

SPATIAL AND ORGANIZATIONAL DYNAMICS

DISCUSSION PAPERS

Cultural Assets in the Organizations

Nº14

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Cultural Values as a Support to the Development of Intercultural Competences

A Influência da Cultura na Inteligência Cultural e na Personalidade Multicultural

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Using Creative Problem Solving (CPS) to Improve Efficiency in a Non-profit Organization

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Knowledge Spillovers within the Algarve Tourism Region. Evidence to Identify a Regional Innovation System

Spillovers do Conhecimento no Turismo da Região do Algarve

Maurício Maldonado and Teresa de Noronha

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Cultural Assets in the Organizations

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CULTURAL VALUES AS A SUPPORT TO THE DEVELOPMENT OF INTERCULTURAL COMPETENCES

A INFLUÊNCIA DA CULTURA NA INTELIGÊNCIA CULTURAL E NA PERSONALIDADE MULTICULTURAL

*Cátia Sousa
Gabriela Gonçalves
Miguel Pina e Cunha*

RESUMO

A globalização dos mercados requer cada vez mais interação entre pessoas de diferentes culturas. A multiculturalidade é hoje uma realidade que exige diversidade às organizações para se tornarem mais criativas e abertas à mudança. Inteligência cultural e personalidade multicultural surgem como novos constructos potenciadores da adaptação e ajustamento eficazes a ambientes caracterizados pela diversidade cultural, nomeadamente o mundo organizacional. Sendo a personalidade e a inteligência características fortemente influenciadas pela cultura, a nossa proposta é analisar a Inteligência Cultural e a Personalidade Multicultural do ponto de vista dos valores culturais sugeridos por Hofstede. É possível verificar que a cultura exerce um forte impacto sobre os níveis de inteligência cultural e sobre a personalidade multicultural, pelo que, as organizações devem empenhar-se na formação dos seus colaboradores, quer em termos do desenvolvimento destas competências, quer na compreensão das diferenças dos valores culturais, visando uma gestão internacional de recursos humanos eficaz e denotando uma postura de abertura à biodiversidade cultural.

Palavras-Chave: Inteligência Cultural, Personalidade Multicultural, Valores Culturais de Hofstede, Multiculturalismo

ABSTRACT

The globalization of markets increasingly requires more and more interaction between people from different cultures. Multiculturalism is a reality that demands diversity in organizations so that they can become more creative and open to change. Cultural intelligence and multicultural personality emerge as the new constructs aimed at enhancing adjustment to culturally diverse environments, particularly to the organizational world. Considering that personality and intelligence traits are deeply influenced by culture, our purpose is to analyze cultural intelligence and multicultural personality in relation to the cultural values proposed by Hofstede. In view of the strong influence exerted by culture on cultural intelligence and multicultural personality, employees are required to further develop these skills and understand the differences related to cultural values. By training employees on these subjects, organizations can develop an effective international management of human resources, denoting attitudes of openness to cultural biodiversity.

Keywords: Cultural Intelligence, Multicultural Personality, Hofstede's Cultural Values, Multiculturalism

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1. INTRODUCTION

Globalization has the incomparable advantage of letting us know the world we live in with an infinite swiftness, approaching us to people, cultures and civilizations (Coelho, 2008). The processes of globalization, migration, and increased cultural diversity among nations has led to an increased need for understanding intercultural relations in plural societies (Van Oudenhoven & Ward, 2013). Population mobility and migration have always existed, but never before with such intensity. According to the United Nations (2013), about 232 million migrants exist worldwide. There are many reasons for people to leave their homeland and move to another country, refugees, international students (Rohmann, Florack, Samochowiec, & Simonett, 2014), expatriates, immigrants (Bücker, Furrer, Poutsma, & Buyens, 2014), researchers, and teachers are all prime examples of this reality. It therefore becomes evident that we actually live in a so-called “flat Earth” (Friedman, 2005) or “global village” (McLuhan & Power, 1989), where culture is an important factor in the search for identity that may create pockets of resistance to the “leveling” of globalization (Coelho, 2008).

The increased global competition, the customer expectations and needs, the rapid increase of change, and the need for adaptation are the primary characteristics of the twenty-first century organizations (Cao, Clarke, & Lehaney, 2003). The physical distance or time differences no longer stand as a barrier to abroad investment (Tsui, Nifadkar, & Ou, 2007). In this globalized world, the boundaries are not defined clear lines, at least at an economic, cultural and linguistic level (Dusi, Messetti, & Steinbach, 2014). The corporate sector itself naturally extends what multiculturalism entails, revealing itself in a multiplicity of everyday business experiences with foreign workforce (Carvalho, 2004), where social integration is frequently left in the background. This cultural differentiation in organizations often causes misunderstandings in international cooperation (e.g., Sørderberg & Holden, 2002), because cross-cultural differences arise not only from national specificities but also from the history and economic system of each country (Savanevičienė & Stark, 2008). The ability to relate with people from different cultures has become an increasingly important competence (Dusi et al., 2014). Managing multiculturalism and cultural diversity with an attitude of openness to cultural diversity is certainly one of the leading and major challenges faced by organizations today.

In this context, new skills are emerging since they are important to acculturation and multicultural integration. In recent years, concepts such as cultural intelligence and multicultural personality have become more prominent in the study of psychology and cross-cultural management. Furthermore, cultural psychology (Sternberg, 2014) has been considered important for understanding social changes. Intelligence and personality, despite being stable human characteristics, may evolve or expand into certain directions, i.e., people who tend to contact with different cultures may increase their levels of cultural intelligence and multicultural personality. Ang, Dyne, and Koh (2006) have shown that personality and cultural intelligence, although distinct, are related constructs, each associated to its unique set of individual differences. While personality is a personal trait that describes relatively stable predispositions, intelligence is a personal trait that describes flexible capabilities, behaviors and skills to deal effectively with culturally diverse situations (Ang et al., 2006). Some researchers have confirmed the existence of significant relationships between certain personality traits and cultural intelligence (e.g., Ward & Fischer, 2008; Ang et al., 2006). However, studies about both concepts are scarce. The four dimensions of cultural intelligence and various dimensions of multicultural personality were shown to facilitate intercultural adjustment (Peltokorpi & Froese, 2011). Kumar, Rose, and Subramaniam (2008) argue that personality traits are predictive and explain the variance in individual levels of cultural intelligence. Ang and colleagues (2006), in their analysis of cultural intelligence and the Big

Five model, have found evidence of the relationship between personality traits and specific dimensions of cultural intelligence. For example, conscientiousness is positively related to the metacognitive dimension of cultural intelligence and acceptance of the behavioral dimension of cultural intelligence. Additionally, extroversion is positively correlated with the cognitive, motivational and behavioral dimensions, whereas high openness to experience is positively correlated with all four dimensions of cultural intelligence (Ang et al., 2006).

