

---

## **An integrated model of sustainable consumption promotion based on the tripod of the democratic-participatory ideal – civil society, government, and market**

---

**Verônica Macário de Oliveira\***

Federal University of Campina Grande,  
Aprígio Veloso, 882, Universitário, Campina Grande – PB,  
CEP: 58429-900, Brazil  
Email: veronicamacario@gmail.com  
\*Corresponding author

**Carla Regina Pasa Gómez**

Federal University of Pernambuco,  
Av. Prof. Moraes Rego, 1235, Cidade Universitária,  
Recife, PE, CEP: 50670-901, Brazil  
Email: carlapasagomez@gmail.com

**Adriana Fumi Chim-Miki and  
Suzanne Érica Nóbrega Correia**

Federal University of Campina Grande,  
Aprígio Veloso, 882, Universitário, Campina Grande – PB,  
CEP: 58429-900, Brazil  
Email: adriana.chimmiki@gmail.com  
Email: suzanne.enc@gmail.com

**Abstract:** The promotion of sustainable consumption in developing countries in a systematic perspective is still an unexplored topic in the literature. This paper identifies the central role of stakeholders in promoting sustainable consumption. From a first literature review, an initial set of parts in promoting sustainable consumption was extracted – subsequently, qualitative research using the policy Delphi method. Based on a panel of experts' perceptions, an integrated model of the roles of promoting sustainable consumption was validated. The panel consisted of 40 experts in the field distributed into four groups: scholars, government, firms, and civil society. The results suggested that sustainable consumption issues include both consumption and production, imposing the necessity of action and articulation among distinct groups to obtain necessary changes. However, there is a concentration on the meso-level and government to promote sustainable consumption in developing countries.

**Keywords:** sustainable consumption; tripod of the democratic-participatory ideal; policy Delphi; developing countries.

**Reference** to this paper should be made as follows: de Oliveira, V.M., Gómez, C.R.P., Chim-Miki, A.F. and Correia, S.E.N. (2022) ‘An integrated model of sustainable consumption promotion based on the tripod of the democratic-participatory ideal – civil society, government, and market’, *Int. J. Environment and Sustainable Development*, Vol. 21, No. 3, pp.327–345.

**Biographical notes:** Verônica Macário de Oliveira is a Professor in the Academic Unit of Administration and Accounting at Federal University of Campina Grande (Brazil). She is a Post-doc Research Fellow in Administration (PUC/MG) and obtained a PhD degree in Administration from PROPAD/UFPE (Brazil). She has experience in ethics and social responsibility, marketing, entrepreneurship and social management, working mainly on the following themes: interorganisational networks, CSR, entrepreneurship, consumption and sustainability and social innovation. She is the leader of the Interdisciplinary Center for Studies in Social and Environmental Management (NIEGS).

Carla Regina Pasa Gómez is a Professor at Business Administration Postgraduate Program at Federal University of Pernambuco, Recife, Brazil. He holds a PhD in Production Engineering from Federal University of Santa Catarina, Brazil. He is the leader of the Interdisciplinary Research and Studies Group on Sustainability (GIPES)

Adriana Fumi Chim-Miki is a Professor in the Academic Unit of Administration and Accounting at Federal University of Campina Grande (Brazil). She holds a PhD in Tourism, Economics, and Management from the Universidad de Las Palmas de Gran Canaria, Spain. She graduated in Business Administration from the Federal University of Rio Grande, an Environmental Management specialist in Municipalities and Master in Geography, research line in economic geography (FURG). She is a permanent Professor of the Postgraduate Program in Administration (PPGA/UAAC). She is a Visiting Professor at the Universidad de San Buenaventura de Cali, Colombia at the Máster en Gestión Turística. She is the leader of the international research group, Coopetition Network Lab, registered with CNPq.

Suzanne Érica Nóbrega Correia is a Professor in the Academic Unit of Administration and Accounting at Federal University of Campina Grande (Brazil). She is a Post-doc Research Fellow in Administration (UFPB) and obtained her PhD degree in PhD in Administration from PROPAD/UFPE (Brazil). She has experience in organisational theories, entrepreneurship and management and social, working mainly on the following themes: social innovation, social business, innovation ecosystems, consumption and sustainability. She is leader of the study group on entrepreneurship and social business (GEENES).

---

## 1 Introduction

The growth of domestic markets is worrying, especially in developing countries. These countries are societies in flux and responsible for almost 80% of the life-cycle impacts of consumption. Thus, it is essential to promote sustainable consumption in a systemic manner (Tukker et al., 2008). However, research on responsible consumption in developing markets is still rare.

Over the last decades, the environmental crisis has become increasingly evident, with scholars and other sectors dedicating growing attention to this enormous world problem (Lim, 2017). In this sense, sustainable development perspectives 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. As part of this perspective, 'sustainable consumption' was formally introduced by the Oslo Symposium in 1994, and it has attracted growing academic studies (Liu et al., 2017).

According to Liu et al. (2017), sustainable consumption has been a 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 consumer choice and behaviour on environmental quality (Wang, 2017). On the other side, the role of different stakeholders in promoting social change has received low attention. However, the topic is vital since current consumption patterns are unsustainable. That is, to date excessive exploitation of finite natural resources, the environmental capacity of waste absorption is exceeded and, the access to riches is both unfairly and unequally distributed (Jackson, 2007). However, the socio-environmental 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, a sole focus on marketing to increase sustainable consumption has a limited potential to provide the level of changes required (Lorek and Spangenberg, 2014). Consequently, it is necessary to allow for structural changes to conciliate the human necessities based on consumption within the limits of the ecosystem.

