
TOWARDS TO SUSTAINABLE DEVELOPMENT: THEORETICAL RESEARCH

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Abstract. *The purpose of this article is to analyse the opportunities for change (scientific assumptions) that determine the transformations of consumer behaviour in the context of sustainable development needs. The article describes the dilemma of consumption and sustainability, since the increasing scale of consumption, as one of the major purposes of the well-being of the society, organisations and the state, is also one of the major risk factors to the environment, equality and health. That is why the article provides an overview of the influence of consumption on ecology, health, social aspects and inequality, also discussing the positions of the consumer, the company and the government, as well as their opportunities to transform the unsustainable consumer behaviour into sustainable consumer behaviour. The authors believe that a framework, based on interdisciplinary understanding and collaborative knowledge, is needed to identify and relate research questions, theories, and conclusions. Therefore, it must be a result of an integrated attitude, because efficient advancement in the field of sustainable and productive consumption may be achieved only by joint effort of producers and consumers and by including the interested groups of the consumption and production system. Such cooperation would promote changes in the consumer and producer behaviour.*

Keywords: *sustainability, sustainable consumption, responsible consumption, sustainable development.*

Introduction

The statement on the negative sides of the consumer society, made by Vance Packard (1960) forty years after the post-war economic upturn, was probably the first warning sign (Robins, 1999). In his book *The Waste Makers*, Packard (1960) drew attention to serious social, economic and environmental outcome, caused by uncontrollable growing consumption (Robins, 1999). A few noticed his criticism at the time, but now, several decades later, the need to transform the current consumption model into sustainable became one of the major topics and tasks of the global environmental and development agenda (Robins, 1999; *EU Sustainable Consumption and Production and Sustainable Industrial Policy. Action Plan*, 2008; *Sustainable Development Agenda 2030*, 2015).

Sustainable consumption in the broad sense is related to the efforts of promoting more efficient consumption and gradual development of energy and natural resource saving habits. It is argued that sustainable development promotion should be focused on areas that are most affected by consumption, i.e. transport, housing, energy and food consumption, as well as seek for deeper systemic change (O'Rourke and Lollo, 2015). To meet the scale of the sustainability challenges we face, interventions and policies must move from relative decoupling via technological improvements, to strategies to change the behaviour of individual consumers, to

broader initiatives to change systems of production and consumption (O'Rourke and Lollo, 2015).

Different authors claim that consumer behaviour is influenced by a number of elements of the socio-cultural system and the interaction between socio-cultural, economic, technological and other factors; therefore, in order to ensure that the consumer choices are more favourable to the environment, it is necessary to change their attitude in shaping the need for environmentally friendly products and services (Krantz, 2010; Assadourian, 2013). Scientists also emphasize the enormous influence of companies in ensuring advancement of sustainable development, because the corporative sector carries the responsibility of promoting sustainable consumption by implementing proper product and service development, production, distribution and supply, but the problems in the majority of the sustainable development fields remain too complex for companies to be able to tackle them on their own (Santolaria, et al., 2011; Sakarya et. al., 2012). It should be noted that besides the support from central and local authorities, achieving significant change in the entire system of production and consumption would be difficult (Stevens, 2010). Therefore, effective advancement in sustainable production and consumption could be achieved only by united effort of the producers and consumers by ensuring the involvement of the interested groups of the consumption and production system. Such cooperation would encourage the consumers and producers to change their behavioural patterns (Seuring and Gold, 2013).

Therefore, sources of information that influence change in the behaviour, as well as structural interventions and sustainability promotion measures must be integrated into sustainable innovations through universal education and sustainable consumption efforts (O'Rourke and Lollo, 2015).

The purpose of this research is to analyse the opportunities for change (scientific assumptions) that determine the transformations of consumer behaviour in the context of sustainable development needs.

The research object is the transformations of consumer behaviour with regards to sustainable development needs.

Research methods – critical scientific literature analysis, abstraction, synthesis.

The objection of sustainable consumption

We face a deep cultural and social dilemma, because the growing scale of consumption as one of the purposes of the well-being of the society, business organisations and the state, is also one of the greatest risk factors to the environment, equality and health (O'Rourke and Lollo, 2015). However, according to William Greider (1997), the industry's continuous growth according to its current model will put us all in danger (Robins, 1999; O'Rourke and Lollo, 2015). And yet, if the industrialisation cannot develop, the majority of the world's population would have to make do with lower living standards, being unable to get the manufactured products to ensure a comfortable life simply because there will not be anything to choose from (Robins, 1999). Previous concerns regarding the so-called limited growth, which could be described as an internal conflict of striving for infinite growth on a finite planet, keep increasing, reinforced with increasing realisation that the consumption-led growth keeps failing to meet the goals of the human and societal development (O'Rourke and Lollo, 2015). The tendencies of global demographic development and consumption clearly point at the increasing risks of environmental and health issues should the scale of consumption and production not be reduced (O'Rourke and Lollo, 2015).