Culture, multiculturalism and the significance of recognition/integration of cultural differences are side by side with the aforementioned concepts. It thus seems clear that Hofstede's model on the development of cultural intelligence, multicultural personality and its cultural dimensions plays a major role in the process of empirical research. The Big Five model has been shown to be a strong predictor of behavior across time, context and culture (e.g., Barrick & Mount, 1991). Since personality is influenced by the correlation between heredity and environment, multicultural personality is further expected to be influenced by environment; in this specific case, it is likely to be influenced by individual cultural values and intelligence, which are closely related to the environment. The intellectual limits set by heredity may be surpassed (or not) depending on the context, hence the importance of an in-depth look at the influence of the environment (cultural values) on multicultural personality and cultural intelligence. The growing relevance of these concepts in organizational psychology and multiculturalism management, as well as the paucity of studies on this issue, is the starting point of our article, in which we aim to analyze the relationship among cultural values, cultural intelligence, and multicultural personality in an organizational context.

2. CULTURE AND HOFSTEDE'S DIMENSIONS

Culture is undoubtedly a difficult concept to define. A definition that has received substantial attention was proposed by Geert Hofstede (1980), who states that culture is "the collective programming of the mind which distinguishes the members of one group or category of people from another". According to Matsumoto (1996), culture is a set of attitudes, values, feelings and behaviors shared by a group of people and conveyed from generation to generation. It can be divided into three levels (iceberg type): the first one (a lower, invisible and more pre-conscious level) is defined by the assumptions and beliefs accepted as true about our relationship with the world, time, and space; the second level, which emerges from and is influenced by the previous assumptions, consists of the values and ideologies prevailing in a society; finally, the third level (the visible one) is influenced by the previous levels and is composed of artifacts and creations such as rules, rituals, dress codes or ways of speaking and acting (Rego & Cunha, 2009).

The evaluation and analysis of cultural values led to a number of models developed by authors such as Schwartz (1992), Trompenaars and Hampden-Turner (1997) and Geert Hofstede (1980). Hofstede's model, which received more attention within the framework of organizational literature, consists of six dimensions: power distance, individualism vs. collectivism, masculinity vs. femininity, uncertainty avoidance, pragmatic orientation vs. normative orientation, and indulgence vs. restraint (Hofstede, Hofstede, & Minkov, 2010; Hofstede & Minkov, 2010). Power distance refers to the way in which a society manages the inequalities among individuals, i.e., this dimension expresses the extent to which the less powerful individuals accept and expect an unequal distribution of power. Members from large power distance societies accept the hierarchical order in which everyone has a specific place and justifications are not required; this is the case of places such as Portugal, Spain, Latin America, Asia and Africa, where there is a great respect for authority figures

and much importance is attributed to status and titles (Cunha, Rego, Cunha, & Cabral-Cardoso, 2005). In low power distance societies, by contrast, individuals strive for a more just distribution of power and challenge inequalities; in countries such as Great Britain, the United States and non-Hispanic European countries, people have no problem in questioning their leaders or superiors, given that they are all considered equal by nature (Cunha et al., 2005). The dimension masculinity vs. femininity represents a social preference for success, heroism, assertiveness and material reward for success (e.g., Japan) vs. a preference for cooperation, modesty, quality of life and caring for the “weak” and vulnerable (e.g., Portugal). The uncertainty avoidance dimension expresses the extent to which a society feels uncomfortable with uncertainty and ambiguity. The main question is how society deals with the fact that the future is something unknown. Countries with strong uncertainty avoidance have codes, behaviors and beliefs that are rigid and intolerant about unorthodox ideas and behaviors (e.g., Japan), whilst countries with low uncertainty avoidance are more tolerant towards deviant behavior and averse to formal rules (e.g., Sweden). Individualistic societies express a preference for social environments where people are expected to take care of themselves and their families (e.g., Australia and Great Britain), whereas in collectivist societies people expect their relatives or members of a particular group to take care of them in exchange for absolute loyalty (e.g., Brazil and Venezuela). The social status in these dimensions is reflected in a personal image defined relatively to “I” or “We”. The pragmatic orientation vs. normative orientation describes how people understand that not everything that happens can be explained. In societies with a normative orientation, people have a strong urge to explain things and want to establish the absolute truth. They genuinely respect social conventions and traditions, have small propensity to save for the future and are focused on quick results (e.g., Venezuela and Egypt). By contrast, in societies with a pragmatic orientation most people do not have the need to explain everything, as they believe it is impossible to understand the complexity of life. Instead of knowing the truth, the challenge is to live a virtuous life. In these societies, people believe the truth depends largely on the context of the situation and time. People accept the adversities of life and adapt according to circumstances; they also have a strong tendency to save and invest in the future, endorsing attitudes of thrift and perseverance in achieving results (e.g., China). An indulgent society accepts the joy of life and fun as basic human needs (e.g., Mexico), whilst a restrictive society represses and regulates these needs through restrictive social norms (e.g., Vietnam and Bulgaria).

Despite the existence of previous research on culture (e.g., Kuhn & McPartland, 1954; Rokeach, 1973), Hofstede was the first to present a theoretical model with quantitative indices describing different national cultures (Taras, Steel, & Kirkman, 2012). Consequently, the model led to a set of cross-cultural studies and has been successfully applied in several research areas, such as the organizational area, focusing on topics such as leadership, teamwork, ethics, satisfaction, communication, commitment, and justice (Taras et al., 2012). According to Avloniti and Filippaios (2014) and Taras and colleagues (2012), the original results of Hofstede’s research have been used in a vast number of publications (e.g., Newbury & Yakova, 2006; Chakrabarty, 2009; Ng, Sorensen, & Yim, 2009).

Hofstede’s cultural dimensions (1980, 1991, 2001) have been described as the “dominant explanation of behavioral differences between nations” (Williamson, 2002). However, his model has received significant criticism (e.g., Signorini, Wiesemes, & Murphy, 2009; McSweeney, 2002; Bhimani, 1999; Harrison & McKinnon, 1999). The most common criticism is the fact that his study focuses on only one company, IBM (Avloniti & Filippaios, 2014). Smith (2002), for example, states that the comparison between culture A and culture B on some attribute will tell us nothing about the variability within each nation, nor will it tell us whether the individuals in the sample are characteristic or uncharacteristic of that

culture. Nonetheless, Hofstede argues that his research describes whole populations, not particular individuals (Signorini et al., 2009). According to Hofstede, culture only exists by comparison. Thus, the average scores achieved by different countries on each dimension are relative, as we are all human and simultaneously unique, i.e., culture only has meaning when compared.

