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ARTICLE

Stakeholder orientation in public universities: A conceptual discussion and a scale development

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Abstract This study, based on stakeholder theory, extends current research on the use of the market orientation construct in non-profit organisations, seeking to develop a new multidimensional scale that better fits the higher education context. More specifically, the main purpose of this research is to develop a stakeholder orientation (SO) scale for public universities. A mail survey was sent to all Spanish public university managers, which resulted in 1420 usable questionnaires. Data were analysed using structural equation modelling to develop the multidimensional construct. The findings confirm the applicability to higher education of this SO scale for focusing public universities towards their stakeholders. This SO scale is a multidimensional construct with five components, namely beneficiary orientation, resource acquisition orientation, peer orientation, environment orientation, and inter-functional coordination. This scale has more meaning for assessing the implementation of the marketing concept in public universities than the traditional market orientation construct.

PALABRAS CLAVE
Orientación a los *stakeholders*;
Educación superior;
Orientación al mercado;
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Orientación a los stakeholders en las universidades públicas: una discusión conceptual y el desarrollo de una escala de medición

Resumen Este estudio, basado en la teoría de los stakeholders, amplía la investigación actual sobre el constructo de la orientación al mercado en las organizaciones sin ánimo de lucro, tratando de desarrollar una nueva escala multidimensional que se ajuste mejor al contexto de la educación superior. Más específicamente, el objetivo principal de esta investigación es elaborar una escala de orientación a los stakeholders (OS) para las universidades públicas. Para ello se llevó a cabo una encuesta por correo electrónico enviada a los gestores de todas las universidades públicas españolas, que dio lugar a 1.420 cuestionarios utilizables. Para desarrollar

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el constructo multidimensional se analizaron los datos mediante modelos de ecuaciones estructurales. Los resultados obtenidos confirman la aplicabilidad a la educación superior de esta escala de OS para orientar a las universidades públicas hacia sus stakeholders. Dicha escala es un constructo multidimensional con cinco dimensiones, orientación a los beneficiarios, a la adquisición de recursos, a otras universidades, al entorno y coordinación entre funciones. Esta escala tiene más sentido para la medición del grado de adopción del concepto de marketing en las universidades públicas que el constructo tradicional de orientación al mercado.

Introduction

The extant literature on university stakeholders indicates that a wide range of individuals, organisations, and government-sponsored agencies are involved in higher education institutions (HEIs), generating conceptual confusion about who exactly the HEI stakeholders are (Mainardes, Raposo, & Alves, 2014). Thus, HEIs are oriented towards a variety of stakeholders (Bjørkquist, 2008; Ferrell, Gonzalez-Padron, Hult, & Maignan, 2010). Along these lines, Lovelock and Rothschild (1980) were pioneers highlighting the need for a broad concept of market orientation (MO) that takes into account more than one university stakeholder.

In for-profit firms, MO is deemed a very suitable strategy for improving performance and is seen as a way to create value by generating loyalty and satisfaction in their customers (Kohli & Jaworski, 1990; Narver & Slater, 1990). However, in a recent definition of marketing, the American Marketing Association (2013) emphasises that an organisation should fulfil the expectations of society at large, instead of just satisfying its customers' needs and wants. This alternative view has been called stakeholder orientation (SO), and it is defined as a behaviour that consists of focusing the organisation towards the different stakeholders in society as a whole (Laczniak & Murphy, 2012; Maignan, Ferrell, & Ferrell, 2005; Parmar et al., 2010). On other words, it is better to think in a multi-orientational way regarding stakeholders, instead of thinking only in terms of customers, as the traditional MO view recommends (Ferrell et al., 2010).

Several authors (Álvarez, Santos, & Vázquez, 2002; Flavián & Lozano, 2003; Greenley, Hooley, & Rudd, 2005; Modi & Mishra, 2010) support the idea that MO is not easily applicable to all kinds of organisations, especially in the context of non-profit organisations (NPOs). They suggest the need to extend the orientation of these organisations to more than one stakeholder, the customer, because the main mission of these organisations is to identify and satisfy the different needs of society (Duque-Zuluaga & Schneider, 2008; Mainardes et al., 2014).

Public universities are no longer an exception to the processes of change common to most other non-profit organisations NPOs (Caruana, Ramaseshan, & Ewing, 1998). Those changes have forced universities to assume responsibility towards society and both maintain and improve their leadership in the development and dissemination of knowledge, all while paying special attention to the aspirations and needs of their key stakeholders (Akonkwa, 2009; Benneworth & Jongbloed, 2010; Bjørkquist, 2008; Jongbloed, Enders, & Salerno, 2008).

For instance, in the case of Spain, public universities, which in their early days operated in an equable and uncompetitive environment, are now being subjected to higher levels of competitiveness and strong social pressures, leading them into new environments to which they must adapt (Cervera, Schlesinger, Iniesta, & Sánchez, 2011; Mora, 2001; Peña, 2010). Thus, they are now required to improve their ability to transform their institution globally and to modernise their operations (Álvarez et al., 2002; Navarro & Gallardo, 2003). Hence, as a response to these challenges, universities are shifting their objective function from a traditionally oriented focus on teaching and research towards a more complex one (Berbegal-Mirabent, Lafuente, & Solé, 2013).

Based on the idea that stakeholder orientation is a construct to measure the organisation degree towards stakeholders, our main purpose is to develop a SO scale for managers of HEIs and to analyse its applicability in the context of public universities. Hence, we conduct a study using a survey instrument administered to a national sample of university managers in Spanish public universities. The study investigates the dimensionality, reliability and validity of the multidimensional construct's scales by checking the psychometric properties of SO. In doing so, we achieve another important research purpose, that is, to provide empirical support to the existing theoretical arguments about the appropriateness of SO within the public university context.

Literature review

Theoretical framework

Stakeholder theory was first explained in the seminal work of Freeman (1984) and underwent extensive development in the 1990s through the work of Clarkson (1995), Donaldson and Preston (1995), Freeman (1994), and Mitchell, Agle, and Wood (1997), among others. This theory emerged in the field of strategy and is grounded in the belief that the final performance of an organisation should consider not just the returns to its shareholders, but also the returns that involve stakeholders.

After Clarkson's (1995) affirmation that for survival and success organisations depend on the ability of their managers to provide their stakeholders with wealth, value, and satisfaction, various theoretical works were proposed to manage stakeholders (Barro, 2009). Specifically, Kipley and Lewis (2008) highlight that stakeholder influence is a proven critical factor in the ability of an organisation to achieve its strategic goals and objectives. Accordingly, de Luque, Washburn, Waldman, and House (2008) demonstrate that the increased efforts of Chief Executive Officers (CEOs) towards a stakeholder orientation improve the overall firm performance. Finally, note the assertions of Jongbloed et al. (2008) and Alves, Mainardes, and Raposo (2010) highlighting that few studies exist concerning HEIs' stakeholder management. In that sense, it is important to stress the assertion made by Alves et al. (2010):

> ...despite using the term stakeholder, researches use different theoretical approaches to explain HEI stakeholder management, which shows a lack of consistency in the investigation of this phenomenon (p. 163).