The effect on the environment. Greater consumption determines production scale, which requires greater energy and material consumption, generating more waste and by-products (Jonkutė, 2016). Increased volumes of natural resource extraction and use, accumulating waste and pollution damages the environment and could hinder economic activity in the long run (Jonkutė, 2016). Since the 1980s, the world has exceeded many key ecological indicators (O'Rourke and Lollo, 2015). The recent scale of species going extinct has been outpacing the normal rates hundreds and even thousands of times and the condition of about 60 per cent of the world's ecosystems show significant deterioration or even overexploitation (O'Rourke and Lollo, 2015). A study, conducted in 2009 by Johan Rockström and his colleagues, has shown that three out of nine of our planet's interrelated boundaries have already been exceeded (Rockström et al., 2009). The boundaries, indicated in the study, including biodiversity, climate change and the disruption of the nitrogen cycle, leads to processes of environmental degradation, which pose a threat to many species (Rockström et al., 2009). In recent couple of centuries the climate system has become much more complex (decreasing forest areas, expanding arable land and urban territories, rapid change in the gaseous composition of the atmosphere, increasing greenhouse effect, soil and water pollution, changing ecosystems (increasing frequency of droughts, heat and cold waves, changes in the thickness of snow cover, soil frost line, more frequent and violent storms)), while the climate change data is staggering in a negative sense (Rimkus et al., 2006; Keršytė et al., 2015; O'Rourke and Lollo, 2015; Bukantis et al., 2016; Feltona et al., 2016). After the 1990s, which was marked by the largest number of environmental agreements signed, global emissions increased by at least 60 per cent, while the consumer-related annual pollution began increasing by nearly 3 per cent every year (O'Rourke and Lollo, 2015). The human footprint on the climate change manifests in significant changes of the air temperature in the late 20th-early 21st century, influenced by an increasing effect of the pollutants, generated by factories, power plants, boilers, arable land and transport (Rimkus et al., 2006; Feltona et al., 2016). The effect of the climate change will become even stronger (Keršytė et al., 2015). According to Brad Ewing (2010) and others that share his opinion, in 2007, human consumption was equal to 1.5 of the amount of the natural resources, while natural resources were used faster than they could generate (Jonkutė, 2016). We began consuming in credit to the future. That is why it is necessary to introduce fundamental changes into the system of production and consumption.

The effect on health, social aspect and inequality. In turn, growing production influences increasing environmental pollution, while the latter – the human health (Oželienė, 2019). Facing environmental challenges, prosperous states increasingly suffer from the so-called ailments, caused by good living, such as obesity, heart diseases, type two diabetes and other health issues (O'Rourke and Lollo, 2015). While people in underdeveloped countries suffer hunger due to a lack of food, the society in economically-developed and developing countries consumes a lot of food, containing fats, salt and sugar (Eičaitė, 2013). Nutritional changes were followed by reducing energy costs for various activities (Ramonaitytė, 2011), determined by sedentary lifestyle, motorised transportation, devices that replaced manual labour in factories and at home, while free time usually involves entertainment that does not require much physical activity (Ramonaitytė, 2011). Predominant consumerism, where consumption, instead of being a necessity and a moderate benefit, turns into a demonstration of social status and competition between people, causes more and more stress and dissatisfaction (Jackson, 2009). However, although the growth of consumption is closely-related with individual well-being, while the increasing GDP symbolises the well-being and success of the state, it has recently been noticed that the measurement of the economic growth in GPD is a poor representation of the well-being and harmony of the society (Costanza et al., 2013). The reason is that the economic growth

