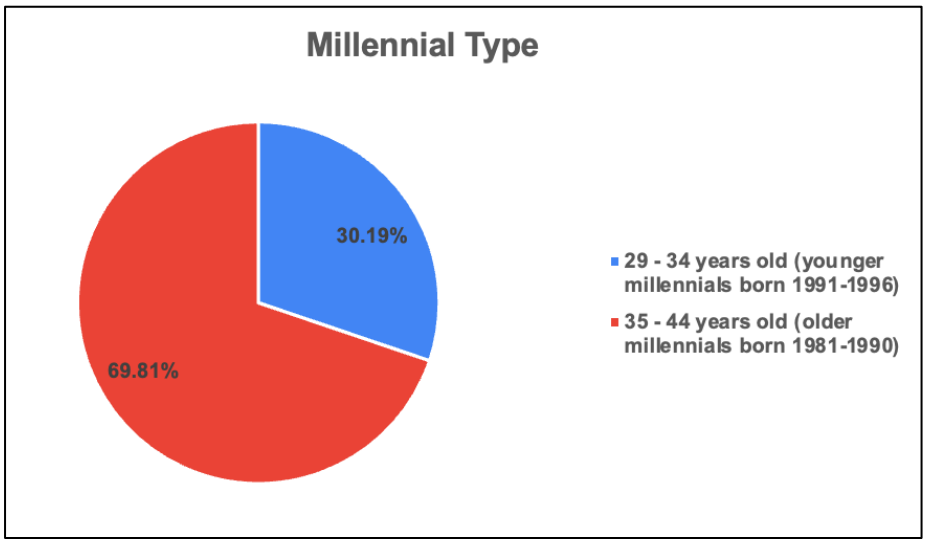

Figure 4: Age Distribution

4.2.3 Employment Status

The employment status distribution among respondents indicates that the vast majority, 87.99%, are employed full-time. Smaller proportions include part-time employees (6.66%), unemployed individuals (3.41%), students (1.14%), and self-employed respondents (0.81%). This suggests that the sample is predominantly composed of full-time workers, which may influence the study's findings, particularly in areas related to income stability, and work-related attitudes.

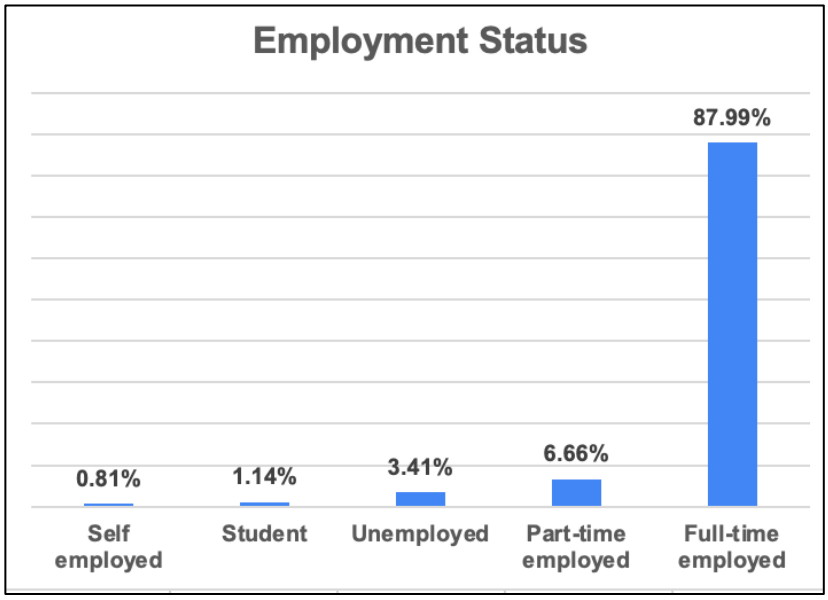

Figure 5: Employment Status

4.2.4 Level of education

The educational attainment of respondents reflects a relatively high level of formal education, with 34.9% holding a postgraduate degree or higher and 17.69% possessing an undergraduate degree. Additionally, 26.62% reported having a diploma qualification, while 20.78% indicated secondary education as their highest level attained. This distribution shows that over half of the participants (52.59%) have completed tertiary-level education, which may influence their ability to understand and critically evaluate complex topics.

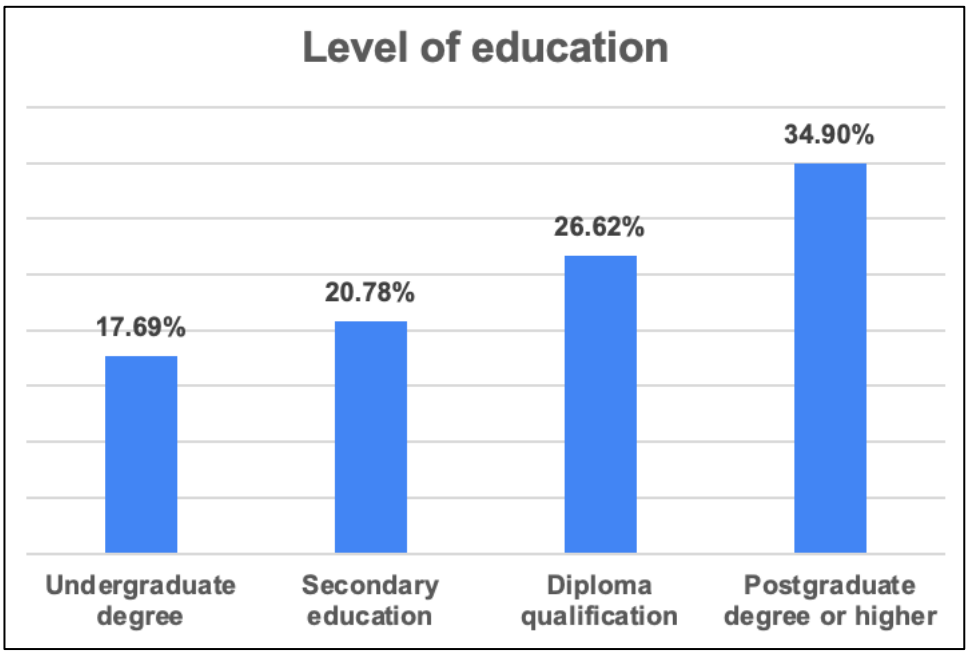

Figure 6: Level of education

4.2.5 Annual Income

The annual income distribution of respondents shows notable variation, with the largest proportion (33.93%) earning between €20,000 and €29,999, followed by 26.14% earning €40,000 or more, and 22.89% within the €30,000–€39,999 range. Smaller proportions include 12.50% earning between €10,000 and €19,999, and only 4.55% earning less than €10,000 annually. This distribution indicates that the majority of participants (82.96%) fall within the mid-to-high income brackets, suggesting a sample with relatively strong purchasing power. This higher income representation may influence findings, as financial stability can directly affect the willingness and ability to engage in sustainable consumption practices.

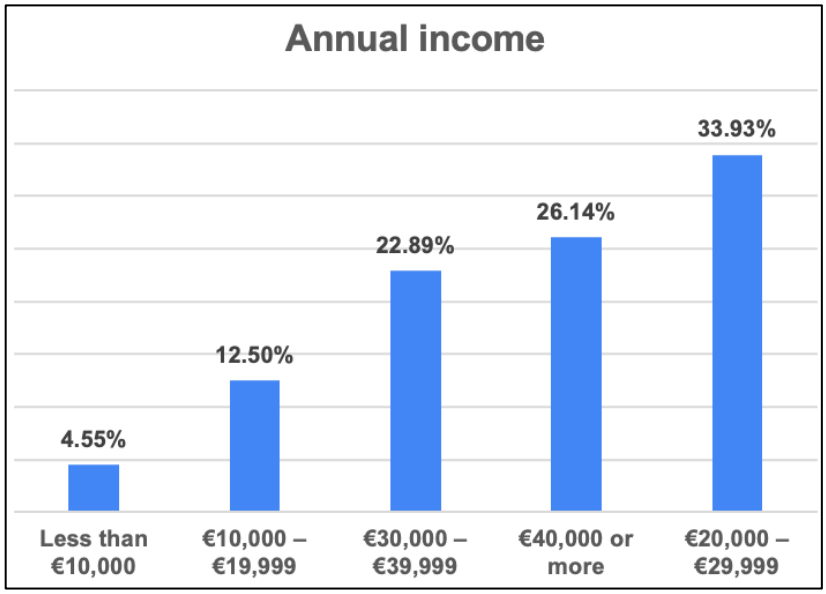

Figure 7: Annual income

4.2.6 Familiarity with the sustainability concept

Most respondents (48.54%) reported being familiar with the concept of sustainability, while a further 22.24% indicated being very familiar. Neutral responses accounted for 18.34%, suggesting a moderate awareness without strong engagement. Only a small proportion reported

low familiarity, with 8.12% being slightly familiar and just 2.76% not familiar at all. This high level of familiarity among participants indicates that most millennials in the sample possess at least a basic understanding of sustainability, which could positively influence their attitudes and behaviours toward sustainable consumption. However, the presence of a small, less-informed segment highlights the potential for targeted educational initiatives to further raise awareness and engagement.

