

PROMOTING SUSTAINABLE CONSUMPTION: an analysis of the roles played by governments, firms and civil society

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1 Introduction

Over the last decades, the environmental crisis has become more evident, and, scholars, as well as, other sectors of society had dedicated attention to this enormous world problem (Lim, 2017). In this sense, Sustainable Development perspective emerged and embraced three primary objectives, poverty eradication, changes in the patterns of production and consumption and, protection and management of natural resources for social and economic development (Sachs, 2007). As part of this perspective, "sustainable consumption" was formally introduced by the Oslo Symposium in 1994, it has attracted growing academic studies (Liu, et al., 2017).

According to Liu et al. (2017), sustainable consumption is a particular field of study for almost two decades. Scholars' attention has been focused on sustainable consumption theory building in different contexts, especially concerning the influence of individual consumers' choice and behavior on environmental quality (Wang, 2017). On the other side, the role of different stakeholders as factors to promote social change has received low attention.

Current consumption patterns that are unsustainable, since there is excessive exploitation of finite natural resources, the environmental capacity of waste absorption is exceeded and, the access to riches is unfair and unequal (Abramovay, 2012; Jackson, 2007). However, the socioenvironmental problems associated with consumption are not limited to consumerism or under consumption. They include daily consumption practices involved in the process of providing for basic needs, such as food, housing, and transportation (Thøgersen, 2010). Thus, focus on marketing to increase sustainable consumption has a limited potential to provide the pattern changes (Lorek & Spangenberg, 2014). It is necessary to improve the performance of societies, to cause structural changes, in order to conciliate the human necessities based on consumption with the limits of the ecosystem.

That means the society needs to go beyond individual practices of consumption and to involve macro and structural changes associated with political and market factors. To achieve that goal, not solely technological innovations and consumption modifications are required, but also collective actions and political, economic and institutional changes (Viegas da Costa & dos Santos de Sousa Teodósio, 2011).

Based on this assumption, studies related to promotion of sustainable consumption has two dimensions. The first one focuses on consumption efficiency through technological improvements on productive processes, and the consumer's choice (Fuchs & Lorek, 2005). The second dimension focuses on the macrostructural changes (Pape & Heisserer, 2011) that require a systemic approach, starting from an integrating politic structure (Jackson, 2007; Tukker et al., 2008) that contemplates the areas of expertise of governments, companies and civil society. Therefore, it is not only inviting people to behave "correctly" over "incorrect" structures (Lorek & Spangenberg, 2014).

Based on this viewpoint, what are the essential roles that play governments, companies and civil society to promote the necessary changes toward to sustainability? In response to this question, the objective of this research has identified the roles played by governments, companies and civil society to promote sustainable consumption based on the perception of brazilian experts.

To reach this primary goal, first, we identify the roles of sustainable consumption promotion in the existing literature approaches. Second, we classified them according to the performance of members from governments, companies and civil society. Finally, we validate the set of roles through expert's panel on the subject, using the Policy Delphi method.

The remainder of the paper is structured as follows. The theoretical background is presented in the next section. The third section summarized the methodology and data

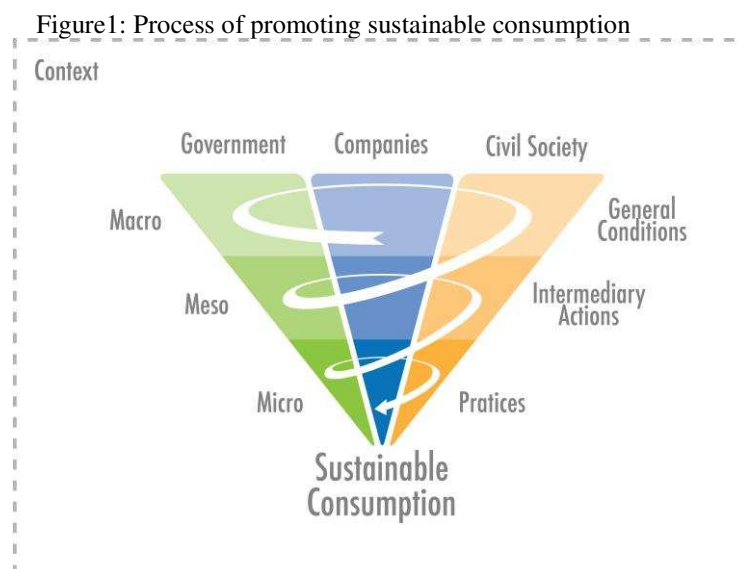
collection. The fourth section shows and interprets the results of the 1st and 2nd Round of Policy Delphi. To conclude, the authors make their last remarks, including discusses of findings, research limitations and, indications of further research.

2 Sustainable Consumption

On the one hand, sustainable consumption means using products and services that fulfill needs and, at the same time, improve society’s quality of life and don't compromise the needs of future generations (Luskin & Del Matto, 2007). That is consumption as an act of intra and intergenerational balance. On the other hand, consumption means to use it up or destroy it, that is complete opposite o “sustainability, therefore "sustainable consumption” requires a perspective beyond the traditional viewpoint, i.e., beyond the lens of purchasing (Lim, 2017). That means, consumption as a process of decisions and actions that include purchasing, product use, and the handling of any remaining tangible product after use (Peattie & Collins, 2009). Moreover, it is a social, economic and cultural process. Therefore, any attempt by these actors to modify consumption patterns must be based on a realistic and comprehensive conception based on social complexities (Cohen & Munoz, 2016; Dolan, 2002).