often contributes to the deteriorating condition of the environment, waste of resources, increasing inequality and other reasons (Gedvilaitė, 2019), while the hypothesis that happiness and life satisfaction is related to increasing revenue is not always true (Jonkutė, 2016), for example, the contribution of human relationships is much more important to their life quality (Ivanauskaitė, 2012). Some scientific literature also describes indices, which show a worsening life quality, caused by infinite economic growth (Easterlin, 1974; Jackson, 2009). Tim Jackson (2009) states that consumers' conscious decision to reduce consumption would not take away their well-being – on the contrary. People that consume less feel a greater respect to the environment and other people, while their subjective well-being shows a significant increase by strengthening their family stability, friendships and community. Doing an extensive study of the necessity to limit consumption, the importance of changing the modern-day consumer thinking, the ideas of sustainable economics and looking for answers to the major issue of harmonising a good life with limited natural resources, Jackson (2009) claims that belief in the economic growth as the source of well-being is a self-deception. That is why we could say that, on one hand, increasing consumption is an expression of increasing well-being, on the other – it is also detrimental from environmental and psychological perspective (Sheth et al., 2011). Researchers of environmental justice have also recorded an unequal distribution of the negative side-effects, highlighting the necessity to ensure that the benefits of the economic growth are justly and equally distributed among all communities instead of witnessing uneven distribution of the benefits on both national and international contexts, including several different generations (Martinez-Alier, 2012). Joan Martinez-Alier (2012) states that the distribution of the benefits we receive from economic development, disposed material property etc., as well as the costs of pollution, waste, hazardous labour, etc., including waste of resources, is unjust. That is why Sustainable Development Agenda (2015) has raised 17 goals, the list of which begins with an obligation to eliminate all forms of poverty, famine, ensure a healthy life, equal and high-quality lifelong education, gender equality, eliminating inequality between countries and inside countries, etc. These goals can be achieved only by joint effort of all members of the society. According to the data of Sustainable Development Goals report (2016), 836 million people of the world live in extreme poverty (under 1.25 dollar per day) (Jonkutė, 2016). The share of the residents living in relative poverty in economically-developed countries is 16 per cent. Obviously, social issues and social gap in the world have been increasing even under economic growth (Oželienė, 2019).

Sustainable consumption, leading to sustainability

More and more attention is recently focused on sustainable consumption. Increasing consumption and the spread of consumer culture is one of the factors that contribute to the degrading environment (Dagiliūtė, 2011).

The participants of the international conference, which took place in Oslo in 1995, have defined the concepts of sustainable development and sustainable production, claiming that the goods and services, consumed to ensure the basic needs and a better life quality, should focus on using less of the natural resources and avoiding dangerous substances, waste and pollutants, generated during their life cycle thus seeking to preserve the planet for the future generations (Giulio et al., 2014). It was also agreed that the level of sustainable consumption also depends on appropriate behaviour of the people, contributing to the development of the general sustainable conditions for the entire humanity so that it could satisfy its objective current and future needs (Giulio et al., 2014).

The UN summit, which took place in Johannesburg in 2002, discussed the course of implementing sustainable development provisions focusing on technological advancement and development of environmentally-efficient products, services and infrastructure, as well as highlighting that sustainable development is much dependent on changing production and consumption methods and habits (Dagiliūtė, 2011).

The Johannesburg Plan of Implementation and the subsequent Marrakech Process highlighted the importance of changing production and consumption attitudes and habits in seeking for sustainable development (Dagiliūtė, 2011).

Changes in production methods and consumer behaviour, as one of the major goals of sustainable development, are listed in the EU Sustainable Development Strategy (2006). Based on this strategy, the European Commission presented the Sustainable Consumption and Production and Sustainable Industrial Policy (2008), which helps to identify and overcome the current obstacles that prevent sustainable consumption and production, to ensure a more efficient integration of related fields of policies, increase the awareness in the society and change consumption habits.

In 2011, the Organisation for Economic Co-operation and Development presented the Green Growth Strategy and, in 2012, the United Nations Rio+20 Conference on Sustainable Development focused on the 'green economy', attempting to solve the issue of sustainable consumption (Barbier, 2012). Although the concepts of green development (growth), green economy and sustainable consumption may seem different, all of the initiatives, related to sustainable development, focus on a single goal – the least negative impact on the environment possible and the best economic efficiency in order to make sure that the decisions made benefit both the economy and the environment (O'Rourke and Lollo, 2015).

The increasing community of researchers and practitioners, gathered to discuss the current issues and characterised by a variety of attitudes, strongly supports sustainable development (O'Rourke and Lollo, 2015).

The studies of this field contribute to the basis of analytical assessment, where the economy is pictured in the society and both of them – in the nature (Costanza et al., 2013). This basis is supported by systems, thus, the aim of sustainable consumption analysis is to examine the tension, rising between environmental, economic and social priorities, attempting to develop strategies, which balance efficiency, adequacy and flexibility. Based on the above, researchers have examined the current governmental structures, making a direct assessment of the levels and forms of abundance, arriving at a fairer distribution of consumption in parallel with technological progress and more efficient consumption (Jackson, 2009; Kallis et al., 2012; Lorek and Spangenberg, 2014).

