



Consumer Intentions to Buy Grocery Products Online

A Comparison between the Netherlands and Russia

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Author's note

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Abstract

Shopping on the Internet has been developing rapidly, covering most of the important spheres of marketing. Online grocery shopping has been noted of being a relatively young but promising area of electronic commerce. However, only a sparse number of studies have been focusing on consumers' intentions to purchase grocery products online in the cross-cultural context. The purpose of this study is to investigate the determinants of Dutch ($N=112$) and Russian ($N=202$) consumers' intentions to buy edible grocery goods, particularly, durable versus perishable goods. Taking intention- and value-based approaches, this study empirically tests relations of consumers' hedonistic and utilitarian attitude, subjective norm, perceived behavioral control, personal values, and behavioral intentions to purchase groceries online. Data were collected using self-administrated online questionnaires. Stepwise multiple regression analysis was performed in order to investigate the relations between the theory of planned behavior cognitions and consumers' intentions. The findings suggested that utilitarian attitude is the strongest predictor of intentions in both groups of consumers. For Russian consumers there were also subjective norm of friends and perceived behavioral control which had small positive effects on the intentions. There was no difference found between Dutch and Russian consumers with regard to product type. Both groups considered buying durable grocery products over perishable goods. Repeated measurements Anova revealed that all durable products had a higher chance to be purchased than each of the perishable ones. Additionally, the study examined the potential impact of consumers' personal values, by dividing them in two opposing groups: values under individualism (power, achievement) versus values under collectivism (tradition, conformity). The study predicted Dutch consumers to score higher on the values under individualism, whereas Russian consumers to score higher on the values under collectivism. The results were contrary to the expectation, indicating that both groups scored higher on the values under individualism. In terms of the factors influencing intentions, value of tradition had a small negative effect for both groups of consumers. Further cross-cultural study is required to place more emphasis on the online grocery markets' development and geographical differences of the countries in question.

Keywords: consumer behavior, online grocery shopping, theory of planned behavior, personal values, individualism

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"Food is our common ground, a universal experience."

James Beard

Introduction

As the Internet plays gradually a more crucial role to connect information and people, the pressure has continued to rise on markets which have already employed online services, and especially on markets to which selling products online is novel (Datamonitor, 2010). The Internet provides quick and easy comparison of many different types of products. Indeed, some standardized goods are generally considered to be more successfully sold on the Internet (e.g. CDs, computer appliances, books), whereas products like groceries are still not widely popular among online consumers (Grewal, Iyer, Levy, & Michael, 2004).

Grocery products are the eatable and drinkable commodities that are bought in supermarkets on a regular basis. Food purchases are necessary, repetitive, and are usually bought in large quantities. Groceries have been traditionally bought in stores, where consumers have an opportunity to touch and inspect products before the purchase and also control the transportation of fragile products (Klein, 1998). Therefore, due to the lack of availability of certain sensory attributes (especially touch and smell) of grocery products in online web-stores, and vulnerability of transportation, the adoption of online grocery shopping is relatively less popular and leaves room for improvement. Modern supermarkets and online grocery stores are not limited to perishable products; they also include durable eatable products (e.g. canned fruits) and non-food goods (e.g. household appliances, household chemical goods) (Schuster & Sporn, 1998). Because online grocery shopping (henceforth OGS) is still considered a novel mode of online shopping, and due to the reasons not to purchase perishable products online, it is crucial to explore this more, particularly the variables which explain the intentions to buy different grocery products online.

Several studies consider consumer personal values as central to consumer behavior. (Homer & Kahle, 1988; Claeys, Swinnen & Vanden Abeele, 1995; Jensen, 2001). *Values* are trans-situational goals that serve the interest of individuals or groups and that act as guiding principle in consumers' lives (Sagiv & Schwartz, 1995). A value-attitude-behavior (VAB) hierarchy was developed and has been validated in different consumer online activities, such as information seeking (Schiffman, Sherman, & Long, 2003) and e-shopping behavior (Jayawardhena, 2004). Some studies suggested the link between Schwartz' (1992) personal values further with Hofstede (1980) individualism-collectivism (I-C) scale (Schwartz, 1994; Triandis, 1996; Oishi, Schimmack, Diener, & Suh, 1998). In this study we are going to conduct a cross-cultural study on the consumers from the Netherlands and Russia, by values preferences in two groups: values under individualism (power, achievement) versus values under collectivism (tradition, conformity). The two groups contrast primarily on the basis of individual versus collective interests.

A number of studies suggested to explain consumers' behavior towards general e-shopping, as well as OGS, using the theory of planned behavior (TPB) (Ahn, Ryu, & Han, 2004; Hansen, 2004; Lin, 2007). TPB measures consumers' intentions to use Internet-related services determined by attitude and subjective norm, with the addition of perceived behavioral control (PBC) as another determinate factor (Hansen, Jensen, and Soolgard, 2004; Shim, Eastlick, Lotz, & Warrington, 2001). When studying consumer behavior in OGS, it is also crucial to pay sufficient attention to consumer acceptance of online shopping and the Internet in general (Liao & Cheung, 2001).

The Dutch online grocery shopping market has been stated to grow steadily. In 2014, almost 6 percent of Dutch grocery shoppers reported that they occasionally buy groceries online, which is twice as many as were in 2013. Also the frequency of online shopping of groceries in the Netherlands has increased by over 70 percent, which has led to total web-sales being three times higher than one year ago (PostNord, 2014). Contrastively, Russian online grocery market is generally considered a poorly developed mode of ecommerce, being listed after travelling services, apparel, and electronics, and also restricted to a small number of pure-play online grocers (e.g. Clickmall, 7cont, Ambar) that focus solely on ordering and delivering groceries via the Internet. Taking into account vast differences in the development of online grocery shopping in the Netherlands and Russia and the limited nature of studies comparing the two countries, in this study we are going to find out whether Dutch consumers are more willing to purchase food products online than are the Russian ones. Moreover, we will investigate the particular product types consumers are intended to buy the most, whether these intentions are impacted by countries, consumers' personal values, and cognitions of TPB. On the basis of the above, the research questions are determined.

Research Questions:

What determines consumers' intentions to purchase grocery products via the Internet?

What product categories are more preferred to be bought online by Dutch and Russian consumers?

Do Dutch and Russian consumers differ in their intentions to purchase grocery products online?

1 Theoretical Framework

The aim of this chapter is to argue whether and how the theory of planned behavior and personal variables of values relate to online consumer behavior and to online grocery behavior in particular. This chapter starts by describing the notion of online shopping in general (1.1), and then we proceed to the description of online grocery shopping (section 1.2). In section 1.3 online grocery behavior will be explained with regard to the intention-based theory (Theory of Planned Behavior (TPB)), which is an adequate framework to study cognitive factors as determinants of consumers' intentions to use online grocery shopping. Next, personal differences between Dutch and Russian people will be determined with regard to individualism and personal human values (section 1.4). Since the study will be carried out on Dutch and Russian consumers, section 1.5 will provide insights on the two e-shopping markets, as well as OGS development and opportunities.

1.1 Online shopping

Given its relative newness, the Internet provides a unique and rapidly developing shopping experience for customers. *Online shopping* is a mode of purchasing products and services by ordering them via the Internet-based stores, which provides consumers with an easy access to products and price information, and facilitates product comparison (Chu, Arce-Urriza, Cebollada-Calvo, & Chintagunta, 2010). Online shopping involves no travel, product carrying or restrictions on shopping hours, offering great accessibility, and convenience. Internet shoppers are found to be more innovative, impulsive, and less risk-averse than non-Internet shoppers (Donthu & Garcla, 1999).

When studying consumer online purchasing behavior, it should be noted that Internet shopping requires particular skills, opportunities, and resources, and therefore doesn't take place just because consumers decide to act (Shim et al., 2001). Thus it is important to possess knowledge about consumers' Internet usage activities and prior experiences with online shopping. Generally, Internet usage can be divided into two types: Internet usage for *communication* purposes, and Internet usage for non-communication purposes. The first type of Internet usage refers to performing all sorts of communications and information gathering, including sending emails, instant messaging, information searching, reading news, etc. One of non-communicative usage of the Internet is the *transactional* Internet usage, which involves acquiring products or services via the Internet, in other words, electronic marketing. It includes making travel reservations, online banking, buying or selling goods, etc. (Selfhout, Branje, Delsing, ter Bogt, & Meeus, 2009).

The consumers' choice between two marketing channels (offline versus online) is affected by their general experience with the Internet and Internet services. When gathering information about a product or a service, consumers with greater Internet and online shopping experience tend to prefer the online channel, than consumers with limited Internet and online shopping experience (Frambach, Roest, & Krishnan, 2007). Consumers with more elaborate Internet experience can access services easily, and as a result, they are more likely to engage in online transactions (Lu, Cao, Wang, & Yang, 2011). Consumers with sufficient Internet experience tend to feel more comfortable buying things online, while others may feel

reluctant to buy products via the Internet because of perceived uncertainty of the platform usage (Montoya-Weiss, Voss, & Grewal, 2003).