Promotion of sustainable consumption should consider procedures that are still little-known systems. They were developed for planning and managing social issues, being integrated, decentralized and sensitive to the complexity present in the non-linear behavior of socio-environmental systems (Geels, McMeekin, Mylan, & Southerton, 2015). The advances in this direction depending on intervention level by the government; active commitment sustained by local communities; and the formation of collaborative networks, thus involving the tripod of democratic-participatory ideal – Civil Society, Government, and Market (Jaeger-Erben, Rückert-John, & Schäfer, 2015).

A management approach based on the democratic-participatory tripod – government, companies and civil society –emerges to confront these issues by promoting dialogues among stakeholders, in order to strengthen the democratic negotiation of conflicts. This notion produces different actors’ roles, in macro, meso and micro levels, according to the context that they play. At the macro level, the main objective is to provide the general conditions to promote sustainable consumption. The meso level is the space for intermediary actions as a bridge between the macro and the micro level. Finally, at the micro level embraces the internal factors of management practices by governments and companies, as well as politicized consumption practices of civil society that contribute to the achievement of sustainable consumption (Fig.1).



Source: Elaborated by the authors

Government actors may play a vital role in the changes of institutional architecture of the consumer society, adopting a management way that leads the process, such as, to establish punitive and rewarding measures that would aid in achieving the necessary macro-structural changes (Jackson & Michaelis, 2003). Also, governments should follow socioenvironmental demands and elaborate policies to regulate and motivate relations between production and consumption, so they would both become sustainable. Players articulation from production and consumption is critical to this process and represents a vital role that governments must play in elaborating the institutional, social, cultural and ethical context, in which the patterns and levels of consumption are negotiated. However, the policies for sustainable consumption must go beyond the rigidity of “control” and “persuasion” and be based on the idea of governments, companies and civil society as collaborators and learning partners in the process of change (Jackson, 2007). Following this approach, government's roles to promote sustainable consumption was identified by scholars, as shown in Figure 2.

Figure 2: Governments’ roles to promote sustainable consumption

Level	Roles played by Governments	Authors
Macro	To combat oligopoly and monopolistic markets	(Tukker et al., 2008)
	To elaborate price policies that reflect products’ environmental costs	(Jackson & Michaelis, 2003; Thøgersen, 2010)
	To create regulatory mechanisms to mitigate consumption socioenvironmental impacts	(Lorek & Spangenberg, 2014; Michaelis, 2003; Tukker et al., 2008)
	To eliminate subsidies for unsustainable markets	(Jackson, 2007; Jackson & Michaelis, 2003; Tukker et al., 2008)
	To establish consumer’s defense mechanisms	(Tukker et al., 2008; Viegas da Costa & dos Santos de Sousa Teodósio, 2011)
	To define rules for advertising that do not allow offers of products that damage the environment or vulnerable groups	(Jackson & Michaelis, 2003; Lorek & Spangenberg, 2014; Tukker et al., 2008)
Meso	To control compliance with environmental regulations	(Jackson, 2007; Jackson & Michaelis, 2003)
	To promote public policies that provide subsidies toward sustainable initiatives	(Jackson & Michaelis, 2003; Thøgersen, 2010)
	To promote equal conditions for the production and distribution of environmental friendly products	(Thøgersen, 2010; Tukker et al., 2008)
	To establish programs and networks to nurture sustainable initiatives and encourage the successful ones to be replicated	(Jackson & Michaelis, 2003; Tukker et al., 2008)
	To establish partnerships with Non-Governmental Organizations that work towards changes in the patterns of consumption	(Jackson & Michaelis, 2003)
	To promote transparency criteria on the environmental performance of products	(Jackson & Michaelis, 2003; Thøgersen, 2010; Tukker et al., 2008)
	To grant awards and accreditation related to sustainable consumption	(Jackson & Michaelis, 2003)
	To promote environmental education	(Barber, 2007; Holt, 2012; Jackson & Michaelis, 2003)
	To engage and motivate consumers toward sustainable consumption	(Jackson & Michaelis, 2003)
Micro	To adopt public purchases policies that include sustainability criteria	(Barber, 2007; Jackson & Michaelis, 2003; Tukker et al., 2008)
	Transparency in monitoring and auditing governmental consumption practices	(Jackson & Michaelis, 2003; Tukker et al., 2008)
	To promote learning using indicators focused on a sustainable consumption strategy	(Jackson & Michaelis, 2003)

Source: Elaborated by the authors

Collective awareness regarding socioenvironmental issues has grown conducting the business owners to seek ideological assimilation of the sustainability discourse face that the challenge of promoting sustainable markets in both aspects production and consumption. Over time firms create technology and wealth that has transformed society providing the most of goods and services. Therefore, they are also responsible for the environmental impacts that result from consumption (Jackson & Michaelis, 2003). This assumption is corroborated by Michaelis (2003) that presented roles played by firms in three different levels of change, namely: 1) Development of new technologies and practices; 2) Changes in economic and legal incentives that pervade both production and consumption; and 3) Changes in values and discourses that shape the cultures of businesses, governments, media and civil society (Michaelis, 2003).

Although some firms reject the idea of to be co-responsible for levels of consumption and claim that their role is only to promote ecoefficiency (Fuchs & Lorek, 2005), the researchers indicate that this role is not limited to the technological issues of their products and production processes. It also comprehends the actions and strategies that involve its stakeholders towards a cultural shift. The roles of firms identified in the reviewed literature are shown in Figure 3.