Taking into consideration the cultural dimensions proposed by Hofstede and the influence of the environment on personality and intelligence, a thorough analysis of the relationship between these constructs and the influence of cultural values on cultural intelligence and multicultural personality is required.

2.1. Cultural Intelligence

In recent years, various types of intelligence have been identified (e.g., Gardner, 1993) which emphasize the ability to adapt to others, such as emotional intelligence (e.g., Goleman, 1996), social intelligence (Cantor & Kihlstrom, 1985; Goleman, 2006), or interpersonal intelligence (e.g., Gardner, 1993). Cultural intelligence is consistent with the following conceptualizations of intelligence: the ability to adapt and adjust to the environment (Gardner, 1993; Sternberg, 2000). It differs from other types of intelligence because it is focused specifically on interactions characterized by cultural diversity (Dyne, Ang, & Koh, 2008). For Sternberg (2004), culture and intelligence are closely related, given that the conceptualization, evaluation and development of intelligence cannot be understood outside its cultural context; otherwise, intelligence would be a “mythological construct”. Despite its close relation to emotional intelligence, cultural intelligence makes headway where emotional intelligence leaves off (Earley & Mosakowski, 2004): a person with high emotional intelligence integrates what makes us simultaneously human and different from one another, whilst an individual with high cultural intelligence is capable of apprehending features of human behavior specific to a person or group, as well as those that are neither universal nor idiosyncratic. The vast territory that lies between these two poles is culture (Earley & Mosakowski, 2004).

Aiming to explain why some individuals have more effective performances than others in multicultural situations, and proceeding from Sternberg and Detterman's (1986) multidimensional perspective of intelligence, Earley and Ang (2003) developed a conceptual model of cultural intelligence. Cultural intelligence is a set of capabilities and competencies that facilitates the adaptation to different cultural situations and allows us to interpret unfamiliar behaviors and situations (Dyne, Ang, & Livermore, 2010). Earley and Ang (2003) refer to cultural intelligence as a multidimensional construct that comprises four dimensions: metacognitive, cognitive, motivational and behavioral. The metacognitive dimension refers to cultural awareness and sensitivity during interaction with different cultures, promoting active thinking about people and situations in an unfamiliar environment. It further elicits critical thinking about habits and beliefs, as well as an evaluation and review of mental maps, thus increasing the capacity of understanding (Dyne et al., 2008). This means that those somewhat detached from their own culture can more easily adopt the habits, customs and even the body language of an unfamiliar culture (Earley & Mosakowski, 2004). The cognitive dimension refers to knowledge possessed about cultural norms, behaviors, practices and conventions in different cultures (obtained through experience and education), including knowledge about the economic, social, and legal systems of different cultures and subcultures, as well as knowledge of cultural values (Rose, Ramalu, Uli, & Kumar, 2010). The motivational dimension is conceptualized as the ability to direct attention and energy towards cultural differences, i.e., it is a form of self-efficacy and intrinsic motivation in intercultural situations (Dyne et al., 2008). For example, people with high levels of cultural intelligence are able to face stressful situations with self-confidence and do not easily give

up when facing an obstacle. Finally, the behavioral dimension, which is one of the most visible aspects of social interactions, refers to the ability to express, verbally and nonverbally, appropriate behaviors when interacting with people from different cultures (Dyne et al, 2008). This means one needs to prove an effective integration in the host's world, through appropriate behaviors and attitudes (Earley & Mosakowski, 2004).

Some studies have shown that people with higher cultural intelligence are more efficient at decision-making in intercultural situations, adapting to culturally diverse situations (Dyne, Ang, & Nielsen, 2007) and exhibiting more effective cross-cultural leadership skills (Deng & Gibson, 2009). Cultural intelligence reduces anxiety and increases job satisfaction (Bücker et al., 2014), facilitates the development of a global identity (Shokef & Erez, 2008), and its four dimensions allow information technologies experts to work more effectively in global teams (Koh, Joseph, & Ang, 2010). And what is the role of culture in the development of cultural intelligence? Are there societies culturally smarter than others? What are the cultural characteristics that predict higher levels of cultural intelligence? According to Earley (2002), pluralistic societies are expected to have greater propensity for the development of cultural intelligence than homogeneous societies, due to the need to interact with diverse communities and subcultures. Based on Hall's (1976) dimensions, the same author states that people from high context cultures exhibit higher levels of cultural intelligence than those from low context cultures. Similarly, those from tight and dependent cultures exhibit higher levels of cultural intelligence, for individuals are required to know and conform to social rules. They are therefore demanded to know what behavior to adopt in each situation, and tolerance towards deviations is very low (Earley, 2002).

2.2. Multicultural Personality

Some researchers (e.g., Arthur & Bennett, 1995; Ruben & Kealey, 1979), aiming to reach multicultural effectiveness, have identified a number of specific personality features that determine the sensitivity to cultural interaction, such as empathy, respect for local culture, flexibility, tolerance, open-mindedness, self-confidence, sociability, positive self-image, courage, maturity, and initiative (Horverak, Sandal, Bye, & Pallesen, 2013). Based on these findings and the Big Five model of personality (Barrick & Mount, 1991), Van der Zee and Van Oudenhoven (2000, 2001) have identified five dimensions of multicultural competence: cultural empathy, open-mindedness, emotional stability, social initiative, and flexibility. Cultural empathy denotes the ability to empathize with the feelings, thoughts and behaviors of members of a different cultural group. Open-mindedness refers to an openness and unprejudiced attitude towards different members, norms, and cultural values. The rules and values of a new culture are more efficiently assimilated by individuals with an open-mindedness attitude, given that they are curious and interested in the perspectives of different groups (Van der Zee, Atsma, & Brodbeck, 2004), facing intercultural situations as a challenge (Van der Zee, Van Oudenhoven, & De Grijjs, 2004). Emotional stability is related to the tendency to remain calm in stressful situations vs. a tendency to show strong emotions under stressful circumstances. Tung (1981) and Hammer, Gudykunst, and Wiseman (1978) argue that the ability to deal with psychological stress is a key dimension in intercultural effectiveness. Flexibility has been considered by some authors (e.g., Hanvey, 1976; Ruben & Kealey, 1979) as a dimension of utmost importance, especially when expectations about the host country do not correspond to the actual situation. Elements of flexibility, such as the ability to learn from mistakes and from new experiences, are crucial to multicultural effectiveness (Spreitzer, McCall & Mahoney, 1997). Flexibility reflects the ability to tolerate uncertainty and adjust behavior to each situation (Van der Zee & Van Oudenhoven, 2000). The fifth and final dimension is social initiative, which includes attitudes of openness to new cultures, a predisposition to seek and explore new situations, facing the challenges,

and the ability to establish and maintain contacts easily (Van der Zee & Van Oudenhoven, 2000, 2001). It includes the use of proactive strategies in social situations and initiative in problem-solving and interpersonal relationships (Leong, 2007). According to Van der Zee and colleagues (2003), high scores on the five dimensions of multicultural personality are predictors of success in complex, stressful, and non-routine jobs, along with tasks that require specific skills to deal with different kinds of people. Multicultural personality emerges as one of the constructs that focus on cultural adaptation, intercultural competence, and multicultural effectiveness (Ponterotto, Ruckdeschel, Joseph, Tennenbaum, & Bruno, 2011).

