

BODØ GRADUATE SCHOOL OF BUSINESS

# MASTER THESIS

# Antecedents of Intention to Buy Green Products: An Empirical Study

International Business and Marketing BE309E

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# ABSTRACT

This paper aims to study factors which are influencing customer's intention to buy green products. Theory of Planned Behavior (TPB) was placed as theoretical framework for this research. The theory provided three main independent variables – subjective norms, attitudes and perceived behavioral control, but the theory was extended by 3 more factors – moral norms, habits and motivation.

The study was conducted on the basis of questionnaire. 176 answers of respondents were analyzed on SPSS by using factor analysis, counting of correlation coefficients and regression modeling.

It was found that such factors as attitudes, perceived behavioral control (self-efficacy), moral norms and motivation gave positive correlation with behavioral intention. The hypothesis that subjective norms influence positively was not confirmed, the same as perceived behavioral control (controllability). It was stated that habits, which related to the buying conventional products should influence negatively on intention, but it was not supported.

There is strong positive correlation between behavioral intention to purchase eco-friendly products and final behavior.

Key terms: theory of planned behavior, behavioral intention, green products

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# LIST OF ABBREVIATION

CB	Control Beliefs
DN	Descriptive Norms
GP	Habits related to buying green products
IN	Injunctive Norms
NB	Normative Beliefs
NGO	Non-Governmental Organisations
NGP	Habits related to buying non-green products
PBC	Perceived Behavioral Control
SN	Subjective Norms
SPSS	Statistical Package for Social Sciences
SRHI	Self-Report Habit Index
TPB	Theory of Planned Behavior
TRA	Theory of Reasoned Action

# **CHAPTER 1**

# **1.0 Introduction**

#### 1.1 Background of study

Environmental issues have become one of the most vital issues in recent years. Many people are aware about the greenhouse effect, the ozone hole and deforestation problems. But how many of these people understand that their everyday activities, like driving a car, buying new goods, directly or indirectly are leading to expanding environmental issues. The contribution of each single person is not so essential, but it encourages companies and industries to produce more and use more resources of our planet (Charter, 1992).

Because of the changes in legislation and regulation policy (both national and international), increase of importance and pressure from NGOs and after series of highly visible ecological problems more and more companies start "going green" (Starkey and Welford, 2005). Products and production processes are becoming cleaner, not only because of they had to do that, but because of they want to take responsibility for the environment. Sustainable development is becoming a guiding line in mapping out the strategy of many companies.

Achieving sustainability is impossible without consumer consciousness. The global population have to be able to take care and responsibility for the environment. Customers become more and more aware about the seriousness of the environmental degradation. Because of the Information Age it is easier to get and share knowledge. It is resulted in increasing ecological consciousness and changes in attitudes and beliefs related to pro-environmental behaviour (Kaufmann et al., 2012; Kim and Choi, 2005).

Finding the right customer and the right product is challenging for every business. Meeting the consumer needs is in most cases a motive for good producing practice. During this process companies trying to meet different types of requirements to make the product acceptable to customers: price and quality of the product, various aspects of products' performance and more common become environmental issues, which are desired to be taken into account by consumers (Vazifehdoust et al., 2013).

Consumers have started to recognize that their purchasing behaviour is a power which can have tremendous impact on environment (Vazifehdoust et al., 2013). Customers are becoming more sensitive to their preferences and attitudes related to these issues.

Environment-friendly are products becoming more common among consumers and companies, this is making the topic of this paper interesting, contemporary and relevant. It is possible to say that going green is already big trend on the market today. But still green products and green marketing are largely a niche market (Lindqvist, 2010).

#### 1.2 Statement of problem

Peoples' awareness and worries about environmental issues do unfortunately not always reflect in pro-environmental behaviour (Kaufmann et al., 2012). A lot of researchers and marketers complain that even if according to the studies environmental aspect is important to customers, it is not obviously could be translated into changes in purchase behaviour. Empirical evidence shows that there is no strong positive correlation between environmental attitudes and particular environmental behaviour (Shrum et al., 1995). Understanding of drivers and preconditions of green consumer behaviour is a prerequisite for identifying developing incentives that will be able to change positively this behaviour (Carrete et al., 2012).

Meanwhile, consumers who switched from traditional products to environmentally friendly goods and materials usually are increasingly interested in buying "green", even if these goods are more expensive that ordinary ones (Vazifehdoust et al., 2013). On the basis of these statements it is interesting to research deeply why consumers purchases eco-friendly products.

# 1.3 Knowledge gap

It is significant that eco-friendly behaviour differ from more common purchase-related customer behaviour. Most of the research in this sphere are oriented on identifying of customer motivation underlying pro-environmental behaviour (e.g., Bagozzi and Dabholkar, 1994; Lee and Holden, 1999). But it is not enough to take into account only motivational factors, because it is only one aspect of psychographic characteristics of consumer.

A large number of other studies are mostly oriented on identifying interconnections between demographic factors and environmental attitudes (Shrum et al., 1995). Using segmentation as

a main tool, researchers try to explain what groups of customers are more inclined to start buying green. Such approach is not holistic, because behaviour could be explained not only though social position or on the bases of some personal information.

Today the decision making process of the consumers is affected by environmental issues (Shabnam, 2013). Most of the studies with the goal to research green behavior use "external" antecedents. For example, Vazifehdoust et al. (2013) use such factors to predict green purchase behavior as environmental knowledge, environmental concern, perceived innovation characteristics, quality, green advertising and green labeling.

A lot of authors (Biel and Dahlstrand, 2005; Wheale and Hinton, 2007; Sener and Hazer, 2008) into a studying of consumer behavior including also such factors as culture, finance, lack of information, lifestyle, personalities or ethical factors. Among the studies it is also possible find such factors as risks and availability of the product.

But there is a gap in explaining such behavioural processes with the help of well-established model of consumer behaviour which can study "internal" antecedents. Among a wide range of theories that explain consumer behaviour, theory of planned behaviour (TPB) which was developed by Ajzen (1985, 1991) is one of the most reliable models which can be applied to ethical decision making (Chatzidakis et.al., 2007). The theory of planned behaviour might be an appropriate theoretical framework for identifying how different independent variables (attitudes, subjective norms and perceived behaviour control) affect the willingness of the consumers to purchase green products (Rezai et al., 2013).

Carrete et al. (2012) emphasizes that attitudes are very significant for predicting green behavior, but at the same time there is examples where this relationship is weak (e.g. Dı'az Meneses and Beerli Palacio, 2006; Kollmuss and Agyeman, 2002),), and where it is quite strong (e.g. Bei and Simpson, 1995; Hamzaoui and Zahaf, 2009; Gatersleben et al., 2002; Laroche et al., 2002). There is also knowledge gap related to other factors of the TPB and their influence on to green behavior.

#### 1.4 Objectives of study and research question

The main objective of this study is to uncover factors which affect behavioural intention toward buying green product and factors which sufficiently influence the decision-making process to buy or not to buy green products. According to the objectives that are mentioned above, was formulated the research question for this study:

• Which factors influence the intention of consumers to purchase and actual purchase of green products?

Findings of this study might give to the practitioner marketers the vision of how to develop in future the environmental-oriented marketing mix, the consumer-oriented green marketing strategy which will provide financial efficiency and customer satisfaction. Such kind of strategy based on the results of this study might be able to ensure loyalty of buyers to the eco-friendly products.

Also the results of research can give to the marketers more information for an understanding of how to transform intention to buy green product into an action (particular or iterative behaviour).

# **1.5 Contributions**

The intended contribution of this master's paper is to get new knowledge about the process of intentions formulating towards purchasing green products, understanding how different factors influence the intention to buy eco-friendly goods and what the weight of each factor is.

In addition, the results of the research can organize green consumers as a separate group of buyers, what will give the opportunity to marketers find the right approach how to work with them, how to involve more new consumers and in such way make their own contribution into conservation of the Earth.

With the goal to eliminate lack of researches about the influence of internal factors on intention to buy green products the theory of planned behavior in addition to main factors will be extend with three more factors – habits, moral norms and motivation.

# 1.6 Paper outline

This master's thesis is organized in five chapters. Chapter one "Introduction" includes such points as: the background of study, statement of problems, objectives of the study, research objective and questions, knowledge gap and justification for the study and contribution. Chapter two "Literature review", focuses on theoretical foundation of green consumer's behaviour, research model and hypotheses formulation. In chapter three "Research methodology" is presented research design, research context, and data analysis. Chapter four consist of data presentation, analyses and discussion. Chapter five provides conclusions to the analysis, implication and recommendations for further researches.

# **CHAPTER 2**

#### 2.0 Literature review

#### 2.1 The green marketing basic concepts review

# 2.1.1 The concept of green marketing

Over the last decades, environmental awareness has become both a significant public issue and a crucial topic for academic research. First changes in consumer's environmental behaviour appear in 1970s (Rahbar, 2011). Pro-environmental concerns and desire of consumers to buy eco-friendly products have lead to appearance of a "new marketing philosophy", which was called green marketing (McDonagh and Clark, 1995; Peattie and Charter, 1997). In 1974 the American Marketing Association organized the first workshop on this topic. During the workshop green marketing was defined as a study of positive and negative aspects of using energy resources (Kinnear and Taylor, 1974). A lot of studies on environmental responsibility at that time were focused on energy conservation and political response and initiatives related to these problems (Finisterra do Paço et al, 2009).

The 1990s was named as the "decade of environment" or "the Earth decade". During this period environmental awareness of consumers increase and was translated into purchasing intentions. Companies start to understand that to survive on the market they have to incorporate these new concerns into management and marketing activities and routines (Finisterra do Paço et.al, 2009). According to McIntosh (1991) there were some factors which enabled this situation: interest of media to this phenomenon; awareness of society that the planet is highly polluted; appearance of pressure groups like NGOs; changes in public opinion after increased amount of ecological disasters.

In 2000 green marketing entered into new stage of development: the new technologies were implemented, both global and each separate government regulation become stricter, global society become more demanding in a process of buying goods which are eco-friendly (Rahbar, 2011).

The new environmental conditions create a new area in marketing field, which was aimed to satisfy newly appeared needs of green consumers. Green marketing can be defined as actions oriented to satisfying current needs and desires of consumers in combination with minimal negative impact on the environment (Stanton and Furtell, 1987). Almost the same definition was given by Polonsky (1994) with one important dimension: "a more humanistic marketing concept that includes ecological and social components". In his study Crane (2000), argued about existence of a relation between environmental marketing and social morality.

Ottman (1993) believes that green marketing emerge as a result of not only production performance and fulfilling of consumer need, but also on the basis of social and environmental responsibilities of the companies.

Jain and Kaur (2004) describe green marketing as a process which includes all marketing activities that are exist to maintain environmental attitudes and behaviours of consumers.

According to Peattie and Charter (2003), green marketing is a holistic management process that aimed to identify and satisfy consumer and society needs in both profitable and sustainable ways. But green marketing includes broader range of different activities, from the R&D, designing, producing processes and packaging to advertising. The authors conclude that marketers should look out of the production frames to the creation higher quality of life and development of a sustainable society. They suggest that with the goal to be successful green marketing have to add to the traditional 4 Ps the new 4 "Ss":

- customer Satisfaction;
- product Safety;
- Social acceptability;
- Sustainability of the products.