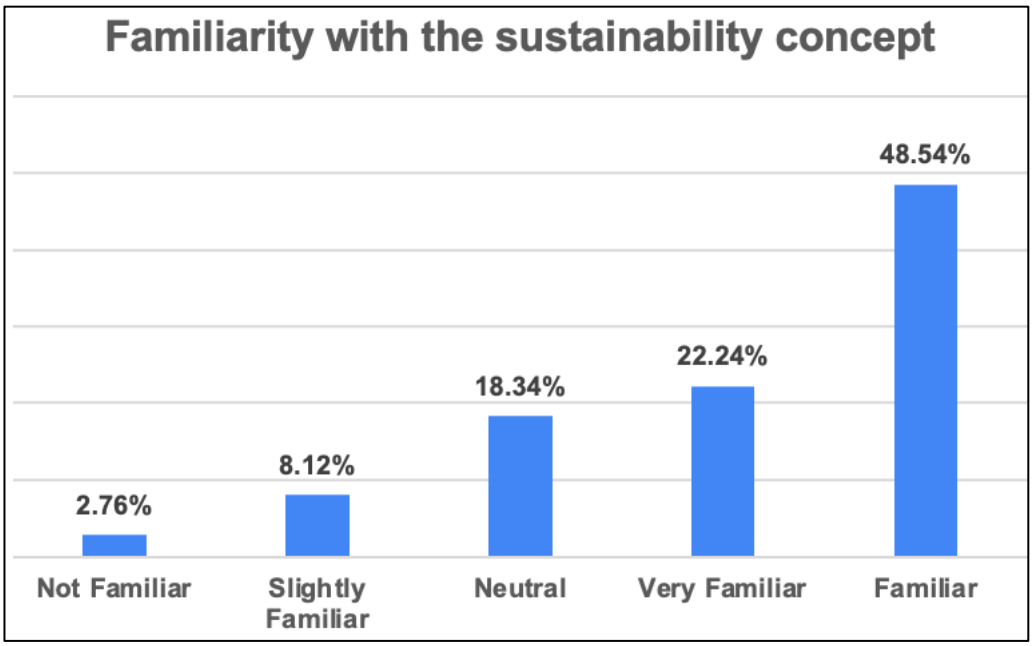

Figure 8: Familiarity with the sustainability concept

4.3 Initial Statistical Testing

4.3.1 Millennials' Familiarity with Sustainability

This section examines whether younger and older millennials differ in their familiarity with sustainability, defined here as self-reported understanding and awareness of sustainability issues (Kollmuss & Agyeman, 2002; Howell, 2018). The Independent-Samples Mann–Whitney U Test compared younger millennials (1991–1996) with older millennials (1981–1990).

Existing literature highlights uneven distribution of sustainability knowledge across age groups. Howell (2018) distinguishes between "awareness" (perception and knowledge) and "literacy" (applied knowledge). Younger cohorts, exposed more to digital media, may gain awareness differently than older cohorts (Horng et al., 2013; Garbie, 2015). Yet, while younger millennials encounter frequent sustainability messaging online, older millennials' greater income stability and purchasing experience may provide stronger exposure in practical contexts (Percy-Smith & Burns, 2013).

The Mann–Whitney U test produced a p-value of 0.004, rejecting the null hypothesis of equal familiarity between age groups. Older millennials reported significantly higher familiarity. A likely explanation lies in their higher educational attainment and greater work experience, which may expose them to sustainability initiatives in professional or institutional settings. By contrast, younger respondents, though active on social media, may rely more on fragmented or surface-level knowledge (Sogari et al., 2017).

This result aligns with the attitude–behaviour gap literature, which stresses that awareness does not necessarily translate into action (Boulstridge & Carrigan, 2000; Jacobs et al., 2018). It also challenges assumptions that younger cohorts are inherently more sustainability-conscious due to digital engagement (Saussier, 2017). In Malta, generational differences appear shaped more

by life and professional experience, suggesting sustainability education and marketing should not treat millennials as a uniform group.

Hypothesis Test Summary

Null Hypothesis	Test	Sig. a, b	Decision
The distribution of Familiarity with the concept of sustainability is the same across categories if you are a millennial	Independent Samples Mann-Whitney U Test	.004	Reject the null hypothesis

Table 1: Millennials' Familiarity with Sustainability

4.3.2 Gender and Willingness to Pay More for Sustainable Products

This section investigates whether gender influences millennials' willingness to pay more for sustainable products. Prior research presents mixed evidence: women are often reported as more pro-environmental yet more price-sensitive (D'Souza et al., 2006; Stolz & Bautista, 2015), while men are sometimes less engaged attitudinally but more willing to absorb price differentials (Tseng & Hung, 2013).

A Chi-Squared Test of Independence was conducted between gender and reported willingness to pay premium prices. The test produced a p-value of 0.104, exceeding the 0.05 threshold, so the null hypothesis could not be rejected. This indicates no significant association between gender and willingness to pay more for sustainable products.

Descriptive patterns showed that female respondents were more hesitant to pay additional costs despite positive attitudes, while males showed a slightly higher inclination to accept price increases, consistent with Schäufele and Hamm (2017). However, since these trends were not statistically significant, they cannot be generalised.

Theoretically, this reinforces the attitude–behaviour gap: women's stronger environmental attitudes did not translate into greater willingness to pay. Instead, affordability and perceived value appear to constrain both genders, echoing Jacobs et al. (2018) and Aryal et al. (2009) on price as a persistent barrier to sustainable consumption.

In Malta, this suggests gender is not a reliable predictor of willingness to pay. Efforts to encourage sustainable purchasing should therefore target shared structural barriers, particularly price sensitivity, rather than segmenting by gender.

Hypothesis Test Summary

Null Hypothesis	Test	Sig. a, b	Decision
Gender and willingness to pay are independent	Chi-Squared Test of Independence	.104	Fail to reject the null hypothesis

Table 2: Independency between gender and willingness to Pay

4.3.3 Employment Status and Motivation to Purchase Sustainably

This section explores whether employment status influences millennials' motivation to purchase sustainable products. Employment status reflects income stability, purchasing power, and lifestyle routines, all of which can shape sustainable consumption (Stolz & Bautista, 2015). Research suggests that those in full-time or secure work are more financially able to pursue sustainable choices (Gil et al., 2000; Canavari et al., 2003), while students and unemployed individuals often express positive attitudes but face financial barriers (Aryal et al., 2009).

A Kruskal–Wallis H Test compared motivation scores across employment groups (full-time, part-time, self-employed, students, and unemployed). The test produced a p-value of 0.046, leading to rejection of the null hypothesis and confirming significant differences between groups.

Full-time employees and self-employed respondents reported higher motivation than unemployed participants and students, supporting earlier findings that financial stability and professional exposure strengthen sustainable behaviours (Dyllick & Hockerts, 2002; Kashyap & Lakhanpal, 2019).

These results echo Jacobs et al. (2018), who argue that motivation is shaped by socio-economic context rather than attitudes alone. They also highlight the attitude–behaviour gap: while students and unemployed respondents may value sustainability, limited resources dampen their motivation. Practically, this implies that policies and business strategies should account for income-related disparities when promoting sustainable consumption.

Hypothesis Test Summary

Null Hypothesis	Test	Sig. a, b	Decision
The distribution of Motivation is the same across categories of Employment Status	Independent-Samples Kruskal-Wallis Test	.046	Reject the null hypothesis

Table 3: Motivation across categories of employment status

4.3.4 Familiarity with Sustainability and Purchase Frequency

This section examines the relationship between respondents' familiarity with sustainability and their frequency of sustainable purchasing. Prior research highlights that greater sustainability

knowledge often leads to more sustainable consumption, though barriers such as price and availability can weaken this link (Howell, 2018; Jacobs et al., 2018).

A Spearman Rank-Order Correlation was applied due to the ordinal data and non-normal distribution. Results showed a positive, moderate correlation ($\rho = 0.337$, $p < .001$), indicating that higher familiarity with sustainability is significantly associated with more frequent sustainable purchasing. In practice, respondents who reported greater familiarity were more likely to consider sustainability when making purchases.

This finding supports the hypothesis that attitudes influence behaviour, consistent with Bamberg and Möser (2007) and Horng et al. (2013). However, the moderate strength suggests familiarity is an important but not exclusive driver, with other factors such as price, availability, and trust in claims also shaping outcomes (Meise et al., 2014; Aryal et al., 2009).

Theoretically, the result partly confirms the knowledge–behaviour link, while acknowledging the persistence of the attitude–behaviour gap (Boulstridge & Carrigan, 2000). In Malta, it highlights that millennials with greater exposure to sustainability concepts are more likely to act on their attitudes through purchasing behaviour.

Practically, this suggests that boosting sustainability literacy could strengthen sustainable consumption. Education campaigns, clearer labelling, and credible social media messaging may help bridge the gap between attitudes and actions.

Hypothesis Test Summary

Null Hypothesis	Test	Sig. a, b	Decision
There is no relationship between familiarity with sustainability and purchase frequency	Spearman Rank-Order Correlation	<.001	Reject the null hypothesis

Table 4: Familiarity with sustainability and purchase frequency

4.3.5 Motivation and Actual Purchasing via Social Media

This section investigates whether motivation to purchase sustainable products translates into actual purchasing behaviour when influenced by social media. While motivation is often viewed as a key driver of sustainable consumption (Bamberg & Möser, 2007), prior research notes that structural and situational barriers often prevent intentions from becoming actions (Boulstridge & Carrigan, 2000; Jacobs et al., 2018).

A Mann–Whitney U Test compared motivation scores between respondents who reported purchasing sustainable products due to social media influence (e.g., influencer endorsements, ads, reviews) and those who had not. The test produced a p-value of 0.357, above the 0.05 threshold, meaning the null hypothesis could not be rejected. Motivation levels did not differ significantly between the two groups.

This indicates that high motivation does not necessarily translate into purchases triggered by social media, reflecting the persistence of the attitude–behaviour gap. Other factors, such as price sensitivity, influencer credibility, and product availability, may play a stronger role in shaping decisions (Meise et al., 2014; Aryal et al., 2009).