Product type plays a crucial role in the expansion and development of online shopping. Earlier studies have focused on why online shopping differs across products. Several studies have shown that “*high-touch*” products that consumers feel they need to inspect and touch, smell or try on are those that require an offline presence at least at the final purchase stage (Chiang and Dholakia 2003; Lynch, Kent, and Srinivasan 2001). High-touch goods include clothing, shoes, jewelry, products for make-up, and so on. At the other extreme there are “*low-touch*” products which are standardized and don’t require prior physical inspection to evaluate quality, thus are more popular by online consumers. Low-touch products include books, CDs, etc. In between this spectrum are goods like groceries (depending on grocery product types), which may be considered as high-touch (e.g. fresh fruits, bread) and low-touch (e.g. canned vegetables, household care goods), according to what consumers perceive as grocery goods.

1.2 Online grocery shopping

As being stated earlier, product category plays an important role in consumers’ adoption of online shopping. Some categories like groceries generally have lower acceptance among consumers (Grewal et al., 2004). *Online grocery shopping (OGS)* refers to ordering grocery products via the Internet and the subsequent delivery of the ordered goods at home (Burke, 1998; Peterson, Balasubramanian, & Bronnenberg, 1997). Online grocery stores offer an electronic ordering interface, and the retailer takes care of picking, and usually also delivery of the goods to the customer. OGS is more local than, for instance, selling digital products that are easily transported and accessible throughout the world (Raijas, 2002). Edible grocery products were classified by considering the ease of storage and how easily consumers can determine product attributes (Hays, Keskinocak, & De López, 2006). *Perishable grocery goods* are not pantry items and often need to be stored in a refrigerator or a freezer (e.g. fruits, meat), they have limitations in delivering sensory input through the Web, require reliable ways of transportation, and thus have less appeal to online customers. *Durable grocery goods*, on the other hand, are items that have a long shelf life, are clearly standardized and don’t require the need to inspect the products before buying (e.g. beverages, canned goods, candy, etc) and involve less transportation sensitivity, thus are being sold more successfully than perishables. Due to the expiration risks and inability to touch and feel certain grocery products online, consumers generally prefer to buy durable grocery items over perishable goods (Schuster & Sporn, 1998).

Despite the obstacles and difficulties of OGS to be more widely adapted by consumers, yet, there is a lot of potential for electronic grocery trade: groceries form the largest category in retailing, and customers can learn to use new online quickly if they intend to use them frequently. Consumers who are willing to adopt online grocery shopping are those that seek for new, convenient, and time saving ways to purchase groceries, as compared to consumers that are accustomed to buy groceries in a traditional store. Moreover, OGS

consumers were identified to be younger and better educated people than those who inclined to use only traditional grocery stores (Raijas, 2002). In order to measure and predict consumers' willingness to buy grocery products via the Internet it is important to implement a practical model that encompasses all the important factors influencing consumer behavior. Intention-based models like the theory of planned behavior (TPB) have been suggested to provide profound explanation of consumers' online behavior. In order to gain a profound understanding of consumers' behavior in OGS, in this study we will focus on several cognitions of TPB that trigger consumers' intentions, which will be discussed in the following section.

1.3 Theory of Planned Behavior

Research related to the Internet usage has focused heavily on the medium, with less attention paid to the attributes and cognitive nature of the consumers' complex online decision-making. From the nature of complexity of consumers' decision-making, there is a need for studies that specifically stress on the cognitive and social contexts of consumer decision-making (Tang & Chen, 2003). OGS is a complex service, which involves consumers' confidence in using online platforms of buying products, as well as product performance risks, difficulties with finding appropriate web-stores, inconveniences related to web-store navigation and submitting an order, etc. Hence consumers may also have a need to obtain advice from trusted individuals before operating a new channel. The theory of planned behavior has been suggested to provide a reliable base for studying consumers' behavior in online shopping, and subsequently in OGS (Omar, 2005; Ramus & Nielsen, 2005; Wu, 2006; Hansen, 2007).

The theory of planned behavior (TPB) (Figure 1) was developed by Ajzen (1991) in order to understand the determinants of consumers' intentions to use the Internet services. TPB is considered an extension of theory of reasoned action (TRA) which measures the direct influence of consumers' intentions on the actual behavior, where intentions are influenced by attitudes and subjective norms that consumers hold before engaging in a behavior. TPB posits that both attitude toward a behavior and subjective norm are direct determinants of behavioral intention (BI) to perform a behavior. TPB further proposes that *behavioral intention* to perform a behavior is the proximal cause of such a behavior. BI is a motivational element of a behavior, that is, the degree of conscious effort that a person will exert in order to perform a behavior.

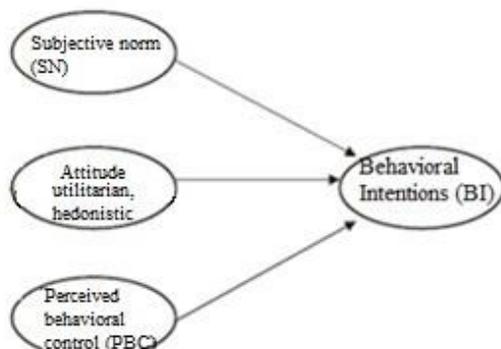


Figure 1. *The Theory of Planned Behavior* (Ajzen, 1991)

Attitude

Attitude towards a behavior is a person's positive or negative evaluation of relevant behavior and is composed of a person's salient beliefs regarding the perceived outcomes of performing a behavior. Previous research has shown that consumer attitudes are the strongest predictor of the behavioral intentions to purchase goods online (Truong, 2009; Choi & Geistfeld, 2004). Additionally, attitudes can be divided into two dimensions: hedonistic and utilitarian dimensions (Batra & Ahtola, 1990; Spangenberg, Voss, & Crowley, 1997; Voss, Spangenberg, & Grohmann, 2003). The *hedonistic* dimension refers to those consumption behaviors in search for happiness, awaking, sensuality, and enjoyment. The reason hedonistic consumers would love to shop is because they enjoy the shopping process. For the online environment, consumers exhibiting a more hedonistic attitude are attracted by the same motivations of enjoyment while visiting web-stores and conducting online purchases. Shopping behavior is no longer just a tedious task to complete (Bloch & Bruce, 1984; Babin, Dardenm & Griffin, 1994). In this study we examine hedonistic attitude towards OGS as its potential pleasant and enjoyable attributes for consumers. The *utilitarian* dimension, on the other hand, is associated with a product or service proving instrumental in fulfilling functional goals. The utilitarian dimension shows that shopping starts with a mission or task, and the acquired benefit depends on whether the task is completed or not, or whether the task is completed efficiently during the process (Babin et al., 1994). In this study we analyze utilitarian attitude towards OGS as its practical and convenient attributes for consumers. Moreover, in line with previous studies on consumers' online behavior (Hansen, 2008; Ajzen, 1991), we expect both hedonistic and utilitarian attitudes towards OGS to be strong predictors of consumers' intentions to purchase grocery goods via the Internet.

Subjective norm (SN)

Another cognition of TPB, subjective norm (SN), is a function of normative beliefs, which represents a person's perception of whether significant references approve or disapprove of a behavior. In other words, SN implies an individual's opinion of what people to whom he relates him/herself (e.g. family members, friends) may think if he/she performs a certain behavior (Ajzen, 1991). In the case of OGS, a number of consumers may have a limited experience and knowledge of online grocery shopping, therefore may be more willing to buy groceries online if they perceive their family members and close friends approving this mode of shopping. In line with Ajzen's (1991) postulates of TPB, we predict that SN, just as hedonic and utilitarian attitudes will have a strong impact on consumers' intentions to buy groceries online.

Perceived behavioral control (PBC)

The main purpose of this cognition is to capture nonvolitional aspects of behavior (i.e. not under an individual's control, highly depending on the medium of the behavior to be performed). TPB incorporates this additional variable together with attitude and SN, as a direct predictor of BI. PBC is the perception of how easy/difficult, facile/tedious, and convenient/inconvenient it is to perform a certain behavior. The aspect of PBC specifically

relates to whether or not a person perceives that he/she possesses requisite resources necessary to perform the behavior in question. In other words, a consumer is more likely to carry out certain behavior if he/she perceives that carrying out such a behavior is relatively easy, trustworthy, and convenient. In this study we will investigate whether OGS is perceived by consumers as a complicated, tedious, and inconvenient to handle, and whether consumers are willing to purchase groceries online if they have these perceptions.

Consumers' decision-making is to a large extent dependent on their attitudes, intentions, perceived influence of trusted individuals, and difficulties consumers perceive to be associated with online shopping. Additionally, personal differences between consumers, namely, their personal values, have been widely acknowledged to serve as grounds for behavioral decisions and consumption behavior (Costa, Dekker, & Jongen, 2004; Tai, 2008; Doran, 2009). In this study we are also interested in studying whether there is an impact of personal values on consumers' intentions to buy groceries online. Consequently, the explanation of personal values and their implementation will be discussed in the following section.