Another group of scientists identify reforms and processes that will stop unsustainable consumption, contributing to the perspective of the systems. Therefore, weak forms of sustainable consumption are observed in the environment that is most harmful to the environment – transport, housing and food sector. Research shows that the EU household consumption directly and indirectly (through products and services) determines up to 70 per cent of the impact on the environment (Dagiliūtė, 2011). The impact of an individual household on the environment is relatively small, but the total effect of the household sector determines such environmental issues as climate warming, air and water pollution, accumulating waste, etc. (Dagiliūtė, 2011). Therefore, considering the above, researchers suggest clear political insights, decoupled from technology-driven innovation. They promote a theory that social and political processes and innovations will contribute to a rapid decrease in vehicle use and meat consumption (Druckman and Jackson, 2010; Allievi et al., 2015), talk of development that targets transit, decreased food waste, greater scale of recycling, reparation, sharing and reusing

(Druckman and Jackson, 2010; Barrett and Scott, 2012; Girod et al., 2014), and a more just distribution of consumption levels in the developing world (Di Giulio et al., 2014; Spangenberg, 2014).

The changing of consumer behaviour

As the majority of researchers, analysing sustainable consumption in communities, have established the need for sustainable development, the issue of achieving these changes in a way that is most promising from political, social and economic perspective, became the major research object (Druckman and Jackson, 2010; Speth, 2012; Costanza, 2014; Fuchs et al., 2015). The modern-day society, which is interested in increasing scales of consumption, is not inclined to buy a sustainable development system. Economic advancement has deeply rooted in social standards, personal habits, decision-making, governmental structures, legislation and cultures. Therefore, researchers of sustainable development make convincing arguments regarding a clearer understanding on the parties that participate in this process, i.e. consumers, business and governmental representatives, their logic and the decision-making processes (Trencher et al., 2014).

Once these issues and structure are clarified, it is possible to formulate more efficient and flexible interventions or processes that would help to move towards sustainable development (Lorek and Fuchs, 2013; Spangenberg, 2014).

Consumer perspective. Consumer attitude towards sustainable lifestyle and sustainable behaviour is still indifferent (Prothero et al., 2011). Sustainable behaviour includes purchasing and using green or environmentally-friendly products, which have the least negative impact on the environment throughout their life cycle: production, use and disposal (Dong, Yang and Li, 2012; Biswas and Roy, 2015). Sustainable development is also related to additional investments into more environmentally-friendly technology, fair trade and other important aspects. A conscious and responsible consumer is a 'client' of fair trade (fair trade that does not involve abusing third world people and children) and environmentally-friendly goods, able to influence certain production methods and, at the same time, the circulation of the goods in the market (Jusčius and Šneiderienė, 2013; Jurgelėnas, 2014); however, international surveys have shown that, although the majority of the consumers in developed and developing countries try not to purchase goods that are related to environmental pollution, deforestation, worker abuse and other environmental or social damage, changes in consumption behaviour are very slow (Zhao et al., 2014), because consumers are inclined to resist the changes in consumption and lifestyle habits due to lack of understanding and awareness, selfishness and costs related to such changes (Niemeyr, 2010; Welfens et al., 2010).

A detailed analysis of the market research, also consumer and target group survey data on changing individual behaviour showed that the majority of consumers prefer greener, healthier and more sustainable products, and would prefer buying them, but there is a consistent discrepancy between the statements of preference to sustainable products and the actual purchases made by the consumers (O'Rourke and Lollo, 2015). This behaviour should be regarded as a gap between the attitude and the behaviour (Jackson, 2005). For this reason, the analysis of the consumption tendencies requires not only considering the technological and economic aspects, related to the use of natural resources, but also a more in-depth analysis of the advancement of the humanity and the nature of its well-being from a number of economic, sociological, psychological and environmental perspectives (Wang et al., 2014).

Individual consumption habits are influenced not only by personal needs for food, clothes, housing and transport, but also aspirations to innovation, status, social comparison and respect

(Jackson, 2009; Soron, 2010; Sheth et al., 2011; Leary et al., 2014). It is argued that this so-called positional consumption may create a self-sustaining cycle, when an increasing consumption rate becomes a norm and it becomes necessary to keep consuming in order to maintain one's position (Assadourian, 2010; Sekulova, et al., 2013). Persons, attempting to switch from consumer lifestyle, experience serious financial, emotional and social conflicts in part because of lack of tangible alternative lifestyle options, which would give them an equivalent status, self-esteem, etc. (Jackson, 2009; Markkula and Moisander, 2012).

