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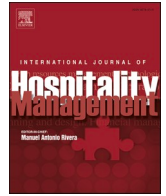
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Effects of millennials willingness to pay on buying behaviour at ethical and socially responsible restaurants: Serial mediation analysis

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ABSTRACT

This study empirically examines millennials' buying behaviour at restaurants undertaking Corporate Social Responsibility activities by testing the effects of willingness to pay on buying behaviour. Using Hayes' serial mediation PROCESS model, the study analyses the direct and indirect effects of millennials' willingness to pay on their buying behaviour at ethical and socially responsible restaurants using data from 212 millennials in North-East Scotland. Results showed that willingness to pay has significant direct and indirect effects on buying behaviour. The mediation effect of environmental concern was not supported. The serial mediation analysis showed that environmental concern, social influence, and personal norms jointly mediated the effects of willingness to pay on buying behaviour. The proposed serial model suggests that only direct measure of willingness to pay on buying behaviour is insufficient for restaurants to respond to millennials' expectations, providing empirical evidence on the need for customer's engagement as businesses emerge from covid-19.

1. Introduction

The hospitality sector, particularly the restaurant industry, is one of the strategic sectors, accounting for about 11% of the global GDP and the third-largest sector in the UK. According to pre-covid data from the UK Office for National Statistics (ONS), the sector employed more than 3.2 million people directly and additional 2.8 million through indirect employment in the UK. With more than 700 businesses representing about 6% of businesses in the UK, the sector generated over £ 158bn of Gross Value Added (GVA) from its direct and indirect activities in 2017 (Ignite Economics, 2018). Despite the global lockdowns and restrictions in 2020, the sector's growth trajectory, especially within the restaurant industry, was boosted by millennials, representing over 70% of dinners in 2020 (Shaw, 2020).

Millennials represent young adults born between 1981 and 1996, and account for about 14 million people in the UK (Statistica, 2021) and 1.8 billion worldwide (World Economic Forum, 2021). They are perceived as an essential consumer group concerning the future of the restaurant industry (Oke et al., 2020) due to their spending pattern (Nicolau et al., 2020); however, they are more unlikely to achieve their potential due to many structural economic constraints, such as reduced

wages (World Economic Forum, 2017). According to Jang et al. (2011), their spending power allow them to dine out twice as much as other generations, making them the key driver of the global economy. This generation of people contributes significantly to the global economy through environmental activism and everyday consumption decisions, especially food consumption (Allen and Spialek, 2018; Chatzopoulou and de Kiewiet, 2021).

Besides their spending power, millennials are more tech-savvy and use social media to raise awareness about social and environmental issues while inspiring positive actions against unsustainable corporate behaviours (Biswas and Roy, 2015; Shaw, 2020). Social media is playing a large part in millennials' everyday life (Bedard and Tolmie, 2018; Statistica, 2022), exposing them to new trends such as "eating green" and "caring for the environment", allowing them to build a community of conscious ethical and sustainable consumers (Oke et al., 2020). Like many other diners, millennials' consumption decisions to eat out are influenced by different restaurants' attributes and qualities; however, sustainability and ethics are dominant in millennials' consumption decisions (Costin, 2019; Okumus, 2021). These decisions have been reported to influence many policies and business decisions across different sectors, suggesting the effects of millennials' expectations on

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services/products that are healthy, ethical and socially produced (COSTIN, 2019; Oke et al., 2020).

With about 200,000 tonnes of food waste generated in the UK annually and average usage of 25,000 gallons of water per restaurant per day (The Waste and Resources Action Programme (WRAP), 2021), restaurants urgently need to install initiatives to reduce the industry's waste and undertake philanthropic activities to address the industry's negative image. This understanding is important for restaurants to address millennials' worries about their health and wellbeing, including animal welfare (Oke et al., 2020) and concern for the environment (Nadanyiova and Das, 2020). The lack of visibility and limited understanding of restaurants' operations might affect millennials' perceptions of restaurants' Corporate Social Responsibility (CSR) activities (Chatzopoulou and de Kiewiet, 2021).

Despite the significant amount of literature on CSR in the hospitality industry (Guzzo et al., 2021; Lee and Heo, 2009), the current knowledge about the determinants of millennials' buying behaviour in ethical and socially responsible restaurants is limited (Chatzopoulou and de Kiewiet, 2021). However, millennials share a common belief about their responsibility for many environmental and social issues (Klimkiewicz and Oltra, 2017; McGlone et al., 2011). For example, millennials are at the front line of pro-environmental and ethical consumption campaigns (Klimkiewicz and Oltra, 2017; Nadanyiova and Das, 2020), driving many demonstrations and protests worldwide.

Their shared belief contributes to millennials' perceptions and expectations for restaurants to be socially responsible with the obligation to maximise the positive impact of their activities in the society (Chatzopoulou and de Kiewiet, 2021). These expectations require businesses within the hospitality industry, including restaurants, to manage their stakeholders' needs by taking ownership of their responsibility and address the consequences of their activities. Being responsible is particularly vital for the future of restaurants post-covid due to the evidence that promoting and implementing CSR activities lead to economic growth and business stability (Aksoy and Ozsonmez, 2019; TM et al., 2021). For example, restaurants have been reported to use social media, especially Instagram, during the pandemic to enhance productivity by experimenting how to channel social relationships with customers (Tuomi et al., 2021). Despite being voluntary, CSR allows businesses, such as restaurants, to incorporate sustainability into their business activities, minimising/eliminating the adverse effects of their operations on the environment, economy and society (Lee et al., 2020).

Although customers are sceptical about the motives behind CSR, about 70% of consumers believe that businesses should undertake CSR activities, and 75% of consumers intend to shop in stores that fit their ethical perceptions (Cox, 2019). With the increasing interest in CSR, it is imperative for restaurateurs to understand issues preventing their business from implementing CSR activities and their effects on consumers' predispositions and buying decisions (Chatzopoulou and de Kiewiet, 2021). Considering the effects of covid-19 on the hospitality industry (Tuomi et al., 2021), restaurants should engage with millennials and adopt CSR, such as supporting local farmers and using local suppliers, to regain their performance. While restaurants are now experiencing increasing customers return after the difficult two years of the pandemic, there are several other challenges, such as hybrid and flexible working arrangements, higher food prices, and the exponential increase in energy costs, affecting restaurants' operations negatively in the UK. With many restaurants collaborated with suppliers during covid-19 to reduce food waste and achieve business continuity (Tuomi et al., 2022), the collaboration with suppliers and customers should be sustained post-covid for restaurants to retain and attract new customers. Innovative approaches are, therefore, required for restaurants to increase their foothold; however, meaningful engagement with millennials is necessary for restaurants to meet millennials' ethical and sustainability expectations, improving their market share through millennials' buying decisions (Aksoy and Ozsonmez, 2019; Nicolau et al., 2020).

