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SELECTION CRITERIA OF RUSSIAN CONSUMERS IN THE ORGANIC FOOD MARKET: COUNTRY OF ORIGIN PERCEPTIONS

Master's Thesis by the 2nd year student

Concentration — General Track

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ЗАЯВЛЕНИЕ О САМОСТОЯТЕЛЬНОМ ХАРАКТЕРЕ ВЫПОЛНЕНИЯ ВЫПУСКНОЙ КВАЛИФИКАЦИОННОЙ РАБОТЫ

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АННОТАЦИЯ

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Описание цели, задач и основных результатов	Цель исследования - изучить восприятие российскими потребителями органических продуктов питания из разных географических регионов и определить, есть ли предпочтение в отношении органических продуктов, производимых на местном рынке, органических продуктов из России или других стран. Опрос потребителей был проведен в марте-апреле 2017 года. Всего было опрошено 76 потребителей в Санкт-Петербурге и 60 в Москве. Были идентифицированы 3 кластера российских потребителей в зависимости от их предпочтений страны происхождения органических продуктов. Была построена регрессионная модель для оценки восприятия органического детского питания из 16 стран российскими потребителями по их индивидуальным характеристикам (возраст, доход, образование). Результаты могут быть использованы маркетологами, работающими на российском рынке органических продуктов (продвигающих как российские, так и импортные органические продукты).
Ключевые слова	органические продукты, детские органические продукты, страна происхождения, эффект страны происхождения, российский рынок продуктов

ABSTRACT

Master Student's Name	Manolova Irina
Master Thesis Title	Selection criteria of Russian consumers in the organic food market: country of origin perceptions
Faculty	Graduate School of Management
Main field of study	Management
Year	2017
Academic Advisor's Name	Maria M. Smirnova
Description of the goal, tasks and main results	The goal of the study is to explore Russian consumers' perception of organic food from different geographical origins, and identify whether there is a preference for organic food produced locally, organic food from Russia or other countries. The questionnaire was completed in March-April 2017. In total, 76 consumers were interviewed in Saint-Petersburg and 60 in Moscow. Three clusters were identified by how Russian consumers perceive organic food from different origins. The regression model was built to evaluate the perceptions of organic baby food from 16 countries by Russian consumers by their individual characteristics (age, income, education). The implications can be used by marketers who operate in the Russian organic food market (both promoting domestic and imported organic food).
Keywords	organic food, organic baby food, country-of-origin, COO effect, Russian food market

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INTRODUCTION

Background

Health and environmental influences (e.g. pesticides, genetically modified organisms, and other non-natural substances used to grow agricultural production) have spurred consumer and marketer interest in organic foods. The organic market has recently developed considerably and is widely regarded as one of the biggest growth markets in the food industry. Organic foods are perceived as more nutritious, as well as healthier, safer, and more environmentally friendly. Given the fast and accelerating demand for and sales of organic foods, understanding the significant factors that affect consumer organic food purchasing behaviour is essential for organic product producers, suppliers, marketing specialists, policy makers, and green restaurateurs to implement successful marketing strategies.

Organic baby food products are produced from organically grown ingredients and processing it naturally without any addition of the chemical. The emerging interest in well-being, consciousness for greener products and awareness among the customers about the availability of safer food products is supposed to fuel the market growth for organic food shortly.

Growing urbanisation coupled with increasing disposable income in Russia is driving growing acceptance for organic baby food goods, not only among the high-income society but also the middle – income society. Moreover, increasing customer awareness for healthier and greener goods in support with parental attention for feeding their child with chemical free products is providing towards a developed demand for organic baby food products in Russia.

Problem statement

To state the relevant research problem, the literature review had been conducted to evaluate the factors that affect organic food purchase. After the literature review was conducted, we identified that despite the colossal literature on consumer preferences for country-of-origin on the one hand and organic food on the other, research on country-of-origin effects in the context of organic food is limited. More profoundly, there is a lack of research on how consumers estimate imported organic food goods.

Therefore, we are going to concentrate on country-of-origin factor to investigate Russian consumers' perceptions and attitudes towards organic food from different origins. The problem is to identify organic food shopping orientations that influence the decision-

making process for Russian consumers and observe the results depending on the region where consumers live – Moscow or Saint-Petersburg. Our study goes one step further by identifying comparisons between regular and occasional buyers of organic food. The cluster analysis will be used to explore Russian consumers' country-of-origin preferences towards organic food.

Purpose of the study

This paper aims to fill this research gap through an in-depth analysis of Russian organic food market, and particularly organic baby food market.

The goal of the study is to explore Russian consumers' perception on organic food from different geographical origins, and identify whether there is a preference for organic food produced locally, organic food from Russia or other countries.

The objectives of this study are:

- to display the differences of country-of-origin perceptions towards organic food based on the region where Russian consumers live;
- to investigate shopping orientations through a factor analysis of responses to psychographic statements related to organic food shopping, and to identify consumer segments by clustering respondents by their scores across the shopping orientation;
- to profile each of the organic food shopping segments on the perception of domestic vs. foreign food images;
- to investigate how Russian consumers perceive organic baby food depending on country-of-origin;
- to formulate managerial implications for the companies to improve their marketing strategies for promoting the consumption of locally and nationally produced organic food, and to create a theoretical multidisciplinary model of the main factors affecting consumer behaviour in a food domain and to show the place of «origin» factor.

Research questions

The following research questions were addressed to investigate Russian consumers' perception of organic food:

RQ1. How do Russian consumers perceive locally and nationally produced organic food compared to organic food imported from other countries?

RQ2. Are there any differences in consumer perception of organic food among consumers in Saint-Petersburg and Moscow?

RQ3. Are there any differences in consumer perception of organic food between regular and occasional buyers of organic food?

RQ4. When making decisions for purchasing organic baby food, the country-of-origin is more important for Russian consumers than brand name?

RQ5. What are Russian consumers' price-quality perceptions of countries-of-origin importing organic baby food to Russia?

Structure of the study

This research paper consists of the introduction, 4 chapters, references. The first chapter is devoted to the literature review of the concept of country-of-origin effect with a focus on the organic food market. The second chapter describes the methods which are used in this research paper and the justification of used tools presented there. The third chapter contains results and discussion and the last one - theoretical and practical contribution, limitations and suggestions for future research.

1. THEORETICAL BACKGROUND

1.1 Introduction

Over the last decade, the organic food segment has been one of the fastest-growing sectors of the global food market (Sahota, 2015). In 2014, global retail purchases of organic food and drink amounted to 80 billion US dollars, which is a fivefold increase in turnover since 1999 (Sahota, 2015). In some regions, the demand for organic food is growing considerably faster than domestic production and supply. This supply shortage has led to high import shares for many organic goods. Consequently, local consumers are presented with a variety of organic products from different country-of-origins and consider and develop preferences also based on this factor.

A stream of research has investigated the role of country-of-origin in shaping consumers' perceptions, preferences, and purchase behaviour (Newman et al., 2014). Moreover, the researchers have identified that the impact of country-of-origin on consumer choices is one of the broadly researched topics in global marketing and consumer behaviour, and there is a broad range of contingencies and moderators of country-of-origin effects (Pharr, 2005). The essential part of consumer demand for the development of the organic market has also given rise to the growing number of literature reviews (Aschemann-Witzel and Zielke, 2015; Hemmerling et al., 2015; Rodiger and Hamm, 2015).

This chapter provides a study of the literature on consumers' decision making regarding country-of-origin effects and regarding organic food goods, mainly concentrating on the yet rare combination of the two.

1.2 Country-of-origin effects

1.2.1 Basic constructs

The role of country-of-origin in shaping customers' perceptions, preferences and buying habits is one of the oldest and most widely researched issues in the global marketing and consumer behaviour literature (Dekhili and Achabou, 2014), resulting in a vast number of publications (Papadopoulos, 2012). According to a comprehensive review of this research, the «seemingly unequivocal conclusion» is that «a product's country-of-origin can influence consumers' evaluative judgments of the product» (Pharr, 2005). Also, research has identified culturally derived antecedents of country-of-origin effects as well as some both product-based and individual consumer determinants moderating these effects (Pharr, 2005).

Insch and Florek (2009) suggest three main reasons to account for country-of-origin information on product labels and packaging. First, country-of-origin may serve as a quality indicator for a product. Second, place references may appeal to customers, who developed a preference for products from a particular origin based on several psychological theories like consumer ethnocentrism, self-image, and status. Third, a country's positive image may be used to emphasise positive links between the product and its origin.

In particular, the study has found a higher willingness to pay for a product from a specific country if there is a link between the product category and the country image. Also, the state image associated with a country-of-origin has been suggested to provide a source of sustainable competitive advantage through offering a differentiated product offering at export markets (Baker and Ballington, 2002).

Procedures to communicate a company's or a product's country-of-origins to consumers range from uncontrolled country-of-origin tactics like the use of emblems, symbols, everyday landscapes or buildings on packaging and in advertisement, to legally controlled strategies like the communication of a «Made in …» statement or geographically based quality marks like the EU's Protected Designation of Origin indication (Aichner, 2014). These legally regulated strategies were particularly relevant for food products since there are mandatory origin labelling obligations both in the USA and within the EU for a wide variety of foodstuffs (European Commission, 2015; Newman et al., 2014; USDA Foreign Agricultural Service, 2014). For goods carrying the European organic label, the origin of the raw materials must be indicated by stating either «EU Agriculture», «non-EU Agriculture» or «EU/non-EU Agriculture». The previous two signs may be replaced or supplemented by a country in case all agricultural raw materials of which the product is produced have been farmed in that country. These rules may over time influence consumer familiarity with on product information about organic and country-of-origin, and also consumer behaviour.

The appearance of hybrid products, with more than one country-of-origin, has diluted the accuracy and validity of country-of-origin labels, making it increasingly difficult for consumers to comprehend a product's country-of-origin. In reply to such developments, recent investigations have disassembled the country-of-origin construct into, e.g., country-of-design, country-of-assembly, country-of-party, country-of-brand in addition to country-of-manufacture (Aichner, 2014). However, for the purpose of this study the following comprehensive definition of country-of-origin effects will do: any influence or bias on

product estimation, risk perception, buying intention resulting from country-of-origin information (Herz and Diamantopoulos, 2013).

1.2.2 Cognitive processes underlying country-of-origin effects

Most researchers have studied country-of-origin effects from an information processing perspective; that is, the cognitive processes through which consumers use country-of-origin cues to make inferences about quality and other attributes of a product or brand (Chattalas et al., 2008). Country-of-origin is regarded a cue to quality, like, for example, the price, brand and store reputation. According to cue utilisation theory, customers rely more heavily on extrinsic cues when intrinsic signals are difficult to judge or estimate, or consumer expertise is weak (Maheswaran, 1994). This is primarily the case for low-involvement products, where the costs of searching and assessing intrinsic cues to aid product evaluation and buying decisions may exceed the benefits. Consistent with this low-effort theory, research involving multi-cue studies has observed that if country-of-origin is shown in alliance with other extrinsic quality cues, the significance of country-of-origin in product evaluation is reduced (Agrawal and Kamakura, 1999).

More specifically, Maheswaran (1994) suggests that country-of-origin affects the evaluative judgments of a product through a stereotyping process, which customers employ to predict the likelihood that a product from a special origin has certain characteristics. Ahmed et al. (2004) introduce three ways how this stereotyping process influence product evaluation. First, if consumers have prior perceptions of the general quality of goods from a particular country-of-origin, the country-of-origin cue can be employed as a signal to infer evaluations of other cues and thus the overall product. Second, as mentioned before, the country-of-origin can be used as an independent signal in combination with other cues. Third, the country-of-origin can function as a heuristic to simplify the production evaluation process, if consumers disregard other available signals.

A significant stream of research also suggests that country-of-origin may affect product assessment and subsequent intentions and behaviours not only directly, still also indirectly through beliefs (Han, 1989). Therefore, two distinct effects or functions derived from country-of-origin information can be identified. First, if buyers are not familiar with a product, the country image associated with a country-of-origin can act as «halo» from which buyers infer product attributes. That is, the state image triggers positive or negative feelings and this so-called «halo effect» indirectly affects overall product evaluation through beliefs.

Alternatively, as purchasers become familiar with a country's products, the «summary construct» sets in and directly affects product evaluation. In this case, the state image may become a construct that summarises consumers' beliefs about product attributes (Han, 1989; Hong and Wyer, 1989).

1.2.3 A comprehensive view of country-of-origin effects

Due to the ambiguous findings of the previous studies, there is a need for further research on antecedents, mediators and moderators of country-of-origin effect.

Based on a regular review of research on country-of-origin evaluations, Pharr (2005) assumes that country-of-origin evaluations have little or no direct impact on purchase intentions. Somewhat, a more holistic brand evaluation, captured by constructs such as brand image or brand equity, mediates country-of-origin effects on product evaluations and ultimately on purchase intentions.

Furthermore, the impact of country-of-origin on consumers' product evaluations and choices has been found to be moderated by a range of product related and individual user variables. Country-of-origin evaluations may not only emerge from country-specific beliefs or cognitions, but also from country-specific effect (Gurhan-Canli and Maheswaran, 2000), that is, emotions and feelings towards a country. Besides, structural characteristics of a country can affect country-of-origin evaluations, such as the country's level of economic development.

Antecedents of country-of-origin effects

One of the most investigated antecedents is consumers' ethnocentrism (Chattalas et al., 2008). Shimp and Sharma (1987), describe customer ethnocentrism as «the beliefs held by consumers about the appropriateness, indeed morality, of purchasing foreign-made products». Highly ethnocentric purchasers systematically prefer domestic over imported goods as the buying of the latter may be regarded as unpatriotic or socially unacceptable, e.g., due to adverse effects on the local economy (Ahmed et al., 2004).