The studies, conducted in recent twenty years in the fields of consumer behaviour, social psychology and behavioural economics have given several important insights on decision-making. One of the most acknowledged study conclusions (Simonson, 2014) is that people are not fully rational participants. Consumer decisions are influenced by psychological processes, such as habits, social norms, limited rationality (when the decisions are limited by our own cognitive limits and access to information), the effect of the fear of losses (when the fear of losses is stronger than the motivation to achieve the benefit), cognitive exhaustion (limited potential of self-control and will), temporary limitations (when the decision-making is distorted by the pressure of the lack of time), the anchor effect (when the decision is influenced by the information received first) or peer influence. Attempts to understand the possible lack of rationality in the consumers, behavioural interventions were introduced, such as choice editing (when the scope of choice is actually limited) or planned choice (when the planned option is the most sustainable or healthiest choice). The purpose of that is either to limit cognitive bias or to use the bias to promote sustainable actions (O'Rourke and Lollo, 2015). To control these limitations, several behavioural interventions were developed (see Table 1).

Table 1. Behavioural interventions

Source: compiled by the authors

Behavioural interventions	Result
Eco-branding, the purpose of which is to create simple and important indicators for decision-making.	Eco-branding could be effective and is needed, but it must be integrated better and related with the context in the environment of the major decision-making (Thøgersen, 2010). Ideally, sustainable consumption information should be adapted to the situation or individually (Eppel et al., 2013), and formulated in an understandable and specific way (Sunstein, 2015).
Anchor effect.	Information is provided carefully, limiting unsuitable choice and directing towards better options, for example, using rating or pricing systems (Ölander and Thøgersen, 2014).
Focus on social influence (Salazar et al., 2013).	As already mentioned before, a general motive of consumption is a social public concern regarding status, thus, following 'what everyone is doing' could have a significant impact, even if the effect on regression is not as significant (Ölander and Thøgersen, 2014).
Forbidden norms.	Forbidden norms of what people 'should be doing', also shows the potential of directing people towards the right direction (Thomas and Sharp, 2013).
Intervention through friends, family, colleagues or trusted intermediaries (e.g. NGO or famous people), depending on whom specific groups trust and whom they identify with (Salazar et al., 2013).	Consumers make their decisions based on personal understanding, emotions, motivation, values, cultural associations and their choices are influenced by the opinion of their family members, friends, peers, social groups and people around (Hutter et al., 2010; Soron et al., 2010).
Collecting feedback on the actions.	Feedback on others' actions and effect could be useful in seeking to show the joint responsibility and social norms (Antal et al., 2012).

Developing a default choice could be an effective way of using the status quo bias (when people want to buy a 'normal' product) (Sunstein, 2015) without limiting the choice. However, researchers of social influence are not sure if this does not lead to forming a co-called 'cattle' as opposed to a continuous and transforming social education (Salazar et al., 2013). Although forming 'cattle behaviour' could be useful in times of crisis, social education is important in developing long-term standards (Salazar et al., 2013).

The possibility of being rewarded for a sufficiently large benefit from one-time events (e.g. purchasing an electric vehicle or installing a solar battery on the roof) can still be considered, but research has shown that the benefits of one-time interventions are often very small, compared to synchronous behaviour (O'Rourke and Lollo, 2015). Thus, synchronous behaviour should be examined further. Although this makes any intervention even harder, eventually it could increase the efficiency of integrated policy (Antal et al., 2012). Moreover, because the behavioural interventions are so complex, the key purpose of behavioural studies is to identify the interventions, which continue or manifest in different behaviour (Thomas and Sharp, 2013). Behaviour formation studies have shown that 'if this, then that' plans applied during the 'moments of change' could create new behavioural models (Duhigg, 2012; Eppel et al., 2013).

Consumers can contribute to sustainability by changing their daily habits – reusing, recycling, saving natural resources, choosing a more environmentally-friendly transportation and encouraging those around them to engage in similar behaviour (Jonkutė, 2016). In addition to that, based on scientific studies, Gintė Jonkutė (2016) states that certain consumer behaviour can create the greatest external pressure on companies, demanding and encouraging producers and production processes to introduce sustainable innovations, applying new effective technology, also encouraging competition in terms of sustainability achievements. Small daily choices of the consumers could determine significant changes in the entire life cycle of the product, e.g. pressure on suppliers could reduce their footprint on the environment, moreover, consumers could influence producers' market image, e.g. boycotting and protesting (Jonkutė, 2016).

Company perspective. Being the driving force of the economy and development in the world, business organisations carry the responsibility of promoting sustainable development by conducting appropriate product and service development production, distribution and supply (Jonkutė, 2016). Increasing public concern regarding the issues of sustainability results in an increasing concern of the companies regarding their own sustainability, encouraging them to aim for sustainable development, which includes economic, environmental and social aspects. Business organisations realise that their competitiveness and profit are inseparable from sustainable development achievements, while environmental and social aspects become as important as other usual economic goals (Gold et al., 2010; Ramos et al., 2013; Gomes et al., 2014).

