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DELVING INTO THE COMPLEXITY OF CONSUMER GREEN PURCHASING BEHAVIOUR. A MULTIPLE METHOD APPROACH

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“I think there’re a very few people on this earth that are totally free.

I'm not free but I'm working on it”

(Stevie Wonder)

Ai miei genitori,

con immenso amore

Index

Preface

"I suppose the important thing is to make some sort of difference", she said. "You know, actually change something".
"What, like change the world you mean?"
"Not the whole entire world. Just the little bit around you".
One Day, David Nicholls

Nowadays sustainable consumption has shifted from an eco-friendly attitude into a necessary international everyday life-style, since it is apparent how environmental recovery cannot wait longer. To ensure environmental protection, EU institutions are establishing increasing numbers of mandatory remedial solutions (e.g., stricter waste recycling standards), which impose important or minor changes on consumers consumption behaviours and habits. However, next to legislative enforcements, the potential of non-mandatory actions spontaneously taken by consumers could play an even more important role and should be incentivised accordingly. Consumers are powerful actors in promoting eco-responsible behaviours: they have the real power of spreading more sustainable consumption life styles and change the current state of things. They have the power to boycott those firms which are acting unethically, reward ethically or environmentally friendly products and push new or revisited forms of consumptions.

It is apparent how we are still a long a way off from cutting the line and, from someone's point of view, it can be seen as utopian. However, there already exist segments of consumers moving to this direction, who may spur other consumers on, resulting in a win-win strategy for consumers themselves and the environment. That is why it is of great importance to analyze the role of consumers and the chances they may carry out.

To encourage consumer transition from shallow to deep environmental embracement more research is needed to better understand consumer beliefs toward environmentally-related products, as well as the extent to which consumers' environmental dispositions and attitudes actually play a role in their consumption behaviours. Missing to understand what individuals mean by "environmental responsibility" and "eco-friendly consumption" can even lead to ineffective policies and practices by firms, non-governmental and governmental organizations.

This work has its roots in the alleged considerations. It aims to contribute to incentivise the diffusion of more eco-friendly consumption patterns by delving into the complexity of green purchasing behaviour and exploring some of the relevant positive and negative antecedents that, respectively, fuel and obstacle the purchasing of eco-friendly products.

This two-year work involved several persons and organizations to whom I am sincerely grateful.
I am immensely grateful to my parents: they have been a source of daily encouragement. They shared with me joys and sorrows and did their best to support my decisions. I am grateful to them more than my words can express.
I am grateful to Prof. Alberto Pastore who strongly believed in me since the first steps of my PhD, and encouraged me to deepen this topic.
I am grateful to Prof. Maria Vernuccio who supported me with unique altruism. We shared joys and sorrows and built an effective professional collaboration as well as a valuable friendship.
I am also grateful to Prof. Patrick De Pelsmacker, one of the persons I admire the most, for cleverness, acumen, fairness, kindness and inner happiness. To work with him means a lot to me.
This project has been entirely developed without any funds. That is why I am immensely grateful to all of the ecological institutions (e.g., CNR Ambiente, FAI, Green Belgium, Green Party, Inachis, ISDE, Legambiente, LIPU, ProNatura, WWF) which spontaneously cooperated with me without any monetary incentives. I am grateful to Ascanio, Dario, Elena and Clarissa for their support in creating a network of green consumers to involve in the study, and to Patrizia and Francesca for their valuable help in the back translation process. Without their cooperation this work would not have been developed.
I thank all the people that are in my heart: they are all in this work.
I turn my minds to my grandparents, my angels. I wish they could be proud of me today.

Camilla Barbarossa

General introduction

This research falls into the two realms of business ethics identified by O'Fallon and Butterfield (2005) as conceptual and empirical ethics, since it theoretically and empirically explored the complexity of green purchasing behaviour.

Adopting an attitude-intention-behaviour theoretical frame, it investigates what positive and negative antecedents determine the purchasing of eco-friendly products. Despite recent studies have been reporting how consumers are more and more concerned about environmental deterioration and willing to adopt more sustainable consumption life styles (e.g., to purchase products which damage the environment to a minor extent), green products market shares are still rather low and the diffusion of eco-friendly purchasing behaviours is still a long way off from being a common standard.

Such inconsistencies emphasize how a more research is needed to deepen the complexity of green purchasing behaviour and its relevant determinants, in order to encourage consumer transition from shallow to deep environmental embracement within daily consumption life styles.

Accordingly, the research questions that this work aims to solve are:

1. Where is the research on green consumer behaviour lacking? Which are the topics which require to be further theoretically and empirically investigated? (Chapter 1)
2. What are the negative factors that prevent consumers from purchasing green goods? Which are the most important ones? How are negative motives related to each others? (Chapter 2)
3. What are the relevant positive motives that fuel green purchasing behaviour? How are positive and negative motives related? How do positive and negative motives exert an impact on green purchase intention and behaviour? (Chapter 3)
4. Are there significant differences in the impact exerted by the alleged antecedents on green purchasing if consumers hold different psychographic traits? Are there significant differences in the impact exerted by the alleged antecedents on green purchasing if countries have different levels of eco-awareness? (Chapter 4)

This work has been structured as a sequence of research papers, aiming to answer the alleged research questions.

Chapter 1: "Sustainable consumption: investigating theory and research in the marketing context. A literature review"

This chapter offers a brief review of how consumers, institutions and researchers have been drawing attention on sustainable consumption since the 1970s. This *excursus* emphasized the prominent role of consumers, and how a more research is needed to encourage consumer transition from shallow to deep environmental embracement. Hence, the preliminary questions it aimed to answer were: (1) where is the extant research on green consumer behaviour lacking? (2) Which specific domains require to be further theoretically and empirically investigated?

In order to answer these research questions, a rigorous 2000-2011 literature review was conducted, which involved the selection of 38 (mostly) marketing "A" and "B" journals and 26 key-words, and which resulted in the collection of 579 scientific articles. All the articles were content analyzed and summarized in 5 thematic categories and descriptive statistics. Findings revealed how some of the most unsolved issues pertain to: (1) the inconsistency between consumer green intention and behaviour (*intention-behaviour* gap), the persistence of deterrent factors which impede consumers to purchase eco-friendly products and the relationships among such factors; (2) the positive motives which incentivize consumers to purchase green goods, since previous research mostly focused on altruistic variables. On the contrary it almost neglected to consider in a unique framework of analysis positive altruistic and positive selfish motives as antecedents of green purchasing behaviour, as well as how positive and negative motives simultaneously exert an impact on green purchase intention and behaviour. In addition, extant models mostly adopted the Theory of Planned Behaviour, while specific models for green purchasing behaviour have been rarely developed and tested in different consumer targets and countries.

These findings became the starting point of the entire work.

Chapter 2: "Why do not people buy eco-friendly products? An exploratory approach"

This chapter investigates what factors prevent consumers from purchasing eco-friendly products. The apparent gap between consumer environmental concern and willing to buy green goods, on the one hand, and low market shares of green products, on the other hand, calls for developing consumer green behaviour knowledge. Therefore, the work falls into the streams of research pertaining to the *attitude-behaviour* and the *intention-behaviour* gaps. The *attitude-behaviour* and the *intention-behaviour* gaps were first analyzed from a methodological perspective (i.e. bias of socially responsible responses, missed enforcement of the principle of specificity). Then, the methodological perspective was integrated with a "substantial" approach: there exist factors that force consumers to bear additional sacrifices when purchasing eco-friendly products, so that green goods are not perceived as effective substitutes of conventional products. Previous research neglected to involve *subjectivist* consumers, namely well established environmentally minded consumers (e.g., active members of

ecological associations) who spontaneously declare to be willing to buy eco-friendly products but do not buy them. In addition, scholars neglected to investigate how different deterrent factors relate to each others. To this end, an exploratory qualitative study of 51 in depth face to face semi-structured interviews involving *subjectivist* consumers was conducted, data analyzed with cognitive maps technique (Decision Explorer) and structural indices (UCINET). Results showed how perceived higher prices, lower quality, ineffective communication and low availability of eco-friendly products cluster in three macro-categories of additional efforts: extra money, time and cognitive resources consumers have to bear to purchase green goods. Relationships among the factors were finally presented. Due to the exploratory qualitative nature of the study such findings could not be generalized. However, they came in useful to develop the next steps of the work, presented in Chapters 3 and 4.

Chapter 3: "Positive and negative motives towards the purchasing of eco-friendly products. A multi-group comparison between "green" and "non-green" consumers, in Italy"

This chapter investigates what positive motives fuel green purchasing behaviour. In addition, on the basis of the findings of Chapter 2, it investigates the simultaneous impact of positive and negative motives on green purchase intention and behaviour.

Referring to the positive motives, scholars focused on altruistic variables as antecedents of green purchasing behaviour, while they almost neglected to consider selfish positive antecedents but a few exceptions. To overcome this gap, in this work, the purchasing of eco-friendly products has been conceptualized as the result of two macro-categories: positive and negative motives which respectively incentivize and obstacle consumers to purchase green goods. In turn, positive antecedents have been conceptualized as composed of both altruistic and egocentric (teleological and deontological) variables. This conceptualization led to the development of a theoretical model with four independent variables, three positive, one altruistic (*attitudes towards environmental consequences of purchasing eco-friendly products*), two ego-centric (*green self-identity* and *green obligation*), one negative (*additional individual efforts*), one mediating (*intention to purchase eco-friendly products*) and one dependent (*self-reported purchasing of eco-friendly products*).

To operationalize the constructs, literature review, 6 focus groups and one pilot study were conducted. The main study involved two different groups of consumers: environmentally minded and non environmentally minded consumers, all responsible for the grocery shopping in the household. In the end, 926 questionnaires (453 green consumers, 473 non-green consumers) were analyzed. The model was tested by structural equation modelling technique (following the recommended two-step approach of confirmatory factor analysis and full structural model analysis). Multi-group analysis was finally conducted and different levels of invariance were tested. Some relevant results arising from the multi-group analysis confirmed, for example, the trade-off between positive and negative motivations to the formation of green

purchase behaviour, the crucial role played by additional individual efforts in decreasing the probability that non-green consumers will be intended to buy eco-friendly products as well as green-consumers will not buy eco-friendly products at the point of purchase.

Chapter 4: "Purchasing eco-friendly products: A cross-national multi-group analysis of "green" and "non-green" consumers, in Italy and Belgium"

The cross-national validation of consumer models is a necessary step. However, the cross-national validation of specific green purchasing behaviour models different from the Theory of Planned Behaviour has been rather scarce. It enables to statistically test whether the hypothesized antecedents are significant also in other Countries and, furthermore, whether they exerted an impact on the dependent variables with similar magnitudes in different Countries.

This Chapter aims to validate the conceptual model proposed in Italy also in Belgium, as Belgium is a country with an higher level of eco-awareness. To discriminate between Italy and Belgium, cultural traits (Hofstede, 2010) and infrastructural data (EUROSTAT, 2011; ISTAT, 2011) have been considered as secondary data.

The procedure of data collection as conducted in Italy was conducted in Belgium, subject to the fulfilment of methodological requirements (e.g., back translation). The main study involved two consumer groups: green and non-green Belgian consumers, and 596 questionnaires were collected (219 green consumers, 377 non-green consumers). By means of structural equation modelling technique and multi-group analysis (subject to the fulfilment of the required invariances), the model was tested on the two Belgian consumers groups and simultaneously on the total amount of consumers involved in the study (1,522 consumers divided as 453 Italian green consumers, 473 Italian non-green consumers, 219 Belgian green consumers, 377 Belgian non-green consumers). Results confirmed, also in Belgium, some of the findings arouse in Chapter 3 and added new facets to the purchasing of eco-friendly products. First, it confirmed how selfish positive motives seemed to be at least as important as altruistic ones. In addition, results revealed that there appears to be a segment of "cross-national" green consumers that develops buying behaviour in a similar way across the two countries, despite the country's stronger or weaker environmental tradition and eco-awareness diffusion. Finally, it revealed no significant differences between green and non-green consumers in Belgium.

The present study has a number of limitations that offer opportunities for further research. In particular, the study involved self-reported measures. Behavioural measures of green purchasing were self evaluations. Future research should integrate a self-reported research design with experiments to overcome this weakness. In addition, referring to the Additional Individual Efforts (AIE), while a stream of research generally referred to constraints that impede green products to be recognized as effective substitutes of conventional goods (e.g., Gupta and Ogden, 2009), there exist other scholars (e.g., Carrington *et al*., 2010) who distinguish between *product-related* and *context-related* barriers. Future research should test

the proposed model with the distinction of the two typologies of barriers instead of promoting only one negative construct.

Chapter 1

Sustainable consumption: investigating theory and research in the marketing context. A literature review

Abstract

Purpose - This study aims to identify, synthesize, and evaluate extant research on environmentally friendly consumption, with the ultimate aims of unveiling trends in this field and provide a reference point to guide further research on the subject.

Design/methodology/approach - Relevant articles were identified using both electronic and manual bibliographic search methods. Altogether, 579 articles were identified in 38 academic (mostly marketing) journals published during the period 2000-2011. Each article was content-analyzed along major dimensions, concerning authorship profile, manuscript characteristics and topical area.

Findings - Overall, it was revealed that this body of research has been increasing in the years, mirroring the increasing interest that consumers and institutions give to environmentally friendly consumption and sustainable development. What determines green consumption behaviour is one of the most researched issues, with contributions investigating both positive (mainly altruistic) and negative factors that, respectively, fuel and obstacle consumers to engaging in more eco-friendly consumption patterns. Consumer willingness to extra pay for eco-friendly products (or labels) it is also widely investigated, in both unconstrained and constrained decisional environments. Finally, consumer perceptions of CSR, as well as the impact of CSR actions on consumption behaviour are investigated.

Research limitations - The fragmented nature of this type of research made the adoption of a bibliographic analysis (qualitative content analysis) an appropriate approach. However, a meta-analytical assessment (quantitative content analysis) could yield more quantitative insights.

Originality/value - Although research on environmental marketing has experienced an exponential growth in the last decade, it has been criticised for being too fragmented in some cases, repetitive and not original in others. This study provides one attempts to identify and evaluate extant knowledge on the subject in a systematic and integrative manner, to identify certain streams of research requiring further attention in the future, and helping in this way the discipline's theoretical advancement and practical development.

Keywords

Sustainable consumption, eco-friendly consumption, green marketing, content analysis

1.1 Introduction

The importance of the natural environment has always been apparent, as the environment supplies citizens and organizations with inputs, offers destinations for their outputs, and provides a physical space within which operations take place (Leonidou and Leonidou, 2011). Unfortunately, even if apparent, the role played by the environment has been constantly overlooked. To some extent this can be ascribed to the *anthropocentric*[1], as opposed to the *ecocentric*[2], approach which guided people and business organisations "as an invisible hand" (Leonidou and Leonidou, 2011, p. 70) to seek profit maximization, irrespective of any negative consequences on ecological matters (Shrivastava, 1995a; 1995b).

Such an approach was revisited in the early 1970s, due to the first apparent worrying signs of systematic maltreatment of the environment, as reported in *The limits of growth* report (Meadows *et al*., 1972). To strike a balance in the human-nature edge, governments in the developed Western parts of the world started to introduce new legislation about environmental protection while, through private initiatives, the first environment-support groups made their début (Cleveland *et al*., 2005). From a research perspective, these developments incentivised a few scholars (e.g., Davis, 1973; Kassarjian, 1971) to delve more into environment-related issues and explore the reverse impact of (taking into account) the environment while developing business strategies. However, these early attempts were not particularly successful, as the business community viewed them with great scepticism and fear, with only a few firms taking a proactive stance (Hart, 1997), and the mass of consumers still underestimating the issue of environmental deterioration.

The 1980s have been called the "lost decade", as environmental disasters reached the climax[3]. Governments proceeded with both mandatory and non-mandatory stricter actions regulating the protection of the environment, as emerged in the Brundtland report, *Our common future*

[1]An approach is defined *anthropocentric* when humankind is regarded as the most important element of existence.

[2]An approach is defined *ecocentric* or *biocentric* when the rights and needs of humans are not more important than those of other living things.

[3]Catching the scientific world as well as policy makers by surprise, measurements by British researchers of the size of the ozone hole were first reported in 1985. The *Global 2000* report recognized for the first time that species extinction was threatening biodiversity as an essential component of the Earth's ecosystems. As the interdependence of environment and development became increasingly clear, the United Nations General Assembly adopted the *World Charter for Nature*, bringing attention to the intrinsic value of species and ecosystems (UN 1982). Besides new discoveries, the 1980s also saw a range of catastrophic events that left a permanent mark both on the environment and on the understanding of its connection to human health. In 1984, a leak from a Union Carbide plant left 3,000 people dead and 20,000 injured in Bhopal, India (Diamond 1985). The same year, up to one million people starved to death in Ethiopia. In 1986, the world's worst nuclear accident happened as a reactor at the Chernobyl nuclear power plant exploded in the Ukrainian Republic of the Soviet Union. The 1989 spill of 50 million litres of oil from the *Exxon Valdez* super-tanker into Alaska's Prince William Sound demonstrated that no area, however remote and 'pristine', is safe from the impact of human activities.

(WCED, 1987). Accordingly, increasing numbers of firms began to insert sums into their financial budgets for investing in infrastructures to meet environmental regulation (MacLean, 2005). However, this pro-environmental approach still represented a minor habit. An upsurge in economic growth observed in many developed countries at that time, a consequent trend toward individualistic consumer patterns, a lack of innovative solutions[4], the existence of consumers confusion and the appearance of deceptive green claims (e.g. *green washing* practices) were some of the reasons that delayed a more rigorous ecological approach to business (Peattie, 1995; Kangun *et al*., 1991). Academic interest in the subject diminished, with only a handful of articles written on environmental matters (Leonidou and Leonidou, 2011). However, it was at this time that the concepts of "strategic social responsibility" and "sustainability" were first introduced, providing the driving force behind many studies (Peattie, 2001; 1995).

Increasing media coverage of environmental disasters caused by industrial action, rising pressure of ecological groups' activities on politicians and public opinion were some of the reasons for the resurgence of interest in environmental phenomena by governments, organizations, and people in the early 1990s (Kalafatis *et al*., 1999). In response to this, the academic community made numerous contributions, tackling such issues as "environmentalism", "sustainable development", and "enviropreneurialism" (Sharma and Vredenburg, 1998; Walley and Whitehead, 1994).

In the 2000s, interest in environmental issues has never been so high: the growing globalization trends and the new media development[5] have been causing quite worldwide stirs of the increasing environmental disasters (e.g. the Fukushima Daiichi nuclear disaster in 2011). Such elements led governments, organizations and consumers to embody more permanent environmental values, and be more conscious of ecological issues (Melillo and Miller, 2006; Karna *et al*., 2003). In response, many companies began viewing environmental problems as potential opportunities to exploit by incorporating into their products and practices genuine environmental attributes and ethical qualities (Curtin, 2007). Finally, academic research on environmental marketing has totally skyrocketed, reflecting in high numbers of contribution within the marketing domain (Chabowski *et al*., 2011; Leonidou and Leonidou, 2011; Teneja *et al*., 2011; Chamorro *et al*., 2009; Vaaland *et al*., 2008). Table 1 provides a complement overview about key and secondary drivers, main environmental problems, attitude by firms, operative business questions and main marketing/management themes for each decade.

[4]Firms mostly adopted "end of pipe" technological solutions, namely they attempted to reduce pollution after it has been already generated, instead of adopting infrastructure and processes reducing it in the early stages.

[5]As stated by Kotler (2011) "Word of mouth has become a growing force in shaping consumer decisions. Consumers can be e-mailing, blogging, and tweeting to their friends and acquaintances good things or bad things about a company. Companies are increasingly swimming in a highly transparent fishbowl" (pp. 133-134).

Table 1. Milestones in environmental marketing/management thought

Year	1970s	1980s	1900s	2000s
Key driver	Conservation	Regulation	Consumers	Global market mechanisms
Secondary drivers	Lobbies Public interest Legal challenges Local pressure groups	Media Maturing environmental movement Ecological disasters and discoveries	Pressure groups Legislation Media Conservation concerns	Consumers Regulations Pressure groups Media Politicians Shareholders
Main environmental problems	Local air, sea, lake and land pollution Environmental disasters (Seveso, IXTOC)	Ozone depletion Acid rain Environmental disasters (Chernobyl, Bhopal, Piper Alpha, Exxon Valdez)	Ozone depletion Environmental disasters (e.g., Kuwait sea island oil terminal) Animal extinction Rain forest destruction Acid rain	Global warming Air pollution in major cities Water shortage Stretch of natural resources to the limits (e.g., deforestation) Overpopulation
Attitude by firms	Compliance Marketing was used as a tool to indicate this compliance Environmental issues were seen as a threat	Embracing environmental issues with an individualistic attitude and without innovating Environmental strategies became possible	Environmental friendliness can be communicated through marketing effectively Reactive and short-term responses to environmental problems Environmental issues as an opportunity	Proactive, innovative and long- term approaches towards environmental issues Environmental culture and environmentally-friendly marketing strategies Environmental issues as a source of competitive advantage

(continued)

Year	**1970s**	**1980s**	**1900s**	**2000s**
Operative business questions	Are we harming the environment? How do we deal with the "environmental problem"?	Are we in compliance? How do we cut environmental costs?	How do we satisfy our green customers? How do we deal with this 'environmental opportunity'? How can we communicate the green aspects of our products? How can we become environmentally friendly?	Are we doing the right thing? How can we become genuinely sustainable? How can we develop a green philosophy across the entire organisation? How do we gain competitive advantage?
Main marketing/management themes	Air pollution and marketing Ecologically-concerned consumers Environmental advertising Ecological marketing Societal marketing Socially-concerned consumers Socially responsible marketing	Socially-concerned marketing Marketing ethics Corporate social responsibility Environmental marketing Environmental management systems and practices Ethics in marketing	Corporate social responsibility Enviropreneurial marketing Eco-orientation Green marketing and advertising Corporate environmentalism Green markets, segments and consumers Environmental strategies as a source of competitive advantage Environmentally-based marketing programs Environmental management systems and practices Green alliances	Corporate social responsibility Enviropreneurial marketing Eco-orientation Corporate environmentalism Green marketing strategy Sustainable marketing and development Environmental New Product Development Green Supply Chain Management Environmental resources and capabilities Environmental strategies and financial performance

Source: Leonidou, C.N. and Leonidou, L.C. (2011), "Research into environmental marketing/management: a bibliographic analysis", *European Journal of Marketing*, Vol.45, No.1/2, pp. 68-103.

Narrowing the attention on consumers, over the past 30 years research into eco-friendly consumer behaviour and sustainable consumption have experienced cyclical changes mirroring the corresponding fluctuations in society's environmental interest and concern (Cleveland *et al*., 2005). Precipitated by the energy crisis of the mid-1970s, an initial flurry of research into environmental consumer behaviour was ensued by a dearth of activity, and the topic waned in the eyes of consumers and government policy makers during the 1980s. From the 1990s onwards, however, a growing chorus of scientists have warned of the dire consequences of human economic activities (e.g. consumption habits) on the planet's ecological balance and future existence (e.g. depletion of the ozone layer, global warming). The 1990s have been labelled the "decade of the environment"[6] (Drumwright, 1994; Menon *et al*., 1999) as environmental concerns assumed a greater level of importance in consumers' product choices and decisions. For many of today's increasingly sophisticated and knowledgeable consumers, the ecological environment is likely to be at or near the top of their list of social concerns. As stated by Kotler (2011), "marketers have viewed consumers as choosing among brands on the basis of functional (Marketing 1.0) and emotional (Marketing 2.0) criteria. But many of today's consumers are adding a third dimension - namely, how the company meets its social responsibilities (Marketing 3.0). Consumers today carry new concerns, doubts, and fears" (p. 133).

Consumers are key actors in promoting more eco-friendly consumption patterns, as they have the power, through their consumption activities, to force companies to act more responsible, punish those firms which are competing unfairly and reward ethical and eco-friendly products available in the market. In order to encourage consumer transition from shallow to deep environmental embracement "more research is needed to better understand consumer attitudes and beliefs toward environmentally-related products, such as drivers of consumer pro-environmental behaviour" (Leonidou and Leonidou, 2011, p. 90). Not understanding the general public and its awareness about environmental issues means to deny the extent to which specific economic, technological and social changes also relate to the nature of individual preferences and the degree to which society is made up of people with heterogeneous preferences. In addition, failure to understand what a society means by "environmental" responsibility can lead to ineffective policies and practices by firms, non-governmental and governmental organizations (Auger *et al*., 2007).

Such a context encourages to question about the current state of research on sustainable consumption within the marketing domain. In particular, it would be of interest to find out which are the most critical topics concerning green consumption whose current research is lacking, and which issues require to be further theoretically and empirically investigated.

To this end, this chapter is structured as follow. To have an overview of the most recent contributions about sustainable consumption, a rigorous literature review is conducted through

[6]As opposed to the 1980s which have been named as "the lost decade".

qualitative content analysis technique (§§1.2 and 1.3), and discussion of findings are proposed (§§1.4 and 1.5). Finally, limitations in the extant research are emphasized, which provide cues to start up future studies (§1.6).

1.2 Characteristics of sustainable consumption. A 2000-2011 literature review

The aim of this study is *to analyze the main characteristics of 2000-2011 research on sustainable consumption in marketing, observing what work has been done, and how, where and by whom it has been carried out*. Answering these questions will not only contribute to understand the current situation, it will also allow to determine what still needs to be done in terms of research in the area and formulate a research agenda to develop further works.

1.3 Methodology

To pursue this goal, a rigorous literature review of scientific marketing articles addressing sustainable consumption has been conducted. Scholarly articles were chosen because what is addressed there later on is "absorbed" in textbooks and conveyed to students and other citizens, influencing managers and managers-to-be in their thinking and behaviours.

1.3.1 Selection of journals

Marketing journals have been referred as they are consistent with the scope of the study and capture adequately the developments in the field. They have been selected according to the list of all of the marketing journals provided by the American Marketing Association[7]. Then, only those general[8] marketing journals which had an impact factor as high as to be recognized as "A" or "B" journals were kept, while the others were not considered.
In addition, specific scientific management journals have been added, as they had been cited by Chamorro *et al*. (2009) and Vaaland *et al*. (2008)[9] to have included articles concerning sustainable consumption from a consumer perspective.

[7]Available at: http://www.marketingpower.com/Community/ARC/Pages/Research/Journals/Other/default.aspx.
[8]Within the list, Journals which refer to specific and not consistent topics (e.g. International Journal of Bank Marketing, International Journal of Wine Marketing, Journal of Direct Data and Digital Marketing Practice) where not considered.
[9]Chamorro, A., Rubio, S. and Miranda, F.J. (2009), "Characteristics of research on green marketing", *Business Strategy and the Environment*, Vol. 18, No. 4, pp. 223-239 aims to describe and analyze the main characteristics of articles on green marketing published in the most relevant journals within the period 1993-2003. Vaaland, T.I., Heide, M. and Grønhaug, K. (2008), "Corporate social responsibility: investigating theory and research in the

Then, only those management journals which had an impact factor as high as to be recognized as "A" or "B" journals were kept, while the others were not considered.
The choice of adding a few management journals lies in that sustainable consumption has been often researched in connection with specific marketing issues (e.g. price and advertising) as well as encompassed into the wider corporate ethical domain (e.g. CSR). Hence, the combination of marketing and management journals aims to capture the whole breadth of phenomena possibly influencing how sustainable consumption is addressed.
Table 2 shows the finalized 38 journals used as sample frame for the identification of journal articles to be content analyzed, the label for each journal and the databases used.

1.3.2 Identification of articles

The period 2000-2011 was set as time frame for the articles selection[10], as one decade has been considered a good lapse of time to collect relevant recent contributions and develop trends in the domain. The journals were both electronically and manually screened for articles including at least one of the following keywords in title, abstract or keywords. Keywords selection resulted from the combination of Chamorro *et al*. (2009) and Vaaland *et al*. (2008)'s keywords with further keywords extracted by the analysis of the previous literature on sustainable consumption.
The finalized 26-keyword list is reported in Table 3.

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marketing context", *European Journal of Marketing*, Vol. 42, No. 9/10, pp. 927-953, instead, aims to develop an integrating overview of the present status of the theory of corporate social responsibility (CSR) applied in the marketing context by reviewing marketing articles within the period 1995-2005. The Author selected these two articles as two of the most cited articles among those of literature review. In addition, they cover different aspects of sustainable consumption that were considered relevant for the scope of the study. The Author acknowledges about the existence of more recent and broader contributions (e.g. Chabowski *et al*., 2011; Leonidou and Leonidou, 2011; Teneja *et al*., 2011). Such contributions have been considered in the development of the whole work. However, they had not been published yet when this literature review started.

[10]This research has been conducted until early December 2011. Consequently, some of the issues referring to December 2011 might have been not available and not included in the analysis. The Author acknowledges about this limitation and commit herself to complete the collection within January 2012. However, due to the growing attention that scholars have been giving to the topic at hand, she preferred to include the year 2011 (with some issues of December not included yet) in the study.

Table 2. Marketing journals applied as sources in the period 2000-2011

	Journal	Label	Numbers of artices	Database
1	Advances in Consumer Research	ACR	17	Ebscohost
2	British Journal of Management	BJM	8	Scopus
3	Business Ethics Quarterly	BEQ	21	Ebscohost
4	California Management Review	CMR	3	Ebscohost
5	Decision Sciences	DS	0	Scopus
6	European Journal of Marketing	EJM	17	Scopus
7	Industrial Marketing Management	IMM	1	Scopus
8	International Journal of Research in Marketing	IJRM	5	Ebscohost
9	International Marketing Review	IMR	8	Ebscohost
10	Journal of Academy of Marketing Science	JAMS	22	Ebscohost
11	Journal of Advertising	JA	7	Ebscohost
12	Journal of Advertising Research	JAR	3	Ebscohost
13	Journal of Business and Industrial Marketing	JBIM	1	Scopus
14	Journal of Business Ethics	JBE	248	Ebscohost
15	Journal of Business Research	JBR	34	Ebscohost
16	Journal of Consumer Affairs	JCA	6	Ebscohost
17	Journal of Consumer Marketing	JCM	29	Ebscohost
18	Journal of Consumer Policy	JCPo	32	Ebscohost
19	Journal of Consumer Psychology	JCPsy	1	Ebscohost
20	Journal of Consumer Research	JCR	7	Ebscohost
21	Journal of Current Issues and Research in Advertising	JCIRA	2	Scopus
22	Journal of International Business Studies	JIBS	0	Scopus
23	Journal of International Marketing	JIM	1	Scopus
24	Journal of MacroMarketing	JMacroM	24	Scopus
25	Journal of Marketing	JM	6	Ebscohost
26	Journal of Marketing Management	JMM	14	Scopus
27	Journal of Marketing Research	JMR	3	Ebscohost
28	Journal of Marketing Theory and Practice	JMTP	2	Scopus
29	Journal of Product Innovation Management	JPIM	1	Scopus
30	Journal of Public Policy and Marketing	JPPM	9	Ebscohost
31	Journal of Retailing	JR	8	Scopus
32	Journal of Retailing and Consumer Services	JRCS	0	Ebscohost
33	Journal of Strategic Marketing	JSM	2	Scopus
34	Long Range Planning	LRP	4	Scopus
35	Marketing Science	MS	0	Scopus
36	MIT Sloan Management Review	MSMR	5	Scopus
37	Psychology and Marketing	PM	8	Scopus
38	Public Relation Review	PRR	20	Scopus

Source: Self elaboration

Table 3. Keywords list used in the study

Keywords	
1. boycott	14. green behavior/behaviour
2. consumer vulnerability	15. green communication
3. corporate citizenship	16. green consumer
4. corporate social responsibility	17. green marketing
5. CSR	18. green product
6. eco-friendly products	19. green purchasing
7. ecological marketing	20. moral
8. environment	21. recycling
9. environmental marketing	22. social
10. environmentalism	23. social responsibility
11. ethical	24. sustainability
12. ethically	25. sustainable development
13. ethics	26. unethical

Source: Self elaboration

1.4 Data analysis and general results

The selection procedure resulted in 610 articles of relevance, which were further creamed off (Teneja *et al*., 2011): 31 articles have been withheld as they cited the word "environment" in the meaning of context or space, while 579 articles were finally analyzed.
Each article was analyzed using a data collection sheet to gather information relating to:

1. the year of publication;
2. the journal where the article has been published;
3. the name of the author(s);
4. the number of the author(s);
5. the origin[11] of the author(s);
6. the type of study (purely conceptual/theoretical "T" or empirical "E").

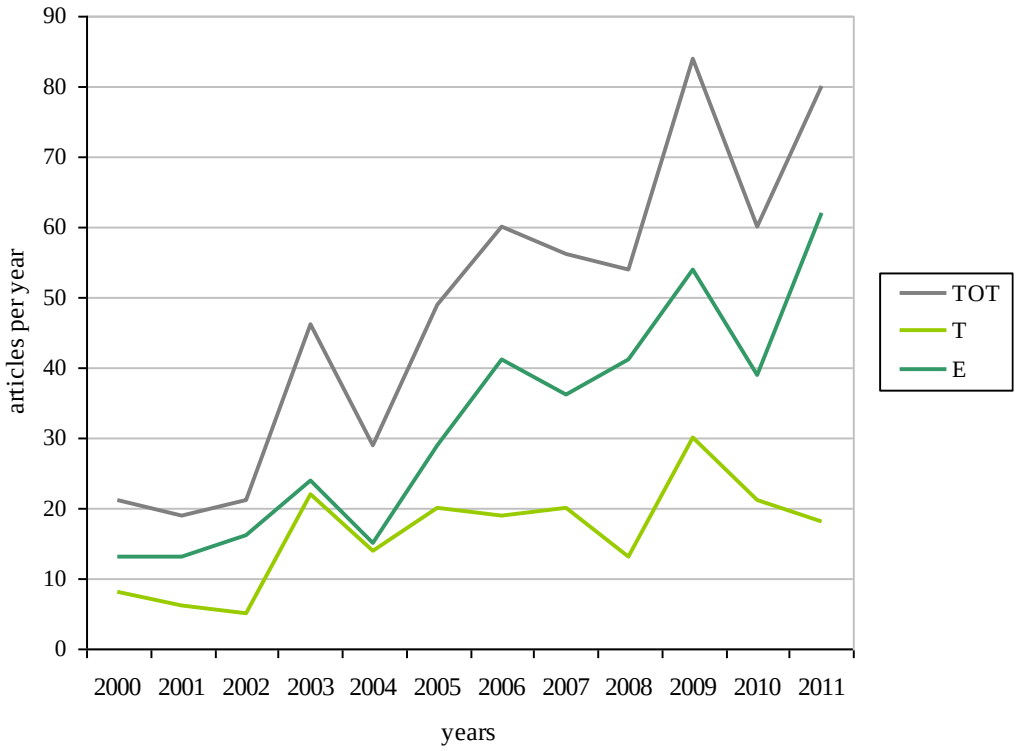
Appendix A[12] reports the full list of 579 articles extracted and the related alleged information.

[11]The origin is based on the country of the university each author belonged to at the time of publication. This choice allows to detect not only the most important authors but even the most sensitive countries to the matter at hand within the time of analysis.
[12]Appendix A can be consulted at the end of this Chapter.

Table 4. Number of (theoretical "T" and empirical "E") papers per year

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Σ
T	8	6	5	22	14	20	19	20	13	30	21	18	196
E	13	13	16	24	15	29	41	36	41	54	39	62	383
TOT	21	19	21	46	29	49	60	56	54	84	60	80	579

Figure 1. Number of (theoretical "T" and empirical "E") papers per year



Among the 579 articles, 196 (33.8%) were conceptual while 389 (68.2%) were empirical. According to the year of publication, it is apparent how research on sustainable marketing has been increasing in the years, but with different yearly rates (Table 4, Figure 1). The total amount of papers increased dramatically from 2000 to 2011. It increased every year but between 2003-2004, 2006-2007-2008, 2009-2010. Such global results feel the effects of both conceptual and empirical articles' trends which are significantly different. After a minimum in 2002 (2 articles), the amount of conceptual articles increased in 2003 (22 articles) and remained rather constant until 2008 when it decreased (13 articles). Despite in 2009 it increased (30 articles), in the last two years the number of conceptual papers slowly decreased again, flowing down from 30 to 21 to 18 conceptual articles per year. On the contrary, the amount of empirical papers dramatically increased in the period 2000-2011, skyrocketing from

13 to 62 empirical articles per year. The years 2006-2007 suffered of minor cut (from 41 to 36 papers), while the years 2003-2004 and 2009-2010 suffered of the most important reductions as the number of empirical papers per year collapsed from 24 to 15 and from 54 to 39, respectively. However, such a decreasing was immediately recovered in 2011, which represents the most flourish year for empirical studies (with 65 empirical articles).

According to the number of papers extracted in each journal (Table 2, Figures 2 and 3), the *Journal of Business Ethics* included the highest number of papers on ethical and eco-friendly issues with 248 articles (42.83%), even if it should not be viewed as surprising considering the object and scope of the journal. Other journals including the highest number of ethical and eco-friendly articles were the *Journal of Business Research* with 34 articles (5.87%), the *Journal of Consumer Policy* with 32 articles (5.53%), the *Journal of Consumer Marketing* with 29 articles (5.01%), the *Journal of MacroMarketing* with 24 articles (4.41%), the *Journal of Academy of Marketing Science* with 22 articles (3.80%), the *Business Ethics Quarterly* with 21 articles (3.63%), the *Public Relation Review* with 20 articles (3.45%), the *Advances in Consumer Research* and the *European Journal of Marketing* both with 17 articles (2.94% each), and the *Journal of Marketing Management* with 14 articles (2.42%). The remaining journals, also the most relevant as the *Journal of Marketing* and the *Journal of Consumer Research*, included less than 10 articles per year (less than 1.6%).

Finally, 1,243 Authors authored the 579 articles, with an average of about 2.15 authors per article. In particular, 172 articles (29.7%) were authored by only one Author, 223 (38.5%) by two Authors, 132 (22.8%) by three Authors, and 52 (9.0%) by more than three Authors.

The second step of the study was to evaluate and categorize the articles according to their content. Sustainable consumption has been addressed in literature with different perspectives. The extraction of papers which included the keywords of Table 2 - despite all the articles included the keyword "consumer" in the title, keywords or abstract - had led to the collection of disparate contents, some of which only vaguely related to consumer behaviour. Hence, the articles required to be further categorized and grouped in five thematic categories, established through an analysis of the previous literature:

1. *corporate social responsibility from a firm perspective (CSR)*;
2. *firm strategies and actions (FSA)*;
3. *consumer behaviour (individual-level perspective) (CB)*;
4. *communication (COM)*;
5. *policy about environment and sustainable development (POL)*.

To this end, one bibliographic card was written for each article[13], which included a summary of the article itself (Tables 5 and 6).

[13]The total amount of bibliographic cards can be obtained from the Author on request.