In other words, societal changes need to go beyond individual practices of consumption and to involve macro level and structural changes that include 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 (Jackson, 2007).

Studies related to the promotion of sustainable consumption usually have two dimensions. The first one focuses on consumption efficiency through technological improvements on productive processes, and the consumer's choice (Fuchs and Lorek, 2005). The second dimension focuses on the macrostructural changes and it requires a systemic approach starting from integrating political structure (Jackson, 2007; Tukker et al., 2008) which contemplates the areas of expertise of governments, firms and civil society. Therefore, it is not only inviting people to behave 'correctly' over 'incorrect' structures (Lorek and Spangenberg, 2014).

In this study, governments are represented by public officials in the State's executive functions related to collective interests. Firms are companies with the role of supplying goods and services to the market. Lastly, civil society is defined as citizens that either individually or collectively promote actions in defence of public and collective interests related to production and consumption.

According to the second dimension, a question remains unanswered: what are the roles that governments, firms and civil society play in promoting the necessary changes towards more sustainable consumption in developing countries? By addressing this issue, our research goal was to identify the roles played by governments, firms and civil society within developing countries to propose an integrated model that promotes sustainable consumption based on the tripod of the democratic-participatory ideal as introduced

above. That model can be used as a managerial tool to prioritise actions and planning processes.

To achieve this primary goal, identifying the roles of the different parties in promoting sustainable consumption as described in the existing literature was the first task. The second one was to classify them according to the performance of members of governments, firms and civil society. And, finally, validating the set of roles through expert panels on the subject following 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 summarises the methodology and data collection. The fourth section shows and interprets the results of the 1st and 2nd round of Policy Delphi. Lastly, the discussion is offered, including an overview of our findings, research limitations and indications of further research.

## **2 Sustainable consumption**

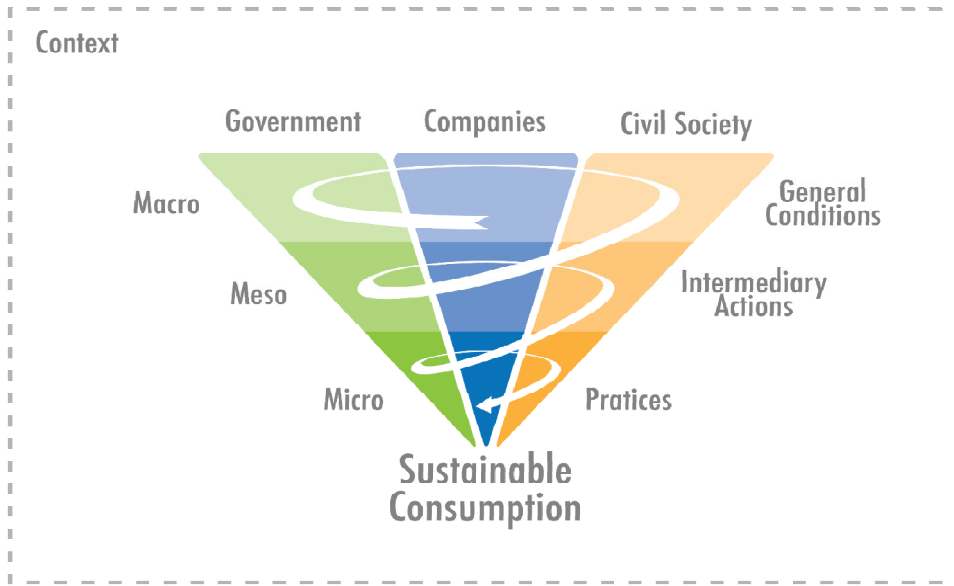
Sustainable consumption means using products and services that fulfil needs and, at the same time, improve society's quality of life while not compromising the needs of future generations (Luskin and Del Matto, 2007). That is consumption as an act of intra- and inter-generational balance. Simultaneously, the term 'consumption' also means, in its very essence, to use up and/or destroy, thus providing an antipode of the quintessence of the term sustainability. As a result, sustainable consumption requires a perspective that goes beyond the traditional viewpoint, that goes, beyond the lens of purchasing (Lim, 2017). In other words, consumption needs to be understood as a process of decisions and actions that includes purchasing, product use, and the handling of any remaining tangible product after the use phase (Peattie and Collins, 2009). Moreover, it is a social, economic and cultural process. Therefore, any attempt to modify consumption patterns by the actors must be based on a realistic and comprehensive conception that acknowledges existing social complexities (Cohen and Munoz, 2016; Dolan, 2002).

The promotion of sustainable consumption should consider procedures that are still little-known systems. They were developed for planning and managing social issues, being integrated, decentralised and sensitive to the complexity which is present in the nonlinear behaviour of socio-environmental systems (Geels et al., 2015) and include consumption and production which are part of a cycle of both intertwined and interdependent activities (Barber, 2007). The advances in this direction depend on interventions by the government; active commitment sustained by local communities; and the formation of collaborative networks, thus involving all parts of the tripod of the democratic-participatory ideal – civil society, government, and market (Jaeger-Erben et al., 2015).

A management approach based on the democratic-participatory tripod – government, firms 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 roles for the involved actors on a macro-, meso- and micro-level, according to the respective context in which they are embedded. 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, the micro-level includes the internal factors of management

practices by governments and firms, as well as politicised consumption practices of civil society that contribute to the achievement of sustainable consumption (Figure 1).