Although the majority of companies, operating in different fields of industry, acknowledge the necessity of sustainability, the majority of them do not yet have a clear understanding of such activity and its effect, considering it more of a risk factor than an opportunity (Venselaar et al., 2010). However, initial research has shown that risk could become the major lever in changing the business, because, e.g. discussions on assets, stuck in fossil fuel portfolios and the effect of climate change on global companies show their concern regarding possible losses (Robins, 2014). Moreover, the pressure of external interested parties, which threatens the reputation of individual employees and targets the company management, seems to be effective in motivating companies to change (O'Rourke and Lollo, 2015).

Seeking to improve the environmental and social operations of the supply chains, companies can also require higher environmental and social standards from their suppliers and even subcontractors (Kovács, 2008), and impose sanctions for non-compliance (Mont et al., 2010). The risk to company's reputation, supply chain and the market could also encourage companies to create more sustainable processes and products (Seuring and Gold, 2013), thus resulting in encouraging stricter regulations, giving them a relative advantage.

Another major sustainability intervention involves the preparation and implementation of sustainability reports and accounting, or environmental profit and loss reports. However, in order to introduce stricter accountability, companies will need to internalise external factors and optimise their production, considering depleting resources and environmental issues (O'Rourke and Lollo, 2015). In this case it would encourage companies to improve the efficiency of their resource use by introducing and developing new, more environmentally-friendly technology, evaluating the entire supply chain, properly realising recycled or used products and raw materials, and also minimising the amount of waste generated (Daub and Ergenzinger, 2005; Staniškis and Stoškus, 2008). This would also help to change the business accounting method, when decisions seem to be correct in theory thus changing the type of risk as well (Antal et al., 2012). Integrated indices and greater reporting transparency could enable the society and investors to pressurise companies to raise their business goals with respect to environmental protection (O'Rourke and Lollo, 2015). The aim of the latest legal changes, such as the establishment of beneficiary organisations, is to support and protect sustainability-oriented companies from the shareholder pressure to maximise the profits (Kanig, 2012). These changes create an opportunity of adjusting high level sustainability goals with companies' internal decision-making processes, but it is crucial to conduct more research in this field (O'Rourke and Lollo, 2015).

Recognizing that the issue of sustainability is often rooted in consumption and that a technological approach alone will not suffice, it becomes clear that the decision-making strategy should focus on promoting more environmentally-friendly consumption (Kolandai-Matchett, 2009). Since it is impossible to have a full control of the consumer demand for goods and services, it is important for companies to keep increasing the supply of sustainable goods, thus making a direct influence on the choice of the consumers (Michaelis, 2003).

It should be noted that not all consumers understand their rights and responsibility or have enough knowledge on the effect the goods and services they purchase make on the environment and thus business organisations, being able to communicate directly with the majority of the consumers, could have a greater influence than any other institution, combining marketing with the means of education and introducing informative campaigns. Thus becoming educators, companies could increase the consumer awareness, offering information on environmental and social meaning of consumption and its outcome – greater awareness could influence the buyers' decisions (Nash, 2009; Stevens, 2010).

Companies seeking for sustainability can adjust their actions by focusing more attention on energy, water, waste, etc. management. Also to their location, transport and logistics. Considering the fact that the employees and their family members are consumers too, their inclusion into the implementation of the sustainability measures could determine greater positive changes in the society thus increasing environmental awareness and changing consumer habits (Hutter et al., 2010). Producers should also make sure to provide clear, easy to understand and precise information on the results of their sustainable development.

Governmental perspective. Seeking to move away from consumption growth trends, governments face enormous challenges (Hobson, 2002; Anderson and Bows, 2011). The narrative of economic growth by promoting consumerism prevails from the most developed to

the poorest countries in the world. Although central and local authorities depend on taxes, generated by consumption, geopolitical power, economic and social stability, reducing poverty and even social advancement is regarded as dependent on economic growth rather than merely state funding (Jackson, 2009; Martínez-Alier, 2012; Knight et al., 2013). Changes in the consumption or production system are hardly achievable without the intervention of central or local authorities, because the government holds all the opportunities for developing policy guidelines. Governments are also capable of indirect promotion of sustainable development by becoming the catalyst of sustainable production, application of legal and economic measures to companies – changing the relative prices of raw materials and initiating technical production changes. The Table 2 lists several governmental incentives that influence sustainable consumption.