Figure 2. Number of articles per journal (alphabetic order)

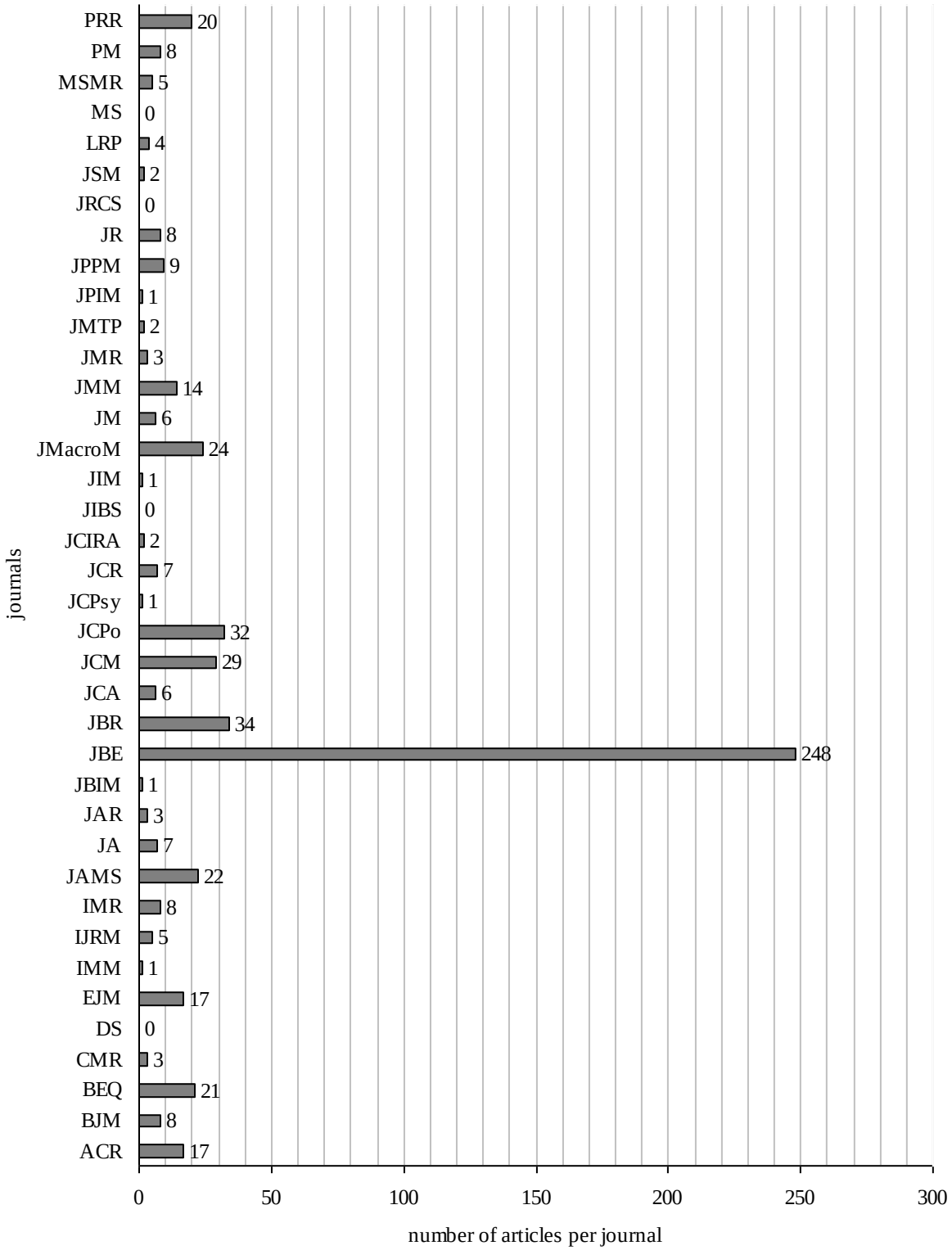


Figure 3. Number of articles per journal (decreasing order)

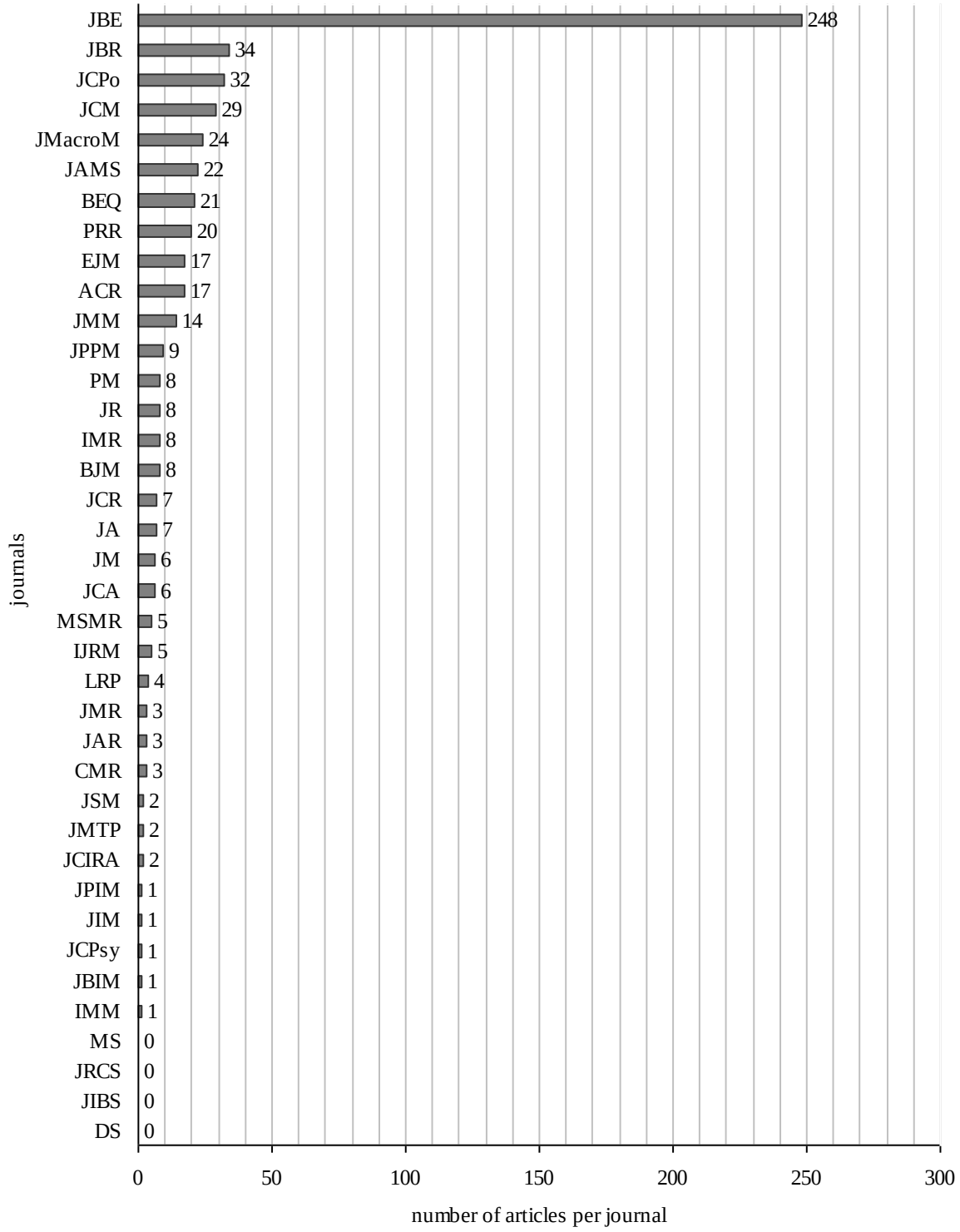


Table 5. Bibliographic card. Example of conceptual paper

Author(s)	Kotler P.
Title	Reinventing Marketing to Manage the Environmental Imperative
Journal	Journal of Marketing, vol. 75, (July), 132-135
Year	2011
Country	USA
Typology	Conceptual paper
Purpose	To comment on the profound influence that the environmental agenda is likely to have on marketing theory and practice.
Method	
Abstract	Marketers in the past have based their strategies on the assumption of infinite resources and zero environmental impact. With the growing recognition of finite resources and high environmental costs, marketers need to re-examine their theory and practices. They need to revise their policies on product development, pricing, distribution, and branding. The recent financial meltdown has added another layer of concern as consumers adjust their lifestyles to a lower level of income and spending. Companies must balance more carefully their growth goals with the need to pursue sustainability. Increased attention will be paid to employing de-marketing and social marketing thinking to meet the new challenges.

Table 6. Bibliographic card. Example of empirical paper

Author(s)	De Pelsmacker P., Janssens W.
Title	A model for fair trade buying behaviour: the role of perceived quantity and quality of information and of product-specific attitudes
Journal	Journal of Business Ethics, vol. 75, No. 4, 361-380
Year	2007
Country	Belgium, Belgium
Typology	Empirical paper
Purpose	To build a model for fair trade buying behaviour in which, besides the impact of fair trade knowledge and attitudes towards the fair trade issue, the importance of attitudes towards fair trade products and the overall perception of the quantity and quality of information about the fair trade issue is investigated.
Method	Web survey, 615 Belgian consumers, Structural Equation modelling
Abstract	In a sample of 615 Belgians a model for fair trade buying behaviour was developed. The impact of fair trade knowledge, general attitudes towards fair trade, attitudes towards fair trade products, and the perception of the quality and quantity of fair trade information on the reported amount of money spent on fair trade products were assessed. Fair trade knowledge, overall concern and scepticism towards fair trade, and the perception of the perceived quantity and quality of fair trade information, influence buying behaviour directly and indirectly through product attitudes. Interest in fair trade products, price acceptability and product liking have a significant impact on fair trade buying behaviour. Product interest is the most important variable influencing buying behaviour. Implications for the campaigns of governments and for the marketing strategy of fair trade organisations are finally offered.

Table 7. Overview of articles per category and year

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Σ
CSR	1	2	2	21	9	9	15	19	16	17	6	9	126
FSA	3	3	7	8	7	7	14	9	10	21	13	24	126
CB	12	11	9	9	8	20	21	13	17	25	28	31	204
POL	4	3	3	7	4	9	10	12	7	14	10	13	96
COM	1	0	0	1	1	4	0	3	4	7	3	3	27
TOT	21	19	21	46	29	49	60	56	54	84	60	80	579

In order not to mistake the categorization process, first, the Author herself categorized all of the articles. Then, the content validity was assessed by three students taking their Master degree in Marketing and working on sustainable consumption for their thesis. Each student was given a detailed description of the five categories along with the set of articles (bibliographic cards). Students were asked to examine each article, associate it with one of the five categories, and indicate their level of confidence in the classification on a 5-point bipolar scale (1 = not at all confident, 5 = totally confident). All 579 articles but ten were correctly classified by the students with an average confidence score of 5. The Author and the students discussed about the inconsistencies until a shared solution was found. This process resulted in the following numbers of articles per category[14]:

1. *corporate social responsibility from a firm perspective (CSR)*= 126 articles;
2. *firm strategies and actions (FSA)* = 126 articles;
3. *consumer behaviour (individual-level perspective) (CB)* = 204 articles;
4. *communication (COM)* = 96 articles;
5. *policy about environment and sustainable development (POL)* = 27 articles.

Table 7 provides a detailed overview of the number of articles per category per year.
Due to the aim of this research, which was *to analyze the main characteristics of research on sustainable consumption to determine what still needs to be done in terms of research in the area and formulate a research agenda to develop further works*, the remaining part of the analysis focuses on the *consumer behaviour (individual-level perspective)* category. Further analyses and specific results for this category are discussed below.

[14]Appendix A provides a detailed list of articles for each thematic category.

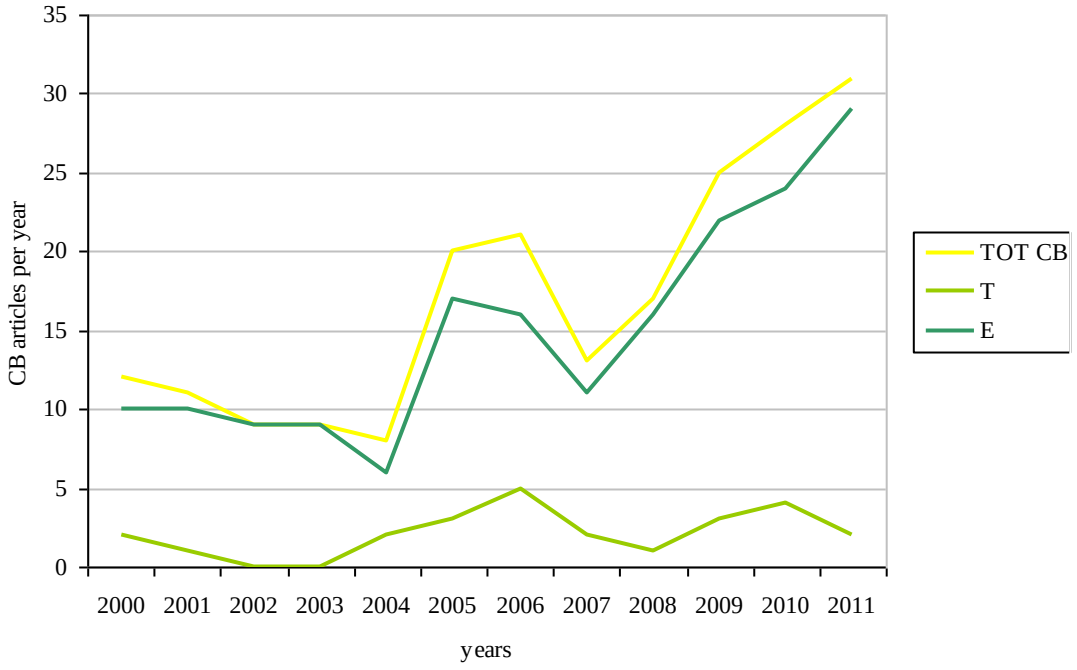
1.4.1 Results within the "consumer behaviour" category

204 articles belonged to the consumer behaviour (CB) category: 26 articles were purely conceptual (12.74%) while 178 were empirical (87.25%).
Considering the year of publication, a positive trend of research on sustainable consumption in the period 2000-2011 emerges (Table 8, Figure 4). The total amount of papers increased from 12 to 31, even though it decreased in the period 2000-2004 (ranging from 12 to 8 articles per year) and in the two-year period 2006-2007 (from 21 to 13 articles per year). However, since 2007 the number of CB articles increased rather constantly, skyrocketing from 17 to 31. The general trend feels the effects of both purely conceptual and empirical articles, which experienced different trends within 2000-2011. Although up to 2007 conceptual and empirical CB papers experienced quite similar fluctuations, later on their trends diverged significantly. Conceptual CB sized in a few units of output (ranging from 1 to 4 outputs per year). On the contrary, empirical CB papers constantly increased from 16 to 22 to 24 to 29 articles per year.

Table 8. Number of (theoretical "T" and empirical "E") consumer behaviour papers per year

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Σ	Σ %
T	2	1	0	0	2	3	5	2	1	3	4	2	25	12.3
E	10	10	9	9	6	17	16	11	16	22	24	29	179	87.7
TOT CB	12	11	9	9	8	20	21	13	17	25	28	31	204	100

Figure 4. Number of (theoretical "T" and empirical "E") consumer behaviour papers per year



According to the number of papers extracted in each journal (Table 9, Figures 5, 6 and 7), the *Journal of Business Ethics* included 70 articles (34.31%), again the highest number, followed by the *Journal of Consumer Marketing* with 25 articles (12.25%), the *Journal of Consumer Policy* with 16 articles (7.84%), *Advances in Consumer Research* with 14 articles (6.86%), the *Journal of Business Research* with 9 articles (4.41%), *Psychology and Marketing* and the *Journal of Marketing Management* with 8 articles each (3.92%), the *European Journal of Marketing* with 7 articles (3.43%), the *Journal of Consumer Research*, the *Journal of Consumer Affairs* and the *International Marketing Review* with 5 articles each (2.45%). The remaining journals included less than 4 articles per year (less than 2%).
Finally, 491 Authors authored the 204 CB articles, with an average of 2.40 authors per article. In particular, 40 articles (19.6%) were authored by only one Author, 76 (37.3%) by two Authors, 61 (29.9%) by three Authors, and 27 (13.2%) by more than three Authors.
According to the Authors' University of affiliation[15], most of the Authors lived in the United States of America (36.8%), United Kingdom (15%), Belgium (7.6%), Canada and Australia (6% each) (Figure 8).
The most productive Authors[16] were reported in Figure 9. Details of those with six, five or four articles are reported below.
With 6 articles authored[17]:

- Ricky Y. K. Chan, Hong Kong Polytechnic University, Honk Kong;
- John Thøgersen, Aarhus School of Business (University of Aarhus), Denmark.

With 5 articles authored:

- Bodo B. Schlegelmilch, Vienna University of Economics and Business Administration, Austria;
- Patrick Van Kenhove, Ghent University, Belgium;
- Scott J. Vitell, School of Business Administration, University of Mississippi, USA.

With 4 articles authored:

- Pat Auger, Melbourne Business School, Australia;
- Patrick De Pelsmacker, University of Antwerp, Belgium;
- Timothy M. Devinney, Australian Graduate School of Management, Australia;
- Robert W. Mitchell, University of Otago, New Zealand;
- Sankar Sen, Baruch College, City University of New York, USA;
- John Tsalikis, Florida International University, USA.

[15]The country is referred to the University of affiliation of each author when the article was published.
[16]Percentages are computed as numbers of articles authored in 200-2011 within the consumer behaviour category.
[17]Authors in each category are reported in alphabetical order.

Figure 5. Number of CB articles per journal (decreasing order)

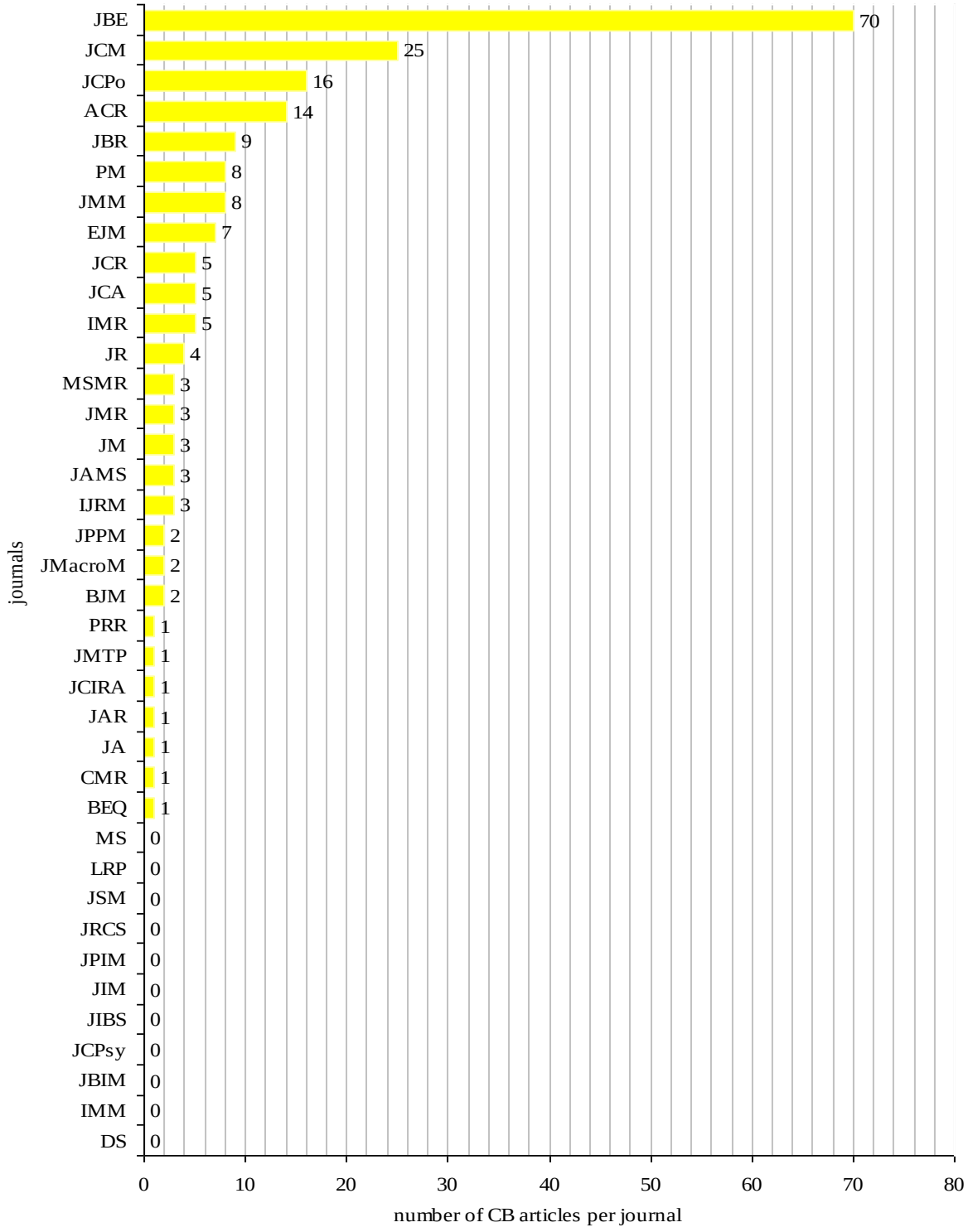


Figure 6. Number of conceptual and empirical CB articles per journal (alphabetical order)

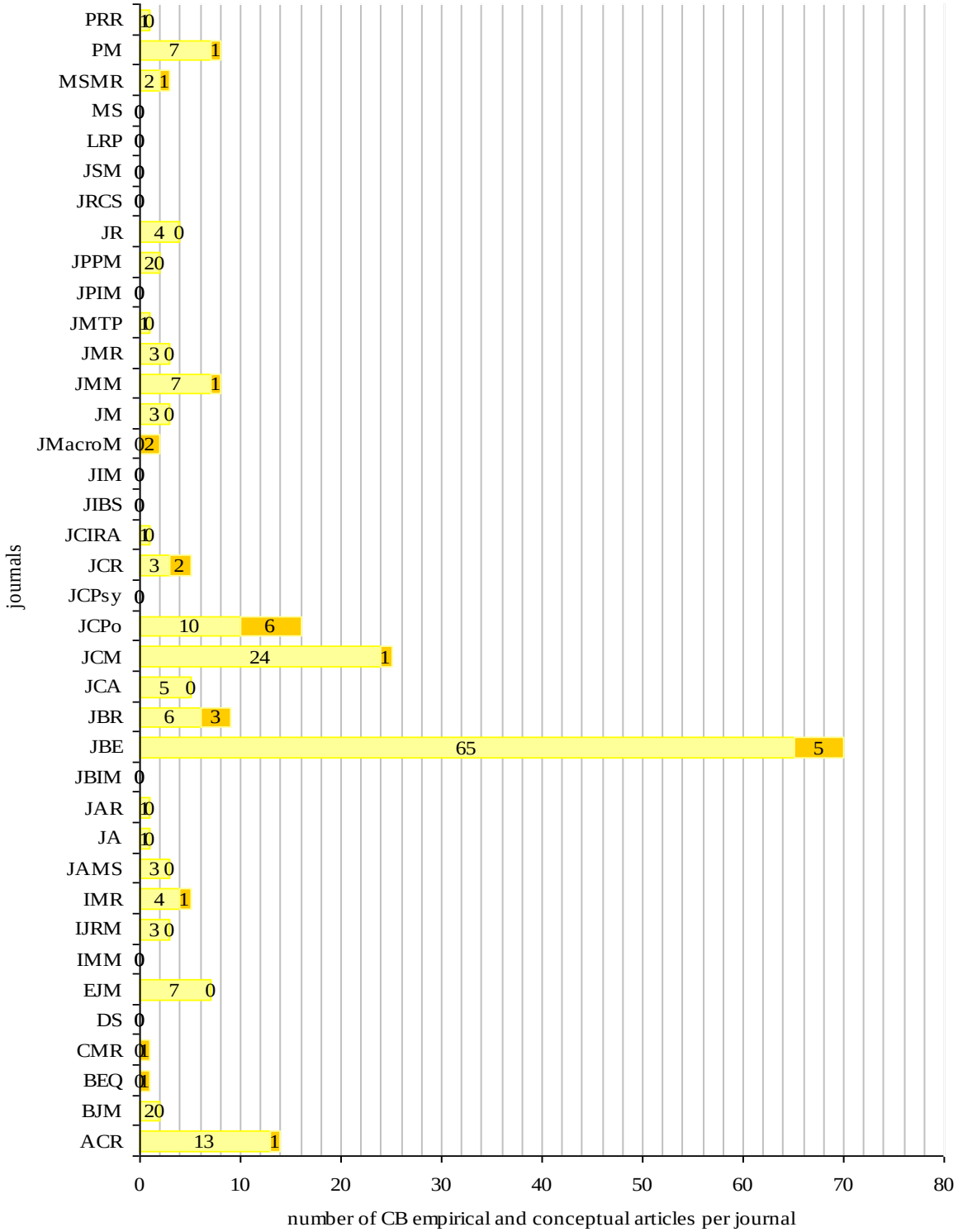


Figure 7. Number of conceptual and empirical CB articles per journal (decreasing order)

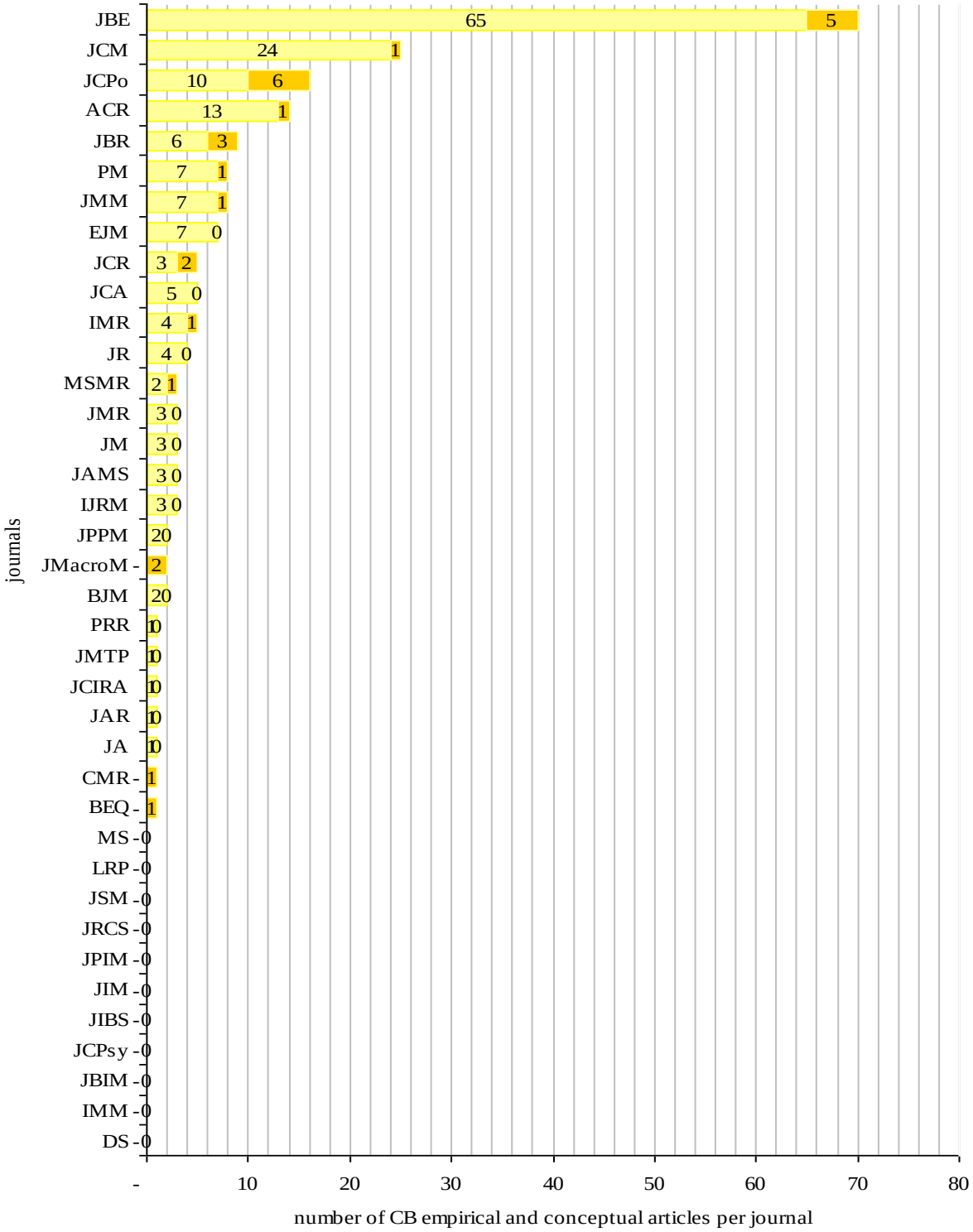


Figure 8. The most productive countries

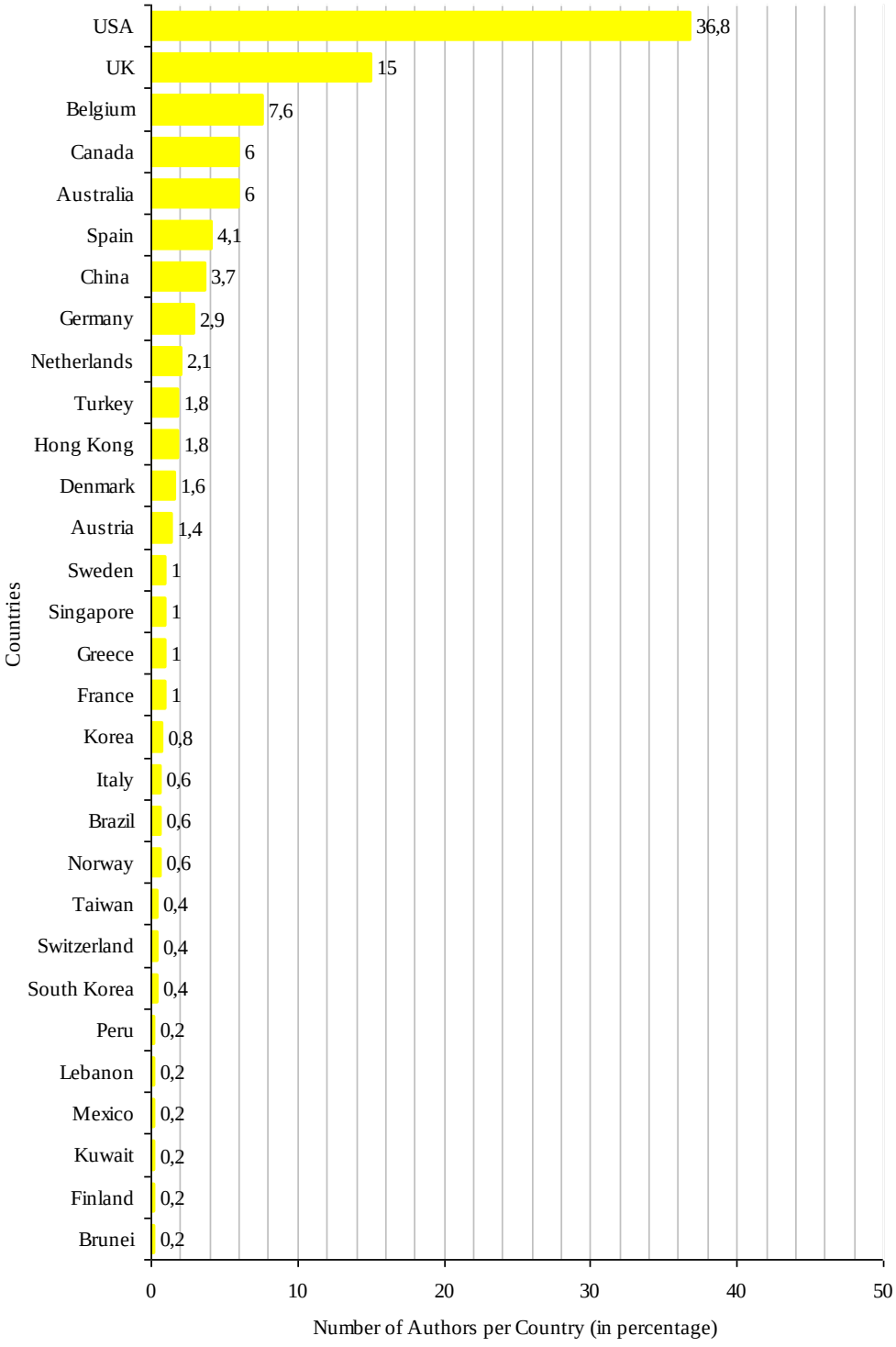


Figure 9. The most productive authors (in terms of number of articles authored)[18]

6 articles	Chan R.Y.K., Thøgersen J.
5 articles	Schlegelmilch B., Van Kenhove P., Vitell S.
4 articles	Auger P., De Pelsmacker P., Devinney T.M., Mitchell V., Sen S., Tsalikis J.
3 articles	Carrigan M., Cornelissen G., Cornwell B., Dewitte S., Fukukawa K., Klein J.G., Louviere J., Martinez J., Mohr L.A., Rawwas M.Y.A., Seaton B., Shaw D., Steenhaut S., Warlop L., Webb D.
2 articles	Burke P.F., Au A., Bateman C.R., Bhattacharya C.B., Chan J., Chatzidakis A., Choi S. M., Cotte J., Crane A., Cui C., d'Astous A., Ennew C., Essoussi L.H., Ettenson R., Gurhan-Canli Z., Hibbert S., Irvin J.R., Janssens W., Kilbourne W., Kim G.-S., Laroche M., Lau L.B.Y., Lee G.Y., Marin L., Nelson M.R., Oliver J.D., Ramasamy B., Ruiz S., Smith A., Swaidan Z., Trudel R., Vermeir I., Wong Y. H., Yeung M., Yzerbyt V.

Finally, from a content perspective, different topics emerged within the CB category.
Many contributions explored what determines green consumer behaviour. Until the 1990s it was paid attention on socio-demographics characteristics (e.g, sex, age, education and social class) and personality measures (e.g., locus of control, alienation, conservatism and dogmatism) (Balderjahn, 1988; Crosby *et al*., 1981; Kinnear *et al*., 1974), whose inadequacy for profiling environmentally-conscious consumers resulted gradually apparent. Environmental concern was no longer a marginal issue but "the socially accepted norm" (Schwepker and Cornwell, 1991, p. 85), so that it should not have been expected that high levels of green purchasing behaviour would have been only reflected in certain socio-demographic sectors of the consumer base (Schlegelmilch *et al.*, 1994). Similarly, despite personality variables have been found to have somewhat higher linkages to individuals' environmental consciousness (Schwepker and Cornwell, 1991), it was true only for general environmental measures and not even for specific pro-environmental behaviours, such as green purchasing (Schlegelmilch *et al.*, 1996). Given these failures, although a few attempts to segment the market using socio-demographic variables still persisted (e.g., do Paco and Raposo, 2009), in the 2000s scholars adopted a different approach to delve into green consumer behaviour, and proposed more specific variables which resulted in higher linkages with specific eco-friendly behaviours. Some scholars evaluated consumer positive attitudes towards the environment (Chan *et al*., 2008; Kim and Choi, 2005), towards eco-friendly

[18]Authors with only one article, within the period 2000-2011, are reported in Appendix A.

behaviours (Oliver and Lee, 2010; Chan and Lau, 2000; Follows and Jobber, 2000), or towards green products or eco-labels (Thøgersen *et al*., 2010; De Pelsmacker and Janssens, 2007; Shaw and Shiu, 2003). Others analysed the linkages between pro-environmental behaviours and specific measures of environmental identity, morality, affection and values (Braunsberger and Buckler, 2011; Sheth *et al*., 2011; Urien and Kilbourne, 2011; Jansson *et al*., 2010; Leonidou *et al*., 2010; Freestone and McGoldrick, 2008; Kilbourne and Pickett, 2008). These studies mainly involved conceptual models based on Ajzen's (1991) Theory of Planned Behaviour (e.g., Chan and Lau, 2000) which, in a few cases, were assessed cross-nationally (Maignan, 2011; Schneider *et al*., 2011; Cornwell *et al*., 2009; Thøgersen, 2009, 2000).

A related stream of research dealt with consumer willingness to pay a premium price for eco-friendly products. The content of this domain is rather homogeneous. Contributions measured the extent to which consumers are willing to extra pay for eco-friendly or ethical products, considering uncostrained (Ha-Brookshire and Norum, 2011; Essoussi and Linton, 2010; De Pelsmacker *et al*., 2005; Laroche *et al*., 2001) or constrained (Auger and Devinney, 2007; Auger *et al*., 2003) decisional environments, as well as the factors that mostly influence consumers to pay a premium price for eco-friendly and ethical goods (Royne *et al*., 2011).

As opposed to these "positive" contributions, a "negative" stream of research dealt with the attitude-behaviour and the intention-behaviour gaps, and questioned why, despite consumer increasing eco-awareness, willingness to buy eco-friendly products and pay a premium price for them, the current market share of green goods were still rather low and eco-friendly consumption behaviours were still a long way off from being general standards of consumption (Bray *et al*., 2011; Choi and Ng, 2011; Shalvi *et al*., 2011; Wiedmann *et al*., 2011; Bamossy and Englis, 2010; Fukukawa and Ennew, 2010; d'Astous and Legendre, 2009; Gupta and Ogden, 2009). Scholars analysed the complexity of green consumer behaviour (Carrigan and Attalla, 2001; Borgmann, 2000) and why people act differently from their intentions (why they "do not walk their talk" as stated by Carrington *et al*., 2010).

Finally, some contributions investigated the impact of CSR on consumer perceptions (Lii and Lee, 2011; Maignan *et al*., 2011) and decisions (Oberseder *et al*., 2011; Becker-Olsen *et al*., 2006), as well as negative consumer reactions to CSR actions (Carvalho *et al*., 2010; Mohr and Webb, 2005) and consumer support to CSR activities (Ramasamy *et al*., 2010). This stream of research, despite investigating CSR from a consumer perspective, resembled the studies about CSR which adopt a business perspective[19], where it is investigated the impact of CSR activities on firm and corporate brand value (e.g., Hong and Anderson, 2011; Jo and Harjoto, 2000) and the impact of CSR activities on stakeholders' (mainly investors) perceptions (e.g., Peloza and Shang, 2011; Sen *et al*., 2006).

[19]These studies have been clustered into the category "CSR" and are consultable in Appendix A.

1.5 Discussion

Findings revealed the presence of some under-researched areas which require to be further theoretically and empirically investigated. This is the case of positive and negative motives that, respectively, fuel or impede green purchasing behaviour.

Concerning the positive variables, efforts have been made to find out those antecedents that are deemed to be relevant in explaining and predicting green purchasing behaviour. A huge percentage of scholars investigated exclusively the altruistic antecedents of green purchasing behaviour, like universalism, collectivism, long term orientation and environmental concern. For example, Leonidou *et al*. (2010) and Kim and Choi (2005) tested the impact of collectivism and environmental concern. Chan and Lau (2000) examined the influence of ecological affect. Follows and Jobber (2000) analysed the impact of both Schwartz's (1992) universalism value type and the attitude towards the environmental consequences of purchasing eco-friendly products. On the contrary, scholars neglected to consider how positive egoistic variables may determine green consumption. A few recent contributions attempted to overcome this gap and analyzed specific selfish variables. For example, Urien and Kilbourne (2011) investigated the impact of generativity and self-enhancement values on eco-friendly intentions and behaviour, while Cherrier (2007) and Reed II *et al*. (2007) focused on moral identity. However, as similar as to the altruistic variables, these studies focused exclusively on the egocentric site, thus failing to consider also the altruistic aspect. That is, research neglected to include both positive altruistic and positive egocentric variables in one single frame of analysis. The few extant exceptions still represent fragmentary contributions (Sheth *et al*., 2011; Chan *et al*., 2008; Freestone and McGoldrick, 2008).

Considering the negative factors which prevent consumers from buying green goods, d'Austous and Legendre (2009) stated that consumers do not buy green goods because of a matter of "economic rationale": the persistence of barriers force consumers to make additional sacrifices to purchase green goods, so that green products are not perceived proper substitutes of conventional goods (Gupta and Odgen, 2009). The extant research dealt mostly with the extra monetary costs consumers have to bear while purchasing eco-friendly products, while it did not adequately considered other typologies of efforts (i.e., non monetary efforts) which may reduce green intention and purchase behaviour, as well as how all the deterrent factors interact with each others.

From a methodological perspective, the cross-national validation of green consumption conceptualizations mostly involved models applying the Theory of Planned Behaviour (e.g., Chan and Lau, 2000). On the contrary, original models specifically developed for green purchasing behaviour have been rarely tested in different countries, as well as in consumer groups having different psychographic traits.

1.6 Conclusions, limitations and guidelines for further research

This work examined the evolution of research on sustainable consumption in the period 2000-2011 by analyzing the articles published in the main marketing and management journals. The objective was to analyze the current state of research in green consumption, identify any under-research areas and develop ideas about where research may proceed in the future.
The increasing numbers of contributions revealed that "studies analyzing the green consumer will continue to be attractive as environmental consciousness evolves over time. The findings of studies from previous years will not necessarily be valid in the future. New research on this topic should aim to identify possible developments in consumers' attitudes, intentions and behaviours" (Chamorro *et al*., 2009, p. 233). The central role played by consumers calls for delving into green purchasing behaviour "to better understand consumer attitudes and beliefs toward environmentally-related products, such as drivers of consumer pro-environmental behaviour, consumer transition from shallow to deep environmental embracement, and external societal influences affecting sustainability" (Leonidou and Leonidou, 2011, p. 90).
Findings revealed that future research should be addressed to further green purchasing behaviour knowledge by:

1. deepening consumer perceptions about the barriers that impede or make more difficult to purchase eco-friendly products;
2. developing specific conceptualizations where positive and negative factors together exert an impact on consumer green purchasing behaviour, and where positive motives are composed of both altruistic and egoistic variables;
3. testing such models in different consumer targets having diverse psychographic traits, as well as in two or more countries.

Chapter 2, 3 and 4 attempt to solve the alleged gaps.
From a methodological perspectives, the study conducted in this chapter presented some limitations that offer challenges and guidelines for future research. First, the numbers of marketing journals involved can be expanded, from 38 to all of the Marketing Journals (not only "A" and "B" journals) as well as to psychological journals that are used to dealing with green consumer behaviour. Second, it involved a qualitative content analysis which listed and categorized 579 articles according to their thematic content (CSR=126; FSA=126; CB=204; POL=96; COM=27), years and journal of publication, number of authors, origin of authors, typology of paper. Descriptive statistics have been also computed. However, the amount of articles categorized lays open itself to further statistical development (statistical content analysis).