With millennials' increasing awareness of sustainability issues

(Klimkiewicz and Oltra, 2017; Oke et al., 2020), it is essential to understand their perceptions toward ethical and socially responsible restaurants to offer valuable insights on sustaining restaurants' CSR programs and business operations. This research seeks to establish the extent to which millennials' ethical, environmental and social concern translates into buying behaviour at socially responsible restaurants. It investigates the direct and indirect effects of willingness to pay on buying behaviour at restaurants undertaking CSR activities. This understanding will allow the hospitality industry, particularly in the UK, to enhance its productivity and growth by attracting millennials as businesses emerge from the pandemic.

1.1. Millennials – an important addressable market segment for businesses

Millennials are a peculiar generation with attributes distinct from other generations, making them the largest powerful consumer segment. They are digital natives with a high disposable income (Nicolau et al., 2020). Their behavioural pattern (Chatzopoulou and de Kiewiet, 2021; McGlone et al., 2011) make them an important addressable market segment for businesses. According to McGlone et al. (2011), 61% of millennials believe that it is their responsibility to make a difference, allowing them to be more cautious of their actions compared to other generations. With more accessible information on brands, millennials hold higher expectations of products and services, making them more susceptible to sharing experiences (Moreno et al., 2017), particularly on social media.

Studies have shown that millennials exert great influence on others, such as family, friends, peers, and community, creating an enormous direct and indirect economic impact (Aksoy and Ozsonmez, 2019; Moreno et al., 2017). Besides, they have shown more willingness to pay for sustainable brands and buy food that allows them to feel responsible and enhance their positive self-image (Nadanyiova and Das, 2020; Nicolau et al., 2020). It is important for businesses, including restaurants, to understand their unique behavioural pattern and perceptions to establish how to attract this important consumer segment. While values and beliefs toward environmental and social issues contribute to consumers' buying decisions (Kim and Seock, 2019), price is a dominant factor affecting millennials' consumption behaviour (Nicolau et al., 2020; Oke et al., 2020). Considering their unique attributes and spending pattern, further examination is required to understand their buying behaviour, and its influencing factors (Biswas and Roy, 2015; Nicolau et al., 2020). Understanding millennials' buying behaviour by analysing direct and indirect effects of millennials' willingness to pay on their buying behaviour at ethical and socially responsible restaurants through some mediators is the main crux of this study. This understanding is particularly important considering many studies have explored factors influencing consumers' willingness to pay (WtP) in sustainable restaurants (Katt and Meixner, 2020; Nicolau et al., 2020); however, how this WtP translates to buying behaviour remains understudied (Oke et al., 2020).

1.2. CSR: a useful social concept or a misleading business dogma

CSR is conceived differently by stakeholders, including businesses, scholars, and policymakers (Guzzo et al., 2021; Osobajo et al., 2022), leading to disparities on what constitutes CSR, how it should be implemented and communicated, and who benefits from it. Rather than creating shared value, businesses main motive is to attract customers as a reward for their perceived or self-indulgent "philanthropic" activities. For example, Diers-Lawson et al. (2020) reported that businesses primarily engage in CSR to increase their market base and profit margins. This view is consistent with Alonso-Almeida et al.'s (2018) argument that restaurants mostly embark on CSR activities for cost-saving and productivity without considering their customers' sustainability concern. With consumers expressing their concern about restaurants'

sourcing strategies and resource consumption (Nicolau et al., 2020), the lack of a positive sustainability outlook can negatively affect restaurants' reputation, productivity, and financial performance (Konuk, 2019). The main problem is that many businesses neither involve stakeholders nor consider customers' perceptions and expectations when introducing CSR (Guzzo et al., 2021) and sustainability (Osobajo et al., 2022) activities. Irrespective of its motivations, CSR is a good business proposition for restaurants to enhance employees' productivity and retain customers if rightfully applied (Guzzo et al., 2021; Lee et al., 2020).

With the reported positive effects of CSR on customers' perceptions and buying behaviour (Chatzopoulou and de Kiewiet, 2021; Schubert et al., 2010), it is imperative for restaurants to increase awareness about their CSR activities. Increasing awareness is necessary for restaurants to educate customers, including millennials, about the impacts of their business and for millennials to be actively involved in restaurants' CSR efforts. The increasing awareness is pertinent considering that millennials (Klimkiewicz and Oltra, 2017) like many customers are more likely to trust and patronise restaurants with a positive CSR agenda (Konuk, 2019), enhancing social, economic, and environmental sustainability (Guzzo et al., 2021; Mihajlović, 2020). However, many high-profile events and scandals, such as horse meat in burgers, Pret A Manger's allergic reactions and Russell Hume's food hygiene issues, have put the food service industry in bad taste (Lee-Zogbessou, 2018). The media backlash and customers' response to these events suggest that consumers are not likely to support CSR efforts blindly without understanding their positive contributions (Konuk, 2019; Mihajlović, 2020).

The premise of this study is that ethical and socially responsible restaurants are more likely to be perceived positively by millennials than those that do not uphold positive environmental, ethical, and social responsibility. Understanding the extent to which these perceptions translate to buying behaviour will allow restaurants to pay more attention to the impacts of their operations and implement activities that align with millennials' ethical and sustainability worldviews. While this knowledge can enhance restaurants' CSR activities and business operations, it offers more clarity regarding Oke et al.'s (2020) concern on whether young adults who are proactive in environmental activism ever examine their consumption behaviour and lifestyle choices.

1.3. Theoretical framework and hypothesis

Theories and models, such as stakeholder theory (Freeman, 1999), legitimacy theory (Dowling and Pfeffer, 1975), and institutional theory (Berger and Luckmann, 1967; Tina Dacin et al., 2002) have provided useful insights into CSR at the corporate level. The stakeholder theory is particularly relevant in this study to explain millennials' involvement in restaurants' decision-making process (Shim et al., 2021) and how they are affected by restaurants activities. It highlights the roles of restaurants in the society, including their relationships with customers. Considering that CSR activities are voluntary, legitimacy theory explains the roles of restaurants in implementing social, ethical, and environmental initiatives, legitimising their actions within the society they operate (Suchman, 1995). The institutional theory provides the premise to understand the roles of restaurants in shaping and reflecting societal culture and norms based on external pressure/rules within the society (Nair and Bhattacharyya, 2019; Parmar et al., 2010). Rather than responding to institutional forces alone by complying with laws and regulations, restaurants must adopt business structure and practices that conform with written and unwritten societal rules/norms, including the acceptable behaviour leading to the institutionalisation of their CSR activities.