Figure 3: Firm's roles to promote sustainable consumption

Level	Roles played by companies	Authors
Macro	To establish dissemination mechanisms for better social and environmental practices in the Market	(Michaelis, 2003)
	Lobbying towards sustainable consumption and production	(Michaelis, 2003)
Meso	To promote the sustainable chain of supplies	(Lorek & Spangenberg, 2014; Michaelis, 2003; Muster, 2011)
	To perform Corporative citizenship	(Michaelis, 2003; Muster, 2011)
	To promote dialogue with stakeholders	(Michaelis, 2003)
	To accomplish responsible marketing	(Michaelis, 2003; Tukker et al., 2008)
	To provide information about products through labels and stamps	(Barber, 2007; Lorek & Spangenberg, 2014; Michaelis, 2003; Thøgersen, 2010)
Micro	To adopt eco efficiency principles	(Fuchs & Lorek, 2005; Michaelis, 2003)
	To promote life cycle assessment of products	(Barber, 2007; Fuchs & Lorek, 2005; Tukker et al., 2008)
	To develop sustainable products	(Tukker et al., 2008)
	To promote the use of ecological packages	(Barber, 2007)
	To respond to government's incentives and regulations through eco-taxes	(Michaelis, 2003; Tukker et al., 2008)

Source: Elaborated by the authors

Consumer relations go beyond a commercial contract that involves rights and duties on the object of purchase/sale. They include the consequences that result from producing and selling (for companies) and from consuming and discarding (for consumers) (Echegaray, 2010). Thus, scholars and professionals proclaim a new consumer awareness, as evidenced by their growing interest in knowing the world that lies behind the products they consume (Fuchs & Lorek, 2005). It promotes civil society engagement in environmental issues. Accordingly, consumers become active citizens, searching for ways to cope and change patterns and levels of consumption (Jaeger-Erben et al., 2015), it produces roles played by civil society to promote sustainable consumption (Figure 4).

Figure 4: Civil society's roles to promote sustainable consumption

Level	Roles played by civil society	Authors
Macro	To collaborate with the elaboration of public policies	(Fuchs & Lorek, 2005; Micheletti & Stolle, 2012)
	To create educational methods for sustainable consumption	(Barber, 2007)
Meso	To put pressure on governments and firms toward sustainable practices	(Barber, 2007; Lorek & Spangenberg, 2014)
	To promote discussions on the subject	(Barber, 2007)
	To form fair trade networks	(Barber, 2007; Cohen & Munoz, 2016; Lorek & Spangenberg, 2014; Mont, Neuvonen, & Lähteenoja, 2014)
	To promote carrotmobs	(Hutter & Hoffmann, 2013)
Micro	To promote protests and boycotts related to the topic	(Barber, 2007; Hutter & Hoffmann, 2013)
	To promote buycotts	(Micheletti & Stolle, 2012)

Source: Elaborated by authors

3 Methodological Procedures

This research aims to analyze the roles played by governments, firms and civil society toward the promotion of sustainable consumption. It was an exploratory study developed in two stages. The first stage identified the distinct roles regards to promotion of sustainable consumption based on a comprehensive theoretical framework. Then, the selected roles played were grouped into categories according to macro, meso, and micro level. These roles were submitted to a validation process by an expert panel using a Policy Delphi. The Delphi is initially a technique that seeks the consensus of opinions within a group of specialists regards to future events. It is based on the structured use of knowledge, experience, and creativity of experts, assuming the collective judgment accurately organized, is better than an individual opinion. When this technique is used to search ideas and strategies in order to propose new organization policies, it is known as Policy Delphi (Wright & Giovinazzo, 2000).

Policy Delphi is an adequate method to achieve our research goal because its use is indicated to explore a complicated subject, with little historical context, which requires an expert review to understand the underlying issues (Franklin & Hart, 2007; Rayens & Hahn, 2000). The technique has allowed the selection of roles played to promote sustainable consumption.

A non-probabilistic and intentional sample was used. That means participants represent the groups of population related to this topic. Therefore, it included technicians that act in public entities related to environment and consumer protection; researchers on sustainable consumption; professionals in promoting sustainable practice; and workers from Non-Governmental Organizations. In the end, the expert panel was composed of 40 participants (see Table 1).

Table 1: Expert Panel Composition in the Delphi Policy

Group of Experts	Amount requested	Number of participants	% of respondents
Academy (G1)	67	16	40,0%
Government (G2)	18	08	20,0%
Companies (G3)	13	08	20,0%
NGO (G4)	37	08	20,0%
Total	135	40	100%

Source: Survey Data, 2016

Data collection was based on semi-structured questionnaires through an online platform. In the questions, the experts attributed degrees of relevance to the roles to promote sustainable

consumption. Thus, respondents expressed their opinions towards some statements by choosing a degree from 1 to 5 in a Likert scale (5 = critically important; 1 = not important). Since the first round of Policy Delphi, the measure of central tendency was calculated, mean (μ), median (Q2), dispersion (variation coefficient (CV), and quartile (Q1; Q2; Q3). These results allowed a comparison of responses from groups of experts with the responses from the overall group, as well as, levels of convergence and divergence among the experts' answers.

On the second round, experts received the summary of the first-round results compared with their answers. They were once again requested to evaluate their position regards to the questions. This phase had demanded individual questionnaires sent by email.