Some studies have highlighted differences in personality traits (e.g., the Big Five) among different cultures (for a review, see Triandis, & Suh, 2002). For example, individualistic societies are characterized by personality traits such as independence, assertiveness and self-satisfaction, whereas collectivist societies are associated with respect, humility, and cooperation (Grimm, Church, Katigbak, & Reyes, 1999). In individualistic societies, there is a tendency for higher self-esteem (Heine, Lehmann, Markus, & Kitayama, 1999) and optimism (Lee & Seligman, 1997), which increases subjective well-being (Suh, 2000). Emotions are stronger predictors of life satisfaction in individualistic societies, whilst social norms are stronger predictors in collectivist societies (Suh, Diener, Oishi, & Triandis, 1998). In line with these studies multicultural personality traits are further expected to diverge depending on the cultural characteristics of societies.

3. THE INFLUENCE OF CULTURAL VALUES ON CULTURAL INTELLIGENCE AND MULTICULTURAL PERSONALITY

Although capitalism has become a kind of universal way of life, civilizational factors continue to structure the organization of economies and societies (Hamilton, 1994). The idea that globalization has standardized the world and we live in a “McWorld” is partly an illusion (Inglehart & Baker, 2000). Even societies that share the same economic development policies follow different trajectories due to cultural heritage. Cultural heritage is therefore embodied in every society because it shapes how a particular society develops (Inglehart & Baker, 2000). Even in some so-called “less traditional” societies, where values become less rigid and more diluted, they are still present in their members. One example is the McDonald’s restaurant chain. As stated by Watson (1998), the apparently identical McDonald’s restaurants spreads throughout the world have different meanings and social functions according to the cultural zone where they are. Although identical, eating in a McDonald’s in Japan is a different social experience from eating in one located in the United States, China or Europe (Watson, 1998). It thus becomes evident that nationality influences individual values, physical visible behavior, cognitive schemata and language propensities (Rego & Cunha, 2009), i.e., culture may either facilitate or inhibit certain behaviors and attitudes.

As aforementioned, the characteristics of each society exert influence on cultural intelligence (Earley, 2002). As a result, some dimensions of intelligence (metacognitive, cognitive, behavioral and motivational) can be more or less developed depending on the dominant values in each culture (e.g., normative vs. pragmatic culture or restrictive vs. indulgent). In addition, intelligence is a malleable cultural capacity that increases adaptive behavior in new contexts and varies depending on cultural exposure, training, socialization, and other experiences (Earley & Ang, 2003). For example, the motivational dimension may be less predictive of adjustments in individuals with more traditional cultural values. In societies with a pragmatic orientation, people may exhibit higher score means in the motivational dimension, whereas in indulgent societies the metacognitive and cognitive dimensions levels are lower. Additionally, the metacognitive dimension of cultural intelligence is more likely

to be weaker in high uncertainty avoidance societies, since individuals tend not to criticize or question habits and beliefs.

Multicultural personality, although relatively stable, enduring and influential on adjustment to environment (Almiro & Simões, 2010), is also influenced by culture, as the norms and rules of a society ultimately dictate, explicitly or implicitly, the model of behavior considered appropriate. Actually, culture and personality were proven to be strongly related by some cultural psychologists (e.g., Heine, 2001; Markus & Kitayama, 1991). According to Hogan and Roberts (2000), personality is best understood within the context of human evolution and cultural experience. In low uncertainty avoidance cultures, for example, people are more inclined to show higher levels of flexibility, open-mindedness and social initiative, because these dimensions involve more tolerance towards uncertainty and openness, a disposition to explore the new and unknown, and the promotion of unprejudiced relationships with unfamiliar cultures. Normative societies are expected to score lower on flexibility and open-mindedness, given that people tend to avoid uncertainty, as well as the new and unknown. In societies with a pragmatic orientation, people may exhibit higher scores on emotional stability (calmly facing stressful situations) and flexibility. In individualistic cultures, people are less likely to exhibit prominent multicultural personality traits on cultural empathy, since it presupposes sharing the feelings and thoughts of others. In the same way, the concepts of *self* and identity differ across the individualist and collectivist cultures. Since the required roles and social relations determine behavior, identity undergoes more changes in collective cultures (Kanagawa, Cross & Markus, 2001; Suh, 2002). One example is the notion of *you* and *yourself*, which may be understood differently in two cultures. In the United States (where many states have individualistic characteristics), and especially in the high and upper middle classes, the term *self* is usually assimilated as something intimate, private, and independent from others and social context; conversely, in Japan (collectivist society) the *self* appears associated with the flexibility and openness required and specific to social context (Kanagawa, et al., 2001; Markus & Kitayama, 1991). Another example illustrative of the differences between individualistic and collectivist society is the simple act of listening to music through an iPod or Mp3: while in the United States individuals use these gadgets as to not to be bothered, in Japan they are used not to disturb others (Rego & Cunha, 2009). In other words, behaviors are assessed and have different meanings according to the characteristics of society. Dusi and colleagues (2014) state that the same behavior can be regarded either as appropriate or as negative depending on the context. Management practices may lead to positive results in certain cultures but not in others, thus behaviors should be adjusted to cultural context (Rego & Cunha, 2009). Therefore, individuals with high cultural intelligence and multicultural personality are expected to recognize what is or isn't acceptable in different cultures and adapt their management practices, because these variables elicit an effective multicultural interaction in unfamiliar cultural environments. These skills have become fundamental in the organizational world, as organizations and their employees are affected by value and cultural differences.