Despite the utility of these theories, they have not been explicitly applied to understand millennials' behaviour towards restaurants with CSR initiatives, limiting research efforts on how restaurants can create value for their most important stakeholders while improving their retention rate. This situation may prevent restaurants from engaging

positively with millennials, reducing their ability to create social value, address unethical operations, and understand how their managers could utilise their skills to manage customers' competing interests. While the stakeholder theory, institutional theory, and legitimacy theory could explain relationships between restaurants and stakeholders (in this case millennials), the lack of testable propositions (Parmar et al., 2010) undermines the utilities of these theories. Nevertheless, stakeholder, institutional, and legitimacy theories serve as a theoretical foundation in this study to understand the roles of restaurants in the society and how their actions influence millennials' buying behaviour. They provide a useful framework to establish how restaurants can engage actively with millennials, legitimising their business practices. This engagement allows restaurants to understand the impacts of their activities on millennials, as a key stakeholder type, allowing them to be involved in restaurants' CSR decision-making process.

Consumer behaviour is generally difficult to explain with a high degree of certainty; however, psychological factors, such as attitudes and values, have been linked to consumer behaviour (Cheng et al., 2021; Le-Anh and Nguyen-To, 2020). Attitudes, when formed, determine how individuals evaluate behaviour, whether positively or negatively (Katt and Meixner, 2020). With high awareness of restaurants' CSR, millennials are more likely to develop a positive attitude, translating their concern and value into buying behaviour at restaurants with CSR activities (Lee et al., 2020). Consistent with stakeholder, institutional, and legitimacy theories, millennials must be aware of restaurants' CSR activities and have positive perceptions and dispositions toward restaurants' actions before activating their buying behaviour. With the increasing agitation for businesses to deliver social value (Shim et al., 2021), customers often desire and set higher requirements for pro-environmental and ethical products (De Canio et al., 2021). Positive perceptions of restaurants' behaviour could alleviate millennials' concern and reinforce their beliefs and values toward the restaurant, consequently shaping their buying behaviour.

Many studies have linked social norms to pro-environmental behaviours, although the reported effects are inconsistent across studies (Anderson et al., 2017; Kim and Seock, 2019). Consistent with Kim and Seock (2019), this study argues that injunctive norms regarding what is socially acceptable and descriptive norms regarding what millennials do are relevant in explaining their behaviour. However, this study adopts social influence because of millennials' positive evaluation of their actions (Allen and Spialek, 2018; Costin, 2019) and how they want others to perceive them, especially people within their social circle (Okumus, 2021). Due to the interactions with social media (Statistica, 2022), millennials might perceive external pressure from others, particularly social media influencers and friends, about their buying behaviour. In this study, social influence is construed as the influence of important others, including social media contacts, on millennials' buying behaviour at restaurants with CSR activities. This view is consistent with studies (such as Cheng et al., 2021) that have reported a relationship between perceived social norms and pro-environmental behaviour.

Personal norms (Schwartz, 1977; Stern, 2000) underpin people's beliefs and reflects their moral obligation to engage in a behaviour (Zhang et al., 2018). Personal norms have been applied to explain many behaviours, including consumption (Katt and Meixner, 2020) and pro-environmental (Kim and Seock, 2019) behaviours. Personal norms, when activated, are a significant determinant of many pro-social and pro-environmental behaviours (Kim and Seock, 2019; Zhang et al., 2018). In this study, personal norms refer to millennials' moral obligation to act on their concern for the wellbeing of others, animals, environment, and community by behaving in an ethical and socially responsible manner. Millennials' beliefs could explain this moral obligation and values (whether self-enhancement or self-transcendence) towards restaurants and their CSR activities. The observed positive relationship between social and personal norms (Kim and Seock, 2019) suggests that millennials may internalise social norms as personal norms, consequently, influence their buying behaviour at an ethical and

socially responsible restaurant.

Irrespective of their social and personal norms, millennials must decide whether they are willing to pay (WtP) a premium at ethical and socially responsible restaurants before activating their buying behaviour. While WtP for green products influences consumer buying behaviour (Varah et al., 2021), the effect is more pronounced only when the product choice is publicly visible (Berger, 2019). According to Tully and Winer (2014), buying frequency may increase the impacts of products on society, increasing the product's social visibility and pressure/influence.

WtP is personal and mostly influenced by consumers' financial situation, but consumers' concern, whether social, ethical, and/or environmental, may contribute to their WtP (De Canio et al., 2021; Varah et al., 2021; Zhang et al., 2018). Considering that price is a strong barrier to buying decision-making and key determinant of behaviour (Katt and Meixner, 2020; Oke et al., 2020) and mostly outside diners' control, price and disposable income may likely contribute to millennials' WtP. From our perspectives and many studies (such as Chaudhary and Bisai, 2018; Konuk, 2019) on consumer behaviour, WtP captures more practical dimensions of consumers' behaviour, including their decision-making process, in terms of products' price and availability. The construct, WtP, is particularly powerful in understanding millennials' buying behaviour considering the evidence (World Economic Forum, 2017) that many British, American, and Japanese Millennials face financial insecurities and challenges due to burgeoning student debts and fallen wages. If cost is a major driver for consuming/buying sustainable and ethically sourced/produced food (Chaudhary and Bisai, 2018; Katt and Meixner, 2020), it is imperative to understand the influence of millennials' WtP a premium on their buying behaviour. This understanding is necessary considering millennials' strong rhetoric about sustainability and ethical issues in the society.