The result challenges the assumption that highly motivated individuals are more responsive to sustainability content on social platforms, supporting broader evidence that sustainable

consumption requires enabling conditions beyond personal motivation (Mont & Plepys, 2008). This suggests that businesses and policymakers should not rely solely on social media campaigns targeting motivated consumers. Reducing price premiums, improving accessibility, and strengthening trust in sustainability claims are essential to converting motivation into action.

Hypothesis Test Summary

Null Hypothesis	Test	Sig. a, b	Decision
The distribution of Motivation does not differ between those who purchased sustainably due to social media and those who did not.	Independent – Samples Mann–Whitney U Test	.357	Retain the null hypothesis

Table 5: Motivation to purchase sustainably due to social media

4.3.6 Consideration of Sustainable Products and Willingness to Pay More

This section examines whether millennials' frequency of considering sustainability in purchasing decisions influences their willingness to pay higher prices. Prior research suggests that when sustainability becomes part of consumers' value systems, they are more likely to accept premium prices (Bjerke, 1992; Canavari et al., 2003), though barriers such as affordability and skepticism remain (Aryal et al., 2009; Meise et al., 2014).

A Chi-Square Test of Independence was conducted between respondents' reported frequency of considering sustainability and their willingness to pay more. Results showed $p < .001$, leading to rejection of the null hypothesis and confirming a significant association. Respondents who

considered sustainability “often” or “always” were far more likely to accept higher prices than those who did so “sometimes” or “never.”

The effect size (Cramér’s V = 0.188) indicates a small to moderate association, suggesting that while sustainability consideration influences willingness to pay, other factors such as income remain important.

These findings align with research showing that positive sustainability values increase tolerance for price premiums (Schäufele & Hamm, 2017), though not universally. Practically, this implies that enhancing the salience of sustainability in everyday decisions through clearer labelling, education, and consistent messaging, may increase consumers’ acceptance of higher prices by embedding sustainability as a habitual rather than occasional consideration.

Hypothesis Test Summary

Null Hypothesis	Test	Sig. a, b	Effect size	Decision
There is no association between consideration of sustainability and willingness to pay more.	Chi-Square Test of Independence	<.001	Cramér’s V = 0.188 (small–moderate)	Reject the null hypothesis

Table 6: Consideration of Sustainable Products and Willingness to Pay More

4.3.7 Social Media Usage Frequency and Sustainable Purchasing Behaviour

This section analyses whether the frequency of social media usage influences millennials’ likelihood of purchasing sustainable products through social media. While social media is often

viewed as a driver of sustainability awareness and engagement (Kaplan & Haenlein, 2010; Sogari et al., 2017), its impact remains contested.

A Spearman Rank-Order Correlation tested the relationship between usage frequency and sustainable purchases influenced by social media (e.g., influencer endorsements, ads, peer content). The results showed a weak negative correlation ($\rho = -0.051$, $p = 0.205$), which was not statistically significant. This indicates that frequent users are not necessarily more likely to purchase sustainably through social media.

These findings challenge the assumption that higher exposure automatically increases sustainable purchasing. Instead, they suggest that content quality and credibility matter more than usage frequency. Prior research confirms that trust in influencers (De Veirman et al., 2017) and the type of content consumed (educational vs. promotional) are stronger predictors of behaviour than overall time spent online (Pop et al., 2020). This implies that increasing exposure alone is insufficient to drive sustainable consumption. Brands and policymakers should prioritise credible and authentic content, such as transparent product information, peer recommendations, and influencer endorsements grounded in genuine sustainability practices, rather than relying on repetitive, high-frequency messaging.

Hypothesis Test Summary

Null Hypothesis	Test	Sig. a, b	Correlation	Decision
There is no relationship between frequency of social media use and sustainable purchases influenced by social media	Spearman Rank-Order Correlation	.205	-.051	Fail to reject the null hypothesis

Table 7: Correlation Between Social Media Usage Frequency and Sustainable Purchases

4.3.8 Trust in Influencers and Following Sustainable Influencers

This section examines the relationship between following sustainability-focused influencers or brands on social media and the trust respondents place in them. Trust is a crucial factor in sustainability marketing, as consumers remain sceptical of greenwashing and rely on perceived authenticity to guide purchases (Meise et al., 2014; Pop et al., 2020). Research shows that sustainability influencers often cultivate stronger credibility than mainstream commercial influencers, shaping both attitudes and behaviour (De Veirman et al., 2017).

A Mann–Whitney U Test compared trust levels between respondents who follow sustainability influencers or brands and those who do not. Results showed $p < .001$, confirming a statistically significant difference: followers reported higher levels of trust, while non-followers expressed lower trust.

This demonstrates a clear link between behavioural engagement (following influencers) and attitudinal trust. Actively following sustainability accounts reinforces credibility and strengthens consumer confidence in related messaging, echoing findings that trust mediates the conversion of awareness into action (Schaefer & Crane, 2005; Sogari et al., 2017). This suggests that brands and policymakers should prioritise partnerships with sustainability-focused influencers who are authentic and consistent in their advocacy. Such trusted voices are more effective in promoting sustainable consumption than generic influencer marketing, which risks limited impact without credibility.

Hypothesis Test Summary

Null Hypothesis	Test	Sig. a, b	Decision
There is no difference in trust levels between those who follow sustainability influencers/brands and those who do not.	Mann- Whitney U Test	<.001	Reject the null hypothesis

Table 8: Association Between Following Sustainable Influencers and Trust Levels

4.3.9 Type of Social Media Content and Purchasing Intent

Social media content can take many forms, including influencer endorsements, brand promotions, peer-generated posts, and educational materials. Prior research suggests that effectiveness depends more on credibility and authenticity than on format alone (Kaplan & Haenlein, 2010; De Veirman et al., 2017).

A Kruskal–Wallis H Test was used to compare purchasing intent (whether respondents would increase, decrease, or maintain sustainable purchases if income changed) across different content categories. The test produced a p-value of 0.354, above the 0.05 threshold, meaning no significant differences were found. Content type therefore does not appear to influence purchasing intent in this sample.This suggests that while social media raises awareness, the format of content is not decisive in shaping behavioural intentions. Instead, factors such as trust in the source, price sensitivity, and motivational drivers may be stronger predictors of purchasing behaviour (Meise et al., 2014; Jacobs et al., 2018). This implies that sustainability campaigns should focus less on selecting a specific content type and more on building credibility and reducing affordability barriers. Integrated campaigns combining trusted sources with accessible pricing may be more effective in shaping purchasing intent.

Hypothesis Test Summary

Null Hypothesis	Test	Sig. a, b	Decision
The type of social media content influencing sustainability perceptions has no effect on purchasing intent	Kruskal–Wallis H Test	.354	Fail to reject the null hypothesis

Table 9: Type of Social Media Content and Purchasing Intent

4.3.10 Intention–Behaviour Gap and Social Media-Based Purchasing

This section examines the association between the intention–behaviour gap (respondents intending to purchase a sustainable product but not doing so) and social media-driven purchasing behaviour (e.g., influencer endorsements, brand ads, or peer reviews). Social media has been suggested as a potential bridge between sustainability intentions and behaviour by providing persuasive cues, enhancing trust, and reducing uncertainty (De Veirman et al., 2017; Sogari et al., 2017).

A Chi-Square Test of Independence was conducted between unfulfilled purchase intentions and reported social media-based sustainable purchasing. The test yielded a Pearson Chi-Square p-value of 0.671, above the 0.05 significance threshold, indicating no statistically significant relationship. This suggests that social media does not decisively explain the intention–behaviour gap in this sample. While it can shape awareness and attitudes, factors such as price sensitivity, availability, or perceived product credibility (Boulstridge & Carrigan, 2000; Jacobs et al., 2018) appear more influential. Practically, addressing these barriers, through reduced price premiums, clearer sustainability labelling, or better availability, may be more effective in closing the intention–behaviour gap than relying on social media alone.

Hypothesis Test Summary

Null Hypothesis	Test	Sig. a, b	Decision
There is no association between intention not to purchase and social media-based purchasing.	Chi-Square Test of Independence	.671	Fail to reject the null hypothesis

Table 10: Intention to Purchase and Social Media-Based Purchasing

4.3.11 Barriers Preventing Sustainable Purchasing

To investigate the attitude–behaviour gap, a Chi-Square test of independence was conducted between Question 13 (intended to purchase a sustainable product but did not) and Question 14 (barriers preventing sustainable purchasing). This analysis assessed whether specific barriers were significantly associated with failure to follow through on sustainable purchase intentions.

The null hypothesis (H_0) stated no association between reporting a barrier and exhibiting an intention–behaviour gap, while the alternative (H_1) suggested that at least one barrier would be significant. Results showed statistically significant associations for all seven barriers:

- Higher price: $p < .001$
- Limited availability in store: $p < .001$
- Limited product variety: $p < .001$
- General concerns/misinformation: $p < .001$
- Difficulty finding products: $p = .046$
- Skepticism toward sustainability claims: $p < .001$
- Lack of knowledge: $p < .001$

All p-values below 0.05 led to rejection of H_0, indicating these barriers are strongly linked to the attitude–behaviour gap. Higher price was the most frequently reported barrier, aligning with literature identifying affordability as a primary obstacle (Aryal et al., 2009; Simpson & Radford, 2012). Other significant barriers: limited availability, variety, skepticism, and knowledge deficits, reflect structural and informational shortcomings in sustainable markets (Meise et al., 2014; Stolz & Bautista, 2015).