**Figure 1** The process of promoting sustainable consumption based on the tripod of the democratic-participatory ideal – civil society, government, and market (see online version for colours)



*Source:* Elaborated by the authors

Government actors play a vital role in making potential changes to the institutional architecture of the consumer society that can facilitate a process, in order to establish punitive and rewarding measures that can aid achieving the necessary macro-structural changes that are necessary to support sustainable consumption (Jackson and Michaelis, 2003). Also, governments follow socio-environmental demands and elaborate policies to regulate and motivate relations between production and consumption, so they would both become sustainable. Player's 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, policies for sustainable consumption must go beyond the rigidity of 'control' and 'persuasion', and they must be based on a shared understanding across governments, firms and civil society as collaborators and learning partners in the process of change (Jackson, 2007). Following this approach, the government's role to promote sustainable consumption was identified by scholars, as shown in Table 1.

Collective awareness regarding socio-environmental 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 of production and consumption.

Over time, firms have created systems of provision that have led to wealth creation and, as a result, have transformed society providing today most of the goods and services

to citizens. Whereas these have made it increasingly easy to access products and services, they are also responsible for the environmental impacts that result from the consumption of the respective products and services (Jackson and Michaelis, 2003). This assumption is corroborated by Michaelis (2003) who suggests that companies can facilitate change via three different levels, namely:

- 1 development of new technologies and practices
- 2 changes in economic and legal incentives that pervade both production and consumption
- 3 changes in values and discourses that shape the cultures of businesses, governments, media and civil society (Michaelis, 2003).

**Table 1** Governments' roles in promoting sustainable consumption

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

*Source:* Elaborated by the authors

Although some firms reject the notion that they are (co-)responsible for the current unsustainable levels of consumption, and claim that their role is only to promote eco-efficient products and services (Fuchs and Lorek, 2005), researchers indicate that their role is not limited to the technological issues of their products and production processes (ibid). Instead, they also need to acknowledge actions and strategies that involve its stakeholders towards a cultural shift. The roles of firms identified in the reviewed literature are shown in Table 2.

**Table 2** Firm's roles in promoting sustainable consumption

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

**Table 3** Civil society's roles in promoting sustainable consumption

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

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 firms) and from consuming and discarding (for consumers) (Echegaray, 2010). Thus, scholars and professionals alike proclaim a new consumer awareness,

following evidence that indicates a growing interest in knowing under which conditions the consumed product has been produced and which impact it had (Fuchs and Lorek, 2005). As a result, it, therefore, 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 (Table 3).

### **3 Methodological procedures**

An exploratory study was conducted in two stages to propose and validate an integrated model to promote sustainable consumption based on the tripod of the democratic-participatory ideal – civil society, government, and firms (market). The first stage identified distinct actions with regards to the promotion of sustainable consumption based on a comprehensive theoretical framework. Then, these actions were gathered into categories according to their stakeholders, i.e., representing the respective role of each group of the democratic-participatory ideal towards promoting sustainable consumption. Furthermore, they were divided into the levels of constituting society: macro, meso and micro. In the second stage, both roles and structure of the model were submitted to a validation process by an expert panel using a policy Delphi.

Delphi is a technique that seeks the consensus of opinions within a group of specialists regarding future events. It is based on the structured use of knowledge, experience, and creativity of experts, assuming that the collective judgment overcomes individual biases and preferences as well as subjective opinion. When being used as a technique to search for ideas and strategies to propose new organisational policies, it is known as Policy Delphi (Wright and Giovinazzo, 2000). Policy Delphi was deemed an adequate method to achieve our research goal because it allows exploring complex subjects with little historical context, which require an expert review to understand better the underlying issues (Franklin and Hart, 2007; Rayens and Hahn, 2000). The technique allowed to uncover the roles that the different parties of the tripod played in promoting sustainable consumption. A non-probabilistic and intentional sample was used to guarantee both theoretical and empirical knowledge with regards to sustainable consumption in developing countries. Two criteria were used to define the composition of the expert panel. Firstly, Brazil was determined as the geographic area due to its status as a developing country with a large internal market; therefore, providing a representative sample to develop a model as proposed. Secondly, a list was elaborated containing names of the prominent researchers and professionals on the topic. Also, companies and non-governmental organisations (NGOs) that promote sustainable consumption in Brazil were selected. That is, all representative of the tripod democratic-participatory ideal – Civil Society, Government, and Firms were represented in the final sample. Then, a total of 135 experts were invited to the Delphi panel. However, only 40 participants concluded the Delphi rounds.

The final sample included technicians that act in public entities related to environment and consumer protection, researchers on sustainable consumption, professionals promoting sustainable practice, and workers from NGOs as shown in see Table 4.



**Table 4** Expert panel composition in the Delphi policy

<i>Group of experts</i>	<i>Amount requested</i>	<i>Number of participants</i>	<i>% of respondents</i>
Scholars (G1)	67	16	40.0%
Government (G2)	18	08	20.0%
Firms (F3)	13	08	20.0%
NGO (G4)	37	08	20.0%
Total	135	40	100%

*Source:* Survey Data (2016)

The 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 were able to express their opinions about the degree of significance of the respective question using a 5-point Likert scale (5 = critically important; 1 = not important). During the first round of Policy Delphi, the measure of central tendency was calculated, mean ( $\mu$ ), median (Q2), dispersion (variation coefficient (CV), and quartile (Q1; Q2; Q3). These results allowed comparison among responses from particular expert's groups and responses from the overall group as well as levels of convergence and divergence among the experts' answers.