Chen and Chang (2012) state that if the company decided to launch eco-friendly products, green marketing play crucial role in determining the amount of sales made. Existence of green marketing reshapes rules in the relations and communication process with customers on the market. They become more demanding in getting trustworthy information about the products and expecting that companies will provide reliable information to reduce consumer's perceived risk and keep them in future (Peattie, 1992).

It is possible to identify five reasons why companies adopting green marketing:

- 1) utilization of newly emerged green opportunities;
- 2) sustaining and improvement of corporate images;

- 3) increasing the value of the product;
- 4) creating and maintaining of competitive advantages;
- 5) meeting the contemporary environmental trends (Chen, 2008).

Marketing is no longer just sales-oriented company's activity, it must include into decisionmaking process ecological factors:

- eco-marketing should introduce limitation of resources as a main guiding principle in production process;
- eco-marketing should put as a guiding line a stabilizing of ecosystem and energy consumption;
- eco-marketing should initiate searching of alternatives which can help to save nature and protect it from industrial destruction;
- eco-marketing should promote eco-friendly design and initiate recycling programmes (Hopfenbeck, 1993).

Companies should change their strategies if they want to find out consumers' green needs, to produce eco-friendly products, to divide the target market into segments and reach one or few of these segments, and to implement a green-marketing mix program (Chen and Chang, 2012).

# 2.1.2 The concept of green product

Changes need to be done in production process and finalise in goods that consumers willing to buy. In general green products are known as products which are ecological and do not lead to damaging of the environment (Rezai et al., 2013).

Green product can also be defined as a product that is not polluting the earth, saving natural resources, and can be recycled or conserved (Vazifehdoust, 2013).

It is possible to look on to definition of green product through three different perspectives: academic, industrial and consumer. According to an integrative definition which was formulated from academic perspective the green product is "a product whose design and/or attributes (and/or production and/or strategy) use recycling (renewable/toxic-free/biodegradables) resources and which improves environmental impact or reduces environmental toxic damage throughout its entire life cycle" (Durif et al., 2010).

There are some differences between industrial and academic definitions: more often appear the topic of necessity of certification by some an official entity, the topic about animal protection is also more frequent, and the last substantial distinction is that green product should be in conformity with the "3 R" – reduce, reuse and recycle (Durif et al., 2010).

Consumers define the green product mostly through different terms, like "biodegradable product", "non-toxic for nature", "with minor impact on the environment" and "safe for the planet". It is possible to say that consumers pay more attention to tangible attributes of eco-friendly products (Durif et al., 2010).

# 2.1.3 The concept of green consumer

Since the green marketing become the contemporary trend in business, it is important to understand how this concept affects the consumer preferences. Ecologically conscious consumers can be defined as individuals who are willing to consume the products which do not influence negatively the environment (Roberts, 1996).

According to Hailes (2007), a green consumer is a person who associates the act of buying goods with the possibility to leave environment untouched. The author state that such persons trying to avoid consuming products which might be risky to health, damage the environment, stimulate extra consumption of energy, or contain unsafe ingredients.

Increasing the environmental awareness among consumers led to emergence of new concept green purchase intention. This concept means that customers who have higher level of environmental awareness will more likely behave her/himself environmentally friendly. (Sheltzer et al., 1991). Working with green purchase intentions marketers need to remember that consumers unlikely will compromise on traditional product characteristics as quality, price and value. Green products have to combine all these attributes and provide enough high level of them (Chen and Chang, 2012).

Not all the consumers are equally favourable to eco-friendly goods. It is possible to differentiate consumer segments related to green products and the behaviour inside these segments is also varying (Lindqvist, 2010).

One of the well-known segmentation of consumers' environmental attitudes was developed by the Roper Organization in 1990, according to which there are five categories of consumers:

- True-Blue Greens they are the most active among other green consumers (11% of the population);
- Greenback Greens their commitment is reflected in willingness to pay higher price for the green products (11%);
- Sprouts individuals who support green initiatives, but these ideas not always reflects in pro-environmental behaviour (26%);
- Grousers individuals who realise lack of pro-environmental behaviour and trying to improve that through different types of excuses or through criticizing of the others (24%);
- Basic Browns individuals who do not believe that environmental problems are so urgent (Coddington, 1993).

There are a lot of other approaches to segmentation, one of the most popular was developed by J. Walter Thompson (Coddington, 1993):

- Greener-that green (23%);
- Green (59%);
- Light green (15%);
- Un-green (3%).

A lot of people buying green products, but their behaviour is caused by different reasons and attributes. Green consumers may vary in such type of terms:

- Demand for eco-friendly products can have different reasons: strong proenvironmental beliefs, desire to try something new;
- Level of interest in environmental issue can vary;
- Frequency of acting as a green consumer;
- Level of commitment into searching of green alternatives;
- Loyalty to green and to traditional brands;
- Belief in the reliability and credibility of the eco-friendly product or producer;
- Acceptance of changes in price level for green products (Peattie, 1992).

Combination of all these factors creates a wide range of different types of behaviours among green consumers. Working with ecological attitudes and intentions marketers need to remember that they explain the sales of green products just to a small extent. People purchase green just when they also willing to expand efforts in obtaining these products: e.g., information, availability or price. This readiness is different from one product to another (Hopfenbeck, 1993).

#### 2.2 The theory of planned behaviour

The theory of planned behaviour (TPB) is an extension of early developed by Fishbein and Ajzen (1975, 1980) the theory of reasoned action (TRA). Both models are aimed to provide explanation of how information and motivation of the person influence the behaviour (Conner and Armitage, 1998). Central conception in the TRA is intention to perform a given behaviour. Intentions play role of indicators which show how hard person is willing to try, how many efforts s/he is ready to exert in order to perform the behaviour (Ajzen, 1991). A general rule was developed under this theory – "the stronger the intention to engage in behaviour, the more likely should be its performance" (Ajzen, 1991, p.181).

Intentions and behaviour are going to have strong relations when they are measured at the same level of specificity of such action parameters as goal, context and time frames (Fishbein and Ajzen, 1975). Time interval has to be short enough to guarantee that intentions will not change (Randall and Wolff, 1994).

The limitation of the theory of reasoned action is that it is able to predict only volitional behaviours, when the person has a good deal of control (Godin et al., 2005). This means that the TRA may be useful in prediction of quite narrow range of behaviours (Armitage and Conner, 1999b). As a result the applicability of the theory was questioned and later on modified with the goal to give sufficient prediction of the person's intention and behaviour.

To overcome this issue, Ajzen (1991) added to the original TRA extensional factor of perceived behavioural control, which was aimed to deal with components of human behaviour that are not under volitional control. The new appeared model was called the theory of planned behaviour.

TPB became one of the most widely employed model of cognitive antecedents of behaviour (Ajzen, 1985, 1991, 2001) which explain almost 27% of the different variance in behaviour across studies (Armitage and Conner, 2001).

The experience of applying the theory to wide range of life domains show that it is able to explain and predict both ethical and unethical aspects of behaviour, e.g. green purchase (Beck and Ajzen, 1991; Chang, 1998; Kalafatis et al., 1999).

The theory of planned behaviour suppose that there are three independent determinants of intention: attitudes towards the behaviour, subjective norms related to this behaviour and perceived behaviour control (Ajzen, 1985; PBC).

The first predictor of intentions is attitudes. They can be recognised as an evaluation of the relevant behaviour by the individual, this evaluation might be either positive or negative. It is possible to define two components of attitudes, affective and instrumental. The first one is related to the emotions which the person will get with performing the behaviour, and the second related to perceive benefits or loses (Yap et al., 2013).

The second predictor of intention is subjective norms. These norms consist of person's beliefs about the significance of the thoughts of the other people about the engagement into some particular behaviour. It is assumed that subjective norms assessing the social pressure about performing or not some particular behaviour (Conner and Armitage, 1998).

PBC describe the perception of the person about the complexity and realizability of some behaviour performance (Ajzen, 1991). According to the TPB the behaviour control has both indirect and direct influence on to the person's behaviour (Conner et al., 2007). In contrast to attitudes and subjective norms the PBC has direct link to the intention and behaviour (Figure 2.2.1). With the extension of PBC, the predictive power of the model significantly increased (Ajzen, 1991; Beck and Ajzen, 1991; Armitage and Conner, 1999b)

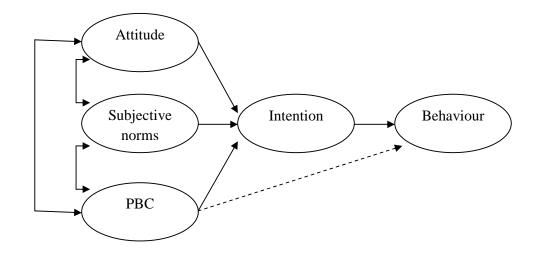


Figure 2.2.1. The theory of planned behaviour (Ajzen, 1991, p.182)

Belonging of the TPB to the group of "rational choice model" allow assuming that people behave logically and rationally during the process of decision-making. With the goal to make a decision they use all available information (van der Velde and van der Plight, 1991).

Choosing the theory of planned behaviour as a main theoretical framework of the paper can be explained by the logic that behaviour of the consumers when they deciding to buy green products need to be explained by well-established, reliable model of human (and particular green consumers) behaviour. In conditions of temporary world market it is need to take into account that decision-making process is affected by variety of non-volitional factors which can influence selecting of eco-friendly products (Han et al., 2010). TPB provide framework with clearly defined structure which considering both volitional and non-volitional factors at the same time.

The TPB is the possible solution for overcoming the attitude-behaviour gap of consumers for marketers. It means that the theory can offer solutions for the issue why eco-friendly attitudes of the consumers not always transform into green behaviour (Schielke and Fantapié Altobelli, 2012).

# 2.2.1 Attitudes towards the behaviour

The attitude represents perceived consequences of the behaviour for the person and is a function of its salient behavioural beliefs (Conner and Armitage, 1998). These types of beliefs

were described by Ajzen and Fishbein (1980) as subjective probability that some particular behaviour will lead to certain outcomes.

Kotler (2003) define attitudes as individuals subjective evaluation, emotional perception and disposition to act in certain way toward some tangible or intangible objects that can persuade person to behave in a fairly consistent way which may change behaviour of the consumer. Full understanding of attitudes is not able to explain behavioural intention, but they are important effecting component (Shabnam, 2013).

The attitudes could be described as a predecessor of intention which is affected by the evaluation of the behaviour as favourable and unfavourable (Ajzen, 1991). Before making a decision to perform the behaviour or not, person will firstly assess all possible benefits and cost which this particular behaviour will bring (Cheng et al., 2006). If the evaluation of the action will be positive it is likely will lead to creation of favourable attitudes. (Ajzen, 1991; Cheng et al., 2006)

Different studies show positive correlation between attitudes of buyers and behavioural intention towards green purchasing across different cultures and different groups of green products (Chan and Lau, 2001; Tarkiainen and Sundqvist, 2005; Kalafatis et al., 1999). Steg and Vlek (2009) proposed to use green attitudes as the estimator of green behaviour. Ajzen (1991) stated that positive attitude about some action make the intention to perform that behaviour more reinforced. Therefore the hypothesis can be formulated as:

H1: Higher level of attitudes is leading to increasing of intention to buy green products.