1.4 Consumer personal differences

The main goal of this study is to investigate determinants of consumers' intentions to purchase grocery products via the Internet and whether there are differences in intentions with regard to different countries. Since we are going to conduct a cross-cultural research, we are determined to see whether the intentions to buy grocery products online are impacted not only by the product type, but also by the personal characteristics of potential consumers. Culture constitutes the broadest influence on many dimensions of human behavior, including consumer behavior in business and marketing (Sondergaard, 1994; Dawar, Parker, & Price, 1996; Shamkarmahesh, Ford, & LaTour, 2003). Hofstede's framework (1980) is the most widely used cultural framework in psychology, sociology, marketing, or management studies (Sondergaard, 1994; Steenkamp, 2001). At the same time, a number of studies considered values as central to consumer behavior (Homer & Kahle, 1988; Claeys, Swinnen, & Vanden Abeele, 1995; Jensen, 2001). Schwartz (1992) identified universal psychological values and proposed a theory for the universal content and structure of values. Schwartz framework offers great potential in international marketing (Steenkamp, 2001).

In this study we are going to conduct a cross-cultural study based on Hofstede's (1980) individualism-collectivism (I-C) dimension employed together with Schwartz' (1992) personal values. Particularly, we select four values, two of which are going to represent individualism (power and achievement), and the other two (tradition and conformity) are going to represent collectivism. By comprising I-C and 4 values, we want to find out whether people from the Netherlands and Russia are different in this respect, and also whether this value distinction adds to Ajzen's (1991) intention-based model of cognitions, describing the intentions to buy groceries online. Thus the following paragraphs are going to describe the notion of I-C in the Netherlands and Russia, and integration of personal values and I-C.

Individualism-collectivism

Hofstede (1980) estimated the work-related values of people in 53 different countries. The findings resulted in four dimensions, that Hofstede labeled power distance, uncertainty avoidance, masculinity/femininity, and individualism-collectivism (I-C). These dimensions coincide with core cultural values that influence the form of the social arrangements, customs, and practices of any society. One of the most important advances in research in cross-cultural psychology has been the empirical identification of dimensions on which cultural groups differ. After much scholarly debate, I-C have emerged as one of the most important constructs to depict cultural differences and similarities and has been the focus of much cross-cultural research.

For this study we have selected two countries (the Netherlands and Russia) to compare with regard to individualism due to vast difference between the scores obtained by the two countries on that scale. On the individualism scale by Hofstede (2001) the Netherlands scored with 80 out of 100 possible points, which indicates a highly individualist society. Individualism is seen as a worldview that centralizes personal goals, and personal uniqueness (Markus & Kitayama, 1991; Kim, 1994; Triandis, 1995). Individualist societies are fundamentally contractual, consisting of narrow primary groups and negotiated social relations, with specific obligations and expectations focusing on achieving status (Schwartz, 1990).

Contrastively, on the individualism scale Russians score with 39, which is an indicator of collectivist culture (Hofstede, 2001). Collectivism implies interdependency between individuals and groups (Triandis, 1995). Collectivists tend to point out the importance of maintaining balanced relationships with others, and making sacrifices for the common good (Kim, Triandis, and Kâğitçibaşı, 1994). Collectivist societies are characterized by diffuse and mutual obligations and expectations based on ascribed statuses (Schwartz, 1990). In these societies, social units with common fate, common goals, and common values are centralized; the personal is simply a component of the social, making the in-group the key unit of analysis (Triandis, 1995). In this study we chose to conduct a cross-cultural research on people from the Netherlands and Russia. The main reasons in choosing these particular countries is the lack of the studies on their comparison in the sphere of online shopping, and also because they are principally opposite to each other on the individualism dimension.

Personal values and I-C

Schwartz (1992) developed a widely known theory of *values* and defined them as ‘desirable, transitional goals, varying in importance, serving as principles in people’s lives’. Schwartz and Bilsky (1990) proposed that human values exhibit three universal requirements: needs of individuals as biological organisms, necessities of coordinated social interactions, and survival and welfare needs of groups. On the basis of the three needs, Schwartz (1992) proposed 10 value types: power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security.

In this study we attempt to explore personal values further, that is, whether values can be linked to other domains, rather than just psychological functions (needs, motivations, and goals) as stated by Schwartz (1992). Oishi, Schimmack, Diener, & Suh (1998) noted that personal values are also related to I-C construct. Even though values and I-C have been studied independently with regard to values, Oishi et al. (1998) provide empirical evidence that Schwartz' (1992) framework can further be used to investigate these diverse research paradigms. It was found that individualism is indeed related to 6 particular Schwartz' (1992) personal values (Oishi et al., 1998). The study revealed that vertical individualism is best characterized as the relative importance of power and achievement, whereas horizontal individualism is best described by the relative importance of self-direction. Similarly, vertical collectivism is best described as the relative importance of tradition and conformity, whereas horizontal collectivism as the relative importance of benevolence. Verticality in I-C entails that inequalities between people stimulate a certain amount of conformity to the hierarchy within the society in question (Singelis et al., 1995).

Similarly to the findings of Oishi et al. (1998) and the definitions of individualism-collectivism, we propose that values best describing Triandis' (1995) 4-dimensional individualism-collectivism construct can be combined and classified into two principally opposing groups of values: values under individualism (power, achievement) which stress individual interests, versus values under collectivism (tradition, conformity) which emphasize collective interests. As suggested by Hansen (2008), power and achievement values are positively related to attitude towards OGS, whereas values of tradition and conformity are negatively related to the attitude. On the basis of the above evidence on I-C in the Netherlands and Russia and the links between I-C and personal values, in this study we choose the following four values to represent two groups of values and to determine probable differences between Dutch and Russian consumers:

Values under individualism are those that in accordance with Hofstede (1980) individualism construct emphasize individual, personal interests, as well as personal uniqueness, independency of choice, and openness to new experience. These values include *power* value (e.g., social status, or dominance over people and resources), and *achievement* value (e.g., personal success through one's own efforts). Consumers that are more influenced by these values are those who seek for more convenient and time-saving ways to purchase groceries.

Values under collectivism stress collective interests, adherence to customary way of doing things, compliance to the opinions of a group, and concern for the well-being of others. This group of values include values of *tradition* (e.g., respect and commitment to cultural or religious customs and ideas), and *conformity* (e.g., restraint of actions and impulses that may harm others and violate social expectations). Consumers that are determined by these values are those who want to preserve the world as it is, and resist to change if they perceive new ideas to contradict with the opinions of other related individuals.

As Dutch people scored high and Russians scored low on individualism (Hofstede, 2001), in this study we are particularly interested in investigating if Dutch consumers would

also score high on the values under individualism (power and achievement), and whether Russian consumers would be more influenced by the values under collectivism (tradition and conformity). Moreover, we are going to examine whether adding value dimensions variables would impact consumers intentions to purchase groceries online. That is, whether Dutch consumers (as being influenced by individualist values) would be more intended to purchase both durable and perishable grocery products than would the Russian ones (as being influenced by collectivist values).

Apart from the information about personal differences between Dutch and Russian consumers, it also important to include the insights of the development of Dutch and Russian online shopping and OGS markets, which will be discussed in the following section.

1.5 Online shopping environments in the Netherlands and in Russia

During the last decade online food retail in Europe has emerged as a frontrunner among customers looking for more convenient and cost effective channels of grocery shopping (Deshpande et al., 2011). The growth of online food shopping has been diversified among the developed countries with nearly a half (48%) of Dutch Internet users (8.5 million people) have ever bought any products online (PostNord, 2014). The Dutch ecommerce industry was worth 10.6 billion euros in 2013, which is higher as compared to 9.75 billion euros in 2012 (EcommerceNews, 2012). In terms of behavioral attitudes, Dutch users with more Internet experience tend to buy online more than those whose Internet experience is short. Online buyers have more years of Internet experience, as well as a higher frequency of Internet use. Moreover, online buyers tend to enjoy buying groceries in a physical store less than do offline shoppers (Krizek, Li, & Handy, 2004). According to the Internet World Stats (2012), Internet penetration of the Dutch population reached 92 percent (15.4 million people) in 2011. For online shopping of all product categories in the Netherlands, clothing/footwear was the most popular category in 2013, with 38 percent of all online shoppers which is equal to 6.5 million people. 28 percent (4.8 million) purchased home electronics online last year, 24 percent of shoppers (3.9 million) preferred to buy books, 13 percent bought make up products and CDs, and 4 percent of online shoppers (0.7 million) bought food products online in 2013 (PostNord, 2014).