Working with people from different cultures can be a complex process for both individuals and organizations, as cultural barriers can create misunderstandings that undermine multicultural interactions (Adler, 2008). In view of that, understanding cultural differences and learning about the cultural values of a society is paramount to a good integration, communication, and consequent business success. The dominant values of a society in turn reflect the culture of organizations. For example, organizations in societies with autonomous cultures and less deep-seated values tend to be more open to change and cultural diversity. The entire organizational philosophy is influenced by culture, at the level of rewards (e.g. Erez & Earley, 1993), feedback (e.g., Morrison, Chen, & Salgado, 2004), job satisfaction policy (e.g., Diener, Oishi, & Lucas, 2003; Posthuma, Joplin, & Maertz,

2005), organizational commitment (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002), psychological contract (Rousseau & Schalk, 2000; Pekerti & Thomas, 2003), leadership (Ensari & Murphy, 2003), performance assessment, and even the practice of dismissal (Rego & Cunha, 2009). The simple motivation for achieving goals and individual aims vary along with the culture of the society. Kurman (2001) has shown that in collectivist and high power distance cultures moderate and achievable goals are more motivating than complex and challenging targets. In the area of recruitment and selection, cultural competence may determine the trend of hiring in the organization. According to Horverak and colleagues (2013), those with less open attitudes tend to be more harmful when hiring people from other countries. On the contrary, people open to diverse social categories tend not to endorse discriminatory attitudes towards differences such as race, sex or age (Lauring & Selmer, 2013). In this case, skills like intelligence and multicultural personality are a real asset, are they not? An organization may well lose a talented individual simply because the recruiter holds discriminatory predispositions towards hiring people from another cultural background. At the level of conflict resolution (Kozan, 1997) and negotiation (Gelfand & Dyer, 2001), cultural differences may also play a decisive role. How can the adjustment between national and organizational culture predict organizational performance in terms of negotiation, conflict management, leadership, management teams, well-being or passion towards work?

Values, and particularly cultural differences, are often seen as a constraint to which organizations have to adapt to (Hoorn, 2014). Organizational management is culturally contingent and often relies on the ability to consistently line up management practices and contextual values (Hoorn, 2014). Within this multicultural context, skills like cultural intelligence and multicultural personality may be the cornerstone to success in organizations that deal with cultural diversity on a daily basis.

4. CONCLUSION

Cultural diversity and contact with different cultures are deep-rooted concepts in societies and organizations. Increased immigration, expatriation, and multinational organizations lead both the host country citizens and those displaced from home to a day-to-day contact with people from different cultures. Cultural intelligence and multicultural personality move onward as key features for success in unfamiliar cultural environments. Understanding, respecting and managing cultural differences and other values and norms has come to be a *sine qua non* condition not only for organizations and their employees but also for travellers, international students, teachers, researchers, immigrants, and all those who socialize with people of various nationalities.

Defined as the ability to adapt and adjust to multiculturalism, cultural intelligence differs from other types of intelligence, because it focuses specifically on interactions characterized by cultural diversity. Cultural intelligence facilitates adaptation to diverse cultural situations, allows interpreting behaviors and unfamiliar situations, and promotes more effective decisions in intercultural situations. Although recent, there is a growing movement towards the research on cultural intelligence that demonstrates the leading role of this personal trait in successful multicultural interactions. Emerging studies are mainly focused on expatriates' adjustment and success, cross-cultural leadership, cultural diversity adaptation, and its relationship with organizational variables such as performance, self-efficacy and motivation. Multicultural personality, a construct focused on multicultural effectiveness, is also begun to be considered of the utmost importance, because it facilitates cultural adaptation, intercultural competence, and multicultural effectiveness. People

with high levels of multicultural personality are therefore shown to be more empathetic towards members of different groups, to learn from new experiences, to maintain open and unprejudiced attitudes, and to have easiness in establishing new contacts. Recent studies have demonstrated a positive relationship between high levels of multicultural personality and adaptation, adjustment and well-being of expatriates, international students, and immigrants.

Every culture has its rules, standards and traditions. In line with Hofstede's model, societies may be described according to several dimensions with important implications for the behavior of nations and individuals, influencing factors such as labor standards, motivations, lifestyles and values, and multicultural intelligence and personality. As previously stated, people from individualistic or high power distance cultures are expected to display distinct personality and intelligence traits. Personality, flexibility and emotional stability, or the motivational dimension of cultural intelligence, for example, will be more consistent in pragmatic societies, where people will tend to accept life's adversities and adapt according to different circumstances.

The characteristics of each culture (e.g., collectivist or individualist, male or female, with high or low power distance) are influential on each individual, since culture affects not only what is visible (such as behavior, attitudes, and social rules) but also personal assumptions and values at a deeper level. Organizations should invest in employees' training, both in terms of cultural intelligence and multicultural personality. Knowledge of cultural values should further be considered not only by expatriates but also by employees that coexist with other nationalities even without leaving their country. The need to manage a multi-ethnic and multicultural workforce has gained much importance in organizations. Managing diversity or diversity management demands respect for the traditions, culture and educational context of all group members. Promoting a balanced overall management of human resources, as well as encouraging respect for multiculturalism and integration, will certainly be the future for successful international organizations. Consciousness about the cultural differences, values, habits, and communication rules of every society and culture is paramount for successful cross-cultural human resources management. Understanding how and why cultural differences and similarities emerge, and when they become problematic for intercultural relations, is the challenge that society and organizations will have to overcome!

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USING CREATIVE PROBLEM SOLVING (CPS) TO IMPROVE EFFICIENCY IN A NON-PROFIT ORGANIZATION

A UTILIZAÇÃO DO MÉTODO DE RESOLUÇÃO CRIATIVA DE PROBLEMAS PARA MELHORAR A EFICIÊNCIA DE UMA ORGANIZAÇÃO SEM FINS LUCRATIVOS

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ABSTRACT

The purpose of this study was to improve the internal efficiency of a non-profit organization, using Creative Problem Solving (CPS) method. The research was designed around an intervention and structured in three stages (pre-consult, intervention and follow-up), with a team designated by management, in order to bring leadership cohesion to both departments of the organization and also between the board and executive management. The results, expressed in the tasks performed and in the interviews to team members, allowed us to conclude on the effectiveness of the CPS method to improve organizational innovation and change, by driving more and more teams in the organization to adopt it, and by establishing a stronger relationship between departments, as well as between the board and executive management. These results highlight possible solutions to improve the management, and to develop organizational innovation in non-profit organizations.