In accordance with Parmar et al. (2010), as the strategic management field moves towards stakeholder theory, an important part of this process will be the direct integration of stakeholder theory into other mainstream theories.

Contributions to a broader market orientation concept based on the stakeholder theory

Kotler (1972) articulates the concept of societal marketing as a customer orientation backed by integrated marketing aimed at generating customer satisfaction and long-run consumer welfare (Kang & James, 2007). In the current literature, we can find several studies that support Kotler's (1972) original assertion and reinforce the idea of broadening the marketing concept when it is applied in the NPO context towards more stakeholders, who are also part of society. Álvarez et al. (2002) reveal the general acceptance among academics that marketing principles are perfectly applicable to NPOs. Concretely, they consider the MO concept to be an intangible resource that supplies the necessary commitment and information to satisfy both beneficiaries' and donors' needs, allowing the accomplishment of the organisational mission. Thus, they define non-profit marketing as:

> ...the management process of those interchanges undertaken by non-profit organisations aimed at generating a social benefit to a specific sector of society (Álvarez et al., 2002, p. 58).

Duque-Zuluaga and Schneider (2008), Liao, Foreman, and Sargeant (2001), and Sargeant, Sargeant, Foreman, and Liao (2002) highlight that neither the concept of MO nor profit performance may be completely applicable to the non-profit context. Likewise, Rivera-Camino and Ayala (2010) suggest the need to integrate different pressure groups or stakeholders to broaden the MO concept. Additionally, Modi and Mishra (2010) in their analysis of the literature identified a lack of agreement over the conceptualisation of a non-profit MO and a narrow view of key stakeholders, too. Moreover, Laczniak and Murphy (2012) predict a return to the neglected societal marketing concept introduced by Kotler in the 1970s, according to which marketing will deliver value to customers that maintains or improves their well-being and that of society.

Against this background, Greenley et al. (2005) propose to address the MO concept within the context of multiple stakeholder orientation, because managers also need to focus on this diversity and not only on customers' needs. Maignan et al. (2005) affirm that the reconceptualisation of the MO concept based on long-term and multiple stakeholders highlights the need, within marketing, to develop a wide stakeholder orientation rather than a narrow customer orientation. Later, Maignan, Gonzalez-Padron, Hult, and Ferrell (2011) complement their contribution by affirming that a growing consensus exists that a firm's stakeholders are embedded, directly and indirectly, in interconnected networks of relationships and, given this, the authors reveal that the MO still focuses on customers and competitors, so the coordination of diverse stakeholders' interests may be difficult to implement. Finally, Ferrell et al. (2010) support the idea that the MO and the SO are not mutually exclusive, there being some overlap between them.

Summarising the concepts covered, in Table 1 we show the main authors who propose an alternative framework to facilitate the operationalisation of the marketing concept towards a broader MO concept.

In Table 1, we highlight the considerable confusion about the MO concept. Basically, we denote that, some authors equate market orientation to societal orientation and propose that this concept can only be applied in a non-profit context (i.e. Duque-Zuluaga & Schneider, 2008; Kang & James, 2007; Liao et al., 2001; Modi & Mishra, 2010; Pavičić, Alfirević, & Mihanović, 2009; or Sargeant et al., 2002). Other authors equate market orientation to stakeholder orientation and suggest that this concept can be applied in both for-profit and non-profit contexts (i.e. Ferrell et al., 2010; Greenley et al., 2005; or Laczniak & Murphy, 2012). Finally, some authors such as Álvarez et al. (2002), Macedo and Pinho (2006) and Rivera-Camino and Ayala (2010), redefine the MO concept but still use the same terminology to refer to it.

To summarise, in our literature review we highlight that most of the research carried out in the university context still employs the terminology market orientation to refer to the operationalization of the marketing concept (Caruana et al., 1998; Casidy, 2014; Flavián & Lozano, 2006; Hammond, Webster, & Harmon, 2006; Hemsley-Brown & Oplatka, 2010; Ma & Todorovic, 2011; Rivera-Camino & Ayala, 2010; Webster, Hammond, & Harmon, 2006). However, we suggest that it would seem inappropriate merely to transfer the MO concept from the for-profit context to the public university context, because the MO in this context should take into consideration the long-term benefit to society rather than only customer satisfaction (i.e. students). Thus, we point out that a public university operationalisation of the marketing concept should properly be termed stakeholder rather than market orientation.

Consequently, we conclude that the stakeholder orientation construct would have considerably more meaning in the university context. However, we affirm that MO and SO are not mutually exclusive, there being some overlap between them. As we mentioned, in the current literature, the concept of stakeholder orientation coexists with the concept of market orientation. Therefore, we base our research on the review of the existing literature about the

Table 1 Contributions to a broader market orientation concept.

Study	Main idea	Supporting the broader orientation concept
Siu and Wilson (1998)	Following a critique of the existing literature, they define MO linked to the long-term survival requirement	''An organisation follows a MO to the extent that its structure, culture, systems and procedures are established in a way to ensure long-term customer (both clients and employees) relationships within the resource limitations and long-term survival requirement of that organisation'' (Siu & Wilson, 1998, p. 303)
Liao et al. (2001)	They posit the need to develop a new measure for the non-profit sector, suggesting terming it societal orientation	''A societal orientation construct should include the needs of the wider society which it forms part. It is that perhaps provides the greatest degree of distinction between societal and market orientation'' (Liao et al., 2001, p. 263)
Álvarez et al. (2002)	They delimit the MO concept in the private non-profit organisation context	''Customers, that is to say, the beneficiaries of the organisation's activities'' (Álvarez et al., 2002, p. 56) ''NPOs management philosophy demands the creation and development of an organisational culture that converts the beneficiaries and resource donors into the central focus of present and future operations'' (Álvarez et al., 2002, p. 58)
Sargeant et al. (2002)	They argue for a new approach to the operationalisation of the marketing concept in the non-profit sector by delineating the components of societal orientation	''In the for-profit context, it is not usual to find operationalisations that focus on customers and employees as the primary stakeholder groups. In the nonprofit context, this can be overly simplistic since organizations can potentially have a much larger group of stakeholders'' (Sargeant et al., 2002, p. 46)
Greenley et al. (2005)	They address MO constituting a multiple stakeholder orientation profile	''Managers have orientation toward each of their stakeholder groups, which exist simultaneously'' (Greenley et al., 2005, p. 1483)
Maignan et al. (2005)	They provide a well-balanced and integrated SO for implementing corporate social responsibility in marketing	''Organizations must focus not just on their customers, but also the important stakeholder groups that hold the firm accountable for its actions'' (Maignan et al., 2005, p. 957)
Macedo and Pinho (2006)	They examine MO within the context of the non-profit sector	''Complexity of managing a non-profit organisation is in part due to the diversity of stakeholders whom these organisation interacts, and their different needs and interests whose are often in conflict with each other'' (Macedo & Pinho, 2006, p. 536)
Kang and James (2007)	They present a conceptualisation of a societal orientation	''The current understanding and practices of marketing appear to have narrowly focused on the individual consumer and the gratification of his/her immediate wants, with little concern for long-run consumer interests and/or the interests of others in society who are not an organisations's direct customers'' (Kang & James, 2007, p. 302)
Duque-Zuluaga and Schneider (2008)	They develop a multidimensional notion of societal orientation for the specific operating environment of NPOs	''Adaptation of the MO philosophy to nonprofits should be called Societal Orientation'' (Duque-Zuluaga & Schneider, 2008, p. 33)
Pavičić et al. (2009)	MO in Croatian higher education is discussed within the context of stakeholder-oriented management	''As the term market may not be always used reliably in a nonprofit setting, the social orientation of nonprofit organisations is often discussed instead, implying that the main goal of a nonprofit institution is to define serve the needs, wishes and interests of its consumers/users, as well as to protect and enhance the welfare and long-term goals of society as a whole'' (Pavičić et al., 2009, p. 192)