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Appendix A. Overview of the 585 articles about sustainable consumption in the marketing/management context in the period 2000-2011

Year	Title	Author(s)	N. of Authors	Origin	Journal	Typology	Category
2000	An Analysis of the Wealth Effects of Green Marketing Strategies	Mathur L.K., Mathur I.	2	USA, USA	JBR	E	FSA
2000	Antecedents of green purchases: a survey in China	Chan R.Y.K., Lau L.B.Y.	2	China, China	JCM	E	CB
2000	Assessing consumer preferences for clean-fuel vehicles: A discrete choice experiment	Ewing G., Sarigöllü E.	2	Canada, Canada	JPPM	E	CB
2000	Consumer concern, knowledge, belief, and attitude toward renewable energy: An application of the reasoned action theory	Bang, H.-K., Ellinger, A.E., Hadjimarcou, J., Traichal, P.A.	4	USA, USA, USA, USA	PM	E	CB
2000	Consumer Protection and Environmental Protection: Contradictions and Suggested Steps Towards Integration	Tonner K.	1	Germany	JCPo	T	POL
2000	Cultural Influences on Agency Practitioners' Ethical Perceptions: A Comparison of Korea and the U.S.	Moon Y.S. and Franke G.	2	Korea, USA	JA	E	COM
2000	Defending the Consumer's Right to a Clean Environment in the Face of Globalisation. The Case of Extraterritorial Environmental Protection Under European Community	Hedemann-Robinson M.	1	Germany	JCPo	T	POL
2000	Enforcement of Environmental Law by Individuals and Interest Groups: Reconceptualizing Standing	Godt C.	1	Germany	JCPo	T	POL
2000	Environmentally responsible purchase behaviour: a test of consumer model	Follows S. B., Jobber D.	2	Canada, UK	EJM	E	CB
2000	Ethical challenges for business in the new millennium: Corporate social responsibility and model of management morality	Carroll A.B.	1	USA	BEQ	T	CSR
2000	Ethics and Marketing Management: A Retrospective and Prospective Commentary	Chonko L.B., Hunt S.	2	USA, USA	JBR	T	FSA
2000	Marketing and the Natural Environment: What Role for Morality?	Crane A.	1	UK	JMacroM	T	POL
2000	On the Concept of Intentional Social Action in Consumer Behavior	Bagozzi R.	1	USA	JCR	T	CB
2000	Packaging Ethics: Perceptual Differences among Packaging Professionals, Brand Managers and Ethically-interested Consumers	Bone P.F., Corey R.J.	2	USA, USA	JBE	E	CB
2000	Perceptions and attitudes of Singaporeans towards genetically modified food	Subrahmanyan S., Cheng, P.S.	2	Singapore, Singapore	JCA	E	CB
2000	Psychological Determinants of Paying Attention to Eco-Labels in Purchase Decisions: Model Development and Multinational Validation	Thøgersen J.	1	Denmark	JCPo	E	CB

2000	The Impact and Implications of Environmentally Linked Strategies on Competitive Advantage: A Study of Malaysian Companies	Slater J., Angel I.T.	2	UK, UK	JBR	E	FSA
2000	The Interest of Consumers in Ecological Product Information Is Growing - Evidence From Two German Surveys	Imkamp H.	1	Germany	JCPo	E	CB
2000	The Moral Complexion of Consumption	Borgmann A.	1	USA	JCR	T	CB
2000	The recycling cycle: An empirical examination of consumer waste recycling and recycling shopping behaviors	Biswas A., Licata J.W., McKee, D., Pullig, C., Daughtridge C.	5	USA, USA, USA, USA, USA	JPPM	E	CB
2000	The Role of Corporate Associations in New Product Evaluation	Madrigal R.	1	USA	ACR	E	CB
2001	Appreciating, understanding and applying universal moral principles	Cohen J.	1	USA	JCM	T	FSA
2001	An Empirical Investigation of the Relationships between Ethical Beliefs, Ethical Ideology, Political Preference and Need for Closure	Van Kenhove P., Vermeir I., Verniers S.	3	Belgium, Belgium, Belgium	JBE	E	CB
2001	Consumer ethics: an application and empirical testing of the Hunt-Vitell theory of ethics	Vitell S.J., Singhapakdi A., Thomas J.	3	USA, USA, USA	JCM	E	CB
2001	Corporate Governance and Firm Value: The Impact of Corporate Social Responsibility	Jo H., Harjoto M.A.	2	USA, USA	JBE	E	CSR
2001	Culture, personality and morality A typology of international consumers' ethical beliefs	Rawwas M.Y.A.	1	USA	IMR	E	CB
2001	Determinants of Chinese consumers' green purchase behavior	Chan R.Y.K.	1	China	PM	E	CB
2001	Do consumers expect companies to be socially responsible? The impact of corporate social responsibility on buying behaviour	Mohr L., Webb D., Harris K.	3	USA, USA, USA	JCA	E	CB
2001	Does Doing Good Always Lead to Doing Better? Consumer Reactions to Corporate Social Responsibility?	Sen S., Bhattacharya C.B.	2	USA, USA	JMR	E	CB
2001	How green is Judaism? Exploring Jewish environmental ethics	Vogel D.	1	USA	BEQ	T	POL
2001	How important are ethics and social responsibility?	Singhapakdi A., Karande K., Rao C.P., Vitell S.J.	4	USA, USA, Kwait, USA	EJM	E	FSA
2001	Moral Orientation: Its Relation to Product Involvement and Consumption	Kwak H., Zinkhan G.M., French W.A.	3	USA, USA, USA	ACR	E	CB
2001	Social Costs of Environmental Justice Associated with the Practice of Green Marketing	Oyewole P.	1	USA	JBE	T	POL
2001	Targeting consumers who are willing to pay more for environmentally friendly products	Laroche M., Bergeron J., Barbaro-Forleo G.	3	Canada, Canada, Canada	JCM	E	CB

2001	The boundaries of strategic corporate social responsibility	Lantos G.P.	1	USA	JCM	T	CSR
2001	The impact of consumer environments on consumption patterns of children from disparate socioeconomic backgrounds	Page C., Ridgway N.	2	USA, USA	JCM	E	CB
2001	The myth of the ethical consumer – do ethics matter in purchase behaviour?	Carrigan M., Attalla A.	2	UK, UK	JCM	E	CB
2001	The role of consumer surveys in public policy decision making	Hastak M., Mazis, M.B., Morris L.A.	3	USA, USA, USA	JPPM	E	POL
2001	Unpacking the Ethical Product	Crane A.	1	UK	JBE	T	CB
2001	What Would Confucius Do? – Confucian Ethics and Self-Regulation in Management	Woods P.R., Lamond D.A.	2	Australia, Australia	JBE	T	FSA
2002	An inquiry into the ethical perceptions of sub-cultural groups in the US: Hispanics vs Anglos	Shepherd P.L., Tsalikis J., Seaton B.	3	USA, USA, USA	JCM	E	CB
2002	Are good soldiers good? Exploring the link between organization citizenship behavior and personal ethics	Turnipseed D.L.	1	USA	JBR	E	FSA
2002	Associating the Corporation with a Charitable Event Through Sponsorship: Measuring the Effects on Corporate Community Relations	Dean H.D.	1	USA	JA	E	FSA
2002	Business ethics in the NAFTA countries: A cross-cultural comparison	Hood J.N., Logsdon J.M.	2	Mexico, Mexico	JBR	T	FSA
2002	Consumer perceptions of "green power"	Rowlands I.H., Parker P., Scott D.	3	Canada, Canada, Canada	JCM	E	CB
2002	Corporate environmentalism: The construct and its measurement	Banerjee S.B.	1	Australia	JBR	E	CSR
2002	Developing a Framework for Ethically Questionable Behavior in Consumption	Fukukawa K., Ennew C.	2	UK, UK	JBE	E	CB
2002	Exploring Motivations for Participation in a Consumer Boycott	Klein J.G., Craig Smith N., John A.	3	France, UK, France	ACR	E	CB
2002	Framing Effects Within the Ethical Decision Making Process of Consumers	Bateman C.R., Fraedrich J.P., Iyer R.	3	USA, USA, USA	JBE	E	CB
2002	Investigating UK Consumers' Unethical Attitudes and Behaviours	Mitchelli V.-W., Chan J.K.L	2	UK, UK	JMM	E	CB
2002	Patterns of actor response to environmental change	Harrison D., Easton G.	2	UK, UK	JBR	E	FSA
2002	Perceived risk, moral philosophy and marketing ethics: mediating influences on sales managers' ethical decision-making	Cherry J., Fraedrich J.	2	USA, USA	JBR	E	FSA

2002	Societal marketing and morality	Crane A., Desmond J.	2	UK, UK	EJM	T	POL
2002	Stalking the Poverty Consumer: A Retrospective Examination of Modern Ethical Dilemmas	Hill P.R.	1	USA	JBE	T	FSA
2002	The ethicality of altruistic corporate social responsibility	Lantos G.P.	1	USA	JCM	T	CSR
2002	The impact of ethical cues on customer satisfaction with service	Thomas J.L., Vitell S.J., Gilbert F.W., Rose G.M.	4	USA, USA, USA, USA	JR	E	FSA
2002	The role of the dominant social paradigm in environmental attitudes. A multinational examination	Kilbourne W., Beckmann S.C., Thelen E.	3	USA, Denmark, Austria	JBR	E	POL
2002	The Sustainability of Sustainable Consumption	Dolan P.	1	Ireland	JMacroM	T	POL
2002	Understanding consumer ethical decision making with respect to purchase of pirated software	Tan B.	1	Singapore	JCM	E	CB
2002	Voluntary Simplicity and the Ethics of Consumption	Shaw, D., Newholm, T.	2	UK, USA	PM	E	CB
2002	Withholding Consumption: A Social Dilemma Perspective on Consumer Boycotts	Sen S., Gurhan-Canli Z., Morwitz V.	3	USA, USA, USA	JCR	E	CB
2003	A New Perspective on Ethics, Ecology, and Economics	Adolphson D.	1	USA	JBE	T	POL
2003	Board Members in the Service Industry: An Empirical Examination of the Relationship Between Corporate Social Responsibility Orientation and Directorial Type	Ibrahim N.A., Howard D.P., Angelidis J.P.	3	USA, USA, USA	JBE	E	CSR
2003	Business Codes of Multinational Firms: What Do They Say?	Kaptein M.	1	Netherlands	JBE	E	FSA
2003	Can socio-demographics still play a role in profiling green consumers? A review of the evidence and an empirical investigation	Diamantopoulos A., Schlegelmilch B., Sinkovics R., Bohlen G.	4	UK, Austria, UK, UK	JBR	E	CB
2003	College Student Attitudes Toward Advertising's Ethical, Economic, and Social Consequences	Beard F.	1	USA	JBE	E	CB
2003	Concepts and Definitions of CSR and Corporate Sustainability: Between Agency and Communion	van Marrewijk M.	1	Netherlands	JBE	T	CSR
2003	Consumer Ethics: Determinants of Ethical Beliefs of African Americans	Swaidan Z., Vitell S.J., Rawwas M.Y.A.	3	USA, USA, USA	JBE	E	CB
2003	Consumer Ethics Research: Review, Synthesis and Suggestions for the Future	Vitell S.	1	USA	JBE	T	CB
2003	Consumer perception of corporate donations: Effects of Company Reputation for Social Responsibility and Type of Donation	Dean H.D.	1	USA	JA	E	CB

2003	Corporate Environmentalism: Antecedents and Influence of Industry Type	Banerjee S.B., Iyer E.S, Kashyap R.K.	3	Australia, USA, USA	JM	E	FSA
2003	Corporate Social Responsibility: A three domain approach	Schwartz M.S., Carroll A.B.	2	USA, USA	BEQ	T	CSR
2003	Corporate Social Responsibility in the 21st Century: A View from the World's Most Successful Firms	Snider J., Hill R., Martin D.	3	USA, USA, USA	JBE	E	CSR
2003	Corporate Sponsorships of Philanthropic Activities: When Do They Impact Perception of Sponsor Brand?	Menon, S., Kahn, B.E.	2	USA, USA	JCPo	E	FSA
2003	Costs and Benefits of Recycling Liquid Board Containers	Ibenholt K., Lindhjem H.	2	Norway, Norway	JCPo	E	POL
2003	CSR in Stakeholder Expectations: And Their Implication for Company Strategy	Dawkins J., Lewis S.	2	UK, UK	JBE	T	CSR
2003	Distributional Effects of Environmental Taxes on Transportation	Aasness J., Larsen E.R.	2	Norway, Norway	JCPo	E	POL
2003	European Corporate Sustainability Framework for Managing Complexity and Corporate Transformation	van Marrewijk M., Hardjono T.W.	2	Netherlands, Netherlands	JBE	T	POL
2003	Ethics in consumer choice: a multivariate modelling approach	Shaw D., Shiu E.	2	UK, UK	EJM	E	CB
2003	Examining firm and environmental influences on export marketing mix strategy and export performance of Australian exporters	O'Cass A., Julian C.	2	Australia, Australia	EJM	E	FSA
2003	From Management Systems to Corporate Social Responsibility	Zwetsloot G.	1	Netherlands	JBE	T	CSR
2003	Global Marketing Ethics: A Communicative Approach	Nill A.	1	USA	JMacroM	T	COM
2003	Governance Choices for Corporate Social Responsibility: to Contribute, Collaborate or Internalize?	Husted B.W.	1	Mexico	LRP	T	CSR
2003	Green and competitive. Influences on environmental new product development performance	Pujari D., Wright G., Peattie K.	3	Canada, UK, UK	JBR	E	FSA
2003	Household Consumption and Ecological Footprints in Norway - Does Urban Form Matter?	Hoyer K.G., Holden E.	2	Norway, Norway	JCPo	E	CB
2003	Implementing Corporate Responsibility - The Chiquita Case	Werre M.	1	Netherlands	JBE	T	CSR
2003	Individual, Social and Organizational Sources of Sharing and Variation in the Ethical Reasoning of Managers	Granitz N. A.	1	USA	JBE	E	CSR
2003	Learning What It Really Costs: Teaching Business Ethics With Life-Cycle Case Studies	DesJardins J., Diedrich E.	2	USA, USA	JBE	T	CSR
2003	Making the Shift: Moving from "Ethics Pays" to an Inter-Systems Model of Business	Stormer F.	1	Canada	JBE	T	CSR

2003	Management and Business Ethics: A Critique and Integration of Ethical Decision-making Models	Bartlett D.	1	UK	BJM	T	CSR
2003	Managing Brand in the New Stakeholder Environment	Maio E.	1	USA	JBE	T	FSA
2003	Monetary Incentives and Recycling: Behavioural and Psychological Reactions to a Performance-Dependent Garbage Fee	Thøgersen J.	1	Denmark	JCPo	E	POL
2003	Multiple Levels of Corporate Sustainability	van Marrewijk M., Werre M.	2	Netherlands, Netherlands	JBE	T	CSR
2003	On the Ethics of Corporate Social Responsibility Considering the Paradigm of Industrial Metabolism	Korhonen J.	1	Finland	JBE	T	CSR
2003	Promoting Sustainable Consumption: Determinants of Green Purchases by Swiss Consumers	Tanner, C., Kast, S.W.	2	USA, Switzerland	PM	E	CB
2003	Rewriting the Bases of Capitalism: Reflexive Modernity and Ecological Sustainability as the Foundations of a New Normative Framework	Balakrishnan U., Duvall T., Primeaux P.	3	USA, USA, USA	JBE	T	POL
2003	Roadmapping Corporate Social Responsibility in Finnish Companies	Panapanaan V.M., Linnanen L., Karvonen M., Phan V.	4	Finland, Finland, Finland, Finland	JBE	E	CSR
2003	Social responsibility in environmental marketing planning	Karna J., Hansen E., Juslin H.	3	Finland, USA, Finalnd	EJM	E	CSR
2003	Socially Responsible Organizational Buying: How Can Stakeholders Dictate Purchasing Policies?	Maignan I., McAlister D.T.	2	Netherlands, USA	JMacroM	T	CSR
2003	Strategic Explanations for the Early Adoption of ISO 14001	Bansal P., Hunter T.	2	Canada, Canada	JBE	E	POL
2003	Supply Chain Specific? Understanding the Patchy Success of Ethical Sourcing Initiatives	Roberts S.	1	UK	JBE	T	FSA
2003	The Influence of Environmental Knowledge and Values on Managerial Behaviours on Behalf of the Environment: An Empirical Examination of Managers in China	Fryxell G., Lo C.W.H.	3	China, Hong Kong	JBE	E	CSR
2003	The perceived role of ethics and social responsibility: a study of marketing professionals	Vitell J.S., Paolillo J.G.P., Thomas J.L.	3	USA, USA, USA	BEQ	E	CSR
2003	The Role of the Global Reporting Initiative's Sustainability Reporting Guidelines in the Social Screening of Investments	Willis A.	1	Canada	JBE	T	CSR
2003	Transparency and Assurance: Minding the Credibility Gap	Dando N., Swift T.	2	UK, UK	JBE	T	FSA
2003	Using Indicators to Measure Sustainability Performance at a Corporate and Project Level	Keeble J.J., Topiol S., Berkeley S.	3	UK, UK, UK	JBE	T	CSR

2003	What Will Consumers Pay for Social Product Features?	Auger P., Burke P., Devinney T., Louviere J.	4	Australia, Australia, Australia, Australia	JBE	E	CB
2004	Adversaries of Consumption: Consumer Movements, Activism, and ideology	Kozinets R.V., Handelman J.M.	2	USA, Canada	JCR	E	CB
2004	Choosing the right green marketing strategy	Ginsberg, J.M., Bloom, P.N.	2	USA, USA	MSMR	T	FSA
2004	Corporate Environmental Disclosure: Contrasting Management's Perceptions with Reality	Cormier D., Gordon I., Magnan M.	3	Canada, Canada, Canada	JBE	E	FSA
2004	Corporate social responsibility and consumers' attributions and brand evaluations in a product–harm crisis	Klein J., Dawar N.	2	France, Canada	IJRM	E	CSR
2004	Corporate Social Responsibility and Marketing: An Integrative Framework	Maignan I., Ferrel O.C.	2	Netherlands, USA	JAMS	T	CSR
2004	Corporate Social Responsibility Theories: Mapping the Territory	Ganiga E., Melé D.	1	Spain	JBE	T	CSR
2004	Creating Corporate Accountability: Foundational Principles to Make Corporate Citizenship Real	Waddock S.	1	USA	JBE	T	FSA
2004	Doing Better at Doing Good: When, why and how consumer respond to corporate social initiatives	Bhattacharya C.B., Sen S.	2	USA, USA	CMR	T	CB
2004	Entangled Affiliations and Attitudes: An Analysis of the Influences on Environmental Policy Stakeholders' Behavioral Intentions	Cordano M., Frieze I., Ellis K.	3	USA, USA, USA	JBE	E	POL
2004	From Quality to Sustainability	Zwetsloot G., van Marrewijk M.	2	Netherlands, Netherlands	JBE	T	FSA
2004	Future generations and business ethics	Jeurissen R., Keijzers G.	2	Netherlands, Netherlands	BEQ	E	CSR
2004	How advertising practitioners view ethics	Drumwright M.E., Murphy P.E.	2	USA, USA	JA	E	COM
2004	Introduction on the European Corporate Sustainability Framework (ECSF)	Hardjono T., de Klein P.	2	Netherlands, Netherlands	JBE	T	POL
2004	Looking at Consumer Behavior in a Moral Perspective	Brinkmann J.	1	Norway	JBE	T	CB
2004	Managerial discretion and corporate commitment to the natural environment	Aragon-Correa J.A., Matías-Reche F., Senise-Barrio M.E.	3	Spain, Spain, Spain	JBR	E	CSR
2004	Managers' Personal Values as Drivers of Corporate Social Responsibility	Hemingway C.A., Maclagan P.W.	2	UK, UK	JBE	T	CSR
2004	Moderating unintended pollution: the role of sustainable product design	Fuller D.A., Ottman J.A.	2	USA, USA	JBR	T	FSA

2004	New Tools to Foster Corporate Socially Responsible Behavior	Tencati A., Perrini F., Pogutz S.	3	Italy, Italy, France	JBE	E	CSR
2004	On Ethical, Social and Environmental Management Systems	Argandona A.	1	Spain	JBE	T	CSR
2004	Shopping for a better world? An interpretive study of the potential for ethical consumption within the older market	Carrigan M., Szmigin I., Wright J.	3	UK, UK, UK	JCM	E	CB
2004	Strategic Management of Product Recovery	Toffel M.W.	1	USA	CMR	T	FSA
2004	The effects of corporate social responsibility to customer donations to corporate-supported nonprofits	Lichtenstein D.R., Drumwright M.E., Braig M.B.	3	USA, USA, USA	JM	E	CB
2004	The Effectiveness of Environmental and Claims among Chinese Consumers: Influences of Claim Type, Country Disposition and Ecocentric Orientation	Chan R.Y.K., Lau L.B.Y.	2	China, China	JMM	E	CB
2004	The Impact of Environmental Labelling on Consumer Preference: Negative vs. Positive Labels	Grankvist G., Dahistrand U., Biel A.	2	Sweden, Sweden	JCPo	E	CB
2004	The Moderating Effect of Environmental Munificence and Dynamism on the Relationship Between Discretionary Social Responsibility and Firm Performance	Goll I., Rasheed A.	2	USA, USA	JBE	E	FSA
2004	The Primordial Stakeholder: Advancing the Conceptual Consideration of Stakeholder Status for the Natural Environment	Driscoll C., Starik M.	2	Canada, USA	JBE	T	POL
2004	Toward the creation of an eco-oriented corporate culture: A proposed model of internal and external antecedents leading to industrial firm eco-orientation	Stone G., Joseph M., Blodgett J.	3	USA, USA, USA	JBIM	E	CSR
2004	Vicarious Ethics: Politics, Business, and Sustainable Development	LeVeness F.P., Primeaux P.D.	2	USA, USA	JBE	T	POL
2004	Virtue in Consumption?	Chatzidakis A., Hibbert S., Mitussis D., Smith A.	4	UK, Australia, UK, UK	JMM	E	CB
2005	A stakeholder model for implementing social responsibility in marketing	Maignan I., Ferrel O.C., Ferrel L.	3	Netherlands, USA, USA	EJM	T	CSR
2005	Addressing Sustainability and Consumption	Schaefer A., Crane A.	2	UK, Canada	JMacroM	T	CB
2005	An Analysis of the Relationship between Environmental Motivations and ISO14001 Certification	Gonzàlez-Benito J., Gonzàlez-Benito O.	2	Spain, Spain	BJM	E	CB
2005	An examination of the relative roles played by consumer behaviour settings and levels of involvement in determining environmental behaviour	Bhate S.	1	UK	JR	E	CB
2005	A Preliminary Investigation into the Role of Positive Psychology in Consumer Sensitivity to Corporate Social Performance	Giacalone R.A., Paul K., Jurkiewicz C.L.	3	USA, USA, USA	JBE	E	CB

2005	Antecedents of Green Purchase Behavior: An Examination of Collectivism, Environmental Concern, and PCE	Kim S., Choi S.M.	4	South Korea, South Korea,	ACR	E	CB
2005	Applying Stories of the Environment to Business: What Business People Can Learn From the Virtues in Environmental Narratives	Dawson D.	1	UK	JBE	T	FSA
2005	Becoming Sensitive to Ethical Consumption Behavior: Narratives of Survival in an Uncertain	Cherrier H.	1	UK	ACR	E	CB
2005	Can corporations be citizens? Corporate Citizenship as a Metaphor for Business Participation in Society	Moon J., Crane A., Matten D.	3	UK, Canada, Canada	BEQ	T	CSR
2005	Challenges of the ‘‘green imperative’’: a natural resource-based approach to the environmental orientation–business performance relationship	Menguc B., Ozanne L.K.	3	Canada, New Zealand	JBR	E	FSA
2005	Code Integration: Alignment or Conflict?	Sullivan R.	1	UK	JBE	T	FSA
2005	Competing Responsibly	van de Ven B., Jeurissen R.	2	Netherlands, Netherlands	BEQ	T	FSA
2005	Consumer Preferences for the Marketing of Ethically Labelled coffee	De Pelsmacker P., Janssens W., Sterckx E., Mielants C.	4	Belgium, Belgium, Belgium, Belgium	IMR	E	CB
2005	Consumer Ethics: A Cross-Cultural Study of the Ethical Beliefs of Turkish and American Consumers	Rawwas M.Y.A., SwaidanZ., Oyman M.	3	USA, USA, Turkey	JBE	E	CB
2005	Consumers' Evaluation of Unethical Marketing Behaviors: The Role of Customer Commitment	Ingram R., Skinner S.J., Taylor V.A.	3	USA, USA, USA	JBE	E	CB
2005	Corporate Social Responsibility as Argument on the Web	Coupland C.	1	UK	JBE	E	CSR
2005	Corporate Social Responsibility Audit: From Theory to Practice	Morimoto R., Ash J., Hope C.	2	France, UK	JBE	E	CSR
2005	Corporate Social Responsibility: Exploring Stakeholder Relationships and Programme Reporting across Leading FTSE Companies	Knox S., Maklan S., French P.	1	UK	JBE	E	CSR
2005	Determinants and consequences of ethical behaviour: an empirical study of salespeople	Romàn S., Munuera J.	2	Spain, Spain	EJM	E	CB
2005	Do Consumers Care about Ethics? Willingness to Pay for Fair-Trade Coffee	De Pelsmacker P., Driesen L., Rayp G.	3	Belgium, Belgium, Belgium	JCA	E	CB
2005	Discriminant Analysis of Consumer Interest in Buying locally Produced Foods	Tregear A., Ness M.	2	UK, UK	JMM	E	CB
2005	Enabling sustainable management through a new multi-disciplinary concept of customer satisfaction	Daub C., Ergenzinger R.	2	Switzerland, Switzerland	EJM	T	CSR

2005	Enacting Ecological Sustainability in the MNC: A Test of an Adapted Value-Belief-Norm Framework	Andersson L., Shivarajan S., Blau G.	3	USA, USA, USA	JBE	E	FSA
2005	Environmental Marketing Strategy and Firm Performance: Effects on New Product Performance and Market Share	Baker W.E., Sinkula J.M.	2	USA, USA	JAMS	E	FSA
2005	Fair trade marketing: An alternative system for globalization and development	Witkowski, T.H.	1	USA	JMTP	T	POL
2005	How May Consumer Policy Empower Consumers for Sustainable Lifestyles?	Thøgersen J.	1	Denmark	JCPo	T	CB
2005	Imperializing spin cycles: A postcolonial look at public relations, greenwashing, and the separation of publics	Munshi D., Kurian P.	2	New Zealand, New Zealand	PRR	T	POL
2005	International green marketing: A comparative study of British and Romanian firms	Gurau C., Ranchho A.	2	France, UK	IMR	E	FSA
2005	Influence of Corporate Social Responsibility on Loyalty and Valuation of Services	del Mar Garcia de los Salmones, Herrero Crespo A., Rodriguez del Basque I.	3	Spain, Spain, Spain	JBE	E	CSR
2005	Intrusive Promotion as Market Failure: How Should Society Impact Marketing?	Redmond W.H.	1	USA	JMacroM	T	COM
2005	Is Cultural Assimilation Related to Environmental Attitudes and Behaviors?	Mukherji J.	1	USA	ACR	E	POL
2005	Measuring Consumers' Ethical Position in Austria, Britain, Brunei, Hong Kong, and USA	Cui C., Mitchell V., Schlegelmilch B., Cornwell B.	4	UK, UK, Austria, USA	JBE	E	CB
2005	Measuring Corporate Social and Environmental Performance: The Extended Life-Cycle Assessment	Gauthier C.	1	France	JBE	T	CSR
2005	The Effects of Corporate Social Responsibility and Price on Consumer Responses	Mohr L.A.. Webb D.J.	2	USA, USA	JCA	E	CB
2005	Transnational corporate social responsibility: A tridimensional approach to the CSR research	Arthaud-Day M.	1	USA	BEQ	T	CSR
2005	Shades of green: linking environmental locus of control and pro-environmental behavior	Cleveland M., Kalamas M., Laroche M.	3	Canada, USA, Canada	JCM	E	CB
2005	Strategic Formulation and Communication of Corporate Environmental Policy Statements: UK Firms' Perspective	Kuk G., Fokeer S., Woan Ting Hung	2	UK, Malaysia	JBE	E	COM
2005	Strategic Intent in the Management of the Green Environment within SMEs	Worthington I., Patton D.	2	UK, UK	LRP	E	POL
2005	Sustainable Consumption Governance: A History of Promises and Failures	Fuchs D.A., Lorek S.	2	Germany, Germany	JCPo	T	POL
2005	Sustainable Development: Lost Meaning and Opportunity?	Fergus A.H.T., Rowney J.I.A.	2	Canada, Canada	JBE	T	POL

2005	Sustaining edges: CSR, postmodern play, and SMEs	Schoenberger-Orgad M., McKie D.	2	New Zealand, New Zealand	PRR	T	POL
2005	The fallout from French nuclear testing in the South Pacific: A longitudinal study of consumer boycott	Ettenson R., Klein J.G.	2	USA, France	IMR	E	CB
2005	The Muncy-Vitell Consumer Ethics Scale: A Modification and Application	Vitell S., Muncy J.	2	USA, USA	JBE	E	CB
2005	The Performative Nature of Consumer Research: Consumers' Environmental Awareness as an Example	Heiskanen E.	1	Finland	JCPo	T	CB
2005	The Perils and Opportunities of Communicating Corporate Ethics	Schlegelmilch B., Pollach I.	2	Austria, Austria	JMM	T	COM
2005	The Use of Corporate Social Responsibility Arguments in Communication Campaigns: Does Source Credibility Matter?	Swaen V., Vanhamme J.	2	Belgium, Netherlands	ACR	E	COM
2005	What Global Emission Regulations Should Corporations Support?	Burres D.	1	USA	JBE	T	POL
2005	When giving means taking: Public relations, sponsorship, and morally marginal donors	Harris R.	1	Australia	PRR	T	POL
2005	Willful Ignorance in the Request for Product Attribute Information	K.R. Ehrich, Irvin J.R.	2	USA, USA	JMR	E	CB
2006	Achieving Marketing Objectives Through Social Sponsorships	Simmons C., Becker-Olsen K.	2	USA, USA	JCR	E	FSA
2006	An Empirical Investigation of the Relationships among a Consumer's Personal Values, Ethical Ideology and Ethical Beliefs	Steenhaut S., van Kenhove P.	2	Belgium, Belgium	JBE	E	CB
2006	A Social Contract Account for CSR as an Extended Model of Corporate Governance (I): Rational Bargaining and Justification	Sacconi L.	1	Italy	JBE	T	CSR
2006	An Empirical Investigation of the Relationships among a Consumer's Personal Values, Ethical Ideology and Ethical Beliefs	Steenhaut S., Van Kenhove P.	2	Belgium, Belgium	JBE	E	CB
2006	Building Corporate Associations: Consumer Attributions for Corporate Socially Responsible Programs	Scholder E.P., Webb, D.J., Mohr L.A.	3	USA, USA, USA	JAMS	E	CB
2006	Business Ethics without stakeholders	Heath J.	1	Canada	BEQ	T	CSR
2006	Business Ethics Index: Measuring Consumer Sentiments Toward Business Ethical Practices	Tsalikis J., Seaton B.	2	USA, USA	JBE	E	CB
2006	Can a Rational Consumer Be a Good Citizen? Conflicting Goals in Today's Society	Tarasi C., Scott M.	2	USA, USA	ACR	T	POL
2006	Consumer perceptions of corporate social responsibility in town shopping centres and their influence on shopping evaluations	Oppewal H., Alexander A., Sullivan P.	3	Australia, UK, USA	JR	E	CB
2006	Consuming Responsibility: The Search for Value at Laskarina Holidays	Gurney P.M., Humphreys M.	2	UK, UK	JBE	E	CB

2006	Corporate Political Strategy: An Examination of the Relation between Political Expenditures, Environmental Performance, and Environmental Disclosure	Cho C., Patten D., Roberts R.	3	USA, USA, USA	JBE	E	FSA
2006	Corporate Social Responsibility, Customer Satisfaction, and Market Value	Luo X., Bhattacharya C.B.	2	USA, USA	JCR	E	CSR
2006	Corporate Social Reporting in the European Context and Human Resource Disclosures: An Analysis of Finnish Companies	Vuontisjarvi T.	1	UK	JBE	E	CSR
2006	Corporate Social Responsibility and Resource-Based Perspectives	Branco M., Rodrigues L.	1	Portugal	JBE	T	CSR
2006	Corporate Social Responsibility: Views from the Frontline	Whitehouse L.	1	UK	JBE	E	CSR
2006	Developments in Marketing Ethics	Jeurissen R., van de Ven B.	2	Netherlands, Netherlands	BEQ	T	FSA
2006	Distributional effects of environmental taxes on transportation: evidence from Engel curves in the United States	Larsen E.R.	1	Norway	JCPo	E	POL
2006	Does coercion drive firms to adopt voluntary green initiatives? Relationships among coercion, superior firm resources, and voluntary green initiatives	Clemens B., Douglas T.J.	2	USA, USA	JBR	E	FSA
2006	Drawing Inferences About Others on the Basis of Corporate Associations	Yoon Y., Gurhan-Canli Z., Bozok B	3	South Korea, Turkey, Turkey	JAMS	E	CSR
2006	Drivers of Environmental Behaviour in Manufacturing SMEs and the Implications for CSR	Williamson D., Lynch-Wood G., Ramsay J.	3	UK, UK, UK	JBE	E	POL
2006	Economic incentives and small firms: Does it pay to be green?	Clemens B.	1	USA	JBR	E	FSA
2006	Effects of culture, gender, and moral obligations on responses to charity advertising across masculine and feminine cultures	Nelson, M.R. , Brunel, F.F., Supphellen, M., Manchanda, R.V.	4	USA, USA, Canada, USA	JCPo	E	CB
2006	Empirical Findings on Business–Society Relations in Europe	Konrad A., Steurer R., Langer M.E., Martinuzzi A.	4	Austria, Austria, Austria, Austria	JBE	E	POL
2006	Environmental Costs and Responsibilities Resulting from Oil Exploitation in Developing Countries: The Case of the Niger Delta of Nigeria	Eweje G.	1	New Zealand	JBE	E	POL
2006	Environmental Management Accounting: A Case Study Research on Innovative Strategy	Masanet-Llodra M.	1	Spain	JBE	E	FSA
2006	Environmental values and lifestyles as determining factors of ecological consumer behaviour: an empirical analysis	Fraj A.E., Martinez-Salinas E.	2	Spain, Spain,	JCM	E	CB
2006	Ethics and value creation in business research: comparing two approaches	Lindfelt L., Törnroos J.	2	Finland, Finland	EJM	T	FSA

2006	"Ethically Concerned, yet Unethically Behaved": Towards an Updated Understanding of Consumer's (Un)ethical Decision Making	Chatzidakis A., Hibbert S., Smith A.	3	UK, UK, UK,	ACR	E	CB
2006	Explicit and Implicit Determinants of Fair-Trade Buying Behavior	Vantomme D., Guens M., DeHouwer J., DePelsmacker P.	4	Belgium, Belgium, Belgium, Belgium	ACR	E	CB
2006	Fair Trade: Three Key Challenges for Reaching the Mainstream	Hira A., Ferrie J.	2	Canada, Canada	JBE	T	CB
2006	Finance as a Driver of Corporate Social Responsibility	Scholtens B.	1	Netherlands	JBE	T	CSR
2006	Focusing the Future of Macromarketing	Peterson M.	1	USA	JMacroM	T	POL
2006	How (and Where) The Mighty Have Fallen: Branded Litter	Roper S., Parker C.	2	UK, UK	JMM	E	FSA
2006	"I Need You Too!'' Corporate Identity Attractiveness for Consumers and The Role of Social Responsibility	Marin L., Ruiz S.	2	Spain, Spain	JBE	E	CB
2006	Improving attitudes toward brands with environmental associations: an experimental approach	Montoro Rios F.J., Martinez T.L., Moreno F.F., Soriano P.C.	3	Spain, Spain, Spain	JCM	E	CB
2006	Innovative stakeholder relations: When ethics pay (and when it doesn't)	Harting T.R., Harmeling S., Venkataraman S.	3	USA, USA, USA	BEQ	T	FSA
2006	Interdisciplinary bar for the public interest: What CSR and NGO frameworks contribute to the public relations of British and European activists	Kovacs R.	1	USA	PRR	E	CSR
2006	Macromarketing: Past, Present, and Possible Future	Layton R.A., Grossbart S.	2	Australia, USA	JMacroM	T	POL
2006	Normative Perspectives for Ethical and Socially Responsible Marketing	Laczniak G.R., Murphy P.E.	2	USA, USA	JMacroM	T	POL
2006	Pro-environmental Behavior in Egypt: Is there a Role for Islamic Environmental Ethics?	Rice G.	1	USA	JBE	E	CB
2006	Recatechizing codes of practice in supply chain relationships: discourse, identity and otherness	Ellis N., Higgins M.	2	UK, UK	JSM	E	FSA
2006	Reexamining the Expected Effect of Available Resources and Firm Size on Firm Environmental Orientation: An Empirical Study of UK Firms	Elsayed K.	1	Egypt	JBE	E	FSA
2006	Rethinking consumer boycotts	Ettenson, R., Smith, N.C., Klein, J., John, A.	4	USA, UK, USA, Singapore	MSMR	T	CB
2006	Seeing Is (Not) Believing: Managing the Impressions of the Firm's Commitment to the Natural Environment	Bansal P., Kistruck G.	2	Canada, Canada	JBE	E	FSA

2006	Self-selection bias in business ethics research	Harvey H.S. Jr.	1	USA	BEQ	T	CB
2006	Small Business Champions for Corporate Social Responsibility	Jenkins H.	1	UK	JBE	E	CSR
2006	SMEs and CSR: An Approach to CSR in their Own Words	Murillo D., Lozano J.	2	Spain, Spain	JBE	E	CSR
2006	Social Paradigms and Attitudes Toward Environmental Accountability	Shafer W. E.	1	China	JBE	E	CSR
2006	Sustainable Consumption Research as Democratic Expertise	Cohen M.J.	1	Honk Kong	JCPO	T	POL
2006	The Effect of Corporate Social Responsibility (CSR) Activities on Companies with bad Reputation	Yoon Y., Gürhan-Canli Z., Schwarz N.	3	South Korea, Turkey, USA	JCPsy	E	CSR
2006	The General Theory of Marketing Ethics: A Revision and Three Questions	Hunt S.D., Vitell S.J.	2	USA, USA	JMacroM	T	FSA
2006	The effects of consumers' ethical beliefs on copying behaviour	Suter T.A., Kopp S., Hardes D.M.	3	USA, USA, USA	JCPo	E	CB
2006	The impact of perceived corporate social responsibility on consumer behavior	Becker-Olsen K.L., Cudmore B.A., Hill, R.P.	3	USA, USA, USA	JBR	E	CB
2006	The Influence of Green Innovation Performance on Corporate Advantage in Taiwan	Chen Y., Lai S., Wen C.	3	Taiwan, Taiwan, Taiwan	JBE	E	FSA
2006	The Mediating Role of Anticipated Guilt in Consumers' Ethical Decision-Making	Steenhaut S., Van Kenhove P.	2	Belgium, Belgium	JBE	E	CB
2006	The Role of Corporate Social Responsibility in Strengthening Multiple Stakeholder Relationships: A Field Experiment	Sen S., Bhattacharya C. B., Korschun D.	3	USA, USA, USA	JAMS	E	CSR
2006	The Practitioner's Perspective on Non-Financial Reporting	Perrini F.	1	Italy	CMR	E	CSR
2006	Toward sustainable consumption: Researching voluntary simplifiers	McDonald, S., Oates, C.J., Young, C.W., Hwang, K.	4	UK, UK, UK, UK	PM	T	CB
2006	Sustainable Consumption Research as Democratic Expertise	Cohen M.J.	1	USA	JCPo	T	CB
2006	What if all trade was fair trade? The potential of a social clause to achieve the goals of fair Trade	Valor C.	1	Spain	JSM	T	POL
2007	A Framework for Understanding Corporate Social Responsibility Programs as a Continuum: An Exploratory Study	Pirsch J., Gupta S., Grau S.	3	USA, USA, USA	JBE	E	CSR
2007	A hierarchical analysis of the green consciousness of the Egyptian consumer	Mostafa M..M.	1	Kuwait	PM	E	CB
2007	A Model for Fair Trade Buying Behaviour: The Role of Perceived Quantity and Quality of Information and of Product-specific Attitudes	De Pelsmacker P., Janssens W.	2	Belgium, Belgium	JBE	E	CB

2007	A Note on Green Sentiments and the Human-Animal Relationship in Print Advertsing During the 20th Century	Spears N., Germain R.	2	USA, USA	JCIRA	E	COM
2007	A Social Contract Account for CSR as an Extended Model of Corporate Governance (II): Compliance, Reputation and Reciprocity	Sacconi L.	1	Italy	JBE	T	CSR
2007	A simulation of moral behavior within marketing exchange relationships	Hill P.R., Watkins A.	2	USA, USA	JAMS	E	FSA
2007	An ethical basis for relationship marketing: a virtue ethics perspective	Murphy P.E., Laczniak G.R., Wood G.	3	USA, USA, USA	EJM	T	CSR
2007	Business Ethics as Practice	Clegg S., Kornberger M., Rhodes C.	3	Australia, Australia, Australia	BJM	T	FSA
2007	Collaborating for systemic change	Senge, P.M., Lichtenstein, B.B., Kaeufer, K., Bradbury, H. Bradbury, H., Carroll, J.	6	USA, USA, USA, USA, USA, USA	MSMR	T	POL
2007	Communicating about corporate social responsibility: A comparative study of CSR reporting in Australia and Slovenia	Golob U., Bartlett J.L.	2	Slovenia, Australia	PRR	E	COM
2007	Consumers' Ethical Beliefs: The Roles of Money, Religiosity and Attitude toward Business	Vitell S.J., Singh J.J., Paolillo J.	3	USA, USA, USA	JBE	E	CB
2007	Consumer response to retailer use of cause-related marketing: Is more fit better?	Barone M.J., Norman A.T., Miyazaki A.D.	3	USA, USA, USA	JR	E	CB
2007	Corporate citizenship and public relations: The importance and interactivity of social responsibility issues on corporate websites	Capriotti P., Moreno A.	2	Spain, Spain	PRR	E	CSR
2007	Corporate Decisions about Labelling Genetically Modified Foods	MacDonald C., Whellams M.	2	Canada, Canada	JBE	T	FSA
2007	Corporate Social Responsibility (CSR): Theory and Practice in a Developing Country Context	Jamali D., Mirshak R.	2	Lebanon, Lebanon	JBE	E	CSR
2007	Corporate Social Responsibility in Global Supply Chains: A Procedural Justice Perspective	Boyd D.E., Spekman R.E., Kamauff J.W., Werhane P.	4	USA, USA, USA, USA	LRP	T	CSR
2007	Corporate Social Responsibility Practices and Environmentally Responsible Behavior: The Case of The United Nations Global Compact	Cetindamar D.	1	Turkey	JBE	E	CSR
2007	CSR Strategies of SMEs and Large Firms. Evidence from Italy	Perrini F., Russo A., Tencati A.	3	Italy, Italy, Italy	JBE	E	CSR
2007	Customers' values, beliefs on sustainable corporate performance, and buying behavior	Collins, C.M., Steg, L, Koning, M.A.S.	3	Netherlands, Netherlands, Netherlands	PM	E	CB
2007	Do What Consumers Say Matter? The Misalignment of Preferences with Unconstrained Ethical Intentions	Auger P., Devinney T.M.	2	Australia, Australia	JBE	E	CB