During the second round, experts received a summary of the first-round results compared with their answers. They were once again asked to evaluate their position with regards to the questions. This phase demanded individual questionnaires sent by e-mail. A cut point to determine the relevant roles were previously defined and was based on the average scores of all investigated factors as follows:

---

$\mu > 4,50$ = 'critically important'
$\leq 3,8 \mu \leq 4,50$ = 'very important'
$3,8 < \mu$ = 'not important'

---

Roles that scored below 3.8 were excluded. Which means that only roles with an average score close to 4 ('very important') and up till 5 ('critically important') were considered. The coefficient of variation was verified to check cases of controversial opinions. However, none of the roles with an average score below 3.8 presented coefficient of variation (CV) above 40%. Considering these rates, the results were deemed confirmed. In other words, these roles were not crucial, according to the experts' view. The Policy Delphi technique ended in the second round following the results confirming the respective relevance levels as assigned by the experts during the first round.

## 4 Results

The results of this Delphi Policy exercise are shown through subsections to highlight the distinct groups and roles to promote sustainable consumption in developing countries on the example of Brazil, namely, government, firms and civil society.

#### *4.1 Roles played by governments*

Regarding roles played by governments, the expert panel pointed out six items (Table 5). Of most significant relevance (i.e., 'critically important') were environmental regulation and the elimination of subsidies for unsustainable business practices. These results follow the theoretical background and, are in line with the market organisation. Control and regulation are possible through instruments of public politics in most of the countries across the globe but became fundamental in developing countries. That is because they are essential for firms to be held accountable by internalising externalities of their business practices and to allow economic instruments to ensure that the incentive given to some markets does not hinder the desired change.

The expert panel deemed several governmental roles as 'very important'. These include: To combat oligopolistic and monopolistic markets, the elaboration of price policies that consider the environmental costs of products, to establish consumer's defence mechanisms, and to define rules for advertising to avoid the promotion of offers that may harm the environment or that targets 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 for unsustainable products, and to minimise the power asymmetries that exist with regards to production/consumption, especially regarding the information provided to consumers. At the meso level, the specialists selected nine roles (Table 5). Four of them are 'critically important', namely, to monitor compliance with environmental regulations; to provide subsidies for sustainable initiatives; to promote criteria on the socio-environmental performance of products, and to promote environmental education.

Whereas previously on the macro level experts focused on regulations, at the meso-level, they point out the importance of monitoring and control. Otherwise the first is an innocuous action. Nevertheless, the panel also highlighted mechanisms to incentivise the adherence to sustainable behaviour through subsidies and/or education.

Also, four roles were considered as 'very important' roles at a meso-level and are related to cooperative networks that can awareness sustainable consumption. The first of them is promoting equal conditions for production and distribution of environmentally friendly products which would make sustainable products more accessible and their prices more competitive. Secondly, establishing programmes and networks to nurture sustainable initiatives and replicate the successful ones. The third 'very important' role was to develop partnerships with NGOs since the ones that work with the environment, consumption, and development are institutions that can modify the society's behaviour when it comes to sustainability and to negotiating diverging interests. Lastly, it highlighted the role of engaging consumers through leadership and feedback of actions that promote sustainable consumption within a government.

Finally, at the micro-level, the experts point out three roles played by the government (Table 5). 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', in the form of using sustainable consumption indicators to promote relevant learning. It can show the degree of adopted sustainable consumption strategy, aiming to increase the superior performance and reverse negative outcomes.

**Table 5** Governments' roles (compared rounds)

Level	Roles played by governments	1st round		2nd round					Final category
		$\mu$	CV	$\mu$	CV	Q1	Q2	Q3	
M A C R O	To eliminate subsidies for unsustainable markets	5	0.13	5	0.12	5	5	5	CI
	To promote environmental regulation	5	0.17	5	0.15	4	5	5	CI
	To establish consumer's defence mechanisms	4	0.18	4	0.18	4	5	5	VI
	To elaborate price policies to reflect products' environmental costs	4	0.21	4	0.21	4	5	5	VI
	To combat oligopoly and monopolistic markets	4	0.20	4	0.19	4	5	5	VI
	To define rules for advertising	4	0.22	4	0.18	4	4	5	VI
M E S O	To monitor compliance with environmental regulations	5	0.09	5	0.08	5	5	5	CI
	To promote environmental education	5	0.12	5	0.11	5	5	5	CI
	To provide subsidies for sustainable initiatives	5	0.14	5	0.13	4	5	5	CI
	To promote criteria on the environmental performance of products	5	0.17	5	0.16	4	5	5	CI
	To establish programmes and networks to replicate sustainable initiatives	4	0.15	4	0.25	4	4	5	VI
	To provide equal conditions for environmental friendly products	4	0.12	4	0.12	4	5	5	VI
	To establish partnerships with non-governmental organisations	4	0.22	4	0.21	3	4	5	VI
	To engage and motivate consumers	4	0.27	4	0.25	3	4	5	VI
	To grant awards and accreditation	3	0.37	3	0.37	2	3	4	NI*
	To foster public purchases with sustainability criteria	5	0.08	5	0.07	5	5	5	CI
M I C R O	To improve transparency in governmental consumption practices	5	0.13	5	0.12	4	5	5	CI
	To use sustainable consumption indicators to promote learning	4	0.21	4	0.20	4	4	5	VI

Notes: CI – critically important; VI – very important; NI – not important

\*Eliminated item

Source: Survey data (2016)

#### 4.2 Roles played by firms

According to the experts' evaluation, the roles played by firms for promoting sustainable consumption in developing countries are not limited to technical issues, but also include their relations to other stakeholders and involve a cultural change. At the macro level, they indicated one role, as 'very important', namely, to establish mechanisms for the dissemination of the best socio-environmental practices.