The Dutch online grocery shopping market is considered to be widely operationalized throughout the country. For instance, Dutch leading food retail company Ahold has its own online stores (e.g. Albert Heijn, Etos, Gall & Gall, bol.com), where consumers may place their orders and either receive them at their home, or at the pick-up points. In 2014, Albert Heijn offered totally 17 food pick-up points throughout the country (Ahold, 2013). In 2013, Ahold online stores grew 20 percent reaching 362 million euros, indicating that its online grocery business is developing steadily, however due to the difficulties in transportation and lower margin of the perishable food products, online grocery shopping still needs time to become a stronger business market (Thomasson, 2014).

The total volume of Russian online retail market size was estimated to \$19 billion in 2013 and ranked the 13th position of the global ecommerce market (GfK/Yandex, 2013). J'son & Partners Consulting (2012) expects the stable annual growth of the market amounting to 15-20 percent. That means that in 2020 the e-commerce market volume in Russia is predicted to reach more than \$60 billion. According to the Public Opinion Foundation (2013), 66 million people, or 57 percent of Russia's adult population, are connected to the Internet on a daily basis, with about 20 million people shopping online (17%), making Russia the second-largest market in Europe behind Germany. Electronics is the single biggest category in the Russian ecommerce, accounting for 40 percent of the market. The category is dominated by store-based retailers which employ online functionality to bring users to a broad variety of goods, where online stores stand for pre-ordering goods, which can be brought to offline stores or pick-up points within a few days (Goldman Sachs Ecommerce Research, 2013).

In 2011, Russian online grocery market was worth \$545 million and accounted for 5 percent of total Internet sales, as compared to American market which is one of the world largest markets accounting for \$6 billion (GAIN report, 2011). In 2012, Utkonos, one of the leading online grocery retailers in Russia, began selling grocery product via the online retail platform Wikimart, which is forecast to grow Utkonos' turnover by 3-4 percent. In 2011 Utkonos annual sales reached approximately \$300 million. At present, they handle 10000 orders per day. Generally speaking, OGS is not considered a well-established area in Russian ecommerce. Russian consumers generally are not accustomed to shopping for groceries online, and they rarely use the Internet for that purpose. It is still perceived to be less complicated to visit the local supermarket than to shop for groceries online. However, significant annual growth in Internet sales in recent years indicates that online grocery retailing has a potential for development.

Taking into account low general acceptance of groceries, the lack of research on consumers' behavior in online shopping environment in Russia, and the considerable well-developed Dutch online grocery shopping market, this study may provide new and useful insights for online grocery retailers about Russian and Dutch consumers' behavior to buy grocery products online.

2 Methodology

2.1 Instruments

The questionnaire consisted of 5 parts: personal information, experiences with off- and online shopping, personal values, determinants of intentions and intentions to buy groceries online.

Personal information

Questions were asked with respect to age, gender, level of education, marital status, residential area, and existence of own household (see (1) to (6)). (1) had an open answering format, (2) to (5) had two or more forced choice options, and (6) was answered with either *yes* or *no*.

- (1) *My age in a number of years is*
- (2) *I am a male / a female*
- (3) *The highest level of education that I have completed already, or that I am still studying on: Primary education / Basic secondary education / Vocational education (basic, middle level professional) / Complete secondary education / University*
- (4) *My marital status is Single / Married or in a domestic partnership / Divorced / Widowed*
- (5) *I live in the city center / a suburb / a rural area*
- (6) *I have a household of my own*

Experiences with off- and online shopping

Experiences with online shopping were questioned in terms of shopping experience, experiences with daily shopping, and actual shopping behavior.

Shopping experience was measured by 3 questions regarding doing daily shopping by oneself, place of doing daily shopping, and level of enjoyment of doing daily shopping (see (7) to (9)). The first two had two or more forced choice options, the latter was measured on a seven-point *agree/disagree* scale.

- (7) *I do the daily shopping myself every day / regularly / rarely / never*
- (8) *I do most of my daily shopping in a supermarket / elsewhere*
- (9) *Overall, I enjoy doing my daily shopping*

Experiences with daily shopping were determined for six cases. They are listed in Table 1: three positive ones (*pos1-3*), and three negative ones (*neg1-3*). Each item started with a phrase “*When doing my daily shoppings I experience consequences of...*” and has been scored with either *yes* or *no*. Table 1 also presents the results of the principal component analysis. This analysis resulted in two components that accorded with the a priori classification of the items and explained 48 percent of the variance. Reliability was low for both components (negative: Cronbach’s $\alpha=.41$; positive: Cronbach’s $\alpha=.45$). Therefore, these items have not been combined into scale scores; they were analyzed separately in the statistical evaluations.

Table 1 Loadings of items for daily shopping experiences after varimax rotation

		Positive	Negative
pos1	Having a lot of choices	.789	-.051
pos2	Going for discounts	.636	.040
pos3	Socializing with people	.611	.208
neg1	Facing crowded spaces	-.007	.731
neg2	Carrying bags	.004	.647
neg3	Waiting in lines	.219	.626
Percentage of explained variance		27.8	19.5

Note all scores higher than .50 are shaded

Actual online shopping behavior was measured with questions about usage of the Internet and experience with buying goods online.

Usage of the Internet was assessed by asking reasons of using the Internet. Each item started with the phrase “*I use the Internet for...*” and has been scored with either *yes* or *no*. Items are listed in Table 2. The factor analysis of the items resulted in 2 components with a total of 48 percent of the variance explained. The first group was determined by the items of transactional purposes (*Transact1-3*), the second factor by the items of communication purposes (*Communic1-3*). Reliability was fair for transactional usage of Internet (Cronbach’s $\alpha = .66$) and poor for communication usage (Cronbach’s $\alpha = .47$). Therefore, these items have not been combined into scale scores; they were analyzed separately in the statistical evaluations.

Table 2 Loadings of items for usage of the Internet after varimax rotation

		Transactional	Communication
Transact1	Buying goods	.813	-.009
Transact2	Banking online	.758	.143
Transact3	Making travel reservations	.704	.104
Communic1	Finding information	-.124	.787
Communic2	Reading news	.093	.691
Communic3	Sending emails	.104	.610
Percentage of explained variance		27.8	20.2

Note all scores higher than .50 are shaded

Experience with online buying was determined for seven products. They are listed in Table 3: four products were high-touch (*high1-4*), three were low-touch (*low1-3*). Each item started with the phrase “*I have already bought on line ...*” and has been scored with either *yes* or *no*. Table 3 also presents the results of the principal component analysis. This analysis resulted in two components that accorded with the a priori classification of the items and explained 51 percent of the variance. Reliability was fair for high-touch products (Cronbach’s $\alpha=.66$) and low for low-touch products (Cronbach’s $\alpha=.50$). Since the statistical evaluations showed

within both types no differences between products, scale scores are reported for high- and low-touch products.

Table 3 Loadings of items for experience with online shopping after varimax rotation

		High-touch	Low-touch
high1	Clothes	.759	.004
high2	Shoes	.743	.029
high3	Jewelry	.640	.324
high4	Make up	.557	.273
low1	CDs	-.057	.811
low2	Groceries	.153	.616
low3	Books	.321	.614
Percentage of explained variance		34.9	16.1

Note all score higher than .50 are shaded

Personal values

Personal values have been assessed for two dimensions: collectivism and individualism. All items are included in Table 4. Individualism was divided into achievement (*I-ach1-3*) and power values (*I-pow1-3*). Collectivism was divided into tradition (*C-tra1-3*) and conformity values (*C-con1-3*). Each item was scored on a seven-point *disagree/agree* scale. The actual relationship between items is verified by a principal components analysis using varimax rotation. This operation resulted in 4 components with a total of 75 percent of the variance explained, and was fully consistent with the a priori division of items. Table 4 specifies the factor loading per item. Reliability was good for each aspect (achievement: Cronbach's $\alpha = .84$; power: Cronbach's $\alpha = .83$; tradition: Cronbach $\alpha = .84$; conformity: Cronbach's $\alpha = .80$).

Table 4 Loadings of items for individualism and collectivism values after varimax rotation

		achievement	power	tradition	conformity
I-ach1	I like to finish things I have started	.879	.167	.069	.074
I-ach2	I like to get things accomplished	.854	.190	.151	.052
I-ach3	I like when things are done successfully	.789	.054	.106	.214
I-pow1	I like to be the one who gives orders	.092	.867	.000	.077
I-pow2	I like to be the one who's telling what has to be done	.039	.853	.000	.125
I-pow3	I like to be the one to decide what direction to take	.332	.818	.047	-.016
C-tra1	I try to follow old customs	-.010	.053	.829	.259
C-tra2	I try to preserve conventional practices	.184	-.049	.827	.318
C-tra3	I try to respect traditional manners	.185	.028	.812	.188
C-con1	I try to comply with socially accepted rules	.071	-.011	.272	.812
C-con2	I try to behave according to beliefs within my community	.180	.045	.226	.800
C-con3	I try to meet the expectations of others	.095	.205	.239	.761
Percentage of explained variance		35.5	19.8	12.3	7.8

Note all scores higher than .50 are shaded

Determinants of intentions

Three determinants have been measured: attitude, subjective norm, and perceived behavioral control.