Table 1 (*Continued*)

Study	Main idea	Supporting the broader orientation concept
Ferrell et al. (2010)	They discuss the potential contribution of MO and SO along with the similarities and differences that could be significant for marketing strategies	''Stakeholder orientation is a philosophy of the long-term welfare of all stakeholders, it focuses on how organizations can leverage their marketing expertise to improve welfare of all stakeholders'' (Ferrell et al., 2010, p. 95) ''Firms characterized by stakeholder orientation are dedicate to learning about addressing stakeholder issues'' (Ferrell et al., 2010, p. 95)
Modi and Mishra (2010)	They apply Narver and Slater's (1990) conceptualisation of MO to NPOs	''NPOs would do well to continuously focus on beneficiaries' needs, should be sensitives to donors' needs and expectations and also, understanding the strengthens, weakness, and strategies of their peers'' (Modi & Mishra, 2010, p. 565)
Rivera-Camino and Ayala (2010)	They develop and validate a MO measure in a sample of Spanish universities	''Recent literature about MO suggest the need to integrate different pressure groups or stakeholders in its definition'' (Rivera-Camino & Ayala, 2010, p. 128)
Maignan et al. (2011)	They conceptualise and operationalise SO	''In order to clarify the potential contribution of the marketing discipline in achieving better financial, ethical, and social performance, one needs to focus on a broader set of stakeholders'' (Maignan et al., 2011, p. 314)
Laczniak and Murphy (2012)	They explain and justify that more normative, macro/societal, and network-focused stakeholder marketing is necessary	''Public policy debates about what exactly constitutes the societal common good and what social measurements reflected that progress will become prominent in the academic conversation on the organisational effectiveness and social fairness of marketing practices'' (Laczniak & Murphy, 2012, p. 290)

aforementioned concepts, considering them as related concepts.

The stakeholder orientation construct in the public university sector

Ferrell et al. (2010) establish that MO identifies customers and competitors as its primary focus, whereas SO does not designate any stakeholder prioritisation. Thus, they define stakeholder orientation as:

> ...the organisational culture and behaviours that induces organisational members to be continuously aware of and proactively act on a variety of stakeholder issues (Ferrell et al., 2010, p. 93).

We hold that the above assertion fits our purpose and subject of research because the complexity of the Spanish public universities context requires us to develop a large SO concept. In agreement with Maignan et al. (2005), this means that from a marketing standpoint the SO must extend beyond markets, competitors, and channel members to understand and address all stakeholder demands.

From the literature review, we identify no consensus on whether is it better to employ a competitor behaviour than a collaboration behaviour, and in the university context, all the works contemplate only the competitive dimension. In this sense, in accordance with Alves et al. (2010), Akonkwa (2009), Jongbloed et al. (2008) and Pavičić et al. (2009), we criticise this narrow point of view, justifying the need to contemplate a broader concept that encompasses a collaborative behaviour too. Thus, in line with this reasoning, our purpose is merge the competitive and collaborative constructs into two ''new'' constructs called ''peer orientation'' and ''environment orientation'' instead of selecting one or other kind of behaviour—meaning, competitive or collaborative.

To develop the SO construct we carry out a critical review of the existing literature on the MO concept, especially on the higher education context and non-profit context. Thus, basing our research on MO and university studies (Akonkwa, 2009; Hammond et al., 2006; Hemsley-Brown & Oplatka, 2010; Ma & Todorovic, 2011; Rivera-Camino & Ayala, 2010; Voon, 2007) and on studies about MO applied to NPOs (Duque-Zuluaga & Schneider, 2008; Liao et al., 2001; Macedo & Pinho, 2006; Modi & Mishra, 2010; Sargeant et al., 2002), we propose to conceptualise universities' SO as a second-order construct made up of five equally important reflective components. These components are beneficiary orientation (this concept appears in all works), acquisition resource orientation (appears in four works), peer orientation (appears in one work), environment orientation (appears in one work), and inter-functional coordination (appears in all works).

Beneficiary orientation

University managers are assumed to understand the target beneficiaries of public universities' collection of information about their relevant stakeholders to adapt strategic decisions to their particular needs, interests, and points of view (Duque-Zuluaga & Schneider, 2008; Ma & Todorovic, 2011; Modi & Mishra, 2010; Sargeant et al., 2002). This entails NPOs designing services suited to their beneficiaries' requirements, which are grounded in the socio-economic settings specific to their context (Modi & Mishra, 2010). Hence, following Modi and Mishra (2010), we define beneficiary orientation as an organisational focus based on understanding the needs of stakeholders, designing services to meet those needs, and regularly monitoring their satisfaction. In agreement with Álvarez et al. (2002), the beneficiaries' of NPOs, given their multiplicity, must be defined from a broad perspective including all of the agents (stakeholders) who are more or less close to them.

Resource acquisition orientation

In the university context, the adoption of the marketing concept is an adaptive strategy for ensuring that organisations receive the necessary resources to accomplish their mission and carry out their activities (Rivera-Camino & Ayala, 2010; Siu & Wilson, 1998). Following Modi and Mishra (2010), we define this construct as the way in which a university is focused on knowing who its funders and patrons are, communicating regularly with them, and meeting their expectations. In relation to identifying funders and patrons as universities' stakeholders, we follow Mainardes et al.'s (2014) classification, which identify: the governments and their administrations, the state funding of grants and contracts from research and development actors and, private funding formed by individual donations and corporate giving.

Peer orientation

As highlighted by Modi and Mishra (2010), the nature of competition in the non-profit sector is different from that in the business sector, since NPOs see themselves as fraternal institutions working in the same broader space. Thus, competition has less relevance to the non-profit arena, but the concept of collaboration is at least as important because it implies the process of looking for convenient partnerships to cooperate in either the provision of services, lobbying, or resource acquisition (Duque-Zuluaga & Schneider, 2008; Liao et al., 2001). Following Modi and Mishra (2010), we define peer orientation as an organisational focus on understanding peers' strengths, weaknesses, and strategies and, wherever necessary, collaborating with them to serve beneficiaries better.