#### 2.2.2 Subjective norms

Definition of subjective norm (SN) by Ajzen (1991, p.188) is "the perceived social pressure to perform or not to perform the behaviour". Subjective norm can be presented as perceived social force. If the person is acting under social pressure the SN give the estimation about the level of behaviour appropriateness (Jager, 2000).

Subjective norms are influenced by person's normative beliefs (NB). They are reflecting in salient opinion of referents about what the person should or should not do, and in motivation to conform actions or not according to referents position (Ajzen and Fishbein, 1980). Normative beliefs related to feeling of preferences importance of others and level of their

influences on to behaviour. They also take into consideration changes in behaviour if the referents approve or disapprove the behaviour (Han et al., 2010).

Subjective norms do not affect the behaviour directly, but do it indirectly through influencing the intentions. It is possible to distinguish two types of subjective norms: injunctive (IN) and descriptive norms (DN). IN represent social forces which involve the person into behaviour on the basis of perception of what others want s/he to do. Source of motivation is desire to avoid social sanctions. The DN is type of social pressures which are based on observed behaviours of others and leading to behaving in similar manner (Manning, 2009).

There are studies of consumer behaviour in various areas of green marketing that shows correlation between subjective norms and intention to be involved in behaviour which is both essential and positive. Thus the principle of "snowball" is making green behaviour more and more desirable for society (Shabnam, 2013). If the person believes that significant others think green products are good, consumer will probably have more intention to purchase these products (Kim and Chung, 2011). Therefore, second hypothesis stated that:

H2: Higher level of subjective norms is leading to increasing of intention to buy green products.

# 2.2.3 Perceived behavioural control

"Perceived behaviour control plays an important part in the theory of planned behaviour" (Ajzen, 1991, p.183). The PBC is special a factor for the theory because together with intention it can directly predict behavioural achievement. Behavioural control measures the degree of control perceived by the person during the accomplishing of certain situation (controllability) and reflects in consumers' estimation of the level of difficulty during performing behaviour (self-efficacy) (Ajzen, 1991).

Perceived behavioural control is a function of control beliefs (CB). They refer to the perception of the person about availability of resources/opportunities which are necessary to perform some action and assessment of this person the degree of resource importance for the achievement of coming results (Ajzen and Madden, 1986).

The PBC aimed to moderate the relations between intention and behaviour when the last one is not under complete volitional control (Baron and Kenny, 1986). According to this higher PBC should be referred to stronger intention-behaviour connection.

Ajzen (1991) stated that if the intention will account for small number of possible behaviour (i.e. if there are problems with volitional control), the perceived behavioural control should be the only one predictive factor of behaviour. If the situation in strongly opposite, the only predictor of behaviour is intention.

The degree of PBC depends on access to the resource and presence of opportunities. Individuals who perceive higher level of control tend to have greater intention to be involved in particular behaviour (Ajzen, 1991). As a result, consumer's intention to buy green product is higher when person perceive that s/he have more control over the process of purchasing these products. Therefore, there are two parts of third hypothesis:

H3a: Higher level of perceived behaviour control (self-efficacy) is leading to increasing of intention to buy green products.

H3b: Higher level of perceived behaviour control (controllability) is leading to increasing of intention to buy green products.

# 2.3 Extension of the theory of planned behaviour

The TPB is tolerating to inclusion of additional predictors of behaviour. Ajzen (1991) concludes that for specific situations and for certain behaviours adding of variable may lead to increasing of predictive power.

It was decided by the author to expand the model by three additional independent variables with the goal to provide more reliable and full answer to the research question: past behaviour, moral norms and motivation.

# 2.3.1 Habits

A number of studies initialize past behaviour as "habit" (Ajzen, 1991). But in fact past behaviour is just one component that habits include. Two others are response automaticity, and contextual cues (e.g. performance location, specific time of day, particular mood etc. (Wood et al., 2005).

Assessment of past behaviour can be employed for examination of adequacy of any model which is aimed to predict future behaviour (Ajzen, 1991).

Frequent performing of behaviour could lead it to acquisition of habitual characteristics. It was found by Godin et al. (1993) that habit has significant effect on intentions and plays a role of essential predictor for exercising behaviour comparing to all others predictors in TPB.

It is not possible to say that past behaviour will cause intentions in present or in the future. But past behaviour usually make habit more strong and at least play a role of information source for future analysis of actions (Ajzen, 2002).

Assuming that the consumers' behaviour is a result of learning and taking into consideration studies about green purchasing behaviour it is possible to conclude that past experience of customers related to buying green products can be crucial in formation opinion about the eco-friendly goods and further formation of purchase intention (Kim and Chung, 2011). Therefore past experience of buyer influence the purchase process and process of using green product. According to these statements was formulated fourth hypothesis:

H4: Higher level of habits which are related to buying green products is leading to increasing of intention to buy green products.

It is need to take into consideration habits which are already established and which are related to non-green, conventional products. If these types of habits are characterized with high level of automaticity it will be hard to change them. Performance of such habits could be outside of a person's awareness and seen as automated from procedural memory (Wood and Neal, 2007). When behavior becomes automatic, it is not any more mediated by the goal (Triandis, 1980). It is start to be done even without intention (Ouellette and Wood, 1998).

If person has strong habits related to buying non-green products, there is high probability that s/he will not consider to start buying eco-friendly products, even if s/he understands that they are better/ healthier/ safer etc. According to this could be formulated fifth hypothesis:

H5: Higher level of habits which are related to buying conventional products is leading to decreasing of intention to buy green products.

#### 2.3.2 Moral norms

Certain behaviour in particular situations demand to consider not only social pressure but also personal perception of moral obligations. Such moral norms can be described as a person's evaluation of behaviour correctness or incorrectness. Such moral obligations are going to influence intension at the same level as other predictors (Ajzen, 1991).

Personal moral norms are not equal to intention, but they influencing behaviour indirectly through strengthening intention (Godin et al., 2005). It can be explained by motivational force: "intentions based on the moral correctness of the behaviour have greater motivational force that intentions based on the perceived consequences of acting" (Godin et al., 2005, p.500).

Different studies suggested that including of moral norm into analysis led to increased amount of variance in intention and increase of predictive power of the model (Conner and Armitage, 1998).

Conner and Armitage (1998) questioned the correlation of moral norms with the other factors of the theory of planned behaviour which showed sufficient level of correlation between all the components. With these results they proved that moral norms as an extensional predictor can play important role for the model. Harland et al. (1999) stated that including of moral norm into studying of ecological behaviour is leading to growing of intention variance which could be explained.

It is possible to make a conclusion that buyer who has higher level of moral norms will show greater correlation between intention and behaviour compare to person whose level of moral norms is lower (Godin et al., 2005).

Developing of the hypothesis related to moral norms based on all previous studies and conclusions which were made by researchers:

H6: Higher level moral norms are leading to increasing of intention to buy green products.

# 2.3.3 Motivation

Motivation is a driving force for any action or any particular behavior of the person. There are two basis of motivation - emotions and achievement-related goals (Scott, 2005).

Intrinsic consumer motivation is one of the factors of the demand for green products. Two others are consumer preference and consumer constraint (Brecard et al., 2009).

Intention to buy green products could be influenced by internal or external motivations, which are obviously connected (Brecard et al., 2009). Frey and Stutzer (2006) developed four models to explain linkages between consuming green products and motivation of customer.

The first one was built on altruism. It is assumed that consumers making purchase relying on personal preferences for the ecological product and on benefits which this consumption can bring to other people (Frey and Stutzer, 2006).

The second and third models based on social and internalized norms, and deal with sanctions that are coming from members of the society and individuals sanctions (Frey and Stutzer, 2006). It was shown by Benabou and Tirole (2006) the importance of social reputation in connection with altruism.

The fourth model is oriented on intrinsic motivation and performing an activity which is by default oriented for welfare. As a conclusion was said that intention to buy green products increases with the degree of altruism (Frey and Stutzer, 2006).

Relying on these studies it is possible to one add more hypothesis, that:

H7: Higher level of motivations is leading to increasing of intention to purchase green products.

# 2.4 Behavioral intention

Ajzen (1985) was the first who proposed to define behavioural intention as the immediate antecedent for the behaviour. A lot of studies approved that there is strong relationship between intention and actual behaviour (Ajzen and Fishbein, 1980; Sheppard et al., 1988). It is not possible to say that intention is the ideal predictor of behaviour, but it was assumed as the best available predictor (Kim and Han, 2010).

According to Nik Abdul et al. (2009) the green purchase intention could be defined as probability and desire of the person to make a choice towards green product over the conventional one in purchasing process. Chen and Chang (2012) define green purchase

intention as probability that customer will buy eco-friendly product because of his/her environmental beliefs and requirements.

Between the purchase intention and purchase behaviour exist strong correlation (Shabnam, 2013). Consequently the hypothesis could be formulated as:

H8: Higher level of intention is leading to increasing of purchase behaviour related to buying green products.

## 2.5 Research model

On default, the theory of planned behaviour composed by four variables which affect the behaviour directly or indirectly. There are three independent variables: attitudes, subjective norms and PBC, an intention in this model could be considered as mediating variable.

By extending the model with additional variables it should acquire more predictive power to the theory and help to understand different factors which influence the decision of consumer to buy ecologically-friendly products. Habits in purchasing develop some knowledge base of the consumer. It means that information related habits in buying green and conventional products give understanding about the process of formation intention and possibilities to change preferences from non-green to green one.

Moral norms of the person are important component in decision-making process regard to ethical issues, such as buying of green products and conservation of the planet. None of the original factors in the theory of planned behaviour could take into account this aspect of consumer behaviour. But moral norms include deep intrinsic causes and real relation of buyer to ecological problems. Such factor has to be considered in a process of answering the research question.

There is connection between level of motivation and intention of person to buy green products. Understanding of motivation background is helpful for explaining why consumers buying green products, what makes them satisfied after purchase and why they do it again. Extrinsic motivation allows taking into account social norms, which are not included into other variables. Intrinsic motivation opens for consideration such concept as level of person's altruism. For answering research question it is need to study motivation as a sum of extrinsic and intrinsic components together.

The research model consist all the original and extended independent variables, all except one of them have positive relation to the intention of consumers to buy green products. It is assumed that habits which are related to buying non-green products will influence negatively. Also the model represents relation between intention and final behaviour, which has positive character. Figure 2.4.1 represent modified model of the TPB.