The findings show that firms are more likely to offer technologies and instruments to achieve 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 finding reflects the experts' notion that there could be an incompatibility between the performance of this role and the companies' monetary interests. However, due to the proximity to the cut-point of 3.8, was eliminated in this role.

**Table 6** Firms' roles (compared rounds)

Level	Roles played by firms	1st round		2nd round					Final category
		$\mu$	CV	$\mu$	CV	Q1	Q2	Q3	
M A C R O	To disseminate the best socio-environmental practices	4	0.15	4	0.15	4	5	5	VI
	Lobbying	4	0.29	4	0.29	3	4	5	NI*
M E S O	To provide information through labels and stamps	5	0.08	5	0.07	5	5	5	CI
	Sustainable supplies chain	4	0.16	5	0.16	4	5	5	CI
	Corporative citizenship	4	0.19	4	0.19	4	5	5	VI
	Dialogue with stakeholders	4	0.19	4	0.19	4	5	5	VI
	Responsible marketing	4	0.26	4	0.25	4	5	5	VI
	Sustainable products	5	0.09	5	0.09	5	5	5	CI
M I C R O	Adoption of eco-efficiency principles	5	0.1	5	0.1	5	5	5	CI
	Analysis of products lifecycle	5	0.13	5	0.13	5	5	5	CI
	Eco-friendly packaging	5	0.14	5	0.14	4	5	5	CI
	Eco-taxes	4	0.22	4	0.2	4	4	5	VI

Notes: CI – Critically important; VI – Very important; NI – not important

\*Eliminated item

Source: Survey data (2016)

Regarding firm roles at a meso-level (Table 6), 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 knowledge is currently a barrier for effecting sustainable consumption so 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. Still, 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 favour the relationship between sustainable production and consumption.

Three other roles were considered 'very important' (Table 6). These were the corporate citizenship, the promotion of dialogue with stakeholders, and practising responsible marketing as a communication mechanism. These choices focus on the firm's role in ethical and philanthropical behaviour as well as transparency and dialogue with society. Therefore, it was aligned with socio-environmental accountability.

On the other hand, most roles played by firms at the micro level were regarded as 'critically important' (Table 6). Most of them are related to technologies and production processes. These roles are, firstly, to adopt eco-efficiency principles, which involve a combination of ecologic efficiency and economic efficiency and stems from technological innovations that integrate environmental concerns into conventional business models. Secondly, to analyse products' lifecycle by considering that the most substantial part of the environmental impacts occurs when products are designed, and, thirdly, to develop sustainable products which can direct the consumption demand to low environmental impact categories. Lastly, the use of eco-friendly packages, since they are seen as essential for protecting products during the stages of distribution, storage, commercialization, handling and consumption. It is crucial to highlight that only adopting eco-taxes was considered as 'very important'. This role is a way of internalizing and sharing environmental costs with the whole value chain.

#### *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 understood to be 'critically important' (Table 7). According to the panel's view, changes for promoting a sustainable consumption depend on a 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 creation of educating methods for sustainable consumption was seen as a critical role since it may provide a favourable context for necessary cultural changes and for propagating more sustainable lifestyles.

At the meso-level, three roles played by civil society were considered as 'critically important': to put pressure on governments and firms as well as to promote discussions about sustainable consumption. It was seen as a way to promote ethical principles and social changes by social organisations across the environmental issues that pervade its actions. Moreover, civil society has the power to broaden and legitimise discussions about the environmental aspect through NGOs.

One category noted as a very important role played by civil society was to promote fair trade networks. Many times, social innovations that fostering sustainable consumption are from networks, for instance, food coops, 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, the expert's panel considered not sufficient to promote the necessary macro-structural changes.

At the 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, providing political actions that help to create change for promoting sustainable consumption. On the other hand, so-called boycott offers a vital role to communicate the need to adopt sustainable business practices. 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 stimulate consumers to do so.

**Table 7** Civil society's roles (compared rounds)

Level	Roles played by civil society (macro)	1st round		2nd round					Final category
		$\mu$	CV	$\mu$	CV	Q1	Q2	Q3	
M A C R O	To collaborate with the elaboration of public policies	5	0.07	5	0.06	5	5	5	CI
	To create educational methods for sustainable consumption	5	0.11	5	0.1	5	5	5	CI
M E S O	To put pressure on governments and firms	5	0.06	5	0.05	5	5	5	CI
	Discussions on the subject	5	0.12	5	0.12	5	5	5	CI
	Fair trade networks	4	0.17	5	0.16	4	5	5	CI
	Carrotmobs	4	0.32	3	0.3	3	3	4	NI*
M I C R O	Protests and boycotts	5	0.16	5	0.15	4	5	5	CI
	Buycott	4	0.25	4	0.25	3	4	5	VI