A cut point to determine the relevant roles was previously defined based on the average scores of all investigated factors, as follows:

$$\begin{aligned}\mu > 4,50 &= \text{“critically important”} \\ \leq 3,8 \quad \mu \leq 4,50 &= \text{“very important”} \\ 3,8 < \mu &= \text{“not important”}\end{aligned}$$

The roles scored below 3,8 were excluded. That means only roles with an average score close to 4 (“very important”) and up till 5 (“critically important”) were considered. In order to check cases of controversial opinions, the coefficient of variation was verified. However, neither of roles with an average score below 3,8 presented coefficient of variation (CV) above 40 %. Considering these rates, the results were maintained, i.e. these roles were not important according to experts' view. The Policy Delphi technique was finalized in the second round, due to the results confirmed the relevance level assigned by the experts in the first one.

4 Results

The results of this Delphi Police exercise are showed through subsections to highlight the distinct groups and roles to promote sustainable consumption, namely, government, companies and civil society.

4.1 Roles played by Governments

Regarding roles played by governments, the expert panel pointed out six items (Table 2). Greatest relevance, i.e., “critically important,” are environmental regulation and elimination of subsidies for unsustainable markets. These results are following the theoretical background and, coherent with the market organization. Control and regulation are possible through instruments of public politics in most of the countries. They are essential for firms to internalize the externalities of their market activities and to allow economic instruments to ensure that the incentive given to some markets does not hinder the desired change.

As “very important” governmental roles, the expert panel chose: To combat oligo and monopolistic markets, the elaboration of price policies that take the environmental costs of products, to establish consumer's defense mechanisms, and to define rules for advertising to avoid the promotion of offers that may harm the environment or that are target to vulnerable groups. Despite the obtained result, there were disagreements among experts based on freedom of speech and censorship. However, in general, the items are related to consumer protection, to guarantee consumption choices, shared responsibility over unsustainable products, and to minimize the power asymmetries that exist in the relation of production/consumption, especially regarding information.

At the meso level, the specialists selected nine roles (Table 2). Four of them are “critically important,” namely, to monitor compliance with environmental regulations; to

provide subsidies for sustainable initiatives; to promote criteria on the socioenvironmental performance of products; and to promote environmental education.

In the previous level, experts focus on regulations, while at meso level they point out the monitoring and control. Otherwise the first is an innocuous action. Nevertheless, the panel also highlights mechanisms to incentives the adherence to sustainable behavior in twofold, subsidies and education.

Also, four roles were considered as “very important” roles at meso level are related to cooperation networks to awareness toward sustainable consumption. The first of them is promoting equal conditions for production and distribution of environmentally friendly products, which would make those products more accessible and their prices more competitive. Secondly, establishing programs and networks to nurture sustainable initiatives and replicate the successful ones. The third “very important” role was to establish partnerships with Non-Governmental Organizations since the ones that work with the environment, consumption, and development are institutions that can modify the society’s behavior when it comes to sustainability and to negotiating diverging interests. And lastly, the role of engaging consumers through leadership and feedback of actions that promote sustainable consumption within a government.

To grant awards and accreditation was a role considered not important by de experts, therefore it will be eliminated from the model.

Finally, at the micro level, the experts point out three roles played by the government (Table 2). Two of them were considered as “critically important,” namely, to adopt policies for public purchases with sustainability criteria, and, to be transparent in monitoring governmental consumption practices. That is, to be an example, a model to the society related to sustainable consumption. The third item was in the category of "very important." It is to use sustainable consumption indicators to promote learning. It can show the degree of adopted sustainable consumption strategy, aiming to increase the performance and reverse negative outcomes.

Table 2: Governments’ roles (compared rounds)

Level	Roles played by Governments	1 st Round		2 nd Round					Final category
		μ	CV	μ	CV	Q1	Q2	Q3	
M A C R O	To eliminate subsidies for unsustainable markets	4,74	0,13	4,77	0,12	5,00	5,00	5,00	CI
	To promote environmental regulation	4,56	0,17	4,59	0,15	4,00	5,00	5,00	CI
	To establish consumer’s defense mechanisms	4,49	0,18	4,49	0,18	4,00	5,00	5,00	VI
	To elaborate price policies to reflect products’ environmental costs	4,41	0,21	4,44	0,21	4,00	5,00	5,00	VI
	To combat oligopoly and monopolistic markets	4,38	0,20	4,36	0,19	4,00	5,00	5,00	VI
	To define rules for advertising	4,28	0,22	4,24	0,18	4,00	4,00	5,00	VI
M E S O	To monitor compliance with environmental regulations	4,82	0,09	4,87	0,08	5,00	5,00	5,00	CI
	To promote environmental education	4,72	0,12	4,76	0,11	5,00	5,00	5,00	CI
	To provide subsidies for sustainable initiatives	4,59	0,14	4,59	0,13	4,00	5,00	5,00	CI
	To promote criteria on the environmental performance of products	4,54	0,17	4,56	0,16	4,00	5,00	5,00	CI
	To establish Programs and Networks to replicate sustainable initiatives	4,38	0,15	4,47	0,25	4,00	4,00	5,00	VI
	Equal conditions for environmental friendly products	4,49	0,12	4,45	0,12	4,00	5,00	5,00	VI