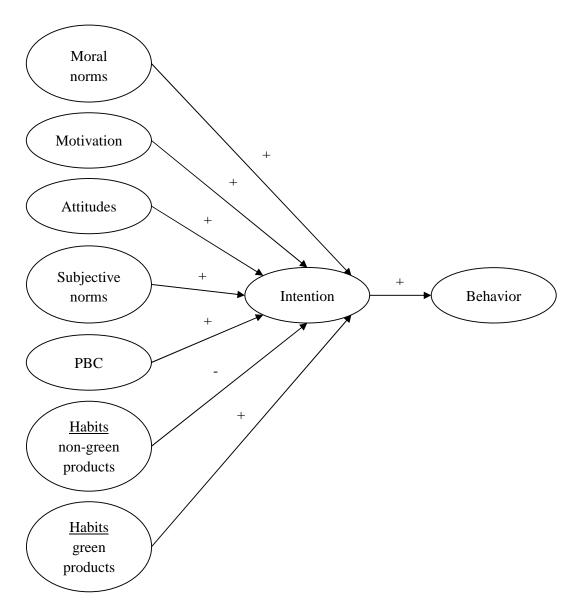


Figure 2.4.1 Research model

The model represents each hypothesis in illustrative form. On the left side there are six independent variables: moral norms, motivation, attitudes, subjective norms, perceived behavioural control and both types of habits. They are influencing a dependent variable which

is behavioural intention. Most of the independent variables have positive relation with dependent variable, it means that positive changes in motivation, moral norms, attitudes, subjective norms, perceived behavioural control or habits, which are related to buying green products will positively change, increase the intention of consumer to buy green products. Just only increasing of habits in purchasing conventional goods will lead to decreasing of intention to buy eco-friendly products.

The last hypothesis is presented relations between intention and behavior. I was assumed that there is positive correlation between these two factors. The higher intention of the customer to buy green products, the higher probability that s/he will go and buy it (perform certain behavior).

# 2.6 Summary

The theoretical chapter can be divided into two main subchapters. The first one starts with defining what is green marketing, when and why this concept appears. The marketing process cannot be separated with the product and the consumer of this product. The first subchapter describes what green product is by using different approaches and who green customers are.

Second subchapter devoted to theoretical framework of the study – Theory of Planned Behavior. It is described all main components (attitudes, subjective norms and perceived behavioral control) of the Theory and additional variables (moral norms, habits and motivation), with providing research hypothesis.

As a result all factors were reflected into research model as a graphical representation of all hypotheses and relations between dependent and independent variables.

# **CHAPTER 3**

### 3.0 Research methodology

This chapter will represent methodological aspects of the paper: which research design was chosen, how was constructed sampling design, which method of data collection was used, how all the variables was measured and what type of software was chosen for data analysis.

# 3.1 Research philosophy and research design

Identifying of underlying philosophy is very useful for clarifying research design and it can help to predict if this research design will work or will not (Easterby-Smith et al., 2008).

For this study as a main research philosophy was adopted relativism with the main aim – exposure (not positivism – discovery or social constructionism – invention) (Easterby-Smith et al., 2008).

"The relativist epistemology assumes that there are regular patterns in human and organizational behavior" (Easterby-Smith et al., 2008: 90), but at the same time there are big number of variables and factors which are need to be observed. According to this, research design needs to apply multiple factors, where multiple variables need to be measured simultaneously. It is also need to examine relationships between these variables. To make the research reliable it is required large sample (Easterby-Smith et al., 2008). As a result self-completion methods are preferred in this area. As examples of such methods are mail surveys, electronic surveys and similar approaches (Hair et al., 2007). Such approaches use structured questionnaires for collecting data.

A questionnaire-based study contains a number of compulsory activities. The first is composition of the questionnaire, the second is validation through pretest and the third is method of administration of the questionnaire (Hair et al., 2007).

# 3.2 Sampling design

Designing a sample starts with defining population of study. The main aim of this research is to study behavioral intention of customers to buy green products. According to this as a population of study was defined all the people who are making decisions about buying products and who have at least some basic knowledge about what green products is. According to the Calder et al. (1981) it is possible to use any sample, not only representative one, when the main goal of research is testing a theory. There is even advantage of homogeneous samples - it is suggested to eliminate external factors that can impact variation in the dependent variable (Cook and Campbel, 1979).

The sample for this research was customers who are living in Norway and are over 18 years old. Norway set the goal to improve its position in the process of implementing sustainable development. A main point of this strategy is to promote consumption of green goods and services and reduction of human's negative influence on to the natural environment (Norwegian Ministry of Finance, 2011).

As a sampling method was used simple random sampling (Easterby-Smith et al., 2008). It means that every single customer had a chance to become a part of the sample.

### 3.3 Data collection method

With the goal to collect the data about intention of customers to buy green products questionnaire was designed and transferred to the web-platform Questback (see Appendix 1). By the using Questback it was possible to send questionnaire by emails or share it in social media through the link. Estimated time for filling up the questionnaire was between 5 to 7 minutes. Data collection took place in a period from April 18, 2015 until May 4<sup>th</sup>, 2015.

By the personal emails it was sent 674 invitations and the response rate was 21% (143 responses). It was set that first reminder will be send after 3 days. It was also used such internet resources as Facebook for spreading the survey among Norwegian customers through the link. With the help of this method it was collected 33 responses. Consequently, the total amount of responses was 176.

The survey includes questions for constructing general profile of the consumer and questions related to each variable of the research model. Questionnaire was separated on different part to make it more comfortable for answering. First page was devoted to collecting general information. Second was asking about subjective norms and attitudes, third about both components of perceived behavioral control, fourth – moral norms and motivation, fifth – habits related to green products and sixth related to non-green products, and the last page asked respondents about their intention and particular behavior.

#### 3.3.1 Pre-test

It was done two pretests before starting to collect the data. The first pretest was sent out to 20 people and the answer was get from 13 of them. Responses were analyzed with SPSS, version 20 through factor analysis. Some of the variables showed week results (low level of Cronbach's alfa or even negative and Factor Analysis showed low interrelations between variables) and they were replaced with new measurements or corrected. The new version of questionnaire was sent to 10 respondents and 9 of them gave full responds. After one more round of factor analysis the final questionnaire was constructed and distributed to the respondents through different ways. Second pretest showed higher results and it were needed just small adjustments to make it reliable.

# **3.4 Measurements**

In a constructing of the questionnaire was used one of the two main measurement scales – category scale. Just two questions from "personal data" part about country of living and sex, consist nominal scales (order of answer variants does not matter). There are also few open-ended questions, about the age and children. All the questions about variables from research model were used ordinal scales; it means that they have natural ordering (Easterby-Smith et al., 2008). Big numbers of questions use 7-point Likert scale.

All the measurements need to be tested for reliability. It indicates if the scale is free from random error. Since this study use few measurements for one variable it is necessary to assess if these items could be "hang together". In other words it is need to assess internal consistency of the scales. The most common way to do it is Cronbach's alpha. The value of this coefficient can range from 0 to 1, but the higher value means higher reliability (Pallant, 2013). Nunnally (1978) provides recommendations about minimum necessary level of 0.7.

# 3.4.1 Attitudes

Attitudes toward the behavior describe the person's evaluation of performing some certain behavior (Ajzen, 2002). It was developed different scaling techniques for attitudes measurement:

Likert's (1932) scale. Different opinion statements need to be rated by person on five or seven point continuum from strongly agree to strongly disagree.

Empirical researches showed that usually general evaluation consist of two separable components: instrumental, which is represented by such bipolar adjectives as valuable – worthless, harmful – beneficial and more experiential component which is represented by such pair as pleasant – unpleasant, enjoyable – unenjoyable. With the goal to perform comprehensive analysis it is recommended to include both components in a combination with good – bad scale (Ajzen, 2002b).

It was constructed and offered three statements to the respondents for evaluation and further analysis of attitudes toward buying green products:

- It is beneficial for me to buy green products (strongly disagree to strongly agree)
- It is good for me to buy green products (strongly disagree to strongly agree)
- It is enjoyable for me to buy green products (strongly disagree to strongly agree)

The scale showed internal consistency with Cronbach's alfa ( $\alpha$ ) of 0.918.

# 3.4.2 Subjective norms

Subjective norm as a perceived social pressure to perform or not to perform the behavior could be measured by multiple items (Ajzen, 1991).

Park and Smith (2007) do not specify different others, but they use different phrasing to analyze various types of social pressure in combination with seven-point scale:

- Most people who are important to me think that I should...(strongly disagree to strongly agree)
- Most people whose opinion I value consider that I should...(strongly disagree to strongly agree)
- It is expected of me that I...(strongly disagree to strongly agree)

On this basis to the respondents were offered four statements about subjective norms related to the green products:

- Most people who are important to me think that I should buy green products (strongly disagree to strongly agree)
- Most people who are important to me expect me to buy green products (strongly disagree to strongly agree)

- Most people whose opinion I value would approve of me buying green products (strongly disagree to strongly agree)
- Most people whose opinion I value consider that I should buy green products

The scale had Cronbach's alfa ( $\alpha$ ) of 0.878.

# 3.4.3 Perceived behavioral control

By different researchers was approved that PBC has multidimensional construct and consist of two separate, but related items (Ajzen, 2002a; Trafimow et al., 2002). Those components are self-efficacy and controllability. First component deals with rate of ease or difficulty about performing certain behavior (Sparks et al., 1997; Trafimow et al., 2002), with person's confidence that s/he can do it if s/he wants so, which also called as "internal control" (Armitage and Conner, 1999 a,b).

Second component of PBC is controllability reflects person's beliefs that s/he has control over the behavior and it is up to them to perform it or not. This component was also called as "external control" by Armitage and Conner (1999a), "locus of control" by Armitage and Conner, 1999b and Rotter (1966), "outcome expectancy" by White et al. (1994), "volitional control" by Trafimow et al. (2002) or "perceived control" by Sparks et al. (1997).

To measure perceived behavioral control related to buying green products it was offered to respondents estimate such statements with seven-point scale:

# Self-efficacy:

- If I wanted to I could buy green products (definitely false to definitely true)
- For me to buy green products would be... (very difficult to very easy)
- If it were entirely up to me, I am confident that I would be able to buy green products (strongly disagree to strongly agree)
- How confident are you that you will be able to buy green products? (completely unconfident to completely confident)

Cronbach's alfa for scale was 0.818

# Controllability:

- It is mostly up to me to buy or not to buy green products (strongly disagree to strongly agree)
- How much personal control do you feel over buying green products? (no control at all to complete control)
- I have full control over buying green products (strongly disagree to strongly agree)

Cronbach's alfa for scale was 0.804

# 3.4.4 Habits

The most commonly used tool for studying of habits strength is self-report. Verplanken and Orbell (2003) designed an instrument which can measure habits strength on the basis of self-report – Self-Report Habit Index (SRHI). Authors offered seven or eleven-point Likert scale for response (Verplanken&Orbell, 2003).

For evaluation of habits strength related to buying green products it was decided to select some statements of SRHI and ask respondents to range them by using seven-point Likert scale.

Buying green products is something:

- I do frequently (strongly disagree to strongly agree)
- That's typically "me" (strongly disagree to strongly agree)
- That makes me feel weird if I do not do it (strongly disagree to strongly agree)
- That belongs to my weekly routine (strongly disagree to strongly agree)
- I have no need to think about doing (strongly disagree to strongly agree)

The scales showed Cronbach's alfa ( $\alpha$ ) of 0.883 for green products.