Notes: CI – critically important; VI – very important; NI – not important

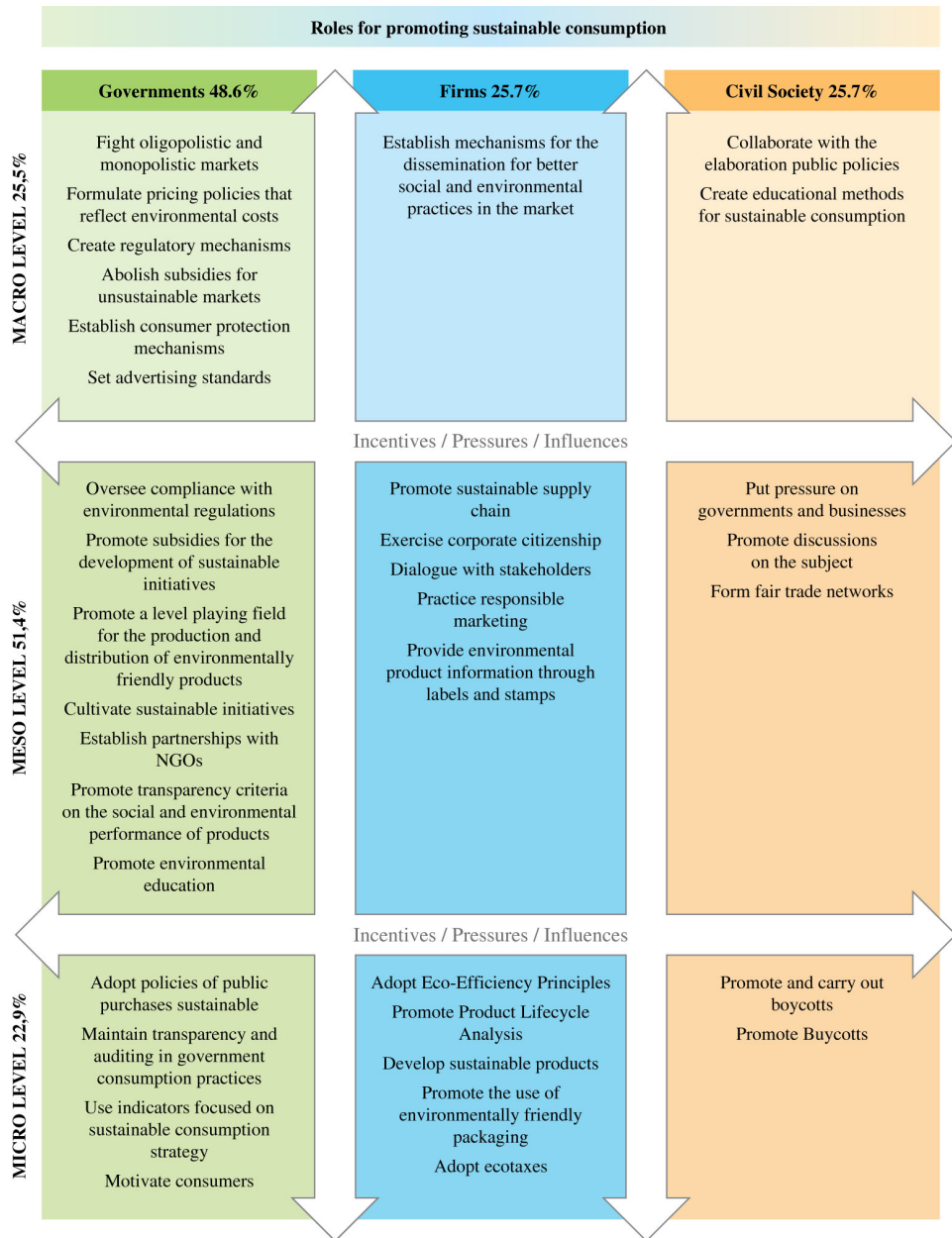
\*Eliminated item

Source: Survey data (2016)

## 5 Discussion

The results show that the expert's panel maintained the degree of relevance to the roles of both Policy Delphi rounds. Despite the slight variations between rounds, the 2nd one confirmed the importance of each role with regards to promoting sustainable consumption. Variation coefficients of the answers also presented minor alterations between the 1st and 2nd round. Most of them were decreases of variation coefficients and interquartile distances which indicate a consistency in the provided answers. Also, the median values (Q2) are very close to the mean values ( $\mu$ ), which points to uniformity and convergence of responses, confirming results obtained during both rounds of Policy Delphi.

**Figure 2** Integrated model of sustainable consumption promotion based on the tripod of the democratic-participatory ideal – civil society, government, and market (see online version for colours)



*Source:* Elaborated by the authors

The meso-level stands out as the space for actions towards promoting sustainable consumption in developing countries. These findings confirm the meso-levels' role as a bridge between the macro and the micro-level. Finally, 35 roles and their degree of relevance were validated by experts as part of the Delphi panel. Therefore, they compose

the variables of an integrated model of sustainable consumption promotion based on the tripod of the democratic-participatory ideal – civil society, firms, and market (Figure 2).

The high degree of approval of the roles indicated by the literature review shows that scholars are aligned with practitioners such as businessmen and government representatives that were part of the sample.

Moreover, concerning stakeholder groups, the results show that in developing countries, the government is the most significant entity in promoting sustainable consumption since 48.5% of the roles should play for them. In turn, firms and civil society are both showed results of 25.7% of roles each one. Besides, more than half of the roles are concentrated at the meso-level (51.4%), followed by the macro-level with 25.7%, and the micro-level with 22.9% of roles to promote sustainable consumption.

These findings allow understanding better the roles that each sector could play to promote sustainable consumption and to establish an environment that prioritises actions according to the degree of importance towards to promote sustainable consumption in developing countries. In sum, while our findings are consistent with the sustainable consumption literature, they go beyond that and offer a useful tool to plan, evaluate and monitor efforts towards changes in consumption patterns in line with the tripod of the democratic-participatory ideal – civil society, government, and market.