Closely connected to the preference for domestic products, multiple-countries studies have found a significant impact of the country’s cultural orientation on country-of-origin effects (Heslop and Papadopoulos, 1993). In a study of American vs. Japanese consumers, Gurhan-Canli and Maheswaran (2000) found that collectivist cultures have a trend to consistently favour a domestic over a foreign product, despite its superiority. In contrast,

respondents from an individualistic culture, such as the USA, estimated a domestic product more favourable only if it was certainly superior to the competition.

Comparable patterns emerge from a country's level of economic development. Many studies have found that consumers living in developed countries prefer domestic over foreign products. The opposite is sometimes mentioned in developing countries (Upadhyay and Singh, 2006). For instance, Okechuku (1994) found that consumers in the USA, Canada, Germany and the Netherlands estimated domestically manufactured electronic goods most favourably, followed by products made in other developed countries and lastly products from less developed countries.

In addition to the mentioned antecedents underlying preference for domestic goods, Hsieh (2004) studied the function of geographical closeness in the country-of-origin evaluation of automobiles. He found that customers are not only more likely to accept domestic goods, but also goods that originate from the same geographic trading region. Similarly, Rosenbloom and Haefner (2009) found that country-of-origin preferences co-vary with the notion of brand support, with both variables being subordinate on the geographical region. About the food sector, most studies confirm that consumers prefer domestic products (Peterson et al., 2013), while results are not regularly explicitly linked to purchaser' ethnocentrism, or to domestic country bias as it is now increasingly termed (Balabanis and Diamantopoulos, 2004).

It is increasingly accepted that country-of-origin is not solely a cognitive cue. In this meaning, country stereotypes have received considerable attention. These stereotypical opinions are developed through direct experience with appropriate national groups (holidays, encounters with foreigners) or indirectly via art, education or media publication. Usunier (2007) notes that «country familiarity related to visits in foreign countries does not always lead to more favourable attitudes towards countries and their products». However, unfamiliar countries are expected to be associated with neutral or lower attributions (Chattalas et al., 2008).

Some studies have found a significant influence on country-of-origin evaluations and consumers' willingness to buy foreign products of country-specific. Country-specific animosity is defined as «anger related to previous or ongoing political, economic, or diplomatic events» (Xie et al., 2015).

Another point related to country stereotypes are the stereotypical association's consumers make between countries and generic products, so-called product-country matches. Usunier (2007) employs the term «product ethnicity» to describe the degree of such a product-country or country-product match. He emphasises that «though closely related, product ethnicity is not the country-of-origin image of products» (Usunier, 2007) in that such matches contain no evaluative dimension, but are merely associations. Product ethnicity reveals two complementary models of categorization – the goods that are recognised typical for a country and the countries that are associated with the origin of an individual product. Products can be linked to one particular country-of-origin, with several backgrounds or with no given country. Associations may emerge from consumers' perception of a country's traditional manufacturing know-how, its location, its climate or its natural resources and vary between customers from different countries.

About cognitive antecedents, Gurhan-Canli and Maheswaran (2000) found that motivation level, information processing goals and product information affect country-of-origin evaluations through country-of-origin related thoughts. In particular, they emphasise the central purpose of motivational intensity and direction in moderating the effect of information type on country-of-origin assessments (Gurhan-Canli and Maheswaran, 2000). When members were directed to evaluate a product's country-of-origin under low motivation conditions, they focused on country-of-origin information. Nevertheless, if their processing purposes directed attention away from country-of-origin cues or under high impulse, subjects were less likely to build product judgments on country-of-origin effect.

Mediators and moderators of country-of-origin effects

Within the broad body of the country-of-origin investigation, a considerable number of studies have tested potential moderators that may perceive the effect of country-of-origin on product evaluation and buy intention, some of which have been discussed already.

Some researchers found the relative impact of the country-of-origin cue on overall product evaluation or purchase plan to be reduced when assessed alongside other quality signals like price and brand name (Ahmed et al., 2004). For instance, various studies showed that a highly regarded brand name could alleviate adverse country-of-origin effects due to a developing country image (Cordell, 1993).

Most scholars seem to agree that country-of-origin effects vary considerably depending on the product type under consideration. Also, Lin and Kao (2004) propose, based

on a review of the earlier investigation, that the effect of country-of-origin on brand equity is managed by product complexity, as well as some individual consumer variables, such as product knowledge and product importance. Nevertheless, the existing study is inconclusive regarding the directionality of these relationships (Usunier, 2007).

Some studies investigated how consumers' involvement moderate the effects of country-of-origin on product evaluation. In general, the use of country-of-origin cues for product evaluation is expected to be more pronounced for high involvement products (Li and Wyer, 1994). However, Ahmed et al. (2004) found that country-of-origin plays a role in the evaluation of low-involvement products, such as coffee and bread. Still, the authors conclude that consumers' purchase conclusions are affected more by the brand than by the country-of-origin of a food product (Ahmed et al., 2004).

All in all, it is highly important to take into consideration the possible mediators such as brand, type of product and price that could influence the study results.

Outcomes of country-of-origin effects

Recently, some researchers have questioned the importance of country-of-origin as the extrinsic cue in consumer decision making. As Usunier (2007) notes, there is now a body of evidence showing that consumers may not attach as much significance as previously believed to country-of-origin for purchase intentions and actual buying behaviour. These reservations are built on three findings. First, buyers may consider a product's country-of-origin not necessary or worth retaining in memory (Samiee et al., 2005). Second, even if buyers know the origin of a product, customers are sometimes found to absence the intention to use this data in their product evaluations. Liefeld (2004) revealed that when blocked at the cash register, of those purchasers that were aware of the country-of-origin of the products they just bought, only 2.2 percent indicated that this knowledge might have played a role in their product choice.

Ultimately, and maybe most importantly, several researchers found that the real awareness and accuracy of a product's country-of-origin under non-laboratory conditions is universally little (Balabanis and Diamantopoulos, 2008). Furthermore, Samiee et al. (2005) found that respondents often just inferred a country-of-origin by associating the brand with a particular language. In light of such proof, different authors propose that the experimental nature of some investigations might have inflated the power of country-of-origin cues on

product perceptions (Samiee, 2010) as the outcome of extrinsic cues, such as country-of-origin, is enlarged when subjects are proposed to estimate particular cues (Hsieh, 2004).

In response to this line of study, recent publications have started to challenge the opinion that country-of-origin cue usage is entirely a known and controlled method by confirming that such usage can occur unconsciously and automatically (Herz and Diamantopoulos, 2013). These researchers critique the dominant paradigm in country-of-origin research that assumes that the country-of-origin cue is processed in a deliberate, cognitively controlled manner.

In sum, the country-of-origin effect is complex, explained by the underlying processes of cue utilisation and halo effects, contingent on some antecedents (e.g. ethnocentrism, cultural orientation, economic development, geographical closeness and familiarity, product-country fit) and moderated by both individual-based and product factors. Further, studies find mostly indirect effects of country-of-origin on purchase intentions, through product evaluations, perceived product value, brand equity or brand image (Hui and Zhou, 2002).

These findings can be used for the next steps while building the methodology of the study. The influence of the individual-based and product factors will be taken into account to provide more relevant and accurate results.

Research on consumers' decision-making regarding organic food products

It is usually assumed that consumers buying organic food products are relatively highly involved in the buying decision (Zanoli and Naspetti, 2002). Customers that are highly involved in a purchase decision are assumed to follow a high-effort path, spending a time to process information on what is usually highly differentiated product alternatives (Hoyer et al., 2013).

As a result, attitudes are more elaborate and stable. For example, Thogersen et al. (2010) explored consumer responses to eco-labels with the help of a mall-intercept survey. They found that consumers with high environmental motivation were also highly involved in the purchase of eco-labelled products, including acquiring larger amount of relevant knowledge to make an informed decision.

One of the most commonly applied analytical frameworks to examine the motivation behind the purchase and using of organic food is Ajzen's (1991) theory of planned behaviour (TPB). The TPB proposes that the attitude towards the behaviour together with perceived

social pressure and perceived control co-determine customer intentions, which is the immediate predictor of response, for example, the purchase of organic food (Thogersen, 2009).

Regarding organic food, several studies also found a direct effect of perceived control on buying behaviour after controlling for buying intentions (Aertsens et al., 2009). Also, the entire decision-making process is affected by a variety of situational, personal and product-related determinants, which may exert their force during different phases of the process. The most important factors found to influence consumer decisions regarding organic food are briefly outlined in the subsequent sections.

1.3 Organic food purchasing behaviour

1.3.1 Perceptions of and inferences about organic food

Customers tend to perceive both expected and experienced food quality primarily along four dimensions: taste and appearance, health, convenience and process characteristics (Grunert et al., 1996). For many customers, the sensorial experience reflected in taste, appearance, and smell, is a central dimension in the perception of food quality (Marian and Thogersen, 2013). Several studies show that other quality aspects have gained vital importance, in particular, health and the production process (Brunso et al., 2002). Consequently, many researchers have started to explore what exactly consumers associate with the quality dimension «organic» and how this influences their purchase behaviour.

Extant research shows that individuals interpret the term «organic» in a multitude of ways depending on the context. Many customers, mainly in Europe and North America, have heard of organic food and are aware of its central features, but many are rather unfamiliar with the criteria and methods holding organic practices. Thus, the buying of organic food is often based on subjective judgments and experiences (Hughner et al., 2007). «Organic» is a process-related product attribute and thus a credence characteristic that is hard for the consumer to verify. Hence, customers rely on cues such as the organic certification label to make inferences about the quality of organic food products (Loebnitz and Aschemann-Witzel, 2016). Customers, though, make a variety of inferences from the organic label including inferences which have no established relationship to the experienced product quality (Schleenbecker and Hamm, 2013), and these assumptions can play a meaningful role in the choice of an organic food product.

Many studies find that consumers associate organic food with environmental protection, animal welfare and social aspects such as local farming (Aertsens et al., 2011). It is also often found that consumers infer health benefits from the consumption of organic food (Aertsens et al., 2011). Also, consumers that buy organic food often believe that organic food products taste better than conventional (Marian and Thogersen, 2013) and that they are safer, more natural and fresher (Hemmerling et al., 2015).

In contrast, the most influential barriers to buying organic food are the price premium, shortage of availability, inferior visual product attribute and presentation, and distrust in organic claims (Thogersen and Zhou, 2012). These judgments of organic food are not universal, but very similar in most developed and also in many developing countries (Thogersen et al., 2015).

1.3.2 Attitudes and behaviour towards organic food

Favourable attitudes towards organic food are rooted in beneficial views about the benefits that organic food provisions (Pearson et al., 2011) and in the consumer's fundamental value priorities (Thogersen et al., 2016). According to the latter research, the most important values for buying organic food are what Schwartz (1994) calls «universalism values», which suggests that consumers view buying organic food as an environment-friendly behaviour (Thogersen, 2011). Nevertheless, it is also common to find a gap between attitudes and behaviour about organic food (Aschemann-Witzel and Niebuhr Aagaard, 2014).

An important reason for the attitude-behaviour gap is that other factors than the attitude influence buying behaviour. For instance, it is common to observe an effect of subjective norms on consumers' intention to buy organic goods after controlling for variations in attitudes (Thogersen, 2009).

Perceived control has been seen to be an additional antecedent of consumers' purchasing intentions and behaviour, and relatively more impactful in countries with a less developed organic market. An additional, direct effect of perceived behavioural control on buying behaviour is usually found when a response is hard to perform and perceived control reasonably reflects actual control. Important obstacles of organic food choice in many countries include insufficient availability, high price premiums and lack of reliable labelling and certification systems (Nuttavuthisit and Thogersen, 2017). As a consequence, the most frequently mentioned reasons for the gap between attitudes and behaviour concerning organic

food are the premium price, insufficient availability and access, and scepticism towards organic food labels (Hughner et al., 2007).

Since «organic» is a credence attribute, it is assumed that consumer trust is a prerequisite for the establishment and growth of an organic market (Bech-Larsen and Grunert, 2001). Mistrust, often fuelled by media scandals or inconsistent standards and assessment practices, may undermine consumer motivation to buy organic food, as, for example, found by Nuttavuthisit and Thogersen (2017) regarding the Thai organic market.

Besides, research has identified a range of moderators of the attitude-behaviour relationship concerning organic food. For example, studies have found that consumers' value priorities moderate the relationship between consumer attitudes and intentions regarding buying organic food (Zhou et al., 2013). Favourable attitudes are more likely to be transformed into buying plans the more compatible buying organic food is with the consumer's primary value priorities.

Research has also found that personal knowledge influences the strength of the attitude towards buying organic food and thereby the transformation of consumers' attitudes into the intention to buy and to actual behaviour. In contrast, objective knowledge mostly influences behaviour indirectly through attitudes (Aertsens et al., 2011).

In sum, consumer decision-making regarding organic food is complex. It is typically explained relating to the concept of involvement and often on the background of the TPB. There are many determinants affecting consumers' decision to buy and actual buying of organic food, often investigated in separated streams of literature. A significant distinction is between those looking into perceptions and inferences about organic food (e.g. understanding of environmental friendliness, health or taste inferences) and those focusing on attitudes and behaviours (e.g. the role of values for reactions, or situational factors inhibiting or promoting organic choice behaviour).

1.4 Country-of-origin effects for organic food products

Despite the growing importance of imported goods in many organic food markets, only a few studies have reviewed the combined effect of country-of-origin and an organic (or other environmental) label, or compared consumer preferences for one vs. the other.