Table 2. Governmental incentives and their influence on sustainable consumption

Source: compiled by the authors

Incentives	Result
Limits for resource use and emissions, as well as penalties for exceeding them.	Encourages companies to improve the general environmental efficiency and introduce environmentally-friendly practices, which motivate polluters to change their behaviour (Stevens, 2010).
Prohibition of certain products that contain harmful materials, etc.	Encourages producers to remove improper products from the market, thus directly limiting consumer choices (Stevens, 2010).
Distribution of environmental taxes among producers and consumers by considering all the environmental and social costs of the goods and processes and including them into the final prices.	Promotes the development and implementation of environmentally-friendly innovations at companies and more sustainable ways of consumption (Geng et al., 2007; Mont and Power, 2010).
The topics of sustainable consumption, integrated into formal and informal education for all age and social groups, include not only children's education, but also adult education.	Increase consumer awareness and, at the same time, sustainable consumption (Gadenne et al., 2011; Wang et al., 2014).
Various informative sustainable consumption campaigns.	Filling consumer knowledge gaps on sustainable consumption (Liu et al., 2012; Vaishnavi et al., 2014; Zhao et al., 2014).
Development of sustainable infrastructure: waste management systems and public transport systems, energy-efficient services, product maintenance, repairation and reuse systems, etc.	Ensures and promotes sustainable lifestyle opportunities (Krantz, 2010; Wang et al., 2014).

Increasing citizen awareness and understanding about the effect of their daily activities, the government also encourages them to take further action in seeking for sustainable lifestyle (Watson et al., 2010). Growing numbers of educated and aware consumers would increase the demand for environmentally-friendly goods and services, as well as expand the markets for these goods and services (Stevens, 2010; Vaishnavi et al., 2014).

Governments are perceived as engaged in their own dynamics, limited rationality, interested persons, political battles between competing systems, bias, short-term social stability, short-sightedness, inertia and lack of accountability (Antal et al., 2012). Therefore, certain researchers have suggested higher transparency and participation at political processes as strategies, the goal of which is to facilitate the issues of public accountability and law enforcement at least in part (Antal et al., 2012; Costanza et al., 2013). It is necessary to conduct more research to assess, how these strategies could affect the bias, attitudes and values of the government officials. New indicators of progress and development could be regarded as the key

factors, helping the governments to move away from consumption-based decision-making processes (O'Rourke and Lollo, 2015).

Should the society's attitudes towards the policy makers be partially based on the rising or falling indices, such as the GDP, then the new indices, such as the Genuine Progress Indicator (Bagstad et al., 2014), Index of Sustainable Economic Welfare (Van den Bergh and Antal, 2014), combined biophysical and social indices (O'Neill, 2012), and the Gross National Happiness (GNH) index (Brooks, 2013) could provide the governments with an opportunity to demonstrate progress in developing reorganisation policies (O'Rourke and Lollo, 2015). Although these indices are widely different, they clearly comprise of the values of inequality, biodiversity and greenhouse effect emissions (O'Rourke and Lollo, 2015). Thus short-term problems could be balanced more efficiently with clear indices of the long-term goals that the governments could be responsible for. Moreover, these new measures enable to evaluate political strategy, which could contribute to public communication and adaptive management (O'Neill, 2012). Regardless, solving complex variable problems and making these indices more efficient for policy-makers requires a lot of studies, although, despite the fact that several governments have already started experimenting with the 'happiness', 'welfare' and sustainability monitoring together with the GPD, they do not see if these measures are closely related to the policy development and practical implementation (O'Rourke and Lollo, 2015). Moreover, it remains a challenge to assess such qualitative values as 'welfare' and 'prosperity' (Akenji and Bengtsson, 2014; Van den Bergh and Antal, 2014).

Initiatives promoting sustainable consumption

In recent 25 years, the issue of consumption and sustainability has been tackled by initiatives, promoting sustainable consumption. International, state and local sustainable consumption initiatives develop by firstly focusing on manufacturing and production processes, based on sustainable materials and energy resources, aiming for sustainable economic growth, posing the least threat to the environment possible and saving natural and energy resources (O'Rourke and Lollo, 2015).

The efficiency of technological processes and saving energy. Innovations, aimed at improving the efficiency of technological processes, are described as shifting from dematerialisation of a product to replacing it with a more environmentally-friendly option, decarbonisation, more efficient energy consumption, intensifying more sustainable production, improving the level of service, etc. (O'Rourke and Lollo, 2015). The purpose of all of these shifts is to promote sustainable consumption and reducing the negative effect on the environment (O'Rourke and Lollo, 2015).

Many international companies have taken responsibility for improving environmental efficiency, particularly in those areas that show economic benefit, such as reducing energy costs, water consumption, reducing packaging and waste in their production processes and products (O'Rourke and Lollo, 2015). Based on P. H. Gleick (2003), S. Meyers, J. McMahon and M. McNeil (2005), B. Schoettle and M. Sivak (2013), J. H. Ausubel (2015), researchers Dara O'Rourke and Niklas Lollo (2015) state that corporate activities and government-level programs have made a substantial contribution to reduced vehicle fuel consumption, more efficient use of energy and reduced water costs. In recent discussions on ecomodernism, researchers have provided convincing evidence of saving in food production and consumption systems, water consumption, mineral and oil extraction, pollutant emissions, etc.