## 6 Conclusions

The consistency of the model presented here finds support in some empirical initiatives such has been proposed by the European Commission to promote sustainable consumption shown in the micro, mesa and macro levels in the roles played by governments (Marín Sánchez, 2019). Meanwhile, The United Nations under the United Nations Environment Programme has been discussing and making an effort to convince firms, governments and engage the society to create and execute many of the actions regards to the promotion of sustainable consumption present in Figure 2 (UNEP, 2015).

The study pointed in the same direction as the discussion addressed by the sustainable consumption research exchanges (SCORE!) establishing links between the role of companies, governments and society (Tukker et al., 2017), which means that the model presented contributes to consolidate the standard needed to promote sustainable consumption. While the SCORE! network did not systematize the papers presented, some of them related to our proposed model.

Our study aimed to identify the roles played by governments, companies and civil society within developing countries on the example of Brazil to propose and validate an integrated model to promote the sustainable consumption based on the tripod of the democratic-participatory ideal. The set of roles presented to an experts panel of practitioners across the tripod during a validation exercise in the form of Policy Delphi were extracted through a systematic and exploratory literature review.

Our study contributes to three strands of existing literature, and it helps to fill existing gaps, including:



- 1 mechanisms of sustainable consumption within developing countries
- 2 the tripod of the democratic-participatory ideal
- 3 a model to plan, control and monitor the promotion of sustainable consumption.

Firstly, it demonstrates that there is a consensus among scholars and practitioners about actions to promote sustainable consumption. Additionally, it provides a ranking of factors that should be prioritised to foster the promotion of sustainable consumption behaviours. Also, it extends the literature on sustainable consumption in developing countries by validating a general approach to a particular context. Thus, it contributes to filling a gap in the field.

Secondly, the scrutiny shows that all groups of the tripod of the democratic-participatory ideal are essential to promote sustainable consumption practices. However, in developing countries, most of the critical roles are concentrated on a meso-level with a particular focus on government interventions. Thus, it provides an integrative model that is based on a systematic perspective developed through the initial review of literature in the field. All in all, thirty-five out of thirty-eight roles that emerged from the literature review on promoting sustainable consumption were validated. The roles considered not important were granting of awards and accreditation (government); lobbying (firms); and carrotmobs (civil society).

Following the results, it concludes that the promotion of sustainable consumption must be considered as a socio-cultural activity. That means, consumption is more than an individual event, and its analysis should consider an extended group of factors and actors within and across different levels. Also, the findings highlight the complex structure generated by social interactions among responsible actors for reaching more sustainable practices. Consequently, making changes on consumption behaviours requires efforts from all actors, including governments, civil society and firms. It is important to note that some validated roles will cause short-term impacts, while others can lead to long-term changes. A commitment to a long-term perspective is crucial because cultural changes and significant modifications of consumer habits are often slow and require time. Governments have a vital role to play in the process through their potential to change existing laws, make changes to educational curriculum, and control. Maybe it is the background to promote sustainable consumption. Firms and civil society share the other half of responsibility toward promoting more sustainable consumption practices.

Thirdly, one key reason to study this field is to develop tools to help planners and support decision-makers to promote sustainable consumption. Our approach offers an integrated model of sustainable consumption promotion based on the tripod of the democratic-participatory ideal – civil society, government, and market (Figure 2). Also, it indicates what actions are most important on each level (i.e., macro-meso-micro) and groups of stakeholders.

The results show that the process of promoting sustainable consumption can be considered as a hybrid. That is, there is no clear separation of the impacts generated from the roles to be played by the actors. Every role presented in this research can produce effects under general conditions, and these effects are interactive, as shown in Figure 2.

Consequently, it is a managerial tool that can be used in three ways:

- 1 to adapt specific consumer segments
- 2 to be a base to develop an explanatory model to sustainable consumption
- 3 to provide a structure to monitor sustainable consumption behaviours.

The main limitations of this research were related to the sample composition of the expert panel regarding nationality and the sample size. Besides, the number of roles presented to the expert panel poses a potential limitation due to the biggest questionnaires, the lower answered rate.

However, this does not compromise the obtained results. Since the main characteristic of the Policy Delphi method is the usage of small samples of experts that allows for the necessary robustness. This robustness is the ability of an analytical approach to resist minor and deliberate variations of the analytical parameters.

Finally, from a theoretical point of view, this research is unprecedented and contributes to sustainable consumption literature. Although, it offers an analysis of roles for promoting sustainable consumption from the Brazilian context, i.e., focused on a developing countries context. However, the model can be transferred to other contexts. Still, it is recommended verifying the changes in the prioritization of roles. It is understood that additional research is necessary to understand better these roles in countries with distinct levels of economic and social characteristics. Besides, further research using different compositions of expert panels is recommended and can add new insights.