Dekhili and Achabou (2014) searched whether a country-of-origin 's ecological image affects the evaluation of an eco-labelled product. Different green images may derive from

various environmental and social efforts as well as different requirements for the same label in the different countries (Lozano et al., 2010). French consumers were presented with washing-up liquids in a blind assessment and a situation revealing information about the ecolabel and the country-of-origin (Dekhili and Achabou, 2014). The study found that, even if products exhibited the same eco-quality, mentioning Spain as a country-of-origin, with a negative environmental image, led to a significant decrease in purchase intention, whereas mentioning Switzerland, a country with a favourable ecological image, did not significantly affect any of the outcome variables. Also, the study found that familiarity with eco-friendly products and trust in the country of production significantly affected the evaluation of an eco-labelled product.

Within the limited stream of research on country-of-origin effects for organic food products, most studies have focused on preferences for domestic vs. imported organic foods (Schjoll, 2016). These studies confirm that a domestic country bias is also – maybe even especially – evident in the case of organic food products. For example, based on a mixed sample of French, Danish, Swedish and British consumers, Dransfield et al. (2005) found that the vast majority (over 90 percent of those making logical choices concerning the origin label) preferred organic pork originating from their home country over an imported product. Furthermore, labels concerning the source and the system of production (raised outside vs. raised inside) had a notable effect not only on appreciation but also on the price participants were willing to pay.

The domestic country bias was also confirmed by a recent study asking Norwegian consumers to make choices between minced veal from Norway, Poland and Denmark, labelled either as organic, free range (the Danish «Friland» label) or with no process label (Schjoll, 2016). The study found that consumers had a clear preference and willingness to pay for domestic compared to imported meat, regardless of the process labelling.

A third example is a choice experiment conducted in the Eastern part of the USA, which also confirmed the domestic origin preference, in this case about organic broccoli (Xie et al., 2015). Among the imported organic alternatives, these US consumers preferred fresh broccoli imported from Canada, followed by Mexico and last China. Even after adding data about the certification rules for imported organic products, none of the imported alternatives could compete with local organic broccolis.

A fourth study investigated the impact of «organic» on Spanish consumers' preferences for Manchego cheese when controlling for origin, type and price (Bernabéu et al., 2010). This study found that origin was the most important product attribute and no impact of organic, but they did not investigate the possible interaction between organic and origin.

However, two recent studies involving organic food products found exceptions to the domestic country bias. One of these studies asked consumers in Beijing, China, to choose between beef originating in either China, the USA or Australia, with either the Chinese «Green Food» label, the Chinese organic label, or no such tag (Ortega et al., 2016). The study found that these consumers were willing to pay more for Australian than for domestic (Chinese), or USA, beef. However, food safety information had the biggest impact on consumer preferences.

In another study, Schrock (2014) found that imported cheeses commanded significant price premiums in the German market, between 23 and 43 percent, compared to domestic products. Prices premiums were primarily high for countries linked with a high competence in cheese production and cheese specialities, such as Belgium, France, Spain, Ireland, and Switzerland. Geographical indications commanded much smaller price premiums, between 0.9 and 2.0 percent, and only in super- and hypermarkets. The average accepted price premium for organic (vs. conventional) cheese was 25 per cent.

Although the latter study suggests a profound appreciation of geographical or regional labels regulated by the European Union, other evidence indicates increasing preferences for local food products. As mentioned earlier, organic is considered a sustainable food alternative, but the globalisation and what is seldom called «conventionalization» of the organic food business has given rise to a «local» trend (Feldmann and Hamm, 2015). Many customers are increasingly requiring locally produced food, seemingly using «local» as a quality indicator, but also to support local farmers and to avoid long transportation distances of imported food products (Hempel and Hamm, 2016).

Adams and Salois (2010) investigated the parallel development of these overlapping trends and determined that buyers have generated more positive attitudes towards local food and in many situations even prefer local over organically produced food products. A current study revealed that in Germany, Austria, and Switzerland more than 80 percent of customers buy local food several times a month, and 92 percent of all respondents assert that they prefer local over organically manufactured food (Hempel and Hamm, 2016). Customers sense local

food more favourably if it is produced in the «right» season, which also leads to higher intention to buy locally produced food (Feldmann and Hamm, 2015).

The overlay in the perceptions and factors of organic and local food goods has given rise to some studies investigating whether these two trends complement or compete (Hempel and Hamm, 2016). Hempel and Hamm (2016) conclude that some consumers favour the combination of local and organic food production. Organic-minded buyers in their study had a relatively high preference for food products being produced as close as possible to their home. They obtained that organic-minded consumers had greater willingness to pay for an organic food coming from Germany than a locally grown product. However, they had a larger willingness to pay for a local food product than for an organic product from a bordering or non-EU country. These judgments show that organic-minded consumers consider both products attributes and may make trade-offs between origin and production method depending on the situation.

1.5 Summary and research gap

This literature review has confirmed that there are few studies investigating the probable interplay between the effects of organic and country-of-origin on consumers' food preferences and decisions (Xie et al., 2015). Visible prerequisites for country-of-origin effects are that customers know a product's origin and pay attention to the country-of-origin in the shopping position.

The evaluated research explains that customers' knowledge of a product's country-of-origin is often weak, but the country-of-origin may still play a role if customers use it as a peripheral cue to interpret quality judgment (Gürhan-Canli and Maheswaran, 2000).

It seems, despite, that the appearance of other quality signals, like a premium brand, moderates the country-of-origin effect, usually reducing the importance of a product's origin, especially for fast moving consumer goods (Ahmed et al., 2004). This also suggests that consumers might pay less attention to the product’s country-of-origin when presented together with an organic label, as an additional quality cue. But, if purchasers are more involved in the purchase of organic than conventional foods (e.g. Zanoli and Naspetti, 2002), this might have a reverse effect, driving to enhanced attention to additional quality cues, such as the country-of-origin. It further confuses resolutions that, even if consumers pay attention to the country-of-origin, they do not necessarily use this information in their product judgments (Liefeld, 2004).

Consumers prefer domestic food products to imported and, hence, «foreign» is a liability to food commodities (Newman et al., 2014). The reviewed research confirmed this domestic country bias also for organic food products. This bias may be further amplified by consumers in some countries increasingly emphasising «local» when buying organic food (Hempel and Hamm, 2016), which proposes an effect of geographical closeness on country-of-origin evaluations for organic food. A preference for geographical closeness might also lead to purchasers holding more positive attitudes towards goods from geographically close than more distant countries. Alternatively, or as a consequence, geographical closeness might give rise to a more positive country-specific impact and a higher regarded product-country match due to greater familiarity. Also, goods from countries with comparatively shorter transport distances may be observed as more environmentally beneficial, an essential impulse to buy organic in the first place according to research (Thogersen, 2011). A few studies find that the liability of being imported is smaller for organic food products, that is, a positive interaction between foreign country-of-origin and organic after controlling for the direct adverse effect of foreign country-of-origin (Xie et al., 2015). In such cases, country-of-origin information and organic seem to be perceived by consumers as supplementary information about quality (Onozaka and Mcfadden, 2011).

In some cases, buyers are ready to pay a premium for imported food products (e.g. Ortega et al., 2016; Schrock, 2014). We have not distinguished any studies reviewing whether it makes a contrast for consumers' evaluation of or readiness to pay a premium for imported products that they are organic vs. conventional. Despite, indicative evidence concerning the feasible interplay between country-of-origin and organic in premium markets is afforded by Larceneux et al. (2012). They discover that «organic» makes less of a distinction for consumers' choice of a premium brand than for a retailer's private label brand, that is, a negative intercommunication between branding and organic labelling, possibly because both the brand name and the organic label are used as cues to premium quality.

If a premium country-of-origin functions in the same method as a premium brand in this respect, that is, as a cue to premium quality, we should suppose the same negative interplay with organic in this case. A negative interaction between imported/country-of-origin and organic is likely to appear when the two components are regarded as substitutes in consumers' assessment of product quality (Onozaka and Mcfadden, 2011). As proposed by Bernabeu et al. (2010), it might be that organic differentiation does not offer extra utility to the customer in products previously differentiated.

Nevertheless, this is a consideration only. It is an important outcome of this literature review that there is a need for research that more regularly examines the possible interactions between country-of-origin and organic certification/labelling on consumer food product preferences and choices. Consumer responses to country-of-origin and organic labelling are also likely to be influenced by recent and future changes in regulations.

On the basis of the literature review, we have investigated the research points that should be covered and studied in our empirical part. By fulfilment these points, we will cover the research gap and formulate the empirical contribution. According to the studied literature, we have formulated the further hypotheses:

1. Consumers' perceptions of organic food might be different between consumers who buy organic food regularly and those who buy it only occasionally (Newman et al., 2014; Pharr, 2005; Rodiger and Hamm, 2015; Aschemann-Witzel and Zielke, 2015).

2. Country-of-origin effect has a moderate importance comparing to other factors while purchasing organic food (Hemmerling et al., 2015; Rodiger and Hamm, 2015; Dekhili and Achabou, 2014; Pharr, 2005; Herz and Diamantopoulos, 2013).

3. Consumers' perceptions and attitudes towards organic food from different origins depends on the region where consumers live (Hsieh, 2004; Rosenbloom and Haefner, 2009; Peterson et al., 2013; Balabanis and Diamantopoulos, 2004).

4. There is a difference in consumers perceptions of locally and nationally produced organic food compared to organic food imported from other countries (Ahmed et al., 2004; Schjoll, 2016; Dransfield et al., 2005; Xie et al., 2015; Schrock, 2014; Hempel and Hamm, 2016; Newman et al., 2014; Ortega et al., 2016).

5. Consumers evaluate the quality and the price of the organic food on the basis of its country-of-origin (Insch and Florek, 2009; Baker and Ballington, 2002; Ahmed et al., 2004; Gurhan-Canli and Maheswaran, 2000).

6. When making decisions for purchasing organic food, the country of origin is more important for a consumer than the brand name (Chattalas et al., 2008; Aichner, 2014; Pharr, 2005; Cordell, 1993).

As we have investigated, multiple determinants shape consumer behaviour toward organic products. Thus, consumers' preferences, behaviour and their perception of organic

products are heterogeneous and depend not only on the appearance and sensory properties of the food but also on psychological and marketing aspects. A better understanding of this complex model and the place of «origin» factor in the model may help to improve the competitiveness of the organic food industry. To meet this goal, the multidisciplinary model of the main factors affecting consumer behaviour in a food domain was created (Figure 1).

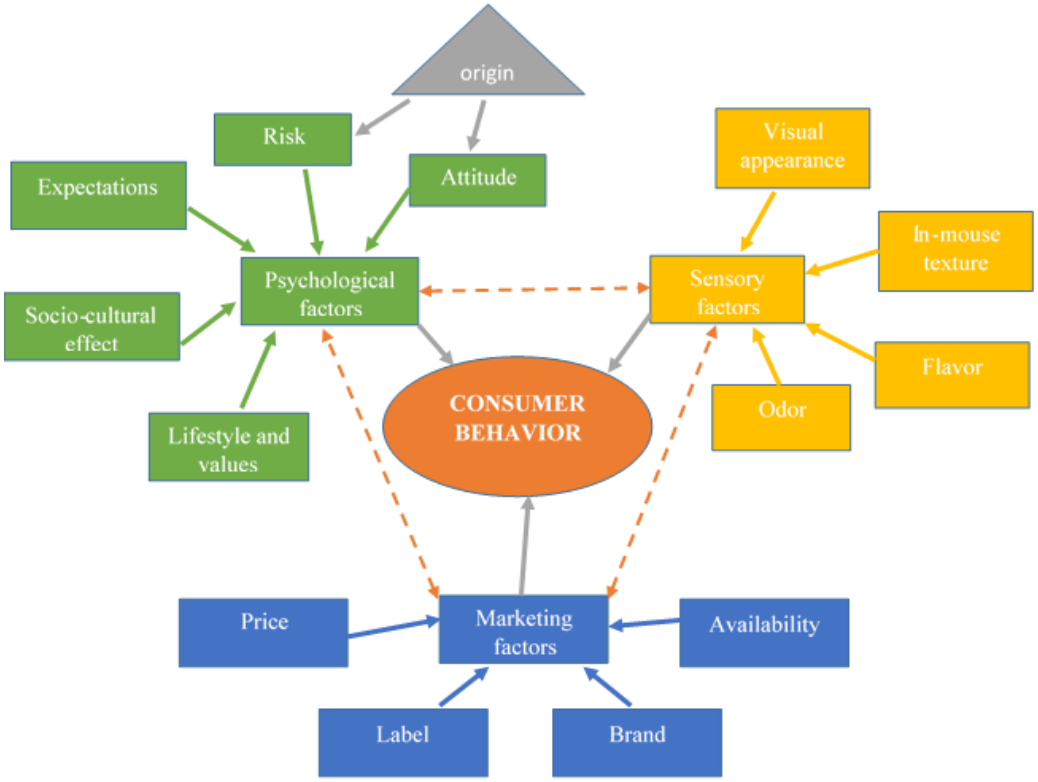

Figure 1. Multidisciplinary model of the main factors affecting consumer behaviour in organic food domain

Research gap

The national and cross-cultural studies that were found demonstrate the great difference in consumer preferences for country-of-origin of organic food. It depends on the country where the research was conducted. The research concerning Russian consumer preferences should be performed to find the valuable insights.

To date, only a few studies have been conducted on consumer views about organic food in Russia. It is, therefore, difficult to predict whether the Russian domestic market for organic food will grow further and provide opportunities for domestic farmers. In particular, it is unclear whether consumers of organic food have a preference for local, national or imported organic food.

The existing body of empirical studies only provides limited insights. Meixner (2014) and Bruschi et al. (2015) carried out the studies of consumers' purchase intentions of organic food. Existing studies were focused only on the factors such as food quality, healthiness, safety, taste, price and availability. However, these authors did not examine the influence of geographic origin on purchase intention.