Keywords: Creative Problem Solving, Team Facilitation, Organizational Innovation, Management in Non-Profit Organizations

RESUMO

A finalidade deste artigo é relatar a intervenção feita numa organização sem fins lucrativos, utilizando o método de resolução criativa de problemas (RCP). A intervenção foi estruturada em três fases (pré-consulta, intervenção e seguimento), com uma equipa designada pela gestão, com a finalidade de proporcionar unidade na liderança de dois departamentos da organização, assim como entre a direção colegial e a gestão executiva. Os resultados, traduzidos nas tarefas desenvolvidas e nas entrevistas feitas aos membros da equipa, permitiram-nos concluir sobre a eficácia do método RCP na execução da mudança organizacional necessária à melhoria da eficiência da organização, levando a que mais equipas adotassem o método e que, quer entre ambos os departamentos, quer entre a direção colegial e a gestão executiva as relações de trabalho tivessem saído reforçadas. Estes resultados sugerem soluções possíveis para melhorar a gestão e a inovação nas organizações sem fins lucrativos.

Palavras-Chave: Resolução Criativa de Problemas, Facilitação de Equipas, Inovação Organizacional, Gestão de Organizações sem Fins Lucrativos

JEL Classification: L30

1. INTRODUCTION

According to Drucker (1990), non-profit organizations are not usually short of ideas, but they sometimes lack the will and ability to convert these into concrete results, thus requiring an innovative strategy to focus its analysis on the external environment and to introduce changes that should be interpreted as potential opportunities. Likewise, as expressed by researchers like Bradshaw, Murray, and Wolphin (1992), and Carver (2006), the governance of board and executive management sometimes pursue different goals, turning it more complex than for-profit firms (Jegers, 2008), and reducing the outcomes (Harrison and Murray, 2012; Jaskyte, 2012). It is therefore important to improve their alignment, together with the collaborators, and we used Creative Problem Solving (CPS) methodology for this purpose.

As Pearce (2003) stated, social enterprises are organizations whose purpose goes beyond the delivery of goods, services or social facilities, trying to spread values of solidarity in other sectors of society. According to Barros (2003), the Private Institutions of Social Solidarity (IPSS), in Portugal, are regulated by law, independent from the Government, and managed by a professional administration, together with voluntary management, fiscal and general boards. These organizations adopted the legal status of public interest and pursue general interest objectives in collaboration with the Government, which grants them access to fiscal benefits. According to the General District Attorney of Lisbon, in 2006, 4634 IPSS were recorded at national level, whose main social responses aims at the well-being of the elderly, children, youth, and family, and to drug addiction, homelessness and healthcare.

Given our experience in the use of CPS methodology (Sousa and Monteiro, 2010), we considered that we could learn from its application in the IPSS environment, while providing improvements in the organization's management. Therefore the following research question was defined: To what extent can we improve the internal efficiency of a non-profit organization by means of an intervention using CPS? To address this, we decided to solicit participation from an organization that would bring managers and personnel to work on the same project in a non-profit setting. The participant organization was the Parish Social Centre of *Sao Cristovao*, which is an example of social support in its region, near Lisbon. Due to its dual executive management structure and absence of board leadership, the Centre faced difficulties in its management practices, which could harm the final service delivery to its clients. The research was designed around an intervention structured in three stages (pre-consult, intervention and follow-up), with a team, the purpose being to develop a greater unity between the board and executive management, and between the two departments.

2. THE EFFECTIVENESS OF CREATIVE PROBLEM SOLVING (CPS)

The effectiveness of CPS techniques to educational purposes, as well as in organizational innovation, has been the subject of investigation by several researchers, as reported by Puccio, Firestien, Coyle, and Masucci (2006). Parnes and Noller (1972), for example, worked the Creative Studies Project, devoted to the enhancement of creative thinking in students and to assessing its effects. As to organizational innovation, studies reported by Basadur (1997; 2004), and Puccio and Cabra (2010), describe improvements in effectiveness, and organizational innovation capabilities, in companies where CPS methodology was used.

Following previous research (Sousa, Monteiro and Peñalver, 2012), we designed a four-step model (Figure 1) comprising *Objective-Finding*, *Problem-Definition*, *Action-Planning* and the *Action* itself. This model focuses team members on implementation with management control measures, communication and acceptance-related tasks. This approach provides an

initial structure for the group, during the divergent phase of *Problem-Definition*, followed by an emotional linkage between members, as efforts are focused on reaching consensus during the convergent phase of *Problem-Definition*. Another structuring step follows during *Action-Planning*, when team members' creativity is expressed during the "how to?" development of each task in the plan.

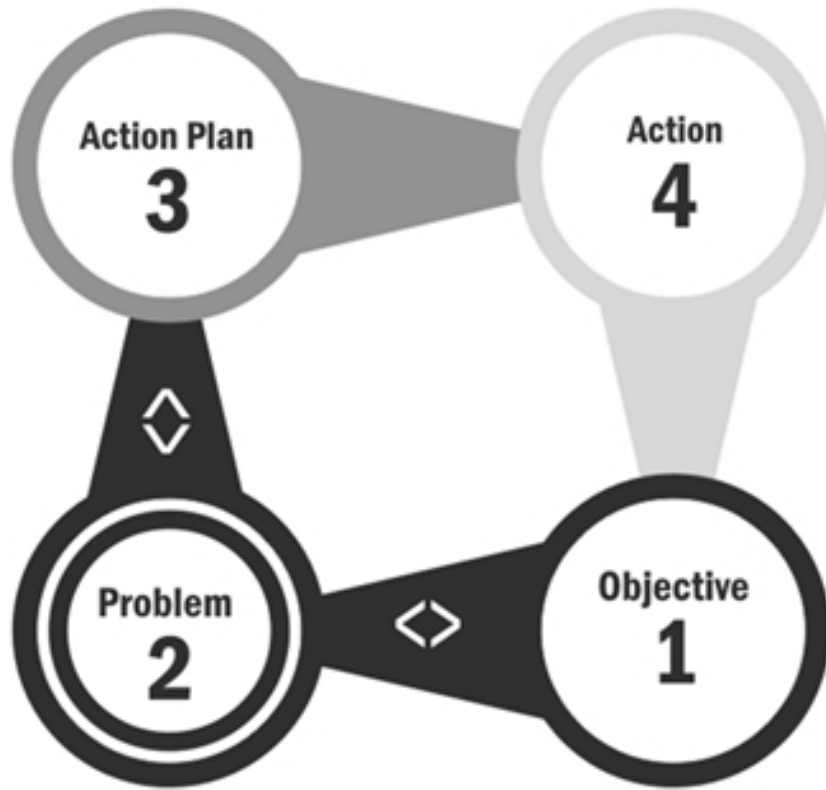


Figure 1. The four-step CPS method (Sousa, Monteiro and Peñalver, 2012)

The sequence of divergence and convergence is maintained only during Objective-Finding (pre-consult) and Problem-Definition steps. During Problem-Definition, the team enumerates all possible barriers to reach the objective, and then selects a final problem definition to work with. During *Action-Planning* the team starts by listing all actions needed to achieve the goal and then puts them in order of execution. For each task, the "how to?" question is defined in such a way as to include any actions necessary to overcome resistances that might arise. Each task is assigned to a sub-team, which defines deadlines and the entity responsible for evaluation of the output.