Environment orientation

In the literature, we find many references to the fact that universities must keep in mind the environment in which they operate. Russo, van den Berg, and Lavanga (2007) show that it is important for universities to develop a vision of their local community as an important pillar in economic development. Specifically, Ma and Todorovic (2011) reveal that a highly dynamic environment requires universities to ensure that they are aligned with the external environment.

According to the above, university managers who aim to understand fully the strengths and weaknesses, as well as the capabilities and potential of external communities seem to internalise environmental orientation in the SO concept. In agreement with Mainardes et al. (2014), we define this construct as an organisational focus on aligning the institutional mission with the demands of external communities (local, national, and international) with the aim of collecting and disseminating information concerning them.

Inter-functional coordination

In the university context, inter-functional coordination is regarded as the extent to which organisations share a common goal and work together synergistically towards its attainment thereof and responsiveness as the extent to which the organisation is capable of developing rapid responses to changing patterns of societal need (Sargeant et al., 2002). In addition, it is important to establish a strategy's plan of communication to disseminate it in an articulated way because that facilitates better implications and compromises among the internal stakeholders (Llinàs-Audet, Girotto, & Sole Parellada, 2011).

In addition, according to Duque-Zuluaga and Schneider (2008), we define inter-functional coordination as the extent to which every activity is synergistically contributing to the institution mission, implying coherent planning, information sharing across all university staff members, and alignment of strategy and programmes among the several internal university structures.

Summarising, SO in public universities is a construct composed of five dimensions: beneficiary orientation (BO), resource acquisition orientation (RAO), peer orientation (PO), environment orientation (EO), and inter-functional coordination (IC). In this sense, to develop a scale of SO for public universities we have relied on constructs used by previous works (see Table 2).

Research design

Method

For the elaboration of the construct scales, we followed the methods of Churchill (1979), Clark and Watson (1995), and Netemeyer et al. (2004). In addition, drawing up the constructs, we followed the recommendations of Rossiter (2002) as regards the fact that the conceptual definition of the construct should specify the object, the attribute, and the trait entity, because the constructs are not the same from the different trait entities' perspectives. Thus, we defined the conceptual definition of SO: public universities as the object, stakeholder orientation as the attribute, and senior university managers as the trait entity.

In turn, we also used content analysis tools to be consistent with the validity and reliability of the methods most commonly used in the literature (Short, Broberg, Cogliser, & Brigham, 2010). Hence, following Jaworski and Kohli (1993), we adopted four stages to develop the scale.

To capture the model constructs (Stage 1), we generated a list of items based on the previous works shown in Table 2 that gather information on strategic orientation from three different sources: (1) components of MO in the non-profit and university contexts, (2) components of SO in the non-profit context and, (3) components of stakeholder orientation in for-profit context. In agreement with Modi and Mishra (2010), our intention in generating a large sample of items was to ensure sufficient breadth of content and an adequate pool of items within each of the theoretical components. This resulted in 171 items reflecting various facets and meanings of the constructs. Subsequently we proceeded (Stage 2) to identify them and classify them according to their links to the different dimensions proposed in our study.

Table 2 Previous literature to develop a SO scale.

Construct	Definition	Previous scales
Beneficiary orientation (BO)	Focuses the organisation towards understanding the explicit needs of beneficiaries by designing services that allow finding these needs.	Duque-Zuluaga and Schneider (2008), Hammond et al. (2006), Ma and Todorovic (2011), Modi and Mishra (2010), Narver, Slater, and MacLachlan (2004), Rivera-Camino and Ayala (2010), Voola and O'Cass (2010)
Resource acquisition orientation (RAO)	Focuses the organisation towards the actual patrons, communicate with them regularly and gather their explicit expectations.	Duque-Zuluaga and Schneider (2008), Hemsley-Brown and Oplatka (2010), Modi and Mishra (2010)
Peer orientation (PO)	Focuses the organisation towards seeking to understand the strengths and weaknesses existing with other similar organisations, with the aim of sharing similar resources.	Duque-Zuluaga and Schneider (2008), Hammond et al. (2006), Ma and Todorovic (2011), Modi and Mishra (2010)
Environment orientation (EO)	Focus the organisation to local, national and international levels of stakeholders in order to collect and disseminate information relating to them.	Hemsley-Brown and Oplatka (2010), Narver et al. (2004), Voola and O'Cass (2010)
Inter-functional coordination (IC)	How to coordinate the functioning of the organisation and use of resources by organisational functions, to interact with the explicit primary stakeholders.	Duque-Zuluaga and Schneider (2008), Hammond et al. (2006), Hemsley-Brown and Oplatka (2010), Macedo and Pinho (2006), Modi and Mishra (2010), Narver et al. (2004), Voola and O'Cass (2010), Voon (2008)

However, in our study, another issue in the process consisted of, on one hand, excessively overlapping items that must be combined and, on the other hand, items that were deemed to lack relevance, which were removed altogether. Next, we undertook several rounds of rigorous editing to reduce the large poll of items to a manageable number (Stage 3). After this process, the amount of items was reduced to 46 (BO = 13 items, RAO = 6, PO = 8, EO = 5, IC = 14).

Then, the resulting items were worded as much as possible to be understandable to the respondents (Clark & Watson, 1995; Short et al., 2010) by regarding the basic principles of item writing, specifically to use language that is simple, straightforward, and appropriate for the reading level of the scale's target population. Hence, double-barrelled items were split to form separate items.

In order to get the definitive questionnaire, following Cervera, Sánchez, and Gil (1999) or Flavián and Lozano (2003), the pool of items relating to the SO construct was checked through discussions with three senior academic university ex-managers with different academic positions (one former managing director, one former vice-rector and one former dean) (stage 4). We knew that data obtained from self-reports could be subject to social desirability bias (Podsakoff & Organ, 1986). The low risk of this bias was indicated by the ex-managers, who commented at the end of the interview that they did not feel pressured by that circumstance. Even so, we informed and ensured the anonymity of the survey, thereby reducing the social desirability bias. Ensuring anonymity is a very useful practice, particularly with answers regarding sensitive issues (Konrad & Linnehan, 1995). After the three depth interviews we proceeded, firstly, to delete those items that were ambiguous, repetitive, and with loaded meaning and, secondly, to rewrite those items with non-understandable language. This left us with 27 items (BO = 7 items, RAO = 4, PO = 5, EO = 3, IC = 8).

Finally, we submit the questionnaire items to a second pre-test seeking the purpose of carrying out the final content validation of the instrument. Hence, we asked ten senior former university managers (two members of the government team; two heads of department; two deans; two members of the managing director team; one external member of the social council; one president/director of linked institutions) to review our final list of items, already in an online format. We personally administrated the questionnaires and interviewed the participants to understand which items were confusing, ambiguous, irrelevant, or otherwise difficult to answer. In sum, they found it to be quite relevant to and adequate for the constructs and, only we removed 1 item leaving us with 26 definitive items (see Annex A.1).