Consumers' WtP has been generally investigated by scholars (such as Aksoy and Ozsonmez, 2019; Balderjahn et al., 2013; Nicolau et al., 2020), allowing for more understanding about consumers' buying behaviour at green restaurants (Nadanyiova and Das, 2020; TM et al., 2021). However, understanding the mechanism through which millennials' WtP influences their buying behaviour is still lacking. Rather than reinventing the wheel by replicating what is already known, this research investigates direct, indirect, and total effects of WtP on millennials' buying behaviour at restaurants with CSR initiatives. These analyses are necessary to deepen our understanding of the effects of WtP on behaviour and how WtP contributes to millennials' buying behaviour, providing more clarity on how and why WtP affects buying behaviour at ethical and socially responsible restaurants. Hayes (2018) PROCESS model 6 (Fig. A1) provides a useful theoretical framework to examine the process through which millennials' WtP a premium translates into buying behaviour at restaurants with CSR activities.

The conceptual model (Fig. A1) proposes that millennials' WtP, CSR perceptions of restaurants' behaviour (i.e., environmental concern), perceived social influence, and personal norms (espoused values) have

significant direct effects on buying behaviour. Besides the direct effect of WtP on buying behaviour, Figure A.1 shows that WtP influences buying behaviour through 7 distinct indirect paths. With millennials expressing their WtP for sustainable brands (Konuk, 2019; Nadanyiova and Das, 2020), establishing mechanisms through which WtP translates to behaviour provides a more holistic view of how and why millennials consume in ethical and socially responsible restaurants. It is worth mentioning that mediation analysis is not the only means of establishing causal effects, the approach is attracting increasing attention in social and behavioural science research due to the complexity in explaining people's behaviour (Hayes, 2018). This study proposes that millennials' perceptions of restaurants' CSR behaviour, social influence, and personal norms could translate their WtP into buying behaviour at restaurants with CSR activities. This proposition is consistent with institutional theory and legitimacy theory in that the way millennials perceive actions of restaurants as desirable and ethical could legitimise their operations (Dowling and Pfeffer, 1975), allowing restaurants to develop a lasting collaborative relationship with millennials.

As a result, we propose that environmental concern, social influence, and personal norms each and jointly mediate the effects of WtP on buying behaviour at ethical and socially responsible restaurants. Due to the complexity of assessing actual buying behaviour through questionnaire surveys, we operationalise willingness to buy (WtB) in this study as a measure of millennials' buying behaviour.

Using a serial model (Figure A.1), the following hypotheses are tested in this study to establish the effects of millennials' WtP on WtB:

- H1. : Willingness to pay directly affects willingness to buy.
- H2. : Environmental concern mediates the effects of WtP on WtB.
- H3. : Social influence mediates the effects of WtP on WtB.
- H4. : WtP influences WtB through the mediation of personal norms (espoused values).
- H5. : WtP has a significant positive effect on WtB through environmental concern and personal norms.
- H6. : WtP indirectly affects WtB through environmental concern and social influence.
- H7. : WtP indirectly affects WtB through social influence and personal norms.
- H8. : Environmental concern, social influence, and personal norms jointly mediate the effects of WtP on WtB.

While these 8 hypothesised paths are examined using a serial model, it is worth noting that this study measures millennials' willingness to buy (WtB) as a proxy for the actual buying behaviour.

2. Methods

A web-based questionnaire survey was used to examine millennials' buying behaviour at ethical and socially responsible restaurants. The online questionnaire was designed using OnlineSurveys (<https://www.onlinesurveys.ac.uk>) due to its simplicity and customisable features, including its strict adherence to General Data Protection Regulation (GDPR). The questionnaire was designed with 35 closed questions utilising both list and matrix-style questions.

The survey instrument was subdivided into three sections and captured millennials' socio-demographics, environmental concern (EC), social influence (SI), personal norms (PN), willingness to pay (WtP), and willingness to buy (WtB). Socio-demographics were adapted from Nadanyiova and Das (2020) and consistent with the UK Office for National Statistics (ONS). Items measuring each construct were adapted from previous studies; EC (Nguyen et al., 2016), SI (Chaudhary and Bisai, 2018; Lee and Heo, 2009), PN (Sobaih et al., 2008; Schubert et al., 2010), WtP (López-Fernández, 2020), and WtB (Jang et al., 2011). The

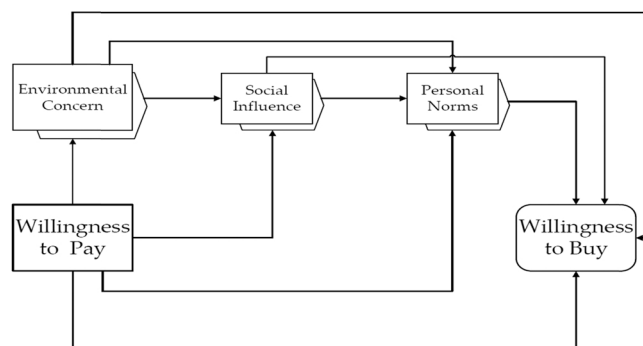


Fig. A1. Conceptual model based on Hayes' PROCESS model 6.

items were assessed using a 7-points Likert scale ranging from "Strongly Disagree = 1" to "Strongly Agree = 7".

Before its dissemination, the instrument was piloted with a sample of 10 respondents, reflecting the attributes of the target population. The goal was to eliminate errors and typos, establishing the appropriateness of the wordings, questionnaire layout, questions arrangement, accessibility, and completion time. No significant adjustments and corrections were made to the instrument; however, double-barrel questions were reworded, and inconsistent words were removed for clarity. Also, a brief description of ethical and socially responsible restaurants was provided for clarity. Consistent with Oke et al. (2020), we described ethical and socially responsible restaurants as those that extend their business model and operations beyond profit-making and shareholder value creation to deliberately and cautiously pursuing activities, such as local sourcing and making donation to charities, that create social and environmental benefits.

The survey link was distributed on social media, Facebook, Instagram, and LinkedIn, considering that about 90% of millennials in the UK engage actively with social media (Statistica, 2022). It is plausible to use social media for data collection considering the increased usage of social media, providing a direct mechanism to engage millennials (Lenhart et al., 2010). While social media research does not particularly involve random sampling, it offers direct and reliable access to the target population. In this research, 1000 people who were self-identified as millennials were randomly selected from the author's social connections on Facebook, Instagram, and LinkedIn. Instagram was particularly useful in this research due to its wider appeal to young adults and importance as a source of rich information for hospitality research (Tuomi et al., 2021). The randomly selected 1000 millennials were contacted for their participation in the research. However, 98 people declined to participate in the research due to their lack of interest in sustainability and CSR issues. The survey link was sent to the remaining 902 respondents in the North East of Scotland, who agreed to participate in the research.