The establishment of an effective communication structure within the team facilitates the collective awareness of what each team member is doing. Also, advertising the project within the organization reduces organizational resistance to task accomplishment and increases peer pressure for the team to comply with the project's milestones and goals.

The acceptance plan, aimed at overcoming resistance from non-team members (sometimes considered the most likely reason for failure [e.g. Buijs, Smulders, and Meer, 2009]), is included. But the most important factor in resistance reduction is that the team should include those who may be affected by the results of the project, have the power to assist or block the project, or possess relevant expertise (Strauss, 2002).

As stated, our research question was: *Can we improve the internal efficiency of a non-profit organization by means of an intervention based on CPS?*

3. METHODOLOGY

3.1 Selected NGO – The Parish Social Centre of Sao Cristovao

The Parish Social Centre, here designated by *Sao Cristovao*, is a private, non-profit institution of social solidarity (IPSS), founded in 1961, to provide assistance to the parish's deprived people and, in 1984, the organization was established legally as an IPSS.

The institution's governance consists of a board of directors, presided by the parish priest, a general assembly board, and a fiscal committee, in a total of twelve volunteers, serving a three-year term. Two professional managers are accountable as executive management; one responsible for the administrative and finance department, with 17 co-workers, and the other in charge of the technical, social and pedagogical department, with 62 co-workers. The organization also includes a body of volunteers who do not have a formal contract and contribute to the daily activities such as crafts, choir, nursing, English lessons and psychology, without remuneration. The activities are decentralized over five units in different locations, providing a diverse set of social responses (Nursery, Pre-School, Leisure, Home Care, Day Care and Social Centre) to almost 600 users, some of which responses developed in partnership with other local and national organizations.

The institution has three distinct sources of funding: the State (59%), the customers (38%), and its own income (3%); it does not rely on any contribution or donation from companies or individuals.

3.2 Procedure

Using the CPS method over a period of eight months, different interventions were executed in order to introduce changes, following a management-defined objective. The interventions made may be segmented into three distinct stages: (a) the *Pre-Consult*, preceding the intervention; (b) the *Intervention* with the team, where the initial plan was drawn (c) the *Follow Up Intervention*, where the plan was implemented, and four follow-up actions were taken.

In the pre-consult session with the Centre's management (the board decided to be absent), both the Technical and the Administrative Directors determined the goal of the intervention and the composition of the initial team. Three diagnostic interviews were held with co-workers designated by the management as examples of reliable organizational assessment (all with academic background and an experience of more than 15 years in the institution). The question was: *How can we work more in tune for a whole?* In the second stage the CPS process was used, gathering a team of ten members, the facilitator, an outside observer (who recorded the entire session), and the client, i.e., the two professional managers who participated in the pre-consult session. In the third stage, the implementation of the action plan took place and four follow-up sessions were organized: the first was dedicated to the assessment of the initial actions, and to define the most appropriate ways to overcome internal resistances; the second follow-up session was aimed at redefining the action plan; the third, to synthesize the work done; and the fourth, to make the final evaluation of the results. At the end of this last session, the interviews conducted at the beginning were repeated, using the same question and their discourse was content analyzed and subjected to a factorial analysis of correspondence, using DTM software (Lebart, Morineau, Becue and Haeusler, 1993), in order to evaluate their perceived changes in the organization. This statistical technique allows us to generate a perceptual mapping of text significance and to differentiate the subjects' perception, before and after the intervention (Hair, Anderson, Tatham, and Black, 1987).

4. ANALYSIS AND RESULTS

4.1 Stage (a) - Pre-consult

After receiving authorization for the intervention by the board (whose president decided not to participate), a joint interview with the Administrative Manager and the Technical Manager (called M and C, respectively, in the role of “client”) was undertaken in this first stage of the intervention. The dynamic began with a divergence to find a goal for the intervention. The managers agreed to concentrate on the non-involvement of the IPSS governance board in daily management, and on the need to overcome the problems of interaction between both departments. These difficulties were initially defined in terms of teamwork, time management and communication, reflecting the existence of two distinct realities within the same organization. The reflection that occurred during the pre-consult allowed us to reach consensus on the need for harmony, and on the question, *How can we work more in tune to a whole?*, which became the selected goal for the intervention.

The next step was the definition of the team to address criteria like the functional and hierarchical heterogeneity and the diversity of knowledge and experience in the organization. Within this framework, ten members were invited and accepted to be part of the problem solving team.

4.2 Stage (b) - Intervention

The CPS process was implemented, focusing on problem definition and its resolution. The designated team, the facilitator, the outside observer, and the two managers (the client), were present.

Starting from the goal, *How can we work more in tune for a whole?*, the team members diverged actively to find the most relevant problems, producing 40 problem definitions, reduced to six in the active convergence phase. The client was then invited to hear the justifications of the choices made by each team member, and to choose the main problem: *What steps are necessary in order to improve the coordination between sectors?*

The next step defined the actions necessary to solve the problem:

1. Define the problems that arise by the lack of coordination
2. Define activity peaks' consequences in cleaning
3. Promote mutual knowledge of the different sectors
4. Define routine or unexpected procedures
5. Define the internal communication system
6. Integrate the interdisciplinary teams
7. Guarantee periodical meetings

The team specified how each task could be implemented, how to clear resistances, who would integrate the sub-teams, what would be the deadline for implementation and who should evaluate the quality of the execution. A project coordinator was designated, and a date for the first follow-up session was set.

4.3 Stage (c) - Follow-up

4.3.1. The first follow-up session

The group was invited to come up with a synthesis of all the work done and reflect about the main difficulties and challenges that had been faced. This session registered an important change with the presence of one board member, representing the president, thus assuming the role of the client and showing the importance of the project at institutional level. The previous clients stayed as team members.

When dealing with the need to overcome resistance and difficulties, the team generated a list of problems and obstacles related to the problem of the previous session (*What steps are necessary to improve the coordination between sectors?*). Next, the group proceeded to find new problems, and the final selection made by the new client turned out to be decisive to formulate a new perspective: *What are the steps needed to engage people over the client?*

Next, the following tasks were defined:

1. Train the new employees
2. Get the sectors' awareness of its contribution to the client's satisfaction (make of an institutional video)
3. Brief description of the existing functions (make of a welcome manual)
4. Work on the logo and its message
5. Work on common procedures and designate a member to be responsible for the implementation

The group coordinator was asked to integrate these tasks into the existing action plan, and a new meeting was scheduled.