Attitude towards buying groceries online was assessed for 2 aspects, each with 3 items: hedonistic (*Hed1-3*), and utilitarian (*Util1-3*). Each item started with the phrase “*Online shopping for groceries is ...*” and has been scored on a seven-point *disagree/agree* scale. The actual relationship between items is verified by a principal components analysis using varimax rotation. This operation resulted in 2 components with a total of 79 percent of the variance explained, and was fully consistent with the a priori division of items. Table 5 specifies the factor loading per item. Reliability was good for both aspects (hedonistic: Cronbach’s $\alpha = .89$; utilitarian: Cronbach’s $\alpha = .86$).

Table 5 Loadings of items for Attitude toward online grocery shopping after varimax rotation

		Hedonistic	Utilitarian
Hed1	Enjoyable	.888	.227
Hed2	Agreeable	.846	.354
Hed3	Pleasant	.782	.365
Util1	Practical	.208	.901
Util2	Convenient	.345	.811
Util3	Efficient	.424	.726
Percentage of explained variance		65.8	13.6

Note all scores higher than .50 are shaded

Subjective norm was measured with 2 items (see (10)), and perceived behavioral control with 5—(see (11)). Each item has been scored on a seven-point *disagree/agree* scale. Both subjective norms have been analyzed separately. The PBC items were combined into one scale; its reliability was good (Cronbach’s $\alpha = .67$).

(10) *My family members would think that buying groceries online is a good idea*
My close friends would think that buying groceries online is a good idea

(11) *Buying groceries online forces me to decide too quickly*
Buying groceries online seems to be a tedious procedure
Buying groceries online makes it hard to check the quality of products
Online grocery stores give too little product information
Online grocery shopping makes it difficult to compare products

Intentions to purchase groceries online were measured in two ways. The general intention to buy groceries online was measured with (12). The item has been scored on a seven-point *disagree/agree* scale.

(12) *If possible I would consider buying groceries via the Internet*

Specific intentions were measured for 14 grocery products, divided into 2 product types, with 7 goods in each type. All items are listed in Table 6. Seven products were durable goods (*Dur1-7*) and seven were perishable goods (*Per1-7*). Each product was scored with either *yes* or *no*. The actual relationship between items is verified by a principal components analysis using varimax rotation. This operation results in 2 components with a total of 55 percent of the variance explained, they were fully consistent with the a priori division of items. Table 6 specifies the factor loading per item. Reliability was good for both aspects (durable: Cronbach's $\alpha = .87$; perishable: Cronbach's $\alpha = .85$).

Table 6 Loadings of specific intentions to buy groceries online after varimax rotation

		durable	perishable
Dur1	Macaroni, rice	.795	.169
Dur2	Chips, cookies	.792	.192
Dur3	Soda drinks, juices	.781	.022
Dur4	Chocolate, candy	.742	.145
Dur5	Canned vegetables	.738	.187
Dur6	Beer, wine	.681	.174
Dur7	Frozen meals	.527	.422
Per1	Fresh vegetables	.077	.785
Per2	Fruits	.023	.738
Per3	Meat, fish	.015	.724
Per4	Bread	.286	.697
Per5	Milk, yoghurt	.263	.687
Per6	Cheese, butter	.260	.661
Per7	Pastry	.318	.543
	Percentage of explained variance	39.9	15.4

Note all scores higher than .50 are shaded

2.2 Description of participants

In all, 314 persons participated: 202 originated from Russia and 112 from the Netherlands. Russians consisted of 71 men and 131 women, the Dutch of 42 men and 70 women. Age ranged from 18 to 52 years, and was on average 24.1 years ($SD=4.8$; Russia: 23.6 years, $SD=3.8$; the Netherlands: 25.0 years, $SD=6.2$).

The target group of consumers for this study was chosen to be young people (younger than 30 years old), which has a number of biases. Primarily, younger consumers are known to be more active Internet users than are the older consumers, thus are more inclined to use the online channel when buying goods online (Raijas, 2002). The distribution of participants in this study according their age means that the results on participants' demographics hold for a particular part of consumers. That is, most participants were single (80%), resided in the city center (80%), held or followed university degree education (81%), and had no household of their own (77%). The majority of all respondents (60.8%) did daily shopping regularly by

themselves in a supermarket (90.1%) For none of these characteristics differences were found between countries (all X^2 's < 1.04, $p > .05$).

Table 7 shows the individualist and collectivist values in relation with country, together with the results of the statistical tests. Russian participants scored significantly higher than the Dutch ones on three values: achievement, conformity and tradition. No difference between Russians and Dutch was found for power. Both Russian and Dutch respondents scored higher on individualist values than on collectivist ones. Thus, the expectation for Dutch respondents to score higher than Russians on individualist values (power, achievement) was not confirmed. The estimation for Russian respondents to score higher than Dutch on collectivist values (tradition, conformity) was confirmed. Differences are small, however, and are far from any indication of a categorical difference between the countries.

Table 7 Individualist and Collectivist values in relation with country (score ranges from 1 to 7)

	the Netherlands	Russia	test
individualist power	5.31	5.24	$F < 1$
achievement	5.87	6.35	$F(1,312) = 16.58, p < .001, \eta_p^2 = .050$
collectivist conformity	4.39	5.04	$F(1,312) = 19.80, p < .001, \eta_p^2 = .060$
tradition	4.06	4.96	$F(1,312) = 36.59, p < .001, \eta_p^2 = .105$

Note Background of highest score is shaded if difference is statistically significant

2.3 Procedure

The questionnaire was conducted by implementing Qualtrics online survey software. The questionnaire was created in English first, then translated into Dutch and Russian (see Appendix 1, 2). The questionnaire consisted of 5 parts: personal information, experience with off- and online shopping, personal values, shopping groceries online, and intentions to buy groceries online. All the answer options in questions (from the second part of the questionnaire on) appeared in a randomized order. The questionnaire was distributed via emails and social networking sites (Facebook, vk.com) through the personal and professional networks of the author primarily to college and university students in Russia and in the Netherlands. Beyond necessary understanding of Russian or Dutch all participants had to be adults (18 years and older).

The questionnaire was introduced with (13). The questions about participants' experience with off- and online shopping were introduced with (14), the questions about personal values by (15).

- (13) *I kindly ask your cooperation with a questionnaire about online shopping. This survey is done on request of Communication Department of Tilburg University. The questionnaire is administered both in Russia and the Netherlands. With the results we want to*

investigate cultural differences between both countries. We thank you in advance for your cooperation. Kind regards, Nandin Tsydybey

- (14) *We now turn to a series of questions about the way you do your daily shopping, and how you use the Internet. Doing your daily shopping has both positive and negative aspects. We mention a number of these. Check for each aspect, whether it applies to your feeling.*
- (15) *People differ in the way they look at the world. Please mark to what extent you agree with the following statements*

The set of questions regarding shopping for groceries online, including participants hedonistic and utilitarian attitude, subjective norms, perceived behavioral control, and intentions to buy 2 types of grocery products was introduced by (16). Once all the questions were answered, participants were thanked with (17) for their contribution and participation.

- (16) *Online shopping means ordering products via the Internet. Then these products are delivered directly at your home. Nowadays it is becoming possible to order grocery products online as well. These products are either perishable or durable. Perishable goods include fresh fruits, vegetables, meat, yoghurt and bread. Durable goods include beverages, candy, rice, and coffee. If you would have the possibility to buy groceries online, what would be your response to that?*
- (17) *This is the end of the questionnaire! Your contribution is highly important for us! Tilburg University, The Netherlands, 2014*

2.4 Statistical analyses

Within item sets their clustering has been inspected with a principal component analysis with application of a varimax rotation. The homogeneity of the items loading sufficiently high on a component has been evaluated with Cronbach's alpha. If the result was unsatisfactory, items have been analyzed separately; if satisfactory, items have been combined into a single scale. Differences between the two participant groups have been evaluated with Chi-square tests for categorical responses and with one way Anova's for scale scores. In the latter case, for each significant result the partial eta-squared is reported (denoted with η^2). Differences between products in their purchase intention have been evaluated with pair-wise comparisons by a repeated measurements Anova. The predictive value of TPB-cognitions and personal values for purchase intention has been evaluated with a stepwise multiple regression analysis.

3 Results

3.1 Experiences with off- and online shopping

Table 8 presents the attitude towards doing daily offline shopping in relation with country. There was a significant difference between Dutch and Russian respondents. Russian respondents reported to enjoy doing daily offline shopping a bit more than the Dutch ones did.

Table 8 Attitude towards daily offline shopping in relation with country (score ranges from 1 to 7)

	the Netherlands	Russia	test
attitude towards daily shopping	4.79	5.16	F(1,312)= 5.29, $p < .025$, $\eta_p^2 = .017$

Note Background of highest score is shaded if difference is statistically significant

Table 9 shows for daily offline shopping the chance to feel positive and negative consequences in relation with country. There were significant differences between Russian and Dutch respondents. For the positive outcomes of daily shopping, Russians reported to experience significantly more of having a lot of choices than did the Dutch. For the negative outcomes, Russian respondents reported to experience more of waiting in lines than did the Dutch ones. Dutch respondents reported to experience more of facing crowded spaces, than did Russian respondents.