The weaker significance of difficulty finding products ($p = .046$) suggests accessibility is less decisive. Overall, the findings show that Maltese millennials' sustainable purchasing is constrained by both structural (price, availability, variety) and perceptual (skepticism, concerns, knowledge) barriers, indicating that motivation alone is insufficient to drive behaviour.

4.3.12 Barriers as Predictors of the Attitude–Behaviour Gap

This section examines whether the cumulative presence of barriers affects follow-through on sustainable purchasing intentions. The attitude–behaviour gap was measured by comparing:

1. **Gap group** – respondents who intended to purchase a sustainable product but did not.
2. **No-gap group** – respondents who reported no discrepancy between intention and behaviour.

The null hypothesis (H_0) stated no difference in overall barrier scores between groups; the alternative (H_1) posited a significant difference. A Mann–Whitney U test showed a statistically significant result ($p < .001$), rejecting H_0. The gap group reported significantly higher cumulative barrier scores than the no-gap group.

This confirms that barriers exert a strong cumulative effect on sustainable purchasing: the more barriers faced, the more likely intentions are abandoned. Consistent with prior research (Boulstridge & Carrigan, 2000; Vergragt et al., 2014), structural and perceptual obstacles especially price and availability, constrain action despite motivation. These findings show that

the attitude–behaviour gap among Maltese millennials is driven by barriers, not lack of willingness.

Hypothesis Test Summary

Null Hypothesis	Test	Sig. a, b	Decision
There is no difference in the distribution of overall barrier scores between respondents with an attitude–behaviour gap and those without.	Mann–Whitney U test	<.001	Reject the null hypothesis

Table 11: Barriers and Attitude-Behaviour Gap

4.3.13 Reported Barriers to Sustainable Purchasing

The results indicate that price is the most cited barrier, with 53% of respondents reporting sustainable products as too expensive, confirming literature that affordability is a major challenge to sustainable consumption (Schäufele & Hamm, 2017).

All other barriers were reported by fewer than 20% of participants: 19% cited limited store availability, 17% limited product variety, 19% general concerns about product quality or benefits, 17% scepticism about sustainability claims, 10% lack of knowledge, and 4% difficulty locating products. The median score was 0 for all barriers except price, and price also showed the highest standard deviation (0.50), reflecting its near 50/50 distribution across the sample. These findings highlight that affordability is the primary obstacle, while other structural and perceptual barriers; availability, variety, scepticism, and knowledge, affect a smaller portion of respondents. They also align with previous Chi-Square results, showing that no single barrier fully explains

the intention–behaviour gap. Overall, sustainable consumption is constrained by a combination of affordability and smaller, but meaningful, market and trust-related challenges.

Interpretation Summary

Variable	Mean	Median	Standard Deviation	Interpretation
Higher Price	0.53	1.00	0.500	53% cite price as a barrier, most common barrier.
Limited availability in store	0.19	0.00	0.395	19% report store availability as a barrier.
Limited product variety	0.17	0.00	0.378	17% report limited product options.
Concerns (general doubts, misinformation)	0.19	0.00	0.389	19% cite general concerns.
Difficulty in finding sustainable products	0.04	0.00	0.201	Only 4% find difficulty locating such products.
Skepticism toward sustainability claims	0.17	0.00	0.372	17% are sceptical about sustainability claims.
Lack of knowledge	0.10	0.00	0.301	10% report lack of knowledge as a barrier.

Table 12: Frequencies of Reported Barriers to Sustainable Purchasing

4.3.14 Age Group (Millennials vs. Non-Millennials) and Perceived Barriers

This section examines whether millennials and non-millennials perceive barriers to sustainable purchasing differently. Previous research (Vermeir & Verbeke, 2006) suggests that younger generations tend to hold stronger pro-sustainability attitudes, but the attitude–behaviour gap persists due to external barriers like price, availability, and trust in claims.

A Mann–Whitney U test was conducted to compare reported barrier scores. The null hypothesis (H_0) assumed no difference between age groups, while the alternative (H_1) posited that millennials perceive barriers differently. The test yielded a p-value of 0.050, leading to retention of H_0. This indicates no statistically significant difference between millennials and non-millennials: both groups face similar obstacles, with cost, limited availability, and scepticism recurring as primary barriers.

Practically, this suggests that interventions such as reducing price premiums, improving product variety and availability, and strengthening trust in sustainability claims should target all consumers rather than specific age groups. While millennials may hold stronger sustainability intentions, the barriers they encounter are universally experienced within the Maltese market.

Hypothesis Test Summary

Null Hypothesis	Test	Sig. a, b	Decision
Millennials and non-millennials perceive similar levels of barriers to sustainable purchasing	Mann–Whitney U test	.050	Fail to reject the null hypothesis

Table 13: Millennials vs. Non-Millennials and Barrier Scores

4.3.15 Gender and Perceived Barriers to Sustainable Purchasing

This section examines whether gender affects perceptions of barriers to sustainable purchasing. While gender can influence sustainability attitudes, structural barriers; such as price, availability, and scepticism tend to impact all consumers (Vermeir & Verbeke, 2006).

A Mann–Whitney U test compared overall barrier scores between male and female respondents. The null hypothesis, that there is no difference across gender, could not be rejected ($p = 0.156$). Both groups reported similar challenges when attempting to purchase sustainably.

These findings confirm that structural barriers, rather than gender, are the decisive factors. Practically, interventions should focus on reducing price premiums and improving trust in sustainability claims, rather than targeting consumers by gender.

Hypothesis Test Summary

Null Hypothesis	Test	Sig. a, b	Decision
Gender does not significantly impact the level of perceived barriers to sustainable purchasing.	Mann–Whitney U test	.156	Fail to reject the null hypothesis

Table 14: Gender and Perceived Barriers to Sustainable Purchasing

4.3.16 Social Media Trust and Sustainable Purchases

The analysis showed a highly significant relationship between trust in social media influencers and sustainable purchasing ($\chi^2 = 98.685$, $p < .001$), indicating that millennials who trust influencers are more likely to follow through on sustainable purchases promoted via social media.

This aligns with existing literature: influencers act as credible intermediaries (De Veirman et al., 2017), and user-generated content is often seen as more persuasive than traditional advertising (Hung, Li, & Tse, 2011). Trust-related attributes; interaction, authenticity, and word-of-mouth credibility, enhance social media marketing effectiveness (Kim & Ko, 2012). The Maltese data empirically reinforce these international findings.

Importantly, this study adds a contextual insight: while earlier research questioned the tangible impact of social media marketing (Hoffman & Fodor, 2010; McDonagh & Prothero, 2014), the results show that trust in influencers is a decisive predictor of actual purchasing behaviour among Maltese millennials. Trust acts as a modern form of social proof, amplifying peer influence and demonstrating that social media can directly translate into consumption choices when credibility is high (Vermeir & Verbeke, 2006).

Test Summary

Tested Variable	Chi-Square (χ^2)	P value	Interpretation
Trust in influencers and Sustainable purchases	98.685	<.001	Trust strongly predicts purchases via social media

Table 15: Trust in influencers and Sustainable purchases

4.3.17 Awareness via Social Media and Sustainable Purchases

The Chi-square test shows a highly significant association between social media–generated awareness and sustainable purchasing ($\chi^2 = 32.581$, $p < .001$), indicating that awareness facilitates the translation of pro-sustainability attitudes into actual behaviour. Millennials who perceive heightened sustainability awareness through social media are more likely to buy sustainable products.

This supports prior research emphasising social media as a key information source for younger consumers (Men & Tsai, 2012; Sogari et al., 2017) and highlights that engaging, interactive content fosters positive attitudes toward green products (Lazaris et al., 2017; Saeed et al., 2019). The findings extend Howell's (2018) distinction between awareness and literacy, showing that awareness via trusted digital platforms can directly influence purchasing.

While some studies questioned the behavioural impact of social media marketing (McDonagh & Prothero, 2014; Hoffman & Fodor, 2010), these results demonstrate that awareness-building is both effective and predictive of action, supporting the idea that awareness is a necessary condition for reducing the attitude–behaviour gap (Kollmuss & Agyeman, 2002) and that social media is a particularly powerful channel for millennials.

Test Summary

Tested Variable	Chi-Square (χ^2)	P value	Interpretation
Awareness via social media and Sustainable purchases	32.581	<.001	Awareness significantly influences purchasing

Table 16: Trust in influencers and Sustainable purchases

4.3.18 Following Sustainability Influencers or Brands and Purchasing Behaviour

The Chi-square test demonstrates a highly significant relationship between following sustainability-focused influencers or brands and actual purchasing behaviour ($\chi^2 = 98.103$, $p < .001$). This suggests that active engagement with sustainability advocates on social media is a decisive factor in determining whether millennials move from intention to purchase. Unlike passive exposure, following such accounts indicates deliberate engagement, which strongly correlates with sustainable buying practices.

Chi (2011) and De Vries et al. (2012) emphasised that interactive online brand communities foster identification and stronger consumer–brand connections, directly influencing purchasing decisions. Similarly, Kim and Chung (2011) noted that social influence, particularly through digital platforms, plays a crucial role in shaping attitudes toward green consumption. Pop et al. (2020) also highlighted how sustainability advocates on social media function as mediators between consumers and companies, driving behavioural outcomes by building trust and providing visibility to sustainable practices.

The study extends these insights by offering clear statistical confirmation that engagement with sustainability-related influencers or brands is not only attitudinal but behaviourally predictive. While McDonagh & Prothero (2014) acknowledged that sustainability marketing on social platforms was underexplored and potentially inconsistent in its outcomes, the present findings show that when millennials actively follow sustainability advocates, the likelihood of purchase rises significantly. This also connects to Vermeir and Verbeke's (2006) argument that social norms and peer influence are key drivers of sustainable consumption. In the digital era, following sustainability influencers or brands effectively represents a new form of peer-group belonging and social proof, strengthening the social pressure to act in alignment with pro-sustainability values.