To fill this gap, we will build a model of shopping orientations of Russian consumers on the basis of the cluster analysis and regression analysis. We will define what is the role of country-of-origin effect among other factors while purchasing organic food for Russian consumers. To test the hypothesis, the part of the empirical research will investigate the difference among the consumers who live in two regions – Saint-Petersburg and Moscow. Also, the consumers will be divided in two groups: regular and occasional organic food buyers. To investigate more deeply how Russian consumers perceive the price and quality of the product on the basis of the country-of-origin effect, we will focus the study on the organic baby food market.

2. RESEARCH DESIGN

The goal of the empirical study is to quantitatively prove how the country-of-origin effect is important for consumers from Moscow and Saint-Petersburg while purchasing organic food. Moreover, the aim is to build the empirical base for further formulating the managerial implications.

First, we will describe target population and sampling process. Second, the questionnaire design will be discussed. Finally, we will prove the statistical methods that were used to analyse the data.

2.1 Target population and sampling

A consumer survey was conducted to investigate consumers' perception of organic food in Russia. Data was collected in Saint-Petersburg and Moscow to find out whether there is a significant difference in perceptions of consumers in these two cities. It is important to point out that our sample is a convenience sample and not representative of the Russian population. Consumers in Moscow and Saint-Petersburg are presumably more likely to be aware of organic food than consumers in other Russian cities, due to a large number of higher income households.

The target population of this study was purchasers who had already bought organic food. We excluded from participation the customers who had never bought organic food. We made this modification since our research focused on the question of organic food from different geographical origins. The purpose was to identify how domestic organic food (local and national) was perceived when opposed to imported organic food. It was thus necessary that the members were familiar with the concept of organic food and had bought organic food before (at least once) so that they could contribute relevant insights on their perceptions of different geographical origins of organic food.

The online consumer survey was conducted over a period of three weeks from late March to April 2017. Two screening questions were used to select participants: «Do you live in Saint-Petersburg (Moscow)?» to guarantee that the members also lived in the respective city; «Have you ever bought organic food?» to select only organic food buyers.

Description of the sample

In total, 76 consumers were interviewed in Saint-Petersburg and 60 in Moscow. Out of these questionnaires, 123 were valid (64 surveys from Saint-Petersburg and 59 from

Moscow). The composition of the sample (Table 1) regarding age, gender, income level and education does not represent the population of Saint-Petersburg and Moscow. A higher percentage of women were included in the sample as they are responsible for food purchases in most Russian households. The percentage share of participants with a higher education degree was higher than the respective share in the general population of Saint-Petersburg and Moscow. These deviations from the average population are because only organic food shoppers were included in the sample.

Table 1. Socio-demographic composition of the sample

Question	**Answer**	**Saint-Petersburg (N=64) (%)**	**Moscow (N=59) (%)**
Gender	Male	27	37
	Female	73	63
Age	Under 20	11	17
	20-29	28	25
	30-39	31	28
	40-49	22	20
	50 or above	8	10
Marital status	Married	63	54
	Single	36	46
Highest education level	School	16	14
	Secondary special education (college etc.)	23	25
	Higher education (university etc.)	55	54
	Postgraduate or above	6	7
Family annual income	Not enough money even for food	8	6
	There is enough money for food, but buying clothes is already difficult	31	25
	Enough money for food and clothes, but buying a refrigerator, TV, furniture – is a problem for us	40	45
	We can easily buy a refrigerator, TV, furniture, but there is no money for the car	16	18
	We can afford almost everything: a car, an apartment, a summer residence and many other things	4	4
	Prefer not to say	1	2

2.2 Questionnaire design

The questionnaire encompassed six parts.

First part. Members were invited to rate the significance of different food attributes for their organic food purchasing choice by showing a number (1 - very unimportant and 5 - very important). The twelve characteristics are presented in Table 2, left-hand column.

Second part. Consumer perceptions of four different food origins were investigated: local conventional food, local organic food, organic food from Russia (outside the local area), and imported organic food. A seven-point semantic differential scale with 12 opposite pairs of descriptive phrases was used (Table 2, right-hand column). For Saint-Petersburg, the local area was set as Saint-Petersburg and Leningrad region. For Moscow, the local area was set as Moscow and Moscow region.

Table 2. Items used in the questionnaire

Criteria important when purchasing food	**Seven-point semantic differential answer scales with the endpoints shown below**[1]
Price	They are very cheap/ They are very expensive
Freshness	They are fresh/ They are not fresh
Taste	They taste good/ They taste bad
Quality	They are of high quality/ They are of poor quality
High nutritional value	They are high in nutritional value/ They are low in nutritional value
No chemical residues	They are free of chemicals/ They contain chemicals
Trustworthiness of producers	I trust these products/ I distrust these products
Food safety	They are safe for consumption/ They are unsafe for consumption
Support of small producers	They are form large producers/ They are from small producers
Low environment impact	They are environmentally friendly/ They are not environmentally friendly
Easily accessible	They can be bought everywhere/ They can only be bought in a limited number pf places
Large variety and brands	There are only small number of types and brands to choose from/ There are a lot of choices in terms of types and brands

Third part. Consumers' purchase behaviour and their buying intention formed the third part (frequency of organic food purchases and the point of sale). Participants were also asked about their intention of buying local organic food, organic food from Russia and imported organic food, respectively, within the next month (multiple-choice format).

Fourth part. Consumers were asked concerning their attitudes towards shopping of domestic organic food products. Scores ranged from 1 (strongly disagree) to 5 (strongly agree).

[1] The items were asked separately for each of the tested food origins (local conventional food, local organic food, organic food from Russia, and imported organic food)

Fifth part. Consumers were asked about their purchase experience with organic baby food for the last two years. If they had such experience, they were asked a number of questions. The consumers' opinion about the organic baby food from Russia and fifteen foreign countries has been studied. The countries have been chosen by referring to the statistical data collected during the research on the baby organic food imported to the Russian market and the content analysis of consumers' opinions in social websites (Table 3).

Table 3. Countries of production of the most popular organic baby food brands on Russian market

Countries of production	**Organic baby food brand**
US	Landi
UK, Belgium, Germany, Netherlands, Czech Republic	Fleur Alpine
Germany	Humana
Poland, Czech Republic, Russia	Hipp
Slovakia	Organic Star
Netherlands	Kabrita
Lithuania	Mamaluzi
Sweden	Semper
Spain, Italy, Poland, Finland, France	Gerber
Germany, Switzerland, Finland	Bebivita
Italy	Heinz
Spain	Peek-a-boo

The ten-point scale was intended to discover the importance of different factors when a consumer makes decisions to purchase organic baby food (1 - absolutely unimportant, 10 - very important). The data collected using this scale enables disclosing the importance of product's country of origin for the consumer in comparison to other factors influencing decisions of purchasing. The calculated Cronbach alpha coefficient shows the high reliability of this scale (0,842).

To survey consumers' opinions about the quality and price of the organic baby food produced in different countries, seven-point scales were used (respectively 1 - very low quality, 7 - very high quality; 1 - very low price, 7 - very high price). According to the Cronbach alpha coefficients, the reliability of these scales is 0,923 and 0,962.

Finally, basic demographic data was collected: gender, age, marital status, highest education level and family annual income.

A pre-test was carried out with 7 members, and the questionnaire was then slightly improved. The final survey took participants 10 to 15 minutes to fill out.

2.3 Data analysis

The statistical analysis was done with SPSS. The collected data was first analysed with descriptive statistics, and it was ascertained that the assumptions for carrying out t-tests were fulfilled (normal distribution within the sample populations, the same variance of the populations, minimum sample size).

The method of t-tests was chosen since t-tests are considered robust in the case of interval scaled data like our survey data with five- and seven-point-scales (Malhotra et al., 2012).

Independent samples t-test analyses were performed to examine significant differences in the results between the two cities and between regular organic food buyers and occasional organic food buyers.

Paired samples t-test analyses were used to identify meaningful differences across the four tested food origins regarding consumer perceptions. First, this was done for each of the twelve attributes specified above separately (i.e. it was compared how consumers perceived the four tested food origins regarding «price», afterwards the same was done for «freshness» etc.)

Second, a multiple-attitude index was determined for each organic product origin, to consolidate consumer perceptions of the 12 criteria into one number for each organic product background. The formula assumes that consumer perceptions of single product characteristics alone do not inevitably allow conclusions regarding purchaser preferences for a product. The concern that buyers place on a product quality in general also needs to be taken into account (Solomon et al., 2010). The index is therefore composed of two elements, namely the consumer's judgment of the product regarding particular attributes (in our case derived from the 12 semantic differential scales in the second part of the questionnaire), and the importance weights of the characteristics (in our case derived from the 12 criteria in the first section of the survey).

The formula of the multiple attitude index is $A = Pi \times Ii$ where A is the general attitude of the consumer towards the product, i is an attribute of the product, P is the perception of the

customer on the particular quality, and I is the importance weights of the attribute (Solomon et al., 2010).

To identify the role of food shopping orientations on organic food evaluation, principal components factor analysis with varimax rotation was used to identify themes within the subjects' responses to the psychographic statements. During the research, we have stated a minimum eigenvalue of 1.0 as a cutoff determinant. Also, we held only integral statements with the factor loading of more than 0.50 for each shopping orientation point.

To build a taxonomy of food shopping segments, we conducted a cluster analysis to accumulate subjects who displayed related shopping orientation models. Respondents who obtained similarly on the degree to which they displayed or did not display the various orientations became pail of a single cluster. For that goal, first the single linkage method, then the Ward method was applied. A cluster analysis separated subjects into segments with low intra-group variance and high between-groups variance. Moreover, to validate the cluster solution, multivariate analysis of variance was conducted. MANOVA tested the overall differences in orientations among the three clusters, while ANOVA concluded on which individual orientations the clusters differed independently for every country.

To identify the link between the importance of different factors for purchasing organic baby food and consumers' characteristics (age, education, income), correlation analysis was used. The calculated Cronbach alpha coefficient showed the high reliability of this scale (0,842). To determine the link between consumers' opinions about the quality and price of the organic baby food produced in different countries and consumers' characteristics (age, education, income) correlation analysis was used. According to the Cronbach alpha coefficients, the reliability of these scales is 0,923 and 0,962.

To build a regression model, which determines how consumers rank the quality of organic baby food based on country-or-origin, we have used Multiple linear regression model with QUALITY score as the dependent variable. The following formula was used:

QUALITY score (country N) = $\beta 0 + \beta 1 * age + \beta 2 * education + \beta 2 * income + u$,

where: QUALITY score (country N) – dependent variable,

age, education, income – independent variables,

$\beta 0$, $\beta 1$, $\beta 2$, $\beta 3$ – coefficients,

u – error.

The dependent variable was metric, while independent variables were categorical. We have used Enter Method: all variables were entered into the model simultaneously. This type of model was built for 16 countries that were investigated.

3. RESULTS AND DISCUSSION

Over the period from 2010 to 2015, the organic food market in Russia grew by more than 60% (from $116 million to $178 million). The number of certified under organic farming land has increased 10 times over the past 6-7 years. Such fields allow to grow ecologically pure products, without chemicals and pesticides. (RG, 2016)

From January 1, 2017 in the Russian Federation has started to act GOST R 57022-2016 «Products of organic production. The procedure for conducting voluntary certification».

Until recently, only two related standards operated in Russia: GOST R 56104-2014 «Organic food. Terms and definitions», GOST R 56508-2015 «Products of organic production. Rules of production, storage, transportation». But the common rules for the certification of organic products did not exist, and in practice, this means that manufacturers could call their agricultural products «organic», «ecological», «bio», regardless of whether it uses pesticides, GMOs in crop production or growth hormones for fattening cattle. While there are numerous markings and certification systems, their criteria are established by the operator of the system. Also, it is difficult for the consumer and the manufacturing companies to understand them.

The new standard will be linked to existing ones and will complement the system, making it easier for both buyers and producers. If earlier many entrepreneurs tried to get certification in other states, from this year they could do it in Russia. And consumers will receive a criterion for determining the quality of bioproducts.

The approved standard will be applied by the certification bodies to produce organic products, as well as organisations that are applying for the certification.

The new GOST complies with the following standards:

- Commission Regulation (EC) No. 889/2008 of September 5, 2008, with provisions on the implementation of Council Regulation (EC) No 834/2007 on organic production and labelling of organic products on organic production, labelling and product control (official bulletin of the European Union Dated September 18, 2008).
- Codex Alimentarius Commission Standard «Guidelines for the production, processing, labelling and marketing of organic food products (GL 32-1999, REV. 1-2001)».
- Basic standards of the International Federation of Organic Agriculture (IFOAM). (Roscontrol, 2016).

3.1 Organic food purchasing behaviour

The majority of participants in Saint-Petersburg and Moscow buys organic food only a few times per year (Table 4). Less than 11% of participants said they buy organic food once a week or more often.

Table 4. Frequency and locations of organic food purchases

	Saint-Petersburg (%)	**Moscow (%)**
Frequency of organic food purchases		
A few times per year	48	51
About once or twice per month	33	24
About every two weeks	11	15
Once a week or more often	8	10
Locations for organic food purchases		
Supermarkets	45	55
Organic and health food stores	38	30
Wet markets	14	7
Home delivery	0	5
Farmer markets	3	3

In the present study, it was hypothesised that consumer perceptions of organic food might be different between consumers who buy organic food regularly and those who buy it only occasionally. The participants were therefore divided into two groups based on their frequency of purchase. A median split was conducted. Members who buy organic food once per month or more often were defined as «regular organic food buyers», while those who buy organic food only a few times a year were defined as «occasional organic food buyers».

Supermarkets are the most popular location for organic food purchases both in Saint-Petersburg and Moscow (Table 4), followed by organic and health food stores.

3.2 Factors important when purchasing organic food

Among the 12 food attributes investigated in the questionnaire, food safety was the most important quality for participants both in Saint-Petersburg and Moscow (Table 5). In Saint-Petersburg, quality was the attribute with the second highest score followed by freshness, while in Moscow freshness was rated second and quality third.