Table 9 For the consequences of daily shopping the chance to experience them in relation with country (score ranges from .00 to 1.00)

	The Netherlands	Russia	test
positive socializing with people	.52	.56	F<1
having a lot of choices	.63	.74	F(1,312)= 4.12, $p < .05$, $\eta_p^2 = .013$
going for discounts	.54	.56	F<1
negative waiting in lines	.63	.74	F(1,312)= 4.12, $p < .05$, $\eta_p^2 = .013$
carrying bags	.51	.50	F<1
facing crowded spaces	.38	.26	F(1,312)= 4.37, $p < .05$, $\eta_p^2 = .014$

Note Background of highest score is shaded if difference is statistically significant

Table 10 presents for Internet activities the chance to perform them in relation with country. For all the activities under transactional type Dutch respondents scored higher than Russian ones. For the communication activities, Russians scored significantly higher on searching information, than did the Dutch.

Table 10 Chance to perform an internet activity in relation with country (score ranges from .00 to 1.00)

	the Netherlands	Russia	test
Transactional			
Banking online	.70	.57	$F(1,312) = 4.96, p < .05, \eta_p^2 = .016$
Making travel reservations	.64	.41	$F(1,312) = 16.21, p < .001, \eta_p^2 = .049$
Buying goods	.69	.54	$F(1,312) = 6.62, p < .05, \eta_p^2 = .021$
Communication			
Searching information	.94	1.00	$F(1,312) = 9.86, p < .05, \eta_p^2 = .031$
Reading news	.88	.94	$F(1,312) = 2.56, p = .11$
Sending emails	.92	.93	$F < 1$

Note Background of highest score is shaded if difference is statistically significant

Table 11 presents the chance to buy a product type in relation with country. For both product types Dutch participants scored higher than the Russian ones. This difference was larger for low-touch products than for high-touch ones. The Dutch did not make difference between product types; the Russians scored higher for high-touch than for low-touch goods.

Table 11 Chance to buy a product type in relation with country (score ranges from .00 to 1.00)

	the Netherlands	Russia	test
high-touch	.45	.34	$F(1,312) = 8.71, p < .05, \eta_p^2 = .027$
low-touch	.42	.20	$F(1,312) = 46.51, p < .001, \eta_p^2 = .130$

Note Background of highest score is shaded if difference is statistically significant

Table 12 presents for several low- and high-touch items the chance of purchasing them in relation with country. For all low-touch goods Dutch respondents scored higher than the Russian ones. Particularly, significantly more of Dutch respondents had ever carried out a purchase of CDs, books, and groceries, than had Russian respondents. For the high-touch items, Dutch respondents scored significantly higher on shoes and jewelry. No difference was found for clothes and make-up.

Table 12 Chance to buy low-touch and high-touch products in relation with country (score ranges from .00 to 1.00)

type	item	the Netherlands	Russia	test
low-touch	books	.54	.36	$F(1,312) = 10.12, p < .05, \eta_p^2 = .032$
	groceries	.46	.13	$F(1,312) = 50.12, p < .001, \eta_p^2 = .138$
	CDs	.26	.09	$F(1,312) = 17.11, p < .001, \eta_p^2 = .052$
high-touch	clothes	.68	.58	$F(1,312) = 3.01, p = .08$
	make-up	.34	.28	$F(1,312) = 1.32, p = .25$
	shoes	.46	.30	$F(1,312) = 7.52, p < .05, \eta_p^2 = .024$
	jewelry	.33	.20	$F(1,312) = 6.93, p < .05, \eta_p^2 = .022$

Note Background of highest score is shaded if difference is statistically significant

3.2 Determinants of shopping intentions

Table 13 presents attitude, subjective norms, and perceived behavioral control in relation with country. Russians scored higher than the Dutch on subjective norm of family members, whereas the Dutch scored higher than Russians on perceived behavioral control.

Table 13 Attitude, subjective norm, and perceived behavioral control in relation with country (scores range from 1 to 7)

		the Netherlands	Russia	test
Attitude	hedonistic	4.15	4.12	F<1
	utilitarian	4.69	4.83	F<1
Subjective norm	family	3.95	4.19	F(1,312) = 1.59, p <.05, η_p^2 =.005
	friends	3.52	3.54	F<1
PBC		3.71	3.44	F(1,312) = 4.70, p <.05, η_p^2 = .015

Note Background of highest score is shaded if difference is statistically significant

3.3 Intentions for shopping groceries online

Table 14 shows the general intention to buy groceries online in relation with country. There was a significant difference between the general intentions to buy groceries of Russian and Dutch respondents. Russian respondents scored higher than did the Dutch ones.

Table 14 Intentions to buy groceries online in relation with country (score ranges from 1.00 to 7.00)

	the Netherlands	Russia	test
intentions	4.66	5.10	F(1,312) = 4.47, p <.05, η_p^2 =.014

Note Background of highest score is shaded if difference is statistically significant

Table 15 presents the chance of purchasing two grocery product types in relation to country. There is no difference found between Dutch and Russian respondents with respect to their intentions to buy durable or perishable products. Both Dutch and Russians score higher on durable products than on perishable products.

Table 15 For two grocery product types the chance to buy them in relation with country (score ranges from .00 to 1.00)

	the Netherlands	Russia	test
durable	.65	.63	F < 1
perishable	.30	.25	F(1,312) = 1.61, p=.21

Note Background of highest score is shaded if difference is statistically significant

Table 16 presents for all grocery products the chance to buy them online for the two countries together. The grouping of the products is based on the pair-wise comparisons in a repeated measurement ANOVA. This analysis resulted in 9 clusters. The lowest chance was attributed to meat and fish, the highest to beer and wine. All durable products had a higher chance to be bought online than each of the perishable products.

Table 16 Ordering of grocery products on the basis of their chance to buy them online (score ranges from .00 to 1.00)

Perishable				Durable				
meat fish	fresh vegetables	cheese butter fruits milk yoghurt	pastry bread	frozen meals	chips cookies canned vegetables	soda drinks juices macaroni rice	chocolate candy	beer wine
.17	.24	.28	.33	.46	.61	.67	.71	.74

3.4 Potential determinants of intention

Table 17 shows - in relation with product type and country - the results of a regression analysis with intention as criterion and the cognitions and values as predictors. For the scores that contributed significantly to the regression model, the beta coefficients are reported.

Table 17 Beta coefficients of potential determinants of intention in relation with product type and country

		Durable		Perishable	
		The NL	Russia	The NL	Russia
cognitions	Attitude utilitarian	.066**	.076***	.074***	.035*
	Attitude hedonistic	-	-	-	-
	Subjective norm family	-	-	-	-
	Subjective norm friends	-	.038*	-	.031*
	Perceived Behavioral Control	-	-	-	.037*
values	Achievement	-	-	-	-.042*
	Power	-	-	-	-
	Conformity	-	-	-	-
	Tradition	-	-.058**	-.043*	-
	Multiple Correlation	.261	.463	.349	.361
	MR ²	.068	.214	.122	.090

Note * p < .05 ** p < .01 *** p < .001

The utilitarian attitude appeared in each model; it is the strongest predictor of the intention to buy groceries online. Actually, for the Dutch it is the only factor with predictive power, apart from the small negative contribution of tradition for perishable products (the more conservative, the less inclined to go online for these products). With the Russians the

intentions proved to depend on a number of other factors as well, be it in an unsystematic way. With durable products the subjective norm of friends had a positive effect and tradition a negative one. Perishable products showed positive effects of subjective norm of friends and perceived behavioral control and a negative one of achievement. In conclusion, the cognitions identified in the Ajzen (1991) model contributed most to the prediction of the intention, the personal values derived from the Hofstede taxonomy had little to add.

4 Discussion

4.1 Key findings and implications

Off- and online shopping experience

There has been a number of studies examining consumers behavior in different spheres of Internet usage and online shopping (Chu et al., 2010; Shim et al., 2001; Donthu & Garcia, 1998). As stated by Shim et al. (2001) Internet shopping requires particular skills, experiences, and resources, therefore, it is crucial to obtain information about consumers' usage of the Internet and their experience with online shopping. According to the results, Russian consumers enjoy physical daily shopping more than do the Dutch ones. Among the reasons for enjoying physical daily shopping, the Russians emphasized availability of many product choices, whereas the Dutch stressed facing crowded spaces as a major disadvantage of the physical daily shopping. This finding corresponds to the general development of Dutch and Russian online shopping environments, implying that Russian consumers, as being generally less accustomed with online shopping and not having available alternatives to physical shopping, enjoy doing their daily shopping in physical shops more, than do Dutch consumers. The Dutch, on the other hand, have more opportunities to compare different channels and evaluate each on potential benefits, thus they no longer appear to especially enjoy doing daily shopping offline (Post Nord, 2014).