For measure of habit strength related to buying conventional products and their influence on intention was selected other statements from SRHI and asked to range them by using seven-point Likert scale:

Buying not green products is something:

- I do frequently (strongly disagree to strongly agree)
- I do automatically (strongly disagree to strongly agree)

- I do without having to consciously remember (strongly disagree to strongly agree)
- I do without thinking (strongly disagree to strongly agree)
- That makes me feel weird if I do not do it (strongly disagree to strongly agree)

The scales showed Cronbach's alfa ( $\alpha$ ) of 0.838 for non-green products.

# 3.4.5 Moral norms

Moral norms in frames of theory of planned behavior were measured differently by different authors Schwarts and Tessler (1972), Pomazal and Jaccard (1976), Zuckerman and Reis (1978), Harrison (1995), they studied different situations and issues, but used various types of one statement "I feel a moral obligation to…" with response scale ranging from extremely weak to extremely strong or extremely agree to extremely disagree.

To study how moral norms influence buying green products to the respondents were offered to range next statements:

- I feel a moral obligation to buy products that are not polluting the world (strongly disagree to strongly agree)
- I feel a moral obligation to buy products that can be recycled or conserved (strongly disagree to strongly agree)
- I feel a moral obligation to buy products that save natural resources (strongly disagree to strongly agree)

The scale showed internal consistency with Cronbach's alfa ( $\alpha$ ) of 0.922

# 3.4.6 Motivation

Motivation is a psychological phenomenon that cannot be observed or recorded directly. So motivation to comply some certain behavior researchers measuring in different ways (Touré-Tillery and Fishbach, 2014):

- Cognitive and affective measures of motivation (goal activation, evaluation and perception, experience);
- Behavioral measures of motivation (speed, performance, choice);
- Self-report by asking person to rate his/her motivation.

It was selected last way to research motivation to buy green products as the most appropriate and accessible for this study. It was offered to rate next statement with seven-point scale:

- I'm motivated to buy green products (strongly disagree to strongly agree)
- I'm willing to buy green products (strongly disagree to strongly agree)
- I will exert effort to buy green products (strongly disagree to strongly agree)

Cronbach's alfa ( $\alpha$ ) for scale was of 0.883

# 3.4.7 Intention

Ajzen (1991) indentify intention as a reflection of person's willingness to try and level of motivation to perform the behavior. Behavioral intention could be measured by direct questions such as "I intend to" in combination with Likert scale response choices as a measurement instrument of intention strength (Armitage and Conner, 2001). Ajzen (2002) state about necessity to use multiple questions for assessing Intention with the goal to obtain reliable self-report.

To analyze behavioral intention to buy green products to the respondents were offered to rate next statements with seven-point scale:

- I intend to purchase green products in the future (extremely unlikely to extremely likely)
- I plan to switch conventional products with green products (strongly disagree to strongly agree)
- I will try to start or to buy more green products (definitely false to definitely true)

Counted Cronbach's alfa ( $\alpha$ ) for the scale was of 0.928.

# 3.4.8 Behavior

Measure of the behavior could be done in two ways: observation, which needs to be done on repeated occasion and continuous presence of observers and self-report. Self-reports are not so time consuming and much easily to be obtained. Responses could be collected in different formats:

• Exact numerical (How many days/ times/ hours...?)

• Less precise estimate (How often do you...? Scale from every day to never)

With the goal to add reliability to self-report measure of behavior it is recommended to use more than one question (Ajzen, 2002b).

In frames of this research to analyze the behavior (purchasing green products) it was offered to the respondents answer next questions with seven-point scale:

- How often do you buy green products? (Never to regularly)
- How would you describe yourself in terms of your current buy of green products?
  - Non Considerers (I understand what green products are but have never considered buying them)
  - Green Considerers (I have considered buying green products but have never actually bought them)
  - Former Green (I used to buy green products earlier, but have not bought them recently)
  - Light Green (Some of the products I currently buy are green)
  - Green (Half of the products I currently buy are green)
  - Dark Green (Most of the products I currently buy are green)
  - Greener than Green (The only products I currently buy are green) (Coddington, 1993)
- I consider increasing my purchase of green products (strongly disagree to strongly agree)
- I think about the advantages of buying green products (strongly disagree to strongly agree)

The scale showed Cronbach's alfa ( $\alpha$ ) of 0.891.

# **3.5 Data analysis**

In the research as a main instrument for data analysis was used Statistical Package for Social Sciences (SPSS) 20.0. This tool enables all the phases of quantitative research for this study:

- Descriptive analysis was employed for creating personal profile of respondents;
- Cronbach's Alfa coefficient to calculate reliability of the variables (Nunnally, 1978);

- Factor analysis "to explore the interrelationships among a set of variables" (Pallant, 2013: 188). It was made two rounds of Factor Analysis. First, one for each separate variable was done with the goal to identify "weak" components. With this goal was built Component Matrix. It shows the unrotated loadings of each of the indicators related to all the components (strong enough meaning is above 0.4, it could be 0.5, but no lower than 0.3). Second, for all variables together was performed to understand the relations among them;
- Correlation analysis to calculate the strength and character of the linear relationship between variables. It was used Pearson correlation coefficient (r). The possible values can vary between -1 and +1 (Pallant, 2013). Cohen (1988) suggests next guidelines for determining of correlation strength:

r = 0.10 to 0.29 - correlation is small;

r = 0.30 to 0.49 - correlation is medium;

r = 0.50 to 1.0 - correlation is large.

Multiple regression – was employed for hypotheses testing, since it explore the relations between dependent and independent variables. To make some evaluations about the model was paid special attention for the value of R Square – the higher R<sup>2</sup>, the better model explains the variance of the dependent variables around its means (Easterby-Smith et al., 2008).

Next important indicator is Beta. The largest value means that corresponding variable makes biggest significant contribution, among all others in the model, to explain the dependent variable (Pallant, 2013).

And one more important indicator is statistical significance (Sig. = .000). It shows if independent variable makes "statistically significant unique" prediction of dependent variable (Pallant, 2013: 167).

## 3.6 Data description

By the using SPSS 20.0 was made descriptive analysis and constructed general profile of respondents. The function Descriptive Statistics allowed analyzing of all 176 responses which were got from Norwegian citizens.

Gender statistics show that among respondents there were 81 males (46%) and 95 females (54%). Minimum value of the respondents age is 19 and maximum is 62, mean value 28.56 years. Among the respondents 49 people have children (27,8%), all the rest 128 (72.2%) don't

have kids by now. Minimum number of children among those 49 persons is 1, maximum number is 4. As a result, the general profile of respondents looks like this (Table 3.6.1).

# Table 3.6.1

General profile of respondents

		Number	%	Max.	Min.	Mean
Gender	Male	81	46.0			
Gender	Female	95	54.0			
То	tal	176	100.0			
Age				62	19	28.56
Children	Yes	49	27.8			
(at least 1)	No	128	72.2			
То	tal	176	100			
Number of children				4	1	
Total		49				

#### **CHAPTER 4**

## 4.0 Presentation of data analysis and discussion

In frames of this chapter it will be showed presentation of data analysis and further discussion of received information. The chapter is divided for four parts. First is factor analysis, where will be possible to identify "weak" variables and exclude them from further analysis. Second is measurement of correlation, which will show how independent variables relate to dependent. Third is hypotheses testing, it will show if the hypotheses are supported or rejected. In the last fourth part it will be discussed all the previous parts.

#### <u>Reliability</u>

The reliability of the scales was assessed through calculating of Cronbach's Alfa. Values range from 0.804 to 0.928 and are much higher that a minimum level of 0.7. It means that scales are reliable.

## **4.1 Factor Analysis**

At first it was made factor analysis and built component matrix for each of the variables separately (see Appendix 2). It was done based on measurements for each variable. On this basis the Factor Analysis was built (Table 4.1.1). As extraction method was used principal component analysis and as rotation method – Varimax with Kaiser Normalization. Relying on the results of one by one modelling in a process of constructing final matrix two items were removed from the analysis based on low loading on the appropriate concepts – one measurement of habits that are related to buying green products and one measurement of habits that are related to purchasing conventional products (GP5 and NGP5).

# Table 4.1.1

	Component					Communalities	
	1	2	3	4	5	6	
SN1			,763				,814
SN2			,755				,835
SN3			,654				,631
SN4			,736				,838
ATT1	,583		,514				,706
ATT2	,694						,776
ATT3	,702						,775
PBC1				,719			,581
PBC2				,643			,620
PBC3				,743			,749
PBC4				,793			,746
PBC5						,752	,630
PBC6						,893	,829
PBC7						,822	,728
MN1	,767						,684
MN2	,814						,734
MN3	,750						,658
MOTIV1	,791						,789
MOTIV2	,744						,637
MOTIV3	,779						,777
GP1	,598				,552		,865
GP2	,574				,540		,828
GP3					,610		,739
GP4	,528				,673		,850
NGP1		-,828					,752
NGP2		-,880					,852
NGP3		-,899					,879
NGP4		-,801					,737
INT1	,821						,784
INT2	,778						,718
INT3	,822						,782
BEH1	,621				,502		,779
BEH2	,613						,633
BEH3	,748						,659
BEH4	,831						,816
Eigenvalues	16,572	3,145	2,498	1,562	1,373	1,056	
Variance	47,350	8,985	7,137	4,462	3,922	3,017	
explained							

# Factor analysis - Rotated Component Matrix

SN – subjective norms, ATT – attitudes, PBC (1-4) – perceived behavioral control (self-efficacy), PBC (5-7) – perceived behavioral control (controllability), MN – moral norms,

MOTIV – motivation, GP – habits related to buying green products, NGP – habits related to buying conventional products, INT – intention, BEH – behavior.

Such variables as attitudes, moral norms, motivation, intention and behavior has strong loading on the first component

Habits (non-green products), has high, but negative loading on second component, from - 0.801 to 0.899. So the component 2 in rotated component matrix is habits, which are related to buying of conventional products.

Subjective norms loaded highly on third component, the value vary from 0.654 to 0.763. So it was made a conclusion that component 3 is subjective norms.

PBC (self-efficacy) has high loading on fourth component with the value of loading factor from 0.643 to 0.793. The component 4 is perceived behavioral control, self-efficacy.

Habits, which related to buying green products loaded highly on fifth component. The factor loading is varying from 0.552 to 0.673. It means that component 5 represent habits related to buying green products.

The second part of PBC – controllability has strong loading on sixth component, the value vary from 0.752 to 0.893. As a result it is possible to conclude that component 6 is perceived behavioral control (controllability).

The situation that a lot of variables loaded highly on the first component cannot be explained in one definite way. At the same time all the other variables are unproblematic. But all the factors were created together in one research model, so they will be put together into correlation and regression modeling with the goal to understand if there are some problems with them or they fitting well to each other.

## 4.2 Correlation analysis

Correlation was calculated for all 176 responses. The relationship between intention and all the independent variables was investigated by Pearson correlation coefficient (Table 4.2.1).