	To establish partnerships with Non-Governmental Organizations	4,03	0,22	4,03	0,21	3,00	4,00	5,00	VI
	To engage and motivate consumers	3,92	0,27	3,87	0,25	3,00	4,00	5,00	VI
	To grant awards and accreditation	3,23	0,37	3,00	0,37	2,00	3,00	4,00	NI*
M I C R O	Public purchases with sustainability criteria	4,85	0,08	4,87	0,07	5,00	5,00	5,00	CI
	Transparency in governmental consumption practices	4,56	0,13	4,56	0,12	4,00	5,00	5,00	CI
	To use sustainable consumption indicators to promote learning	4,23	0,21	4,26	0,20	4,00	4,00	5,00	VI

CI – Critically Important VI – Very Important NI – Not Important (* item eliminated)

Source: Survey data, 2016

4.2 Roles played by companies

According to expert's choices, the roles played by firms for promoting sustainable consumption are not limited to technological issues, but also include their relations to other stakeholders and involve a cultural change. At the macro level, the experts evaluated two roles (Table 3). According to expert's choices, the roles played by firms for promoting sustainable consumption are not limited to technological issues, but also include their relations to other stakeholders and involve a cultural change. At the macro level, they verified two roles. One of them achieved the category of "very important," namely, to establish mechanisms for the dissemination of the best socioenvironmental practices. However, the other was eliminated because it was considered not important by the specialists. Expert's choice showed that firms are more fit for offering modern technologies and needed instruments for achieving efficiency improvements in the use of natural resources and for pollution reduction.

On the other hand, lobbying for influencing governmental practices related to socio-environmental issues, aiming for a political change at the macro level, is in the border of average to be included as a firm's role ($\mu = 3,77$). This result can be because some experts feel that there could be an incompatibility between the performance of this role and the firm's monetary interests. However, although the proximity to cut point (3.8) we eliminated this role.

Regarding firm's roles at mesa level (Table 3), surveyed specialists considered that providing information about the socio-environmental aspects of products by using labels and stamps is "critically important". Indeed, the lack of information is currently a barrier for effecting sustainable consumption and that using this mechanism may aid consumers in their decisions.

The mean of the role to promote a sustainable supply chain has suffered a slight change in between rounds, but in the end, it was also considered to be "critically important." The goal is that the links that form the chain of the primary activity of the company, upstream and downstream, share accountability and favor the relationship between sustainable production and consumption.

Other three roles were viewed as "very important" (Table 3), the corporative citizenship, the promotion of dialogue with stakeholders, and practicing responsible marketing as a communication mechanism. These choices focus on the firm's role towards ethics and philanthropy behavior, as well as, transparency and dialogue with the society. Therefore, it was aligned with socioenvironmental accountability.

On the other hand, most roles played by firms at the micro level were regarded as "critically important." (Table 3). Most of them are related to technologies and production processes. These roles are: to adopt eco-efficiency principles, which involves a combination of ecologic efficiency and economic efficiency and stems from technological innovations that integrate environmental concerns into conventional business models; to analyze products'

lifecycle by considering that the most substantial part of the environmental impacts is decided when products are being designed; to develop sustainable products, which can direct the consumption demand to low environmental impact categories; and the use of eco-friendly packages, since are essential for protecting products during the stages of distribution, storage, commercialization, handling and consumption.

Only, adopting eco-taxes was considered as “very important.” This role is a way of internalizing and sharing the environmental costs with the whole chain of value.

Table 3: Firms’ roles (compared rounds)

Level	Roles played by Companies	1 st Round		2 nd Round					Final Category
		μ	CV	μ	CV	Q1	Q2	Q3	
M A C R O	To disseminate the best socioenvironmental practices	4,41	0,15	4,40	0,15	4,00	4,50	5,00	VI
	Lobbying	3,79	0,29	3,77	0,29	3,00	4,00	4,50	NI*
M E S O	To provide information through labels and stamps	4,85	0,08	4,87	0,07	5,00	5,00	5,00	CI
	Sustainable supplies chain	4,49	0,16	4,51	0,16	4,00	5,00	5,00	CI
	Corporative citizenship	4,49	0,19	4,46	0,19	4,00	5,00	5,00	VI
	Dialogue with stakeholders	4,36	0,19	4,32	0,19	4,00	4,50	5,00	VI
	Responsible marketing	4,21	0,26	4,19	0,25	4,00	4,50	5,00	VI
M I C R O	Sustainable products	4,85	0,09	4,85	0,09	5,00	5,00	5,00	CI
	To adopt eco-efficiency principles	4,77	0,10	4,77	0,10	5,00	5,00	5,00	CI
	To analyze products’ lifecycle	4,69	0,13	4,71	0,13	4,75	5,00	5,00	CI
	Eco-friendly packaging	4,62	0,14	4,60	0,14	4,00	5,00	5,00	CI
	Eco-taxes	4,18	0,22	4,15	0,20	4,00	4,00	5,00	VI

CI – Critically Important VI – Very Important NI – Not Important (*item eliminated)

Source: Survey data, 2016

4.3 Roles played by Civil Society

Concerning Civil society’s roles in promoting sustainable consumption the expert panel considered their active participation, individually or collectively to face the dilemmas related to production and consumption activities. At the macro level, two roles were selected both as “critically important” (Table 4). According to panel view, changes for promoting a sustainable consumption depend on collective effort. Due to this, the participation of civil society in elaborating public policies towards sustainable consumption was considered an essential role. In the same way, the creating educating methods for sustainable consumption is a critical role, since it may provide a favorable context for necessary cultural changes and for propagating more sustainable lifestyles.