Questionnaire development

Churchill (1979) argues that determining the form of the response to individual questions is a crucial aspect of empirical data collection, so we decided to adopt the commonly used seven-point Likert-type scoring for all the items extent (from ''strongly disagree'' to ''totally agree''), for reasons of reliability and validity. The respondents were required to answer all the questions according to their unbiased perception of the situation and not to consider what the desired answers might be. The questionnaire included multi-item questions related to measuring the level of orientation towards beneficiaries, acquisition of resources, peers, the environment, and inter-functional coordination (Annex A.1).

All the institutions and individuals remain anonymous and the respondents were assured of the anonymity of their responses. To minimise the possible respondent bias, we did not use the term stakeholder orientation, referring simply to *orientation towards*.... The questionnaire was mailed by the institutional/personal university manager's email to all the members of the selected universe with a letter explaining the research objective. The survey was finally carried out in September 2013, with a follow-up mailing until January 2014.

Data collection

This study focuses on public universities' managers as its unit of analysis because they are responsible for defining university strategies related to their main missions: teaching, research, and knowledge transfer. Thus, we needed to gather the population, understood as the number of Spanish public university managers who are involved in the process of strategic decision making.

There are 50 Spanish public universities, 2 of which are directly dependent on the Education Ministry and the remaining 48 of which have delegated their competences to their corresponding autonomous communities, a university system existing for each autonomous community (Pérez & Peiró, 1999). According to University Reform Act (*Ley de Reforma de Universidades*, LRU), our research is directed towards these 48 public universities that the direct responsibility was transferred from the central government to their autonomous communities, which in turn are responsible for financing public universities and planning higher education in the region. In this sense and according to Mora and Vidal (2000), we argue that these universities, in front of those that are directly dependent of the central government, possess specific characteristics that cause differences on strategic management of the university stakeholders.

The Spanish 2001 Organic Act on Universities (*Ley Orgánica de Universidades*, LOU) provides a set of individual organs of government for public universities. From a practical perspective, we decided to group different positions according to different existing government structures of university. Therefore, the following groups of university managers with their respective charges are considered:

- Government team (*Equipo rectoral*). Includes the rector, vice-rectors, secretary-general and, the ''deputy of the rector''. The last ones are charges assigned directly by rectors, who meet the mission of developing and implementing decisions or strategic areas.
- Deans and school directors (*Decanos/as y directores/as de escuelas*).
- Heads of department (*Directores/as de departamento*).
- Institute directors (*Directores/as de institutos*).
- Managing director team (*Equipos de gerencia*). Includes the managing director (*Gerente/a*), vice-managing directors (*Vice-gerentes/as*) and, area directors (*Directores/as de áreas*).

In addition, we selected those who have a society relation: social council members (presidents, vice-presidents, secretary and external counsellors) not directly linked to the institution but related to the cultural, economic, and social life of the university environment and, the university ombudsman (*Defensor/a universitario*). Finally, as other individual and collective peripheral organs, we selected the following: directors' chair at the university (*Directores/as de cátedras universitarias*), directors or presidents of peripheral foundations, associations, and science parks (*Presidentes/as y/o directores/as de fundaciones y asociaciones universitàrias así como de parques científicos*) and, university union presidents (*Presidentes/as de uniones sindicales*).

Currently there is no database of Spanish public universities from which to obtain information about the existence of the university manager's charges. We gathered this information by building our own database after collecting the information from the university websites, obtaining a final database with a total of 7130 observations. Table 3 shows the composition of the population and the sample of the university managers. In general, terms, we can observe that the managing positions considered in our model fit university population.

From the final survey, 2178 questionnaires were returned. We cleaned the data by excluding questionnaires with duplicate responses, resulting 2169 cases. Specifically, for the empirical analysis were removed all cases with missing values in the items used to measure the latent variables, leaving a total of 1420 valid cases, which means a 19.92% valid response rate (a 2.3% of sampling error at 95% confidence level ($Z = 1.96$, $p = q = 0.5$)). The response rate achieved is similar than the response obtained by other studies related to the education sector: Hammond et al. (2006), (21)%; Macedo and Pinho (2006), (26)%; Rivera-Camino and Ayala (2010), (14)%.

Analysis and results

The data analysis will consist of exploring the statistical properties of all the items of the scales and testing the validity and reliability of the constructs (Gallarza & Gil, 2006). We will verify the reliability through the inter-item consistency by Cronbach's alpha coefficient (Cronbach, 1951). Furthermore, we will undertake an exploratory factor analysis (EFA) to verify and, if necessary, delete items that compose constructs and a confirmatory factor analysis (CFA) to test the factors found in the exploratory factor analysis that should definitely compose constructs' multidimensionality. Finally, the reliability and validity of the scales will be confirmed.

Dimensionality of the SO scale: explorative research

In order to check the five sub-scales that make up the SO construct, they are both assessed and analysed separately as well as being combined into a single overall score. As asserted by Clark and Watson (1995), sub-scales are

Table 3 Description of the population and the sample.

Managing positions	Population		Sample	
	Frequency	Percentage	Frequency	Percentage
Government team	1062	15.0%	226	15.9%
Dean	686	9.6%	203	14.3%
Head of department	2396	33.6%	570	40.1%
Institute director	698	9.8%	66	4.6%
Managing director team	573	8.0%	168	11.8%
Members with society relation	815	11.4%	48	3.4%
Members of peripheral organs	900	12.6%	139	9.8%
Total	7130	100.0%	1420	100.0%

hypothesised to be specific manifestations of a more general construct. Through this analysis, we try to establish that behind each sub-scale is a single underlying factor (Sweeney & Soutar, 2001).

With this purpose, we developed an EFA with SPSS v. 19.0. For the EFA, we ran principal components analysis (PCA). The first step in developing an EFA is to analyse the Kaiser–Meyer–Olkin (KMO) measure and Bartlett's test of sphericity. The KMO was greater than 0.80 (KMO = 0.937) and Bartlett's test of sphericity was highly significant (χ^2 = 23,633.932; d.f. = 276; p = 0.000), indicating good model acceptability, that is, it was a good idea to proceed with a factor analysis for the data.

After factor extraction, an orthogonal varimax rotation was performed that minimised the number of variables with high loadings on a particular factor. Five factors resulted from the analysis, accounting for 69.05% of the symptomatic variance.

The PCA refining process was carried out by observing which indicators showed loads on an improper factor or similar loads on more than one factor. This process was completed with an analysis of communalities, recommended as a complementary measure to verify the factorial loads. The results of both classification criteria determined the removal of items RAO2 (which had a load factor of about 0.504 and 0.586 on BO and RAO, respectively) and EO1 (which had a load factor of about 0.673 on PO).