## References

- Barber, J. (2007) 'Mapping the movement to achieve sustainable production and consumption in North America', *Journal of Cleaner Production*, Vol. 15, No. 6, pp.499–512.
- Cohen, B. and Munoz, P. (2016) 'Sharing cities and sustainable consumption and production: towards an integrated framework', *Journal of Cleaner Production*, Vol. 134, No. 134, pp.87–97.
- Dolan, P. (2002) 'The sustainability of 'sustainable consumption'', *Journal of Macromarketing*, Vol. 22, No. 2, pp.170–181.
- Echegaray, F. (2010) 'Votando com o 'carrinho': A politização do consumo na América Latina', *Proceeding of V Enec – Encontro Nacional de Estudos Do Consumo*, Rio de Janeiro-RJ.
- Franklin, K.K. and Hart, J.K. (2007) 'Idea generation and exploration: Benefits and limitations of the policy Delphi research method', *Innovative Higher Education*, Vol. 31, No. 4, pp.237–246.
- Fuchs, D.A. and Lorek, S. (2005) 'Sustainable consumption governance: a history of promises and failures', *Journal of Consumer Policy*, Vol. 28, No. 3, pp.261–288.
- Geels, F.W., McMeekin, A., Mylan, J. and Southerton, D. (2015) 'A critical appraisal of sustainable consumption and production research: the reformist, revolutionary and reconfiguration positions', *Global Environmental Change*, Vol. 34, No. 34, pp.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*, Vol. 644, No. 1, pp.236–255.
- Hutter, K. and Hoffmann, S. (2013) 'Carrotmob and anti-consumption: Same motives but different willingness to make sacrifices?', *Journal of Macromarketing*, Vol. 33, No. 3, pp.217–231.
- Jackson, T. (2007) '16. Sustainable consumption', in Atkinson, G., Dietz, G. and Neumayer, E. (Eds.): *Handbook of Sustainable Development*, Edward Elgar Cheltenham, UK, Northampton, MA, USA, pp.254–268.

- Jackson, T. and Michaelis, L. (2003) *Policies for Sustainable Consumption*, Sustainable Development Commission, London.
- Jaeger-Erben, M., Rückert-John, J. and Schäfer, M. (2015) 'Sustainable consumption through social innovation: a typology of innovations for sustainable consumption practices', *Journal of Cleaner Production*, Vol. 108, No. 108, pp.784–798.
- Lim, W.M. (2017) 'Inside the sustainable consumption theoretical toolbox: critical concepts for sustainability, consumption, and marketing', *Journal of Business Research*, Vol. 78, No. 78, pp.69–80.
- Liu, Y., Qu, Y., Lei, Z. and Jia, H. (2017) 'Understanding the evolution of sustainable consumption research', *Sustainable Development*, Vol. 25, No. 5, pp.414–430.
- Lorek, S. and Spangenberg, J.H. (2014) 'Sustainable consumption within a sustainable economy – beyond green growth and green economies', *Journal of Cleaner Production*, Vol. 63, No. 63, pp.33–44.
- Luskin, J. and Del Matto, T. (2007) 'Introduction to the special issue on, sustainable production and consumption: making the connection', *Journal of Cleaner Production*, Vol. 6, No. 15, pp.489–491.
- Marín Sánchez, A. (2019) 'Strategic role of public administrations based on innovation and environmental sustainability: green and innovative public purchase', *Revista Universitaria Europea*, Enero-Junio, No. 30, pp.177–202.
- Michaelis, L. (2003) 'The role of business in sustainable consumption', *Journal of Cleaner Production*, Vol. 11, No. 8, pp.915–921.
- Micheletti, M. and Stolle, D. (2012) 'Sustainable citizenship and the new politics of consumption', *The ANNALS of the American Academy of Political and Social Science*, Vol. 644, No. 1, pp.88–120.
- Mont, O., Neuvonen, A. and Lähteenoja, S. (2014). 'Sustainable lifestyles 2050: stakeholder visions, emerging practices and future research', *Journal of Cleaner Production*, Vol. 63, No. 63, pp.24–32.
- Muster, V. (2011) 'Companies promoting sustainable consumption of employees', *Journal of Consumer Policy*, Vol. 34, No. 1, pp.161–174.
- Peattie, K. and Collins, A. (2009) 'Guest editorial: Perspectives on sustainable consumption', *International Journal of Consumer Studies*, Vol. 33, No. 2, pp.107–112.
- Rayens, M.K. and Hahn, E.J. (2000) 'Building consensus using the policy Delphi method', *Policy, Politics, and Nursing Practice*, Vol. 1, No. 4, pp.308–315.
- Thøgersen, J. (2010) 'Country differences in sustainable consumption: the case of organic food', *Journal of Macromarketing*, Vol. 30, No. 2, pp.171–185.
- Tukker, A., Charter, M., Vezzoli, C., Sto, E. and Andersen, M.M. (2017) *System Innovation for Sustainability 1: Perspectives on Radical Changes to Sustainable Consumption and Production*, 2nd ed., Routledge, New York.
- Tukker, A., Emmert, S., Charter, M., Vezzoli, C., Sto, E., Andersen, M.M. and Lahlou, S. (2008) 'Fostering change to sustainable consumption and production: an evidence based view', *Journal of Cleaner Production*, Vol. 16, No. 11, pp.1218–1225.
- United Nations Environment Programme – UNEP (2015) *Sustainable Consumption and Production: A Handbook for Policymakers*, Global Edition.
- Viegas da Costa, D. and 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*, Vol. 12, No. 3, pp.1218–1225.
- Wang, Y. (2017) 'Promoting sustainable consumption behaviors: the impacts of environmental attitudes and governance in a cross-national context', *Environment and Behavior*, Vol. 49, No. 10, pp.1128–1155.
- Wright, J.T.C. and Giovinazzo, R.A. (2000) 'Delphi: uma ferramenta de apoio ao planejamento prospectivo', *Caderno de Pesquisa Em Administração*, Vol. 12, No. 2, pp.54–65.