3. Data analysis

Out of 902 questionnaires disseminated, 227 respondents completed the survey, representing about 25% of the sample population. The collected data was prepared, processed, and analysed using Statistical Package for the Social Sciences (SPSS) version 28. Initial screening showed that 15 people did not complete all the important sections in the questionnaire and were subsequently deleted from the dataset resulting in 212 complete and useable responses. Consistent with the research focus, all respondents (Table A1) are millennials between 24 and 40 years old.

Further breakdown (Table A1) shows that about 78% are female and

Table A1
Socio-demographics.

Variable	Category	Frequency	%
Age	24–29	83	39.2
	30–34	53	25.0
	35–40	64	30.2
	Prefer not to say	12	5.7
Gender	Male	43	20.3
	Female	165	77.8
	Other	3	1.4
	Prefer not to say	1	0.5
Employment	Full-time	114	53.8
	Part-time	55	25.9
	Unemployed	3	1.4
	Student	33	15.6
	Other	7	3.3
Annual Income	Less than £ 20,000	90	42.5
	£ 20,000 - £ 40,000	73	34.4
	more than £ 40,000	40	18.9
	Prefer not to say	8	4.2
Total		212	100

20% male, while about 54% are in full-time employment and 26% part-time. The gender disparity could be due to the use of social media to disseminate the instrument. This assumption is consistent with Statistica (2022) that a higher percentage (63%) of social media users in the UK are female.

Also, about 43% of our respondents are earning less than £ 20,000 per annum, 34% have an annual income between £ 20,000 and £ 40,000, and only around 19% are earning more than £ 40,000 a year. Although around a quarter of the participants (19%) earn more than £ 40,000 annually, almost half of the respondents (43%) are earning less than £ 20,000 annually. The fact that about 26% of the respondents work part-time and 16% are students could explain the respondents' annual income. The alternative reason could be associated with the increasing economic inequalities between generations in the UK with younger workers mostly affected by economic policies and economic crises than older workers (Cribb, 2019).

Despite adapting all the items from previous studies, we conducted exploratory factor analysis (EFA) to identify constructs that can parsimoniously explain millennials' buying behaviour at ethical and socially responsible restaurants. We applied Principal Component Analysis (PCA), with Eigenvalue greater than 1 (Kaiser criterion), as the extraction method and Varimax as the rotation method for the simplification of factor loadings. The Kaiser-Meyer-Olkin measure of sampling adequacy (KMO; 0.92) and significant Bartlett's test of sphericity ($p < 0.001$) suggest that constructs were independent and suitable to detect the structure of millennials buying behaviour. Using EFA, we extracted five factors (Table A2) that were operationalised in this study as 1 dependent, 1 independent, and 3 mediators.

Further, we performed reliability test using Cronbach's alpha (α) to test the internal consistency of the measuring items; the test indicates the extent to which the items measure the same construct in the hypothesised model. Consistent with Nunnally's (1978) recommendations, the Cronbach's alpha coefficient (Table A3) of each construct in this study exceeded the 0.7 threshold, indicating a strong reliability. The condition for reliability of the measuring constructs was achieved in this study, establishing the internal consistency (i.e., reliability) of the measuring scale (Fornell and Lacker, 1981; MacKinnon et al., 2004).

Having established the internal consistency of the measuring scale, we assessed multicollinearity issues using tolerance value and its reciprocal, the variance inflation factor (VIF). As shown in Table A3, the tolerance level for each construct is greater than 0.1 with a VIF value of less than 10, suggesting no evidence of multicollinearity issues. The correlation between the constructs was assessed using Pearson's correlation coefficient and suggests a positive relationship between constructs. The results show no multicollinearity issues, indicating that no multivariate assumption, such as normality and collinearity, was violated in this study.

3.1. Hypothesis analysis and results

The relationships between the constructs (i.e. dependent and independent variables) using multiple correlation analysis were examined before testing the hypothesised model (Figure A.2). This approach allowed us to establish a possible statistical relationship between the constructs in the hypothesised model. The results (Table A3) show significant positive relationships between the model's constructs, suggesting that PB, SI, PN, and WtP each contributes to millennials WtB at a restaurant with CSR activities. To further explore this relationship by establishing the direct and indirect effects of WtP on WtB, we performed a serial mediation analysis using Hayes (2018) PROCESS model 6. The statistical serial model (Figure A.2) based on the hypothesised model (Figure A.1) examines the direct, indirect, and total effects of WtP on millennials' WtB at restaurants undertaking CSR initiatives. To test this proposition, we performed a serial sequential mediation analysis using PROCESS macro for SPSS.

According to Hayes (2018), the statistical causal relationships

Table A2
Exploratory Factor analysis.

	Component				
	PN	EC	WtB	SI	WtP
I plan to eat at socially responsible restaurants	0.783				
I recommend that others eat at socially responsible restaurants	0.774				
I prefer to buy/eat organic produce	0.750				
I prefer to eat at restaurants that provide locally sourced products to reduce the carbon footprint	0.696				
Supporting socially responsible restaurants makes me feel that I have a purpose	0.609				
I am proud to be a socially responsible person	0.544				
Anti-pollution and food waste laws should be enforced		0.876			
I am very concerned about the environment		0.845			
Not enough is being done to protect the environment		0.832			
I would be willing to reduce my consumption to help protect the environment		0.814			
Major changes within restaurants are necessary to protect the natural environment		0.759			
I often visit restaurants with pleasant staff and a good atmosphere			0.769		
I often visit restaurants that support local charities			0.682		
I often visit restaurants with locally sourced food			0.634		
I often visit restaurants that are considerate to animal welfare			0.623		
My friends often recommend socially responsible restaurants to me				0.661	
Family can have an influence on whether I eat at a socially responsible restaurant				0.648	
Information that is available about a restaurant's social responsibilities has an influence on where I eat				0.595	
I make my own decisions based upon eating at socially responsible restaurants				0.551	
Media coverage has an influence on deciding where to eat				0.682	
I am willing to pay more for local products					0.602
I am willing to pay more for restaurants that are participating in activities such as supporting the local community and schools					0.547
I am willing to pay more for restaurants participating in environmentally friendly practices					0.524

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Rotated Component Matrix^a = Rotation converged in 12 iterations.

between the constructs (Figs. A1 and A2) are represented with the following set of equations:

1. Direct effect of X on Y = c'
2. Indirect effect of X on Y through M₁ only = a₁ b₁
3. Indirect effect of X on Y through M₂ only = a₂ b₂
4. Indirect effect of X on Y through M₃ only = a₃ b₃
5. Indirect effect of X on Y through M₁ and M₂ in serial = a₁d₂₁b₂
6. Indirect effect of X on Y through M₁ and M₃ in serial = a₁d₃₁b₃

7. Indirect effect of X on Y through M₂ and M₃ in serial = a₂d₃₂b₃
8. Indirect effect of X on Y through M₁, M₂, and M₃ in serial = a₁d₂₁d₃₂b₃

In this study, M₁ = Environmental Concern (EC); M₂ = Social Influence (SI); M₃ = Personal Norms (PN), while a₁, a₂, a₃, b₁, b₂, b₃, c', d₂₁, d₃₁, and d₃₂, are regression coefficients; and e = error term.

