The impact of moral intelligence on green purchase intention

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CHRONICLE	ABSTRACT
	In this article, the impacts that moral intelligence has on green purchasing intentions in Jordan was investigated based on three moral theories (Utilitarianism, Deontology, Virtue Ethics), as well as the theory of Planned Behavior. Furthermore, four key areas of moral intelligence (compassion, forgiveness, responsibility and integrity) were discussed. A questionnaire was used to obtain the necessary primary data from 191 customers in Jordan. To analyze the results, partial least squares structural equation modeling was carried out. It was concluded that the four key aspects of moral intelligence (compassion, forgiveness, responsibility and integrity) positively impact green purchasing intentions. This research has practical significance in the fields of green marketing and moral intelligence, especially with regard to the dimensions of compassion, forgiveness, responsibility and integrity. These dimensions can thus serve as a guide for improving customers' green purchase intentions in future. Moreover, the research is important for investigations into individual and company-based environmental sustainability.

1. Introduction

In 1987, the Brundtland Commission made a publication, and a short time afterwards, the Earth Summits took place (Rios et al., 2006). This pushed sustainable development to become a fundamental issue within the contemporary world. The importance of sustainability as a developing 'megatrend' is stressed by Lubin and Esty (2010). The latter researchers also suggest that a majority of executives understand the importance of improving sustainability, which could incidentally enhance their own company competitiveness, as well as ensure their ultimate survival. Nowadays, sustainability is considered to be a crucial business objective (Raska & Shaw, 2012), which pushes companies to strive for green innovation (Pfeffer, 2010). A number of companies now emphasize the efforts that they make to implement sustainability into their daily company practices (Raska & Shaw, 2012). Some examples of famous companies known for their environmental sustainability include HP, Cisco, Gap, GE, Nike, Interface, Wal-Mart and Patagonia (Sheth et al., 2011). Sustainability refers to a broader belief that development within interlocking environmental, social, and economic spheres should be harmonious. However, accomplishing this is very difficult (Huang et al., 2014). What's more, it is easy for consumers to identify a company's environmental efforts by observing the extent to which their products are environmentally-friendly. The present research thus focuses exclusively on environmental issues.

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Academic interest in green marketing has soared over the last few years (Cervellon & Wernerfelt, 2012). In previous research by Dwyer (2009), the term "green" has been defined as the recycling, purchasing and consumption of products which cause minimal environmental damage. In this definition, green products are items which are long-lasting, non-toxic, recycled, recyclable and placed in the least possible packaging (Ottman & Books, 1998). Chang and Chen (2014) point out that, consumers today are increasingly motivated to purchase green items due to rising concerns regarding green management and environmentally-friendly production processes (Joshi & Rahman, 2015). Recent studies have actually shown that an increasing number of firms are becoming part of the green products market (Chen & Chang, 2013). This is either due to genuine concerns about environmental protection or the need to sell green products in a new environmental era. Chang (2015) asserts that green consumers prioritize their duties to protect the environment when deciding to purchase green products.

The key factors that determine how individuals think, feel and behave underpin the Value-Attitude-Behaviour (V-A-B) Hierarchy Theory (Arnould et al., 2004; Homer & Kahle, 1988). Here, internal factors such as individual perceptions and attitudes are deemed to be crucial in determining 'green purchase intention' (GPI). Furthermore, green consumption is part of a charier consumption lifestyle with the purpose of living a better and longer life. It is thus evident that moral factors can impact GPI, and it is possible that there is a causal relationship the two. Understanding this relationship is highly valuable for marketers, consumers, and the general society. It has recently been suggested that moral behaviors and decisions are determined by 'moral intelligence' (MI), a contemporary issue that is difficult to pinpoint and measure. MI refers to an ability to comprehend right and wrong, and to act in a way that is considered right (similar to the moral competence concept). At present, there has been little research exploring the role of MI in determining consumer behaviors. It is therefore important to investigate the relationships between MI and specific consumer actions (such as GPI) in order to generate a more profound insight into consumers' green behaviors.