The green market. A significant role in practical and theoretical levels of sustainable consumption is played by intermediary sustainability initiatives – with the promotion of the

green economy this role focuses on supporting market mechanisms that encourage sustainability innovation (O'Rourke and Lollo, 2015). According to its main thesis, the purchases of 'rational' consumers are deliberate, thus encouraging the emergence of innovation, which promotes sustainability (O'Rourke and Lollo, 2015).

Keeping to the market theories, policy makers and non-governmental organisations must firstly focus on providing timely information for consumers on the negative and positive effect of the products introduced and circulating in the market (O'Rourke and Lollo, 2015). The key component of this strategy is to make a better assessment of how the product supply chains and the product life cycle affects the environment. These fields show a significant improvement, for example, the development of carbon footprint detection, life cycle impact calculators, virtual waster cost calculations and industry-specific assessment measures, e.g. the Higg Index standard for the clothing industry (O'Shea, Golden, Olander, 2013).

The next step towards greener economy would be the company costs, allocated to encourage innovation helping to save natural and energy resources, reduce fuel costs, pollution and waste (O'Rourke and Lollo, 2015).

In some areas technological innovations and socio-economic tendencies have bred innovative business models, e.g. service rent instead of buying products. Table 3 provides a short introduction of such innovations, describing their forms that support the current sustainability strategies.

Table 3. Innovations, supporting current sustainability strategies

Source: compiled by the authors

Incentives	Result
Collaborative consumption	Collaborative consumption refers to the variety of business models, such as distribution systems, sharing resources, etc. Although collaborative consumption, better known as 'sharing economy', has been present throughout the history, recently it has begun embracing increasingly advanced technologies that are making sharing activities more and more efficient. These systems offer opportunities for a less resource-intensive economy, which, in turn, increases the access to the needed products. New online services become strong secondary markets for goods and services. New companies have introduced a completely new so-called hospitality industry, where people as if 'share' their homes, welcoming guests, while other companies have introduced systems for exchanging, sharing or donating things. We can only guess if the sharing economy truly contributes to saving resources, but, at least in theory, it looks like a beginning of a way to a smaller and not as intensive product consumption (Schor, 2014).
Circular economy	Circular economy is the latest name for an initiative, which focuses on closed cycle production and consumption systems. Its goal is to reshape the value chains and encourage the flow of materials in circular systems, where products and infrastructure are redesigned for possible reusing, recycling and renewal. Here the legislation, which focuses on greater producer responsibility and requires companies to design their products with regard to end-of-life and other environmental aspects, play an important role (Korhonen et al., 2018; Geissdoerfer et al., 2018).

Such innovations have turned out to have more potential for a more effective distribution, use and final disposal of goods, once they reach the end of the consumption cycle (O'Rourke and Lollo, 2015).

Conclusions

Considering the current tendencies of consumption growth, it becomes clear that we are approaching a sustainability policy crisis. Strong sustainable consumption refers to a transformation of consumer behaviour in the context of sustainable development, which ranges from changes in private lifestyles to changes in business organisations, central and local authorities.

Consumer influence on the environment is enormous, thus current consumption models have a negative impact on both the environment and the public welfare. Seeking to evade consumption's negative outcome on the environment and the society itself, individuals are encouraged to transform their consumption behaviour according to the needs of sustainable development. Sustainable consumer behaviour is regarded as satisfying individual needs in different areas of consumption by purchasing, using and disposing of goods and services with the aim of leaving no negative impact on satisfying other people's needs and posing no threat to the future generations. Weak sustainable consumption is observed in the areas that leave the most negative impact on the environment – transport, housing and food sectors, thus making it necessary to focus the effort towards integration, which combines these challenges and a new attitude towards agricultural, policy action plans and programmes, with an emphasis on shifting to sustainable consumption models.

Numerous researchers assume that an effective progress in transforming unsustainable consumer behaviour in the context of sustainable development can be achieved by ensuring the involvement of private persons, business organisations, central and local authorities.

Consumer behaviour transformations in the context of sustainable development require new structures, tools, interventions, etc., the purpose of which is to make the transfer to the future systems and support them. While implementing changes in sustainability policies, it is important to focus different fields of research, ranging from social psychology to ecological economics, on new theories, strategies and innovations to transform the current unsustainable consumption and production into sustainable consumption and production. That is why it is necessary to keep developing and improving the scientific research and practice in this field, which would be later integrated, tested and implemented.

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