For the Internet usage, Dutch respondents reported to be more active than the Russians, when it comes to transactional Internet usage. Particularly, more of Dutch consumers stated that they use banking online, make travel reservations, and buy various goods, than did Russian consumers. Significantly more of Dutch consumers have bought online several high-touch goods, and all of the presented low-touch products including groceries, than have the Russian ones. These results on a greater Internet activity, and greater online shopping experience of the Dutch in comparison with the Russians are in accordance with the knowledge on the Internet penetration in two countries (92% in the Netherlands, and 57% in Russia), as well as the percentage of online shoppers in the Netherlands (48%) and in Russia (17%) (Post Nord, 2014; Public Opinion Foundation, 2013).

Determinants of OGS intentions

According to the results, attitude is the best predictor of intentions to buy groceries, which is in line with other studies on Ajzen's (1991) theory of planned behavior in online shopping (Truong, 2009; Choi & Geistfeld, 2004). More specifically, utilitarian dimension of attitude is the strongest predictor of the intentions, which corresponds to the prior study on Internet shopping motivations by To et al. (2007). To et al. (2007) stated that utilitarian dimension of attitude, which is motivated by convenience, efficiency, and practicability of conducting a service, have the biggest influence on the intentions to search and purchase products via the Internet. As for additional cognitions of TPB, only for Russian consumers SN of friends and PBC demonstrate minor effect for intentions. These findings on predicative power of cognitions presented by Ajzen (1991) demonstrate the indisputable importance of practical

characteristics of OGS for consumers' intentions over other cognitions of TPB, in other words, efficiency and convenience of an online grocery store in consumers' decision-making when considering ordering groceries via the Internet.

As for the general intentions to buy groceries online, Russian consumers, despite of having less experience with the general online shopping and less developed OGS market, generally are more willing to start purchasing grocery products via the Internet. This result contradicts with our initial expectation that Dutch consumers would be more willing to buy groceries online than would the Russians due to a better developed online shopping market. According to GAIN report (2011), as Russian general online market shows significant annual growth in recent years, the interest of Russian consumers to use OGS leads to promising possibilities of Russian online grocery market to evolve in the future.

Grocery product type preference

There has been an abundance of previous studies on consumer behavior that have focused primarily on the product types in general online shopping and in OGS. However, little attention was paid to the differentiation of grocery product type preference in OGS cross-culturally, particularly on the two product types: durable and perishable edible goods. The results of this study contribute to a sparse literature on product type preference in online grocery shopping of Dutch and Russian grocery markets.

One of the key findings of the study includes evidence on durable product type preference among Dutch and Russian consumers. Both Dutch and Russian consumers indicated durable grocery products to be a more desirable category of goods than perishable products, regardless of their nationality. All durable product items within the category are more preferred by both groups of consumers than each of the perishable products. These findings are in line with the other studies by Hays et al. (2006) and Schuster & Sporn (1998), which stated that durable grocery products are more popular among online consumers, primarily because these products have a considerably long shelf life, are clearly standardized, so consumers feel certain about the quality, and thus are more likely to give their preference to durable goods. The least popular perishable products are meat and fish, implying that the transportation vulnerability of the items, as well as inability to inspect the quality of these goods prior to purchase still plays a crucial role in making consumers consider buying these items via the Internet. The most popular durable grocery item was beer and wine, which indicates that consumers generally don't feel the need to check the quality of these products and control the transportation, when considering purchasing them online. Consumers perceive beer and wine to be more distinctly standardized, having a strong packed format and a long shelf life, comparing to any of the perishables and other durable goods.

Consumers' personal values and I-C

As for individualism-collectivism value distinction, consumers didn't show significant difference in relation with country. In other words, Dutch respondents didn't outperform the Russians on the values under individualism as expected, rather, both groups of consumers scored higher on the values under individualism than on the values under collectivism. It was

also expected, in accordance with Hofstede's (1980) cultural theory, that Dutch consumers as being impacted by individualist values would be more willing to purchase both types of grocery products via the Internet, than would the Russian ones. Our results failed to support this expectation either. Adding value distinction as a measurement of personal differences of consumers didn't play a crucial role neither in determining the intentions to buy groceries online, nor in classifying Dutch and Russian consumers along the values under individualism versus collectivism. Personal values distinctions played rather an additional minor role in predicting consumers' intentions to buy groceries online. That is, the results suggest that potential online grocery shoppers that are more conservative are less likely to purchase groceries via the Internet, regardless of their nationality.

As stated by Michailova & Hutchings (2006) and Rassadina (2006), due to globalization, political and economical changes in Russian society during the last 25 years (e.g. dissolution of the Soviet Union in 1991, consequent transition from communist political regime to a democratic one, and switch towards market economy in 1991) Russian culture gradually started to become more individualist. Moreover, Rassadina (2006) stated that after the "stabilization" of Russian economy in 1996, values that commonly had high preference, such as tradition and conformity (values under collectivism), have started to be replaced by values that associate with Western economy, namely, power and achievement (values under individualism). Taking into account changes driving Russian culture from highly collectivist to a more individualist, and gradual transformation of dominant values, it may well be a possible explanation of no differences in personal values and I-C between Dutch and Russian consumers in this study.

Adding value distinction as a measurement of personal differences of consumers didn't play a crucial role neither in determining the intentions to buy groceries online, nor in classifying Dutch and Russian consumers along the values under individualism versus collectivism. It is also possible that the differences between the Netherlands and Russia in our study are mainly determined by dissimilarities in the development of general online markets, and online grocery markets of the two countries in particular, rather than by single cultural characteristics of the Dutch and the Russians.

As noted above, this study has theoretical implications in that it supports the findings of previous studies on the determinants of intentions to buy grocery products online (To et al., 2007; Ajzen, 1991), as well as on product preference in OGS (Hays et al., 2006; Schuster & Sporn, 1998). This study also lays a foundation for further analysis into the role of a particular grocery market. More specifically, the results disprove the findings of Oishi et al. (1998) and Jayawardhena (2004) and demonstrate that value distinctions along individualism don't appear to be critical in explaining consumers' intentions to purchase grocery products via the Internet. It is rather the efficiency, convenience of OGS, and the ability to satisfy practical goals that makes consumers willing to make grocery purchases via the Internet.

4.2 Limitations and future research

This study was subject to a number of limitations. Firstly, we didn't take into account the geographic nature of consumers' residence according to provinces (for the Dutch) and federal districts (for Russian citizens) in which consumers reside. For instance, according to Russia retail report (2011) residents of the Central and North-Western Russian regions with their larger population, advanced ways of transportation and a better development of ecommerce are more familiar with online shopping, and consequently may be more willing to participate in OGS, as compared to the residents of Siberian or Far East region of Russia. Obtaining knowledge on Russian consumers' residence according the federal districts in the future studies may shed more light and give new insights about consumers' online shopping behavior.

Moreover, we didn't take into consideration sizes of the two countries. Russia is the world's biggest country with longer distances between built-up areas than the Netherlands. It may well be that consumer behavior in online shopping is impacted by the density of cities or any important sights, than merely the developments of the markets.

In terms of product category, we compared durable and perishable grocery products, which together comprised 14 product items. Future studies may include a larger number of grocery product items in order to come up with a more detailed picture and deeper insights on products which are either more or less desirable to be bought via the Internet.

Furthermore, we only picked individualism and four personal values as major factors of Dutch and Russian consumers' personal differences based on Hofstede's (1980) individualism dimension and Schwartz' (1992) theory of personal values. This distinction didn't yield significant results and didn't contribute to the expectations of consumers' intentions to purchase grocery products online. Future studies on consumer online behavior may focus more on the differences between online shopping environments of the countries in question.

Overall the subject of this study is uniquely interesting and deserves further investigation through additional research. Understanding the role that product type plays in online shopping, and in online grocery shopping of particular markets, will provide us with valuable information to emphasize and develop the promotion of certain types of groceries in order to make consumers more familiar and, as a result more willing to engage in online grocery shopping.

4.3 Conclusion

The results of the study give answers to the research questions mentioned at the beginning. This study suggested that utilitarian attitude is the best determinant of consumers' intentions to purchase groceries via the Internet. The more preferable grocery products category is durable goods, which contributes to the previous studies on grocery product preferences.

Additionally, the inclusion of values distinction in investigating the potential personal differences between Dutch and Russian consumers didn't contribute to the knowledge on consumer behavior. Contrary to the initial expectations, Dutch consumers didn't report to be more strongly impacted by the values under individualism (power, achievement) than did the Russians, instead, both groups of consumers scored equally high on these values. Value distinction also didn't provide insights on the product preference in the context of OGS. Consumers preferred to buy durable grocery products over the perishable ones, regardless of their value preferences and the country.