There is large positive correlation between intention and subjective norms, attitudes, perceived behavioral control (self-efficacy), moral norms, motivation and habits (green).

Between intention and non-green habits appears strong negative correlation. There is no significant correlation between intention and controllability component of PBC.

Table 4.2.1

Correlation

	int	sn	at	pbc1	pbc2	mn	motiv	gp	ngp
Intention	1								
Attitudes	,756**	1							
Subjective norms	,597**	,702**	1						
Perceived behavioral control – self- efficacy	,467**	,496**	,384**	1					
Perceived behavioral control - controllability	,060	,068	,113	,403**	1				
Habits (green products)	,695**	,672**	,673**	,413**	,094	1			
Habits (non-green- products)	- ,336**	- ,385**	- ,381**	-,188*	- ,006	- ,524**	1		
Moral norms	,712**	,650**	,543**	,379**	,066	,667**	- ,344**	1	
Motivation	,827**	,781**	,618**	,433**	,092	,754**	- ,415**	,767**	1
Behavior	,834**	,773**	,650**	,473**	,109	,809**	- ,461**	,748**	,843**
**. Correlation is sign	ificant at	the 0.01 1	evel (2-ta	iled).					
*. Correlation is significant at the 0.05 level (2-tailed).									

There is also large positive inter correlation between next variables: attitudes – subjective norms, PBC (self-efficacy), moral norms, motivation and habits that related to green products; subjective norms and PBC (self-efficacy), moral norms, motivation and green habits; PBC (self-efficacy) with second component of perceived behavioral control (controllability), moral norms, motivation and green habits; moral norms with motivation and green habits; and the last couple is correlation between motivation and habits, that are related to green products. Correlation analysis shows that PBC (controllability) has significant correlation just with another component of PBC, with all the others it is not significant.

It is important to say that habits that are related to buying conventional (non-green products) have strong negative correlation to all of the variables. It means that the higher value of non-green habits, the lower value of each separate other variable.

Between intention to buy green products and behavior there is very large correlation and has positive character, that means the higher intention the higher will the value of behavior. Also behavior has high level of correlation with all the variables except controllability component of PBC. With non-green habits correlation has negative direction.

# 4.3 Hypotheses testing

To study the prediction power of each independent variable and analyze their significance was built simple linear regression for each independent variable separately in combination with intention (see Appendix 3).

To test hypotheses was employed multiple linear regression modeling. As a dependent variable it was placed intention. Regression coefficients presented below (Table 4.3.1.):

Model		Intention
Attitudes	β	.204
	t	2.759
	р	.006**
Subjective norms	β	.015
	t	.252
	р	.802
PBC (self-efficacy)	β	.100
	t	1.975
	р	.050*
PBC (controllability)	β	057
	t	-1.294
	р	.197
Habits (green products)	β	.104
	t	1.474
	р	.142
Habits (non-green products)	β	.060
	t	1.281
	р	.202
Moral norms	β	.129
	t	2.035
	р	.043*
Motivation	β	.467
	t	5.743
	р	.000**
Adjusted R squa	are	.725

Table 4.3.1 Effect of independent variables on intention (\*p<0.05; \*\*p<0.01)

The model shows that R square = 0.738, it means that 73,8% of intention variance could be explained by this set of the variables. But next step is to see on to the statistical significance value of all the factors.

H1 stated that higher level of attitudes is leading to increasing of intention to buy green products. Based on the data ( $\beta$  =0.204, t=2.759, p=.006) it is conclude that H1 is accepted.

On the basis of the analysis and derived results it is possible to say that attitudes have strong relationships with intention. It means that the higher value of attitudes, the higher intention of customers to buy green products. Regression analysis proved attitudes towards purchasing green products gives a statistically significant impact into explaining customers' intention. Statement of Ajzen (1991) that positive attitudes, which are related to some action, substantially increase the intention of person to perform that behavior is supported.

H2 proposed that higher level of subjective norms is leading to increasing of intention to buy green products. This hypothesis is rejected ( $\beta$  =0.015, t=0.252, p=.802).

According to the regression model it was found that there are no strong relations between subjective norms and intention in Norway related to buying green products, which means that hypothesis about positive influence of subjective norms on intention is not supported. According to Kim and Chung (2011) if the consumers believe that people who are important to him think that buying green products is good, this consumer will probably have more intention to buy them. But if the subjective norms are not so strong or if the opinion about green products in the society is still not formed, than the principle of behavioral "snowball" could not be launched (Shabam, 2013).

H3a postulates that higher level perceived behavioural control (self-efficacy) is leading to increasing of intention to buy green products. For the self-efficacy hypothesis 3a was supported ( $\beta$  =0.100, t=1.975, p=.050).

H3b proposed that higher level perceived behavioural control (controllability) is leading to increasing of intention to buy green products. The third (3b) hypothesis for rejected ( $\beta = -.057$ , t= -1.294, p=.197).

Analysis of perceived behavioral control showed opposite results for self-efficacy and controllability. Self-efficacy or in other words it is consumers' concept about the level of

behavior performing difficulty (Ajzen, 1991), showed that it has positive influence on intention to buy green products. Controllability had the opposite effect on intention. Influence of controllability on purchase intention is very weak and not statistically significant. Ajzen (1991) stated that the more control customer perceive over buying process, the higher will be intention. But for this model statement doesn't work.

H4 stated that higher level of habits which are related to buying green products is leading to increasing of intention to buy green products. This fourth hypothesis was not supported ( $\beta$  =0.104, t=1.474, p=.142).

Habits that are related to buying green products are built on past experience and if this experience were positive there is high probability that intention will increase and after some time behavior become habitual (Kim and Chung, 2011). But according to the hypothesis test, positive influence of habits to influence positively intention with the support of regression analysis was not accepted.

H5 postulates that higher level of habits which are related to buying conventional products is leading to decreasing of intention to buy green products. This hypothesis was rejected ( $\beta$  =0.060, t=1.281, p=.202).

The hypothesis which is related to buying conventional products was not supported by regression model. But the simple linear regression showed that this variable has strong, but negative relationships with all other independent variables and with intention. The stronger is habits to buy conventional products, the lower intention to by green ones. This argument seems very realistic, but it was not supported by regression model.

H6 stated that higher level of moral norms is leading to increasing of intention to buy green products. Based on the data ( $\beta$  =0.129, t=2.035, p=.043) the sixth hypothesis was accepted.

Studying of moral norms led to the results that Conner and Armitage (1998) were correct when stated that including of moral norms give to the model higher level of correlation between all the variables. And the simple linear regression test showed that moral norms in studying of ecological behavior lead to increasing of intention (Harland et al., 1999). At the same time the statement that higher moral norms leading to increasing of intention to buy green products is supported by the analysis results. H7 proposed that higher level of motivation is leading to increasing of intention to buy green products. On the basis of the data ( $\beta$  =0.467, t=5.743, p=.000) this hypothesis was accepted.

Motivation is the variable with low level of statistical significance in the model. It means that statement of Frey and Stutzer (2006), that intention to buy green products increases with the degree of motivation, was correct and the hypothesis is accepted. At the same time motivation has largest effect on intention to buy green products.

## Intention – behavior hypothesis testing

Behavior (buying of green products) was assigned as dependent variable, intention as independent. Regression coefficients presented below (Table 4.3.2):

Table 4.3.2

Effect of intention on behavior

Mo	Behavior	
Intention	β	0.834
	t	19.940
	р	.000**
Adjusted	.694	

H8 stated higher level of intention is leading to increasing of purchase behaviour related to buying green products. Based on the data ( $\beta$  =0.834, t=19.940, p=.000) this hypothesis is accepted.

R square is equal to .696, it means that 69.6% of the variance in behavior is explained by the intention. The model is statistically significant. The effect of intention in explaining customers' behavior is 0.834.

The second part of the research model cause construction of one more hypothesis about the positive relationships between intention and behavior. Intention is the strongest available predictor of behavior (Kim and Han, 2010). The hypothesis was supported by the regression model and even more, high enough level of the variance in behavior can be explained by the intention. The effect of intention on purchasing green products is statistically significant. Shabnam (2013) was correct that between behaviour and intention exist very strong positive correlation. The higher value of intention to purchase eco-friendly goods, the higher will be value of behavior.

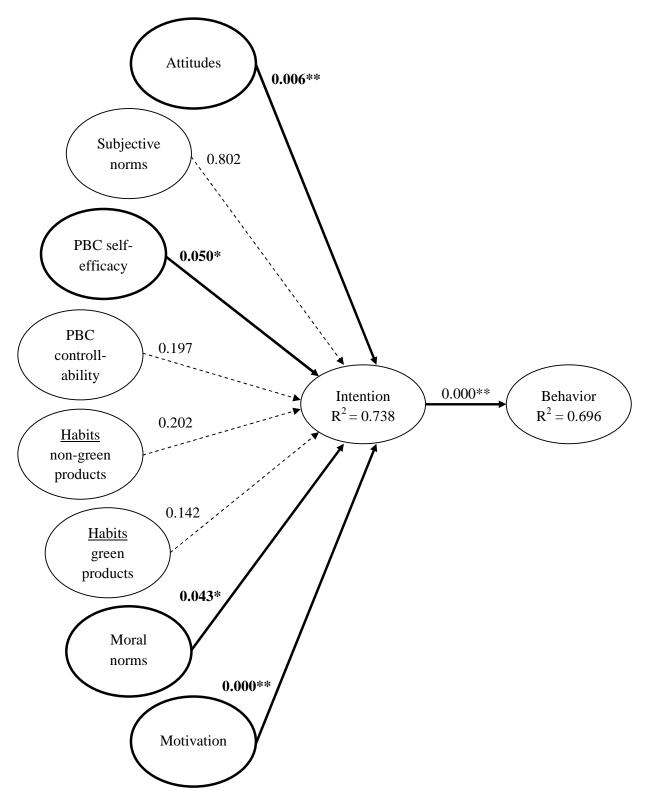


Figure 4.3.1 Modified research model (\*p<0.05; \*\*p<0.01)

Figure 4.3.1.1 present modified model of research model which reflects all the results of regression model and give understanding about which hypotheses were accepted and which one were rejected with support of statistical significance values and values of R square.

#### **CHAPTER 5**

## 5.0 Conclusion, implications and recommendations

This chapter will make a conclusion about the results of this research. It will be discussed possible ways of results implementation. The chapter also will show the limitations of the research and present ways for further research.

#### **5.1 Conclusions**

The purpose of research was to study antecedents of the behavioral intentions of customers related to buying green products. The study based on the research question: "Which factors influence the intention of consumers to purchase and actual purchase of green products?" Relying on the theoretical part it was offered eight hypotheses, which were the basement for the research model. The research model represented all the connections between independent variables (attitudes, subjective norms, PBC, moral norms, motivation and habits) and the dependent variable (intention). There was also reflected relationship between intention and final behavior.