Test Summary

Tested Variable	Chi-Square (χ^2)	P value	Interpretation
Following sustainability influencers/brands and Sustainable purchases	98.103	<.001	Following sustainability influencers/brands strongly linked to purchases

Table 17: Trust in influencers and Sustainable purchases

4.3.19 Frequency of Social Media Use and Sustainable Purchases

The Chi-square analysis revealed no significant relationship between the frequency of social media use and sustainable purchasing ($\chi^2 = 4.519$, $p = .340$). This indicates that simply spending more time on social media does not predict whether millennials will purchase sustainable products. Instead, what matters are the specific forms of engagement, namely, trust in influencers, heightened awareness, and following sustainability-focused accounts, which were all found to be statistically significant predictors in earlier tests.

This finding nuances and extends the discussion in previous literature. While authors such as Kaplan and Haenlein (2010) and Russo et al. (2008) emphasised the transformative impact of social media in reshaping consumer interactions and decision-making, the present study shows that quantity of use is insufficient without meaningful engagement. Similarly, McCann Truth Central (2013) noted that millennials are the most active social media users, but your results suggest that activity level alone does not guarantee sustainable behaviour.

Instead, these findings resonate more closely with Kim and Ko (2012), who highlighted that the effectiveness of social media marketing depends on specific attributes such as authenticity, interactivity, and trendiness. Likewise, Godey et al. (2016) demonstrated that it is the quality of

engagement, rather than the mere presence on digital platforms that shapes brand equity and behavioural outcomes. In the context of sustainability, this study adds new evidence by showing that general exposure to social media is too diffuse to predict behaviour, but targeted, trust-based interactions (e.g., with influencers and brands) are key.

This result also clarifies a gap noted in the literature. Hoffman and Fodor (2010) and McDonagh and Prothero (2014) questioned whether social media efforts in sustainability marketing genuinely influence consumer decisions.

Test Summary

Tested Variable	Chi-Square (χ^2)	P value	Interpretation
Frequency use of social media and Sustainable purchases	4.519	.340	General frequency use of social media does not predict purchasing

Table 18: Frequency use of social media and Sustainable purchases

4.4 Regressions

4.4.1 Regression Analysis on Sustainable Consumption Among Maltese Millennials

To address the first research question, a multiple regression analysis was conducted. The dependent variable was the extent to which participants consider sustainability when making purchasing decisions.

The results indicate that the overall regression model has sufficient explanatory power ($F = 32.844$, $p < 0.001$), confirming that the set of predictors collectively explains a meaningful proportion of variance in sustainable purchasing behaviour. The model accounts for approximately 25% of the variance ($R^2 = 0.245$)**,** suggesting that while attitudinal factors significantly contribute to sustainable purchasing, a considerable proportion of the behaviour is influenced by other factors not captured in the model.

Examining the individual predictors reveals several noteworthy findings. Familiarity with the concept of sustainability ($\beta = 0.189$, $p < 0.001$**)** emerged as a strong positive predictor, indicating that the more knowledgeable millennials are about sustainability, the more likely they are to incorporate it into their purchasing behaviour. Similarly, motivation ($\beta = 0.170$, $p < 0.001$) was also a significant predictor, suggesting that intrinsic drivers play a crucial role in shaping sustainable consumption. In addition, perceptions of product quality ($\beta = 0.139$, $p = 0.003$) were positively associated with sustainable purchasing, showing that millennials are more inclined to buy sustainable products when these are perceived as equal to or better than conventional alternatives.

On the other hand, two predictors displayed significant negative effects. Awareness of the ethical or unethical practices of brands ($\beta = -0.237$, $p < 0.001$) and willingness to stop purchasing from unethical brands ($\beta = -0.321$, $p < 0.001$) were both negatively related to the dependent variable. This counterintuitive result may reflect a degree of skepticism or distrust

among consumers, whereby greater awareness of unethical practices could generate disillusionment, reducing confidence in sustainability-related claims.

Interestingly, willingness to pay a higher price for sustainable products ($\beta = 0.023$, $p = 0.688$**)** was not a significant predictor. This finding suggests that while millennials may value sustainability in principle, cost remains a barrier to actual purchasing behaviour. In other words, financial considerations outweigh positive attitudes when price differences between sustainable and conventional products are substantial.

The finding that familiarity with sustainability and motivation are strong positive predictors aligns with previous studies which highlight the role of awareness and intrinsic values in driving sustainable behaviour (e.g., Vermeir & Verbeke, 2006).

Taken together, these results confirm that Maltese millennials hold generally positive attitudes towards sustainability, but their actual purchasing behaviours are shaped by a balance of knowledge, motivation, trust, and financial feasibility. The analysis shows that Maltese millennials' sustainable consumption behaviour is primarily influenced by familiarity, motivation, and perceptions of quality**,** but is complicated by distrust in brand ethics and sensitivity to price**.**

Summary Output/ Regression Statistics

Statistic	**Value**
R Square	0.245

Coefficients

Variable	β (Unstandardised Coefficient)	Standard Error	t Stat	P- value
(Constant)	2.432	0.257	9.476	<0.001
Familiarity with the concept of sustainability	0.189	0.028	6.678	<0.001
Motivation	0.170	0.033	5.145	<0.001
Willingness to pay a higher price for a sustainable product over a conventional one	0.023	0.057	0.401	0.688
Awareness of the ethical/unethical practices of the brands you purchase from	-0.237	0.062	-3.821	<0.001
Quality of sustainable products compared to conventional ones	0.139	0.048	2.936	0.003
Stop purchasing from a brand if you discovered they engaged in unethical practices	-0.321	0.071	-4.516	<0.001

Table 19: Regression Analysis on Sustainable Consumption Among Maltese Millennials

4.4.2 Regression Analysis of Barriers Preventing Sustainable Purchasing

To assess which barriers most strongly explain the intention–behaviour gap in sustainable consumption among Maltese millennials, a multiple regression analysis was conducted using the dependent variable “Have you ever intended to purchase a sustainable product but decided not to?” The model has a high R^2 of 578 ($p < .001$), meaning that nearly 58% of the variance in the attitude–behaviour gap is explained by the included predictors. This indicates strong explanatory power, confirming that barriers are crucial determinants of whether sustainable intentions translate into action.

The most influential barrier was higher price ($\beta = –.533$, $p < .001$). Respondents who perceived sustainable products as more expensive were significantly more likely to abandon their purchase intentions. This finding reflects earlier evidence by Aryal et al. (2009) and Basha & Lal (2019), who showed that willingness to pay for sustainable or organic products is highly constrained by affordability. It also aligns with Creyer & Ross (1997), who observed that consumers consistently make trade-offs between price and quality when choosing products.

Other statistically significant barriers included limited availability in stores ($\beta = –.112$, $p < .001$), limited product variety ($\beta = –.232$, $p < .001$), and lack of knowledge ($\beta = –.166$, $p < .001$). These findings echo Barr (2007) and Wang et al. (2014), who argued that structural limitations such as convenience, access, and product range act as practical obstacles to sustainable consumption. Basha et al. (2015) similarly highlighted that lack of awareness and knowledge about organic and green products reduces purchasing likelihood, a barrier that is also visible in the Maltese context.

Scepticism ($\beta = –.083$, $p = .022$) and general concerns ($\beta = –.190$, $p < .001$) further reinforce the role of consumer trust and attitudes. Boulstridge & Carrigan (2000) famously described this as the “attitude–behaviour gap,” where positive attitudes towards sustainability do not necessarily lead to action due to doubts about the credibility of claims. Likewise, D’Souza et al. (2006)

showed that confusion and scepticism over eco-labels often diminish their effectiveness, which explains why mistrust continues to act as a negative predictor.

Conversely, difficulty locating products ($\beta = .067$, $p = .294$)**,** perceived quality of sustainable versus conventional products ($\beta = –.017$, $p = .409$)**,** complexity of sustainability labels ($\beta = –.019$, $p = .463$), and changes in income ($\beta = –.022$, $p = .129$) were not statistically significant. This contrasts with Rashid (2009), who argued that label comprehension can influence consumer decisions, but suggests that in Malta, price and availability overshadow label complexity as purchase barriers.

Awareness of ethical or unethical brand practices ($\beta = .130$, $p < .001$) had a positive and significant influence, reducing the intention–behaviour gap. This resonates with Carrigan et al. (2004) and Vermeir & Verbeke (2006), who argued that transparency and ethical positioning increase trust and encourage consumers to act in line with their sustainable values. Similarly, Farrugia (2020) found that credible green advertising in Malta increases willingness to pay, suggesting that ethical brand awareness can act as an enabler rather than a barrier.

The regression confirms that while multiple factors shape the attitude–behaviour gap, price, availability, product variety, scepticism, and knowledge limitations are the dominant barriers. At the same time, ethical brand awareness emerges as a unique facilitator, indicating that when millennials feel informed and confident about brand practices, they are less likely to abandon sustainable purchasing. This interplay of barriers and enablers mirrors the findings of Kollmuss & Agyeman (2002), who highlighted the complex mix of internal and external factors that explain why pro-environmental attitudes do not always translate into action.