2007	Environmental Reporting of Global Corporations: A Content Analysis based on Website Disclosures	Jose A., Lee S.	2	USA, USA	JBE	E	CSR
2007	Environmental Sustainability Versus Profit Maximization: Overcoming Systemic Constraints on Implementing Normatively Preferable Alternatives	Alexander J.	1	USA	JBE	T	FSA
2007	Ethical Decision-Making by Consumers: The Roles of Product Harm and Consumer Vulnerability	Jones J.L., Middleton K.L.	2	USA, USA	JBE	E	CB
2007	Ethical positioning and political marketing: the ethical awareness and concerns of UK voters	Freestone O.M., McGoldrick P.J.	2	UK, UK	JMM	E	POL
2007	Filling the Empty Shell. The Public Debate on CSR in Austria as a Paradigmatic Example of a Political Discourse	Mark-Ungericht B., Weiskopf R.	2	Austria, Austria	JBE	T	CSR
2007	Greening the Danes? Experience with consumption and environment policies	Christensen,T., Godskesen M., Gram-Hanssen K., Quitzau M., Ropke I.	5	Denmark, Denmark, Denmark, Denmark, Denmark	JCPo	T	POL
2007	How Standard is Standardized MNC Global Environmental Communication?	Hunter T., Bansal P.	2	Canada, Canada	JBE	E	COM
2007	‘‘I Need You Too!’’ Corporate Identity Attractiveness for Consumers and The Role of Social Responsibility	Marin L., Ruiz S., Rubio A.	3	Spain, Spain, Spain	JBE	E	CSR
2007	Institutionalization of ethics and its consequences: a survey of marketing professionals	Singhapakdi A., Vitell S.J.	2	USA, USA	JAMS	E	CSR
2007	Micro-Macro Linking Using System Dynamics Modeling: An Examination of Eco-Labeling Effects for Farmed Shrimp	Arquitt S.P., Cornwell T.B.	2	Australia, Australia	JMacroM	E	POL
2007	Mistaking a marketing perspective for ethical analysis: when consumers can’t know that they should want	Rotfeld H.J.	1	USA	JCM	T	CB
2007	Moral Identity and Judgments of Charitable Behaviors	Reed II A., Aquino K., Levy E.	3	USA, USA, USA	JM	E	CB
2007	Morality and consumption: towards a multidisciplinary perspective	Caruana R.	1	UK	JMM	T	CB
2007	Proactive Corporate Environmental Strategies: Myths and Misunderstandings	Aragon-Correa J., Rubio Lopez E.	3	Spain, Spain, Spain	LRP	E	FSA
2007	Public Policies on Corporate Social Responsibility: The Role of Governments in Europe	Albareda L., Lozano J., Ysa T.	3	Spain, Spain, Spain	JBE	E	POL
2007	Reaping relational rewards from corporate social responsibility: The role of competitive positioning	Du S., Bhattacharya C.B., Sen S.	3	USA, USA, USA	IJRM	E	CSR
2007	Re-evaluating green marketing strategy: a stakeholder perspective	Rivera-Camino J.	1	Spain	EJM	E	FSA

2007	Researching Corporate Social Responsibility: An Agenda for the 21st Century	Godfrey P., Hatch N.	2	USA, USA	JBE	T	CSR
2007	Social Role Conceptions and CSR Policy Success	Gossling T., Vocht C.	2	Netherlands, Netherlands	JBE	E	POL
2007	Social Standards: Toward an Active Ethical Involvement of Businesses in Developing Countries	Beschorner T., Muller M.	2	Germany, Germany	JBE	T	POL
2007	Sustainable Tourism: Ethical Alternative or Marketing Ploy?	Lansing P., De Vries P.	2	USA, USA	JBE	T	POL
2007	Taboos in Corporate Social Responsibility Discourse	Kallio T.	1	Finland	JBE	T	CSR
2007	Taming Trojan Horses: Identifying and Mitigating Corporate Social Responsibility Risks	Heugens P., Dentchev N.	2	Netherlands, Belgium	JBE	E	CSR
2007	The Communication of Corporate Social Responsibility: United States and European Union Multinational Corporations	Hartman L., Rubin R., Dhanda K.	3	USA, USA, USA	JBE	E	CSR
2007	The End(s) of Marketing and the Neglect of Moral Responsibility by the American Marketing Association	Mick D.G.	1	USA	JPPM	T	POL
2007	The International Business Ethics Index: European Union	Tsalikis J., Seaton B.	2	USA, USA	JBE	E	CSR
2007	Business Ethics Index: USA 2006	Tsalikis J., Seaton B.	2	USA, USA	JBE	E	CSR
2007	The Multinational Corporation and Global Governance: Modelling Global Public Policy Networks	Detomasi D.	1	Canada	JBE	T	POL
2007	The Pragmatics of Care in Sustainable Global Enterprise	Simola S.	1	Canada	JBE	T	POL
2007	The Social Responsibilities of International Business Firms in Developing Areas	Bird F., Smucker J.	2	Canada, Canada	JBE	T	POL
2007	Trust in buyer-seller relationships: the challenge of environmental (green) adaptation	Canning L. , Hanmer-Lloyd S.	2	UK, UK	EJM	E	FSA
2007	Using Best–Worst Scaling Methodology to Investigate Consumer Ethical Beliefs Across Countries	Auger P, Devinney T., Louviere J.	3	Australia, Australia, Australia	JBE	E	CB
2007	Values and Attitudes Toward Social and Environmental Accountability: a Study of MBA Students	Fukukawa K., Shafer W., Lee G.	3	UK, Hong Kong, Hong Kong	JBE	E	CB
2007	What Corporate Social Responsibility Activities are Valued by the Market?	Bird R., Hall A., Momentè F., Reggiani F.	4	Australia, Australia, Italy, Italy	JBE	E	FSA
2007	Whatever people say I am, that's what I am: Social labeling as a social marketing tool	Cornelissen G., Pandelaere M., Warlop L., Dewitte S.	4	Spain, Belgium, Belgium, Belgium	IJRM	E	CB

2007	Why Firms Should Not Always Maximize Profits	Kolstad I.	1	Norway	JBE	T	FSA
2008	A Holistic Corporate Responsibility Model: Integrating Values, Discourses and Actions	Ketola T.	1	Finland	JBE	T	CSR
2008	Applying Ethical Concepts to the Study of ‘‘Green’’ Consumer Behavior: An Analysis of Chinese Consumers Intentions to Bring their Own Shopping Bags	Chan R.Y.K., Wong Y. H., Leung T. K. P.	3	Hong Kong, Hong Kong, Hong Kong	JBE	E	CB
2008	A Room with a Viewpoint: Using Social Norms to Motivate Environmental Conservation in Hotels	Goldstein N.J., Cialdini R.B., Griskevicius V.	3	USA, USA, USA	JCR	E	CB
2008	Antecedents of Consumer Attitudes toward Cause-Related Marketing	Youn S., Kim H.	2	UK, UK	JAR	E	CB
2008	Applying Ethical Concepts to the Study of ‘‘Green’’ Consumer Behavior: An Analysis of Chinese Consumers’ Intentions to Bring their Own Shopping Bags	Chan R., Wong Y., Leung T.	3	China, China, China	JBE	E	CB
2008	Beyond moral reasoning: a review of moral identity research and its implications for business ethics	Shao R., Aquino K., Freeman D.	3	USA, Canada, USA	BEQ	T	CSR
2008	Can Consumers Buy Responsibly? Analysis and Solutions for Market Failures	Valor C.	1	Spain	JCPo	T	CB
2008	Commercializing Social Interaction: The Ethics of Stealth Marketing	Martin K.D., Smith N.C.	2	USA, UK	JPPM	T	COM
2008	Complementary Resources and Capabilities for an Ethical and Environmental Management: A Qual/Quan Study	Lopez-Gamero M., Claver-Cortes E., Molina-Azorin J.	3	Spain, Spain, Spain	JBE	E	FSA
2008	Compliance with Mandatory Environmental Reporting in Financial Statements: The Case of Spain (2001–2003)	Criado-Jimenez I., Fernandez-Chulian M., Husillos-Carques C., Larrinaga-Gonzalez F.	4	Spain, Spain, Spain, Spain	JBE	E	FSA
2008	Consumer Perceptions of Business Ethical Behavior in Former Eastern Block Countries	Tsalikis J., Seaton B.	2	USA, USA	JBE	E	CB
2008	Corporate Social Responsibility and Crony Capitalism in Taiwan	Ip P.	1	Taiwan	JBE	E	CSR
2008	Corporate Social Responsibility and the Social Enterprise	Cornelius N., Todres M., Janjuha-Jvraj S., Woods A., Wallace J.	5	UK, UK, UK, UK, UK	JBE	T	CSR
2008	Corporate social responsibility attribute rankings	O’Connor A., Meister M.	2	USA, USA	PRR	E	CSR
2008	Corporate Social Responsibility of the Most Highly Reputed European and North American Firms	Sotorrio L., Fernandez Sanchez J.	2	Spain, Spain	JBE	E	CSR
2008	Corporations as citizens: political not metaphorical. A reply to critics	Neron P.Y., Norman W.	2	Canada, USA	BEQ	T	POL

2008	Decision making process of community organic food consumers: an exploratory study	Essoussi L.H., Zahaf M.	2	Canada, Canada	JCM	E	CB
2008	Do Firms Practice What They Preach? The Relationship Between Mission Statements and Stakeholder Management	Bartkus B., Glassman M.	2	USA, USA	JBE	E	FSA
2008	Do social product features have value to consumers?	Auger P., Devinney T.M., Louviere J.J., Burke P.F.	3	Australia, Australia, Australia	IJRM	E	CB
2008	Environmental Reporting: The U.K.Water and Energy Industries: A Research Note	Stray S.	1	UK	JBE	E	POL
2008	Environmental Respect: Ethics or Simply Business? A Study in the Small and Medium Enterprise (SME) Context	Cambra-Fierro J., Hart S., Polo Redondo Y.	3	Spain, UK, Spain	JBE	E	POL
2008	Ethics and Public Policy Implications of Research on Consumer Well-Being	Sirgy M.J.	1	USA	JPPM	T	POL
2008	Ethics, Power and Communities: Corporate Social Responsibility Revisited	Kleinrichert D.	1	USA	JBE	T	CSR
2008	Gauging consumers' responses to CSR activities: Does increased awareness make cents?	Wigley S.	1	USA	PRR	E	CB
2008	How Green Should You Be: Can Environmental Associations Enhance Brand Performance?	Montoro-Rios F.J., Luque-Martinez T., Rodriguez-Molina M.A.	3	Spain, Spain, Spain	JAR	E	COM
2008	How Macro Should Macromarketing Be?	Kilbourne W.E.	1	USA	JMacroM	T	POL
2008	How materialism affects environmental beliefs, concern, and environmentally responsible behavior	Kilbourne W., Pickett G.	2	USA, USA	JBR	E	CB
2008	Inciting consumers to buy fairly-traded products: a field experiment	d'Astous A., Mathieu S.	1	Canada, France	JCM	E	CB
2008	Local Responsiveness Pressure, Subsidiary Resources, Green Management Adoption and Subsidiary's Performance: Evidence from Taiwanese Manufactures	Peng Y., Lin S.	2	Taiwan, Taiwan	JBE	E	FSA
2008	Marketing with integrity: ethics and the service-dominant logic for marketing	Abela A., Murphy E.P.	2	USA, USA	JAMS	T	FSA
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2008	Moral Discourse and Corporate Social Responsibility Reporting	Reynolds M., Yuthas K.	2	USA, USA	JBE	T	CSR
2008	Motivations of the Ethical Consumer	Freestone O.M., McGoldrick P.J.	2	UK, UK	JBE	E	CB

2008	Positive cueing: Promoting sustainable consumer behavior by cueing common environmental behaviors as environmental	Cornelissen G., Dewitte S., Warlop L., Yzerbyt V.	4	Spain, Belgium, Belgium, Belgium	IJRM	E	CB
2008	Pro-environmental products: marketing influence on consumer purchase decision	Pickett-Baker J., Ozaki R.	2	UK, UK	JCM	E	CB
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2008	The Corporate Social Performance Content of Innovation in the U.K.	Pavelin S., Porter L.	2	UK, UK	JBE	E	CSR
2008	The Dominant Social Paradigm, Consumption, and Environmental Attitudes: Can Macromarketing Education help?	Kilbourne W.E., Carlson L.	2	USA, USA	JMacroM	E	POL
2008	The Driver of Green Innovation and Green Image – Green Core Competence	Chen Y.	1	Taiwan	JBE	E	FSA
2008	The Ethical Aspects of Direct to Consumer Advertising of Prescription Drugs in the United Kingdom: Physician versus Consumer Views	Reast J., Palihawadana D., Shabbir H.	3	UK, UK, UK	JAR	E	COM
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2008	The Positive Effect of Green Intellectual Capital on Competitive Advantages of Firms	Chen Y.	1	Taiwan	JBE	E	FSA
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2008	Walk the line: Active Moms define corporate social responsibility	O'Connor A., Shumate M., Meister M.	3	USA, USA, USA	PRR	E	CSR
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2009	A cross-cultural study of the role of religion in consumers' ethical positions	Cornwell B., Chi Cui C., Mitchell V., Schlegelmilch B., Dzulkiflee A., Chan J.	6	Australia, UK, UK, Austria, Brunei, China	IMR	E	CB
2009	A Multidimensional Approach to the Influence of Environmental Marketing and Orientation on the Firm's Organizational Performance	Fraj A.E., Martinez-Salinas E., Matute-Vallejo J.	3	Spain, Spain, Spain	JBE	E	FSA
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2009	Corporate social responsibility communication of Chinese and global corporations in China	Tang L., Li H.	2	USA, USA	PRR	E	COM
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2009	European Communication Monitor Current developments, issues and tendencies of the professional practice of public relations in Europe	Moreno A., Zerfass A., Tench R., Verčič D., Verhoeven P.	5	Spain, Germany, UK, Slovenia, Netherlands	PRR	E	POL

2009	Examining the Effects of Moral Development Level, Self-Concept, and Self-Monitoring on Consumers' Ethical Attitudes	Kavak B., Gurel E., Eryigit C.,Tektas O.O.	4	Turkey, Turkey, Turkey, Turkey	JBE	E	CB
2009	Fair Trade's Dual Aspect. The Communications Challenge of Fair Trade Marketing	Golding K.M.	1	UK	JMacroM	E	FSA
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2009	Ingraining Product-Relevant Social Good into Business Processes in Subsistence Marketplaces: The Sustainable Market Orientation	Viswanathan M., Seth A., Gau R., Chaturvedi A.	4	USA, USA, USA, USA	JMacroM	E	FSA
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2009	Measuring Unethical Consumer Behavior Across Four Countries	Mitchell V.W., Balabanis G., Schlegelmilch B.B., Cornwell T.B.	4	UK, UK, Austria, USA	JBE	E	CB
2009	National Culture, Economic Development, Population Growth and Environmental Performance: The Mediating Role of Education	Peng Y., Lin S.	2	Taiwan, Taiwan	JBE	E	POL
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2009	The Status of Contemporary Business Ethics Research: Present and Future	Ma Z.	1	Canada	JBE	E	FSA
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2010	Alliances Between Brands and Social Causes: The Influence of Company Credibility on Social Responsibility Image	Bigne Alcaniz E., Chumpitaz Caceres R., Curras Perez R.C.	4	Spain, Spain, France, Peru	JBE	E	FSA
2010	Antecedents and outcomes of consumer environmentally friendly attitudes and behaviour	Leonidou L.C., Leonidou C.N., Kvasova O.	3	Greece, UK, Sweden	JMM	E	CB
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2010	Consumer Support for Corporate Social Responsibility (CSR): The Role of Religion and Values	Ramasamy B., Yeung M., Au A.	3	China, Hong Kong, Hong Kong	JBE	E	CB
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2010	The Sustainability Liability: Potential Negative Effects of Ethicality on Product Preference	Luchs R., Naylor R.W., Irwin J.R., Raghunathan R.	4	USA, USA, USA, USA	JM	E	CB
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2010	Why Ethical Consumers Don't Walk Their Talk: Towards a Framework for Understanding the Gap Between the Ethical Purchase Intentions and Actual Buying Behaviour of Ethically Minded Consumers	Carrington M.J., Neville B.A., Whitwell G.J.	3	Australia, Australia, Australia	JBE	T	CB
2010	Using consumer perceived ethicality as a guideline for corporate social responsibility strategy: A commentary essay	Shea L.J.	1	USA	JBR	T	CSR
2011	A Cross-Cultural Examination of Corporate Social Responsibility Marketing Communications in Mexico and the United States: Strategies for Global Brands	Becker-Olsen K., Taylor C.R., Hill R.P., Yalcinkaya G.	4	USA, USA, USA, USA	JIM	E	COM
2011	A Model for Ethical Decision Making in Business: Reasoning, Intuition, and Rational Moral Principles	Woiceshyn J.	1	Canada	JBE	T	FSA
2011	Adoption barriers and resistance to sustainable solutions in the automotive sector	Wiedmann K.-P., Hennigs N., Pankalla L., Kassubek M., Seegebarth B.	5	Germany, Germany, Germany, Germany, Germany	JBR	E	CB
2011	An Empirical Study of Leader Ethical Values, Transformational and Transactional Leadership, and Follower Attitudes Toward Corporate Social Responsibility	Groves K.S., LaRocca M.	2	USA, USA	JBE	E	FSA
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2011	An Institutional Perspective on the Diffusion of International Management System Standards: The Case of the Environmental Management Standard ISO 14001	Delmas M., Montes-Sancho M.	2	USA, Spain	BEQ	T	POL
2011	Astroturfing Global Warming: It Isn't Always Greener on the Other Side of the Fence	Cho C.H., Martens M.L., Kim H., Rodriguez M.	4	France, Canada, Canada, Canada	JBE	E	POL
2011	Assessing the Effects of Certification Networks on Sustainable Production and Consumption: The Cases of FLO and FSC	Gandenberger C., Garrelts H., Wehlau D.	3	Germany, Germany, Germany	JCPo	T	POL

2011	Behaviour and climate change: Consumer perceptions of responsibility	Wells V. K., Ponting C.A. Peattie K.	3	UK, UK, UK,	JMM	E	CB
2011	Beyond Profitability of Energy-Saving Measures—Attitudes Towards Energy Saving	Zundel S., Stieß I.	2	Germany, Germany	JCPo	E	CB
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2011	Customer Response to Carbon Labelling of Groceries	Vanclay J., Shortiss J., Aulsebrook S., Gillespie A., Howell B., Johanni R., Maher M., Mitchell K., Stewart M., Yates J.	10	Australia, Australia, Australia, Australia, Australia, Australia, Australia, Australia, Australia, Australia	JCPo	E	CB
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2011	Do Consumers Care About Ethical-Luxury?	Davies I.A., Lee Z., Ahonkhai I.	3	UK, UK, UK	JBE	E	CB
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2011	Doing Right Leads to Doing Well: When the Type of CSR and Reputation Interact to Affect Consumer Evaluations of the Firm	Lii Y.-S., Lee M.	2	Taiwan, USA	JBE	E	CB
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2011	Explicating Ethical Corporate Marketing. Insights from the BP Deepwater Horizon Catastrophe: The Ethical Brand that Exploded and then Imploded	Balmer J.M.T., Powell S.M., Greyser S.A.	3	UK, Australia, USA	JBE	E	FSA
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2011	Green marketing strategies: an examination of stakeholders and the opportunities they present	Cronin, J.Jr, Smith J.S., Gleim M.R., Ramirez E., Martinez J.D.	5	USA, USA, USA, USA, USA	JAMS	T	FSA
2011	How can corporate social responsibility activities create value for stakeholders? A systematic review	Peloza J., Shang J.	2	Canada, Canada	JAMS	E	CSR
2011	How Sustainability Ratings Might Deter 'Greenwashing': A Closer Look at Ethical Corporate Communication	Parguel B., Benoıt-Moreau F., Larceneux F.	4	France, France, France, France	JBE	E	COM

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2011	Putting Sustainable Consumption into Practice	Schrader U., Thøgersen J.	2	Germany, Denmark	JCPo	T	CB
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2011	Sustainability and consumption	Huang M.-H., Rust R.T.	2	Taiwan, USA	JAMS	T	POL
2011	Sustainable consumption: Opportunities for consumer research and public policy	Prothero A., Dobscha S., Freund J., Kilbourne W.E., Luchs M.G., Ozanne L.K., Thøgersen J.	8	Ireland, USA, UK, USA, USA, New Zeland, Denmark	JPPM	T	POL
2011	Sustainable marketing, equity, and economic growth: a resource-advantage, economic freedom approach	Hunt S.D.	1	USA	JAMS	T	POL
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2011	The Emergence, Variation, and Evolution of Corporate Social Responsibility in the Public Sphere, 1980–2004: The Exposure of Firms to Public Debate	Lee S.Y., Carroll C.E.	2	USA, USA	JBE	E	CSR
2011	The Impact Evaluation of Sustainable Consumption Policy Instruments	Wolff F., Schönherr N.	2	Germany, Germany	JCPo	E	POL

2011	The Impact of Ethical Ideologies, Moral Intensity, and Social Context on Sales-Based Ethical Reasoning	Valentine S.R., Bateman C.R.	2	USA, USA	JBE	E	FSA
2011	The Impact of Intrinsic Religiosity on Consumers' Ethical Beliefs: Does It Depend on the Type of Religion? A Comparison of Christian and Moslem Consumers in Germany and Turkey	Schneider H., Krieger J., Bayraktar A.	3	Germany, Germany, Turkey	JBE	E	CB
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2011	The influence of gender, social cause, charitable support, and message appeal on Gen Y's responses to cause-related marketing	Hyllegard K.H., Yan R.N., Ogle J.P., Attmann J.	4	USA, USA, USA, SA	JMM	E	CB
2011	The Public Health Implications of Consumers' Environmental Concern and Their Willingness to Pay for an Eco-Friendly Product	Royne M.B., Levy M., Martinez J.	3	USA, USA, USA	JCA	E	CB
2011	The Relationship Between Corporate Social Responsibility and Earnings Management: An Exploratory Study	Hong Y., Andersen M.L.	2	USA, USA	JBE	E	CSR
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2011	The Service-Dominant Logic of Marketing and Marketing Ethics	Williams J., Aitken R.	2	New Zealand, New Zealand	JBE	T	FSA
2011	The structure of sustainability research in marketing, 1958–2008: a basis for future research opportunities	Chabowski B.R., Mena J.A., Gonzalez-Padron T.L.	3	USA, USA, USA	JAMS	E	FSA
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2011	Toward a "theoretical toolbox" for sustainability research in marketing	Connelly B.L., Ketchen D.Jr., Slater S.F.	3	USA, USA, USA	JAMS	T	FSA
2011	Towards Shared Social Responsibility: A Study of Consumers' Willingness to Donate Micro-Insurances when Taking Out Their Own Insurance	Jansen P., Gossling T., Bullens T.	3	Netherlands, Netherlands, Netherlands	JBE	E	CB
2011	Transformative green marketing: Impediments and opportunities	Polonsky M.J.	1	Australia	JBR	T	CB
2011	Uncovering the Intellectual Structure of Research in Business Ethics: A Journey Through the History, the Classics, and the Pillars of Journal of Business Ethics	Calabretta G., Durisin B., Ogliengo M.	3	Norway, Italy, Italy	JBE	E	FSA
2011	Understanding Consumer's Responses to Enterprise's Ethical Behaviors: An Investigation in China	Deng X.	1	China	JBE	E	CB
2011	Understanding Purchase Intention During Product-Harm Crises: Moderating Effects of Perceived Corporate Ability and Corporate Social Responsibility	Lin C.-P., Chen S.-C., Chiu C.-K., Lee W.-Y.	4	Taiwan, Taiwan, Taiwan, Taiwan	JBE	E	FSA
2011	Understanding the Role of Moral Principles in Business Ethics: A Kantian Perspective	Smith J., Dubbink W.	2	Netherlands, USA	BEQ	T	FSA

2011	Varieties of Environmental Labelling, Market Structures, and Sustainable Consumption Across Europe: A Comparative Analysis of Organizational and Market Supply Determinants of Environmental-Labelled Goods	Koos S.	1	Germany	JCPo	E	CB
2011	Visualizing the Phronetic Organization: The Case of Photographs in CSR Reports	Rämö H.	1	Sweden	JBE	E	CSR
2011	What motivates consumers to participate in boycotts: Lessons from the ongoing Canadian seafood boycott	Braunsberger K., Buckler B.	1	USA, USA	JBR	E	CB
2011	‘‘Why Don’t Consumers Care About CSR?’’: A Qualitative Study Exploring the Role of CSR in Consumption Decisions	Oberseder M., Schlegelmilch B.B., Gruber V.	3	Austria, Austria, Austria	JBE	E	CB
2011	Who Shall Lead Us? How Cultural Values and Ethical Ideologies Guide Young Marketers’ Evaluations of the Transformational Manager–Leader	Smith B.	1	USA	JBE	E	FSA
2011	Willingness to pay for socially responsible products: case of cotton apparel	Ha-Brookshire J.E., Norum P.S.	2	USA, USA	JCM	E	CB

Chapter 2[1]

Why do not people buy eco-friendly products? An exploratory approach

Abstract

Purpose - Despite the last decades have seen a progressive increase in environmental consciousness worldwide, market shares of green products are still very low and resistances to the diffusion of more eco-friendly purchasing patterns persist. Focusing on Perceived Behavioural Control construct and its underlying Control beliefs, the aim of this study is to explore which are the main perceived barriers to the purchase of eco-friendly products, as they are deemed partially responsible for the intention-behaviour gap in environmentally minded consumers.

Design/methodology - An exploratory, qualitative study was conducted: 51 environmentally minded consumers were interviewed (semi-structured face to face interviews of one hour in length each), and data analysed with cognitive maps technique.

Results – Findings revealed that higher price, lower quality, scarce availability, inadequate communication of eco-friendly products are clustered by consumers in three macro-categories of sacrifices: extra money, time, cognitive resources which are required to purchase eco-friendly products. These deterrent factors represent additional efforts consumers have to bear to buy green goods, and they lead green products not to be proper substitutes of conventional products. Hence, they reduce environmentally minded consumer intention but especially behaviour at the point of purchase.

Originality – Adopting cognitive maps technique, the study draws the negative impact of each deterrent factor on green purchase behaviour. In addition, it shows how such factors cluster.

Keywords

green consumer behaviour, environmentally friendly products, attitude-behaviour gap, intention-behaviour gap, cognitive maps technique

[1]The content of this Chapter has been developed in two different research papers: Pastore A. and Barbarossa C., "Why people do not buy environmentally friendly products. An exploratory approach", presented at the 7th Marketing Trends Conference, Plenary Session, Paris, 2011, and Pastore A. and Barbarossa C., "Almost green. Exploring why environmentally minded consumers do not translate their intentions into purchase behaviour" presented at the 40th EMAC Conference, poster session, 2011, Lubljiana.

To shed light on the first of the grey research areas as emerged in the content analysis (Chapter 1), in Chapter 2 the attitude-behaviour and the intention-behaviour gaps are investigated from both a methodological and a substantial perspective. According to the latter, it is attempted to find out the most relevant deterrent factors which impede or make more difficult to purchase eco-friendly products as they force consumers to bear additional sacrifices (or efforts) when purchasing green goods (as compared to conventional ones).

2.1 Introduction

In 1999, Lee and Holden stated how "there is strong evidence to suggest that people's concern for environmental issues is growing, but little evidence that this has translated into appropriate changes in pro-environmental consumer behaviour" (p. 373). In 2001, Carrigan and Attalla reflected on how ethical and environmental issues are "inherently controversial, and years of research continue to present scholars and practitioners with conflicting and challenging views on the value of a socially responsible approach to marketing activities" (p. 560). In 2006, Chatzidakis *et al*. addressed the attitude-behaviour discrepancy in ethical consumer behaviour, advancing the concept of neutralization, "a process through which people justify or rationalize their behaviour as a means of coping with decision conflict and insulating themselves from blame and guilt" (p. 693). In the same year, Eckhardt *et al*. (2006) provided a synthesis of the justifications that consumers invoke for behaving not ethically or environmentally friendly. In 2007, Auger and Devinney wrote that "opinions of consumers do not appear to translate into changes in purchasing behaviour. That is, there appears to be a gap between what consumers say about the importance of ethical issues and what they do at the checkout counter" (p. 361). In 2009, Gupta and Ogden emphasized how "research to date has failed to answer the puzzling question about why despite concern towards the environment (attitude) consumers fail to purchase green products (behavior)?" (pp. 376-377). In 2010, Carrington *et al*. observed how "empirical evidence suggests that, while increasing numbers of consumers have absorbed and are motivated by the values of ethical consumerism, a change in consumption behaviour is much less apparent. Stated ethical intentions rarely translate into actual ethical buying behaviour at the moment of truth - the cash register" (p. 139). In the same year, Young *et al*. (2010) stated that high amounts of consumers "report that they are very concerned about environmental issues but they are struggling to translate this into purchases" (p. 20-31). In 2011, more than ten years later Lee and Holden's (1999) work, Öberseder *et al*. still draw attention on how "during the past decade, consumers have become progressively more interested in corporate social responsibility. […] However, despite consumers' interest in CSR and its impact on purchase intention, in reality, CSR still only plays a minor role in consumption decisions" (p. 449).

The alleged contributions prove how the last four decades have seen a progressive increase in environmental consciousness worldwide, as the environment moved from a fringe, to a mainstream issue. Increased media coverage, more stringent legislation, rise of pressure

group activities and great stirs of major industrial disasters on public opinion led consumers to become more concerned about the environment. Early research focused on consumer attitudes toward environmental issues. "By the end of the 1980s, increasing numbers of consumers described themselves as environmentalists and a number of opinion polls indicating an expressed desire to protect the environment emerged" (Kalafatis *et al*. 1999, p. 442). They suggested that consumers with a higher level of environmental concern were more likely to engage in eco-friendly purchase behaviour and led firms to suppose there were chances to develop primary demand (Shabecoff, 1993; Sheltzer *et al*., 1991; Antil, 1984).

However, in the following years, demand for eco-friendly products did not grow as expected and limits in the use of measures of general attitude appeared under the name of *attitude-behaviour* gap (Young *et al*., 2010). As a consequence of the impossibility of considering general measures of attitude as good predictors of specific environmental activities, and in order to overcome the attitude-behaviour gap, some scholars called for the development of new theories as well as for the consideration of new variables (Lee and Holden, 1999). Thus, mostly adopting the Theory of Planned Behaviour (Ajzen, 1991) in the "green" field, research focused on consumers' self declared willingness to buy eco-friendly products. Intention was found to have a mediating role between attitude and behaviour, as well as a significant predicting power of green purchasing behaviour (Follows and Jobber, 2000).

However, today, despite positive forecasts on increasing eco-awareness and consumers' self declared willingness to buy green goods, market share of green products are still quite low and resistances to the diffusion of more ecologically oriented consumption patterns still persist (Moisander, 2007). Some scholars investigated if green matters were really relevant for consumers (Carrigan and Attalla, 2001), while others investigated if the attitude-behaviour gap had the same strength among different product categories (Wheale and Hinton, 2007). However, a lot of work still must be done, and a deep knowledge of the main deterrent factors that obstacle the purchasing of eco-friendly products is still a long way off (Carrington *et al*., 2010). In particular, if the attitude-behaviour gap was almost unanimously solved by the literature referring to the missed application of the *principle of specificity* (De Pelsmacker and Janssens, 2007), the *intention-behaviour* gap is still a widely discussed topic. Even when intentions are correctly measured and respondents' responses are not biased (as in the case of well-established environmentally minded consumers, like active members of ecological associations), an inconsistency between green purchase intention and actual behaviour may arise. To this end, in recent years, some authors attempted to explore the substantial complexity of green purchase behaviour by investigating the presence of relevant constraints (Moisander, 2007). Despite the meaningful contribution to green purchasing knowledge, scholars mainly dealt with unspecified general consumers (Follows and Jobber, 2000) or self-declared green purchasers (Young *et al.*, 2010), while they almost neglected to analyse *subjectivist* consumers, namely established environmentally minded consumers who declare to be willing to buy green goods but not buy them.

This works aims *to find out why established environmentally minded consumers who declare to be willing to buy green products, do not actually buy them*.
Consequently, the research questions are:

RQ1: Which are the deterrent factors to the purchasing of green products for environmentally minded consumers?
RQ2: Which are the most relevant factors?
RQ3: Which are the relationships among them?

Understanding the gap between what environmentally minded consumers intend to do and what they actually do at the point of purchase, and understanding how to close this gap, is an important academic, managerial and social objective (Carrington *et al*., 2010). In particular, from a managerial point of view, *subjectivist* consumers represent a wide potential market and to understand how to close the intention-behaviour gap may lead firms to increase both the primary demand and the market share of green goods.
To pursue the research goal, this work is structured as follow. In §§ 2.2.1 and 2.2.2 the matters of attitude-behaviour and intention-behaviour gaps are first discussed according to a methodological perspective, and the bias of socially desirable answers is deepened (§ 2.2.3). In § 2.2.4 the matter of measurement is integrated by the adoption of a "substantial" perspective. In §§ 2.3 and 2.4, methodology and findings are presented, respectively. In §§ 2.5 and 2.6, discussions, managerial implications, conclusions, limitations and guidelines for further research are reported.

2.2 Theoretical framework

2.2.1 Green consumer behaviour: a definition

Borrowing Webster's definition (1975), an environmentally conscious consumer can be defined as the one who takes into account the environmental consequences of his or her private consumption or who attempts to use his or her purchasing power to bring about positive environmental changes. Elkington *et al*. (1990) and Cowe and Williams (2000) extended the definition to include wider ethical issues and "matters of conscience" and defined green consumer as the one who avoids products that might endanger the health of the consumer or others; cause significant damage to the environment during manufacture, use or disposal; consume a disproportionate amount of energy; cause unnecessary waste; use materials derived from threatened species or environments; involve unnecessary use or cruelty to animals [or] adversely affect other countries. Similarly, Hendarwan (2002) broadly defined green consumerism as the one which involves "beliefs and values aimed at supporting a greater good that motivates consumers' purchases" (p.16). That is, notwithstanding the concept of ethical consumerism is generally accepted as being borne out of the environmental domain, some authors (e.g., Webb *et al*., 2008) tended to refer to environmentally minded consumers and ethically minded consumers without any

distinction. In the Author's point of view, this similarity must be considered with caution as ethical consumers are additionally concerned with the "people" element of consumerism (Harper and Makatouni, 2002) "such as those of the Third World" (Shaw and Clarke, 1999, p.109). Harrison *et al*. (2005) noted that ethical consumers "care whether a corporation promotes employees from minority ethnicities, plan their consumption to avoid harm to other animals, worry about product transportation distances and probably a plethora of other concerns" (p. 4), so that a different and more complex decision making process occurs (Freestone and McGoldrick, 2008). For example, an individual with a positive attitude towards the environment (e.g., forest depletion, air or water pollution, climate change) may have no positive attitudes towards child labour.

Furthermore, within the green consumption domain, Webster's definition (1975) of green consumer sheds light on how green consumption can be enacted by different behaviours, i.e. purchasing eco-responsible products (Follows and Jobber, 2000), boycotting grey products (Dalli, 2005), recycling goods, re-using containers (Tilikidou and Delistavrou, 2008) or expanding products' life-span (Peattie, 1995)[2]. In accordance with previous research (Folkes and Kaminis, 1999; Skowronski and Carlston, 1987), Carrigan and Attalla (2001) argued that, to date, there is a conflicting research on how information about firm practices have an asymmetrical influence on consumers. Awareness about a firm's "grey" practices may lead consumers to boycott a firm's products while knowing about a firm's ecological practices would not necessarily persuade consumers to buy green goods (Baumeister *et al*., 2001).

"Consumers' primary motive for green consumerism can be expressed or manifested with different selective motives and behaviours" (Moisander, 2007, p. 3). "Eco-friendly consumption constitutes a *behavioral category*" (Ajzen and Fishbein, 1980, p. 31), namely an *inferred concept* that involve a wide range of single behaviours assumed to be instances of the general behavioural category. In turn, each single behaviour can be expressed by several activities. For example, eco-friendly behaviour (*general behavioural category*) can be expressed by recycling, boycotting or green purchasing (*behaviours*). In turn, green purchasing, for example, may be inferred by avoiding extra packaged products, by purchasing "zero km" products, or by bringing own shopping bags (*activities*).

Consumers may have different attitudes towards each behaviour and activity, according to their consideration of (Moisander, 2007):

1. what are the relevant behavioural elements involved, namely what behaviours/activities are considered ecologically relevant;
2. what is the weight or magnitude of each behaviour/activity involved, namely the extent to which each ecologically relevant behaviour/activity is performed.

[2]There are also other pro-environmental activities, which are not directly related purchase or post purchase, like "ecological activities either taken by an individual alone, such as preferring public transportation instead of a private car, or by an individual together with other people, such as participating in pro-environmental demonstrations" (Tilikidou and Delistavrou, 2008, p. 61). However, as the scope of this work concern the purchase of eco-friendly products, we draw attention on those behaviours more related with products purchasing and consumption habits.

Consumers may not choose to engage in all of the eco-friendly behaviours or activities: some, for example, may not buy eco-friendly products but exhibit compensatory post-purchase behaviours, while others may buy eco-friendly products and not proceed with recycling[3].
Predating the alleged considerations, Pickett *et al*. (1993) and Diamantopoulos *et al*. (1994) recommended to study "green" consumer behaviour assessing it for specific activities rather than for general ethically-responsible behaviour patterns. Consequently, this study:

1. deals with environmentally minded consumers, and not with general ethically minded consumers;
2. analyses the purchasing of specific eco-friendly products (§2.3).

It takes up Follows and Jobber's (2000) narrower definition of green consumer as the one who chooses freely to purchase eco-friendly goods.
According to their "green" attitude, intention and purchase behaviour, Cowe and Williams (2001) divided consumers into five groups:

1. the first group composed of people not sufficiently environmentally concerned to produce any marketplace action;
2. the second group with people much more pre-occupied with the value for money element;
3. the third group consisting of young consumers who are yet to be set in their purchase behaviour patterns;
4. the fourth group composed of people declaring to have a positive attitude towards the environment and claim to prefer goods on an environmental basis but when making their purchasing decisions they defer to other factors;
5. the fifth group consisting of the passionate environmentally consumers, who will go further to pursue their beliefs and when buying products they are more interested in environmental issues than in other elements.

The group of our attention is the fourth one, composed of consumers called *subjectivists* (Forsyth, 1980) or *non-activists* (Tallontire, 2001) which apparently show *attitude-behaviour* and *intention-behaviour* gaps, as they have a positive attitude towards the environment and a willingness to buy eco-friendly products but, when making their purchase decisions, they do not buy green goods.
Previous research mostly explained the *attitude-behaviour* and the *intention-behaviour* gaps through matters of measurement (Conner, *et al*. 2000) and bias of socially desirable responses (Peattie and Crane, 2005). On the contrary, in recent years, some authors explored the substantial complexity of green purchasing behaviour and analysed the

[3]However, Tilikidou and Delistavrou (2008), referring to non-purchasing pro-environmental behaviour (like recycling), tested empirically that those consumers who are engaged in one type of non-purchasing pro-environmental behaviour are more likely to engage in another type, as well.

presence of considerable barriers that impede the diffusion of more ecologically oriented purchasing patterns (Moisander, 2007).

2.2.2 The attitude-behaviour gap

Attitude can be defined as a predisposition to respond in a favourable or unfavourable manner with respect to a specific object (Ajzen and Gilbert Cote, 2008). As a general rule, it is assumed that attitudes toward available options determine consumer decisions. When confronted with a choice between alternative brands or products, consumers presumably select the alternative toward which they hold the most favourable overall attitude.
Although intuitively reasonable, the assumption that consumer attitudes are predictive of behaviour must be regarded with caution in light of extensive research on the attitude-behaviour relation conducted over the past 40 years (Young *et al.* 2010; Ajzen and Fishbein, 2000; Eagly and Chaiken, 1998; Webb and Mohr, 1998; Wicker, 1969). Negative findings should not be viewed as surprising (Ajzen, 1988; Ajzen and Fishbein, 1977): attitudes can be expected to correlate with behaviour only to the extent that the predictor and criterion are measured at compatible levels of generality or specificity in terms of *action* involved, *target* at which the action is directed, *context* in which it occurs and *time* of its occurrence (*principle of compatibility*) (Ajzen and Gilbert Cote, 2008). Measures of general attitudes towards the environment cannot be expected to be good predictors of specific actions directed at the attitude object (Gupta and Ogden, 2009; De Pelsmacker and Janssens, 2007). Concern for the environment should predict a measure of environmentally responsible consumer behaviour that aggregates across many different kinds of actions. However, in most consumer situations, we are interested not in understanding broad patterns of behaviour but rather the purchase or use of a particular product or service. Measures of environmental concern are usually poor predictors of such environmentally responsible consumer behaviours as buying fewer packaged products or recycled paper products (*evaluative inconsistency*), and "since we are often interested in understanding and predicting single actions, concepts which are related with only to general behavioural tendencies must appear of rather limited utility" (Ajzen, 1982, p. 9). Leonidou *et al*. (2010) found that an individual can simultaneously exhibit inward and outward environmental attitudes, with each of them influencing a different aspect of behaviour. While inward environmental attitude is more associated with green purchasing behaviour, outward environmental attitude mainly refers to general green behaviours. In other words, a person with an outward environmental attitude can act in a friendly way to the general environment, but is not necessarily involved in a green purchasing behaviour, which is the result of the development of an inward green attitude. Consequently, whether used as antecedents of the purchasing of eco-friendly products, environmental attitude should be operationalized as attitude towards the positive consequences on the environment of

purchasing eco-friendly products, or attitude towards the negative consequences on the environment of purchasing conventional goods, etc[4].