With the goal to answer the research question was launched an online survey on the basis of web platform Questback. To analyse each concept and check its efficiency was constructed questionnaire and made two pretests. Questions were constructed with seven-point scales, e.g. from strongly disagree to strongly agree. It was collected 176 responses from Norwegian citizens, part of the invitations to participate questionnaire was sent by emails, and other part was answered through the direct link which was put on Facebook.

All the responses were analyzed with SPSS, version 20.0. It was used three steps of analysis: factor analysis, correlation analysis and regression modelling for hypotheses testing.

The next results were got from analytical part:

Attitudes, one of the components of perceived behavioural control (self-efficacy), moral norms and motivation influence positively the behavioral intention to buy green products. The higher is value of factors influence, the higher will be intention of consumers. It was found also that hypothesis about positive correlation of subjective norms, second component of PBC (controllability) and both types of habits were rejected.

Next finding relates to relationship between intention and behavior - there is strong positive correlation. It means that if the customer has positive intentions about buying green products there is higher probability that s/he will go and buy them.

By this study were covered next knowledge gaps:

In addition to motivational factors in studying pro-environmental purchase behavior (Bagozzi and Dabholkar, 1994; Lee and Holden, 1999) was included main factors from the theory of planned behavior and two more which extended the TPB. It means that research is not only oriented on external antecedents, but took into consideration deeper influential factors of persons' behavior.

Demographical characteristics in most of the studies of the customers were the main factor of influence. The author tried to apply more holistic approach in explaining intentions, internal stimulus of buyers and attitudes, because of the final behavior is not only based on position in the society or some demographical factors of consumers.

The next contributions were made into understanding of the process how the intention to buy green products appears:

The behavioral process was studied by the well-known theory of planned behavior that explains consumer behavior and relies on internal antecedents of purchase intention and behavior.

In addition to the main factors (attitudes, subjective norms and perceived behavioral control) which the theory of planned behavior includes, it was added three factors (habits, moral norms and motivation) with the goal to extend the model and make the predictive power higher.

The study includes habits of customers as a factor that affect intention to buy green products, but it was took into consideration two sides of this factor – habits that related to buying conventional products and habits that related to buying green products.

This is one of the first studies of intention to buy green products and factors that influence it in Norway.

## **5.2 Implications**

Marketers who are employed to sell green products could find results of this study very useful and valuable for their job. It can give to them answers about how to increase intention and purchasing of their product more popular, how to make demand higher and how to involve new customers into a process of buying eco-friendly goods.

According to the results of study first of all it is the most important to create motivation and positive attitudes for customers about buying green products. These two factors will raise intention the most. Motivation and attitudes could be formed by promoting of the advantages of green products consuming for the body and for the planet in general.

The next significant concept for creating higher intention to purchase eco-friendly products is increasing of the influence of moral norms. It could not be done by simple advertisement and it is a task for long-period term. Moral norms is something that person perceive as right thing to do in certain situation. Understanding of this "doing the right thing" coming usually from parents behavior, from parents education, from reading books. It means that it could not be done in short-term perspective. But this is something that governments need to work with and this is a subject of persons' self-education.

One more interesting implication was found for the theory. Subjected norms showed positive correlation with intention in previous researches. According to this was formed a hypothesis which was not accepted based on the results. It could be a particular case for green market, because green products are not a mainstream in the world and in Norway.

The findings of this research paper can be also useful for governances of the countries in a process of developing programs for inducing of citizens to buy environmentally-friendly products and creating of the programs for sustainable development of the Earth.

In a process of developing sustainable public policy and further implementation of it they can take into consideration that main levers in this process are creating positive attitudes by the explaining of all the benefits of green consumption to the society. The next important lever is stimulating people to buy green instead of conventional products. It could be done for example through state subsidies, protection mechanisms of green product producers etc.

#### 5.3 Limitations and recommendations for further research

In a process of constructing the questionnaire it was hard to find measurement for each factor that will help to find answer for research question. It was needed to make two pretests before research model start to work.

The questionnaire was developed with including questions related to all factors of the theory of planned behavior and extended factors. It was used at least three measurements for studying each factor with the purpose to make research reliable. It was required to spend from 5 to 7 minutes from each respondent to accomplish the survey. As a result it was hard to motivate people to answer the questionnaire and response rate was just 21% (674 invitations were sent by emails and 143 responses got).

The behavior of the customers is not easy to understand. Each separate person may act differently in different situations and under different conditions. Even if the findings of this research are satisfactory, there are ways how to expand it and get more useful information:

One of the possible variants for further research is to increase the number of respondents in frames of Norway and try to make higher the average age of the respondent with the goal to cover more groups of society. It will make the general profile of respondent more impartial.

As it was shown, the behavioral model fits very well with studying of green market, to make the research better it is possible to make it comparative. For example, to study not only Norway, but add one or few more countries in research.

It is possible to make the study more focused on dependency between buying green products and number and age of the children in family. Because probably mothers who have small kids want to make their life safer, so their attitudes, motivation and moral norms will be even higher.

Research findings show that some hypotheses that might work and seems logical were not supported by regression model. For example, hypothesis about habits, which related to buying non-green products, stated that they influence negatively on intention to buy green products. This hypothesis was not supported by the regression model, but in one-tailed regression test statistical significance was .000 and in correlation model habits (non-green) showed strong,

but negative relation to intention, which is logically approved. The new setting or partial changes in settings could give new results and accept hypotheses which were established.

For further research it is possible to add some more factors for analysis or replace some of them with new, it will give the possibility to study more aspects of green consumer behavior and antecedents of intention to buy eco-friendly products.

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# Appendix 1

# **Behavioral Intention At The Green Market**

## Hello!

My name is Olga Gorokhova and I'm a Master student at the University of Nordland. This questionnaire is designed to study purchase intention and behavior of the consumers related to green (ecological, organic, environmentally friendly) products.

An honest response is critical for accurate results.

Hide my identity

Read more about confidentiality and hidden identity here. (Opens in a new window.)

	* Please, select your gender Male Female
2)	* What is your country of living?
D	Norway Ukraine Other
3)	* What is your age?
4)	* Do you have children?
O	Yes No
18	If you answer "Yes" for previous question, please write how many of them are under
6)	* Most people who are important to me think that I should buy green products
C	1 Strongly Disagree
7)	* Most people who are important to me expect me to buy green products
0	1 Strongly Disagree 2 2 3 4 5 5 6 7 Strongly Agree
8)	* Most people whose opinion I value would approve of me buying green products
	1 Strongly Disagree $2$ $2$ $3$ $2$ $4$ $3$ $2$ $4$ $5$ $2$ $6$ $2$ 7 Strongly Agree

9) \* Most people whose opinion I value consider that I should buy green products  $\square$  1 Strongly Disagree  $\square$  2  $\square$  3  $\square$  4  $\square$  5  $\square$  6  $\square$  7 Strongly Agree 10) \* It is beneficial for me to buy green products  $\square$  1 Strongly Disagree  $\square$  2  $\square$  3  $\square$  4  $\square$  5  $\square$  6  $\square$  7 Strongly Agree 11) \* It is good for me to buy green products  $\square$  1 Strongly Disagree  $\square$  2  $\square$  3  $\square$  4  $\square$  5  $\square$  6  $\square$  7 Strongly Agree 12) \* It is enjoyable for me to buy green products C 1 Strongly Disagree C 2 C 3 C 4 C 5 C 6 C 7 Strongly Agree 29 % completed 13) \* If I wanted to I could buy green products 1 Definitely False 2 2 3 4 5 6 7 Definitely True 14) \* For me to buy green products would be... L 1 Verv Difficult 2 2 3 4 5 6 6 7 Very Easy 15) \* If it were entirely up to me, I am confident that I would be able to buy green products  $\square$  1 Strongly Disagree  $\square$  2  $\square$  3  $\square$  4  $\square$  5  $\square$  6  $\square$  7 Strongly Agree 16) \* How confident are you that you will be able to buy green products? C 1 Completely Unconfident C 2 C 3 C 4 C 5 C 6 C 7 Completely Confident 17) \* It is mostly up to me to buy or not to buy green products 1 Strongly Disagree 18) \* I have full control over buying green products  $\square$  1 Strongly Disagree  $\square$  2  $\square$  3  $\square$  4  $\square$  5  $\square$  6  $\square$  7 Strongly Agree 19) \* How much personal control do you feel over buying green products  $\square$  1 No control at all  $\square$  2  $\square$  3  $\square$  4  $\square$  5  $\square$  6  $\square$  7 Complete Control 20) \* I feel moral obligation to buy products that are not polluting the world  $\square$  1 Strongly Disagree  $\square$  2  $\square$  3  $\square$  4  $\square$  5  $\square$  6  $\square$  7 Strongly Agree 21) \* I feel moral obligation to buy products that can be recycled or conserved  $\square_{1 \text{ Strongly Disagree}} \square_{2} \square_{3} \square_{4} \square_{5} \square_{6} \square_{7 \text{ Strongly Aaree}}$ 

 22) \* I feel moral obligation to buy products that save natural resources

 1 Strongly Disagree
 2
 3
 4
 5
 6
 7 Strongly Agree

 23) \* I'm motivated to buy green products

 1 Strongly Disagree
 2
 3
 4
 5
 6
 7 Strongly Agree

 24) \* I'm willing to buy green products

 1 Strongly Disagree
 2
 3
 4
 5
 6
 7 Strongly Agree

 25) \* I will exert effort to buy green products

 1 Strongly Disagree
 2
 3
 4
 5
 6
 7 Strongly Agree

 25) \* I will exert effort to buy green products
 3
 4
 5
 6
 7 Strongly Agree

 1 Strongly Disagree
 2
 3
 4
 5
 6
 7 Strongly Agree

 1 Strongly Disagree
 2
 3
 4
 5
 6
 7 Strongly Agree

 1 Strongly Disagree
 2
 3
 4
 5
 6
 7 Strongly Agree

 3 T work
 3
 4
 5
 6
 7 Strongly Agree

Buying green products is something...

26) \* I do frequently
1 Strongly Disagree 2 2 3 4 5 6 7 Strongly Agree
2 7 Strongly Agree 7 Strongly Agree 7 Strongly Agree 7 Strongly Agree 7 Strongly Disagree 7 2 3 4 7 5 6 7 Strongly Agree 7 Strongly Agree 7 Strongly Disagree 7 2 3 7 Strongly Disagree 7 3 7 Strongly Disagre

Buying not green products is something...