At the meso level, three roles played by civil society were selected by the experts. To put pressure on governments and firms, as well as, promoting discussions on the subject of sustainable consumption are considered to be “critically important” roles. It is a way to promote ethical principles and social changes by social organizations across the environmental issues that pervade its actions. Also, civil society has the power to broaden and legitimize discussions about the environmental aspect through Non-Governmental Organizations.

In the category noted as the very important role played by civil society are to promote fair trade networks. Many times social innovations that fostering sustainable consumption are

from networks, for instance, food co-ops, negotiation and exchange platforms, as well as the creation of local currencies that may work as valuable sustainable consumption social laboratories in a local level. Carrotmob had received a low ranking. It is a crowdfunding strategy based on a high volume of purchases conditioned to a compromise of improving sustainability. However, expert's panel considered not sufficient to promote the necessary macro and structural changes.

At micro level the expert's panel indicated protests and boycotts as “critically important” roles of the Civil Society. These practices represent the rupture of existing barriers between consumers and citizens, becoming political actions that help to create change for promoting sustainable consumption. On the other hand, the boycott is a very important role. It is a way of rewarding firms for adopting sustainable conducts. Both boycotts and buycotts contribute to putting pressure on firms to become more responsible when it comes to sustainability practices in the market, as well as, also stimulate consumers to do so.

Table 4: Civil society’s roles (compared rounds)

Level	Roles played by Civil Society (Macro)	1 st Round		2 nd Round					Final category
		μ	CV	μ	CV	Q1	Q2	Q3	
M A C R O	To collaborate with the elaboration of public policies	4,87	0,07	4,90	0,06	5,00	5,00	5,00	CI
	To create educational methods for sustainable consumption	4,74	0,11	4,77	0,10	5,00	5,00	5,00	CI
M E T A	To put pressure on governments and companies	4,90	0,06	4,92	0,05	5,00	5,00	5,00	CI
	Discussions on the subject	4,74	0,12	4,72	0,12	5,00	5,00	5,00	CI
	Fair trade networks	4,49	0,17	4,51	0,16	4,00	5,00	5,00	CI
	Carrotmobs	3,54	0,32	3,49	0,30	3,00	3,00	4,00	NI*
M I C R O	Protests and boycotts	4,59	0,16	4,59	0,15	4,00	5,00	5,00	CI
	Buycott	4,15	0,25	4,10	0,25	3,00	4,00	5,00	VI

CI – Critically Important VI – Very Important NI – Not Important (*item eliminated)

Source: Survey data, 2016.