2.2.3 The intention-behaviour gap

Discussions about the *attitude-behaviour* gap led researchers to propose that intention to perform a behaviour, rather than attitude, is the closest cognitive antecedent of actual behavioural performance. When appropriately measured, behavioural intention accounts for an appreciable proportion of variance in actual behaviour and many studies have substantiated its predictive validity (Armitage and Conner, 2001 Notani, 1998). In a meta-analysis, Sheeran (2002) reported an overall correlation of 0.53 between intention and behaviour. However, notwithstanding these encouraging findings, there is considerable variability in the magnitude of observed correlations. Relatively low (or non significant) intention-behaviour correlations have been obtained as well. That is, there is an inconsistency between what people say they will do and what they actually do. In some cases and for some reasons, consumers fail to carry out their stated intentions (*literal inconsistency*) (LaPiere, 1934).

Hornik *et al*., (2001) stated that if there is little or no *variance* either in intention or in behaviour, strong correlations cannot be expected. Albarracín *et al*. (2001) found that intentions should have been stable to be good predictors of later behaviour. The time interval between measurement of intention and assessment of behaviour can be taken as a proxy for stability because it is assumed that with the passage of time, an increasing number of events may cause intentions to change. Instead of relying on time interval as an indication of stability, other studies have assessed stability of intentions directly and have consistently found that the intention-behaviour correlation declined substantially when intentions themselves were unstable and unstated (Conner *et al*., 2000). Differently than for attitude, the lack of *compatibility* is usually not a problem when it comes to predicting behaviour from intentions because measures of intention naturally deal not with a general target but with the behaviour of interest.

However, even when measures of intention and behaviour have *sufficient variance*, are *relatively stable*, and meet the *criterion of compatibility*, an intention-behaviour gap may arise. In the field of green purchasing, *literal inconsistency* comes out, for example, when consumers reveal their willingness to buy eco-friendly products and then they do not buy them at the behavioural stage (point of purchase) (Carrington *et al*., 2010; Auger and Devinney, 2007).

[4]See also Chapter 3.

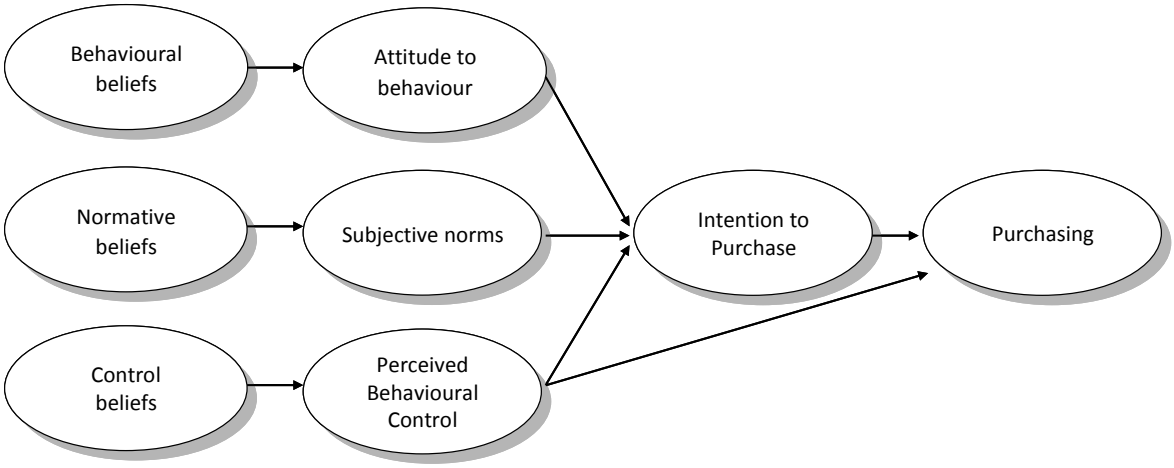
2.2.4 Bias of socially desirable answers

Both attitude-behaviour gap (*evaluative inconsistency*) and intention-behaviour gap (*literal inconsistency*) may encompass a matter of biased responses. When researching on "sensitive" issues, attitude and intention may be systematically distorted or biased and not reflect the truth: respondents may be likely to give socially desirable responses because of the desire to avoid embarrassment and project a favourable image on others.
Within the domain of green consumer behaviour, several self-reported surveys were distorted as respondents "over-reported" their environmental concern, willingness to buy eco-friendly products and pay a premium price for them (Peattie and Crane, 2005).
In view of the aforementioned considerations, both attitude-behaviour and intention-behaviour gaps may reveal a weak predictive power of attitude and intention, due to systematic errors in measurement (namely *compatibility*, *stability* and *bias* in answers). However, while the attitude-behaviour gap was rather unanimously solved by the literature in the misapplication of the *principle of compatibility*, the intention-behaviour gap is still a discussed topic. Even when intentions are correctly measured and responses are not biased, inconsistencies between intention to buy and actual purchasing of eco-friendly products may arise.

2.2.5 The complexity of green purchasing behaviour: a substantial perspective

Carrington *et al*., (2010) outlined that problems of measurement provide only a partial (even if relevant) explanation of the intention-behaviour gap. Consumers are hampered by various constraints and barriers which impede or make more difficult to purchase eco-friendly goods. Such barriers force consumers to bear additional sacrifices when purchasing eco-friendly products, so that green goods are not effective substitutes of conventional goods (Gupta and Ogden, 2009).
The Theory of Planned Behaviour (Ajzen, 1991), in particular the *Perceived Behavioural Control* (PBC) and the underlying *Control Beliefs* can be effectively adopted as theoretical framework. According to the Theory of Planned Behaviour (Ajzen, 1991), the behaviour of interest (i.e. to purchase eco-friendly products) is supposed to be determined by intention (to purchase eco-friendly products) and perceived behavioural control (Figure 1).

Figure 1. The Theory of Planned Behaviour



Source: Ajzen I. (2005), *Attitudes, personality and behavior* (2nd ed.), Milton-Keynes, England: Open University Press, McGraw-Hill.

Intention to purchase green products is, in turn, the result of three direct determinants (Kalafatis *et al*., 1999): *attitude towards a behaviour* (AB), *subjective norms* (SN) and *perceived behavioural control* (PBC). In particular:

1. *Attitude towards a behaviour* (AB) is the degree to which the performance of purchasing green products is positively or negatively valued. *Attitude towards a behaviour* is determined by the total set of accessible *behavioural beliefs* (or *outcomes beliefs*), individual's beliefs about consequences of a particular behavior.
2. *Subjective norms* (SN) reveal if purchasing green products is instigated by the desire to act as others think one should act. *Subjective norm* (SN) is based on *normative* beliefs, individual's perception about the particular behavior which is influenced by the judgment of significant others (i.e., friends, institutions and associations).
3. *Perceived Behavioural Control* (PCB) can be defined as an higher-order construct expressing an individual's expectations regarding the perceived ease or difficulty of buying green goods (*perceived self efficacy*) as well as the perceived extent to which green purchasing is up to the individual (*perceived controllability*) (Ajzen, 2002). In turn, PBC is given by underlying *Control beliefs*, an individual's beliefs about the presence of internal and external contingent factors that may facilitate or impede to purchase green goods.

Exploring the PCB variable, Kalafatis *et al*. (1999), Carrigan and Boulstridge (2000), Young *et al*. (2010) identified lack of availability, narrow product range, higher prices and lower quality of ecological brands as reasons for less green consumption. Similarly, Eckhardt *et al*. (2006) found how consumers argue that environmentally responsible consumption is costly. Consumers agree that companies must engage in environmentally responsible practices but they refuse to assume the possible consequences. Although consumers say that they are willing to pay more to buy ethical products, the majority do so

only if functional product attributes are preserved (Devinney *et al*., 2006), like few consumers agree to trade basic functional attributes for socially acceptable attributes (Auger *et al*., 2006).
Picket-Baker and Ozaki (2008) attempted to investigate if marketing and branding techniques could help establish green brands and introduce greener patterns of consumption into contemporary lifestyles. They found consumers cannot easily identify greener products and they do not find the actual product marketing particularly engaging. Pinkse and Domisse's (2009) findings revealed that firms should communicate more the advantages of green products and clean technologies to potential buyers in order to create market demand. Teisl *et al*. (2002), D'Souza *et al*. (2006) and Pedersen and Neergaard (2006) investigated how eco-labels influence purchasing decisions and found that a big proportion of consumers find eco-product labels hard to understand. There is a proliferation of not clear green labels which "may confuse consumers and undermine credibility" (De Pelsmacker *et al.*, 2005, p. 515). Similarly, Pickett-Baker and Ozaki (2008) revealed difficulties for consumers to identify green brands. According to all the aforementioned authors, scepticism and lack of information are relevant deterrent factors to the purchase of green goods. In the end, Moisander (2007) attempted to collect and systematized in one single theoretical framework all the relevant constraints and divided them in *internal (product-related)* and *external (context-related)*. However, the work remained a theoretical framework with no empirical test.
Despite the meaningful contribution to green purchasing knowledge, the extant literature mainly dealt with unspecified general consumers (Follows and Jobber, 2000) or self-declared green purchasers (Young *et al.*, 2010), thus almost neglecting to analyse which are the main deterrent factors to the purchase of green products for *subjectivist* consumers, namely those environmentally minded consumers who declare to be willing to buy green goods but not buy them. In addition it almost failed to investigate the relationships among the main deterrent factors.

2.3 Methodology

To find out which are the most relevant deterrent factors for *subjectivist* consumers to purchase eco-friendly products, an exploratory, qualitative research was conducted in Italy from May to July 2010. The Author conducted 51[5] in depth face-to-face, semi-structured interviews, of one hour in length each.
Due to the explorative nature of the study, the Author chose to conduct in depth interviews because, as a qualitative research method, they allow for preliminary exploration and are particularly used in under research areas (Molteni and Troilo, 2003). They allow to elicit consumers opinions toward the purchase of eco-friendly products and collect a wide range of deterrent factors.

[5]Respondents were 18 from the North, 20 from the Centre and 13 from the South of Italy.

As the consumer target was composed of *subjectivist* consumers, respondents were selected from a *purposive* sample (Kumar, 2005), according to a three-step screening process. Therefore, respondents met three requirements, as they were:

1. members of ecological associations (like Greenpeace, WWF, Legambiente, LIPU[6] and FAI[7]) who were actively involved in environmental protection[8];
2. who were responsible for the grocery shopping in the household and used to buying tissue paper products;
3. who declared spontaneously of willing to buy eco-friendly tissue paper products but actually not buying them[9].

As Wheale and Hinton (2007) tested how consumers may have different purchase behaviours toward different product categories (grocery food, grocery non food, clothes, white goods, brown goods, pharmaceutical goods, cars), in accordance with Picket *et al.* (1993) and Diamantopoulous *et al*. (1994) who declare the necessity of studying green purchase behaviour assessing it for specific product categories, this work is referred to the purchasing of eco-friendly *tissue paper* products (EFTPP). EFTPP can be defined as tissue papers, paper napkins, toilet papers, scrolls, paper towels and paper tablecloths (see ACNielsen product category tree for grocery non-food) whose production and consumption damage the environment to a lesser degree than conventional tissue paper products (Pettie, 1995). This product category has been selected because:

- eco-friendly household products show the highest growth in market share among all eco-friendly product categories, presenting a good unit of analysis for eco-friendly purchasing (Co-operative Bank, 2009);
- consumers have no excuses of exhibiting compensatory non-purchasing behaviours since tissue-paper products cannot be recycled after use (OJEU, 2008);
- previous research has rarely focused on green commodities while green purchasing models "should be tested with a number of low-involvement products that are purchased on regular basis, such as paper products" (Follows and Jobber, 2000, p. 714).

[6]Lega Italiana Protezione Uccelli.

[7]Fondo Ambiente Italiano.

[8]In this way, we attempted to avoid *socially desirable answers* leading to "over-reported" concerns for the environment. In fact, as we chose respondents as only members of ecological associations who were actively involved in environmental protection, we got a proof of the truthfulness of their positive attitudes toward the matter in hand.

[9]By choosing respondents of this kind, we selected consumers who manifested clearly an intention-behaviour gap and we attempted to eliminate the component of distortion in answers concerning the *literal inconsistency*.

Analysis of qualitative data was aided by *Cognitive Maps Technique* (Codara, 1998), using both Decision Explorer software[10] (Eden, *et al*., 1992) and UCINET software[11] (Borgatti *et al*., 2002). *Cognitive Maps*, used with an *explanatory* function, allow to reconstruct people premises and understand underlying reasons for their choices (Codara, 1998).
In order to capture both the reasoning and sequence of the decision-making processes and the information flows that support them, all 51 interviews were tape-recorded and fully transcribed. In accordance with Wrightson (1976), the *Documentary coding method* was adopted, which encompasses four phases:

1. the *coding text* phase, where the Author read each transcription and identified key concepts and relationships among them;
2. the *index dictionary card drafting* phase, where the Author listed all the concepts mentioned by the interviewee and identified statements that, though using different words, had the same meanings (*merging* procedure);
3. the *relationship card drafting* phase, where relationships among concepts came out;
4. the *cognitive map drafting* phase.

After it has been drawn, each map was showed to the interviewees (*validation* phase). *Documentary coding method* usually does not require any *validation* phase. However, in accordance with Bougon (1983) and Cossette and Audet (1992), the Author preferred to ask interviewees if each map was a consistent representation of their mental structures, in order to:

1. minimize the Author's interference in drawing the map;
2. improve the representation of each interviewee's cognitive structures by the direct comparison with his/her own map.

All of the 51 maps were validated by the interviewees, so no minor changes were required.
Then, the *Map of Unanimity* was drawn, namely the map resulting from the aggregation of the 51 individual cognitive maps and representing those concepts and links shared by all the individual maps (Figure 2). Finally, the *Map of Unanimity* was analyzed by *structural* and *qualitative* analyses. *Structural* analysis, belonging to the network analysis, aims to underline a map's structural traits. In this respect, the *indegree centrality*, *outdegree centrality* and *betweenness centrality* indexes (Freeman, 1979) were computed (Table 1). Such indices show the complexity of consumer reasoning and reveal which are the most important concepts within the purchasing process. Indegree centrality index shows the (standardized) amount of links (information) that comes to each node as a centre. The outdegree centrality index shows the (standardized) amount of links out-going from each concept. The betweenness centrality index shows the (standardized) amount of relations a given node maintains, and measures the degree to which a specific node can function as a point of control in the consumer decision process. For the purpose of this study, these

[10]See www.banxia.com.
[11]See www.analytictech.com.

indices showed the strength of any control belief upon the purchase decision process. A deeper explanation is given by *qualitative* analysis of the map, as follow.

2.4 Findings

In cognitive maps *tails* are concepts considered as inputs of reasoning because they have only outgoing links. In this study, they represent those elements *subjectivist* consumers spontaneously cited as the most important barriers to the purchase of EFTPP.
As it is summarized in the *merging* procedure, they are:

- lack of availability in supermarkets and retail stores (concept 1);
- lack of time to do the shopping (concept 4);
- not feeling like doing the shopping (concept 5);
- competing brands often sold "on sale" (concept 11);
- EFTPP standing among traditional products instead of having their own shelves or departments (concept 15);
- previous purchase experience (concept 18);
- ex ante information collection on the internet (concept 19);
- lack of proper in store communication (concept 23);
- lack of proper mass media communication (concept 24).

Lack of availability in supermarkets and retail stores (concept 1) and higher relative price (concept 11) were the first concepts respondents cited during interviews, while lack of proper mass media communication (concept 24) and lack of proper in store communication (concept 23) were the ones with more consequences on the decisional process (they have the highest normalized *outdegree centrality* indices, namely 17 and 13).
Lack of availability was considered of particular importance especially by respondents living in the Centre and South of Italy, while those from the North recognized the presence of retailers selling this kind of goods. Lack of widespread distribution (concept 1) obliges *subjectivist* consumers to go to more far, big supermarkets (having a wider range of products) or to specialized stores (concept 2) and spend more time in additional, longer routes (concept 3). In this respect, one interviewee declared:

> « Despite I reserve a fair time to do the shopping, I cannot waste two hours every week to buy toilet papers or napkins. I simply buy them at the closest store».
>
> (L., male, 34 years old)

Figure 2. Cognitive Map representing the main deterrent factors to the purchase of EF products for *subjectivist* consumers

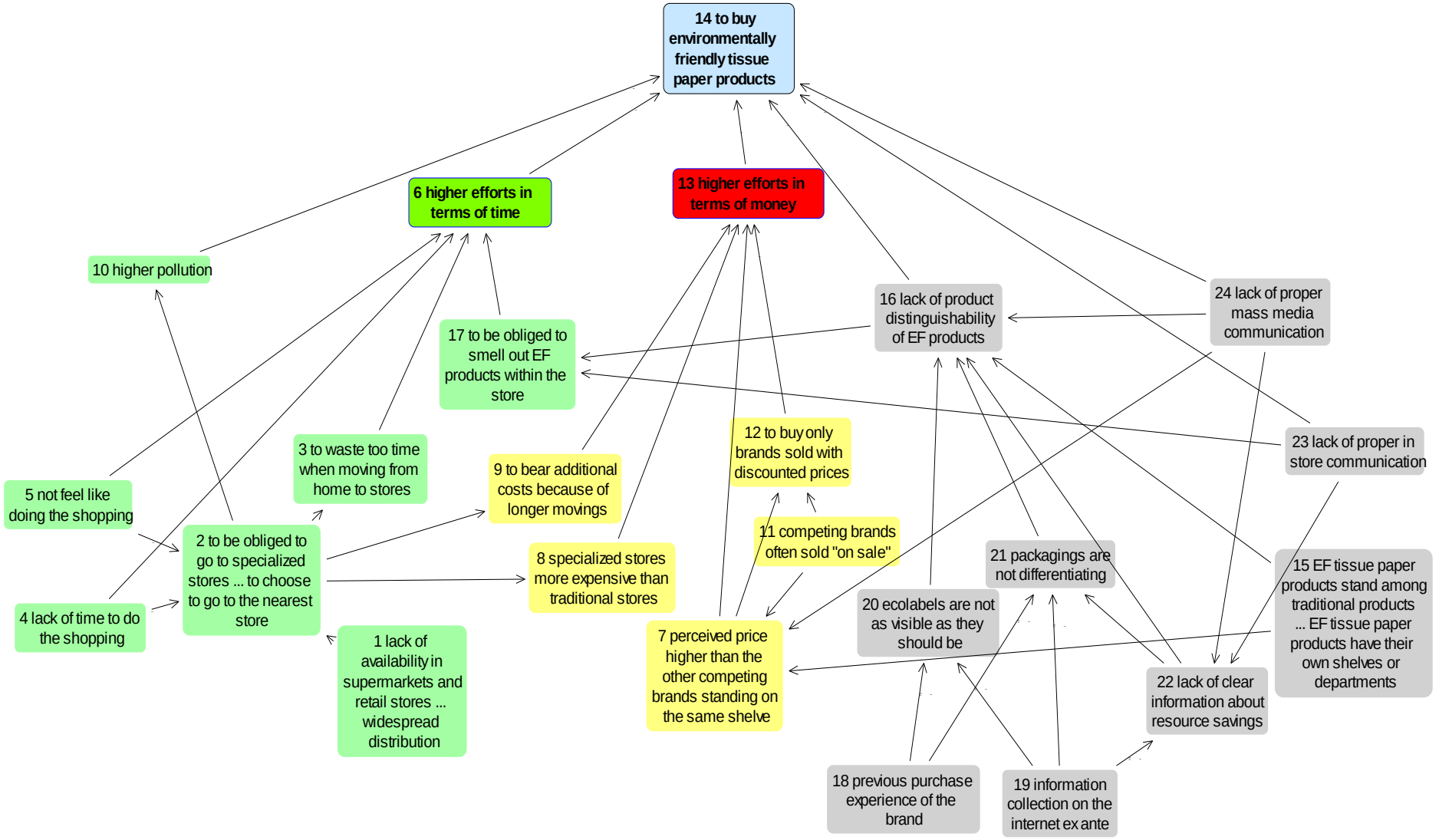


Table 1. Structural analysis: indexes of cognitive centrality

Concepts	Norm. Outdegree Centrality*	Norm. Indegree Centrality*	Norm. Betweenness Centrality*
1 lack of availability in supermarkets and retail stores...widespread distribution	4.348**	0**	0**
2 to be obliged to go to specialized stores...to choose to go to the nearest store	17	13	3.36
3 to waste time when moving from home to stores	4	4	0.4
4 lack of time to do the shopping	9	0	0
5 not feel like doing the shopping	9	0	0
6 higher efforts in terms of time	4	17	0.79
7 higher perceived price than other competing brands standing on the same shelf	9	13	0.99
8 specialized stores more expensive than traditional ones	4	4	0.4
9 to bear additional costs because of longer movings	4	4	0.4
10 higher pollution	4	4	0.4
11 competing brands often sold “on sale”	9	0	0
12 to buy only brands sold with discounted prices	4	9	0.2
13 higher efforts in terms of money	4	17	0.99
14 to buy environmentally friendly tissue paper products	0	26	0
15 standing among traditional products...have their own shelves or departments	9	0	0
16 lack of product distinguishability	9	22	3.95
17 to be obliged to smell EF brands out	4	9	1.78
18 previous purchase experience	9	0	0
19 information collection on the internet ex ante	13	0	0
20 ecolabels not visible as they should	4	9	0.66
21 packaging not differentiating	4	13	0.66
22 lack of clear information about saving of resources	9	13	0.86
23 lack of proper in store communication	13	0	0
24 lack of proper mass media communication	17	0	0

*Freeman’s (1979) Centrality Indexes

**Indices calculated with UCINET 6 (Borgatti *et al*., 2002)

To go to far supermarkets or specialized stores does not mean only to waste time (concept 6) but even to bear additional costs because of longer routes (for example, for car fuels or bus tickets) (concept 9). In addition, average prices practiced by specialized stores are usually higher than those practiced by traditional supermarkets (concept 8). Furthermore, when EFTPP are available in traditional supermarkets, they have higher prices than conventional brands (concept 7). Though absolute prices are not so high (as in the case of commodities such as tissue paper products), it is the comparison with competing brands that leads them to loose. Consumer perception of price is influenced by the disposition inside the store as green tissue paper products usually stand among traditional goods, instead of having specific shelves or departments (concept 15). They are overwhelmed by both low and premium price brands. *Low price* brands are often "on sale" causing distortions in relative prices perception: reducing their prices increases those of green brands and consumers who are price sensitive are more likely to buy brands "on sale". On the contrary, consumers who are willing to pay more will buy *premium price* brands, namely those brands that, thanks to their marketing efforts, have been establishing strong, lasting relationships with consumers. Instead, EFTPP advertising is almost absent on mass media. According to previous research (Pastore and Barbarossa, 2012; Shaw *et al*., 2005), *subjectivists* are independent, self-efficient, curious consumers who are able to collect further information about EFTPP on the internet. However, the total lack of communication does not let them be aware of green brands, it impedes to easily recognize EFTPP inside the store (concepts 16 and 17) and oblige to waste time in finding EFTPP out (concept 6). Similar answers were collected about the lack of specific shelves and in-store promotion. Again, constraints of this kind lead *subjectivist* consumers to waste time and not to buy EFTPP. However, both collection of information on the internet (concept 19) and previous purchase experience (concept 18) reduce the perception of low distinguishability of ecological goods inside the store and the time needed to recognize them.

Unlike findings deriving from previous research, perception of low quality (Young *et al.*, 2010; De Pelsmacker *et al.*, 2005; Kalafatis *et al.*, 1999) and scepticism (Carrigan and Attalla, 2001) were not considered important deterrent factors to the purchase of EFTPP.

2.5 Discussion and managerial implications

Findings revealed how firms selling green goods, like EFTPP, should rethink and improve their marketing mix choices. With regard of distribution, in order to overcome the lack of availability, firms should establish effective agreements with retailers, especially in the Centre and South of Italy where respondents mostly underlined the gap. Agreements should aim to ensure a widespread distribution of green products (extended coverage of the market), as well as specific shelves to green brands or, at least, assign them a better disposition on the shelf, if they stand among other products.

Firms should also improve their communication in many ways. First, they should let *subjectivist* consumers be aware of green brands by improving green products communication on mass media and reserve a deeper communication on the internet where consumers can find out detailed information about green firms, products and the amount of natural resources it is possible to save by purchasing EFTPP. Secondly, they should improve in-store communication to reaching those *subjectivists* that are not used to deepening information by themselves (for example, elderly people).
Firms should increase packaging differentiation. Many persons interviewed declared how strong green big symbols or green coloured packs with some easy to read cartoons could increase product uniqueness and catch consumers attention, especially if green products stand among traditional brands.
Finally, price is the most complex problem for EFTPP, because they are overwhelmed by both low and premium price brands. The Author thinks that green firms should keep competing low-middle prices despite they had to bear higher production costs. Firms should not adjust green brands' prices to the lowest ones, as they should also underline a medium-high quality of green products. They should often sell their brands "on sale" in order to push green brands' first trial.

2.6 Conclusions, limitations and further research

This work attempted to explore and deepen why *subjectivist* consumers may not walk their talk (Carrington *et al*., 2010) and why they perceive so hard to purchase eco-friendly products in their everyday shopping life. To this end, this work collected, in an integrated way, all the constraints (e.g., low availability, higher prices, ineffective location inside the store and on the shelf of green products) and, by means of cognitive maps technique, it drew the relationships among the constraints, analysed how they cluster into macro negative categories (related to money, time and cognitive resources), and finally how these negative categories exert a negative impact on green purchasing behaviour. Furthermore, unlike previous research dealing with unspecified or self declared green consumers, it focused on *subjectivist* consumers, in the attempt to overcome biased responses and focus on consumers who apparently show an intention-behaviour gap. Finally, it may provide important insights for managers, as it proposed guidelines to let *subjectivists* overcome the intention-behaviour gap.
Despite these important findings, it showed some limitations which offer insights to develop further research. Price and availability of EFTPP depend on the level of primary demand. In countries, like Italy, where eco-friendly patterns of consumption are not popular among the mass, it is desirable to explore also the firm's point of view. In this respect, it should be recommended to develop a similar research interviewing managers of green firms, to have a complete overview of why, today, barriers to the diffusion of green purchasing patterns still persist.

From a methodological perspective, as an exploratory qualitative research, findings were not susceptible to be extended to the whole population of *subjectivist* consumers or other consumer targets. Second, it purposively involved *subjectivist* consumers to overcome distortions in answers and focus on respondents that showed clearly an intention-behaviour gap. However, the Author acknowledges how such issues require to be tested on larger, more general samples composed not only of *subjectivist* consumers. To this end, in Chapters 3 and 4 two quantitative broader studies have been developed.

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Chapter 3[1]

Positive and negative motives towards the purchasing of eco-friendly products: A multi-group comparison between "green" and "non-green" consumers, in Italy

Abstract

Purpose - Many consumers are increasingly concerned about environmental deterioration and intend to switch towards more eco-friendly purchasing patterns. However, what motivates and deters consumers from buying green products still requires further theoretical and empirical investigation.
A specific and parsimonious model for the purchasing of eco-friendly products was developed, in which green purchase behaviour has been conceptualised as a result of positive (altruistic and selfish) and negative (selfish) motives that motivate or deter consumers from purchasing green goods.

Design/methodology - By means of a survey, the model was empirically validated in two different target groups (green and non-green consumers), in Italy (n=926). Data were analysed using Structural Equation Modelling and simultaneous multi-group analysis of the two groups.

Results - Results confirmed the relevance of the determining factors in the model and showed significant differences in the green buying decision process, with respect to the hypothesised positive and negative motives, between green and non-green Italian consumers.

Originality - This paper contributes to green purchasing behaviour knowledge by developing an original and parsimonious model to explain and predict the purchasing of eco-friendly products and, most importantly, by validating it in two different target groups of consumers characterized by a different purchasing bhevaiour process of eco-friendly products.

Keywords

Green consumer behaviour, eco-friendly products, environmental concern, self-identity, green obligation, additional individual efforts, structural equation modelling, multi-group analysis, Italy.

[1]The content of this chapter has been presented as research paper (Barbarossa C., "Positive and negative motives towards the purchasing of eco-friendly products: A multi-group comparison between "green" and "non-green" consumers, in Italy") at the 8th International Marketing Trends Conference, Venice, 2012.

Findings of the literature review (Chpater 1) revealed how further issues that required to be further investigated concerned how negative factors interact with positive motives. In addition, a broader and deeper knowledge of positive motives which fuel green consumption behaviour was also required. The following chapter aims to shed light on such isues.

3.1 Introduction

It is well known how over the last decades environmental issues have been shifting from a fringe in to a mainstream issue and how numerous studies reported that consumers are increasingly concerned about environmental deterioration and are more willing to purchase eco-friendly products (Mintel, 2010; Co-operative Bank, 2009; European Commission, 2009). However, notwithstanding consumers' positive declarations, eco-friendly behaviours are still far away from being common standards of consumption and the current market shares of green products are still rather low (Young *et al*., 2010). Italy represents a good example of this inconsistency. A recent study (GPF, 2010) reported that, despite the 34% and 56% of Italian consumers considered environmental protection as a "very important" and a "rather important" priority, the 54% admitted to be still behind with the purchasing of green goods.

These inconsistencies emphasize how a deep understanding of what incentives consumers to and what refrains them from buying eco-friendly products still requires further theoretical and empirical investigation.

In order to investigate the main antecedents of green purchasing behaviour, scholars mostly applied the Theory of Planned Behaviour (TPB) (Ajzen, 1991), in its original framework or by adding variables to increase the predictive validity of the TPB when applied to pro-social behaviours. Within the first stream of research, Kalafatis *et al.* (1999) examined the determinants that influence consumers' intention to buy eco-friendly products in UK and Greece. Chan and Lau (2001) conducted a cross-cultural study on American and Chinese consumers in the attempt to test key determinants of consumers' willingness, and actual behaviour of bringing own shopping bags while visiting supermarkets.

However, some authors questioned about the applicability *sic et sempliciter* of the TPB for those behaviours not merely driven by egoistic motivations. To adopt the TPB in its original form may deny the acknowledged necessity of increasing the explicative and predictive power of the Theory for those behaviours that are driven also by altruistic motivations, like ethical and eco-friendly behaviours. Ajzen and Fishbein (1980) first stated that "at the present time, we see no need to expand our Theory" (p. 247). Later, as occurred with the addition of the Perceived Behavioural Control variable, Ajzen himself declared that "the Theory of Planned Behaviour is, in principle, open to the inclusion of additional predictors, if it can be shown that they capture a significant proportion of the

variance in intention or behaviour after the Theory's current variables have been taken into account" (Ajzen, 1991, p. 199).

Consequently, further constructs were extensively introduced in the TPB. Show *et al*. (2000) and Shaw and Shiu (2003) enclosed constructs of Self-identity (Sparks and Guthrie, 1998; Sparks and Shepherd, 1992; Granberg and Holmerg, 1990) and Ethical Obligation (Kurland, 1995; Raats *et al.*, 1995; Sparks *et al.*, 1995) to explain the purchasing of fair trade products by ethical consumers. De Pelsmacker and Janssens (2007), in the attempt to build a fair-trade buying behaviour model, argued about the necessity of including specific attitudes with respect to ethical product attributes as well as constructs of information quality and quantity. Similarly, Arvola *et al.* (2008) attempted to predict intentions to purchase organic food by affective and moral attitudes. Vermeir and Verbeke (2008) investigated the influence of determinants as attitudes, perceived behavioural control and subjective norms, as well as consumer's perceived confidence and personal values on sustainable consumption intention.

Despite the meaningful contributions to green purchasing behaviour knowledge, the continuous addition of variables into the Theory of Planned Behaviour has resulted in unmanageably complex models incorporating excessive numbers of constructs, which has led scholars to call for an elementary revision and possibly replacement of the theoretical framework for green purchasing behaviour (Moisander, 2007).

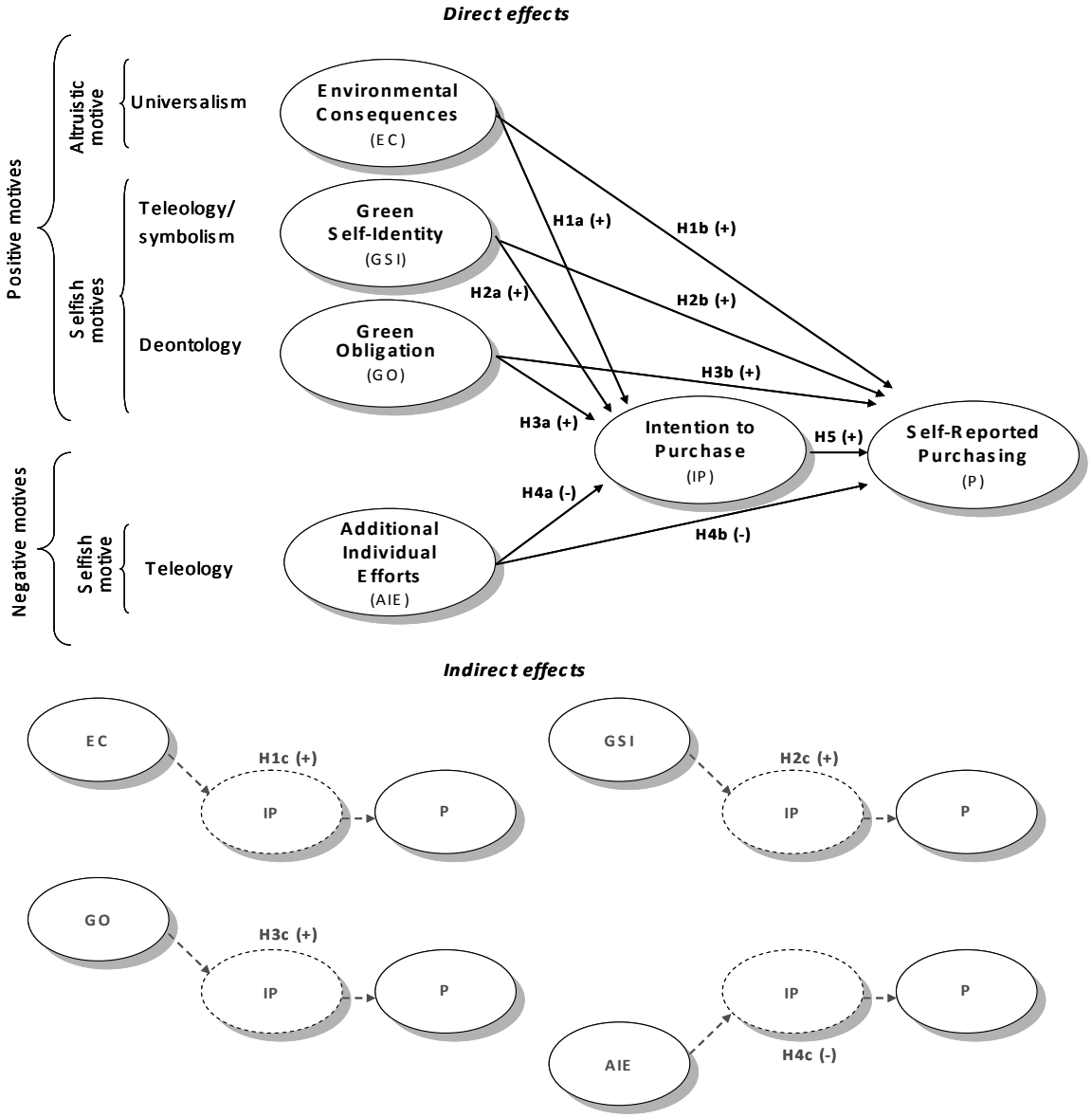
Second, previous research mostly involved unspecified general consumers (Leonidou *et al*., 2010; Follow and Jobber, 2000) or self-declared green purchasers (Young *et al*., 2010), which may lead to biased responses and "over-reported" results due to respondents' tendency to avoid embarrassment and project a favourable image on others (Peattie and Crane, 2005). On the contrary, researchers rarely focused on "established" green consumers as unit of analysis and, furthermore, they failed to incorporate both established *green* and *non-green* consumers in to the same study to evaluate potential significant differences between groups of consumers with diverse psychographic traits.

In view of these research gaps, the aim of this study is to:

1. *develop a parsimonious model to explain and predict the purchasing of eco-friendly products*;
2. *test the model on both established green and non-green consumers, in Italy.*

With reference to the first aim, following and extending earlier work by Hunt and Vitell (1986), Bagozzi and Dabholkar (1994), Follows and Jobber (2000), Ottman *et al*. (2006), a parsimonious model has been developed, in which positive altruistic and egoistic (deontological and teleological) and negative motivations are used as antecedents of purchasing eco-friendly products. Such a conceptualization leads to a parsimonious model with four independent variables: the *attitude towards the environmental consequences of purchasing specific eco-friendly products*, *self-identity*, *moral obligation* and *additional individual efforts*, and one mediating variable (*purchase intention*) predicting *self-reported purchase behaviour*.

Figure 1. Conceptual model



The second aim of the study was to test the model in two different consumer groups, established *green* and *non-green* consumers, to assess potential common patterns and differences in the purchasing process of eco-friendly products. For example, positive motives, particularly altruistic motives, may exert a greater impact on green consumers' intention to purchase eco-friendly products, as opposed to non-green consumers who are supposed to be not concerned about environmental issues. In addition, negative motives may reduce non-green consumers' intention to purchase eco-friendly products to a greater extent, acting as a reinforcement of non-green consumers' unwillingness to buy eco-friendly goods. On the contrary, they may dramatically reduce green consumers' eco-friendly purchasing behaviour due to potential situational barriers that impede them to translate green purchase intentions into actual purchasing behaviour at the point of purchase. Therefore, comparing the purchasing process of eco-friendly products between

the two groups of consumers is meaningful. Since the nature of the differences between the two groups is unclear, the following research question is formulated:
RQ_1. *What are the differences between the purchasing behaviour process of eco-friendly products between green and non-green consumers?*
To pursue the aforementioned research goals, §3.2 introduces the theoretical framework, §3.3 explains methodology, §3.4 and 3.5 report and discuss results, respectively, and §3.6 offers conclusions, limitations and guidelines for further research.

3.2 Conceptual framework and hypotheses

3.2.1 General conceptual framework

Building upon the line of research pioneered by Follows and Jobber (2000), green purchasing behaviour has been conceptualised as a result of two theoretically opposing antecedents: "positive" and "negative" motives that stimulate or prevent consumers from buying green goods (Figure 1). Contrary to Follows and Jobber's (2000) conceptualization in which only altruistic motives are deemed relevant, within the "positive" antecedent category both altruistic and selfish motivations are supposed to motivate consumers to purchase eco-friendly products (Bagozzi and Dabholkar, 1994). *Positive altruistic motives* appeal to consumers' concern for the welfare of nature and the willingness to reduce the impact of consumption lifestyles on the environment. *Positive selfish motives* embrace both teleological and deontological evaluations. As a result of *teleological evaluation* (based on the estimated goodness or badness of the consequences of each behavioural alternative), self-esteem and status may guide consumers to purchase green goods, as opting for a greener life-style may provide consumers with personal satisfaction (Ottman *et al.*, 2006). As a result of *deontological evaluation* (based on the inherent righteousness of each behavioural alternative), the purchasing of eco-friendly products may represent the right consumption life-style that leads an individual to ease his conscience and avoid personal distress (Hunt and Vitell, 1986).
Hence, measures of *attitude towards environmental consequences* of purchasing specific eco-friendly products (positive altruistic), *green self-identity* (positive teleological egoistic) and *green obligation* (positive deontological egoistic) have been introduced in the model. In line with Sparks *et al.* (1995), we suppose the three concepts as conceptually distinct and having independent positive effects on green purchase intention and behaviour.
In contrast, the "negative" antecedent category refers to consumers' negative and egoistic teleological evaluation of avoiding additional time, monetary and cognitive efforts required to purchase green goods (Chan *et al.*, 2008). Hence, a measure named *additional individual efforts* has been introduced in the model, and it is supposed to reduce both consumers' green purchase intention and behaviour. All four antecedents are assumed to have an influence on the intention to purchase green products and self-reported buying behaviour.