31) \* I do frequently

1 Strongly Disagree

2

3

4

5

6

7 Strongly Agree

33) \* I do without having to consciously remember

1 Strongly Disagree
34) * I do without thinking
1 Strongly Disagree
35) * That makes me feel weird if I do not do it
<b>1</b> Strongly Disagree <b>2 3 4 4 5 6 7</b> Strongly Agree
36) * I intend to purchase green products in the future
1 Extremely Unlikely 2 2 3 4 5 6 7 Extremely Likely
37) * I plan to switch conventional products with green products
1 Strongly Disagree
38) * I will try to start or to buy more green products
$\square$ 1 Definitely False $\square$ 2 $\square$ 3 $\square$ 4 $\square$ 5 $\square$ 6 $\square$ 7 Definitely True
39) * How often do you buy green products
$\square_{1 \text{ Never}} \square_2 \square_3 \square_4 \square_5 \square_6 \square_7 \text{ Regularly}$
40) * How would you describe yourself in terms of your current buying of green products
1 Non Considerers (I understand what green products are but have never considered buying
1 Non Considerers (I understand what green products are but have never considered buying them)
1 Non Considerers (I understand what green products are but have never considered buying
<ul> <li>1 Non Considerers (I understand what green products are but have never considered buying them)</li> <li>2 Green Considerers (I have considered buying green products but have never actually bought</li> </ul>
<ul> <li>1 Non Considerers (I understand what green products are but have never considered buying them)</li> <li>2 Green Considerers (I have considered buying green products but have never actually bought them)</li> </ul>
<ul> <li>1 Non Considerers (I understand what green products are but have never considered buying them)</li> <li>2 Green Considerers (I have considered buying green products but have never actually bought them)</li> <li>3 Former Green (I used to buy green products earlier, but have not bought them recently)</li> </ul>
<ul> <li>1 Non Considerers (I understand what green products are but have never considered buying them)</li> <li>2 Green Considerers (I have considered buying green products but have never actually bought them)</li> <li>3 Former Green (I used to buy green products earlier, but have not bought them recently)</li> <li>4 Light Green (Some of the products I currently buy are green)</li> </ul>
<ul> <li>1 Non Considerers (I understand what green products are but have never considered buying them)</li> <li>2 Green Considerers (I have considered buying green products but have never actually bought them)</li> <li>3 Former Green (I used to buy green products earlier, but have not bought them recently)</li> <li>4 Light Green (Some of the products I currently buy are green)</li> <li>5 Green (Half of the products I currently buy are green)</li> </ul>
<ul> <li>1 Non Considerers (I understand what green products are but have never considered buying them)</li> <li>2 Green Considerers (I have considered buying green products but have never actually bought them)</li> <li>3 Former Green (I used to buy green products earlier, but have not bought them recently)</li> <li>4 Light Green (Some of the products I currently buy are green)</li> <li>5 Green (Half of the products I currently buy are green)</li> <li>6 Dark Green (Most of the products I currently buy are green)</li> </ul>
<ul> <li>1 Non Considerers (I understand what green products are but have never considered buying them)</li> <li>2 Green Considerers (I have considered buying green products but have never actually bought them)</li> <li>3 Former Green (I used to buy green products earlier, but have not bought them recently)</li> <li>4 Light Green (Some of the products I currently buy are green)</li> <li>5 Green (Half of the products I currently buy are green)</li> <li>6 Dark Green (Most of the products I currently buy are green)</li> <li>7 Greener than Green (The only products I currently buy are green)</li> </ul>
<ul> <li>I Non Considerers (I understand what green products are but have never considered buying them)</li> <li>2 Green Considerers (I have considered buying green products but have never actually bought them)</li> <li>3 Former Green (I used to buy green products earlier, but have not bought them recently)</li> <li>4 Light Green (Some of the products I currently buy are green)</li> <li>5 Green (Half of the products I currently buy are green)</li> <li>6 Dark Green (Most of the products I currently buy are green)</li> <li>7 Greener than Green (The only products I currently buy are green)</li> <li>* I think about the advantages of buying green products</li> </ul>
<ul> <li>1 Non Considerers (I understand what green products are but have never considered buying them)</li> <li>2 Green Considerers (I have considered buying green products but have never actually bought them)</li> <li>3 Former Green (I used to buy green products earlier, but have not bought them recently)</li> <li>4 Light Green (Some of the products I currently buy are green)</li> <li>5 Green (Half of the products I currently buy are green)</li> <li>6 Dark Green (Most of the products I currently buy are green)</li> <li>7 Greener than Green (The only products I currently buy are green)</li> <li>1 Strongly Disagree</li> <li>2 Greener and a greener of the products I currently buy are greener of the products I currentl</li></ul>

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# Appendix 2

Attitudes: All the indicators load strongly enough on one component

**Component Matrix** 

	Component
	1
ATT1	.916
ATT2	.948
ATT3	.918

Subjective Norms: All the indicators load strongly enough on one component

**Component Matrix** 

	Component
	1
SN1	.922
SN2	.905
SN3	.721
SN4	.921

<u>Perceived behavioral control (self-efficacy)</u>: All the indicators load strongly enough on one component

Component Matrix

	Component
	1
PBC10	.747
PBC11`	.732
PBC12	.851
PBC13	.881

<u>Perceived behavioral control (controllability)</u>: All the indicators load strongly enough on one component

## **Component Matrix**

	Component
	1
PBC20	.766
PBC21`	.913
PBC22	.858

# Moral norms: All the indicators load strongly enough on one component

# **Component Matrix**

	Component
	1
MN1	.922
MN2	.947
MN3	.922

Motivation: All the indicators load strongly enough on one component

# **Component Matrix**

	Component
	1
MOTIV1	.908
MOTIV2	.868
MOTIV3	.924

<u>Habits (green products)</u>: Just four indicators load strongly enough on one component. It means that four-indicator solution will be more appropriate (GP1 to GP4).

# **Component Matrix**

	Component
	1
GP1	.917
GP2	.934
GP3	.856
GP4	.929
GP5	.468

<u>Habits (non-green products)</u>: Just four indicators load strongly enough on one component. It means that four-indicator solution will be more appropriate (NGP1 to NGP4).

# Component Matrix

	Component
	1
NGP1	.859
NGP2	.916
NGP3	.932
NGP4	.839
NGP5	.245

# Intention: All the indicators load strongly enough on one component

Component Matrix

	Component
	1
INT1	.929
INT2	.941
INT3	.937

Behavior: All the indicators load strongly enough on one component

Component Matrix

	Component
	1
BEH1	.859
BEH2	.856
BEH3	.863
BEH4	.907

## **Appendix 3**

## Simple linear regression

## Attitudes - Intention

Intention was assigned as dependent variable, attitudes as independent. Coefficients presented below:

Model		Unstandardized Coefficients del		Standardized Coefficients	t	Sig.
		В	Std. Error	Beta		
1	Constant	1.571	.202		7.793	.000
	(att)	.673	.044	.756	15.244	.000

Coefficients (Attitudes - Intention)

Preliminary inspection of attitudes – intention linear regression is supported by the data ( $\beta$  =0.756, t=15.244, p=.000). The model is statistically significant. R square is equal to 0.572, it means that 57.2% of the variance in intention is explained by the attitudes. The effect of attitudes in explaining customers' intention is 0.756.

## Subjective norms - Intention

Intention was assigned as dependent variable, subjective norms as independent. Coefficients presented below:

Model Unstandardi		Unstandardize	d Coefficients	Standardized Coefficients	t	Sig.
		В	Std. Error	Beta		
1	Constant	2.377	.228		10.411	.000
	(sn)	.619	.063	.597	9.805	.000

Coefficients (Subjective norms - Intention)

Preliminary inspection of subjective norms – intention linear regression is supported by the data ( $\beta$  =0.597, t=9.805, p=.000). The model is statistically significant. R square is equal to 0.356, it means that 35.6% of the variance in intention is explained by the subjective norms. The effect of subjective norms in explaining customers' intention is 0.597.

## PBC (self-efficacy) - Intention

Intention was assigned as dependent variable, PBC (self-efficacy) as independent. Coefficients presented below:

		Unstandardize	d Coefficients	Standardized		
Model				Coefficients	t	Sig.
		В	Std. Error	Beta		
1 Const	tant	1.521	.430		3.536	.001
(pbc1)	)	.287	.084	.467	6.974	.000

Coefficients (PBC (self-efficacy) - Intention)

Preliminary inspection of PBC (self-efficacy) – intention linear regression is supported by the data ( $\beta$  =0.467, t=6.974, p=.000). The model is statistically significant. The model is statistically significant. R square is equal to 0.218, it means that 21.8% of the variance in intention is explained by the PBC (self-efficacy). The effect of PBC (self-efficacy) in explaining customers' intention is 0.467.

## PBC (controllability) - Intention

Intention was assigned as dependent variable, PBC (controllability) as independent. Coefficients presented below:

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	В	Std. Error	Beta		_
1 Constant	4.087	.464		8.812	.000
(pbc2)	.069	.087	.060	.789	.431

Coefficients (PBC (controllability) - Intention)

Preliminary inspection of PBC (controllability) – intention linear regression is supported by the data ( $\beta$  =0.060, t=0.789, p=.431). The model is not statistically insignificant. The model is statistically significant. R square is equal to 0.004, it means that 0.4% of the variance in intention is explained by the PBC (controllability). The effect of PBC (controllability) in explaining customers' intention is 0.060.

## Moral norms - Intention

Intention was assigned as dependent variable, moral norms as independent. Coefficients presented below:

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		В	Std. Error	Beta		
1	Constant	1.390	.241		5.766	.000
	(mn)	.668	.050	.712	13.366	.000

Coefficients (Moral norms - Intention)

Preliminary inspection of moral norms – intention linear regression is supported by the data ( $\beta$  =0.712, t=13.366, p=.000). The model is statistically significant. R square is equal to 0.356, it means that 50.7% of the variance in intention is explained by the moral norms. The effect of moral norms in explaining customers' intention is 0.712.

## Motivation - Intention

Intention was assigned as dependent variable, motivation as independent. Coefficients presented below:

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	В	Std. Error	Beta		
1 Constant	.752	.200		3.760	.000
(motiv)	.819	.042	.827	19.403	.000

Coefficients (Motivation - Intention)

Preliminary inspection of motivation – intention linear regression is supported by the data ( $\beta$  =0.827, t=19.403, p=.000). The model is statistically significant. R square is equal to 0.684, it means that 68.4% of the variance in intention is explained by the motivation. The effect of motivation in explaining customers' intention is 0.827.

## Habits (green products) - Intention

Intention was assigned as dependent variable, habits (green products) as independent. Coefficients presented below:

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		В	Std. Error	Beta		
1	Constant	2.496	.172		14.517	.000
	(gp)	.666	.052	.695	12.749	.000

Coefficients (Habits (green products) - Intention)

Preliminary inspection of habits (green products) – intention linear regression is supported by the data ( $\beta$  =0.695, t=12.749, p=.000). The model is statistically significant. R square is equal to 0.483, it means that 48.3% of the variance in intention is explained by the habits, which are related to buying green products. The effect of habits (green products) in explaining customers' intention is 0.695.

## Habits (non-green products) - Intention

Intention was assigned as dependent variable, habits (non-green products) as independent. Coefficients presented below:

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	В	Std. Error	Beta		
1 Constant	5.868	.320		18.324	.000
(ngp)	320	.068	336	-4.705	.000

Coefficients (Habits (non-green products) - Intention)

Preliminary inspection of habits (non-green) – intention linear regression is supported by the data ( $\beta$  = -0.336, t= -4.705, p=.000). The model is statistically significant. R square is equal to 0.113, it means that 11.3% of the variance in intention is explained by the habits, which related to buying non-green products. The effect of subjective norms in explaining customers' intention is -0.336.