Independent-samples t-tests were performed to compare the results between participants in Saint-Petersburg and Moscow. Significant differences ($p < 0.05$) were found between participants in the two cities for the following: participants in Saint-Petersburg

placed higher importance on «price», «high nutritional value» and «support of small producers» than their counterparts in Moscow, while participants in Moscow gave «no chemical residues», «freshness» and «trustworthiness of producers» more importance than the participants in Saint-Petersburg.

Table 5. Importance of different food attributes

Food attributes	**Mean ratings**	
	Saint-Petersburg	**Moscow**
Food Safety	4.81	4.74
Quality	4.47	4.57
Freshness	4.46	4.67
High nutritional value	4.31	4.02
Taste	4.30	4.39
Trustworthiness of producers	4.14	4.39
No chemical residues	4.13	4.55
Price	4.04	3.59
Low environment impact	3.79	3.68
Easily accessible	3.78	3.95
Support of small producers	3.72	3.10
Large variety and brands	3.51	3.56

3.3 Consumer perceptions and attitudes towards organic food from different origins

With the further analysis, we are going to test the hypothesis that were stated after the literature review: consumers' perceptions and attitudes towards organic food from different origins depends on the region where consumers live. In our research, the two regions will be Saint-Petersburg and Moscow.

3.3.1 Saint-Petersburg

Figure 2 shows how participants in Saint-Petersburg perceived the four tested food origins regarding the twelve food attributes. Significant differences between the food origins are displayed in Table 6. The results clearly show that the four food origins were rated very differently regarding all attributes except for the attribute «large variety and brands». Overall, imported organic food received the most positive mean ratings, followed by local organic food. In particular, in terms of quality, nutritional value, the absence of chemical residues, food safety, and low environmental impacts the participants perceived these two food origins as better than the two counterparts. The ratings of the food attribute «freshness» revealed

surprising results. Imported organic food was viewed as fresh as local conventional food, which might reflect the participants' positive overall impression of imported organic food.

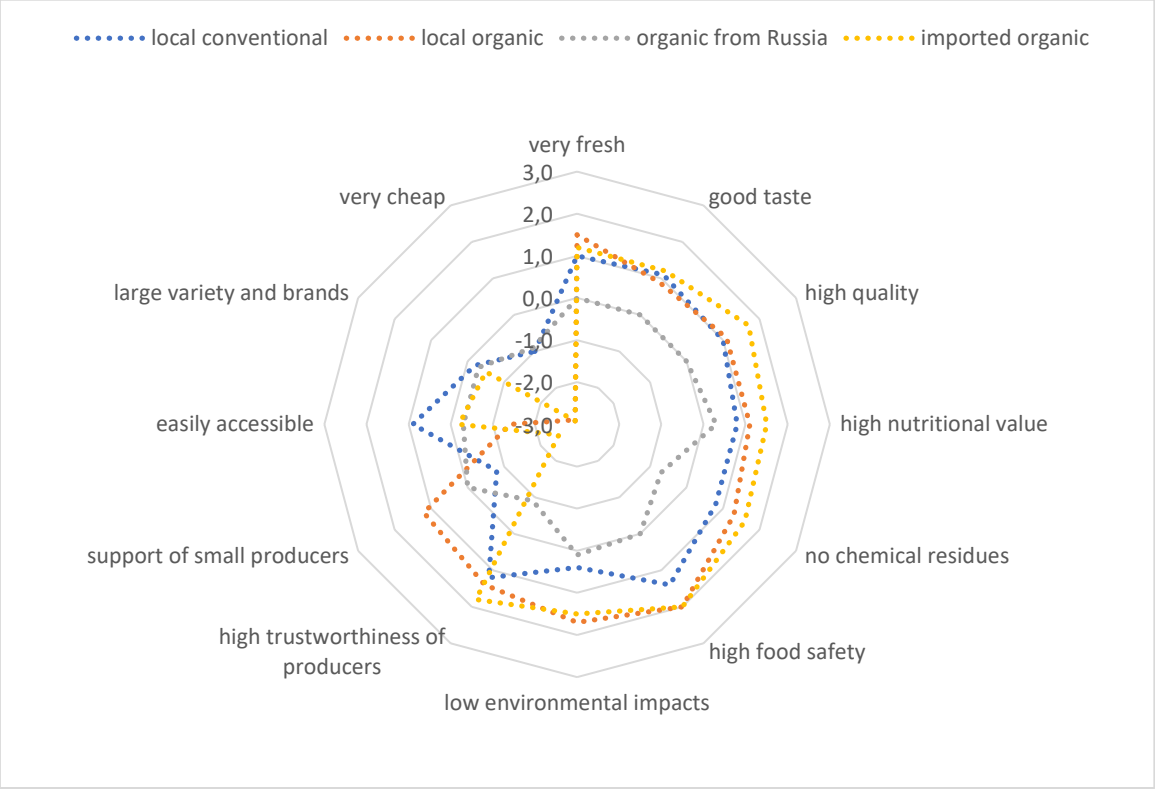

Figure 2. Consumer perception of local organic, organic food from Russia, imported organic and local conventional food in Saint-Petersburg (mean ratings)

Organic food from Russia received comparably low mean ratings. The participants from Saint-Petersburg thus associated organic food from Russia with rather negative attributes such as low quality, contamination with chemical residues and a small trustworthiness of producers.

Regarding the attributes «price» and «availability and variety of food», the results reflect the situation on the food market in Saint-Petersburg. Imported organic food and local organic food were perceived to be the most expensive, whereas organic food from Russia and local conventional food were considered to be much cheaper. To the authors' knowledge, local organic food and imported organic food are much more expensive than conventional food, whereas organic food from Russia is cheaper than the ones above. Regarding availability and variety of food, all food origins received rather low ratings, even local conventional food. The local organic food was perceived as the food origin with the most limited availability and smallest variety. Local farmers and food producers only offer a relatively low quantity and the variety of food to consumers.

Table 6. Significant differences between the tested food origins (sample from Saint-Petersburg)[2]

Food attributes	Pairwise comparison of different food origins1 (comparison of mean ratings with paired-samples t-test)					
	local organic vs. local conventional	local organic vs. imported organic	local organic vs. organic from Russia	organic from Russia vs. local conventional	organic from Russia vs. imported organic	imported organic vs. local conventional
Price	**	**	**	n.s.	**	**
Freshness	**	**	**	**	**	n.s.
Taste	**	**	**	**	**	n.s.
Quality	**	**	**	**	**	**
High nutritional value	**	**	n.s.	**	**	**
No chemical residues	**	**	**	**	**	**
Trustworthiness of producers	n.s.	**	**	**	**	**
Food safety	**	**	n.s.	**	**	**
Support of small producers	**	**	**	**	**	**
Low environment impact	**	**	n.s.	**	*	**
Easily accessible	**	**	**	**	**	**
Large variety and brands	**	**	**	n.s.	n.s.	n.s

3.3.2 Moscow

The perception of the tested food origins by consumers in Moscow can be found in Figure 3 and Table 7. It becomes evident that the ratings of the four food origins are much closer together compared to the results from Saint-Petersburg, in particular, the ratings of the three organic food origins. In Moscow, imported organic and local organic food also received the most positive mean ratings regarding «quality», «nutritional value», «absence of chemical residues», and «food safety». Regarding «price», imported organic food was perceived as the most expensive, while the local conventional food was seen to be the cheapest. When it comes to «accessibility and variety», the local conventional food was perceived to be more easily accessible and with a larger variety of brands. Imported organic food was perceived as the least available with a limited amount of choice.

[2] The pairwise comparisons of the food origins were based on consumer ratings of the different food attributes, e.g. consumer ratings of the price of local organic food compared to consumer ratings of the price of local conventional food etc.
** significant difference at p-value <0.05; * significant difference at p-value <0.1; n.s. no significant difference

It is interesting that participants in Moscow rated the local conventional food as significantly tastier than local organic food and organic food from Russia.

All tested food origins were perceived to stem from rather large producers, in particular, imported organic food. At the same time, the trustworthiness of producers was seen to be the highest for imported organic food.

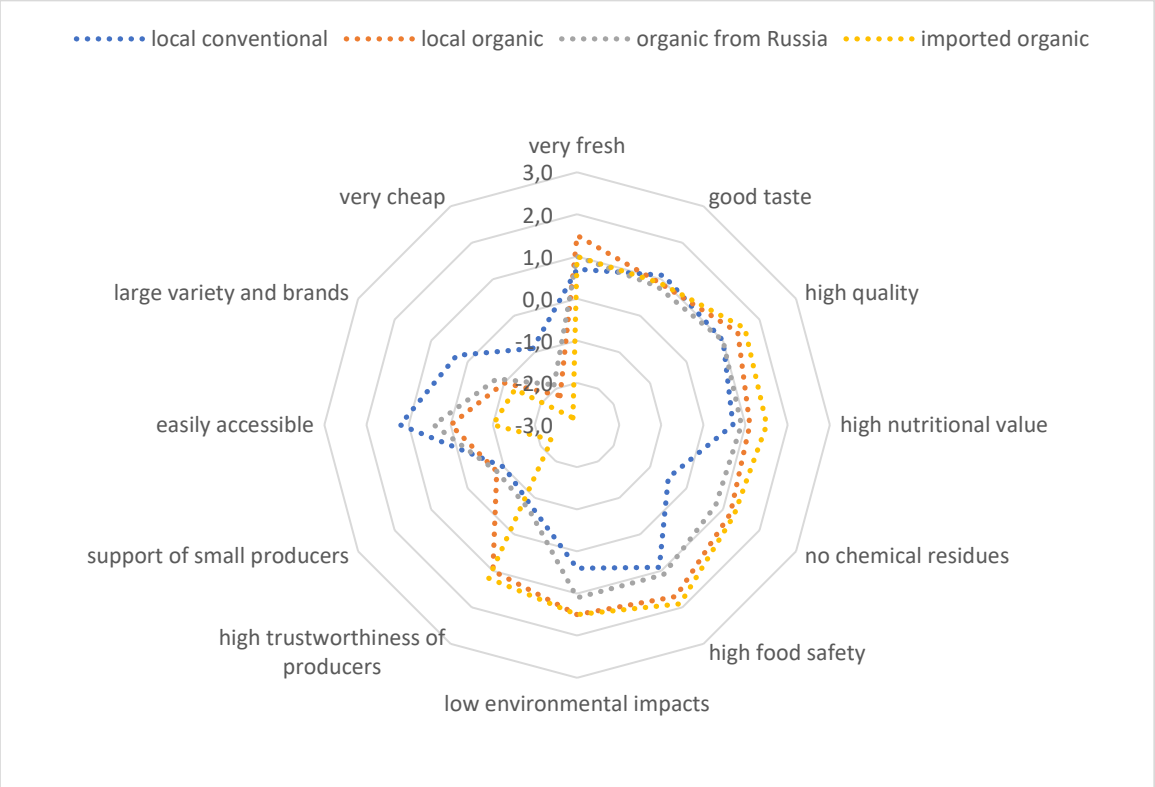

Figure 3. Consumer perception of local organic, organic food from Russia, imported organic and local conventional food in Moscow (mean ratings)

Table 7. Significant differences between the tested food origins (sample from Moscow)[3]

Food attributes	Pairwise comparison of different food origins1 (comparison of mean ratings with paired-samples t-test)					
	local organic vs. local conventional	local organic vs. imported organic	local organic vs. organic from Russia	organic from Russia vs. local conventional	organic from Russia vs. imported organic	imported organic vs. local conventional
Price	**	**	**	**	**	**
Freshness	**	**	**	n.s.	n.s.	n.s.
Taste	**	n.s.	n.s.	**	*	n.s.
Quality	**	n.s.	**	n.s.	**	**
High nutritional value	**	**	n.s.	**	**	**
No chemical residues	**	n.s.	n.s.	**	**	**
Trustworthiness of producers	**	n.s.	**	n.s.	**	**
Food safety	**	n.s.	**	**	**	**
Support of small producers	n.s.	n.s.	**	n.s.	**	**
Low environment impact	n.s.	**	n.s.	n.s.	**	**
Easily accessible	**	**	n.s.	**	**	**
Large variety and brands	**	*	*	**	**	**

3.3.3 Comparison between consumers in Saint-Petersburg and Moscow

For a direct comparison of the results from Saint-Petersburg and Moscow, a multiple-attitude index was calculated for each food origin to find out consumers' overall attitudes on the tested food origins. In line with the results on consumer perceptions, participants in Saint-Petersburg showed a very positive attitude towards imported organic food and local organic food (Figure 4). The local conventional food was also evaluated positively, while consumers had a distinctly negative attitude towards organic products from Russia. In Moscow, the four product types received relatively similar index values.

The comparison between the index values in Saint-Petersburg and Moscow revealed significant differences regarding two food origins, namely imported organic food and organic food from Russia ($p < 0.05$). Participants in Saint-Petersburg had a more positive attitude towards imported organic food than participants in Moscow. In Saint-Petersburg, imported organic food was perceived better regarding chemical residues, freshness, the trustworthiness of producers, accessibility, taste, and variety and brands when compared to Moscow. The

[3] The pairwise comparisons of the food origins were based on consumer ratings of the different food attributes, e.g. consumer ratings of the price of local organic food compared to consumer ratings of the price of local conventional food etc.
** significant difference at p-value <0.05; * significant difference at p-value <0.1; n.s. no significant difference

opposite was observed for organic food from Russia, which was evaluated positively by participants in Moscow while participants in Saint-Petersburg had a negative attitude towards this food origin. In Moscow, organic food from Russia was rated significantly better than in Saint-Petersburg regarding quality, taste, freshness, nutritional value, free of chemical residues, food safety, small environmental impact and accessibility. Only the price of organic food from Russia was rated better in Saint-Petersburg than in Moscow.