Summary Output/ Regression Statistics

Statistic	Value
R Square	0.578

Coefficients

Variable	β (Unstandardised Coefficient)	Standard Error	T Stat	P- value
Constant	1.661	0.086	19.412	<.001
Higher Price	-0.533	0.026	-20.224	<.001
Limited Availability in Stores	-0.112	0.034	-3.337	<.001
Limited Product Variety	-0.232	0.035	-6.710	<.001
Concerns (general worries)	-0.190	0.034	-5.554	<.001
Difficulty	0.067	0.064	1.050	0.294
Skepticism	-0.083	0.036	-2.297	0.022
Lack (knowledge/awareness)	-0.166	0.043	-3.834	<.001
Perceived Quality of Sustainable vs Conventional Products	-0.017	0.021	-0.826	0.409
Difficulty Understanding Labels & Certifications	-0.019	0.026	-0.735	0.463
Change in Purchasing Behaviour with Income Variations	-0.022	0.015	-1.518	0.129
Awareness of Ethical/Unethical Practices of Brands	0.130	0.027	4.855	<.001

Table 20: Regression Analysis of Barriers Preventing Sustainable Purchasing

4.4.3 Regression Analysis of Social Media and Sustainable Purchasing

However, the explanatory power was relatively limited, with $R^2 = .448$, suggesting that while social media factors explain some variance in purchasing behaviour, other external influences remain important. The standard error of the estimate was .441, and the overall model approached significance at $p = .06$, which is slightly above the conventional threshold of .05, implying that while trends are visible, results should be interpreted with caution.

Several variables were non-significant, but a few stand out. Educational social media content ($\beta = .472$, $p = .002$) and None (no exposure to social media content, $\beta = .872$, $p = .008$) were statistically significant predictors. The positive coefficient for educational content suggests that factual, knowledge-driven posts are more likely to influence purchasing decisions compared to influencer or brand endorsements. This aligns with Meise et al. (2014), who emphasised that consumers value sustainability-related product information when it is clear, credible, and practical. Similarly, Sogari et al. (2017) and Pop et al. (2020) found that educational and informative content on social platforms enhances consumer motivation towards sustainable products more effectively than promotional campaigns.

On the other hand, variables such as influencer promotion ($\beta = .103$, $p = .535$) and brand promotion ($\beta = -.078$, $p = .620$) were not significant, echoing Farrugia (2020) and Kaplan & Haenlein (2010), who highlighted consumer scepticism towards influencer-driven marketing in the Maltese and European contexts. This also reflects Boulstridge & Carrigan (2000)'s argument on the attitude–behaviour gap, where consumers may express interest but fail to act when confronted with content perceived as marketing-driven rather than authentic.

The "None" category being positively significant indicates that some respondents who reported no reliance on social media were still more likely to purchase sustainably. This could suggest that offline influences such as personal values (Abela, 2006; Belk, 1985), peer-to-peer

communication (Barr, 2007), or direct product experience (Thøgersen, 2002) continue to play a crucial role in sustainable consumption.

Overall, this regression suggests that Maltese millennials are more influenced by educational and awareness-driven social media content rather than promotional or influencer-based marketing, supporting the view of Suki (2013) and Chan (2001) that credibility and clarity outweigh superficial green advertising.

Summary Output/ Regression Statistics

Statistic	**Value**
R Square	0.448

Coefficients

Variable	β (Unstandardised Coefficient)	Standard Error	T Stat	P-value
Constant	1.689	0.739	2.285	0.024
How often do you use social media?	0.032	0.074	0.432	0.666
Facebook	-0.664	0.497	-1.338	0.185
Instagram	0.022	0.166	0.139	0.890
TikTok	-0.230	0.151	-1.515	0.132
Twitter	0.053	0.136	0.387	0.698
LinkedIn	-0.019	0.197	-0.096	0.924
YouTube	-0.077	0.150	-0.506	0.615
Influencer Promotion	0.103	0.167	0.622	0.535
Brand Promotion	-0.078	0.156	-0.497	0.620
Friend/Family Recommendations	0.169	0.163	1.038	0.301
Educational Social Media Content	0.472	0.146	3.233	0.002
None (no exposure to social media content)	0.872	0.323	2.698	0.008
Trust in Influencers Promoting Sustainable Products	-0.063	0.077	-0.821	0.412
Social Media Increased Sustainability Awareness	0.045	0.148	0.303	0.762
Following Brands/Influencers that Promote Sustainable Living	0.085	0.145	0.589	0.557

Table 21: Regression Analysis of Social Media and Sustainable Purchasing

4.5 Discussion

4.5.1 Addressing Research Question 1: What are the attitudes and purchasing behaviours of Maltese millennials regarding sustainable consumption?

The analysis demonstrates that Maltese millennials hold generally positive attitudes toward sustainability, but their purchasing behaviours only partially reflect these attitudes. The regression model confirmed that attitudinal factors significantly predict sustainable purchasing behaviour, explaining 24.5% of the variance. This indicates that while knowledge and motivation are important drivers, much of the variance remains shaped by external and structural factors.

Key predictors emerged from the analysis. Familiarity with sustainability, motivation, and perceptions of product quality were strong positive influences, suggesting that knowledge, intrinsic drivers, and confidence in product performance encourage sustainable choices. These findings align with literature that emphasises awareness and values as essential enablers of sustainable behaviour (e.g., Vermeir & Verbeke, 2006).

Conversely, two predictors showed significant negative effects. Awareness of unethical brand practices and willingness to stop purchasing from such brands were associated with reduced sustainable purchasing. This counterintuitive outcome suggests that heightened awareness can sometimes generate scepticism or disillusionment, limiting action. In contrast, willingness to pay more for sustainable products was not significant, reinforcing that financial considerations remain a strong barrier despite positive attitudes.

Further subgroup analysis revealed generational and social dimensions. Older millennials reported greater familiarity with sustainability, suggesting that life stage and accumulated experience deepen awareness. Employment status was also significant, with full-time and self-employed respondents showing higher motivation compared to students or the unemployed, indicating that financial stability supports the translation of attitudes into action.

Social influence emerged as another key factor. Trust in influencers and brands was higher among those who actively followed them, reinforcing that engagement fosters credibility. However, the type of social media content (e.g., influencer vs. educational posts) did not significantly predict purchasing intent, suggesting that authenticity and trust matter more than format. This is consistent with the broader sustainability literature, which stresses credibility over marketing techniques.

Correlational analyses further support these insights. Familiarity was positively associated with purchase frequency, showing that knowledge is linked to behaviour. Likewise, individuals who frequently considered sustainability in purchasing were significantly more likely to accept higher prices, although the effect was moderate, again suggesting other barriers at play. Yet, motivation alone did not translate into behaviour when measured against social media-driven purchases, and overall frequency of social media use was not predictive.

Taken together, the findings confirm that Maltese millennials are attitudinally supportive of sustainability, characterised by familiarity, motivation, and positive perceptions of product quality. However, their purchasing behaviour remains uneven and contingent on financial stability, trust in communication sources, and structural constraints such as price and availability. This reflects the well-documented attitude–behaviour gap, where strong intentions are undermined by affordability concerns and scepticism.

For Malta, these results suggest that closing the gap requires targeted interventions: affordable pricing strategies, credible and authentic communication, and clearer sustainability labelling. While millennials form a promising consumer base for sustainable products, their behaviours remain constrained by practical and trust-related barriers, underscoring the need for systemic changes alongside consumer education.

4.5.2 Addressing Research Question 2: If an attitude-behavior gap exists, what barriers prevent millennials from engaging in sustainable consumption?

The results provide strong empirical evidence that Maltese millennials experience a pronounced attitude–behaviour gap, whereby pro-sustainability intentions are frequently undermined by structural and psychological barriers. The regression model was statistically significant, with nearly 58% of the variance in the dependent variable ("Have you ever intended to purchase a sustainable product but decided not to?") explained by the predictors. This confirms that barriers are not peripheral but central in shaping whether sustainable intentions translate into real purchasing behaviour.

The most influential barrier was price**,** with over half of respondents citing high costs as the primary deterrent. This finding is consistent with prior evidence from Creyer & Ross (1997), Aryal et al. (2009), Simpson & Radford (2012), and Schäufele & Hamm (2017), who demonstrated that affordability remains the most persistent challenge to sustainable purchasing. Similar to Stolz and Bautista (2015), the Maltese data confirm that cost continues to outweigh ethical intentions when consumers make trade-offs.

Other significant obstacles included limited availability in stores, limited product variety, and lack of knowledge. These align with Barr (2007) and Wang et al. (2014), who highlighted that convenience and access shape purchasing opportunities, while Basha et al. (2015) linked low awareness directly to reduced sustainable consumption. Similarly, Hill & Lee (2015) noted that narrow ranges in sustainable fashion restrict adoption, a pattern mirrored in Malta's market.

Consumer scepticism and concerns also emerged as critical barriers. Both scepticism and general concerns significantly reduced the likelihood of following through with sustainable purchases. These findings echo Boulstridge & Carrigan's (2000) "ethical purchasing gap" and D'Souza et al. (2006), who found that confusing or unverified eco-labels fuel mistrust. Earlier

warnings from Chase & Smith (1992) and West (1995) about misleading green claims are particularly relevant here, as credibility gaps continue to erode consumer confidence.

By contrast, several variables were not significant: difficulty locating products, perceived quality of sustainable products, label complexity, and income changes. While Rashid (2009) suggested label comprehension can shape behaviour, the Maltese evidence suggests that structural constraints such as price and availability are far more decisive than label clarity or income fluctuation.

Interestingly, awareness of ethical or unethical brand practices acted as a positive predictor**.** This suggests that transparency and brand credibility can function as enablers, reducing the intention–behaviour gap. This aligns with Carrigan et al. (2004), Vermeir & Verbeke (2006), and Farrugia (2020), who argued that ethical positioning and credible green advertising foster trust and increase consumers' willingness to act sustainably.