Research on the predictive validity of general measures of the alleged antecedents of purchasing eco-friendly products has often produced conflicting results. Whilst some authors found empirical evidence that consumers with pro-environmental attitudes are more likely to engage in eco-friendly purchasing behaviour (Kilbourne and Pickett, 2008), others observed a substantial attitude-behaviour gap (Leonidou *et al.*, 2010; Young *et al.*, 2010). Lee and Holden (1999), Cleveland *et al*. (2005), and De Pelsmacker and Janssens (2007) stressed the importance of enforcing the *attitude specificity* principle within green consumerism, as the more specific the attitude is related to a particular behaviour (in terms of action, target, context and time), the more likely the attitude will correlate with the behaviour of interest (Ajzen and Gilbert-Cote, 2008; Roberts and Bacon, 1997). In addition, Wheale and Hinton (2007) tested how consumers show different attitudes towards the purchasing of eco-friendly products according to the product category involved, and recommended to study green purchase behaviour assessing it for specific product categories. Therefore, all concepts in the model are defined in the context of buying eco-friendly tissue-paper products (EFTPP) to ensure this specificity[2], and to be consistent with the product category involved in the previous qualitative study – Chapter 2.

3.2.2 Attitude towards environmental consequences of purchasing EFTPP

Prior research established that values belonging to the *universalism* value type (a broader concern for all people and nature), such as "protecting the environment" and "unity with nature" (Schwartz, 1992), are antecedents of positive attitudes towards the purchasing of eco-friendly products (Shaw *et al.*, 2005; Follows and Jobber, 2000). Consumers who are concerned about environmental issues, believe that the ecological situation on the planet is deteriorating and it is necessary to take drastic measures (Banerjee and McKeage, 1994). Indeed, in harmony with the Cognitive Consistency Theory (Festinger, 1957), attitude towards an environmental object is supposed to predispose consumers to behave in a more eco-friendly way (Weigel, 1983), and consumers having pro-environmental attitudes are more likely to engage in eco-friendly purchasing behaviour (Kilbourne and Pickett, 2008; Mostafa, 2007; Schlegelmilch *et al.*, 1996). Consumers who care about environmental degradation are aware of the environmental consequences of their consumption life-style

[2]It is reminded that EFTPP can be defined as tissue papers, paper napkins, toilet papers, scrolls, paper towels and paper tablecloths (see ACNielsen product category tree for grocery non-food), whose production and consumption affect the environment to a smaller degree than towels and paper tablecloths (see ACNielsen product category tree for grocery non-food), whose production and consumption affect the environment to a smaller degree than conventional tissue-paper products (Peattie,1995).This product category has been selected because of the following reasons. (1) Eco-friendly household products show the highest growth in market share among all eco-friendly product categories, presenting a good unit of analysis for eco-friendly purchasing (Co-operative Bank, 2009). (2) Consumers have no excuses of exhibiting compensatory non-purchasing behaviours since tissue-paper products cannot be recycled after use (OJEU, 2008). (3) Previous research has rarely focused on green commodities while green purchasing models "should be tested with a number of low-involvement products that are purchased on regular basis, such as paper products" (Follows and Jobber, 2000, p. 714).

and are more likely to commit themselves to take remedial actions, i.e. to purchase products which are less damaging for the environment (Freestone and McGoldrick, 2008).
Hence, it is hypothesized that:
H_{1a}: Attitude towards the environmental consequences of purchasing EFTPP has a positive direct effect on the intention to purchase EFTPP.
H_{1b}: Attitude towards the environmental consequences of purchasing EFTPP has a positive direct effect on the purchase of EFTPP.
H_{1c}: Intention to purchase EFTPP mediates the relationship between consumers' attitude towards the environmental consequences of purchasing EFTPP and the purchase of EFTPP.

3.2.3 Green self-identity

Recent contributions emphasized how consumers can get a number of personal selfish benefits (in addition to the altruistic ones) by purchasing eco-friendly products, like health, safety and, especially symbolism and status (Leonidou *et al.*, 2010; Ottman *et al.*, 2006). Some consumers are increasingly opting for a less wasteful life (e.g., switching off lights, recycling more, buying less) and show a strong interest in green consumption because they derive personal satisfaction from it (Flatters and Willmott, 2009; Thøgersen and Crompton, 2009). Hence, consumers may purchase EFTPP because of the selfish motive to identify themselves as green consumers and convey this status to others. Shaw and Shiu, (2003) stated that "as an ethical (or environmental) issue becomes central to an individual' self-identity, then behavioural intention is accordingly adjusted" (p. 380).
Consumers construct their *self-identity* through specific product/brand choices, based on the congruency between product/brand-user associations and self-image associations (Levy, 1957). The concept of self, "how the individual perceives himself" (Grubb and Grathwohl, 1967, p. 24), is guided by one's personal motivations for self-esteem, self-enhancement and self-understanding and further reinforced by social interaction (e.g. products as symbols of group's membership) (Solomon, 1983). Hence, an individual may purchase eco-friendly products in accordance with his own as well as others' expectations to be identified as a green consumer. Sparks and Shepherd (1992) added measures of green self-identity within the original framework of the Theory of Planned Behaviour (Ajzen, 1991) and found a significant influence of self-identity on both intention and purchasing of green products, independently from the other TPB variables. Clayton (2003) constructed an Environmental Identity Scale (EID) to assess the relationship between environmental identity and different environmental behaviours, and found the two significantly correlated. Dono *et al.* (2010) found similar results.
Hence, it is hypothesized that:
H_{2a}: Green self-identity has a positive direct effect on the intention to purchase EFTPP.
H_{2b}: Green self-identity has a positive direct effect on the purchase of EFTPP.
H_{2c}: Intention to purchase EFTPP mediates the relationship between consumers' green self-identity and the purchase of EFTPP.

3.2.4 Green obligation

Moral or ethical obligation can be defined as "an individual's internalised ethical rules, which reflect his/her personal beliefs about right and wrong" (Shaw and Shiu, 2003, p. 882), or as "a personal internal state construct (that) is concerned with the extent to which an individual feels a sense of responsibility to act morally when faced with an ethical situation" (Haines *et al.*, 2008, p. 390), thus it matching with Hunt and Vitell's (1986) conceptualization of deontology, defined as the evaluation of the inherent rightness versus wrongness of different behaviours.

Within the domain of green consumerism, a deontological individual adheres to specific eco-friendly principles because it is the right thing to do, and he claims an absolute right to life animals, plants, or ecosystems, because it is intrinsically right and the violation of which is intrinsically wrong (Leonidou *et al.*, 2010). The perception of a need for a better environment and the consciousness of not behaving in the right way may lead consumers to feel guilty and, consequently, to personal distress or sadness. If an individual recognizes the moral and environmental aspect of a particular issue, then the purchasing of green products can be considered a deontological egoistic motivation to relieve one's own distress (Haines *et al.*, 2008). Measures of moral obligation have been integrated into the original framework of the Theory of Planned Behaviour and found to improve significantly the prediction of intention and behaviours involving strong moral dimensions (Shaw and Shiu, 2003; Sparks *et al.*, 1995).

Hence, it is hypothesized that:

H_{3a}: Green obligation has a positive direct effect on intention to purchase EFTPP.

H_{3b}: Green obligation has a positive direct effect on the purchase of EFTPP.

H_{3c}: Intention to purchase EFTPP mediates the relationship between consumers' green obligation to purchase EFTPP.

3.2.5 Additional individual efforts[3]

Empirical evidence suggests that, despite an increasing numbers of consumers reporting a concern about the environment, a change in purchasing behaviour is much less apparent (Carrington *et al.*, 2010). Most previous research attempted to explain the intention-behaviour gap by social desirability bias, i.e. respondents' tendency to over-report their willingness to buy eco-friendly products (Carrigan and Attalla, 2001). More recently, scholars have studied the substantial conceptual complexity of green purchasing behaviour as an explanation for this gap (Gupta and Ogden, 2009; Moisander, 2007). Boulstridge and Carrigan (2000) identified the lack of availability, narrow product range, higher price and lower quality of eco-friendly products as reasons for less green consumption. D'Souza *et al.* (2006) and Pedersen and Neergaard (2006) found that a large proportion of consumers experience difficulties in selecting eco-product labels due to a rampant proliferation of

[3]For a broader discussion of the attitude-behaviour and the intention-behaviour gaps see Chapter 2.

ambiguous green labels which "confuse consumers and undermine credibility" (De Pelsmacker *et al.*, 2005, p. 515). Picket-Baker and Ozaki (2008) argued that consumers find it hard to differentiate between green and non-green products and do not perceive the actual green marketing to be particularly engaging, while Pinkse and Domisse (2009) recommended companies to better communicate the advantages of green products to potential buyers.

Many of these issues represent barriers so that individuals require additional individual efforts in terms of costs, time and cognitive resources to buy green goods. Individuals who believe to lack the necessary resources and opportunities to buy green goods are unlikely to form strong behavioural intentions. Furthermore, even those consumers who have strong green intentions (like environmentally minded consumers) are prevented from buying eco-friendly products at the moment of purchase.

Hence, it is hypothesized that:

H_{4a}: Additional individual efforts have a negative direct effect on the intention to purchase EFTPP.

H_{4b}: Additional individual efforts have a negative direct effect on the purchase of EFTPP.

H_{4c}: Intention to purchase EFTPP mediates the relationship between additional individual efforts to purchase of EFTPP.

3.2.6 Intention to purchase EFTPP

Numerous studies have shown the predictive validity of behavioural intentions on behaviour (Sheeran, 2002). Moreover, H1c, H2c, H3c and H4c already imply an effect of intention on behaviour.

Hence, it is hypothesized that:

H_5: Intention to purchase EFTPP has a positive direct effect on the purchase of EFTPP.

Table 1 provides an overview of some of the most relevant green consumption models analysed to build up the foregoing hypotheses. Author(s)' name, paper title, key subjects, methodology and variables involved are described[4].

[4]The list is not exhaustive. It embraces the most meaningful contributions according to the purpose and the scope of this study.

Table 1. Overview of the most relevant proposed green purchasing behaviour models

Author(s)	Title	Key subjects	Methodology	Relating variable
Arvola *et al.* (2008)	Predicting intentions to purchase organic food: the role of affective and moral attitudes in the Theory of Planned Behaviour	Affective attitudes, Theory of Planned Behaviour, moral norms	Survey, 202 Italian, 270 Finnish and 200 UK consumers, multi-group SEM	GO
Auger *et al.* (2010)	The importance of social product attributes in consumer purchasing decisions: A multi-country comparative study	Social product attributes, environmentalism	Experiment, 600 consumers (Germany, Spain, Turkey, USA, India, and South Korea)	EC
Carrington *et al.* (2010)	Why ethical consumers don't walk their talk: towards a framework for understanding the gap between the ethical purchase intentions and actual buying behaviour of ethically minded consumers	Actual behavioural control, ethical consumerism, intention–behaviour gap, perceived behavioural control, situational context	Theorethical/conceptual paper	AIE
Chan *et al.* (2008)	Applying ethical concepts to the study of "green" consumer behaviour: an analysis of Chinese consumers' intentions to bring their own shopping bags	Teleological evaluation, deontological evaluation, habits	Survey, 250 Chinese consumers, multiple regression analysis	EC, GSI, GO, AIE
Chan and Lau (2001)	Explaining green purchasing behaviour: a cross-cultural study on American and Chinese consumers	Attitude towards purchasing green products, subjective norms, perceived behavioural control, Theory of Planned Behaviour	Survey, 232 Chinese and 213 American consumers, multi-group SEM	EC, GSI, GO, AIE
Chatzidakis *et al.* (2006)	Ethically concerned, yet unethically behaved: towards an updated understanding of consumer's (un)ethical decision making	Moral norms, neutralization, ethical behaviour	Theorethical/Conceptual paper	GO, AIE
Chatzidakis *et al.* (2007)	Why people don't take their concerns about fair trade to the supermarket: the role of neutralisation	Attitude-behaviour gap, ethical consumerism, ethical decision-making, fair trade purchase, neutralisation	Theoretical/Conceptual paper	GO, AIE
Cleveland *et al*. (2005)	Shades of green: linking environmental locus of control and pro-environmental behaviors control and pro-environmental behaviours	Locus of control, pro-environmental behaviours	Survey, 900 Canadian consumers, SEM	AIE
D'Astous and Legendre (2009)	Understanding consumers' ethical justifications: a scale for appraising consumers' reasons for not behaving ethically	Economic rationalist, the economic development reality, government dependency	Survey, 157 Canadian consumers, EFA	AIE
De Pelsmacker and Janssens (2007)	A model for fair-trade buying behaviour: the role of perceived information and product-specific attitudes	Price, lower quality, requirement to "shop around", lack of information, low quality information	Survey, 615 Belgian consumers, SEM	EC, AIE

De Pelsmacker *et al.* (2005)	Consumer preferences for the marketing of ethically labelled coffee	Type of ethical issue, label issuer, amount of information provided, distribution, promotion strategy and branding (of fair trade labelled coffee)	Web-based survey, 750 Belgian consumers, conjoint analysis	EC, GSI, GO, AIE
Dono *et al.* (2010)	The relationship between environmental activism, pro-environmental behaviour and social identity	Environmental activism, social identity, pro-environmental behaviour	Survey, 131 Australian students, SEM	EC, GSI, GO, AIE
Follows and Jobber (2000)	Environmentally responsible purchase behaviour: a test of a consumer model	Self transcendence, self enhancement, conservation, environmental consequences, individual consequences	Survey, 334 consumers for attitudinal scale development, 160 consumers for testing model, SEM	EC, AIE
Freestone and McGoldrick (2008)	Motivations of the ethical consumer	Ethical motives, decisional balance scale	ZMET, survey	EC, GO
Gupta and Ogden (2009)	To buy or not to buy? A social dilemma perspective on green buying	Social dilemma variables (social value orientation, trust, in-group identity, expectation of others' cooperation, perceived self efficacy), variables related to costs of cooperation (substitutability and product preferences)	Survey, 321 American consumers, discriminant analysis	AIE
Haines *et al.* (2008)	The influence of perceived importance of an ethical issue on moral judgment, moral obligation, and moral intent	Ethical decision-making, perceived importance of an ethical issue, moral intensity, moral obligation	Web-based survey, 235 students, SEM (PLS)	GO
Kalafatis *et al.* (1999)	Green marketing and Ajzen's Theory of Planned Behaviour: a cross-market examination	Attitude, subjective norm, perceived behavioural control	Postal survey, 175 UK and 170 Greek consumers, SEM	EC
Kilbourne and Pickett (2008)	How materialism affects environmental beliefs, concerns, and environmentally responsible behaviour	Materialism, environmental beliefs, environmental concern, environmental behaviors	Telephone survey, 337 US consumers, CFA	EC
Kurland (1995)	Ethical Intentions and the Theory of Reasoned Action and Planned Behaviour	Attitude, subjective norm, perceived behavioural control, moral obligation	Survey, 145 agents, regression	GO
Lee and Holden (1999)	Understanding the determinants of environmentally conscious behaviour	Batson's model, internal responses to distress, empathy	Survey, 78 students, regression	GO

Leonidou *et al.* (2010)	Antecedents and outcomes of consumer environmentally friendly attitudes and behaviour	Degree of collectivism, long-term orientation, political involvement, deontology, law obedience	Survey, 500 Cypriot consumers, SEM	EC, GSI, GO
Minton and Randall (1997)	The Effects of environmental concern on environmentally friendly consumer behaviour: an exploratory study	Attitude, environmental concern, injunctive norms, personal norms	Mail survey, 144 primary shoppers in the household, CFA, MANOVA/ANOVA	EC
Moisander (2007)	Motivational complexity of green consumerism	Motivations, environmental concern, constraints	Theoretical/Conceptual paper	EC, AIE
Paek and Nelson (2009)	To buy or not to buy: determinants of socially responsible consumer behavior and consumer reactions to cause-related and boycotting ads	Environmental beliefs, boycotting	Experiment, survey, CFA, SEM	EC, AIE
Picket-Baker and Ozaki (2008)	Pro-environmental products: marketing influence on consumer purchase decision	Beliefs, green trust	Survey, 51 households, regression	AIE
Raats *et al.* (1995)	Including moral dimensions of choice within the structure of the Theory of Planned Behaviour	Attitude, subjective norm, perceived behavioural control, moral obligation	Survey, 257 consumers, regression	GO
Rowlands *et al.* (2002)	Consumer perceptions of "green power"	Consumer effectiveness, empowerment, green energy, premium price	Survey, 480 Canadian consumers, Chi-square test, ANOVA	AIE
Shaw *et al.* (2000)	The contribution of Ethical Obligation and Self-Identity to the Theory of Planned Behaviour: and exploration of ethical consumers	Attitude, subjective norms, perceived behavioural control, self-identity, ethical obligation	Questionnaire, 736 ethical UK consumers (Ethical Magazine members), regression analysis	GSI, GO
Shaw and Shiu (2002)	The role of ethical obligation and self-identity in ethical consumer choice	Attitude, subjective norms, perceived behavioural control, self-identity, ethical obligation	Questionnaire, 736 ethical UK consumers (Ethical Magazine members), regression analysis	GSI, GO
Shaw and Shiu (2003)	Ethics in consumer choice: a multivariate modelling approach	Attitude, subjective norms, perceived behavioural control, self-identity, ethical obligation	Questionnaire, 1400 ethical UK consumers (Ethical Magazine members), SEM	GSI, GO
Sparks *et al.* (1995)	Assessing and structuring attitudes towards the use of gene technology in food production: the role of perceived ethical obligation	Attitude, subjective norms, perceived behavioural control, perceived ethical obligation	Questionnaire, 334 consumers, regression analysis	GO

Sparks and Shepherd (1992)	Self-identity and the Theory of Planned Behaviour: assessing the role of identification with "green consumerism"	Attitude, subjective norms, perceived behavioural control, self-identity	Postal questionnaire, 261 consumers, regression	GSI
Sparks and Shepherd (2002)	The role of moral judgments within expectancy-value-based attitude-behavior models	Attitude, subjective norms, perceived behavioural control, perceived ethical obligation	Questionnaire, 61 consumers, regression	GO
Vermeir and Verbeke (2008)	Sustainable food consumption among young adults in Belgium: Theory of planned behaviour and the role of confidence and values	Sustainable consumption, attitude, subjective norms, perceived behavioural control, values	Survey, 456 students, regression	EC, AIE
Vitell *et al.* (2001)	Consumer ethics: an application and empirical testing of the Hunt-Vitell Theory of ethics	Deontology, teleology	Survey, experiment, 166 students	GO
Wagner-Tsukamoto and Tadajewski (2006)	Cognitive anthropology and the problem solving behaviour of green consumers	Cognitive approach, practical thinking, bricolage	Interviews, 56 UK and 33 German consumers	EC, AIE
Whitmarsh and O'Neill (2010)	Green idendity green living	Self-identity, pro-environmental behaviour, spill-over effects	Survey, 551 UK consumers, CFA	GSI
Young *et al.* (2010)	Green consumer behaviour when purchasing products	Attitude, environmental concern, attitude-behaviour gap	Interviews, 81 self-declared green consumers	EC, AIE

Notes: AIE=Additional individual efforts, ANOVA=Analysis of variance; CFA=Confirmatory factor analysis; EC=Attitude towards environmental consequences of purchasing EFTPP; EFA=Exploratory factor analysis; EFTPP=Eco-friendly tissue paper products; GSI=Green self-identity; GO=Green obligation; MANOVA=Multivariate analysis of variance; SEM=Structural equation modelling.

Source: Self elaboration

3.3 Methodology

3.3.1 Measures and pilot study

The model for eco-friendly purchasing behaviour was developed based on a thorough review of the literature as well as on the results of two exploratory qualitative studies (five focus groups and 51 in-depth, face-to-face, semi-structured interviews), conducted in Italy in 2010 (Pastore and Barbarossa, 2012; 2011) (see Chapter 2).
The questionnaire was pre-tested by a small sample of 45 Italian shoppers to identify potential problems of clarity and comprehension. This process resulted in some minor changes. Resulting finalized items (and corresponding labels) are described hereafter and in Table 2.
To measure respondents *attitude towards the consequences on the environment of purchasing EFTPP (EC)*, Follows and Jobber's (2000) four-item scale was adapted to the product category at hand, consistently with the "attitude specificity" principle.
Based on respondents' contribution in the conducted qualitative studies, two new items (GS_3 and GS_4) were added to Sparks and Shepherd's (1992) two-item *green self-identity (GSI)* scale.
To measure respondents *green obligation (GO)* to purchase EFTPP, Sparks and Shepherd's (2002) three-item scale was used and adapted to the chosen product category.
A four-item scale measuring the *additional individual efforts (AIE)* was newly developed, based on a thorough review of the literature and on the qualitative studies' results.
To measure respondents *intention to purchase EFTPP (IP)*, Shaw and Shiu's (2003) one-statement scale was used (Bergkvist and Rossiter, 2007).
Finally two statements were used to measure *self-reported purchasing of EFTPP (P)* (Follows and Jobber, 2000).
All the items were coded on a 7-point Likert scale anchored by "1= Completely disagree" and "7= Completely agree", except items measuring the *purchasing* of eco-friendly products that were coded on a 7-point Likert scale anchored by "1=Never" and "7=Always".
To further assess the real "green" nature of the respondents, fifteen screening questions about eco-friendly behaviours were introduced (Moons *et al.*, 2010) (Table 3).

Table 2. Item list per construct

Constructs and items
Attitude towards environmental consequences (EC)
How tissue paper products may affect the environment is important to me (EC1)
It is important to me whether tissue paper products cause the depletion of forests (EC2)
It is important to me whether manufacturing tissue paper products causes water pollution (EC3)
The amount of energy used to produce tissue paper products it is not important to me (EC1) (r.i.)
Green self-identity (GSI)
I think of myself as someone who is concerned about environmental issues (GSI1)
I think of myself as a "green" consumer (GSI2)
To buy eco-friendly tissue paper products would make me feel a green consumer (GSI3)
I would feel totally satisfied of me if I bought eco-friendly tissue paper products (GSI4)
Green obligation (GO)
I would feel guilty if I bought tissue paper products damaging the environment (GO1)
To buy tissue paper products damaging the environment it would be morally wrong for me (GO2)
Buying tissue paper products affecting the environment would go against my principles (GO3)
Additional Individual efforts (AIE)
I do not like to pay more to buy eco-friendly tissue paper products (AIE1)
I do not like to waste time to go to specialized stores to buy eco-friendly tissue paper products (AIE2)
While I shopping I cannot easily recognize which tissue paper products are eco-friendly (AIE3)
Inside the store, I need a lot of time to find eco-friendly tissue paper products out (AIE4)
Intention to purchase eco-friendly products (IP)
Next month I intend to buy eco-friendly tissue paper products (IP1)
Purchasing of eco-friendly products (P)
At the present, when I go shopping, I buy eco-friendly tissue paper products (P1)
Last month I bought eco-friendly tissue paper products (P2)

Table 3. Eco-friendly behaviours

I changed most of my lamps to energy saving lamps
I consistently select my garbage
Most of the time I buy biologically degradable soaps
I have invested in solar energy panels
I am a member of an environmentalist organisation
In my house or garden I use rain water or water from my own natural water source
My household energy is provided by a "green" supplier
When doing my grocery shopping, I avoid unnecessary packaging
I take short showers to avoid wasting water
I have a water saving button on my toilet
I regularly talk to others about a more environmentally friendly lifestyle
My clothes are made from environmentally friendly products
My house is extra isolated
I have installed a hat pump at my house
Whenever possible, I avoid using my car

3.3.2 Main study, sample and procedure

The main study involved the administration of a questionnaire designed to collect views from adult consumers (aged above 18), in Italy. The questionnaire comprised three parts. The first part comprised the aim of the study and guidelines to complete the questionnaire. As suggested by Chan and Lau (2001), "since different people might have different interpretations of what constitutes a green product, it is necessary to ensure that respondents under study would adopt a common frame of reference when answering" (p. 18). To this end, an opening definition (Peattie,1995) and pictures of EFTPP were provided. The second part comprised screening questions and measurement scales for the predictor variables. The last part, recorded socio-demographic data and thanked the participants.
As targets of the study were established "environmentally minded" and "non-environmentally minded" Italian consumers, respondents were selected from two *purposive* samples. "Green" respondents met contemporaneously three requirements, as they were:

1. members of ecological institutions (Inachis, ProNatura, ISDE and Legambiente);
2. who reported to behave "eco-friendly" for the majority of Moons *et al.*'s (2010) screening questions;
3. who declared to be responsible for grocery shopping in the household.

Respondents for the "non-green" sample, instead, were:

- consumers responsible for grocery shopping in the household;
- who declared not to be members of any ecological associations;
- who declared not to behave "eco-friendly" for the majority of Moons *et al.*'s (2010) screening questions.

Data collection was carried out from January until May 2011. Questionnaires were personally delivered by the Author online and offline and also forwarded by respondents themselves. In particular, in order to reach properly the green target, questionnaires were also delivered during specific "green" days (e.g. FAI Spring Day, Legambiente Eco-train Day), during "eco-meetings" and uploaded on green institutions' web sites and sent by e-mails, always respecting the ethical code of data collection.
In the end, 960 useful replies were collected. Among those, 34 questionnaires were incomplete while 926 were fully completed and analyzed. Analyzed questionnaires resulted in: 453 *Italian green* consumers and 473 *Italian non-green* consumers. Descriptive statistics are reported in Table 4, showing similar socio-demographic features between the samples.

Table 4. Socio-demographic characteristics

		Italian green (n=453)	*Italian non-green* (n=473)
Gender	Male	43	34
	Female	57	66
Age	18-24	15	4
	25-34	41	41
	35-44	22	25
	45-55	13	15
	>55	9	16
Education	Junior High School	2	6
	High School	28	29
	Bachelor or Master	64	67

Notes: Frequencies expressed as percentage (%).

3.4 Data analysis and results

Structural equation modelling technique was used to test the ability of the model to forecast the purchasing of eco-friendly products, following Anderson and Gerbing's (1988) two-step approach. The first step involved the assessment of the measurement model by employing confirmatory factor analysis (CFA). The second step concerned the analysis of the full structural model, to assess the fitness of the full model and estimate all the relevant path coefficients. Finally multi-group analysis was performed (Steenkamp and Baumgartner, 1998), as two distinct and independent samples were involved in the study.

3.4.1 Confirmatory factor analysis (CFA)

A six-factor measurement model was validated by means of CFA using LISREL 8.80 (Jöreskog and Sörbom, 2006). The reliability and convergent validity of the measurement model was assessed through *global* fit criteria, to evaluate the consistency of the measurement model as a whole, and *local* fit criteria, to test the fit of single indicators and factors (Appendix B)[5].

[5]Appendix B provides an exhaustive explanation of global and local fit indices.

Table 5. Item list per construct and standardized item loadings

Constructs and items	CFA-model loadings		Path analysis loadings	
	IG	ING	IG	ING
Attitude towards environmental consequences (EC)				
How tissue paper products may affect the environment is important to me (EC1)	0.710	0.647	0.712	0.647
It is important to me whether tissue paper products cause the depletion of forests (EC2)	0.801	0.927	0.801	0.927
It is important to me whether manufacturing tissue paper products causes water pollution (EC3)	0.848	0.895	0.847	0.895
The amount of energy used to produce tissue paper products it is not important to me (EC1) (r.i.)	0.655	0.600	0.655	0.600
Green self-identity (GSI)				
I think of myself as someone who is concerned about environmental issues (GSI1)	0.752	0.763	0.752	0.764
I think of myself as a "green" consumer (GSI2)	0.776	0.750	0.775	0.740
To buy eco-friendly tissue paper products would make me feel a green consumer (GSI3)	0.750	0.869	0.750	0.869
I would feel totally satisfied of me if I bought eco-friendly tissue paper products (GSI4)	0.692	0.878	0.695	0.879
Green obligation (GO)				
I would feel guilty if I bought tissue paper products damaging the environment (GO1)	0.839	0.909	0.839	0.909
To buy tissue paper products damaging the environment it would be morally wrong for me (GO2)	0.888	0.939	0.888	0.939
Buying tissue paper products affecting the environment would go against my principles (GO3)	0.888	0.857	0.889	0.856
Individual additional efforts (AIE)				
I don't like to pay more to buy eco-friendly tissue paper products (AIE1)	0.850	0.800	0.850	0.800
I don't like to waste time to go to specialized stores to buy eco-friendly tissue paper products (AIE2)	0.868	0.837	0.868	0.837
While I shopping I can't easily recognize which tissue paper products are eco-friendly (AIE3)	0.882	0.814	0.883	0.814
Inside the store, I need a lot of time to find eco-friendly tissue paper products out (AIE4)	0.843	0.739	0.844	0.739
Intention to purchase eco-friendly products (IP)				
Next month I intend to buy eco-friendly tissue paper products (IP1)	0.957	0.975	0.957	0.975
Purchasing of eco-friendly products (P)				
At the present, when I go shopping, I buy eco-friendly tissue paper products (P1)	0.925	0.992	0.925	0.993
Last month I bought eco-friendly tissue paper products (P2)	0.970	0.892	0.970	0.892

Notes: IG=Italian green sample; ING=Italian non-green sample.

Global fit indices were good, notwithstanding the samples showed slightly high relative Chi-Square (χ^2/d.f.) (Table 6). It has to be kept in mind that χ^2 is sensitive to sample normal distribution, sample size and the number of indicators, so that it should be evaluated with care (Bagozzi and Foxall, 1996). The two samples showed RMSEA lower than 0.08 thus acceptable (Browne and Cudeck, 1993), SRMR lower than 0.05 (Diamantopoulos and Siguaw, 2000), and NFI, NNFI and CFI all greater than 0.95 (Hu and Bentler, 1999).
Local fit criteria gave very satisfying results. All the items were significantly loading on their constructs ($p<.001$) and factor loadings were substantially greater than 0.60 (Comrey and Lee, 1992) (Table 5). Cronbach's alpha (α) was calculated for all constructs and resulted always greater than 0.70, in accordance with Nunnally's (1994) standard of internal consistency (Table 7). Cronbach's alpha for intention to purchase (IP) construct was not computed, as IP was composed of one single item. The composite reliability (CR) threshold of 0.60 was met for every factor and the average variance extracted (AVE) was always greater than 0.50 (Bagozzi and Yi, 1988). The discriminant validity was confirmed because the shared variance between pairs of factors was always less than the corresponding AVE (Fornell and Lacker, 1981).

Table 6. Confirmatory factor analysis: global measures of fit

	χ^2	d.f.	χ^2/d.f.	RMSEA	SRMR	NFI	NNFI	CFI
Italian green	376.072	121	3.10	0.070	0.043	0.967	0.971	0.977
Italian non-green	378.898	121	3.13	0.067	0.043	0.958	0.962	0.970

Notes: CFI=Comparative fit index; d.f.=Degrees of freedom; NFI=Normed fit index; NNFI=Non-normed fit index; RMSEA=Root mean square error of approximation; SRMR=Standardized root mean square residual; χ^2=Chi-square.

Table 7. Sample mean, relative standard deviation, Cronbach's alpha, composite reliability and average variance extracted

Construct	*Italian green*				*Italian non-green*			
	μ (σ)	α	CR	AVE	μ (σ)	α	CR	AVE
EC	6.35 (0.11)	0.84	0.86	0.61	4.02 (0.19)	0.85	0.85	0.60
GSI	5.23 (0.19)	0.83	0.83	0.56	4.34 (0.29)	0.89	0.89	0.67
GO	5.28 (0.26)	0.91	0.91	0.77	4.77 (0.30)	0.93	0.93	0.82
AIE	4.30 (0.36)	0.92	0.92	0.74	4.58 (0.29)	0.88	0.88	0.64
IP	5.52 (0.20)		0.91	0.91	4.21 (0.34)		0.95	0.95
P	3.70 (0.43)	0.95	0.95	0.90	2.93 (0.51)	0.94	0.94	0.89

Notes: α= Cronbach's alpha; AVE=Average variance extracted; CR=Composite reliability; μ=Sample mean; σ=relative standard deviation.
Referring to μ and σ EC, GSI, GO, AIE, P are global measures for Attitude toward environmental consequences, green self-identity, green obligation, additional individual efforts and purchasing, respectively. IP was a single item construct.

3.4.2 Full Structural Analysis

Analysis of the full structural model was performed using, again, LISREL 8.80 (Jöreskog and Sörbom, 2006) and the Maximum Likelihood Method. The resulting model fitted the data well.

Global fit indices gave good results (Table 8). Again, the two samples showed high relative Chi-Square (χ^2/d.f.). However, in both the samples RMSEA was lower than 0.08, SRMR lower than 0.05, and NFI, NNFI and CFI all greater than 0.95.

Local fit indices gave very good results. All standardized item loadings were significantly (p<.001) greater than 0.60 (Table 5). Table 8 reports all the hypothesized paths and their significance, while figures 2 and 3, draw the model for each sample.

Table 8. Structural equation model: standardized path estimates and goodness of fit indices

Hypotheses	*Paths*	*Italian green (n=453)*		*Italian non-green (n=473)*	
Direct effects		Stand. β	t-value	Stand. β	t-value[6]
H1a: Environmental consequences → Intention to purchase	$\gamma_{1,1}$	0.256	4.61***	0.023	0.53(ns)
H1b: Environmental consequences → Actual purchasing	$\gamma_{2,1}$	0.024	0.08(ns)	0.003	0.39(ns)
H2a: Green Identity → Intention to purchase	$\gamma_{1,2}$	0.308	4.42***	0.335	5.72***
H2b: Green Identity → Actual purchasing	$\gamma_{2,2}$	0.010	1.57(ns)	0.044	4.77***
H3a: Green Obligation → Intention to purchase	$\gamma_{1,3}$	0.120	2.01**	0.228	4.12***
H3b: Green Obligation → Actual purchasing	$\gamma_{2,3}$	0.020	1.02(ns)	0.025	2.16***
H4a: Individual additional efforts → Intention to purchase	$\gamma_{1,4}$	-0.262	6.37***	-0.353	8.05***
H4b: Individual additional efforts → Actual purchasing	$\gamma_{2,4}$	-0.765	18.25***	-0.227	8.79***
H5: Intention to purchase → Actual purchasing	$\beta_{2,1}$	0.209	4.32***	0.612	11.80***
Indirect effects (via intention to purchase)					
H1c: Environmental consequences → Actual purchasing		0.054	3.33***	0.014	0.53(ns)
H2c: Green Identity → Actual purchasing		0.064	1.84*	0.205	4.92***
H3c: Green Obligation → Actual purchasing		0.025	2.90***	0.114	3.87***
H4c: Individual additional efforts → Actual purchasing		-0.055	3.72***	-0.216	7.37***
Global goodness of fit indices		χ^2/d.f= 388.850/121 RMSEA=0.070 SRMR=0.043 NFI=0.967 NNFI=0.971 CFI=0.977		χ^2/d.f=378.898/121 RMSEA=0.067 SRMR=0.043 NFI=0.958 NNFI=0.962 CFI=0.970	

Notes: CFI=Comparative fit index; d.f.=Degrees of freedom; NFI=Normed fit index; NNFI=Non-normed fit index; RMSEA=Root mean square error of approximation; SRMR=Standardized root mean square residual; Stand. β=Standardized beta coefficient; χ^2=Chi-Square; (ns)=Not significant; *=significant at p<0.1; **=significant at p<0.05; ***=significant at p<0.01

[6] *significant at p<0.1 as t-value>|1.64|; **significant at p<0.05 as t-value>|1.96|; ***significant at p<0.01 as t-value>|2.58|.

Figure 2. Italian green sample. Standardized path estimates

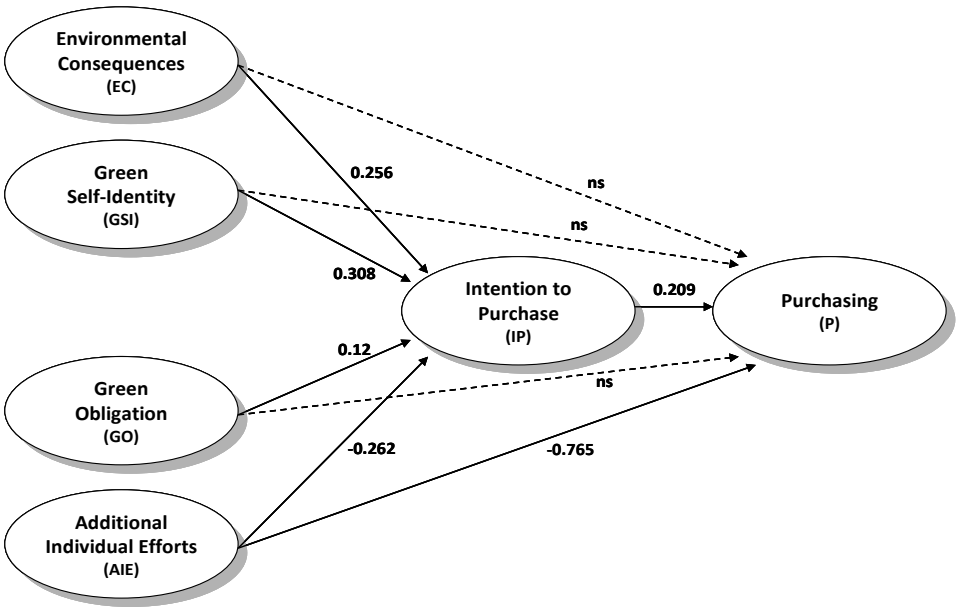
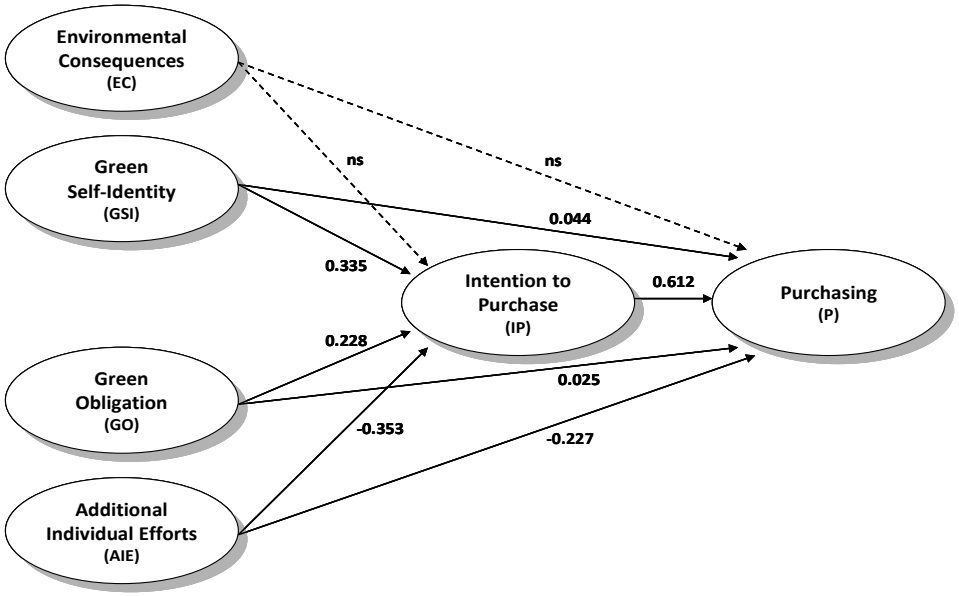


Figure 3. Italian non-green sample. Standardized path estimates



With reference to the *Italian green* sample (Table 8, Figure 2), the direct effects of EC, GSI, GO and AIE on the intention to purchase EFTPP (IP) were all significant, supporting, H_{1a}, H_{2a}, H_{3a}, $H_{4a.}$ However the direct effects of the same variables on P were not significant, with the exception of AIE that exerted a strong negative effect on P. Thus, H_{4b} was supported, while H_{1b}, H_{2b}, H_{3b} were not. Based on the magnitude of the effects, GSI exerted the largest effect on IP and P (indirectly) among the positive motives, followed by EC and GO. AIE exerted a strong negative impact especially on P, explaining a certain low correlation between IP and P.

With reference to the *Italian non-green* sample (Table 8, Figure 3), all the direct and indirect effects on IP and P were significant ($p<.01$), with the exception of the effects of EC on IP and P ($p>.10$). GSI exerted the largest impact on IP and P among the positive motives, followed by GO. AIE exerted a negative impact on both IP and P with a similar magnitude of the positive motives. IP predicted P reasonably.

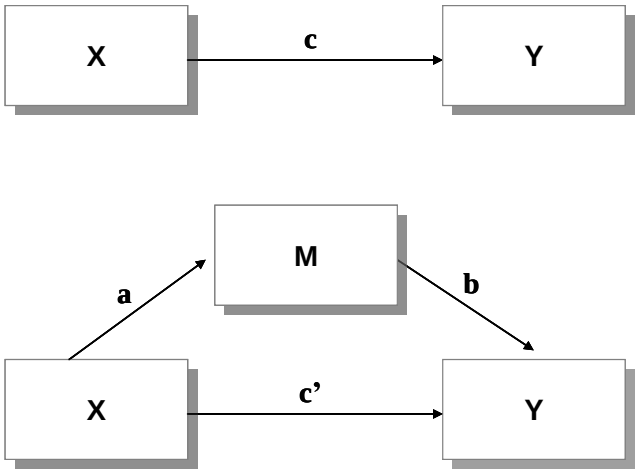
3.4.3 Indirect effects and tests on existence and significance of mediation

To check the existence and significance of intention as a mediator, different tests were conducted, as suggested by previous research (Cording *et al.*, 2008; Grayson *et al.*, 2008; Iacobucci *et al.*, 2007; Preacher and Hayes, 2004).