The model allowed us to perform the indirect effect with WtP as the predictor variable and EC (M₁), SI (M₂), PN (M₃) as the mediators, and WtB (Y) as the outcome variable. We applied 5000 bootstrap resamples to generate 95% bias confidence intervals and test whether direct and indirect effects are statistically different from zero. We used bootstrap resamples because the approach provides superior outcomes for indirect effects due to its effective control of Type I error and makes no assumptions about normality in the sampling distribution (Preacher and Hayes, 2004; MacKinnon et al., 2004). The effects are statistically significant when bootstrap confidence is well above zero (i.e., the distance between upper and lower limits straddles no zero); otherwise, the effects are not statistically significant (Hayes, 2018). The results (see Appendix A for detailed results) are summarised in Table A4 and further explained below for ease of understanding.

According to the results, the total effect (95% CI [.695, .983]) of willingness to pay (WtP) on buying behaviour (WtB) taking all the other factors into consideration is positive and statistically significant, c = .839, t(210) = 11.479, p = .000. Similarly, the regression coefficients (a₁, a₂, a₃, b₂, b₃) show that all the direct effects, apart from the direct effect of EC (b₁) on WtB, are statistically significant. The results suggest that WtP, SI, and PN each has a significant positive effect on millennials' WtB. Also, the direct effect (95% CI [.051, .430]) of millennials' willingness to pay (WtP) on buying behaviour (WtB) is positive and statistically significant, c' = .240, t(210) = 2.496, p = .013, allowing us to further probe how WtP transmits its effect to WtB through the mediators.

Consistent with Guzzo et al.'s (2021) argument about the need to understand "how", "why", and "when" CSR influences stakeholders, especially customers, we estimated the indirect effects of millennials' WtP on WtB. The results (Table A4) show that the indirect effect (95% CI [-.058, .073]) of willingness to pay (WtP) on buying behaviour (WtB) through environmental concern (EC) is positive but not statistically significant. This result further corroborates the insignificant direct effects of EC on WtB. However, willingness to pay (WtP) has a positive indirect significant effect on buying behaviour (WtB) through social influence (SI) at 95% CI [.026, .192]. Similarly, the indirect effect (95% CI [.218, .467]) of willingness to pay (WtP) on buying behaviour (WtB) through personal norms (PN) is positively significant.

The serial mediation analysis shows that WtP indirectly affects WtB through EC and PN (95% CI [.001, .035]). Also, WtP indirectly affects WtB through EC and SI (95% CI [.006, .077]). In addition, millennials' WtP has statistically significant effect (95% CI [.048, .141]) on their WtB through PN and SI. There is a statistically significant indirect effect (95% CI [.002, .025]) of WtP on WtB through EC, SI, and PN. The obtained serial indirect effects show that EC alone is insufficient to affect millennials buying behaviour (WtB) without the contributions of SI and PN.

4. Discussion

Efforts to determine how consumer behaviour is shaped have advanced in recent times; however, little is known on what contributes to millennials buying behaviour and whether this behaviour is activated at restaurants with CSR activities. Behaviour analysts and social scientists have identified many factors and principles guiding behaviour to solve complex social and ethical issues. Consistent with these efforts, this study shows the effects of millennials' willingness to pay (WtP) on their buying behaviour (WtB) at ethical and socially responsible restaurants. The study further demonstrates how willingness to pay translates to buying behaviour through the mediators. While this finding could be attributed to millennials' disposable income (Biswas and Roy,

Table A3
Multivariate analysis.

	Mean	SD	α	Correlations					Collinearity Statistics ^a	
				1	2	3	4	5	Tolerance	VIF
1. WtP	16.31	3.71	.87	–					453	2.207
2. WtB	21.86	4.17	.80	.622**	–					
3. EC	28.93	5.67	.91	.412**	.361**	–			0.786	1.272
4. SI	20.67	5.95	.72	.557**	.495**	.355**	–		0.594	1.683
5. PN	28.57	7.08	.89	.714**	.639**	.422**	.607**	–	0.416	2.401

* *. Correlation is significant at the 0.01 level (2-tailed).

a. Dependent Variable: WtB

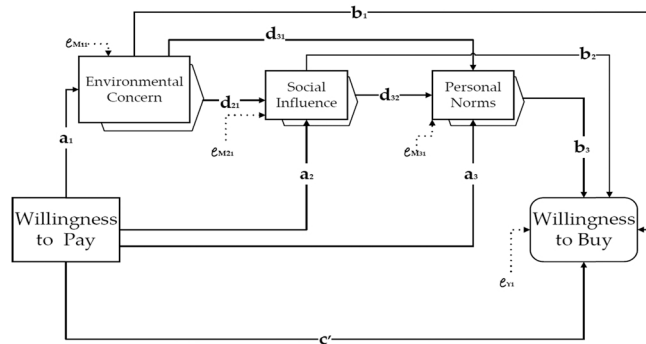


Fig. A2. Statistical model of the hypothesised model based on Hayes process model 6.

Table A4
Path coefficients, indirect effects and 95% bias-corrected confidence intervals from OLS regressions predicting score on Buying behaviour (N = 210).