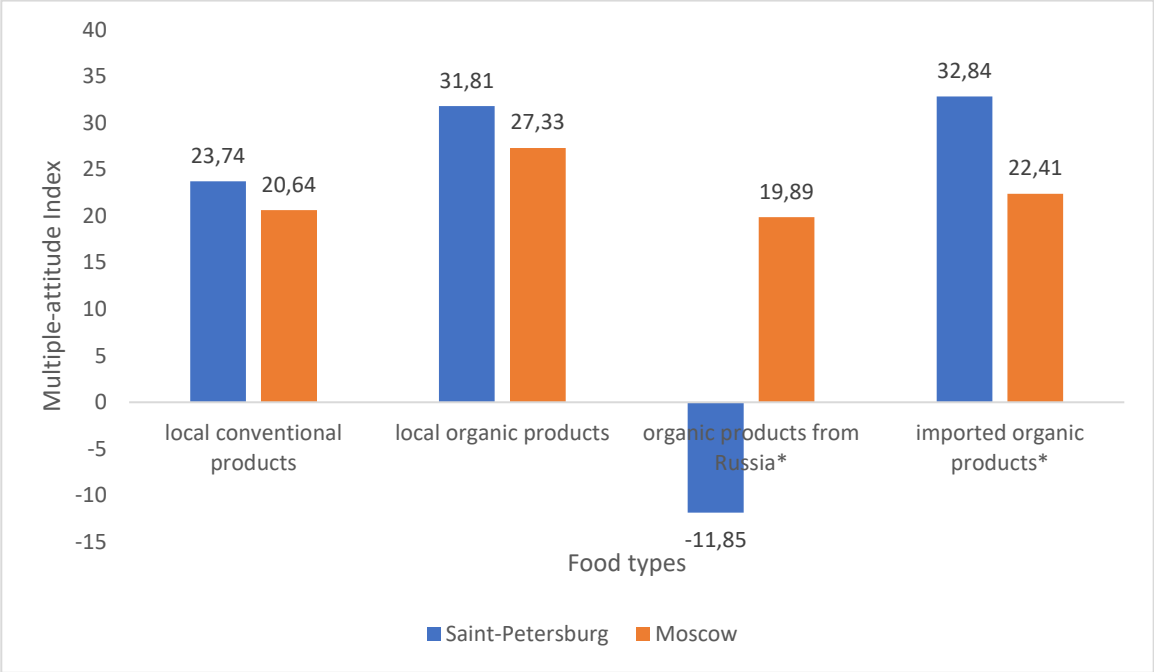

Figure 4. Mean of multiple-attitude index of each food origin in Saint-Petersburg and Moscow[4]

In our study from Moscow, the mean ratings of organic food from Russia were very positive. However, the standard deviation was also relatively high (34.7). It is thus interesting to further look at the proportion of participants with a negative attitude towards organic food from Russia (i.e. an attitude index below zero), which accounted for 20.5 %. In fact, every fifth participant in Moscow thus had a negative attitude towards organic food from Russia.

So, we accept the hypothesis that consumers' perceptions and attitudes towards organic food from different origins depends on the region where consumers live. In this way, the results support the ones that were obtained during the previous experiments (Hsieh, 2004; Rosenbloom and Haefner, 2009).

[4] indicates the difference between Saint-Petersburg participants is significant at p-value <0.05

Also, we accept the hypothesis that there is a difference in consumers perceptions of locally and nationally produced organic food compared to organic food imported from other countries. This issue was earlier studied by Ahmed et al., 2004, Schjoll, 2016, Dransfield et al., 2005 and Xie et al., 2015. But in our research we also provide the detailed results depending on the region where consumers live – Saint-Petersburg or Moscow.

3.3.4 Consumers' buying intention

Figure 5 shows consumers' intention to buy local organic food, organic food from Russia and imported organic food. Interestingly, in both cities, participants showed the highest buying intention for imported organic food. Regarding local organic food, the share of participants who stated an intention to buy it within the next month was slightly lower. For organic food from Russia, only about 25 % of the participants in Saint-Petersburg and around 36 % of the participants in Moscow would probably or definitely buy it within the next month. While for Saint-Petersburg, the results on buying intentions were completely in line with the results on attitudes and perceptions, it is surprising that the share of participants from Moscow who stated an intention to buy organic food from Russia was relatively low. The latter finding could be a manifestation of the so-called attitude-behaviour gap, according to which a person's positive attitudes do not necessarily lead to corresponding behaviour (Solomon et al., 2010).

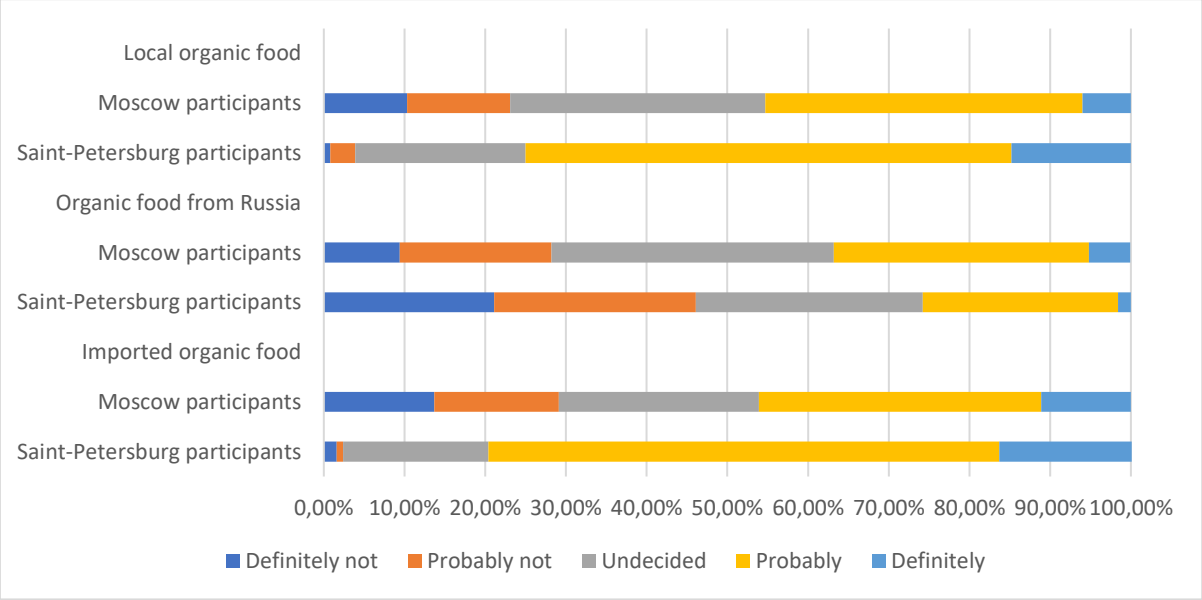

Figure 5. Consumers' buying intention of organic food from different origins

3.4 Comparison between regular and occasional buyers of organic food

In this part of the research, we are going to test the hypothesis that wat stated after the literature review: consumers' perceptions of organic food might be different between consumers who buy organic food regularly and those who buy it only occasionally.

Figure 6 shows that in Saint-Petersburg, regular buyers of organic food had a more positive attitude towards the three tested organic origins than occasional buyers of organic food (t-test, $p < 0.05$), whereas no significant difference between the two groups of customers was identified for local conventional food. Overall, the findings from Saint-Petersburg are in line with common marketing theory. In Moscow, in contrast, no significant differences were found between regular and occasional buyers regarding their attitudes towards the tested food origins. Nevertheless, regular organic food consumers showed a higher buying intention for all three organic food origins. In Moscow, it would thus be interesting to find out why positive attitudes among occasional buyers of organic food did not translate into higher levels of actual purchases, which could be the subject of future research.

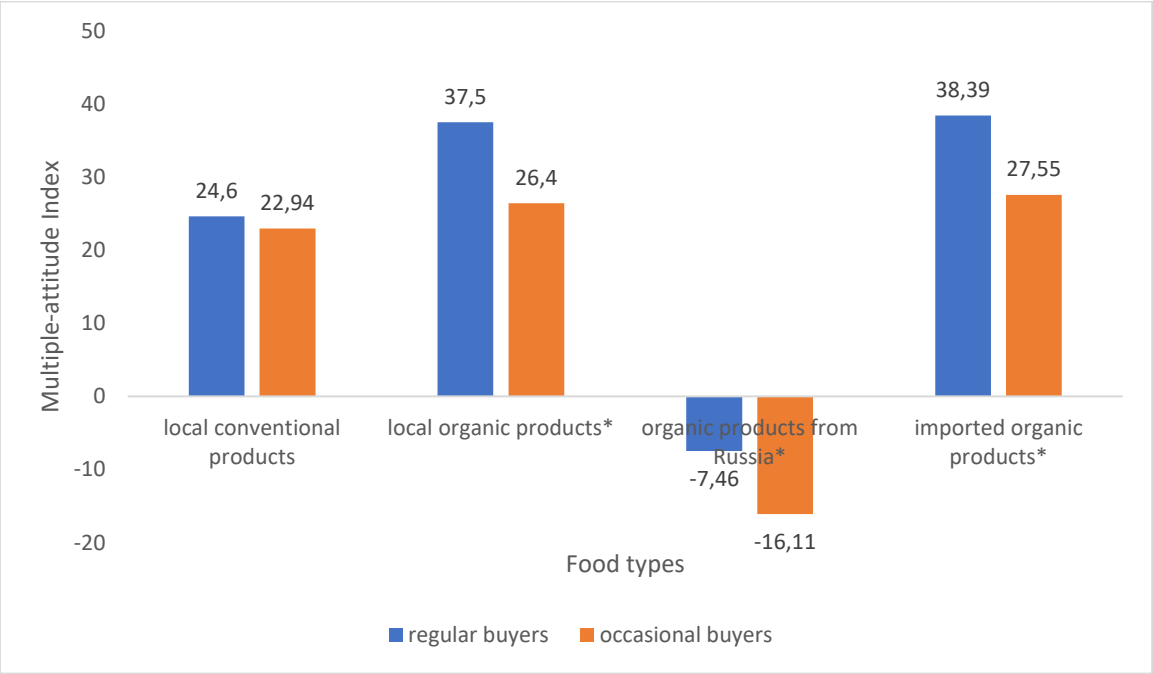

Figure 6. Mean of multiple-attitudes index for regular (N=33) and occasional (N=31) organic food buyers in Saint-Petersburg[5]

So, we accept the hypothesis that consumers' perceptions of organic food might be different between consumers who buy organic food regularly and those who buy it only

[5] indicates the difference between Saint-Petersburg participants is significant at p-value <0.05

occasionally. But, again, in our example the results are different and depend on the region where consumers live. Nevertheless, our results confirm the theories that were studied in the previous researches (Newman et al., 2014; Pharr, 2005; Rodiger and Hamm, 2015).

3.5 Identification of food shopping orientations

The statement response statistics is presented in Table 8. The shopping orientation themes are shown in Table 8. The three-factor model explains 49% of the variance. Cronbach's alphas for the factors ranged from 0.63 to 0.82. The shopping orientation factors were labelled (1) politics/planned behaviour, (2) patriotism, and (3) store time.

Table 8. Russian consumer attitudes towards shopping of domestic organic food products[6]

Statement	**N**	**Mean**	**Standard error**
I have great trust in domestic organic food products	123	2.93	0.84
Domestic organic food products are part of our national identity	123	2.87	0.96
Domestic organic food products stand for quality	123	2.85	0.74
When shopping for food, convenience is most important for me	123	2.82	1.01
I buy domestic organic food products to support Russian industry	123	2.61	1.12
I am very proud of domestic organic food products	123	2.59	0.91
I accept a higher price for a guaranteed superior quality of food products	123	2.59	1.08
I am willing to spend more money for domestic organic food products	123	2.35	1.22
I am not willing to pay high prices for domestic organic food products	123	2.34	1.18
I will always prefer domestic organic food products to those from other countries	123	2.24	1.11
If necessary, I visit several stores to buy a particular food product	123	2.23	1.30
I buy domestic organic food products explicitly to help secure Russian jobs	123	2.17	1.20
I do not care what country the food products that I buy come from	123	1.97	1.22
I buy domestic organic food products to help avoid long-distance transportation	123	1.76	1.12
I do not pay much attention when shopping for food since I want to be finished as quickly as possible	123	1.42	1.28

[6] scores ranged from 1 (strongly disagree) to 5 (strongly agree)

Table 9. Factor analysis of shopping orientations

Factors	Factor loading	Eigenvalue	% of variance	Cronbach's alpha
Politics/planned behaviour		4.53	30.18%	0.82
*secure domestic jobs	0.84			
*avoid long transportation	0.83			
*always prefer domestic	0.74			
*support domestic industry	0.64			
*spend more money	0.53			
Patriotism		1.5	9.98%	0.80
*great trust	0.84			
*stand for quality	0.84			
*very proud	0.75			
*national identity	0.54			
Store/time		1.37	9.12%	0.63
*visit several stores	0.76			
*as quickly as possible	-0.73			

3.6 Identification of food clusters

We have tested 2, 3, 5 and 7 cluster solutions and stated that a 3-cluster solution displays the most extensive distribution of subjects. Table 10 shows the results of the cluster procedures; including the group mean for each of the three food shopping clusters/segments on each of the three shopping themes. The table also provides the results of the validating MANOVA and ANOVA tests.

Testing of ANOVA scores exhibits that patriotism is the most determining factor in separating the segments in the sample (F=114.3, p<=0.001).