After the deletion of these two items, we carried out the PCA once again to obtain the five factors in each factor load on the proposed factor. The five factors resulting from the analysis accounted for 70.24% of the symptomatic variance. The factor structure was consistent because all the variables had a factor loading >0.5 on the relevant factor.

Dimensionality of the SO scale: confirmatory research

Once the dimensionality of each of the five subscales was confirmed, the overall dimensionality of the SO construct was analysed. To analyse the dimensionality of the construct, we used structural equation methodology (Flavián & Lozano, 2006). In particular, a rival models strategy was developed (Anderson & Gerbing, 1988; Hair, Black, Babin, Anderson, & Tatham, 2006). Accordingly, we compared a second-order model in which various dimensions measured the multidimensional construct under consideration with a first-order model in which all the items weighed on a single factor (Steenkamp & Van Trijp, 1991).

Consistent with the structural equation methodology literature, it is important to establish whether the constructs and model are of a formative or a reflective type, and to establish the higher order factor of the proposed measure for SO: this distinction is essential for the proper specification of a measurement model and is necessary if meaningful relationships are to be assigned in the structural model (Coltman, Devinney, Midgley, & Venaik, 2008). In fact, there is extensive debate regarding the reflective versus formative nature of observed measures and models in the literature (e.g. Journal of Business Research, 2008 covers the controversy about the formative versus reflective model specification).

We propose that SO is a reflective second-order construct measured by the five reflective first-order dimensions (beneficiary orientation, resource acquisition orientation, peer orientation, environmental orientation and inter-functional coordination), because variation in the level of SO leads to variation in its indicators, and because those indicators are presumed to be interrelated. Although several authors have recommended the use of formative indicator models to measure MO, where causality flows from the items to the latent variable, as an alternative to traditional scale development (Jarvis, MacKenzie, & Podsakoff, 2003; Rossiter, 2002; Salzberger & Koller, 2013), there is still a predominance of use of a reflective indicator in MO scale development. Reflective measurement has filled the role of creating measures of constructs within marketing research and within the MO scale. The previous literature review confirms that researchers typically consider MO as a reflective measure (Diamantopoulos & Siguaw, 2006; Hult, Ketchen, & Slater, 2005; Smirnova, Naudé, Henneberg, Mouzas, & Kouchtch, 2011).

Therefore, in this study the SO is conceptualised as a five-dimensional second-order reflective measure. We understand that the true existence of a SO involves the simultaneous development and implementation of the basic SO dimensions: beneficiary orientation, resource acquisition orientation, peer orientation, environmental orientation and inter-functional coordination. That is to say that the SO causes the orientation towards beneficiary, resource acquisition, peer and environmental and inter-functional coordination and that these five basic dimensions are expected

Table 4 Confirmatory factorial analysis (robust coefficients).

Goodness-of-fit measures	Optimal value	Model 1: first order (24 items, 1 factor)	Model 2: second order (24 items, 5 factors)
Absolute fit indices			
Satorra-Bentler χ^2	$p > 0.05$	5417.1005	1576.2302
(d.f.)		(252)	(242)
(p)		($p < 0.001$)	($p < 0.001$)
RMSEA	RMSEA < 0.8	0.120	0.062
Incremental fit			
NFI	NFI > 0.9	0.697	0.912
NNFI	Close to 1	0.678	0.913
CFI	Close to 1	0.706	0.924
Parsimonious fit			
AIC	Choose the lowest	4913.101	1092.230
CAIC	Choose the lowest	3335.981	−422.306

RMSEA – root mean square of error of approximation; NFI – normed-fit index; NNFI – non-normed-fit index; CFI – comparative fit index; AIC – Akaike's information criterion; CAIC – consistent AIC.

to covariate if the SO value varies (Jarvis et al., 2003). Therefore, our test of the second-order structure assumes that the five dimensions are different forms manifested by the SO. Likewise, these five dimensions are explained by their respective observable indicators (Santos-Vijande, Díaz-Martín, Suárez-Álvarez, & del Río-Lanza, 2013).

The models were estimated with EQS 6.1 (Bentler, 1995) using the robust maximum likelihood method, since our data showed evidence of non-normal distribution (Mardia's coefficient normalised estimate = 152.24). Although other estimation methods have been developed for use when the normality assumption does not hold, the recommendation of Hu, Bentler, and Kano (1992) for correcting the statistics, rather than using a different estimation model was followed. Thus, robust statistics will be provided (Satorra & Bentler, 1988).

The proposed alternative models and indicators of goodness of fit obtained by confirmatory factor analysis (CFA) are reflected in Table 4. Specifically, in Model 1, all the items are grouped around a single factor, ignoring the existence of critical dimensions, and in Model 2, the items are grouped into five dimensions in turn, which are presumably correlated.

With the aim of selecting the most appropriate model among those proposed we compared the values reflected by each of them in absolute, incremental, and parsimony fit indices (Hair et al., 2006). The absolute incremental fit gave us an idea of the overall fit of the model, allowing us to analyse the extent to which the model is able to predict the initial data matrix. The incremental fit indices compared the model with another model that is denominated a null model, which represents the worst possible model because it assumes a total lack of adjustment. The parsimony fit compared different models of complexity understood as the number of distinct parameters to be estimated in each case. These measures related the goodness of the model to the number of estimated coefficients, that is, we can detect whether a high level of adjustment was obtained by introducing an excessive number of variables.

From the comparisons made, we can conclude that the proposed model with five factors (Model 2) improved the result compared with the model that combined all the items into a single latent variable SO, ignoring the existence of the criticism dimension (Model 1). The choice of Model 2 assumes that acceptance of the SO concept in the university context can be represented by five basic dimensions that correspond to the orientation towards beneficiaries, resource acquisition, peer, the environment and inter-functional coordination.

The fact that the SO concept does not present unidimensionality – to be the preferred Model 2 versus Model 1 – indicates that each item belongs to a sub-scale; therefore, each concept discussed belongs exclusively to a basic dimension.

Reliability and validity assessment

After completing the analysis of the dimensionality of the scale, it is necessary to study the reliability and validity of the measuring instrument used.

A confirmatory factor analysis (CFA) was conducted jointly for all the constructs making up the model, with the aim of assessing the measurement reliability and validity. The structural equation modelling (SEM) techniques were applied using the statistics package EQS 6.1.b.

The *reliability* of the constructs is presented in Table 5 and demonstrates high internal consistency of the constructs. With an exploratory analysis, we found that the item–total correlation, which measures the correlation of each item with the sum of the remaining items that constitute the scale, is above the minimum of 0.3 recommended by Nurosis (1993). In each case, Cronbach's alpha exceeds Nunnally and Bernstein (1994) recommendation of 0.70. Composite reliability (CR) represents the shared variance among a set of observed variables measuring an underlying construct (Fornell & Larcker, 1981). Generally, a CR of at least 0.60 is considered desirable (Bagozzi & Yi, 1988).

Table 5 Internal consistency and convergent validity.