Path	Effect	Estimate	Lower	Upper	Remark
95% CI					
Total effect (c)	0.8391	0.0731	0.6950	0.9832	Confirmed
Direct effects					
c' = WtP -> WtB	0.2403	0.0963	0.0505	0.4301	Confirmed
a ₁ = WtP -> EC	0.6372	0.0964	0.4471	0.8273	
a ₂ = WtP -> SI	0.7979	0.1006	0.5996	0.9963	
a ₃ = WtP -> PN	1.1513	0.1187	0.9173	1.3853	
b ₁ = EC -> WtB	0.0027	0.0471	-0.0902	0.0955	
b ₂ = SI -> WtB	0.1368	0.0515	0.0354	0.2383	
b ₃ = PN -> WtB	0.2944	0.0468	0.2021	0.3867	
Indirect effects					
a ₁ b ₁ = WtP->EC->WtB	0.0017	0.0326	-0.0579	0.0733	Not Confirmed
a ₂ b ₂ = WtP->SI->WtB	0.1092	0.0420	0.0259	0.1917	Confirmed
a ₃ b ₃ = WtP->PN->WtB	0.3390	0.0650	0.2148	0.4669	Confirmed
a ₁ d ₂₁ b ₂ = WtP->EC->SI->WtB	0.0136	0.0086	0.0013	0.0345	Confirmed
a ₁ d ₃₁ b ₃ = WtP->EC->PN->WtB	0.0346	0.0179	0.0061	0.0768	Confirmed
a ₂ d ₃₂ b ₃ = WtP->SI->PN->WtB	0.0896	0.0238	0.0478	0.1407	Confirmed
a ₁ d ₂₁ d ₃₂ b ₃ = WtP->EC->SI->PN->WtB	0.0112	0.0058	0.0020	0.0249	Confirmed

2015; Nicolau et al., 2020), it supports previous studies (such as Costin, 2019; Oke et al., 2020) suggesting that millennials' behaviour is influenced by their demand for healthy and ethical produced products. Considering millennials' high spending power compared to other generations, it is not surprising that their willingness to pay has a strong positive and significant effect on their buying behaviour at restaurants with CSR initiatives.

The findings also confirmed that social influence and personal norms

are important for millennials to buy at ethical and socially responsible restaurants. The findings are consistent with previous studies (such as Nadanyiova and Das, 2020; Nicolau et al., 2020) that reported the positive effects of consumers' feelings of personal responsibility for social and environmental issues. The results further show the importance of positive self-image (i.e., espoused values) on millennials' behaviour. However, millennials' environmental concern is insufficient alone to influence their buying behaviour. The finding could be associated with the lack of stakeholder engagement (Chatzopoulou and de Kiewiet, 2021; Osobajo et al., 2022), leading to the lack of explicit CSR and scepticism about CSR activities (Cox, 2019).

However, social influence and personal norms mediate the effects of willingness to pay on buying behaviour. Millennials' willingness to pay a premium at ethical and socially responsible restaurants are more likely to be influenced by people in their social circle, such as families, friends, and other social media contacts. The influence of their social circle, i.e., perceived social norms, could be internalised as personal norms, allowing them to convert their willingness to pay to buying behaviour. Consistent with Nadanyiova and Das (2020) and Nicolau et al. (2020), our findings could imply that millennials are more concerned about their image than whether restaurants are ethical and socially responsible. Millennials' willingness to pay is unlikely to transmit its effects to buying behaviour through environmental concern without positive perceptions of social influence (i.e., social norms) and self (i.e., personal norms).

Based on the results, social influence and personal norms are important mediators for millennials to convert their willingness to pay to buying behaviour at ethical and socially responsible restaurants. On the one hand, willingness to pay might shape millennials' perceptions of ethical and socially acceptable business activities (Moreno et al., 2017; Nicolau et al., 2020) due to their disposable income and personal norms or values (McGlone et al., 2011; Nadanyiova and Das, 2020). On the other hand, a positive evaluation of other people's buying behaviour may strengthen their buying behaviour at restaurants with CSR initiatives compared to when the behaviour is perceived negatively. According to this study, social influence is important to millennials' buying behaviour because of the positive ways they want others, especially people within their social network and circle, to perceive their actions (Costin, 2019; Okumus, 2021). Consistent with stakeholder and legitimacy theories, this study shows that millennials might not want to patronise a restaurant if they have negative concern about its CSR behaviour, suggesting the need for restaurants to engage and communicate actively with millennials when introducing CSR activities.

5. Conclusion

In this paper, we empirically investigated the links between millennials' willingness to pay, environmental concern, social influence, personal norms and willingness to buy at ethical and socially responsible restaurants. The findings suggest the need for restaurants to engage their customers (in this case millennials) when implementing CSR initiatives. The engagement would allow for co-creation of solutions, addressing millennials' social and environmental concern regarding restaurants

activities. The collaboration in addressing social and environmental issues should go beyond engaging downstream customers alone; the engagement approach should also allow upstream suppliers to play their part. For example, Tuomi et al. (2022) reported that restaurants were able to collaborate with their stakeholders, including suppliers, during covid-19 to enhance their operational performance and efficiency. Rather than maximising shareholder value alone, restaurants are more likely to address pertinent social, environmental, and ethical concern by placing customers (in this case millennials) at the centre of their CSR activities. Co-creating solutions with millennials is particularly important due to their beliefs that restaurants should be ethical and socially responsible (Jang et al., 2017; Shim et al., 2021). The involvement of customers could consequently influence how they perceive restaurants' CSR behaviour, contributing to their buying behaviour. The study provides further insights on the mechanism allowing millennials to translate their willingness to pay for a premium to buying behaviour at ethical and socially responsible restaurants. Although many events have heightened consumers' risk perception about food consumption in restaurants, trust and loyalty could be increased if consumers were adequately aware of the restaurants' positive ethical and socially responsible behaviours, possibly through direct engagement.

6. Research implications

The complexities of business activities are increasing with consequences on customers, this study suggests that customer engagement is imperative for restaurants to reduce the negative impacts of their operations. Engaging customers allows restaurants to understand the stakeholders' CSR needs and expectations, including how these expectations could be achieved. Considering that millennials mostly share similar values and motivations (Moreno et al., 2017; Nadanyiova and Das, 2020) and with more spending power than other generations (Nicolau et al., 2020), understanding their buying behaviour is important for restaurants to regain their confidence. Although the positive effects of CSR on buying behaviour have been reported (Kim et al., 2020; TM et al., 2021), establishing motivations for consumption decisions underpinning buying behaviour is complex. Studies (such as Aksoy and Ozsonmez, 2019; Katt and Meixner, 2020) have established price and product availability as major drivers of willingness to pay. This study shows that restaurants should look beyond the effects of price to attract customers, especially millennials, and remain competitive.