In a first step, the linkages in the mediating model were tested following the procedure recommended by Baron and Kenny (1986). To establish mediation, three conditions must hold: first, the independent variable must affect the dependent variable (c), second, the independent variable must affect the intervening variable (a), and third, the intervening variable must affect the dependent variable (b) (figure 4). In other words, variable M is considered a mediator if (1): X significantly predicts Y (i.e., $c \neq 0$), (2) X significantly predicts M (i.e., $a \neq 0$), and (3) M significantly predicts Y controlling for X (i.e., $b \neq 0$), where *i* is an intercept coefficient:

1. $Y = i_1 + cX$
2. $M\ i_2 + aX$
3. $Y = 1_3 + c'X + bM$

Figure 4. Illustration of a mediation design



Source: Preacher, K.J and Hayes, A.F. (2004), "SPSS and SAS procedures for estimating indirect effects in simple mediation models", *Behavior Research Methods, Instruments, and Computers*, Vol. 36 No. 4, pp. 717-731.

In particular, to check the existence of mediation, and thus to check the existence of condition (c) (direct effects of independent variables on actual purchasing of eco-friendly products), a different model with LISREL to test only the direct effects of independent variables (EC, GSI, GO and AIE) on the purchasing of EFTPP was developed (figure 5).
Goodness-of-fit indices and hypotheses testing were conducted again with LISREL. Tables 9 and 10 report the standardized path estimates of direct effects and global fit indices for each sample.
Hypotheses testing for the *green* sample (n=453) revealed that significant ($p<.01$) direct effects were exerted only by the Additional Individual Efforts. On the contrary, Environmental Consequences, Green Self-Identity and Green Obligation had no significance direct influence on the Purchasing Behaviour (Table 9). Hence, only H_4 was supported.
Hypotheses testing for the *non-green* sample revealed significant direct effects of Green Self-Identity ($p<.01$), Additional Individual Efforts ($p<.01$) and Green Obligation ($p<.05$) on the Purchasing of EFTPP, but not significant direct effects of Environmental Consequences the behavioural variable ($p>.10$) (Table 10). H_2, H_3 and H_4 were supported with the exception of H_1.
Then, as a second step, to statistically test the significance of IP as a mediating variable, Sobel's (Sobel, 1982) and PRODCLIN (MacKinnon *et al*., 2007) tests were conducted. Indeed, Sobel test enables the investigation of statistically significant indirect effects for independent variables, regardless of the significance of their total effects on the dependent variable, as several recent studies have argued that this constraint may be relaxed without hampering the validity of the mediation analysis (De Luca and Atuahene-Gima, 2007; Smith *et al*., 2005; Pracher and Hayes, 2004; Shrout and Bolger, 2002).
The utility and performance of the Sobel test has been demonstrated frequently (MacKinnon *et al*., 2002). However, due its sensitiveness to data distribution and sample size, it is recommended to support Sobel's results with other tests that use asymmetric confidence intervals (Preacher and Hayes, 2004), like PRODCLIN (MacKinnon *et al*., 2007). Hence, PRODCLIN test was conducted, as well.
In this study, Sobel's and PRODCLIN tests supported the significant role played by intention in mediating the relationships between EC, GSI, GO, AIE and P (Table 11 and 12). In both the two groups, significant indirect effect ($p<.05$) were found for EC, GO, GSI, AIE to P via IP, with the exception of the indirect effect of EC on P in the *non-green* sample ($p>.10$). Hence, H_{1c}, H_{2c}, H_{3c}, $H_{4c,}$ were supported with the exception of H_{1c} in the *non-green* sample.

Figure 5. Direct effects only on actual purchasing

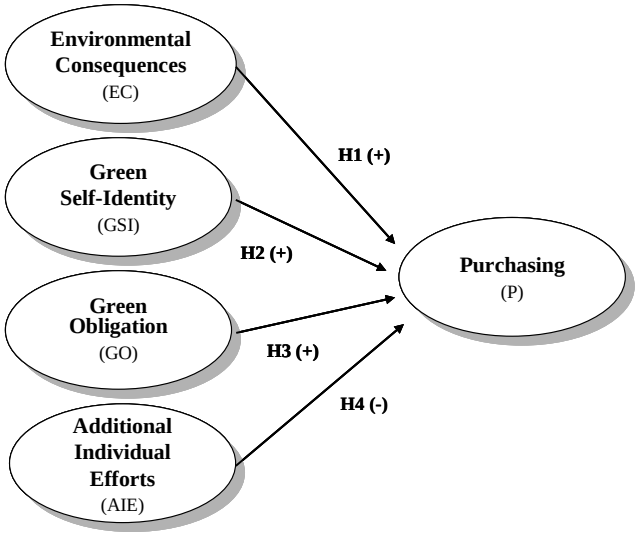


Table 9. Italian green sample. Standardized path estimates of direct effects on purchasing

Hypothesis	Standardized β	t-value[7]
Direct effects on purchasing		
H1: Environmental consequences → Purchasing	0.005	n.s.
H2: Green Self-Identity → Purchasing	0.075	n.s.
H3: Green Obligation → Purchasing	0.046	n.s.
H4: Additional individual efforts → Purchasing	-0.80	18.2***
χ^2=372.676; χ^2/d.f.=3.41; RMSEA= 0.070; SRMR= 0.044; NFI=0.965; NNFI=0.968; CFI=0.975		

Notes: *N=453 *significant at p<0.1 **significant at p<0.05 ***significant at p<0.01*

Table 10. Italian non green sample. Standardized path estimates of direct effects on purchasing

Hypothesis	Standardized β	t-value[8]
Direct effects on purchasing		
H1: Environmental consequences → Purchasing	0.017	n.s.
H2: Green Identity → Purchasing	0.248	4.742***
H3: Green Obligation → Purchasing	0.115	2.160**
H4: Additional Individual Efforts → Purchasing	-0.447	8.807***
χ^2=365.897; χ^2/d.f.= 3.3; RMSEA= 0.070; SRMR= 0.044; NFI=0.936; NNFI=0.956; CFI=0.965		

Notes: *N=473 *significant at p<0.1 **significant at p<0.05 ***significant at p<0.01*

[7] *significant at p<0.1 as t-value>|1.64|;
**significant at p<0.05 as t-value>|1.96|;
***significant at p<0.01 as t-value>|2.58|.
[8] See footnote 7.

Table 11. Sobel test on the green (n=453) and non-green (n=473) sample

Sample	Constructs	α	Confidence Interval		Significant mediation
			Lower Limit	Upper Limit	
Italian green (n=453)	H_{1c}: EC → IP → P	.05	0.006	0.186	yes
	H_{2c}: GSI → IP → P	.05	0.046	0.177	yes
	H_{3c}: GO → IP → P	.10	0.004	0.054	yes
	H_{4c}: AIE → IP → P	.05	-0.083	-0.028	yes
Italian non-green (n=473)	H_{1c}: EC → IP → P	.05	-0.096	0.168	no
	H_{2c}: GSI → IP → P	.05	0.173	0.369	yes
	H_{3c}: GO → IP → P	.05	0.077	0.226	yes
	H_{4c}: AIE → IP → P	.05	-0.335	-0.216	yes

Table 12. Prodclin test on the green (n=453) and non-green (n=473) sample

Sample	Constructs	coef. a	s_a	coeff. b	s_b	corr.	α	Interval of Confidence		Sign. Med.
								lower lim.	upper lim.	
Italian green	*H1*: EC → IP → P	.435	.094	.283	.055	-.17	.05	0.065	0.20	yes
	H2: GSI → IP → P	.394	.089	.283	.055	.089	.05	0.052	0.19	yes
	H3: GO → IP → P	.101	.050	.283	.055	.040	.05	0.002	0.062	yes
	H4: IFE → IP → P	-.196	.031	.283	.055	.079	.05	-0.84	-0.31	yes
Italian non green	*H1*: EC → IP → P	.053	.099	.681	.044	.080	.05	-0.95	0.17	no
	H2: GSI → IP → P	.040	.07	.681	.044	.085	.05	0.173	0.175	yes
	H3: GO → IP → P	.222	.054	.681	.044	.000	.05	0.078	0.228	yes
	H4: IFE → IP → P	.404	.050	.681	.044	.230	.05	0.20	0.36	yes

Notes: Coeff. a=Effect of the independent variable on the mediator; s_a=Standard error between the independent variable and the mediator; Coeff. b=Effect of the mediator on the dependent variable; s_b=Standard error between the mediator and the dependent variable; Corr.=Correlation; Lower lim.=Lower limit; Upper lim.=Upper limit; Sign. Med.=Significance of mediation.

3.4.4 Multi-group analysis

One of the biggest challenges in determining the relative importance of a set of issues across multiple groups or countries is the existence of inequivalences. Inequivalences arise primarily because of differences in response styles, which are defined as "tendencies to respond systematically to questionnaire items on some basis other than what the items were specifically designed to measure" (Paulhus, 1991, p. 17). Empirical evidence shows that countries differ significantly in their response styles and that these differences can lead to seriously biased conclusions (Steenkamp and Ter Hofstede, 2002).

Table 13a. Configural, Metric and Partial Metric Invariance

	C.I.				M.I.				P.M.I.			
	λ	Φ	SRMR	GFI	λ	Φ	SRMR	GFI	λ	Φ	SRMR	GFI
Italian green (n=453)	p<.001	<1	0.040	0.908	p<.001	<1	0.049	0.903	p<.001	<1	0.043	0.909
Italian non-green (n=473)	p<.001	<1	0.043	0.91	p<.001	<1	0.044	0.906	p<.001	<1	0.044	0.906

Notes: C.I.=Configural invariance; M.I.=Metric invariance; P.M.I.=Partial metric invariance; λ=Items factor loadings; Φ=Covariances among latent factors; GFI=Goodness of fit index; SRMR=Standardized root mean square residual.

Table 13b. Full model: Configural, Metric and Partial Metric Invariance

		χ^2	d.f.	RMSEA	NFI	NNFI	CFI	ΔCFI	$\Delta\chi^2$	Δd.f.	p-value
Full sample	C.I.	806.851	242	0.071	0.963	0.967	0.974				
(n=926)	M.I.	857.068	254	0.071	0.961	0.967	0.972	0.002	50.22	12	0.001
	P.M.I.*	822.537	251	0.070	0.962	0.968	0.972	0.001	15.69	9	0.074

**unconstrained EC2, GSI3 and GO4*

In order to test the equivalence of the factorial measurement and the structural model between the groups, *configural*, *metric* and *structural* invariances were performed on the full sample model (n=926) (Steenkamp and Baumgartner, 1998) (Tables 13a and 13b).

C*onfigural* invariance (C.I.), whether the pattern of fixed and free parameters is the same for the two groups, was met. Each group showed significant (p<.001) factor loadings (**λ)**, covariances among latent factors (Φ) smaller than 1, SRMR lower than 0.05 and GFI greater than 0.90 (Table 13a). Fit indices for the full sample model (n=926) showed good results (Table 13b): χ^2*(242)* was 806.851, RMSEA was lower than 0.08, NFI, NNFI and CFI were all greater than 0.95.

M*etric* invariance (M.I.), whether the factor structure is statistically invariant between the two groups, was not observed as the $\Delta\chi^2$ between the full model computed for metric invariance and the full model computed for configural invariance was significant ($\Delta\chi^2$*(12)*=50.22, p=.001) (Table 13b). To locate the source of inequality and discover an invariant measurement model across the samples, a *partial metric* invariance (P.M.I.) test was conducted. Modification indices revealed that the metric inequivalence occurred because of three items (EC_2, GSI_3 and GO_4). The items were unconstrained and the model was tested again. Each group showed significant (p<.001) factor loadings (**λ)**, covariances among latent factors (Φ) smaller than 1, SRMR lower than 0.05 and GFI greater than 0.90 (Table 13a, last column). Fit indices for the full sample model (n=926) showed good results, too (Table 13b, last row): χ^2*(251)* was 822.537, RMSEA was lower than 0.08, NFI, NNFI and CFI were all greater than 0.95. **Δ**CFI was 0.001, thus lower than 0.01, and **Δ**χ^2 was not significant (p=.074). *Partial metric* invariance was finally met, thus the purchasing of eco-friendly products could be meaningfully compared between the two groups.

Structural (or path) invariance (S.I.), whether regression weights for each of the structural paths are statistically invariant between the groups, was tested accordingly. Constraining all of the paths of the two samples at the same time yielded a significant delta chi-square

($\Delta\chi^2(9)$=125.31, p=.001) indicating significant differences in the structural paths between the groups. To find out paths responsible for the invariance, we started by constraining all structural paths to be invariant between the two groups and then entering the constraints one by one, keeping previous invariant paths constrained, while freeing non-invariant paths (Dens and De Pelsmacker, 2010).

The comparison between *Italian green* (IG) and *Italian non-green* (ING) consumers revealed, among the positive motives to the purchase of eco-friendly products, $\gamma_{1,1}$:EC→IP as significantly greater for IG than ING consumers ($\Delta\chi^2(1)$=10.82, p=.001) while, referring to the negative motives, $\gamma_{1,4}$:AIE→IP as greater for ING than IG ($\Delta\chi^2(1)$=18.18, p=.001) and $\gamma_{2,4}$:AIE→P greater for IG than ING ($\Delta\chi^2(1)$=88.18, p=.001). Finally, $\beta_{2,1}$:IP→P was greater for ING than IG consumers ($\Delta\chi^2(1)$=33.31, p=.001). The reminder paths ($\gamma_{2,1}$, $\gamma_{1,2}$, $\gamma_{2,2}$, $\gamma_{1,3}$, $\gamma_{2,3}$) did not significantly differ between the groups, as $\Delta\chi^2(1)$ was always not significant (p>.1).

3.5 Discussion

The comparison between *Italian green* and *Italian non-green consumers* revealed that the effect of attitude towards the environmental consequences of purchasing eco-friendly tissue paper products (EFTPP) on the intention to purchase EFTPP ($\gamma_{1,1}$:EC→IP) is significantly greater for green than non-green consumers, but not the effect of the same variable on the purchase behaviour ($\gamma_{2,1}$:EC→P). As expected, the altruistic principle exerts a stronger impact on the formation of eco-friendly purchase intentions for green than non-green consumers. However, its impact ceases at the "intention-purchase" stage, where the effect becomes invariant between the two groups. This result is in line with Chan *et al.*'s (2008) findings of green consumers incorporating also teleological principles in their consumption choices. Furthermore, the vanished effect can be theoretically supported when considering the different role that is played by the "additional individual efforts" variable (AIE) on green purchase intention ($\gamma_{1,4}$:AIE→IP) and behaviour ($\gamma_{2,4}$:AIE→P) for green and non-green consumers respectively.

In countries like Italy, where situational barriers still prevent the proliferation of eco-friendly purchasing behaviours, the perception of being forced to make additional efforts to buy EFTPP (AIE) affects non-green consumers mainly at the stage of intention formation while green consumers at the point of purchase (behavioural stage). AIE significantly reduces Italian non-green consumers' willingness to buy EFTPP ($\gamma_{1,4}$=-0.353) which seems to act as reinforcement to follow their intentions of not purchasing green goods. For this sample, indeed, IP correlates with P rather strongly ($\beta_{2,1}$=0.612). On the contrary, AIE reduces Italian green consumers' willingness to purchase EFTPP to a lesser extent ($\gamma_{1,4}$=-0.262), as the general impact of the positive motives is still greater than the impact of the deterrent factors. However, AIE affects the behaviour at the point of purchase considerably ($\gamma_{2,4}$:-0.765), and consequently, notwithstanding the declared willingness to buy EFTPP, IP and P show a small correlation ($\beta_{2,1}$=0.209), supporting the frequently observed intention-

behaviour gap among green consumers (Carrington *et al*., 2010). As stated by Gupta and Holden (2009), "in the event when green and conventional products are not perceived as substitutes, the likelihood that consumers will defect is high. This is the case because the cost of cooperation by buying a product that is an unacceptable substitute of the conventional version presents a big cost to the individual who will attempt to alleviate this cost by defecting and purchasing the conventional product" (p. 381).

The probability of defection is even higher for low involvement products that are purchased on regular basis, like EFTPP, than for high involvement products, like electric cars or solar panels. Consumers perceived a low effectiveness associated with the purchasing EFTPP, as they feel that it significantly does not help the environment. Consequently, they are even less willing to bear additional sacrifices at the moment of purchasing. De Pelsamcker and Janssens (2007) empirically tested how consumers actions are influenced by the perceived degree of effectiveness and how, in turn, the perceived effectiveness is negatively related to the lack of proper and specific information about the impact on the environment of purchasing and consuming specific products (like the amount of natural resources that may be saved by purchasing EFTPP).

The effect of green self-identity on both intention to purchase and purchasing behaviour did not significantly differ between the two samples. One possible explanation may be that Italian green consumers answering the questionnaire being stricter with themselves as opposed to non-green consumers. When asked whether they perceived themselves to be green consumers, they might have answered according to their "actual self", due to an awareness that in their everyday life they are still far away from being actual green consumers. On the other hand, non-green consumers who might be aware to a minor degree to what to be green consumers means, might have answered according to their "ideal self", reflecting a social desirability bias.

Secondly, when asked whether consumers perceived themselves to be green consumers by purchasing EFTPP, the low-involvement nature of the chosen product category possibly affected the responses, since the perceived positive environmental impact made when buying EFTPP, as compared to conventional tissue-paper products, may have led to a lower identification (GSI) as well as lower moral obligation (GO) with the act of purchasing this particular product. In fact, has previously argued, a lack of product-specific information for green commodities, such as the amount of natural resources that can be saved by purchasing green goods, is negatively related to consumer's perceived empowerment. Cleveland and Laroche (2005) suggested that even if consumers are concerned about the environment, their concern may not necessarily translate into action without a sense of empowerment or locus of control, namely "the extent to which people believe that they have the ability to affect -pro-environmental- outcomes through their own actions" (McCarty and Shrum, 2001, p. 94).

3.6 Conclusions, limitation and guidelines for further research

The present study aimed to make a contribution by developing a novel model to explain and predict the purchasing of eco-friendly products, and, differently from previous research, by testing it in specific targets of established *green* and *non-green Italian* consumers. Rogers'(1995) "Diffusion of Innovation Theory" shows how a new idea or product can be accepted by the market by first persuading "innovators" and "early adopters". This is based on the rationale that once 10-25 per cent of the population adopts an innovation, a relatively rapid adoption by the remaining consumers can be expected. Green consumers may represent Rogers' (1995) "innovators" and "early adopters". Hence, a better understanding of green consumers' purchasing motives may inform targeting strategies that first convince innovators and early adopters and then expand to other consumer segments.

Some relevant results, arising from the multi-group analysis conducted in the study, confirmed, for example, the trade-off between positive (altruistic and selfish) and negative (selfish) motivations to the formation of green purchase behaviour, the crucial role played by additional individual efforts in decreasing the probability that non-green consumers will be intended to buy EFTPP as well as green-consumers will not buy EFTPP at the point of purchase.

As a consequence of such results, in order to increase green and non-green consumers' purchase intentions of EFTPP, firms should address the positive environmental and individual consequences of purchasing specific green goods. Promotion strategies are recommended to stress the positive environmental consequences of purchasing specific eco-friendly products (like showing the amount of natural resources that consumers may save by purchasing specific green products), in order to enforce the aforementioned principle of "attitude specificity" and increase consumers' perceived effectiveness even for low involvement commodities. In these days, WWF is launching a campaign about the damages on Indonesian forests caused by toilet papers companies (http://wwf.panda.org/wwf_news). Firms selling EFTPP may cooperate with ecological associations to show how EFTPP differ from conventional tissue paper products and, thus, gain credibility.

Secondly, firms selling EFTPP should also emphasize the selfish benefits (status and ease of environmental conscience) that consumers can derive from purchasing eco-friendly products, as self-identity, a selfish motives, contributed to the formation of green purchasing intention to the greatest extent (among the positive motives) for green-consumers, while the impact of the environmental concern (altruistic motivation) was not significant on both IP and P for non-green consumers.

It is further recommended to firms to reduce product-related and situational barriers in order to increase the perception of the substitutability between green and conventional goods.

When implementing the here outlined recommendations, the following limitations should be taken into account.

This study expressly involved purposive samples of established environmentally minded and not environmentally minded consumers. However, testing the model on a statistical sample, more representative of the entire Italian population, may be a worthwhile undertaking.

Finally it would be of interest to test the here proposed model in countries with a different level of environmental concern. A study, comparing well established *green* and well established *non-green* consumers, in two Countries with a different level of overall environmental concern as well as different level of barriers to the diffusion of more ecological consumption patterns may represent a worthwhile challenge. To this end, Chapter 4 describes a multi-group comparison between established *green* and *non-green* consumers in Italy and Belgium, with Belgium assumed to be a Country with an higher overall environmental concern, and a lower level of situational barriers to the diffusion of eco-friendly (purchasing) behaviours.

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Appendix B. Goodness of fit indices, an overview

The Chi-Square value (χ^2)

The Chi-Square value is the traditional measure for evaluating overall model fit and it "assesses the magnitude of discrepancy between the sample and fitted covariances matrices" (Hu and Bentler, 1999, p. 2). A good model fit would provide an insignificant result at a 0.05 threshold (Barrett, 2007), thus the Chi-Square statistic is often referred to as either a "badness of fit" (Kline, 2005) or a "lack of fit" (Mulaik *et al.*, 1989) measure. While the Chi-Square test retains its popularity as a fit statistic, there exist a number of severe limitations in its use. Firstly, this test assumes multivariate normality and severe deviations from normality may result in model rejections even when the model is properly specified (McIntosh, 2006). Secondly, because the Chi-Square statistic is in essence a statistical significance test it is sensitive to sample size which means that the Chi-Square statistic nearly always rejects the model when large samples are used (Bentler and Bonnet, 1980; Jöreskog and Sörbom, 1993). On the other hand, where small samples are used, the Chi-Square statistic lacks power and because of this may not discriminate between good fitting models and poor fitting models (Kenny and McCoach, 2003). Due to its restrictiveness, researchers have sought alternative indices to assess model fit. One example of a statistic that minimises the impact of sample size on the Model Chi-Square is Wheaton *et al.*'s (1977) relative/normed chi-square (χ^2/df). Although there is no consensus regarding an acceptable ratio for this statistic, recommendations range from as high as 5.0 (Wheaton *et al.*, 1977) to as low as 2.0 (Tabachnick and Fidell, 2007).

The Goodness-of-Fit statistic (GFI)

The Goodness-of-Fit statistic (GFI) was created by Jöreskog and Sorbom as an alternative to the Chi-Square test and calculates the proportion of variance that is accounted for by the estimated population covariance (Tabachnick and Fidell, 2007). By looking at the variances and covariances accounted for by the model it shows how closely the model comes to replicating the observed covariance matrix (Diamantopoulos and Siguaw, 2000). This statistic ranges from 0 to 1 with larger samples increasing its value. When there are a large number of degrees of freedom in comparison to sample size, the GFI has a downward bias (Sharma *et al.*, 2005). In addition, it has also been found that the GFI increases as the number of parameters increases (MacCallum and Hong, 1997) and also has an upward bias with large samples (Miles and Shevlin, 1998; Bollen, 1990). Traditionally an omnibus cut-off point of 0.90 has been recommended for the GFI however, simulation studies have shown that when factor loadings and sample sizes are low a higher cut-off of 0.95 is more appropriate (Miles and Shevlin, 1998). Given the sensitivity of this index, it has become less popular in recent years and it has even been recommended that this index should not be used (Sharma *et al.*, 2005). However given its historical importance it is often reported in covariance structure analyses.

The Root mean square error of approximation (RMSEA)

The Root mean square error of approximation (RMSEA) tells us how well the model, with unknown but optimally chosen parameter estimates, would fit the populations covariance matrix (Byrne, 1998). In recent years it has become regarded as "one of the most informative fit indices" (Diamantopoulos and Siguaw, 2000, p. 85) due to its sensitivity to the number of estimated parameters in the model, as it favours parsimony in that it will choose the model with the lesser number of parameters. Recommendations for RMSEA cut-off points have been reduced considerably in the last fifteen years. Up until the early nineties, an RMSEA in the range of 0.05 to 0.10 was considered an indication of fair fit and values above 0.10 indicated poor fit (MacCallum *et al.*, 1996). It was then thought that an

RMSEA of between 0.08 to 0.10 provides a mediocre fit and below 0.08 shows a good fit (MacCallum *et al.*, 1996). However, more recently, a cut-off value close to 0.06 (Hu and Bentler, 1999) or a stringent upper limit of 0.07 (Steiger, 2007) seems to be the general consensus amongst authorities in this area.

The RMR and the SRMR

The RMR and the SRMR are the square root of the difference between the residuals of the sample covariance matrix and the hypothesised covariance model. The range of the RMR is calculated based upon the scales of each indicator, therefore, if a questionnaire contains items with varying levels (some items may range from 1 to 5 while others range from 1 to 7) the RMR becomes difficult to interpret (Kline, 2005). The standardised RMR (SRMR) resolves this problem and is therefore much more meaningful to interpret. Values for the SRMR range from zero to 1.0 with well fitting models obtaining values less than 0.05 (Diamantopoulos and Siguaw, 2000; Byrne, 1998), however values as high as 0.08 are deemed acceptable (Hu and Bentler, 1999). An SRMR of 0 indicates perfect fit but it must be noted that SRMR will be lower when there is a high number of parameters in the model and in models based on large sample sizes.

The Normed Fit Index (NFI)

In addition to the aforementioned absolute fit indices, incremental fit indices must be considered. Incremental fit indices, also known as comparative (Miles and Shevlin, 2007) or relative fit indices (McDonald and Ho, 2002), are a group of indices that do not use the chi-square in its raw form but compare the chi-square value to a baseline model. For these models the null hypothesis is that all variables are uncorrelated (McDonald and Ho, 2002). The Normed Fit Index (NFI) (Bentler and Bonnet, 1980) assesses the model by comparing the χ^2 value of the model to the χ^2 of the null model. The null/independence model is the worst case scenario as it specifies that all measured variables are uncorrelated. Values for this statistic range between 0 and 1 with Bentler and Bonnet (1980) recommending values greater than 0.90 indicating a good fit. More recent suggestions state that the cut-off criteria should be NFI $\geq$ 0.95 (Hu and Bentler, 1999). A major drawback to this index is that it is sensitive to sample size, underestimating fit for samples less than 200 (Bentler, 1990), and is thus not recommended to be solely relied on (Kline, 2005).

The Non-Normed Fit Index (NNFI)

This problem was rectified by the Non-Normed Fit Index (NNFI), also known as the Tucker-Lewis index (TLI), an index that prefers simpler models. However in situations were small samples are used, the value of the NNFI can indicate poor fit despite other statistics pointing towards good fit (Tabachnick and Fidell, 2007; Kline, 2005). A final problem with the NNFI is that due to its non-normed nature, values can go above 1.0 and can thus be difficult to interpret (Byrne, 1998). Bentler and Hu (1999) have suggested NNFI $\geq$ 0.95 as the threshold.

The Comparative Fit Index (CFI)

The Comparative Fit Index (CFI) (Bentler, 1990) is a revised form of the NFI which takes into account sample size (Byrne, 1998) that performs well even when sample size is small (Tabachnick and Fidell, 2007). Like the NFI, this statistic assumes that all latent variables are uncorrelated (null/independence model) and compares the sample covariance matrix with this null model. As with the NFI, values for this statistic range between 0.0 and 1.0 with values closer to 1.0 indicating good fit. A cut-off criterion of CFI $\geq$ 0.90 was initially advanced however, recent studies have shown that a value greater than 0.90 is needed in order to ensure that unspecified models are not accepted (Hu and Bentler, 1999). From this,

a value of CFI ≥ 0.95 is presently recognised as indicative of good fit (Hu and Bentler, 1999). Today this index is included in all SEM programs and is one of the most popularly reported fit indices due to being one of the measures least effectedby sample size (Fan *et al.*, 1999).
Table 14 provides an overview of fit indices and acceptable thresholds is reported below.

Table 14. Fit indices and acceptable thresholds

Fit Index	Acceptable Threshold Levels	Description
Absolute Fit Indices		
Chi-Square $\chi 2$	Low $\chi 2$ relative to degrees of freedom with an insignificant *p* value ($p > 0.05$)	Chi-Square $\chi 2$
Root Mean Square Error of Approximation (RMSEA)	Value less than 0.08 (Browne and Cudeck, 1993). Values less than 0.07 (Steiger, 2007)	Has a known distribution. Favours parsimony. Values less than 0.03 represent excellent fit.
GFI	Values greater than 0.95	Scaled between 0 and 1, with higher values indicating better model fit. This statistic should be used with caution.
RMR	Good models have small RMR, less than 0.08 (Tabachnik and Fidell, 2007)	Residual based. The average squared differences between the residuals of the sample covariances and the residuals of the estimated covariances. unstandardized.
SRMR	SRMR less than 0.08 (Hu and Bentler, 1999)	Standardised version of the RMR. Easier to interpret due to its standardized nature.
Relative Fit Indices		
Chi-Square $\chi 2$	Low $\chi 2$ relative to degrees of freedom with an insignificant *p* value ($p > 0.05$)	Chi-Square $\chi 2$
Root Mean Square Error of Approximation (RMSEA)	Value less than 0.08 (Browne and Cudeck, 1993). Values less than 0.07 (Steiger, 2007)	Has a known distribution. Favours parsimony. Values less than 0.03 represent excellent fit.
GFI	Values greater than 0.95	Scaled between 0 and 1, with higher values indicating better model fit. This statistic should be used with caution

Source: Hooper, D., Coughlan, J. and Mullen, M. (2008), "Structural Equation Modelling: guidelines for determining model fit", *Electronic Journal of Business Research Methods*, Vol. 6 No. 1, pp. 53-60.

Chapter 4[1]

Purchasing eco-friendly products: A cross-national multi-group analysis of "green" and "non-green" consumers, in Italy and Belgium

Abstract

Purpose - Over the last decades, environmental protection has been increasingly recognized as an international issue. Notwithstanding consumers are generally more and more aware of the environmental deterioration, a general shift towards eco-friendly purchasing patterns occurred with different degrees among groups of consumers with different environmental attitudes as well as among different Countries. Scholars failed to test original models (different from the Theory of Planned Behaviour) in different target groups composed of consumers with different degree of environmental concern (i.e. environmentally minded and non-environmentally minded consumers). Moreover, they almost failed to cross-validate such models in two or more Countries having different levels of eco-awareness. In view of this lack of research, a specific and parsimonious model for the purchasing of eco-friendly products (developed in Chapter 3), was empirically validated in two different target groups (environmentally minded and non-environmentally minded consumers) in two different countries (Italy and Belgium) (n=1,522), resulting in four samples: Italian green consumers (n=453), Italian non-green consumers (n=473), Belgian green consumers (n=219) and Belgian non-green consumers (n=377).

Design/methodology - By means of a survey, data were analysed using Structural Equation Modelling and simultaneous multi-group analysis of the four groups.

Results - Results confirmed the relevance of the determining factors in the model and showed significant differences in the green buying decision process, with respect to the hypothesised positive and negative motives, between green and non-green Italian consumers and between Italian and Belgian non-green consumers. At the same time, there are indications of a segment of green consumers that shows a similar decision process across the two countries (cross-national green consumers).

Originality - This paper contributes to green purchasing behaviour knowledge by validating a specific model for the purchasing of eco-friendly products in two different target groups of consumers (green and non-green consumers) and in two countries with different level of eco-awareness (Italy and Belgium).

Keywords
Eco-friendly products, consumer behaviour, structural equation modelling, multi-group analysis, Italy, Belgium.

[1]The content of this chapter has been further developed in two different research papers: (1) Barbarossa C. and De Pelsmacker P., "Purchasing eco-friendly products: A cross-National multi-group analysis of green and non-green consumers in Italy and Belgium", which is currently under the European Journal of Marketing reviewing process; (2) Barbarossa C., Miceli G., and De Pelsmacker P., "Green consumption motivation: development and validation of an efficient measurement scale", which is currently under the reviewing process of the 41st European Marketing Academy (EMAC) Conference, Lisbon, 2012.

In Chapter 3, an original parsimonious and specific model for the purchasing of eco-friendly tissue paper products (EFTPP) has been tested in Italy, in two groups of consumers: established environmentally minded consumers and established non-environmentally minded consumers (named *green* and *non-green* consumers, respectively). Results revealed the validity of the model in explaining and predicting the purchasing of EFTPP as well as its ability to find out significant differences between the two groups.
However, as in the last decades environmental protection has been shifting in to an internationally recognized issue, it is necessary to further assess the cross-national validity of any proposed model for the purchasing of eco-friendly products. Since the purchasing of eco-friendly products is a freely stated action and not the result of a mandatory legislation, personal traits and cultural differences among consumers are extremely relevant. Hence, to test if consumers of different countries are guided by the same antecedents and motives (and with the same strength) towards the purchasing of eco-friendly products is a worthwhile challenge. Chapter 4 addresses this issue.

4.1 Introduction

Research on the cross-cultural validation of eco-friendly purchasing models is still rare. It has been mainly conducted to assess the Theory of Planned Behaviour (TPB) (Ajzen, 1991) when applied to eco-friendly purchasing behaviour in different countries. For example, Kalafatis *et al*. (1999) adopted the TPB to examine the determinants that influence consumers' intention to buy eco-labelled timber furniture, in Greece and UK. Similarly, Chan and Lau (2001) examined the applicability of the TPB to green purchasing behaviour in the Chinese and American cultural settings. Arvola *et al*. (2008) integrated measures of affective and moral attitudes into the TPB model to predict the purchase intentions of organic food and tested it in Finland, Italy and UK. On the contrary, the cross-national validation of original models, different from the TPB and specific for the purchasing of eco-friendly products, has been lacking.
In addition, Kalafatis *et al*., (1999), Chan and Lau (2001), and Arvola *et al*.'s (2008) works involved unspecified general consumers, while the involvement of specific segments of consumers having different psychographic traits (i.e. green and non-green consumers) has been rather scarce. Hence, the cross-national validation of original models in specific consumer targets (i.e. green and non-green consumers) requires further theoretical and empirical investigation.
The aim of this study is to *test the EFTTP purchasing model on established green and non-green consumers in two different countries, Italy and Belgium,* with Belgium having an higher level of environmental concern than Italy.
It results in testing the model in four different target groups: *Italian green*, *Italian non-green*, *Belgian green* and *Belgian non-green* consumers.
As stated in Chapter 3 about the Italian samples, to test the model in two different consumer groups (established *green* and *non-green* consumers) may assess potential

common patterns and differences in the purchasing process of eco-friendly products. Positive motives, particularly altruistic motives, may exert a greater impact on green consumers' intention to purchase eco-friendly products, as opposed to non-green consumers who are supposed to be not concerned about environmental issues. In addition, negative motives may reduce non-green consumers' intention to purchase eco-friendly products to a greater extent, acting as a reinforcement of non-green consumers' unwillingness to buy eco-friendly goods. On the contrary, they may dramatically reduce green consumers' eco-friendly purchasing behaviour due to potential situational barriers that impede them to translate green purchase intentions into actual purchasing behaviour at the point of purchase. Therefore, comparing the purchasing process of eco-friendly products between the two groups of consumers in each country is meaningful.

Second, consumers from the two countries are supposed to experience different levels of environmental concern due to cultural and macro-economic factors.

Hofstede's (2010) cultural dimensions show that the two countries differ with regard to the Uncertainty Avoidance Index (UAI) and the Masculinity Index (MAS). The UAI in Belgium (90/100) is greater than in Italy (70/100), suggesting the Belgian culture to be more likely to minimize the possibility of unstructured situations by strict laws, rules, safety and security measures, and on the philosophical and religious level, to carry a belief in the absolute Truth. In comparison, the MAS is lower in Belgium (50/100) than in Italy (65/100), indicating the Belgian culture to be more caring-oriented than the Italian.

Macro-economic indices, related to environmental protection in Italy and Belgium, show Italy (values per capita) as having higher municipal waste, a lower rate in recycling household waste, higher CO_2 emissions and greenhouse gases, as well as constant decreasing expenditures for environmental protection and a lower availability of green products -different from food- (EUROSTAT, 2011; ISTAT, 2011). Consequently, Belgium is a country that can be expected to be generally more environmentally-friendly compared to Italy. Therefore, comparing the EFTPP purchasing process between the two countries is meaningful.

Since the nature of the differences between the two targets groups within the two countries is unclear, the following research questions are formulated:

RQ_1. What are the differences between the purchasing behaviour process of eco-friendly products between green and non-green consumers?

RQ_2. What are the differences between the EFTPP purchasing behaviour process between Italian and Belgian consumers?

4.2 Theoretical framework

The conceptual model of reference is the one explained in Chapter 2. Hereafter its graphical representation (Figure 1) and hypotheses are briefly reported again for the sake of clarity[2].

Attitude towards environmental consequences of purchasing EFTPP
H_{1a}: Attitude towards the environmental consequences of purchasing EFTPP has a positive direct effect on the intention to purchase EFTPP.
H_{1b}: Attitude towards the environmental consequences of purchasing EFTPP has a positive direct effect on the purchase of EFTPP.
H_{1c}: Intention to purchase EFTPP mediates the relationship between consumers' attitude towards the environmental consequences of purchasing EFTPP and the purchase of EFTPP.

Green self-identity
H_{2a}: Green self-identity has a positive direct effect on the intention to purchase EFTPP.
H_{2b}: Green self-identity has a positive direct effect on the purchase of EFTPP.
H_{2c}: Intention to purchase EFTPP mediates the relationship between consumers' green self-identity and the purchase of EFTPP.

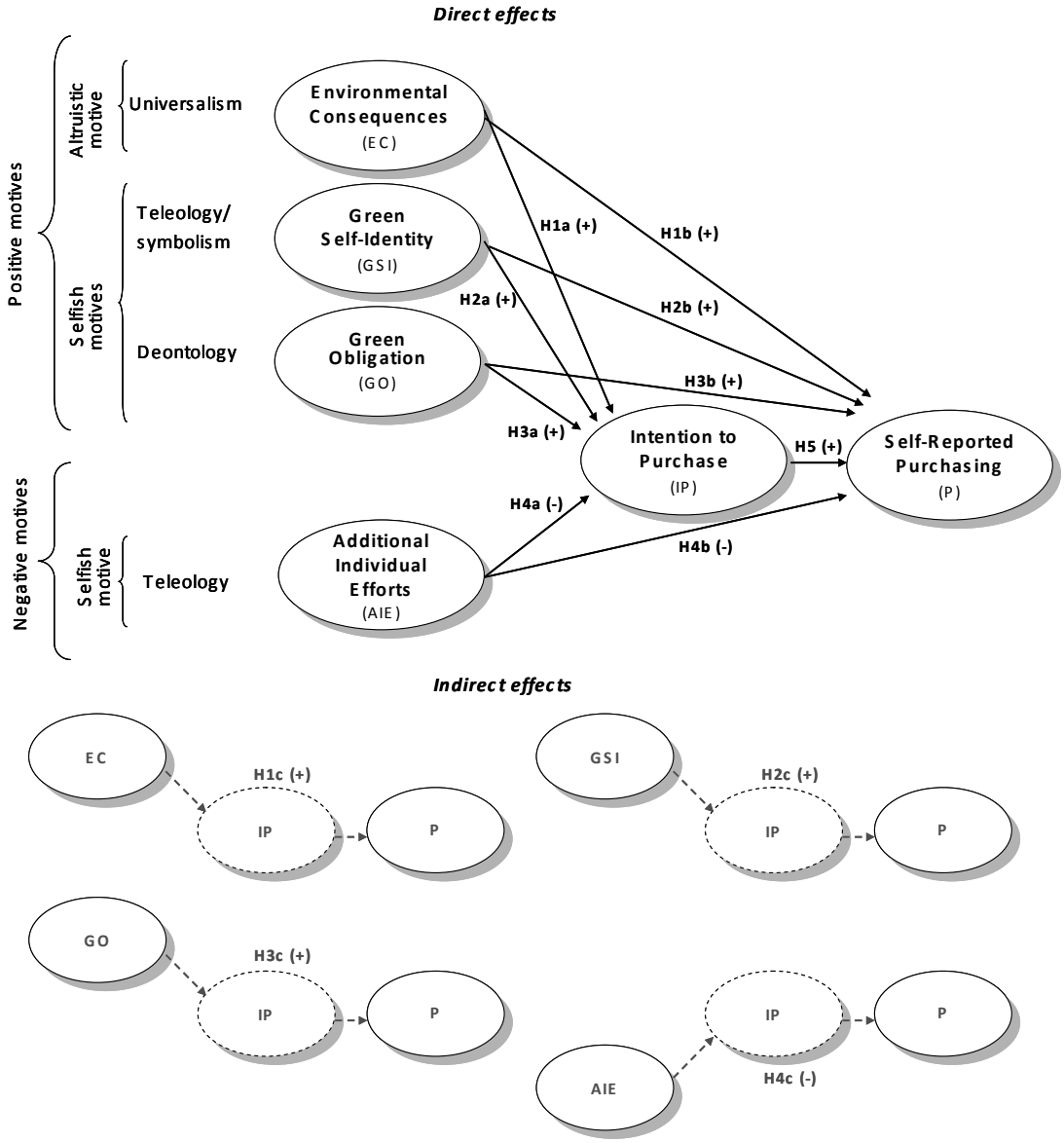
Green obligation
H_{3a}: Green obligation has a positive direct effect on intention to purchase EFTPP.
H_{3b}: Green obligation has a positive direct effect on the purchase of EFTPP.
H_{3c}: Intention to purchase EFTPP mediates the relationship between consumers' green obligation to purchase EFTPP.

Additional individual efforts
H_{4a}: Additional individual efforts have a negative direct effect on the intention to purchase EFTPP.
H_{4b}: Additional individual efforts have a negative direct effect on the purchase of EFTPP.
H_{4c}: Intention to purchase EFTPP mediates the relationship between additional individual efforts to purchase of EFTPP.