It was recommended by Barber et al. (2010) that researchers explore GPI, with Tan (2011) suggesting that researchers in future could benefit from testing the V-A-B model with regard to green purchasing behaviors. In this respect, the present research attempts to investigate the extent to which MI could impact GPI. Previous research has revealed that green marketing is a relatively new concept in Jordan, which is being increasingly promoted by environmentally-friendly consumers. Jordan has thus been chosen as the case study for the present research (Jahamani, 2003; Alsmadi, 2007; Alhadid & As' ad, 2014; Zu'bi et al. 2015; Al-Adamat & Aladamat, 2019; Al-Gasawneh & Al-Adamat, 2020). Despite Jordanian consumers being environmentally conscious, they prefer to purchase more traditional products (Alsmadi, 2007). Since there is little exploration of the issues in question within existing literature, the present study will hopefully serve as a basis, upon which future research into the topic can expand. Furthermore, the present research is intended to play a major role in enhancing policy makers' and companies' understandings of the moral stances of Jordanian consumers.

2. Literature review

2.1 Green Purchase Intention (GPI)

Typically, green products do not damage the natural environment or human health to the same extent as traditional products (Al-Gasawneh & Al-Adamat, 2020). Speer (2011) defines a green product as an item that generates very little pollution, saves resources and can be recycled. Such items are otherwise called ecological or environmentally friendly, are recyclable and contain less packaging and toxic ingredients than their conventional counterpart products (Al-Gasawneh & Al-Adamat, 2020). This means that they reduce negative impacts on the natural environment. On the whole, green products are deemed to be less harmful to the environment. Examples of such products include green cars (hybrid cars), energy-efficient electronic devices, recycled products, organic teas and natural body care products. Hasan and Mohammad (2013) define purchase intentions as the manner in which a consumer selects a product for purchase based on the belief that it will address their needs and will suit their general lifestyle. A green purchase intention can thus be defined as the probability that someone will select an environmentally-friendly product rather than a similar traditional one (Rahim et al., 2016). Green purchase intention is a fundamental part of a customer's entire green purchasing behavior. A consumer will intend to buy a green product if they find it appealing.

2.2 Moral Intelligence (MI)

In comparison to more established types of intelligence (such as emotional, cognitive and social intelligence), moral intelligence (MI) is relatively new and has received far less research attention. However, exploring this concept could greatly enhance our understanding of human learning and behaviors (Beheshtifar et al., 2011; Clarken, 2009). Clarken (2009) explains the concept of intelligence as the capacity to think and learn. It has often been applied to discuss the application of skills and factual information during the learning process. Levels of intelligence vary greatly between individuals, and this is due to differences in inherited, innate and acquired characteristics (Beheshtifar et al., 2011). MI has been defined by both Borba (2005) and Clarken (2009) as the capacity to differentiate between right and wrong, to have a strong moral compass and to act in a suitable manner. Moreover, Lennick and Kiel (2005; P.7) define moral intelligence as the mental capacity to understand how to implement universal human principles in our daily lives and beliefs. Desire, willpower and knowledge all play an important role in MI, and Clarken (2009) explains that it involves how we think, feel and act. MI is often regarded as a skill that can be improved through practice. Borba (2001) highlights seven key concepts that children must develop in order to create MI, namely conscience, empathy, respect, self-control, fairness, kindness and tolerance. In terms of organizational