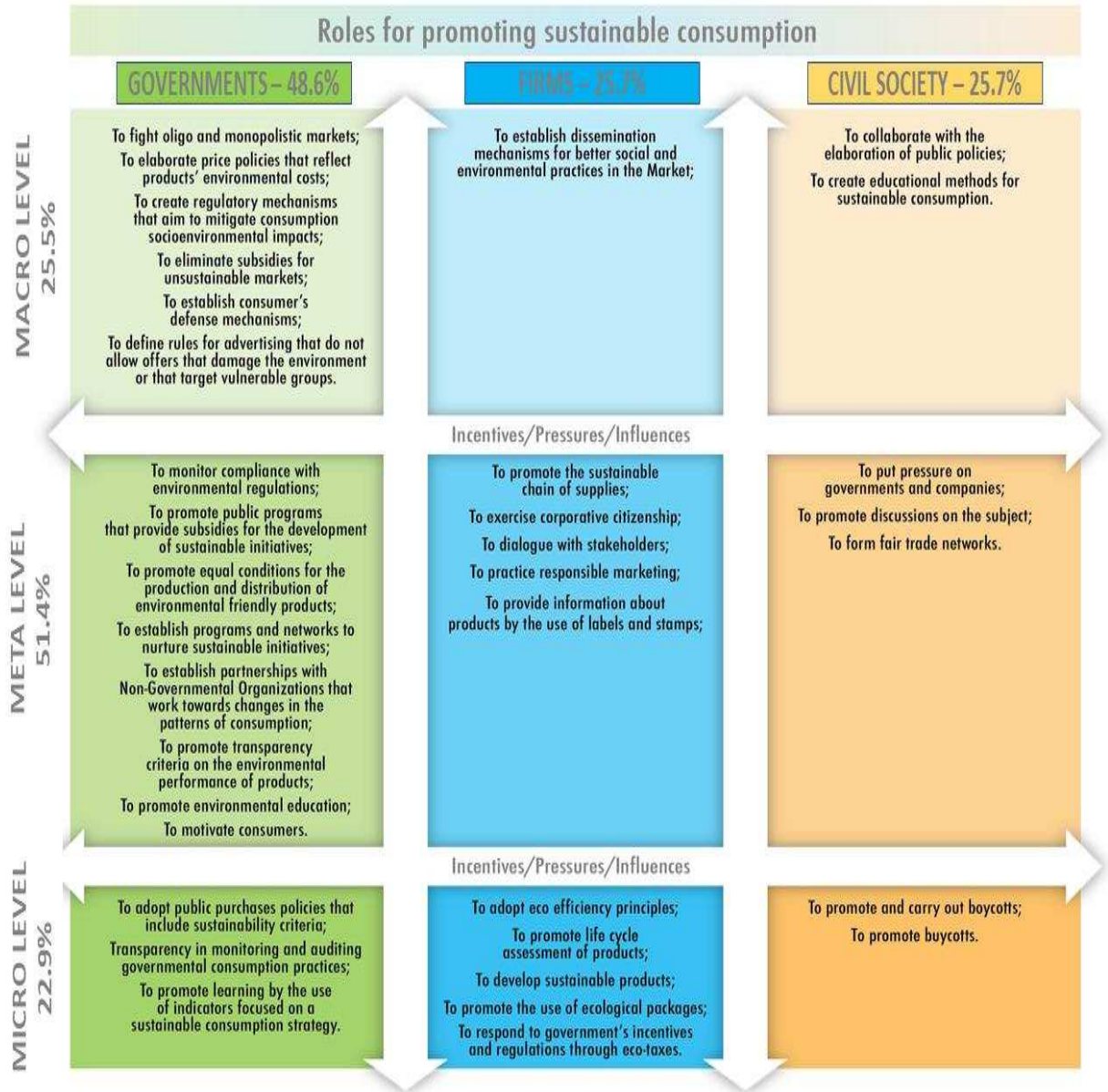
4.4 Final results

The results showed that experts' panel had maintained the degree of relevance to the roles on both Policy Delphi rounds. Despite the slight variations between rounds, 2nd round confirm the importance to each role for promoting sustainable consumption. Variation coefficients of the answers also presented minor alterations between 1st and 2nd rounds. Most of them were a decrease of variation coefficients and interquartile distances, which indicates more consistency in answers. Also, the median values (Q2) are very close to the means values (μ), which points to uniformity and convergence of responses, confirming results obtained on both rounds of Policy Delphi.

The meso level stands up as the space for actions toward promoting sustainable consumption. These findings confirm that is as a bridge between the macro and the micro level. Therefore, 35 roles and its relevance degrees were considered validated by experts on the Delphi panel (Figure 2). The high rate of approval of the roles indicated by the literature review

shows that scholars are aligned with the market, since practitioners, businessmen, and government representatives make up the sample.

Figure 3: Roles for promoting sustainable consumption validated by experts



Source: Elaborated by the authors

On the one side, concerning to groups, the government is the most significant player in promoting sustainable consumption, since 48.5% of the roles are playing for them. In turn, firms and Civil Society are tied with 25.7% of roles each one. On the other side, more than half roles are concentrated at Meta level (51.4%), following of Macro level with 25.7% of roles, and at the Micro level are 22.9% of roles to promote sustainable consumption.

These findings allow understood better the roles that should be played by each sector and to establish a prioritization of actions according to the degree of importance towards to promote sustainable consumption. Specially, these results can provide a useful tool for both, planning and evaluate efforts to make changes in consumption patterns. Thus, they can be used

in three ways: can be adapted to specific consumer segments; to be a base to develop an explanatory model to sustainable consumption; and, to provide a structure to monitoring a behavior toward sustainable consumption.

5 Conclusions

This research aimed to analyze the roles played by governments, companies and civil society to promote sustainable consumption, regarding its validation and relevance. The set of roles presented to a validation exercise were extracted by a systematic and exploratory literature review. A Policy Delphi technique with a group of experts on the subject was conducted with experts from Brazil. The result expresses a Brazilian context; however, due to the Delphi method, these results can be generalized. Nevertheless, further research using different composition to the expert panel is recommended.

The main limitations of this research were related to the sample, composition of the expert panel regarding nationality, and the sample size. Though the number of roles presented to expert panel also could be biggest.

In the end, thirty-five roles from the thirty-eight points out in the literature on promoting sustainable consumption were validated. The roles considered not relevant were a grant of awards and accreditation (government); lobbying (firms); and carrotmobs (civil society).

From the results, we conclude that the promotion of sustainable consumption must be considered as a sociocultural activity. That means, consumption is more than an individual event, and its analysis should consider the group of factors, actors, and levels. Also, it is a complex structure generated by social interactions among responsible actors for reaching more sustainable practices. Therefore, to make changes in the consumption behavior we need efforts of governments, civil society and firms are required. Note that some validated roles will cause short-term impact, while others at long-term. The committed to the long-term perspective is crucial because cultural changes and significant modifications in consumers' habits do not happen overnight. Governments have a high weight in the process related to rules, education, and control. Maybe it is the background to promote sustainable consumption. Firms and Civil society divided the other half of responsibility toward the sustainable consumer.

Another conclusion from these results is the fear that the played roles may have a negative impact on the country's economy. Despite this concern, to prioritize the promotion of sustainable consumption all parties must go beyond economic aspects and emphasize actions that improve the way natural resources are used, that protect the environment and preserve people's quality of life. Nevertheless, results showed the economic issues are still seen as a priority over socioenvironmental matters.

Some of the most significant challenges to be faced for promoting sustainable consumption are the ideological divergences over the relevance of socio-environmental issues and the conflicts of interests between parties (governments, firms, and civil society), which guide the way the roles validated. Indeed, the process for promoting sustainable consumption is hybrid. There is no clear line between levels of roles played by actors and their effects interact with each other.

Thus, from a theoretical point of view, this research is unprecedented and contributes to the literature on the subject. It offers an analysis of roles for promoting sustainable consumption from the Brazilian context based on a broader perspective that considers the participation of the democratic tripod (government, firms and civil society). In practical terms, this study may aid governments, firms and civil society to prioritize actions and strategies that can be adapted to promote sustainable consumption.