Intention to purchase
H_5: Intention to purchase EFTPP has a positive direct effect on the purchase of EFTPP.

[2]Theoretical framework and, partially, methodology are the same of those used in the Italian samples. Hence, in this Chapter only those procedures which differ from the previous are reported. Please, see Chapter 2 for a complete dissertation of both theoretical framework and method.

Figure 1. Conceptual model



Source: Self elaboration

4.3 Methodology

4.3.1 Measures

The measures used for the constructs in the model were the same of the study conducted in Italy to allow a valid comparison. The questionnaire was initially developed in English and subsequently translated into Dutch. Linguistic equivalence (Italian-Dutch) was ensured through back-translation by two professional translators and one marketing manager (Bhalla and Lin, 1987).

Also for the Belgian samples, to discriminate between *green* and *non-green* consumers, Moons *et al*.'s (2010) screening questions for general environmentally-friendly behaviours were used.

4.3.2 Main study: procedure and samples

The main study involved the administration of a questionnaire with samples of adult consumers (aged above 18), in Belgium (Dutch speaking area).
As in the case of Italian consumers, to collect data from established "environmentally minded" and "non environmentally minded" Belgian consumers, respondents were selected from two purposive samples. "Green" respondents were selected on the basis of sampling frames that met three requirements:

4. members of ecological institutions (Green Party and Green Belgium);
5. who reported to behave "eco-friendly" for the majority of Moons *et al*.'s (2010) screening questions;
6. who declared to be responsible for grocery shopping in the household.

Respondents for the "non-green" samples were "unspecified" consumers (no members of ecological institutions) who declared:

1. to be responsible for grocery shopping in the household, and;
2. not to behave "eco-friendly" for the majority of Moons *et al*.'s (2010) screening questions.

Data collection was carried out from April until June 2011. Questionnaires were delivered both online and offline. To reach the green target properly, questionnaires were delivered during specific "green" days and uploaded on green institutions' web site. Belgian associations and respondents cooperated and completed the survey without any kind of incentive. In the end, 620 questionnaires returned back. Among those, 24 were incomplete while 596 were fully complete and analyzed. They resulted in: 219 *Belgian green* and 377 *Belgian non-green* consumers.
As the purpose of this chapter was to compare *green* and *non-green* Belgian consumers and, furthermore, *green* and *non-green* Belgian consumers with *green* and *non-green* Italian consumers, the following analyses involve all the four target groups. In Chapter 3, the two Italian samples have been already discussed. However, the Author prefers to be partially luxuriant and report again results and indices of the two Italian samples in order to expedite the multi-group comparison across the four groups. Hence, in the end, 1,522 questionnaires in Italy and Belgium were fully completed and analyzed, and they resulted as follow:

- 453 *Italian green* consumers;
- 473 *Italian non-green* consumers;
- 219 *Belgian green* consumers;
- 377 *Belgian non-green* consumers.

Table 1. Socio-demographic characteristics of the four samples

		Italian green (n=453)	*Italian non-green* (n=473)	*Belgian green* (n=219)	*Belgian non-green* (n=377)
Gender	Male	43	34	35	39
	Female	57	66	65	61
Age	18-24	15	4	10	8
	25-34	41	41	38	32
	35-44	22	25	22	14
	45-55	13	15	15	23
	>55	9	16	15	23
Education	Junior High School	2	6	7	5
	High School	28	29	19	24
	Bachelor or Master	64	67	79	73

Notes: Cells are percentages (%).

The four samples have a similar socio-demographic composition (Table 1).

4.4 Data analysis and results

Structural equation modelling was used again to test the model, following Anderson and Gerbing's (1988) two-step approach: confirmatory factor analysis (CFA) and analysis of the full structural model (hypotheses testing). Finally, a simultaneous four-group analysis was performed (Steenkamp and Baumgartner, 1998) to provide answers to research questions 1 and 2.

4.4.1 Confirmatory factor analysis (CFA)

A six-factor measurement model was validated by means of CFA using LISREL 8.80 (Jöreskog and Sörbom, 2006). Global fit indices were good, although the two Italian samples, with larger sample size, showed χ^2/d.f. ratios slightly higher than three (Hair *et al*., 2006) (Table 2). All four samples showed acceptable RMSEA lower than 0.08 (Browne and Cudeck, 1993), SRMR lower than 0.05 (Diamantopoulos and Siguaw, 2000), and NFI, NNFI and CFI all greater than 0.95 (Hu and Bentler, 1999). Local fit criteria were good (Table 4). All the items significantly loaded on their constructs ($p<.001$) and factor loadings were substantially greater than 0.60, ranging from 0.712 to 0.992 (Comrey and Lee, 1992). Cronbach's alphas (α) for all constructs were greater than 0.70, in accordance with Nunnally's (1994) standard of internal consistency (Table 3). Cronbach's alpha for the intention to purchase (IP) construct was not computed, as IP is measured by one single item. The composite reliability (CR) threshold of 0.60 was met for every factor, and the average variance extracted (AVE) was always greater than 0.50 (Bagozzi and Yi, 1988). The discriminant validity was confirmed because the shared variance between pairs of factors was always less than the corresponding AVE (Fornell and Larcker, 1981).

4.4.2 Structural Analysis

Analysis of the full structural model was performed, using LISREL 8.80 (Jöreskog and Sörbom, 2006) and the Maximum Likelihood Method. Global fit indices gave good results (Table 5). Again, the two Italian samples showed slightly high relative Chi-Square (χ^2/d.f.), but not the Belgian samples whose ratio was lower than three. All samples showed RMSEA lower than 0.08, SRMR lower than 0.05, and NFI, NNFI and CFI all greater than 0.95. Local fit indices were very good (Table 4). All standardized item loadings were significantly ($p<.001$) greater than 0.60 ranging from 0.715 to 0.993. Table 5 reports all the hypothesized paths and their significance, while figures 2, 3, 4 and 5 show the model for each sample.

For the sake of clarity and in order to expedite the following multi-group comparison (§4.4), we briefly report again the results concerning the two Italian samples.

In the *Italian green* sample (Table 5 and Figure 2), the direct effects of EC, GSI, GO and AIE on the intention to purchase EFTPP (IP) were all significant, supporting H_{1a}, H_{2a}, H_{3a} and H_{4a}. However the direct effects of the same variables on P were not significant, with the exception of AIE that exerted a strong negative effect on P. Thus, H_{4b} was supported, while H_{1b}, H_{2b}, and H_{3b} were not. GSI exerted the largest effect on IP and P (indirectly), followed by EC and GO. AIE exerted a strong negative impact especially on P, possibly explaining the relatively low correlation between IP and P.

In the *Italian non-green* sample (Table 5 and Figure 3), all the direct and indirect effects on IP and P were significant ($p<.01$), with the exception of the effects of EC on IP and P ($p>.10$). GSI exerted the largest impact on IP and P, followed by GO. AIE exerted a negative impact on both IP and P with a similar magnitude of the positive motives. IP predicted P reasonably. All hypotheses except H_{1a} and H_{1b} were supported.

In the *Belgian green* sample (Table 5 and Figure 4), all direct effects of the independent variables on both IP and P (directly and indirectly) were significant ($p<.01$), with the exception of the effect of EC on P ($p>.10$), supporting all the hypotheses except H_{1b}. GSI had the largest effect on IP and P, followed by GO, and EC on IP and P (indirectly). AIE exerts a stronger negative effect on P than on IP and the magnitude of the negative motive was similar to the one held by the positive motives. IP predicted P quite well.

Finally, in the *Belgian non-green* sample (Table 5 and Figure 5), all direct effects were significant ($p<.01$) and all the hypotheses were supported. Differently from the previous samples, GO had the largest effect on IP and P, followed by EC and GSI. AIE had a negative effect on both IP and P, but it was smaller than the magnitudes of the positive motives. IP predicted P reasonably.

Table 2. Confirmatory factor analysis: global measures of fit

	χ^2	d.f.	χ^2/df	RMSEA	SRMR	NFI	NNFI	CFI
Italian green	376.072	121	3.11	0.070	0.043	0.967	0.971	0.977
Italian non-green	378.898	121	3.13	0.067	0.043	0.958	0.962	0.970
Belgian green	254.162	121	2.10	0.071	0.040	0.969	0.978	0.983
Belgian non-green	276.093	121	2.28	0.058	0.032	0.980	0.984	0.987

Notes: CFI=Comparative fit index; d.f.=Degrees of freedom; NNFI=Non-normed fit index; RMSEA=Root mean square error of approximation; SRMR=Standardized root mean square residual; χ^2=Chi-square.

Table 3. Sample mean, relative standard deviation, Cronbach's alpha, composite reliability and average variance extracted

Construct	*Italian green*				*Italian non-green*				*Belgian green*				*Belgian non-green*			
	μ (σ)	α	CR	AVE	μ (σ)	α	CR	AVE	μ (σ)	α	CR	AVE	μ (σ)	A	CR	AVE
EC	6.35 (0.11)	0.84	0.86	0.61	4.02* (0.19)	0.85	0.85	0.60	5.60* (0.22)	0.95	0.97	0.90	4.61 (0.32)	0.95	0.95	0.84
GSI	5.23 (0.19)	0.83	0.83	0.56	4.34* (0.29)	0.89	0.89	0.67	4.55* (0.19)	0.95	0.96	0.85	3.88 (0.32)	0.94	0.95	0.82
GO	5.28 (0.26)	0.91	0.91	0.77	4.77* (0.30)	0.93	0.93	0.82	4.33* (0.37)	0.97	0.97	0.91	3.15 (0.47)	0.97	0.97	0.90
AIE	4.30 (0.36)	0.92	0.92	0.74	4.58* (0.29)	0.88	0.88	0.64	4.28 (0.37)	0.93	0.94	0.79	5.03 (0.26)	0.92	0.92	0.76
IP	5.52 (0.20)		0.91	0.91	4.21* (0.34)		0.95	0.95	4.98* (0.29)		0.95	0.95	3.90 (0.35)		0.98	0.98
P	3.70 (0.43)	0.95	0.95	0.90	2.93* (0.51)	0.94	0.94	0.89	3.97 (0.40)	0.96	0.97	0.94	3.05 (0.42)	0.95	0.95	0.91

Notes: α= Cronbach's alpha; AVE=Average variance extracted; CR=Composite reliability; μ=Sample mean; σ=relative standard deviation.
Referring to μ and σ EC, GSI, GO, AIE, P are global measures for environmental consequences, green self-identity, green obligation, individual additional efforts and actual purchasing respectively. IP was a single item construct.

Table 4. Item list per construct and standardized item loadings

Constructs and items	CFA-model loadings				Path analysis loadings			
	IG	ING	BG	BNG	IG	ING	BG	BNG
Attitude towards environmental consequences (EC)								
How tissue paper products may affect the environment is important to me (EC1)	0.710	0.647	0.836	0.879	0.712	0.647	0.819	0.879
It is important to me whether tissue paper products cause the depletion of forests (EC2)	0.801	0.927	0.938	0.960	0.801	0.927	0.934	0.960
It is important to me whether manufacturing tissue paper products causes water pollution (EC3)	0.848	0.895	0.960	0.958	0.847	0.895	0.959	0.958
The amount of energy used to produce tissue paper products it is not important to me (EC1) (r.i.)	0.655	0.600	0.921	0.867	0.655	0.600	0.902	0.867
Green self-identity (GSI)								
I think of myself as someone who is concerned about environmental issues (GSI1)	0.752	0.763	0.877	0.889	0.752	0.764	0.821	0.889
I think of myself as a "green" consumer (GSI2)	0.776	0.750	0.903	0.862	0.775	0.740	0.894	0.862
To buy eco-friendly tissue paper products would make me feel a green consumer (GSI3)	0.750	0.869	0.906	0.912	0.750	0.869	0.900	0.912
I would feel totally satisfied of me if I bought eco-friendly tissue paper products (GSI4)	0.692	0.878	0.930	0.933	0.695	0.879	0.904	0.934
Green obligation (GO)								
I would feel guilty if I bought tissue paper products damaging the environment (GO1)	0.839	0.909	0.941	0.938	0.839	0.909	0.927	0.938
To buy tissue paper products damaging the environment it would be morally wrong for me (GO2)	0.888	0.939	0.957	0.940	0.888	0.939	0.954	0.940
Buying tissue paper products affecting the environment would go against my principles (GO3)	0.888	0.857	0.970	0.975	0.889	0.856	0.967	0.975
Individual additional efforts (AIE)								
I don't like to pay more to buy eco-friendly tissue paper products (AIE1)	0.850	0.800	0.872	0.868	0.850	0.800	0.831	0.868
I don't like to waste time to go to specialized stores to buy eco-friendly tissue paper products (AIE2)	0.868	0.837	0.886	0.870	0.868	0.837	0.860	0.870
While I shopping I can't easily recognize which tissue paper products are eco-friendly (AIE3)	0.882	0.814	0.930	0.904	0.883	0.814	0.904	0.904
Inside the store, I need a lot of time to find eco-friendly tissue paper products out (AIE4)	0.843	0.739	0.864	0.837	0.844	0.739	0.841	0.837
Intention to purchase eco-friendly products (IP)								
Next month I intend to buy eco-friendly tissue paper products (IP1)	0.957	0.975	0.975	0.974	0.957	0.975	0.975	0.973
Purchasing of eco-friendly products (P)								
At the present, when I go shopping, I buy eco-friendly tissue paper products (P1)	0.925	0.992	0.985	0.957	0.925	0.993	0.974	0.957
Last month I bought eco-friendly tissue paper products (P2)	0.970	0.892	0.959	0.948	0.970	0.892	0.947	0.949

Notes: CFA=Confirmatory factor analysis; IG=Italian green sample; ING=Italian non-green sample; BG=Belgian green sample; BNG=Belgian non-green sample.

Table 5. Structural equation model: Standardized path estimates and goodness of fit indices

Hypotheses	*Paths*	Italian green (n=453)		Italian non-green (n=473)		Belgian green (n=219)		Belgian non-green (n=377)	
Direct effects		Stand. β	t-value	Stand. β	t-value	Stand. β	t-value	Stand. β	t-value
H1a: Environmental consequences → Intention to purchase	$\gamma_{1,1}$	0.256	4.61***	0.023	0.53(ns)	0.237	3.58***	0.309	6.27***
H1b: Environmental consequences → Purchasing	$\gamma_{2,1}$	0.024	0.08(ns)	0.003	0.39(ns)	0.014	1.64(ns)	0.042	4.85***
H2a: Green Identity → Intention to purchase	$\gamma_{1,2}$	0.308	4.42***	0.335	5.72***	0.355	4.66***	0.294	5.75***
H2b: Green Identity → Purchasing	$\gamma_{2,2}$	0.010	1.57(ns)	0.044	4.77***	0.136	4.39***	0.042	4.17***
H3a: Green Obligation → Intention to purchase	$\gamma_{1,3}$	0.120	2.01**	0.228	4.12***	0.309	6.20***	0.321	7.94***
H3b: Green Obligation → Purchasing	$\gamma_{2,3}$	0.020	1.02(ns)	0.025	2.16***	0.072	4.47***	0.182	9.05***
H4a: Individual additional efforts → Intention to purchase	$\gamma_{1,4}$	-0.262	6.37***	-0.353	8.05***	-0.175	3.51***	-0.123	3.10***
H4b: Individual additional efforts → Purchasing	$\gamma_{2,4}$	-0.765	18.25***	-0.227	8.79***	-0.279	6.43***	-0.171	5.79***
H5: Intention to purchase → Purchasing	$\beta_{2,1}$	0.209	4.32***	0.612	11.80***	0.508	5.92***	0.607	9.92***
Indirect effects *(via intention to purchase)*									
H1c: Environmental consequences → Purchasing		0.054	3.33***	0.014	0.53(ns)	0.120	3.06***	0.188	5.20***
H2c: Green Identity → Purchasing		0.064	1.84*	0.205	4.92***	0.181	3.74***	0.178	5.35***
H3c: Green Obligation → Purchasing		0.025	2.90***	0.114	3.87***	0.157	4.65***	0.195	6.58***
H4c: Individual additional efforts → Purchasing		-0.055	3.72***	-0.216	7.37***	-0.089	2.84***	-0.075	2.79***
Global goodness of fit indices		χ^2/d.f= 388.850/121 RMSEA=0.070 SRMR=0.043 NFI=0.967 NNFI=0.971 CFI=0.977		χ^2/d.f=378.898/121 RMSEA=0.067 SRMR=0.043 NFI=0.958 NNFI=0.962 CFI=0.970		χ^2/d.f=254.162/121 RMSEA=0.071 SRMR=0.040 NFI=0.969 NNFI=0.978 CFI=0.983		χ^2/d.f=276.093/121 RMSEA=0.058 SRMR=0.032 NFI=0.980 NNFI=0.984 CFI=0.987	

Notes: Stand. β=Standardized beta coefficient; (ns)=Not significant; *=Significant at p<0.1; **=Significant at p<0.05; ***=Significant at p<0.01.

Figure 2. Italian green sample. Standardized path estimates

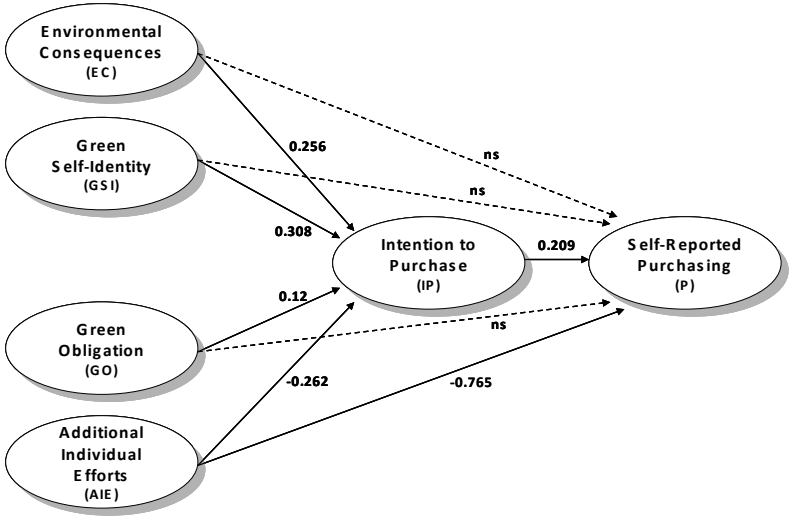


Figure 3. Italian non-green sample. Standardized path estimates

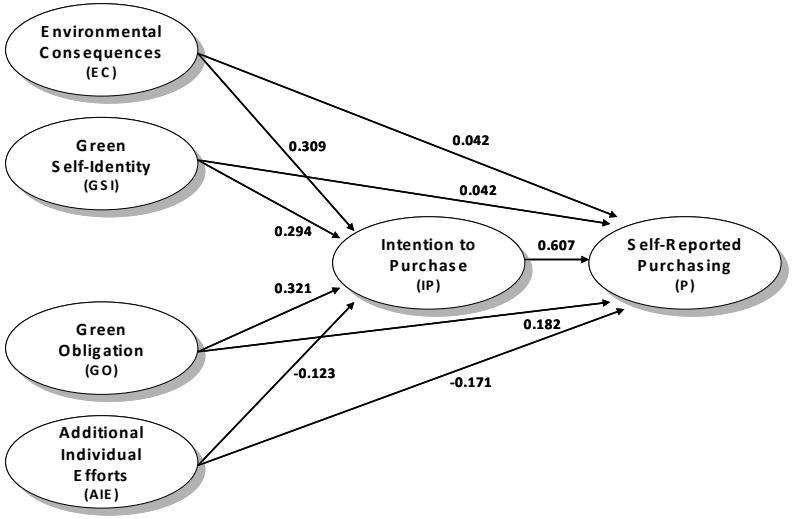


Figure 4. Belgian green sample. Standardized path estimates

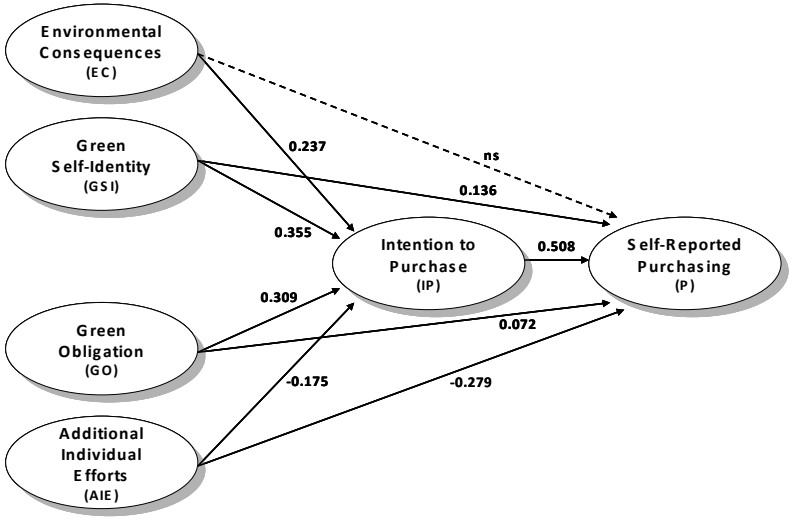
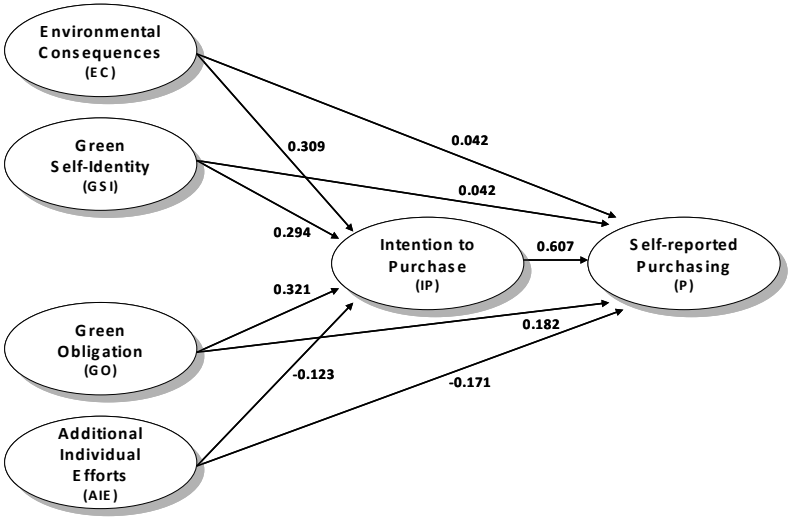


Figure 5. Belgian non-green sample. Standardized path estimates



4.4.3 Tests on existence and significance of mediation

To test the existence of mediation (first step) and the statistical significance of the indirect effects (second step), rival models composed of the only direct effects of the alleged antecedents on the purchasing of EFTPP were tested (Baron and Kenny, 1986) (Tables 6 and 7). Then, Sobel's (Sobel, 1982) and PRODCLIN (MacKinnon *et al*., 2007) test were conducted to statistically test the significance of the indirect effects (intention as a mediator) (Table 8 and 9).

Hypotheses testing for the *Belgian green* sample (n=219) revealed that all the antecedents exerted significant direct effects on the purchasing of EFTPP (Environmental Consequences at p<.10 while Green Self-Identity, Green Obligation and Additional Individual Efforts at p<.01) (Table 6). Hence, H_1, H_2, H_3, H_4 were all supported.

Hypotheses testing for the *Belgian non-green* sample (n=377) revealed that all the antecedents exerted significant (p<.01) direct effects on the purchasing of EFTPP (Table 7). Hence, H_1, H_2, H_3, H_4 were all supported.

Sobel and PRODCLIN tests supported the significant role played by purchase intention in mediating the relationships between EC, GSI, GO, AIE on the one hand and P on the other. In both the two Belgian groups, significant indirect effect (p<.05) were found for EC, GO, GSI, AIE to P via IP. H_{1c}, H_{2c}, H_{3c}, $H_{4c,}$ were thus supported (Tables 8 and 9).

Table 6. Belgian green sample. Standardized path estimates of direct effects on purchasing

Hypothesis	Standardized β	t-value
Direct effects on purchasing		
H1: Environmental consequences → Purchasing	0.106	1.642*
H2: Green Self-Identity → Purchasing	0.317	4.391***
H3: Green Obligation → Purchasing	0.230	4.496***
H4: Additional individual efforts → Purchasing	-0.367	6.403***
χ^2=218.696; χ^2/d.f.=2.0; RMSEA= 0.067; SRMR= 0.038; NFI=0.969; NNFI=0.979; CFI=0.983		

Notes: *N=219 *significant at p<0.1 **significant at p<0.05 ***significant at p<0.01*

Table 7. Belgian non-green sample. Standardized path estimates of direct effects on purchasing

Hypothesis	Standardized β	t-value
Direct effects on purchasing		
H1: Environmental consequences → Purchasing	0.229	4.859***
H2: Green Identity → Purchasing	0.220	4.170***
H3: Green Obligation → Purchasing	0.377	8.992***
H4: Additional Individual Efforts → Purchasing	-0.246	5.799***
χ^2=255.278; χ^2/d.f.=2.34; RMSEA= 0.059; SRMR= 0.033; NFI=0.979; NNFI=0.983; CFI=0.986		

Notes: *N=377 *significant at p<0.1 **significant at p<0.05 ***significant at p<0.01*

Table 8. Sobel's test on the Belgian green (n=219) and Belgian non-green (n=377) samples

Sample	Constructs	α	Confidence Interval		Significant mediation
			Lower Limit	Upper Limit	
Belgian green (n=219)	H_{1c}: EC → IP → P	0.05	0.09	0.33	yes
	H_{2c}: GSI → IP → P	0.05	0.16	0.41	yes
	H_{3c}: GO → IP → P	0.05	0.14	0.30	yes
	H_{4c}: AIE → IP → P	0.05	-0.20	-0.04	yes
Belgian non-green (n=377)	H_{1c}: EC → IP → P	0.05	0.149	0.29	yes
	H_{2c}: GSI → IP → P	0.05	0.14	0.30	yes
	H_{3c}: GO → IP → P	0.05	0.18	0.30	yes
	H_{4c}: AIE → IP → P	0.05	-0.15	-0.03	yes

Table 9. Prodclin test on the Belgian green (n=219) and Belgian non-green (n=377) samples

Sample	Constructs	coef. a	s_a	coeff. b	s_b	corr.	α	Interval of Confidence		Sign. Med.
								lower lim.	upper lim.	
Belgian green	*H1*: EC → IP → P	.300	.084	.707	.065	.056	.05	0.095	0.336	yes
	H2: GSI → IP → P	.404	.084	.707	.065	-.05	.05	0.165	0.415	yes
	H3: GO → IP → P	.303	.048	.707	.065	-.05	.05	0.155	0.271	yes
	H4: IFE → IP → P	-.170	.050	.707	.065	-.19	.05	-0.201	-0.048	yes
Belgian non-green	*H1*: EC → IP → P	.305	.047	.719	.040	-.02	.05	0.15	0.29	yes
	H2: GSI → IP → P	.305	.052	.719	.040	-.11	.05	0.14	0.29	yes
	H3: GO → IP → P	.333	.038	.719	.040	-.02	.05	0.18	0.30	yes
	H4: IFE → IP → P	-.123	.043	.719	.040	-.16	.05	-0.15	-0.03	yes

Notes: Coeff. a=Effect of the independent variable on the mediator; s_a=Standard error between the independent variable and the mediator; Coeff. b=Effect of the mediator on the dependent variable; s_b=Standard error between the mediator and the dependent variable; Corr.=Correlation; Lower lim.=Lower limit; Upper lim.=Upper limit; Sign. Med.=Significance of mediation.

4.4.4 Multi-group analysis

In order to test the equivalence of the factorial measurement and the structural model among the four groups, *configural*, *metric* and *structural* invariance tests were performed on the full sample model (n=1,522) (Steenkamp and Baumgartner, 1998) (Tables 10a and 10b).

Table 10a. Configural, Metric and Partial Metric Invariance

	C.I.		M.I.		P.M.I.	
	SRMR	GFI	SRMR	GFI	SRMR	GFI
Italian green (n=453)	0.043	0.91	0.041	0.91	0.044	0.91
Italian non-green (n=473)	0.043	0.91	0.047	0.90	0.044	0.91
Belgian green (n=219)	0.038	0.88	0.047	0.87	0.040	0.89
Belgian non-green (n=377)	0.032	0.91	0.041	0.91	0.040	0.91

Notes: C.I.=Configural invariance; M.I.=Metric invariance; P.M.I.=Partial metric invariance.

Table 10b. Full model: Configural, Metric and Partial Metric Invariance

		χ^2	d.f.	RMSEA	NFI	NNFI	CFI	ΔCFI	$\Delta\chi^2$	Δd.f.	p-value
Full sample (n=1,522)	C.I.	917.265	484	0.048	0.970	0.975	0.98				
	M.I.	1001.425	519	0.049	0.968	0.975	0.97	0.001	84.16	35	0.001
	P.M.I.*	952.485	510	0.047	0.969	0.976	0.98	0	35.22	26	0.107

**unconstrained EC4, GSI3 and GO4*

C*onfigural* invariance (C.I.), i.e. whether the pattern of fixed and free parameters is the same for the four groups, was met. Each group showed significant (p<.001) factor loadings, covariances among latent factors smaller than 1, SRMR lower than 0.05 and GFI greater than 0.90 (except the Belgian green sample where it was 0.88, which is still acceptable) (Table 10a). Fit indices for the full sample model showed good results (Table 10b): $\chi^2(484)$ was 917.265, RMSEA was lower than 0.08, NFI, NNFI and CFI were all greater than 0.95.

M*etric* invariance (M.I.), i.e. whether the factor structure is statistically invariant among the four groups, was not observed as the $\Delta\chi^2$ between the full model computed for metric invariance and the full model computed for configural invariance was significant ($\Delta\chi^2(35)$=84.16, p=.001) (Table 10b). To locate the source of inequality and develop an invariant measurement model across the samples, a *partial metric* invariance (P.M.I.) test was conducted. Modification indices revealed that the metric inequivalence occurred because of three items (EC_4, GSI_3 and GO_4). The items were unconstrained and the model was tested again. Each group showed significant (p<.001) factor loadings, covariances among latent factors smaller than 1, SRMR lower than 0.05 and GFI greater than 0.90 (except the Belgian green sample where it was 0.89) (Table 10a, last column). Fit indices for the full sample model (n=1,522) showed good results, too (Table 10b, last row): $\chi^2(510)$ was 952.485, RMSEA was lower than 0.08, NFI, NNFI and CFI were all greater than 0.95. **Δ**CFI was 0, thus lower than 0.01, and $\mathbf{\Delta}\chi^2$ was not significant (p>.10). *Partial metric* invariance was thus met, and the model could therefore be meaningfully compared across the groups.

Finally, also s*tructural* (or path) invariance (S.I.), i.e. whether regression weights for each of the structural paths are statistically invariant among the groups, was tested. Constraining paths of all the four samples at the same time yielded a significant delta chi-square ($\mathbf{\Delta}\chi^2(27)$=200.97, p=.001) indicating significant differences in the structural paths among

the groups. To find out paths responsible for the invariance, two by two combinations of groups were compared (*Italian green* vs *Italian non-green*, *Italian green* vs *Belgian green*, *Belgian green* vs *Belgian non-green*, *Italian non-green* vs *Belgian non-green*), starting by constraining all structural paths to be invariant between the two groups and then entering the constraints one by one, keeping previous invariant paths constrained, while freeing non-invariant paths.

Reminding also the two Italian samples, the comparison between *Italian green* (IG) and *Italian non-green* (ING) consumers revealed that $\gamma_{1,1}$:EC→IP was significantly greater for IG than ING consumers ($\Delta\chi^2(1)$=10.82, p=.001) while $\gamma_{1,4}$:AIE→IP was greater for ING than IG ($\Delta\chi^2(1)$=18.18, p=.001) and $\gamma_{2,4}$:AIE→P greater for IG than ING ($\Delta\chi^2(1)$=88.18, p=.001). Finally, $\beta_{2,1}$:IP→P was greater for NG than IG consumers ($\Delta\chi^2(1)$=33.31, p=.001). The remaining paths did not significantly differ between the groups, as $\Delta\chi^2(1)$ was always not significant (p>.10).

The comparison between *Italian green* (IG) and *Belgian green* (BG) consumers revealed that $\gamma_{1,3}$:GO→IP was significantly greater for BG than IG consumers ($\Delta\chi^2(1)$=11.34, p=.001) while, $\gamma_{2,4}$:AIE→P was greater for IG than BG ($\Delta\chi^2(1)$=52.34, p=.001). Finally, $\beta_{2,1}$:IP→P was greater for BG than IG consumers ($\Delta\chi^2(1)$=33.62, p=.001). None of the other paths significantly differed between the two groups (p>.10).

The comparison between *Belgian green* (BG) and *Belgian non-green* (BNG) consumers showed no significant differences between any of the path coefficients.

Finally, the comparison between *Italian non-green* (ING) and *Belgian non-green* (BNG) consumers, revealed that $\gamma_{1,1}$:EC→IP and $\gamma_{2,3}$:GO→P were greater for BNG than ING consumers ($\Delta\chi^2(1)$=5.47, p=.020, and $\Delta\chi^2(1)$=8.76, p=.003, respectively) while $\gamma_{1,4}$:AIE→IP was greater for ING than BNG ($\Delta\chi^2(1)$=29.93, p=.001). Finally, $\beta_{2,1}$:IP→P was slightly but significantly greater for ING than BNG consumers ($\Delta\chi^2(1)$=3.88, p=.049). All other paths were invariant between the two groups (p>.10).

4.5 Conclusions and discussion

The present study aimed to make a contribution to the eco-friendly consumer behaviour literature by testing a new parsimonious model to explain and predict the purchasing of low-involvement eco-friendly grocery products in two specific groups of consumers (green and non-green consumers) in two different countries (Italy and Belgium).

Some remarkable differences between consumer groups emerged, such as differences in the decision process between green and non-green consumers (especially with respect to the role of additional individual efforts) and between Belgium (a more highly environmentally conscious country) and Italy (with a lower environmental level). At the same time, there are indications of a segment of green consumers that shows a similar decision process across the two countries.

The comparison between *Italian green* and *Italian non-green consumers* (Chapter 3) revealed that the effect of the attitude towards the environmental consequences of

purchasing EFTPP (EC) on the intention to purchase them (IP) is significantly greater for green than for non-green consumers, but not the effect of the same variable on self-reported purchasing behaviour (P). As expected, EC exerts a stronger impact on the formation of eco-friendly purchase intentions for green than for non-green consumers. However, its impact ceases at the "intention-purchase" stage, where the effect becomes invariant between the two groups. This can be understood by the different role played by the "additional individual efforts" variable (AIE) on green IP and P for green and non-green consumers respectively. In countries like Italy, where situational barriers still prevent the proliferation of eco-friendly purchasing behaviours, the perception of being forced to make additional efforts to buy EFTPP affects non-green consumers mainly at the stage of intention formation while green consumers at the behavioural stage. AIE significantly reduces Italian non-green consumers' IP, reinforcing intentions of not purchasing green goods (the effects of EC on IP and P are both not significant). For this sample, indeed, IP correlates with P rather strongly. On the other hand, AIE reduces Italian green consumers' IP to a lesser extent as the general impact of the positive motives is still greater than the one of the deterrent factor. However, AIE affects the behaviour at the point of purchase considerably. Hence, notwithstanding the declared willingness to buy EFTPP, IP and P show a small correlation, supporting the frequently observed intention-behaviour gap among green consumers (Carrington *et al*., 2010).

The comparison between *Italian green* consumers and *Belgian green* consumers only revealed minor differences. The similarity of the purchasing process in the two samples seems to support the presence of cross-national segments of green consumers who, regardless of their national context, hold the same motives (with similar strengths) towards green purchasing. One difference between the two groups is the greater impact of green obligation (GO) on the intention to purchase EFTPP (IP) in Belgium than in Italy, which may be explained by Belgium's higher score in Hofstede's Uncertainty Avoidance Index (UAI). UAI is a cultural tendency of a population to minimize the possibility of unstructured situations by strict laws, rules, safety and security measures, and on the philosophical and religious level, to carry a belief in the absolute Truth. Hence, Belgian green consumers may own greater levels of moral and environmental obligation (to carry a belief in the absolute Truth) than the Italian green consumers. The second difference is the stronger negative impact of AIE on the purchase of EFTPP for Italian green consumers than for Belgian ones. Higher situational barriers, such as a lower availability of eco-friendly products at conventional supermarkets (EUROSTAT, 2011; ISTAT, 2011), may inhibit Italian green consumers to follow their green intentions at the point of purchase. Consequently, the intention-behaviour link is lower for green Italian consumers than for Belgian ones.

The comparison between *Belgian green* and *Belgian non-green* consumers revealed no significant differences. This may be due to the cultural characteristics of the Belgian population, on the one hand, and, to the high level of eco-awareness and a rather high availability of eco-friendly products in Belgium, on the other hand. Concerning the first aspect(the cultural traits), a high score on the Uncertainty Avoidance Index may indicate a

general propagation of rules and laws regarding the respect of the common good and nature, which are not only reflected in green consumers but characterize the majority of the Belgian population. In addition, a low Masculinity Index score is supposed to be related to more feminine traits and caring-orientation. Concerning the second aspect (rather high availability of eco-friendly products and low barriers to eco-friendly behaviours), it arises how the purchasing of eco-friendly products does not imply excessive extra-costs, so that consumers perceive green goods as effective substitutes of the corresponding conventional products. For these reasons, eco-friendly behaviour is more likely to be common behaviours among green and non-green consumers.
The comparison between *Italian non-green* and *Belgian non-green* consumers displayed significant differences that can be explained again by cultural and structural differences. The greater impact of EC on IP for Belgian than for Italian non-green consumers may be explained by the lower level of Hofstede's Masculinity Index in Belgium than in Italy. Similarly, the greater impact of GO on P for Belgian than for Italian non-green consumers can be explained by a higher level of Uncertainty Avoidance in Belgium. In addition, the stronger negative impact of AIE on IP for Italian than Belgian non-green consumers could be the result of different levels of situational barriers in the two countries.

4.6 Managerial implications and suggestions for further research

The results of the present study confirm, also in Belgium, some of the findings arouse in Chapter 3, and add new facets to the purchasing of eco-friendly products. First, it is confirmed how selfish positive motives seemed to be at least as important as altruistic ones. Consequently, in order to increase consumers' purchase intention and behaviour of eco-friendly grocery products, advertising should address, both in Italy and Belgium, the positive environmental consequences of purchasing specific eco-friendly products (like showing the amount of saved natural resources) as well as to address the selfish benefits (status and ease of environmental conscience) that consumers can derive from purchasing green goods.
In addition, the results of this study revealed that there appears to be a segment of "cross-national" green consumers that develops buying behaviour in a similar way across the two countries, despite the country's stronger or weaker environmental tradition and eco-awareness diffusion. This observation represents a valuable opportunity for firms selling EFTPP so far refrained from launching green products due to expected low sales volumes. The introduction of cross-national segments of green consumers may allow the adoption of global marketing strategies achieving both economies of scale and scope.
Finally, this study revealed no significant differences between green and non-green consumers in Belgium, which can be, again, a valuable opportunity for firms selling eco-friendly products in Belgium to reach rather satisfying volumes of sales and being more competitive against firms selling conventional goods. On the contrary, in Italy, due to cultural traits and still rather high situational barriers, the diffusion of more ecological

purchasing behaviours seems a long way off, at least for the case of low-involvement grocery products, such as tissue paper products.

The present study has a number of limitations that offer opportunities for further research. As in the case of the Italian samples (Chapter 3) the effect of green self-identity on both intention to purchase and self-reported purchase behaviour was found to be not significantly different among the four samples. This seems rather surprising, especially with reference to green and non-green Italian consumers. Hence, once again, future research should explore the role of self-identity in more depth and include a social desirability measure.

Perceived additional efforts appeared to be very relevant in explaining self-reported eco-behaviour. Future research should investigate which specific constraints and efforts have the greatest impact on behaviour and on the intention-behaviour gap.

Finally, the study involved self-reported measures. In particular, behavioural measures were self-reported measures of purchasing eco-friendly products (i.e. "At the present, when I go shopping, I buy eco-friendly tissue paper products", "Last month I bought EFTPP"). To avoid biased responses the Author purposely selected the targets of consumers from two different sampling frames and ensure respondents' anonymity in participating to the survey. A rather large sample size to minimize such bias was also designed. However, distortions and over-reported results may arise in case of self-reported behaviours. Future research should integrate a self-reported research design with experiments to overcome this weakness. In addition, referring to the Additional Individual Efforts (AIE), while some scholars refer to general constraints that impede green products to be recognized as effective substitutes of conventional goods (e.g., Gupta and Ogden, 2009), there exist others (e.g., Carrington *et al*., 2010) who distinguish between product-related and context-related barriers (or internal and external barriers). Hence, future research should test the proposed model with the distinction of the two kinds of barriers instead of promoting only one negative variable (AIE).

Last of all, nowadays sustainable consumption has shifted from an eco-friendly attitude into a necessary international everyday life-style. To ensure environmental protection, EU institutions are establishing increasing numbers of mandatory remedial solutions (like stricter waste recycling standards, bringing own bags when shopping rules), which impose important and incidental changes on consumers consumption behaviours and purchasing habits. However, next to legislative enforcements, the potential of non-mandatory actions taken by consumers, in this case the purchase of eco-friendly grocery products, could play an even more important role and should be incentivised accordingly. Consumers are powerful actors in promoting eco-responsible behaviour. Hence, it is of great importance to identify the incentives and the obstacles that stimulate and prevent the diffusion of more ecological purchasing patterns across countries. The present study offered a contribution towards reaching this goal.

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