performance, four key MI principles have been put forward by Lennick & Kiel (2005). These are integrity, responsibility, compassion and forgiveness. The latter researchers have proposed an MI construct made up of four key competencies for integrity (behaving according to principles and beliefs, telling the truth, defending what is right, and keeping promises), three for responsibility (taking personal responsibility, owning up to mistakes, and taking responsibility for serving others), two for forgiveness (overcoming your own mistakes and letting go of mistakes made by others) and one for compassion (to show care and consideration to other people) (Clarken, 2009). Rahimi (2011) proposed another model, in which seven key characteristics of moral beings are put forward, namely inhibitory control, empathy, consistency, fairness, responsibility, cooperation, and logic. The model is based on the assumption that there is a relationship between how much a person shows these traits and their level of MI. Lennick and Kiel (2005, 2011) put forward four key abilities within MI which are in line with Borba's (2001) suggested seven virtues. They are also in accordance with a number of the integrity-related traits that Rahimi (2011) has identified. Integrity covers the dimensions of conscience and fairness put forward by Borba (2001), as well as the dimensions of consistency and fairness suggested by Rahimi (2011). Integrity tends to be used in reference to the development of harmony and consistency between an individual's words and behaviors according to one's own moral principles. Both Lennick and Kiel (2005, 2011) and Rahimi (2011) believe that individuals with high MI also exhibit high levels of responsibility. Responsibility is the ability to admit to personal mistakes and to held accountable for our own actions despite what the consequences might be. The responsibility dimension thus covers Borba's (2001) self-control and respect concept. What's more, Lennick and Kiel (2005, 2011) believe that compassion (the active displaying of care and consideration to others) is also a fundamental skill associated with MI. Compassion could thus address aspects of empathy (Rahim, 2011; Borba, 2001) and kindness (Borba, 2001). The final principle of forgiveness refers to the letting go of mistakes (whether they are one's own mistakes or the mistakes of others). There is a clear connection between Lennick and Kiel's competency of forgiveness item and Borba's (2001) virtue of tolerance. This is in accordance with the assumption that forgiveness requires tolerance of other people's mistakes. A majority of prior studies exploring MI have been related to leadership within the business field (Bezanjani et al., 2019; Matsimbe, 2017).

3. Hypotheses development

A number of different studies have demonstrated that morality can positively impact individuals' attitudes to many different behaviors (Botetzagias et al., 2015; López Mosquera et al., 2014; Conner & Armitage, 1998; Raats et al., 1995; Kaiser, 2006; Arvola et al., 2008). In other words, a person's understanding of good and bad can lead them to make either a positive of negative assessment of which behavior to show (Yuang et al., 2016). Xu et al. (2017) explain that moral factors often encourage people to be kind to the environment. Bozaci (2014) carried out research which revealed a close connection between morality and green consumption behaviors. A person's ethical beliefs can thus influence their positive attitudes towards green products. Additionally, it is thought that their positive attitudes towards green consumption will ultimately increase their GPI the longer the individual holds such beliefs (Chen, 2007; Leonidou et al., 2010). Lu et al. (2015) opine that consumers' values and beliefs play a fundamental role in determining their intention to purchase environmentally friendly products. We thus propose that MI displayed in the forms of responsibility, compassion, forgiveness and integrity will greatly impact consumers' intentions to buy green goods.

3.1 Compassion

Compassion is defined by Clarken (2009) as the active showing of care and consideration about others, which in turns demonstrates our respect for those other people (Beheshtifar et al., 2011). Within compassion, it is implied that an individual should support other people and allow others to participate in any intended activities (Hosseini et al., 2013). Such support must be provided whether necessary or not. Manallack (2006) describes compassion as having a two-way effect, since compassionate individuals typically show compassion to other such people during times of trouble. In this respect, it is assumed in the present paper that the extent to which a consumer is compassionate will determine the extent of their green purchase intentions.

H$_1$: A consumer's level of compassion will have a statistically significant impact on their GPI.

3.2 Responsibility

Hosseini et al. (2013) define responsibility as the act of being accountable for our own actions. People must take responsibility even if the consequences are not favorable or expected (Bani-Khalid & Al-Adamat, 2020). Moreover, Lennick and Kiel (2005, 2011) identify three key competencies that constitute responsibility, namely the ability to accept personal responsibility, the admission of one's own mistakes and the ability to accept responsibility for serving others. Those possessing high levels of moral intelligence will take responsibility for their own actions and mistakes, as well as bearing the consequences. Additionally, Xu et al. (2017) point out that a number of moral variables (such as responsibility) can encourage individuals to take more care of the natural environment. It is thus suggested in the present work that consumers' green purchase intentions will be impacted by their level of responsibility.