Variable	Indicator	Factor loading	Robust *t*-value*	Cronbach's alpha	Composite reliability (CR)	Average variance extracted (AVE)
Beneficiary orientation	BO1	0.773	29.128	0.932	0.933	0.698
	BO2	0.865	41.263			
	BO3	0.894	46.560			
	BO4	0.878	46.834			
	BO5	0.811	43.917			
	BO6	0.784	34.075			
Resource acquisition orientation	RAO1	0.776	30.181	0.854	0.856	0.665
	RAO3	0.874	40.798			
	RAO4	0.803	33.525			
Peer orientation	PO1	0.582	16.661	0.825	0.826	0.500
	PO2	0.711	25.769			
	PO3	0.765	34.216			
	PO4	0.771	39.691			
	PO5	0.654	27.346			
Environmental orientation	EO2	0.710	16.238	0.820	0.845	0.737
	EO3	0.985	19.518			
Inter-functional coordination	IC1	0.596	21.023	0.917	0.923	0.603
	IC2	0.837	39.335			
	IC3	0.890	49.096			
	IC4	0.895	51.099			
	IC5	0.822	41.553			
	IC6	0.608	27.875			
	IC7	0.701	29.670			
	IC8	0.800	39.781			

* $p < 0.01$.

This requirement is met for every factor. The average variance extracted (AVE) was also calculated for each construct, resulting in AVEs greater than 0.50 (Fornell & Larcker, 1981).

Regarding *content validity*, all the items included in the scale have been tested in the academic literature (Cronbach, 1971).

Convergent validity is verified by analysing the factor loadings and their significance. The *t* scores obtained for the coefficients in Table 6 indicate that all the factor loadings are significant. In addition, the size of all the standardised loadings is higher than 0.50, and the averages of the item-to-factor loadings are higher than 0.70 (Hair et al., 2006). This finding provides evidence supporting the convergent validity of the indicators (Anderson & Gerbing, 1988).

Evidence for the *discriminant validity* of the measures was provided in two ways (Table 6). First, none of the 95% confidence intervals of the individual elements of the latent factor correlation matrix contained a value of 1.0 (Anderson & Gerbing, 1988). Second, the shared variance between pairs of constructs was always less than the corresponding AVE (Fornell & Larcker, 1981).

Nomological validity is essential to the determination of any new construct's role in the predictability of important organisational phenomena (Nunnally & Bernstein, 1994). To test this validity, we analyse the correlation of *stakeholder orientation* with *beneficiary satisfaction*. From our review of previous literature on stakeholder orientation, we identify *beneficiary satisfaction* as an outcome variable of SO (e.g. Laplume, Sonpar, & Litz, 2008; Pavičić et al., 2009). Beneficiary satisfaction is a focal dimension of organisational performance. This variable is the perception of the beneficiary's own satisfaction (Gainer & Padanyi, 2005). The SO construct is correlated significantly with measures of satisfaction and has positive and significant effect on beneficiary satisfaction ($\beta = 0.490$, robust *t*-value = 12.181, $p < 0.01$).

Additionally, as the SO is considered a reflective higher-order measure ''it is required that the indicators have a similar (positive/negative, significant/non-significant) relationship with the antecedents and consequences of the construct'' (Coltman et al., 2008, p. 1254). Specifically, when the five dimensions of SO were included each separately in the structural model specified in the study the causal relationships confirmed remained the same. The fit indices of the models were also satisfactory. This approach allows us to establish SO's criterion and nomological validity.

Therefore, construct validity was verified by assessing the convergent validity, discriminant validity and nomological validity of the scale. In addition, these results confirm the second-order construct, since we obtained a high correlation between our latent variables. Moreover, the SO scale has reliable indicators (five indicators corresponding to the five latent variables) since its Cronbach's alpha is 0.765, composite reliability is 0.825 and its average variance extracted is above 0.5. Furthermore, the evaluation of the second order factor (Table 4) provides satisfactory goodness-of-fit indices which show that a latent factor under

Table 6 Discriminant validity of the theoretical construct measures.

	BO	RAO	PO	EO	IC
BO	0.698[a]	[0.517, 0.625]	[0.480, 0.584]	[0.181, 0.313]	[0.674, 0.758]
RAO	0.326	0.665[a]	[0.526, 0.634]	[0.183, 0.315]	[0.529, 0.633]
PO	0.283	0.336	0.500[a]	[0.139, 0.275]	[0.635, 0.719]
EO	0.061	0.062	0.043	0.737[a]	[0.166, 0.298]
IC	0.512	0.337	0.458	0.054	0.603[a]

[a] The diagonal represents the AVE, while above the diagonal, the 95% confidence interval for the estimated factor correlations is provided, and below the diagonal, the shared variance (squared correlations) is represented.

lays the beneficiary orientation, resource acquisition orientation, peer orientation, environmental orientation and inter-functional coordination dimensions: the SO.

In short, by carrying out the process of refining the scale, analysing the dimensionality, and overcoming the reliability and validity tests, we could conclude that it had been possible to design an appropriate statistical tool to assess the stakeholder orientation of public universities.

Finally, we tested for common method variance. Following Harman (1967) recommendation, a principal components factor analysis was utilised in which common method bias could be indicated if only one factor, or one factor that accounted for an extensive amount of the variance in the unrotated factor structure, were to be produced. The factor analysis produced five factors reflective of the constructs under study with Eigenvalues greater than one. Moreover, we also followed the procedure recommended by Podsakoff, Mackenzie, Lee, and Podsakoff (2003) and re-estimated the model with all indicator variables loading on a general method factor and the resulting model fit was unacceptable, suggesting that bias arising from common method variance was unlikely.

Conclusions

This research provides important contributions to the theoretical perspective concerning the research on the adoption of the market concept in the public university context by expanding the few existing models of MO applied to the educational context (e.g., Caruana et al., 1998; Casidy, 2014; Flavián & Lozano, 2006; Hemsley-Brown & Oplatka, 2010). Specifically, the research employed a survey of public university managers with the aim of gathering the main actions that public university managers can use to orient their universities towards the different university stakeholders. Specifically, following the suggestion of several authors, who assert that universities should include more stakeholders (Benneworth & Jongbloed, 2010; Cervera et al., 2011; Greenley et al., 2005; Mainardes, Raposo, & Alves, 2012, Mainardes et al., 2014), the study proposes the introduction of the concept of SO to the higher education context by providing a SO scale for public universities as a second-order multidimensional construct.

The first contribution of this research arises from the revision of the stakeholder orientation concept and the proposal to use the term SO for public universities instead of the term MO. The second contribution emerges through the revision of market orientation studies in universities, and we conclude that it is necessary to readapt the traditional second-order construct, highlighting new dimensions in order to contemplate the multiple stakeholders' different needs. Finally, the third and main contribution of these study comes from the empirical validation of a measure of SO in the university context. In this sense, the results highlight universities' need to focus on a broader group of beneficiary stakeholders, rather than just on the students, to perform actions aimed at acquiring resources, to establish sources of collaboration with other universities, and to perform all this without forgetting the influence that the environment can have on the policies and strategies of a university. Finally, it is necessary for universities to encompass the coordinated and integrated application of organisational resources in order to put processes in place to build and maintain strong relationships with their stakeholders.