Finally, subgroup analysis showed that barriers were not strongly differentiated by gender or age within the millennial group. Both male and female respondents, as well as younger and older millennials, reported similar obstacles. This reinforces the arguments of Newman et al. (1995) and Hobson (2004), who stressed that structural and situational barriers outweigh demographic distinctions.

Taken together, the findings confirm that the attitude–behaviour gap among Maltese millennials is shaped primarily by affordability, availability, product range, scepticism, and knowledge gaps, while ethical brand awareness stands out as a potential facilitator. These results align with broader theoretical perspectives such as Kollmuss & Agyeman (2002) and Vergragt et al. (2014), who argued that systemic constraints, rather than attitudinal deficits, explain why positive intentions fail to translate into consistent behaviours. For Malta, the evidence suggests that closing the gap requires structural interventions: reducing price premiums, widening

product access, improving trust through transparency, and building consumer knowledge via credible sustainability communication.

4.5.3 Addressing Research question 3: How does social media influence the sustainable purchasing behaviours of Maltese millennials?

The findings demonstrate that social media exerts a significant but selective influence on the sustainable purchasing behaviours of Maltese millennials. The Chi-square analyses showed three highly significant predictors: trust in influencers, awareness generated via social media, and active following of sustainability-focused influencers or brands. Together, these highlight that credibility and deliberate engagement are the key mechanisms by which social media narrows the intention–behaviour gap. By contrast, general frequency of social media use had no significant effect, showing that time spent online does not automatically translate into sustainable consumption.

The regression model provided additional insights. While the overall model was moderately strong, its explanatory power was modest. This suggests that while social media factors explain part of sustainable purchasing behaviour, other external influences remain important. Within the regression, educational content emerged as a significant predictor, showing that factual, knowledge-driven posts are particularly effective in motivating sustainable purchases. This reinforces Meise et al. (2014) and Sogari et al. (2017), who emphasised that consumers value sustainability information when it is clear, credible, and practical. Interestingly, the “None” category (no exposure to social media content) was also significant, suggesting that offline factors such as personal values (Abela, 2006; Belk, 1985), peer-to-peer influence (Barr, 2007), or direct product experience (Thøgersen, 2002) remain powerful drivers of sustainable behaviour.

By contrast, influencer promotions and brand endorsements were not significant, reflecting persistent scepticism toward overtly commercial marketing. This finding echoes Farrugia (2020), Kaplan & Haenlein (2010), and Boulstridge & Carrigan (2000), who highlighted that credibility gaps and consumer distrust often undermine influencer-driven or brand-led sustainability campaigns. In other words, Maltese millennials appear more responsive to authentic and educational sustainability messages than to traditional marketing-style endorsements.

Overall, the evidence positions social media as a behavioural mediator rather than a simple communication channel. When trust, awareness, and active engagement are present, social media enables intentions to convert into actual purchases, aligning with Vermeir & Verbeke's (2006) argument that social norms strongly shape sustainable behaviour. However, the influence is highly contingent: credibility and quality of content matter far more than quantity of use or promotional exposure**.** These findings contribute to sustainability marketing literature by demonstrating that in the Maltese context, social media has the potential to close the attitude–behaviour gap, but only when communication is transparent, authentic, and educationally focused.

Chapter 5 Conclusion and Recommendations

5.1 Restating the Research Purpose

The central aim of this thesis was to examine the attitudes and purchasing behaviours of Maltese millennials with respect to sustainable consumption, with particular emphasis on the role of social media influencers and digital platforms in shaping such behaviours. As outlined in the introductory chapters, sustainability has become a defining challenge for societies and businesses, yet consumer action often lags behind stated concern. This phenomenon, commonly termed the attitude–behaviour gap is especially salient among millennials, who are often portrayed as the "sustainability generation," yet whose actual consumption patterns remain inconsistent.

5.2 Synthesis of Key Findings

5.2.1 Attitudes and Purchasing Behaviour

The first research question investigated the extent to which attitudes influence actual sustainable consumption behaviour among Maltese millennials. The regression results revealed that familiarity with sustainability is the strongest predictor of sustainable purchasing. Respondents with higher levels of sustainability knowledge were significantly more likely to consider sustainability in their purchase decisions. This supports earlier findings that awareness and ecological literacy are essential foundations for sustainable behaviour (Howell, 2018; Horng et al., 2013).

Conversely, motivation alone was not a significant predictor of purchasing sustainable products. Despite millennials often reporting high levels of moral or ethical motivation, this did not consistently translate into action, especially in the context of social media purchases. This result resonates strongly with the attitude–behaviour gap literature (Boulstridge & Carrigan, 2000;

Vermeir & Verbeke, 2006), which highlights the disconnect between values and consumption practices.

Demographic influences were found to be secondary. While employment status significantly influenced motivation (with full-time employees reporting higher motivation), and older millennials were more familiar with sustainability concepts than younger millennials, gender did not significantly predict willingness to pay more for sustainable products. This finding suggests that demographics alone are poor predictors of sustainable consumption, echoing global studies which argue that behavioural segmentation is more effective than demographic segmentation.

Overall, the results underscore that knowledge and familiarity are critical to bridging the gap between intention and action, while motivation without a strong informational foundation does not predict behaviour.

5.2.2 The Attitude–Behaviour Gap and Barriers

The second research question explored the barriers preventing millennials from engaging in sustainable consumption. Consistent with prior studies, price emerged as the primary barrier, cited by 53% of respondents. Other barriers such as limited product availability, lack of variety, and skepticism were also statistically significant, though less frequently reported. The Mann–Whitney and chi-square tests confirmed that respondents who expressed intentions but did not follow through on sustainable purchases reported significantly higher barrier scores.

This finding mirrors international research that has consistently identified price sensitivity as a key inhibitor of sustainable consumption (Wessells et al., 1999). In the Maltese context, the relatively small market size and reliance on imports may exacerbate this challenge, making sustainable alternatives less available and more expensive. Importantly, demographic factors such as gender or age were not significant predictors of barrier perception, suggesting that these challenges are structural rather than individual.

Thus, while millennials in Malta express positive attitudes and intentions toward sustainability, situational and structural barriers prevent these from becoming consistent purchasing patterns. This underscores the importance of policy and market-level interventions to reduce costs, increase accessibility, and enhance trust in sustainable products.

5.2.3 The Role of Social Media

The third research question examined the influence of social media on sustainable purchasing behaviour. The regression and chi-square analyses yielded strikingly consistent results:

- Trust in influencers (Q22) was a strong predictor of purchasing sustainably via social media ($\chi^2 = 98.685$, $p < .001$).
- Awareness raised through social media (Q23) was also highly significant ($\chi^2 = 32.581$, $p < .001$).
- Following sustainability-focused influencers or brands (Q24) showed a very strong link to actual purchases ($\chi^2 = 98.103$, $p < .001$).

By contrast, the frequency of social media use (Q18) was not a significant predictor of sustainable purchases ($p = 0.340$). This distinction highlights that credibility, content, and intentional following matter far more than time spent on platforms.

These findings align closely with international literature on influencer credibility and parasocial trust (De Veirman et al., 2017; Pop et al., 2020). They suggest that Maltese millennials are not passively influenced by exposure to content but are instead more responsive when credible influencers whom they trust actively endorse sustainable behaviours or products.

In short, social media exerts a significant influence on sustainable purchasing, but only when mediated by trust and engagement with specific sustainability-oriented communities.

5.3 Theoretical Contributions

This thesis makes several contributions to the theoretical understanding of sustainable consumption.

First, the findings reinforce and refine the attitude–behaviour gap framework. The regression results demonstrated that motivation, while conceptually central to sustainability, does not directly predict actual purchasing behaviour. By contrast, familiarity with sustainability concepts did predict behaviour, indicating that knowledge plays a mediating or enabling role. This result strengthens the argument advanced in prior research that attitudes or intentions alone are not sufficient to produce consistent sustainable behaviours (Vermeir & Verbeke, 2006; Boulstridge & Carrigan, 2000). The findings also contribute a more nuanced understanding by showing that not all attitudinal constructs are equally predictive. Motivation, when not accompanied by concrete knowledge and practical enablers, remains an abstract aspiration, whereas familiarity serves as a cognitive foundation for action. This distinction provides theoretical support for integrating informational and structural factors more explicitly into models of pro-environmental behaviour, such as the Theory of Planned Behaviour and the Value-Belief-Norm framework.

Second, this thesis extends existing models of sustainable consumption to a small-market context. Much of the international literature is grounded in larger economies, where consumers typically face a wider range of product options, greater competitive pressures, and economies of scale that reduce costs. In Malta, however, the barriers of price and availability are amplified by the limited market size and reliance on imports. The finding that price emerged as the most frequently cited barrier, alongside limited product choice, illustrates how structural constraints can be sharper in smaller economies. This suggests that models of sustainable consumption cannot be applied uniformly across contexts but must account for variations in market size, supply chain limitations, and local economic structures. By situating these findings in Malta, this

research contributes a contextualised perspective that highlights the role of structural and systemic conditions in shaping the attitude–behaviour gap.

Third, the thesis contributes to the growing literature on digital persuasion and social media by highlighting the role of credibility. The analysis revealed that general social media use was not a predictor of sustainable purchasing, while trust in influencers, awareness raised through social media, and intentional following of sustainability-oriented accounts were highly significant. This offers a meaningful refinement to theories of digital influence, which often focus on exposure metrics such as time spent online or platform usage frequency. The evidence here demonstrates that content quality, trustworthiness, and purposeful engagement are the real levers of behavioural change. This aligns with studies on parasocial trust and influencer credibility but adds empirical weight in the context of sustainability. It suggests that future theoretical models should treat credibility as a core mediating factor rather than a secondary consideration.