References

- Abramovay, R. (2012). *Muito além da economia verde*. São Paulo: Editora Abril São Paulo.
- Barber, J. (2007). Mapping the movement to achieve sustainable production and consumption in North America. *Journal of Cleaner Production*, 15(6), 499–512.
- Cohen, B., & Munoz, P. (2016). Sharing cities and sustainable consumption and production: towards an integrated framework. *Journal of Cleaner Production*, 134, 87–97.
- Dolan, P. (2002). The sustainability of “sustainable consumption.” *Journal of Macromarketing*, 22(2), 170–181.
- Echegaray, F. (2010). Votando com o “carrinho”: A politização do consumo na América Latina. *Anais... V Enec--Encontro Nacional de Estudos Do Consumo. Rio de Janeiro-RJ*.
- Franklin, K. K., & Hart, J. K. (2007). Idea generation and exploration: Benefits and limitations of the policy Delphi research method. *Innovative Higher Education*, 31(4), 237–246.
- Fuchs, D. A., & Lorek, S. (2005). Sustainable consumption governance: A history of promises and failures. *Journal of Consumer Policy*, 28(3), 261–288.
- Geels, F. W., McMeekin, A., Mylan, J., & Southerton, D. (2015). A critical appraisal of Sustainable Consumption and Production research: The reformist, revolutionary and reconfiguration positions. *Global Environmental Change*, 34, 1–12.
- Holt, D. B. (2012). Constructing sustainable consumption: From ethical values to the cultural transformation of unsustainable markets. *The ANNALS of the American Academy of Political and Social Science*, 644(1), 236–255.
- Hutter, K., & Hoffmann, S. (2013). Carrotmob and anti-consumption: Same motives but different willingness to make sacrifices? *Journal of Macromarketing*, 33(3), 217–231.
- Jackson, T. (2007). 16 Sustainable consumption. *Handbook of Sustainable Development*, 254.
- Jackson, T., & Michaelis, L. (2003). Policies for sustainable consumption. *Sustainable Development Commission, London*.
- Jaeger-Erben, M., Rückert-John, J., & Schäfer, M. (2015). Sustainable consumption through social innovation: a typology of innovations for sustainable consumption practices. *Journal of Cleaner Production*, 108, 784–798.
- Lim, W. M. (2017). Inside the sustainable consumption theoretical toolbox: Critical concepts for sustainability, consumption, and marketing. *Journal of Business Research*, 78, 69–80. <https://doi.org/10.1016/j.jbusres.2017.05.001>
- Liu, Y., Qu, Y., Lei, Z., & Jia, H. (2017). Understanding the Evolution of Sustainable Consumption Research. *Sustainable Development*, 25(5), 414–430. <https://doi.org/10.1002/sd.1671>
- Lorek, S., & Spangenberg, J. H. (2014). Sustainable consumption within a sustainable economy--beyond green growth and green economies. *Journal of Cleaner Production*, 63, 33–44.
- Luskin, J., & Del Matto, T. (2007). Introduction to the special issue on, sustainable production and consumption: making the connection. Elsevier.
- Michaelis, L. (2003). The role of business in sustainable consumption. *Journal of Cleaner Production*, 11(8), 915–921.
- Micheletti, M., & Stolle, D. (2012). Sustainable citizenship and the new politics of consumption. *The ANNALS of the American Academy of Political and Social Science*, 644(1), 88–120.
- Mont, O., Neuvonen, A., & Lähteenoja, S. (2014). Sustainable lifestyles 2050: stakeholder visions, emerging practices and future research. *Journal of Cleaner Production*, 63, 24–32.
- Muster, V. (2011). Companies promoting sustainable consumption of employees. *Journal of Consumer Policy*, 34(1), 161–174.

- Pape, J., & Heisserer, B. (2011). Towards Sustainable Consumption: a conceptualisation and evaluation of measurement tools.
- Peattie, K., & Collins, A. (2009). Guest editorial: Perspectives on sustainable consumption. *International Journal of Consumer Studies*, 33(2), 107–112.
- Rayens, M. K., & Hahn, E. J. (2000). Building consensus using the policy Delphi method. *Policy, Politics, & Nursing Practice*, 1(4), 308–315.
- Sachs, I. (2007). *Rumo à ecossocioeconomia: teoria e prática do desenvolvimento*. Cortez.
- Thøgersen, J. (2010). Country differences in sustainable consumption: The case of organic food. *Journal of Macromarketing*, 30(2), 171–185.
- Tukker, A., Emmert, S., Charter, M., Vezzoli, C., Sto, E., Andersen, M. M., ... Lahlou, S. (2008). Fostering change to sustainable consumption and production: an evidence based view. *Journal of Cleaner Production*, 16(11), 1218–1225.
- Viegas da Costa, D., & dos Santos de Sousa Teodósio, A. (2011). Desenvolvimento Sustentável, Consumo e Cidadania: um estudo sobre a (des) articulação da comunicação de Organizações da Sociedade Civil, Estado e Empresas. *RAM. Revista de Administração Mackenzie*, 12(3).
- Wang, Y. (2017). Promoting Sustainable Consumption Behaviors: The Impacts of Environmental Attitudes and Governance in a Cross-National Context. *Environment and Behavior*, 49(10), 1128–1155. <https://doi.org/10.1177/0013916516680264>
- Wright, J. T. C., & Giovinazzo, R. A. (2000). Delphi: uma ferramenta de apoio ao planejamento prospectivo. *Caderno de Pesquisa Em Administração*, 12(12), 54–65.