H$_2$: A consumer's level of responsibility will have a statistically significant impact on their GPI.

3.3 Forgiveness

Since humans are not perfect beings, the possibility of making mistakes must be understood and considered. This is very important and if individuals do not learn to be tolerant of mistakes and human imperfection, it is probable that they will

become rigid and uncompromising, which will negatively impact the common good (Manallack, 2006). Within forgiveness, it is important that a person can overcome their own mistakes and let go of mistakes made by others. A person must tolerate their own mistakes, as well as those of others, as long as such mistakes do not fall below established norms. Furthermore, it is important that they are accepting of different people and different ideas, even if their opinions contradict their own (Matsimbe, 2017). It is thus suggested in the present paper that green purchasing intentions will be impacted by a consumer's capacity to forgive.

H₃: A consumer's level of forgiveness will have a statistically significant impact on their GPI.

3.4 Integrity

Manallack (2006) defines integrity as the establishment of harmony between our beliefs and actions. It refers to doing the right thing in order to generate positive outcomes, not just for our own sake, but for the common good (Hosseini et al., 2013). Within integrity, being always honest and truthful is vital (Beheshtifar et al., 2011). Moreover, Clarken (2009) has explained that integrity involves acting in line with one's own principles, values and beliefs, being honest, doing the right thing and keeping promises. Matsimbe (2017) points out that those with high levels of integrity are honest and truthful, as well as consistent in keeping promises and maintaining good values and principles. Such people will behave in the right way even when nobody else is looking (Clarken, 2009). When other people make requests to such individuals, it is likely their requests and interests will be carefully considered (Bani-Khalid & Al-Adamat, 2020). We thus suggest in the present paper that a consumer's green purchase intentions will be impacted by their level of integrity.

H₄: A consumer's level of integrity will have a statistically significant impact on their GPI.

4. Materials and methods

The present research is a descriptive study. Descriptive research refers to the detailed investigation of a phenomena or particular condition. Such studies are highly representative of the situation under investigation. The key purpose of descriptive studies is to test established hypotheses to identify the extent to which they correspond to the situation at hand. In the current research, educated urban consumers form the target population. In prior studies, it has been revealed that those with higher education backgrounds with have more knowledge and understanding of ecological products, and will thus have a good understanding of the green context (Hedlund, 2011; Han et al., 2010; Han & Kim, 2010). All participants in the study must thus be educated to at least graduate level. This minimum education level (graduate) requirement also ensures that children are eliminated from the study, as their understanding of green consumption is likely to be limited (Chan, 2001). Thus, to gain the necessary data pertaining to moral intelligence and GPI, a sample of participants aged over 22 years was created. This age limit was set purposefully, since consumers in this age range are renowned for their green product purchase behaviors and feel empowered to choose the right items from the many available options. A structured questionnaire was used to gather the data. When developing the questionnaire, English was used. However, it was subsequently translated into Arabic to enable the participants to understand the questions. To ensure that there was linguistic equivalence between the English and Arabic editions of the questionnaires, a back-translation was carried out (Bhalla & Lin, 1987). The survey was administered at the homes of the participants by four trained, native fieldworkers and each respondent was awarded a small token of appreciation to encourage participation and the expression of the participants' true feelings and opinions. To develop the independent variable of MI and its related dimensions, the work of Yen and Yang (2018) and Bozaci (2014) was used. To develop the dependent variable of GPI, the work of Rahim et al. (2016) was used. The four key dimensions of MI were created with eight items for integrity (INT), five for responsibility (RES), five for forgiveness (FOR) and five for compassion (CMO). There were four questions relating to GPI. To answer each question, a five-point Likert scale was included. On this scale, strong agreement is represented by a score of 5, whilst strong disagreement is represented by a score of 1. Demographic information was also requested. Verification of the questionnaire's validity and reliability was also tested. To test the validity, the survey was presented to university professors, after which the internal consistency was measured by applying Cronbach's alpha on the variables. The findings of this test were as follows: Integrity = 0.82, Responsibility = 0.72, Forgiveness =0.79, compassion = 0.71 and GPI = 0.81. It is thus shown that the questionnaire was both valid and reliable. It is important that the sample size is established in accordance with the analytical power. In other words, the minimum number for the sample must be determined by the model complexity. The table presented in Green's (1991) work shows four predictors from the research framework. This is based on Gefen et al.'s (2011) work, in which the minimum sample size for medium effect is recommended to be 80. Hair et al. (2010) assert, however, that the sample size must be in excess of 100 to obtain accurate results. A total of 300 questionnaires were thus distributed throughout Amman, the Jordanian Capital, since it has the capacity to reach a vast number of consumers.