Table 10. Cluster Analysis of Patriotic Orientation

	cluster			P
factor	indifferent	dedicated	patriotic	
Politics	2.54^{ac}	3.58^{ab}	3.17^{bc}	0.000
Patriotism	2.70^{ac}	2.37^{ab}	3.77^{bc}	0.000
Store/time	2.56^{ac}	3.46^{a}	3.11^{b}	0.000
	Multivariate			0.000
%	55	22	24	

The first segment included 55% of the subjects. As this is the largest national segment, the most satisfying results would contribute some notable features that food marketers could use. Moreover, an analysis of shopping orientation means scores presented in Table 10 reveals that a majority of food shoppers express a common denominator sort of segment. The segment

had the distinctively lowest mean scores on politics (M=2.54), and store/attention (M=2.56). The mean score for patriotism is higher than for the second but lower than for the third segment. Thus, the segment was not motivated by political behaviour nor by relations to stores or by time dedicated to food shopping. Therefore, the first segment was labelled «Indifferent Segment». The second segment consisted of 21% of the subjects. This segment had the highest score for the politics orientation (M=3.58) and for the store time (M=3.46) orientation. Patriotism is one of the lowest importance to them. They explicitly dedicate time to food shopping, select their stores carefully, are aware of the consequences of their shopping behaviour and consider food shopping as a means of making a public statement. Therefore, this group labelled «Dedicated Segment». The third segment comprises 24% of the sample. This group had the distinctively highest score on the patriotism orientation (M=3.77). Consequently, it was labelled «Patriotic Segment».

3.7 Organic baby food research

In this part of the study we are going to test the hypothesis that when making decisions for purchasing organic food, the country of origin is more important for a consumer than the brand name. Further we will discuss whether our results go alongside with ones that were obtained in previous experiments.

Country of origin or a brand name?

Country-of-origin as the factor influencing decisions to purchase baby organic food to the study results (Appendix 1), the named elements are divided into four groups according to the importance when a consumer chooses what organic baby food to purchase.

The most important factors in the respondents' choice of organic baby food are as follows: naturalness (displays the highest mean score for all factors with a value of 8,39) and price (7,97). The analysis of correlation among the first factor and consumers' demographic variables shows the statistically reliable positive link between the first attribute naturalness) and respondents' education. The data presented in Appendix 1 show that the importance of this quality grows when the respondents' education increases (r=0,148).

The following factors are attributed to the group of the important factors when making decisions to purchase organic baby food — expiry date (7,84), doctor's recommendations (7,59), discounts (7,54). The statistically reliable positive correlation has been identified between the importance of supplements' expiry date and respondents' age (r=0,231).

Statistically significant negative relations have been identified between the importance of price and respondents' income (r=-0,214), the importance of supplements' expiry date and respondents' income (r=-0,114) as well as the importance of offered discounts and respondents' income (r=-0,146).

The following factors are moderately important for the respondents in making decisions to purchase organic baby food: country of origin (6,16), known brand (6,14), consumers' comments on the Internet (5,38). The correlation analysis has disclosed the statistically reliable negative relations between the importance of the recommendations of friends, acquaintances and respondents' age (r=-0,204); the importance of consumers' comments on the Internet and respondents' age (r=-0,194).

The least significant factors in the decision making to purchase baby organic food for the respondents are the following: comprehensive presentation on TV or in press (3,92), advertising (3,60) and attractive packaging (3,15).

The research results show the statistically significant negative correlation between the importance of advertising as well as attractive packaging and respondents' age (respectively r=-0,110 and -0,298).

It was hypothesised that, when making decisions for purchasing organic baby food, the country of origin is more important for a consumer than supplements' brand name. Referring to the above-presented data, the hypothesis is denied. The data collected during the survey show that the country of origin of organic baby food is as important (mean 6,16) as the product's brand name (6,14). Both named factors are attributed to the group of factors of moderate importance. But the limitation is the we have tested this hypothesis only for baby organic food market. The results could be different for other product categories as ones that were obtained during the previous experiments (Chattalas et al., 2008; Aichner, 2014; Pharr, 2005).

Perceptions of organic baby food produced in Russia and foreign countries

In this part of the study the aim is to test the next hypothesis: consumers evaluate the quality and the price of the organic food on the basis of its country-of-origin. We will confirm or deny the results that were obtained by other researchers (Insch and Florek, 2009; Baker and Ballington, 2002; Ahmed et al., 2004; Gurhan-Canli and Maheswaran, 2000).

Perceptions of product quality

The research results (Table 11) show that the respondents rate the quality of the organic baby food produced in Germany and Switzerland (mean 6,16 and 6,13) the highest. The quality of the organic baby food produced in other surveyed developed countries is top rated as well: Sweden - mean 5,99; USA -5,88; France – 5,79; Finland – 5,70; Lithuania – 5,48; UK – 5,43; Belgium - 5.22; Netherlands - 5.18. Lower evaluations of the respondents (however, higher than moderate) were given to the quality of the organic baby food produced in Slovakia and Russia (respectively 4,97 and 4,91). The respondents moderately rate the quality of the organic baby food produced in Italy (4,17), Poland (4,17), Czech Republic (3,91), and Spain (3,61).

Table 11. Perceptions of the quality of the organic baby food produced in different countries[7]

Baby organic food made in	**Mean**	**Age**		**Education**		**Income**	
		Correlation coefficient	**Sig. (2-tailed)**	**Correlation coefficient**	**Sig. (2-tailed)**	**Correlation coefficient**	**Sig. (2-tailed)**
Germany	6,16	0,092	0,206	0,282**	0,000	0,127	0,083
Switzerland	6,13	0,149	0,081	0,344*	0,000	0,048	0,584
Sweden	5,99	-0,035	0,664	0,198*	0,013	0,053	0,508
USA	5,88	0,159*	0,037	0,216**	0,004	0,170*	0,026
France	5,79	0,056	0,574	0,259**	0,008	-0,053	0,598
Finland	5,70	0,268*	0,012	0,358**	0,001	0,208	0,056
Lithuania	5,48	0,164*	0,012	0,246**	0,000	-0,043	0,512
UK	5,43	0,113	0,187	0,248**	0,003	0,114	0,187
Belgium	5,22	-0,007	0,949	0,271*	0,019	-0,017	0,886
Netherlands	5,18	0,041	0,744	0,297*	0,017	0,064	0,615
Slovakia	4,97	0,288**	0,004	0,327**	0,001	0,058	0,570
Russia	4,91	0,084	0,278	0,114	0,141	-0,189*	0,014
Italy	4,17	0,116	0,307	0,133	0,244	-0,136	0,234
Poland	4,17	0,146	0,121	0,213*	0,023	-0,119	0,207
Czech Republic	3,91	0,109	0,317	0,144	0,182	-0,226*	0,034
Spain	3,61	0,138	0,194	0,178	0,094	-0,098	0,359

The correlation analysis shows statistically reliable positive relations among the respondents' age, education, income and the evaluation of the quality of organic baby food made in the USA (r=0,159; 0,216 and 0,170). During the research the statistically significant positive correlation relation was identified among the respondents' age, education, and the evaluations of the quality of the organic baby food made in Finland (r=0,268 and 0,358), Lithuania (r=0,164 and 0,246) and Slovakia (r=0,288 and 0,327). The statistically reliable

[7] 1 - not important factor, 7 - most important factor while making purchase decisions

negative relation was determined by the respondents' income and the perceived quality of the supplements made in Russia (r=0,189) and Czech Republic (r=-0,226).

The regression model was built to investigate how consumers perceive the quality of the baby organic food from a particular country depending on their age, education, and income. Appendix 2 shows the model summary for 16 countries.

Appendix 3 demonstrates the coefficients for dependent (quality score) and independent (age, education, income) variables).

The regression functions were built for each of 16 countries so the model can be used to predict the score for a particular country depending on the consumer age, education and income.

Table 12. Regression function (Regression Analysis)

Country	Function
Germany	QUALITY score = 4.670 + 0.067*age + 0.180*education + 0.255*income
Switzerland	QUALITY score = 5.104 + 0.106*age + 0.120*education + 0.116*income
Sweden	QUALITY score = 5.784 - 0.040*age + 0.117*education + 0.130*income
USA	QUALITY score = 4.767 + 0.016*age + 0.105*education + 0.250*income
France	QUALITY score = 4.883 + 0.147*age + 0.247*education - 0.055*income
Finland	QUALITY score = 4.419 + 0.020*age + 0.197*education + 0.210*income
Lithuania	QUALITY score = 5.459 + 0.015*age + 0.098*education - 0.106*income
UK	QUALITY score = 3.873 + 0.133*age + 0.207*education + 0.179*income
Belgium	QUALITY score = 5.159 - 0.060*age + 0.295*education - 0.174*income
Netherlands	QUALITY score = 3.968 + 0.057*age + 0.217*education + 0.130*income
Slovakia	QUALITY score = 3.599 + 0.075*age + 0.275*education + 0.107*income
Russia	QUALITY score = 4.913 + 0.026*age + 0.104*education - 0.133*income
Italy	QUALITY score = 4.084 + 0.065*age + 0.164*education - 0.143*income
Poland	QUALITY score = 3.963 + 0.021*age + 0.256*education - 0.208*income
Czech Republic	QUALITY score = 3.892 + 0.017*age + 0.192*education - 0.191*income
Spain	QUALITY score = 3.364 + 0.101*age + 0.188*education - 0.207*income

For example, quality score for organic baby food from Germany is predicted from the factors age ($\beta = 0.067$), education ($\beta = 0.180$) and income ($\beta = 0.255$). This model explains 66.5% of the variance (R2 adj = 0.665). This mean the model is reliable and can be used to predict how consumers will perceive the quality of the organic baby food from this particular country on the basis of consumers' individual characteristics such as age, income, education.

Perceptions of product price

In the analysis of the respondents' opinion on the prices of the organic baby food made in different countries (Table 13), the tendency that the higher the quality of the organic baby food produced in the country is rated, the higher their price, according to the respondents.

According to the respondents, the highest prices are characteristic for the organic baby food produced in developed countries: Switzerland (5,72), Germany (5,51), Finland (5,46), Sweden (5,40), France (5,38), USA (5,35), UK (5,15), Belgium (5,08), and Netherlands (5,02). The prices of the organic baby food produced in Lithuania are evaluated a bit higher than moderately (4,66), and somewhat — in Slovakia (4,26), Italy (3,86), Poland (3,65) and Spain (3,62). According to the respondents, the countries producing the cheapest organic baby food are Russia (3,30) and Czech Republic (3,35). The prices of the organic baby food produced in these countries are lower than moderate, according to the respondents.

Table 13. Perceptions about the price of the organic baby food produced in different countries[8]

Baby organic food made in	**Mean**	**Age**		**Education**		**Income**	
		Correlation coefficient	**Sig. (2-tailed)**	**Correlation coefficient**	**Sig. (2-tailed)**	**Correlation coefficient**	**Sig. (2-tailed)**
Germany	5,51	0,118	0,155	0,101	0,223	-0,058	0,488
Switzerland	5,72	0,197*	0,039	0,155	0,104	0,038	0,694
Sweden	5,40	0,142	0,117	0,322*	0,000	0,035	0,696
USA	5,35	0,139	0,089	0,021	0,793	-0,124	0,131
France	5,38	0,280*	0,012	0,171	0,128	0,184	0,105
Finland	5,46	0,152	0,254	0,364**	0,005	0,115	0,390
Lithuania	4,66	-0,033	0,634	0,038	0,587	-0,130	0,065
UK	5,15	0,262**	0,004	0,122	0,180	0,127	0,163
Belgium	5,08	0,279*	0,034	0,290*	0,026	-0,052	0,694
Netherlands	5,02	0,262	0,072	0,194	0,188	-0,069	0,639
Slovakia	4,26	0,137	0,223	0,199	0,074	0,103	0,356
Russia	3,30	-0,049	0,537	-0,003	0,969	-0,112	0,160
Italy	3,86	0,162	0,229	-0,162	0,228	-0,411**	-0,002
Poland	3,65	-0,072	0,484	0,018	0,858	-0,193	0,057
Czech Republic	3,35	0,075	0,518	-0,195	0,091	-0,227*	0,049
Spain	3,62	0,348**	0,004	0,104	0,401	-0,279	0,022

The statistically significant positive correlation between the respondents' age and the prices of the organic baby food produced in Switzerland (r=0,197), France (r=0,280), UK

[8] 1 - not important factor, 7 - most important factor while making purchase decisions

(r=0,262), Belgium (r=0,279), Spain (r=0,348) have been identified. Statistically significant positive correlation have been identified between the respondents' education and the evaluations of the prices of the organic baby food produced in Sweden (r=0,155), Finland (r=0,364) and Belgium (r=0,290). The negative correlation was found between the respondents' income and the evaluation of the prices of the organic baby food produced in Italy (r=-0,411), Czech Republic (r=-0,227) and Spain (r=-0,279).

Figure 7. Perceptions of the quality and price of the organic baby food produced in Russia and foreign countries[9]

The study provides a comprehensive picture of a country of origin effect in a Russian market of the organic baby food. The research results reveal the respondents' perceptions of the organic baby food produced in Russia and fifteen foreign countries, and it also shows how important the organic baby food country of origin is for consumers when making purchase decisions.

Despite the clear perceptions of the consumers about the organic baby food produced in different countries, the study results indicate that the product's country of origin is the factor of moderate importance. When a Russian consumer of organic baby food makes

[9] SP – Spain, CR – Czech Republic, PL – Poland, RU – Russia, SL – Slovakia, LT – Lithuania, NY – Netherlands, BE – Belgium, UK – United Kingdom, FN – Finland, FR – France, USA – USA, SW – Sweden, DE – Germany, CH - Switzerland

decisions to purchase, for him/her the personally tried product's quality, naturalness, their price and offered discounts, doctor's recommendations are much more important.