7. Managerial implications

From managerial perspectives, this study further shows that understanding millennials' buying behaviour due to their strong rhetoric about ethical and social issues presents an opportunity for restaurants to engage this important customer group. Consistent with stakeholder and legitimacy theories (Nair and Bhattacharyya, 2019; Shim et al., 2021), our results suggest that restaurants could address social issues through effective stakeholder engagement rather than focusing only on cost-saving activities and productivity (Alonso-Almeida et al., 2018). With millennials driving e-commerce globally and many of them engaging actively on social media, such as Facebook and Instagram, restaurants should sense and capture this opportunity to engage millennials about their ethical and socially responsible activities, making their business more attractive to this important customer segment. This suggestion aligns with Oke et al. (2020) on the use of social media in engaging young adults and consistent with Tuomi et al. (2021) who observed that restaurants rely more on social media, especially Instagram, to engage their customers during the pandemic. The results further indicate the need for restaurants to understand whether consumers are willing to pay a premium for ethical food products. The good news is that consumers are more willing to pay (López-Fernández, 2020) and support businesses that adopt ethical and socially responsible practices (Allen and Spialek, 2018). The support could be through

millennials' perceptions, reviews/feedback, and buying behaviour; however, millennials must be aware of restaurants' practices. This knowledge could influence how millennials evaluate restaurants' CSR activities, other people's actions and what they consider as values and norms.

8. Study limitations

This study, however, is not without limitations. First, using self-reported measures might attract response bias with no opportunity to understand how respondents' frame of reference changes with time. Second, willingness to buy instead of actual buying behaviour was operationalised in this study due to the complexity and difficulty in measuring millennials' actual buying behaviour using the self-report approach. These limitations should be addressed in future studies. Future studies may consider other (or multiple) contexts and different geographical locations to enrich the conceptualisation of restaurants' CSR activities and how they influence millennials' buying behaviour.

Despite the limitations, the observed path from willingness to pay, perceptions of CSR behaviour, social influence, personal norms, and buying behaviour at restaurants with CSR activities is important for theory and practice. The adopted serial mediation model provides important theoretical propositions that future studies could explore more in-depth. The model allows for practical insights and tools for restaurants to attract customers through their genuine CSR activities and engagement. Restaurants must engage with stakeholders to introduce real impacts ethical and socially responsible activities, leading to positive evaluations of their CSR behaviour and allowing customers to convert their willingness to pay a premium to buying behaviour. This argument is consistent with studies such as Zhang et al. (2018) that customers with strong intentions are more likely to act and translate their intentions into actual buying behaviour at restaurants with CSR activities.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at [doi:10.1016/j.ijhm.2023.103507](https://doi.org/10.1016/j.ijhm.2023.103507).

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Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.0 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 6
Y : WtB
X : WtP
M1 : EC
M2 : SI
M3 : PN

Sample
Size: 212

OUTCOME VARIABLE:
EC

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4166	.1736	26.7114	43.6817	1.0000	208.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	18.5251	1.6133	11.4829	.0000	15.3447	21.7056
WtP	.6372	.0964	6.6092	.0000	.4471	.8273

Standardized coefficients

	coeff
WtP	.4166

OUTCOME VARIABLE:
SI

Model Summary

R	R-sq	MSE	F	df1	df2	p
.5745	.3300	24.0364	50.9878	2.0000	207.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	3.1211	1.9562	1.5955	.1121	-.7355	6.9777
WtP	.7979	.1006	7.9313	.0000	.5996	.9963
EC	.1564	.0658	2.3782	.0183	.0268	.2861

Standardized coefficients

	coeff
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WtP .4963
 EC .1488

OUTCOME VARIABLE:

PN

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.7855	.6170	25.6571	110.6080	3.0000	206.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.1315	2.0335	1.0482	.2958	-1.8776	6.1405
WtP	1.1513	.1187	9.7003	.0000	.9173	1.3853
EC	.1846	.0689	2.6805	.0079	.0488	.3204
SI	.3812	.0718	5.3087	.0000	.2396	.5228

Standardized coefficients

	coeff
WtP	.5254
EC	.1289
SI	.2797

OUTCOME VARIABLE:

WtB

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.7380	.5446	11.5897	61.2906	4.0000	205.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	9.2375	1.3703	6.7411	.0000	6.5358	11.9392
WtP	.2403	.0963	2.4958	.0134	.0505	.4301
EC	.0027	.0471	.0567	.9548	-.0902	.0955
SI	.1368	.0515	2.6588	.0085	.0354	.2383
PN	.2944	.0468	6.2872	.0000	.2021	.3867

Standardized coefficients

	coeff
WtP	.1783
EC	.0030
SI	.1632
PN	.4788

***** TOTAL EFFECT MODEL *****

OUTCOME VARIABLE:

WtB

Model Summary

	R	R-sq	MSE	F	df1	df2	p
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.6228 .3878 15.3549 131.7771 1.0000 208.0000 .0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	12.4205	1.2232	10.1544	.0000	10.0091	14.8319
WtP	.8391	.0731	11.4794	.0000	.6950	.9832

Standardized coefficients

	coeff
WtP	.6228

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_cs
.8391	.0731	11.4794	.0000	.6950	.9832	.6228

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_cs
.2403	.0963	2.4958	.0134	.0505	.4301	.1783

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.5988	.0762	.4474	.7492
Ind1	.0017	.0324	-.0567	.0737
Ind2	.1092	.0422	.0256	.1896
Ind3	.3390	.0641	.2203	.4702
Ind4	.0136	.0082	.0011	.0329
Ind5	.0346	.0180	.0069	.0763
Ind6	.0896	.0242	.0474	.1415
Ind7	.0112	.0057	.0021	.0245

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.4444	.0549	.3361	.5512
Ind1	.0013	.0241	-.0436	.0536
Ind2	.0810	.0315	.0189	.1431
Ind3	.2516	.0471	.1651	.3482
Ind4	.0101	.0062	.0008	.0247
Ind5	.0257	.0134	.0050	.0571
Ind6	.0665	.0178	.0352	.1044
Ind7	.0083	.0043	.0015	.0183

Indirect effect key:

Ind1	WtP	->	EC	->	WtB			
Ind2	WtP	->	SI	->	WtB			
Ind3	WtP	->	PN	->	WtB			
Ind4	WtP	->	EC	->	SI	->	WtB	
Ind5	WtP	->	EC	->	PN	->	WtB	
Ind6	WtP	->	SI	->	PN	->	WtB	
Ind7	WtP	->	EC	->	SI	->	PN	
							->	WtB

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

----- END MATRIX -----