5. Results

Altogether, 220 questionnaires were completed, of which 29 had to be eliminated due to being incomplete. This left 191 questionnaires to be used in the research.

5.1 CFA Research Model

The measurement model can be seen in Fig. 1. A total of 26 items were included to assess the 5 first-order constructs (compassion 'CMO', responsibility 'RES', forgiveness 'FOR', integrity 'INT', and green purchase intention 'GPI'). Furthermore, confirmatory factor analysis was carried out to evaluate the measurement tools used in the research model.
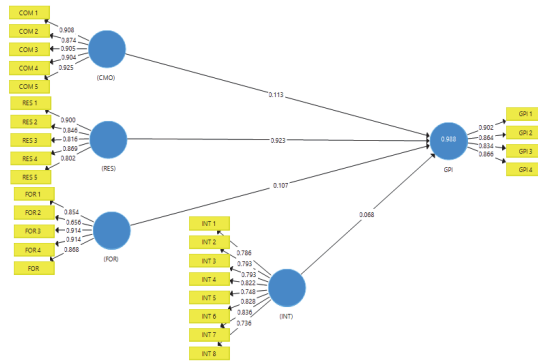
Fig. 1. The Measurement Model

5.2 Convergent Validity

Table 1 presents the findings for the confirmatory factor analysis carried out on the measurement's model. Furthermore, it shows the outcomes of the standardized factor loadings of the model items. It is evident that all standardized factor loadings were in excess of 0.6, varying between 0. 656 to 0. 925. What's more, there were AVE values of between 0.630 and 0.816 for every construct. According to Hair et al.'s (2010) work, 0.5 should serve as the cut-off value, and all values exceeded this. Finally, the composite reliability results for all constructs ranged from 0.924 and 0.957, and all such values are greater than Hair et al.'s (2010) recommended value of 0.7.

Table 1
The Result of Cronbach's Alpha and Convergent Validity of the CFA Model

Construct	Items	Factor loading	CR	AVE	Construct	Items	Factor	CR	AVE
	CMO 1	0.908	0.957	0.816		INT 1	0.786	0.931	0.630
	CMO 2	0.874				INT 2	0.793		
CMO	CMO 3	0.905				INT 3	0.793		
	CMO 4	0.904				INT 4	0.822		
	CMO 5	0.925			INT	INT 5	0.748		
	RES 1	0.900	0.927	0.718		INT 6	0.728		
	RES 2	0.846				INT 7	0.836		
RES	RES 3	0.816				INT 8	0.736		
	RES 4	0.869				GPI 1	0.902	0.924	0.751
	RES 5	0.802				GPI 2	0.864		
	FOR 1	0.854	0.926	0.717	GPI	GPI 3	0.834		
	FOR 2	0.656				GPI 4	0.866		
FOR	FOR 3	0. 914							
	FOR 4	0.914							
	FOR 5	0.858							

5.3 Discriminant Validity

HTMT (as discussed by Henseler; 2015) was gathered in the present research to determine the model's discriminant validity.

Table 2

The HTMT for Constructs

	RES	CMO	FOR	GPI	INT
RES					
CMO	0.674				
FOR	0.560	0.739			
GPI	0.732	0.704	0.522		
INT	0.839	0.618	0.640	0.821	

Since the HTMT values ranged from 0.522 to 0.839, all the values were less than 0.90. This can be seen in Table 2. This indicates that all construct measurements were completely discriminant against each other (Henseler et al., 2015). Once the convergent and discriminant validity of the measurement model had been established, the measurement scale employed for assessing constructs are associated items within the CFA model could be considered both valid and reliable.