Theoretical and practical implications

The responses suggest several implications for marketing academics, for public university managers, and for policy makers within the higher education context. With regard the implications for academics, we have argued that, when talking about the implementation of the marketing concept, SO has considerably more meaning for public universities than the traditional MO construct. Specifically, this study advances the literature by testing empirically a formal definition of SO and its five components: beneficiary orientation, resource acquisition orientation, peer orientation, environment orientation, and inter-functional coordination. We claim that by providing a scale for measuring the SO of public universities this study makes an important contribution to developing future research applied to the field of strategic marketing and universities.

According to Hammond et al. (2006), university managers might wonder what universities can do to strengthen their stakeholder orientation. Regarding the practical implications for public university managers, the study provides empirical results that can help university managers to implement actions and behaviours to focalise their universities on their stakeholders. Moreover, the scale obtained in the present study could be a marketing tool that can be useful to measure the stakeholder orientation degree of a public university. Moreover the scale can help university managers to bear in mind the importance of stakeholders' needs, to attract and consolidate resources, to establish peer collaborations, to face up to external changes, and to disseminate marketing procedures into their institution, as Mainardes et al. (2012) highlight. Additionally, during the validation process, our results clearly suggest that public universities with a higher SO attain a better organisational performance in terms of beneficiary satisfaction. Therefore, this research promotes the importance of the SO concept and the need for it to be integrated within universities' current strategies as one way to promote and develop stakeholder orientation as an important consideration to achieve better performance.

In addition, our results support Siu and Wilson's (1998) suggestions along two main lines. First, a SO construct could cover the management's need to allow themselves to be accessible to other managers and administrators and also to all the internal university stakeholders by holding meetings with them regularly and answering questions about decisions. Moreover, managers can set stakeholder-oriented goals with similar institutions, funding institutions, and other external stakeholders. Second, the findings also suggest that beneficiary stakeholders' demands need to be known and understood continuously and systematically.

Finally, as claimed by Navarro and Gallardo (2003), universities have a lack of capacity to respond to social needs with speed, efficiency, effectiveness, and quality. For instance, several authors reveal their concern about the process whereby Spanish public universities are adapting to the new needs and social demands, recognising that there is some distance to Spanish universities with regard to marketing strategies (Llinàs-Audet et al., 2011; Mora, 2001). Thus, the results of our study could help university managers to implement a SO as a way to adapt public universities to the new scenario and make the whole system more oriented towards social demands.

Grau (2012) looks beyond this and affirms that Spanish universities are not within the actual political priorities of policy makers, and that one of the purposes of the European Commission is for Spanish universities to implement tools of strategic management to become more competitive and responsible with the goal of gaining the trust of society. In this way, regarding public universities' policy makers implications, we hope that this study provides a tool with which policy makers can analyse the SO concept, helping them to design incentives and mechanisms to move the university manager thinking from the students, as the primary university stakeholder, to a broad stakeholder orientation in university's strategies.

Limitations and further research lines

Several limitations of this study should be noted. First, the choice of university managers and the particular groupings used was somewhat arbitrary because of the limit established on the management positions that could not be defined clearly, since it was difficult to define exactly who exerts influence on the strategic decisions of universities and who is responsible for them. Therefore, further research could establish new criteria to determine who exerts influence on the strategic management decisions in public universities. In a similar way, the low response from the external members could indicate a lack of feeling within that group to participate in the strategic management of universities or non-suitability of the questionnaire. Thus, as a future line, we propose to analyse this group in isolation from the rest of the internal management positions. The third limitation is derived from the static data gathered, which reflect the views of university managers at a given moment; consequently, longitudinal studies need to be considered. Finally, the sampling frame included only public universities located in Spain. Thus, we must use caution in attempting to generalise the findings to universities overall. Therefore, future research could extend the study to public universities from other nationalities. This extension might be very helpful in generalising the findings outside the context of this study.

Moreover, studies could further investigate the relationship between SO and its antecedents and consequences in public universities, in other words, which behaviours, actions, or other factors are antecedents or consequences of SO, and also which variables moderate those relationships (Hammond et al., 2006). Finally, it might be interesting to test whether our SO construct would also be suitable for private universities or, conversely, whether the private sector would be a better fit for the traditional MO construct.

Conflict of interest

The authors declare no conflict of interest.

Annex A.1.

See Table A.1.

Table A.1 Measurement scale of stakeholder orientation.

Construct		Item
	BO1	Our main objective is to understand the stakeholders' explicit needs of our services and activities
Beneficiary orientation (BO)	BO2	To achieve competitive advantages we design strategies based on information obtained from explicit needs of our stakeholders
	BO3	We constantly monitor our level of commitment on serving the explicit needs of our stakeholders
	BO4	We regularly analyse the viability/utility of our activities through the satisfaction of our stakeholders
	BO5	To evaluate the services performed to our stakeholders we measure it systematically and frequently

Table A.1 (*Continued*)

Construct		Item
	BO6	Management positions maintain regular contact with stakeholders who have under their responsibility
Resource acquisition orientation (RAO)	RAO1	We seek feedback regularly of our activities and/or services with public and private institutions, financiers and patrons
	RAO2	We periodically review the likely effect of changes in our environment on stakeholders
	RAO3	We periodically assesses our funders and patrons' satisfaction with performance of activities, projects and/or services
	RAO4	When we find out that our funding institutions and patrons like us to modify the activities offering we make concerted effort to do so
Peer orientation (PO)	PO1	As university managers we are interested in knowing how other universities work
	PO2	We have information from similar universities about their services and activities
	PO3	We periodically control the strengths and weaknesses from scientific communities, employers, professional associations and private funders and use them to improve our activities
	PO4	Information related to strategies of other universities and/or similar organisations is freely shared across the organisation
	PO5	We share resources through networks with other universities and/or similar organisations
Environment orientation (EO)	EO1	The senior management and governing bodies believe important to collaborate with similar organisations
	EO2	We are most focused to regulatory agencies, local community and media that other public universities
	EO3	We understand better the needs of the regulatory agencies, the local community and the media than other similar universities and education institutions do
Inter-functional coordination (IC)	IC1	Different structures and management positions have very good communication with top management teams
	IC2	All management teams and their functional areas are coordinated for serving the explicit needs of our stakeholders
	IC3	We freely communicate information about our successful and unsuccessful experiences with stakeholders across all structures functions
	IC4	We report regularly at all levels, the degree of satisfaction among different stakeholders
	IC5	If something important happens with some stakeholder we disclose it quickly throughout the organisation
	IC6	We survey various stakeholders at a least once a year to assess the quality of ours services and activities
	IC7	We systematically organise meetings with different structures to implement improvements in our services and activities
	IC8	We regularly review our services and activities to ensure they are in line to meet the explicit needs of our stakeholders

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