All in all, the last part of the empirical research tested the hypothesis from the literature review: consumers evaluate the quality and the price of the organic food on the basis of its country-of-origin. While testing it for the organic baby food market, we confirmed the results that were obtained earlier by a number of researchers (Insch and Florek, 2009; Baker and Ballington, 2002; Ahmed et al., 2004). At the same time, we extent the research by adding the regression model. It can be used for evaluating how consumers perceive the quality of the organic baby food depending on the country-of-origin. The model test 16 countries and is unique for research of Russian consumers. Also, it can be applied further to test the perceptions of the consumers from other Russian regions as well as from other countries. It can be also useful for testing the other organic product categories such as dairy products, meat, fruits, vegetables.

4. CONCLUSIONS AND IMPLICATIONS

4.1 Conclusions

We conclude that local organic food, organic food from Russia, imported organic food and local conventional food were perceived differently by consumers in Saint-Petersburg. Among these four product types, consumers in Saint-Petersburg had a positive attitude towards local organic food and imported organic food, while they were sceptical about organic food from Russia, in particular regarding chemical residues and the trustworthiness of producers. They would prefer local conventional food to organic food from Russia. We further conclude that the perception and attitude of consumers in Moscow, in contrast, did not show much deviation between the different types of organic products. Consumers in both cities showed more positive attitudes towards local organic and imported organic food than towards local conventional food, and they perceived local organic and imported organic food as safe and high-quality food. In both cities, the local organic food was also seen to be the freshest. These three attributes (high food safety, high quality and freshness) turned out to be the most important aspects for consumers when purchasing food in general.

Nevertheless, the current consumption of organic food in Russia is very limited. According to our findings and previous studies, high prices, difficult accessibility and lack of variety of organic food are major factors that hinder consumers from purchasing it.

The ultimate goal of this paper was to help marketers to promote domestic organic products in Russia better. This research showed that consumers in Saint-Petersburg had a negative attitude and a low intention to buy organic food from Russia, and customers in Moscow did not particularly prefer it to organic food produced elsewhere. Further investigation is necessary to find out more about the reasons behind this phenomenon. From the current results, the following recommendations can be given to Russian marketers of organic food. It seems essential to convince consumers that organic food from Russia is of similar quality as organic food produced elsewhere. According to our results, high food safety, high quality and freshness are the most important aspects for consumers when purchasing food. We, therefore, recommend that marketers should put effort into providing organic products from Russia that fulfil consumer expectations regarding food safety, quality and freshness. Moreover, marketers should focus on these aspects when they design marketing messages and campaigns. Marketing communication in the form of advertising, events and public relations could assist to enhance the image of Russian organic food in the minds of consumers.

Russian consumers in the examined market perceive foreign-made food products significantly better than domestic alternatives on several important criteria. The results of a psychographic segmentation show, however, that in Russia three viable segments exist that display distinct shopping styles. The segments significantly differed in their perception of domestic versus foreign organic products.

The results of this study demonstrate that Russian consumers perceive foreign organic food products better than domestic alternatives and that patriotism plays a significant role in this perception. Moreover, it shows that the food products market can be segmented by shopping orientations. These shopping orientation-based segments differed in the understanding of food attributes.

All three of the food shopping segments produced extreme (both high and low) mean scores on various shopping orientations. This made it easy to characterise the segments. The same three groups exhibited pairwise differences on at least two of the eight profiling attributes. Thus, the groups can be addressed by using segmented approaches tailored to their shopping orientation and their profiling characteristics.

The study provides a comprehensive picture of a country-of-origin effect in a Russian market of organic baby food. The research results reveal the respondents' perceptions of the organic baby food produced in Russia and fifteen foreign countries, and it also shows how important the organic baby food' country of origin is for consumers when making purchase decisions.

The organic baby products produced in Germany, Switzerland, Sweden, USA are rated as the products of the highest quality. The organic food produced in Russia is rated lower in comparisons to the organic baby food produced in developed countries.

The customers' perceptions on prices of the organic baby products produced in Russia and foreign countries, which have been surveyed during the research, show that this factor is also perceived as analogous for the quality. That is the prices of the organic baby food produced in developed economies are perceived as much higher than the prices of the organic baby food produced in Russia.

Despite the clear perceptions of the consumers about the organic baby food produced in different countries, the study results indicate that the product's country-of-origin is the factor of moderate importance.

When a Russian buyer of organic baby food makes decisions to purchase, for him or her the naturalness, price and offered discounts, expire dates, doctor's recommendations are much more important.

4.2 Theoretical and practical contribution

We have investigated that there are a lot of factors that shape purchasing behaviour toward organic food. We realised that we need a better understanding of the place of the country-of-origin factor in the theoretical model of consumer behaviour. A multidisciplinary model of the main factors affecting consumer behaviour in organic food domain and the role of «origin» factor in this complex system can be used as a theoretical base for future researchers.

As for the other theoretical contribution, we have confirmed the number of theories that were studied in the literature review and extrapolated these theories for the Russian organic food market. While the hypothesis about the power of brand name comparing to the power of country-of-origin was denied, all other hypotheses were accepted. Moreover, they were extended with the detailed explanation of all factors that influence why this hypothesis works or doesn't work for Russian consumers and/or for organic food market.

Managerial implications are described as follows:

The Indifferent Segment was the largest group and comprised more than half of the subjects. The group had the lowest scores on the store/time and dedication. People in this segment do not pay close attention to where products come from nor what the consequences of their purchasing behaviour might be. The group was little patriotic. These findings may be viewed as a window of opportunity for marketers regarding devising strategies to satisfy this segment for expanding their markets by actually luring the segment into developing preferences for foreign-made products.

The Dedicated-Food-Shoppers Segment had the highest score on the politics and on the store/time shopping orientation. The group comprised roughly a quarter of the subjects and exhibited the lowest score on the patriotic shopping orientation. People in this group perceived foreign organic food products significantly best. Food marketers interested in targeting the Dedicated-Food-Shopper Segment should focus on communicating a unique price-quality-ratio to appropriate stores.

The Patriotic Segment included roughly a quarter of the food shoppers. While not the largest group, the size of this segment is certainly sufficient for attracting the attention of food marketers. The group has high trust in domestic organic food production, firmly believes that domestic organic products stand for quality, considers domestic food a part of their national identity, and is very proud of it. Individuals in this segment also dedicate some time to organic food purchasing and are aware of the effects of their behaviour. Patriotic shoppers place greater value on the country-of-origin of food products and perceive domestic products significantly better than shoppers in the other segments. When exposed to foreign organic food, members of this group are more likely to reject those offers. This segment is relatively difficult for internationally operating food industries to target. Food producers who are interested in acquiring the patriotic Russian consumers should focus on appropriate image campaigns, e.g., emphasise their products being the results of joint ventures with Russian firms.

Moreover, the regression model can be used by marketers for creating marketing activities for different groups of consumers on the basis of their age, income, education. The model proposes to evaluate how consumers will perceive the baby organic food depending on its country-of-origin. So, the marketers can focus their efforts on the most attractive segment of customers as the resources to attract the buyers are often limited.

4.3 Recommendations for future research and limitations

The first limitation relates to sample characteristics. As the shares of women and men are not equal, the sex attribute of sample does not fully represent the population. This factor should be considered while implementing the results of the research.

In addition to the 12 food attributes that were used in this research, many other possible factors such as trendiness and social status (Bähr et al., 2004), trust in regulations (Bähr et al., 2004) and consumers' knowledge about organic food (Roitner-Schobesberger et al., 2008; Grzelak & Maciejczak, 2013) can also influence consumers' attitudes towards organic food.

Furthermore, it is important to mention that perceptions and purchase intention might not result in final purchase decisions. There are many other aspects such as pricing and availability that may affect consumers' final purchase decisions. To get a better understanding of consumer behaviour about organic food in Russia, future research should not only include these factors but, in particular, try to measure real purchasing behaviour.

Further studies should be performed in other cities such as Novosibirsk, Ekaterinburg, Kazan, Chelyabinsk, and Omsk. This would help to find out whether there are differences of consumer perception across cities, giving a more comprehensive view of the Russian market.

In the first part of the study, the participants were asked for their opinions on organic food in general without any further distinction between different kinds of food. In future research, it should be differentiated between specific food categories such as dairy products, fresh vegetables or processed meat to get a more detailed view of consumer perception and buying behaviour of organic food.

As for the research of organic baby food market, our study primarily focused on whether the information has an effect on consumers' preference for imported organic foods, and did not delve into other issues, such as why information creates an impact, or not.

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APPENDIXES

Appendix 1. The importance of the factors when a consumer makes decisions to purchase organic baby food

Factors influencing purchase intentions	Mean 10	Age		Education		Income	
		Correlation coefficient	Sig. (2-tailed)	Correlation coefficient	Sig. (2-tailed)	Correlation coefficient	Sig. (2-tailed)
Naturalness	8,39	0,103	0,055	0,148**	0,006	0,100	0,064
Price	7,97	-0,024	0,650	-0,046	0,393	0,214**	0,000
Expire date	7,84	0,231**	0,000	-0,005	0,928	-0,114*	0,035
Doctor's recommendations	7,59	0,071	0,190	-0,072	0,178	-0,074	0,169
Offered discount	7,54	0,045	0,410	-0,011	0,838	-0,146**	0,007
Recommendations of friends and acquaintances	6,89	-0,204**	0,000	0,056	0,303	0,070	0,202
Product's country of origin	6,16	0,045	0,403	0,045	0,403	0,086	0,114
Well-known brand	6,14	0,070	0,194	0,074	0,168	0,084	0,121
Consumers' comments in the Internet	5,38	-0,194**	0,000	-0,013	0,808	0,054	0,322
Comprehension presentation on TV or press	3,92	0,001	0,978	-0,036	0,513	-0,053	0,335
Advertising	3,60	-0,110*	0,041	-0,031	0,567	-0,075	0,169
Attractive packaging	3,15	-0,298**	0,000	-0,048	0,374	0,002	0,964

[10] 1 - not important factor, 10 - most important factor while making purchase decisions

Appendix 2. Model summary (Regression Analysis)

Country	R	R Square	Adjusted R Square	Std. Error of the estimate
Germany	0.818	0.670	0.665	0.0105679
Switzerland	0.801	0.642	0.641	0.0109195
Sweden	0.293	0.086	0.083	0.0350973
USA	0.598	0.358	0.287	0.0230648
France	0.843	0.711	0.708	0.0088098
Finland	0.842	0.709	0.675	0.0080045
Lithuania	0.547	0.300	0.293	0.0199633
UK	0.881	0.777	0.769	0.0075679
Belgium	0.476	0.227	0.222	0.0240900
Netherlands	0.842	0.709	0.675	0.0080044
Slovakia	0.784	0.614	0.606	0.0110071
Russia	0.404	0.163	0.157	0.0268484
Italy	0.657	0.432	0.411	0.0178380
Poland	0.410	0.168	0.146	0.0310508
Czech Republic	0.867	0.752	0.721	0.0098455
Spain	0.478	0.229	0.220	0.0240969

Appendix 3. Coefficients (Regression Analysis)

Country	**Model**	**Unstandartised coefficients**		**Sig.**
		B	**Std. Error**	
Germany	(Constant)	4.670	0.059	0.000
	Age	0.067	0.004	0.000
	Education	0.180	0.008	0.000
	Income	0.255	0.009	0.067
Switzerland	(Constant)	5.104	0.062	0.000
	Age	0.106	0.006	0.000
	Education	0.120	0.004	0.932
	Income	0.116	0.005	0.015
Sweden	(Constant)	5.784	0.059	0.000
	Age	-0.040	0.001	0.003
	Education	0.117	0.008	0.000
	Income	0.130	0.004	0.000
USA	(Constant)	4.767	0.077	0.000
	Age	0.016	0.001	0.042
	Education	0.105	0.001	0.000
	Income	0.250	0.004	0.000
France	(Constant)	4.883	0.057	0.006
	Age	0.147	0.002	0.000
	Education	0.247	0.006	0.000
	Income	-0.055	0.001	0.018
Finland	(Constant)	4.419	0.053	0.000
	Age	0.020	0.003	0.000
	Education	0.197	0.005	0.000
	Income	0.210	0.009	0.000
Lithuania	(Constant)	5.459	0.065	0.015
	Age	0.015	0.001	0.002
	Education	0.098	0.002	0.000
	Income	-0.106	0.004	0.000
UK	(Constant)	3.873	0.053	0.002
	Age	0.133	0.003	0.055
	Education	0.207	0.007	0.000
	Income	0.179	0.002	0.000
Belgium	(Constant)	5.159	0.101	0.000
	Age	-0.060	0.002	0.000
	Education	0.295	0.007	0.000
	Income	-0.174	0.002	0.000
Netherlands	(Constant)	3.968	0.079	0.000

	Age	0.057	0.001	0.000
	Education	0.217	0.008	0.000
	Income	0.130	0.007	0.000
Slovakia	(Constant)	3.599	0.060	0.000
	Age	0.075	0.001	0.000
	Education	0.275	0.004	0.030
	Income	0.107	0.001	0.000
Russia	(Constant)	4.913	0.073	0.041
	Age	0.026	0.001	0.000
	Education	0.104	0.004	0.000
	Income	-0.133	0.002	0.000
Italy	(Constant)	4.084	0.081	0.000
	Age	0.065	0.002	0.001
	Education	0.164	0.006	0.000
	Income	-0.143	0.001	0.000
Poland	(Constant)	3.963	0.791	0.000
	Age	0.021	0.001	0.001
	Education	0.256	0.009	0.088
	Income	-0.208	0.007	0.000
Czech Republic	(Constant)	3.892	0.077	0.000
	Age	0.017	0.003	0.098
	Education	0.192	0.003	0.002
	Income	-0.191	0.001	0.017
Spain	(Constant)	3.364	0.067	0.000
	Age	0.101	0.001	0.001
	Education	0.188	0.006	0.000
	Income	-0.207	0.007	0.000