5.4 Hypothesized Direct Effects of the Constructs in Structural Model

Table 3 shows a R^2 value for GPI of 0.988. This thus indicates that 98.8% of GPI differences are due to the predictors (CMO, RES, FOR, INT). Research by Chin (1998) recommended that R^2 values must meet a cut-off value of at least 0.19, and this was achieved in the present study.
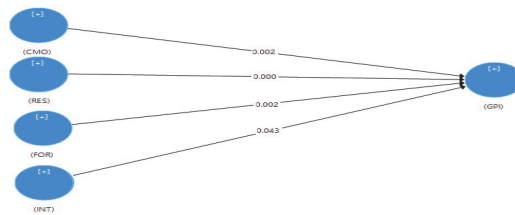
Fig. 2. PLS Algorithm for Hypothesis Testing

Furthermore, the Q^2 value for GPI was far greater than zero (0.645), meaning that the model has great predictive relevance to the recommendations made by Chin (2010). It is demonstrated that the model has a sufficient level of fit, as well as high predictive relevance. All VIF values were found to be below five (2.701, 2.853, 2.433, and 2.815), which is in line with recommendations made by Hair et al. (2016). The following p-values were found for predicting the GPI CMO: 0.002, RES: 0.000, FOR: 0.002 and INT: 0.043. Moreover, the path coefficients (S, B) values were as follows: (CMO to GPI) 0.113, (RES to GPI) 0.923, (FOR to GPI) 0.107 and (INT to GPI) 0.068. Since this indicates positive relationships, hypotheses H1, H2, H3, H4 can be accepted.

Table 3
Hypothesized Direct Effects Structural Model

Path	St, β	St. d	R^2	Q^2	F^2	VIF	T-value	P-value
CMO → GPI	0.113	0.038	0.988	0.645	0.382	2.701	2.969	0.002
RES → GPI	0.923	0.085			0.567	2.853	10.858	0.000
FOR → GPI	0.107	0,037			0.383	2.433	2.901	0.002
INT → GPI	0.068	0.039			0.132	2.815	1.742	0.043

6. Discussion and conclusion

Previous research has investigated the relationship between moral intelligence and consumption (such as the work of Bozaci; 2014) and it has been revealed that moral intelligence and its relevant dimensions have a positive influence on consumption. The present research serves as a valuable contribution to the topic by exploring the influence that moral intelligence dimensions (compassion, responsibility, forgiveness, and integrity) have on consumers' green purchase intentions. It is the first study of its kind to do so. To analyze the research variables, PLS-SEM was performed, which revealed that green purchase intentions are positively influenced by the dimensions of moral intelligence. Whilst integrity means that consumers intend to purchase green items due to a desire to establish equilibrium between their beliefs and actions, responsibility encourages them to purchase green items in order to behave in a responsible manner. Compassion refers to a customer's decision to purchase a green item out of genuine concern and consideration for the environment. Lastly, since humans are imperfect by nature, accepting mistakes and attempting to rectify them through forgiveness is crucial in determining a customer's behavior toward the purchasing green goods. The summary above shows that all four dimensions of moral intelligence dimensions positively influenced purchase intentions. Finally, three moral theories (Utilitarianism, Deontology, Virtue Ethics) discussed by Frederiksen (2010), as well as Ajzen's Theory of Planned Behavior (1991) have been effectively employed. They have revealed that moral intelligence can increase consumers' intentions to buy environmentally-friendly products. After carrying out the present research, a number of recommendations can now be made for future investigations. First of all, all participants in the current study were residents of Amman. In future, studies should consider investigating different areas within Jordan, as well as different countries. Moreover, the present research only explored the effects of moral intelligence on the green purchasing intentions, and thus future research should include other variables to investigate (for example, Islamic ethics).

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