In conclusion, this study allows to better understand the determinants of consumers' intentions to purchase grocery goods online, and the overall preference of durable products over the perishable ones. The findings of the study add to the evidence of previous literature on OGS that may serve as a basis for predicting consumer behavior in the context of Dutch and Russian online grocery markets.

4.4 Advice for online marketers

The findings of the study can be used as advice for online marketers in order to improve their current marketing strategy.

As the results demonstrated, durable products were generally more preferred over the perishable ones. Among perishable grocery category, meat and fish were the least likely to be bought by consumers. Similarly, within the durable category, frozen meals were the least popular among consumers. These insights may be taken into account by grocery stores, so they put more emphasis in advertising these product items on their web stores, as well as in their physical stores. Additionally, online grocers may promote all the perishable products by explicitly stating that their store provides safe and reliable ways of transportation of these vulnerable goods.

The most preferable single product items among all goods were beer and wine, which suggests putting more stress on these products in the OGS advertisements. Particularly, grocers may provide discounts on buying beer and wine, as well as on other drinkable commodities, when ordering online.

The results also suggested that for Russian consumers specifically, subjective norm of friends played a considerably influential role in intentions to purchase both perishable and durable grocery goods online. This suggests that consumers, who perceive that their close friends approve using of OGS, would be more likely to intend on buying groceries online. Online marketers may take this into consideration and accentuate the importance of "word-of-mouth" promotions, so that consumers who have already bought groceries online recommend doing the same to their friends.

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Appendix I. Dutch version of the questionnaire

Mijn leeftijd in jaren is

Ik ben een

- man
- vrouw

De hoogste opleiding die ik reeds heb afgerond, of waar ik nog mee bezig ben:

- Basisonderwijs
- Voorbereidend middelbaar beroepsonderwijs (vmbo, mavo, LTS, LHNO)
- Algemeen voortgezet onderwijs (mulo, havo)
- Voorbereidend wetenschappelijk onderwijs (atheneum, gymnasium, HBS)
- Middelbaar beroepsonderwijs
- Hoger beroepsonderwijs
- Universiteit

Mijn burgerlijke staat is:

- vrijgezel
- getrouwd / geregistreerd partnerschap
- gescheiden
- weduwe / weduwnaar

Ik woon in

- het centrum van de stad
- een buitenwijk
- een landelijk gebied

Ik voer een eigen huishouden

- ja
- nee

Ik doe de dagelijkse boodschappen zelf

- iedere dag
- regelmatig
- zelden
- nooit

Ik doe het merendeel van mijn dagelijkse boodschappen in

- een supermarkt
- elders

Over het algemeen vind ik het leuk om mijn dagelijkse boodschappen te doen

- volledig wel mee eens neutraal volledig niet mee eens

Als ik mijn dagelijkse boodschappen doe, dan ervaar ik gevoelens door

- ja nee

wachten in de rij
omgaan met mensen
dragen van tassen
rijkdom aan keuzes

rondlopen in drukke ruimtes
zoeken van aanbiedingen

Ik gebruik het Internet om: ja nee

het nieuws te lezen
online bankzaken te regelen
informatie op te zoeken
games te spelen
emails te versturen
artikelen te kopen
reizen te boeken

Online heb ik ooit wel eens gekocht ja nee

kleding
levensmiddelen
make up
schoenen
CDs
sieraden
boeken

Mensen verschillen in hun kijk op de wereld.

Geef aan in welke mate u het eens bent met de volgende stellingen.

- volledig wel mee eens neutraal volledig niet mee eens
- Ik ben graag degene die zegt wat er moet gebeuren
Ik probeer om me aan vertrouwde gewoontes te houden
Ik heb graag dat zaken afgemaakt worden
Ik probeer me te houden aan maatschappelijk geaccepteerde regels
Ik ben graag degene die bepaalt welke kant we op zullen gaan
Ik probeer om ingeburgerde omgangsvormen aan te houden
Ik heb graag dat ik afmaak waar ik aan ben begonnen
Ik probeer te voldoen aan de verwachtingen van anderen
Ik ben graag degene die de bevelen geeft
Ik probeer om traditionele manieren in ere te houden
Ik heb graag dat zaken succesvol worden afgewerkt
Ik probeer me te gedragen naar de regels van de samenleving

Online winkelen voor levensmiddelen is

prettig
handig
plezierig
gemakkelijk
aangenaam
praktisch

- volledig wel mee eens neutraal volledig niet mee eens

Door online levensmiddelen te kopen wordt ik gedwongen om te snel te beslissen

Mijn familieleden zullen positief staan tegenover het online kopen van levensmiddelen

Door online levensmiddelen te kopen kun je de kwaliteit van producten slecht controleren

Online bedrijven voor levensmiddelen geven te weinig product informatie

Het online kopen van levensmiddelen schijnt nogal moeizaam te gaan

Mijn vriendenkring zal positief staan tegenover het online kopen van levensmiddelen

Het online kopen van levensmiddelen maakt het moeilijk om producten met elkaar te vergelijken

- volledig wel mee eens neutraal volledig niet mee eens

Als het mogelijk zou zijn, dan zou ik overwegen om levensmiddelen te kopen via het Internet

- volledig wel mee eens neutraal volledig niet mee eens

Ik zou belangstelling hebben om de volgende producten via het Internet te kopen:

- ja nee

Fruit

Limonade, sap

Vlees, vis

Macaroni, rijst

Gebak

Chips, koekjes

Melk, yoghurt

Diepvries maaltijden

Kaas, boter

Chocolade, snoep

Brood

Groentes in blik

Verse groentes

Bier, wijn

Appendix II. Russian version of the questionnaire

Мой возраст в годах:

Мой пол:

- мужской
- женский

Наивысший уровень образования который я уже получил(а), или до сих пор получаю:

- начальное образование
- основное общее образование (неполное)
- среднее общее образование (полное)
- среднее профессиональное образование
- высшее образование

Мое семейное положение:

- не женат/не замужем
- женат/замужем или гражданском браке
- разведен
- вдовец/вдова

Я живу

- городе
- в пригороде
- в сельской местности

У меня есть свое домашнее хозяйство

- да
- нет

Я совершаю повседневные покупки

- каждый день
- регулярно
- редко
- никогда

Большинство своих повседневных покупок я осуществляю

- в супермаркете
- в другом месте

В целом, я получаю удовольствие от совершения повседневных покупок

- полностью согласен
-
- нейтрально
-
- полностью несогласен

Совершая повседневные покупки, я чувствую эффекты:

- да
- нет

ожидания в очередях

взаимодействия с людьми

переноски тяжелых сумок

наличия большого ассортимента продуктов

нахождения в тесном помещении

доступности различных скидок и предложений

Я использую Интернет для:

да нет

чтения новостей
использования онлайн банков
поиска информации
компьютерных игр
отправки электронных писем
покупки товаров
бронирования путешествий

Я уже покупал(а) через Интернет:

да нет

одежду
продукты питания
косметику
обувь
CD диски
бижутерию
книги

Люди различаются в своих взглядах на жизнь.

Отметьте, насколько вы согласны со следующими утверждениями:

полностью согласен нейтрально полностью несогласен

Мне нравится быть тем, кто говорит, что нужно делать

Я стараюсь следовать старым традициям

Мне нравится доводить дела до конца

Я стараюсь соответствовать общепринятым правилам

Мне нравится быть тем, кто определяет направление

Я стараюсь сохранять традиционные устои

Мне нравится заканчивать начатое

Я стараюсь соответствовать ожиданиям окружающих

Мне нравится быть тем, кто отдает указания

Я стараюсь чтить устоявшиеся обычаи

Мне нравится, когда моя работа выполнена успешно

Я стараюсь вести себя согласно нормам моего окружения

Покупка продуктов питания онлайн является

полностью согласен нейтрально полностью несогласен

приятным занятием

эффективным занятием

занимательным занятием

удобным занятием

привлекательным занятием

практичным занятием

- полностью согласен нейтрально полностью несогласен

Покупка продуктов питания онлайн заставляет принимать решения слишком быстро;

Члены моей семьи сочли бы покупку продуктов питания онлайн хорошей идеей;

Покупая продукты питания онлайн, сложно контролировать качество приобретаемых товаров;

Онлайн супермаркеты предоставляют недостаточно информации о продуктах;

Покупка продуктов питания онлайн кажется трудоемким занятием;

Мои близкие друзья сочли бы покупку продуктов питания онлайн хорошей идеей;

Покупая продукты питания онлайн, тяжело сравнивать разные товары;

Я бы рассмотрел(а) возможность покупки продуктов питания онлайн

- полностью согласен нейтрально полностью несогласен

Я был(а) бы заинтересован(а) в покупке следующих продуктов через Интернет:

- да нет

Фрукты

Газированные напитки, соки

Мясо, рыба

Макаронные изделия, крупы

Выпечка

Чипсы, печенье

Молоко, кефир

Замороженная пицца

Сыр, сливочное масло

Шоколад, конфеты

Хлеб

Консервированные овощи

Свежие овощи

Пиво, вино