5.4 Practical Implications

The findings of this thesis also carry significant implications for both policymakers and businesses.

5.4.1 For Policymakers

Reducing price barriers is a central priority. The analysis revealed that cost was the most frequently cited obstacle to sustainable purchasing among Maltese millennials. Policymakers could intervene by implementing targeted subsidies for sustainable goods, introducing tax incentives, or reducing VAT rates on certified sustainable products. Such interventions would lower the price differential between conventional and sustainable options, thereby reducing the financial trade-off that often prevents pro-sustainability choices.

Improving accessibility is another critical avenue. Limited variety and availability were reported as notable barriers, which reflects both Malta's small market and the limited supply chain for sustainable products. Policymakers could collaborate with retailers, importers, and producers to increase the availability of sustainable alternatives in mainstream outlets. Ensuring that sustainable goods are not confined to niche stores but are instead present in supermarkets and widely consumed product categories could normalise sustainable purchasing.

Promoting education campaigns can further strengthen the role of familiarity. Since familiarity was found to be the strongest predictor of behaviour, public campaigns that raise awareness of sustainability concepts, product certifications, and the broader impact of consumer choices would reinforce the cognitive link between attitudes and behaviour. Such campaigns could be integrated into school curricula, university programmes, or national sustainability strategies to reach younger demographics early and effectively.

5.4.2 For Businesses and Brands

Businesses can leverage influencer credibility to drive behaviour. The regression analysis highlighted the central role of trust in influencers and following sustainability-oriented accounts. Companies aiming to promote sustainable products should therefore collaborate with authentic, trusted influencers who embody sustainable values rather than engaging in broad or generic advertising. These partnerships should emphasise authenticity and long-term credibility rather than one-off promotions.

Transparency and trust-building should also be priorities. Skepticism and consumer concerns were among the reported barriers, suggesting that greenwashing or vague sustainability claims erode confidence. Brands that invest in clear, verifiable claims, backed by credible certification schemes, are more likely to overcome such skepticism. Transparent communication of sourcing, production methods, and social or environmental impact can build the credibility necessary to motivate purchases.

Segmentation strategies should move beyond demographics. Gender and age had little predictive power in this study, which suggests that traditional demographic-based marketing is less effective. Instead, businesses should segment their audience based on attitudinal and behavioural variables such as sustainability familiarity, trust in influencers, or sensitivity to price barriers. This more sophisticated approach would allow businesses to target consumers who are both motivated and positioned to act, while tailoring interventions to overcome the specific barriers of different consumer segments.

5.5 Recommendations for Future Research

Future research could address these limitations and extend the findings in several directions. Longitudinal designs should be employed to track changes in attitudes and behaviours over time. As sustainability awareness grows and policy or market conditions evolve, it will be valuable to observe whether millennials' behaviours converge more closely with their attitudes.

Experimental research would also be useful, particularly in testing the causal impact of influencer credibility and trust. Controlled studies that vary the characteristics of influencers, their messaging strategies, or the transparency of claims could clarify the mechanisms by which social media affects sustainable purchasing decisions.

Comparative studies across generational cohorts are another promising avenue. By examining Gen Z, who are emerging as digital natives with potentially stronger sustainability orientations, and comparing them with millennials or older cohorts, researchers could explore whether the predictors of sustainable behaviour differ across age groups.

Finally, future work should investigate the impact of structural interventions, such as subsidies, tax policies, or retailer commitments to stocking sustainable goods. Understanding which types of systemic change most effectively reduce the attitude–behaviour gap would provide valuable

guidance for policymakers and businesses seeking to promote sustainable consumption at scale.

5.6 Concluding Statement

This thesis demonstrates that Maltese millennials express strong pro-sustainability attitudes but face clear barriers in translating these into consistent consumption behaviours. The results confirm the centrality of the attitude–behaviour gap, showing that while motivation is important, familiarity with sustainability and the removal of structural barriers are decisive in enabling action.

Social media emerges as a powerful, but selective, influence: trust in credible influencers and purposeful following of sustainability-focused content significantly predict sustainable purchases, while general social media use does not.

Ultimately, the study highlights both the promise and the challenges of promoting sustainable consumption in Malta. By investing in education, accessibility, and affordability, policymakers and businesses can help bridge the gap between what millennials say and what they do. At the same time, by leveraging the credibility of trusted digital voices, marketers can authentically engage millennials in building a more sustainable future.

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Appendices

Appendix 1 – Questionnaire

Exploring Millennials Consumer Behaviours, Attitudes, and Barriers of Sustainability in Malta

Dear participant,

My name is Paula Piscopo, and I am conducting research concerning millennials under the guidance of Dr Jonathan Spiteri. The aim of the study is to examine consumer behaviour regarding sustainability, focusing on the gap between attitudes and actual shopping behaviour, the barriers preventing consumers from shopping more sustainably, and the influence of social media on the shopping behaviour of maltese millennials.

Participation in this questionnaire is entirely voluntary; in other words, you are free to accept or refuse to participate without giving a reason. You are also free to withdraw from the study at any time without needing to provide any explanation and without any negative repercussions.

Please also note that, as a participant, you have the right under the General Data Protection Regulation (GDPR) and national legislation to access, rectify and where applicable, ask for the data concerning you to be erased. All data collected will be stored in an anonymised form on completion of the study and publication of results.

By completing the questionnaire, you are providing consent to participate in the study. All data collected is anonymous and will be treated confidentially. Only the researcher endorsing this letter will have access to this data.

Should you have any questions or concerns, please do not hesitate to contact me by email on paula.piscopo.21@um.edu.mt. Thank you for your time and consideration.

Section 1: Demographic Information

1. **What is your age group**?
    - 18-24
    - 25-34
    - 35-44
    - 45+
2. **If you are a millennial (born 1981–1996) are you:**
    - 25 – 30 years (Younger Millennials, born 1991–1996)
    - 31 – 39 years (Older Millennials, born 1981–1990)
3. **Gender:**
    - Male
    - Female
    - Prefer not to say
4. **Highest level of education attained:**
    - Secondary education
    - Diploma qualification
    - Undergraduate degree
    - Postgraduate degree or higher
5. **Employment status:**
    - Full-time employed
    - Part-time employed
    - Unemployed
6. **What is your annual income?**
    - **Less than €10,000**

- **€10,000 – €19,999**
- **€20,000 – €29,999**
- **€30,000 – €39,999**
- **€40,000 or more**

Section 2: Attitudes Toward Sustainable Consumption

7. **How familiar are you with the concept of sustainability?**
    - *Very Familiar*
    - *Familiar*
    - *Neutral*
    - *Slightly Familiar*
    - *Not Familiar*

8. **To what extent do you consider sustainability when making purchasing decisions?**
    - Never
    - Rarely
    - Sometimes
    - Often
    - Always

9. **What motivates you to purchase sustainable products?** *(Select all that apply)*
    - Environmental concerns (e.g., reducing carbon footprint)
    - Ethical concerns (e.g., fair trade, human rights)
    - Health benefits (e.g., organic, chemical-free products)
    - Influence from family or peers
    - Social media marketing or influencers
    - Other (please specify): _____

10. **Would you be willing to pay a higher price for a sustainable product over a conventional one?**
    - Yes, regardless of price difference
    - Yes, but only if the price difference is small
    - No, price is my main deciding factor
11. **Are you aware of the ethical or unethical practices of the brands you purchase from?**
    - Yes
    - No
12. **Would you stop purchasing from a brand if you discovered they engaged in unethical practices?**
    - Yes
    - No

Section 3: Barriers to Sustainable Consumption (Attitude-Behaviour Gap)

13. **Have you ever intended to purchase a sustainable product but decided not to?**
    - Yes
    - No
14. **If yes, what prevented you from purchasing it?** *(Select all that apply)*
    - Higher price
    - Limited availability in stores
    - Limited product variety compared to conventional options
    - Concerns about product quality or effectiveness
    - Difficulty understanding sustainability labels

- Skepticism about companies' sustainability claims (greenwashing)
- Lack of knowledge on sustainable alternatives

15. **How do you perceive the quality of sustainable products compared to conventional ones?**

    - Better quality
    - Same quality
    - Lower quality

16. **Do you find sustainability labels and certifications difficult to understand?**

    - Yes
    - No

17. **Would your purchasing behaviour change if your income were to increase or decrease?**

    - Yes, I would buy more sustainable products if my income increased
    - No, my sustainability-related choices would remain the same
    - Yes, I would buy fewer sustainable products if my income decreased

Section 4: Social Media and Sustainable Consumption

18. **How often do you use social media?**

    - Never
    - Occasionally
    - Sometimes
    - Often

- Daily

19. **Which social media platforms do you use the most?** *(Select up to 3)*

    - Facebook
    - Instagram
    - TikTok
    - Twitter/X
    - LinkedIn
    - YouTube
    - Other (please specify): _____

20. **Have you ever purchased a sustainable product based on social media content (e.g., influencer endorsement, brand advertisement, user reviews)?**

    - Yes, multiple times
    - Yes, once or twice
    - No

21. **What type of social media content has influenced your perception of sustainability the most?** *(Select all that apply)*

    - Influencer recommendations
    - Brand advertisements
    - Friends' or family's posts
    - Educational content (e.g., documentaries, infographics)
    - None

22. **Do you trust social media influencers when they promote sustainable products?**

- Never
- Occasionally
- Sometimes
- Often
- Always

23. **Has social media increased your awareness of sustainability and its impact?**

- Yes
- No

24. **Do you follow brands or influencers that promote sustainable living?**

- Yes
- No