4.3.2. The second follow-up session

This session started with the integrated action plan, which was validated by the project team. The synthesis presented included:

- **Influence the new employees to their contribution to client's satisfaction.** A video was produced internally, to enable all the departments to see themselves, to communicate a common message, and to representing the institution externally.
- **Brief description of the existing functions.** After collecting good practices from other organizations, the team presented a *welcome manual*.
- **Work on a logo with a message.** The team proposed a symbol adopted as the institutional image of the Centre.
- **Work on common goals.** This task addressed the need to define the routine and unexpected events, so that cross-sector problems could be solved. For instance, registration forms were made to improve the communication between the secretariat and the operational rooms.
- **Projects not implemented.** The cleaning tasks were not executed, with the justification that the management had defined parallel tasks. The same happened with the definition of the coordination teams, and the designation of representatives of the sectors. These facts led to some tension related to the delimitation of power zones.

The session ended with a compromise to make a new follow-up session within a month.

4.3.3. The third follow-up session

This session took place, with a team of 15 elements: the ten initial members, the executive managers, the client, and two new co-workers (one of the Administrative Department and a senior educator). The session focused on the redefinition of the action plan, based on the reflection made in the previous session.

The previous problem, *How could we define proposals for improving the customer service?*, was redefined into, *What steps must be taken to engage the teams in task performance?*

The next step consisted, again, in the search of concrete solutions, and tasks were subsequently ordered, culminating in the construction of a new action plan:

1. Define common tasks
2. Define the composition of the implementation teams
3. Define the working method

4. Communicate the actions

5. Share the results

Thus, five sub-teams were made and a new project manager was designated to coordinate the implementation. The next follow-up meeting was scheduled within two months.

4.3.4. The fourth follow-up session

The action plan designed gave birth to five new teams (total of 38 members, coordinated by the main team members), thus involving more than 40% of people from the Centre and, by using CPS procedures, the following projects were defined:

- Create an entrance gate keeper schedule, to ensure a nonstop functioning;
- Streamline the internal emergency plan, submit it to the National Authority for Civil Protection, implement and promote it.
- Structure training in personal and social areas, requesting a budget to three different companies.
- Communicate the organizational mission, vision, values and main principles, through an essay written by the children and the elderly, published in the parish journal, in flyers, and in posters.
- Study the costs of changing the location of the toilets of the daycare centre.
- Set a system to acknowledge the birthday of each employee.
- Share the work experiences carried out in the classes, with the participation of teams from different sectors..
- Submit “A day in ...”, in a documentary about the institution’s functioning of all sectors and social services.
- Create the “employee’s day”, to promote team spirit, and organize a shared lunch and a souvenir distribution.
- Search for the cost of hiring a nutritionist, by establishing partnerships with other institutions and prepare awareness activities for seniors.

Finally, the group responsible for the communication project, made the debriefing of the activities. They mentioned some conflicts that occurred at the implementation level, dealing with different positions and the questioning of past practices. This new dynamic, marked by a greater participation, was positively viewed and contributed to the abolition of some stereotypes differentiating the organizational sectors.

Approximately eight months after the pre-consult (Stage (a)), the same subjects were interviewed again, using the same open question, *How can we work more in tune for a whole?* to identify any attitude changes. Globally, the three interviewees verbalized changes, showing a greater involvement and cooperation. They manifested some scepticism in their discourse, essentially induced by the fear that the observed changes would not be internalized, thus assuring its continuity.

Their discourse was content analysed and ten categories emerged. The registration units were replaced by the categories and submitted to a factorial analysis of correspondence, organizing the participants’ perceptions in two dimensions (Figure 2) which we called *change to rigidity* (horizontal axis) and *participation to isolation* (vertical axis). Knowing that the odd numbers (1,3,5) represent the initial interviews, and the even numbers (2,4,6) the interviews conducted at the end of the intervention, the graph reflects the changes in perception. Undeniably, the subjects 1-2 and 3-4 became more open to change and participation. Even the subject 5-6, who did not have such a negative views as the others, evolved positively towards a perception of more participation after the intervention.

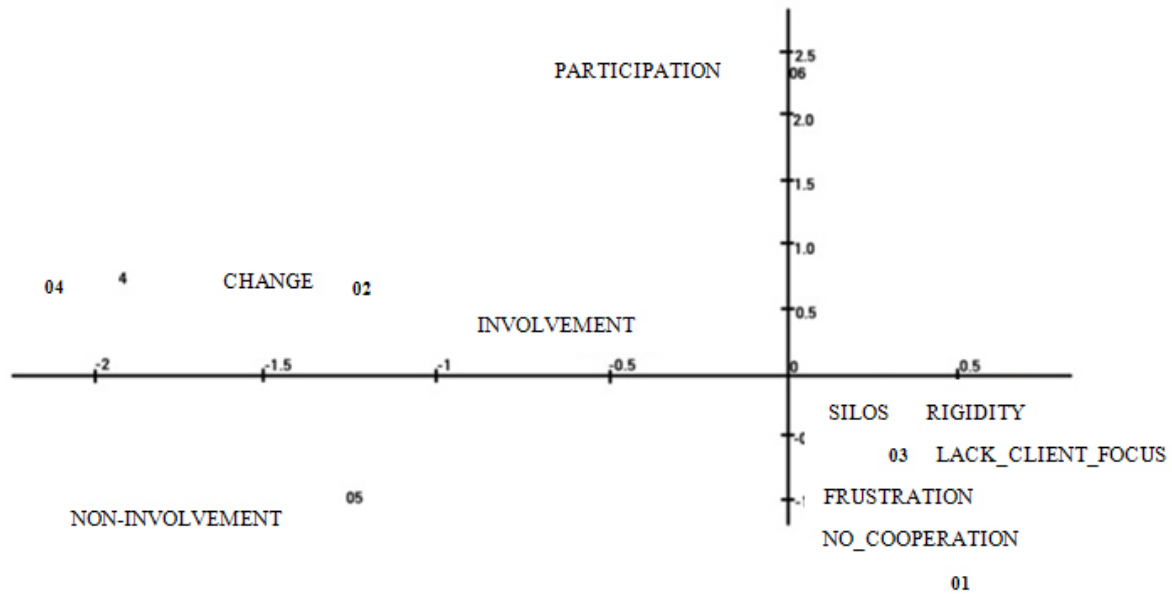


Figure 2. Perceptual map of the three interviewees, in Stage (a) (numbers 01, 03 and 05), and in Stage (c) (numbers 02, 04 e 06)

5. DISCUSSION

This research tried to understand to what extent the CPS methodology could produce results in the optimization of processes and management methods of a non-profit organization. Therefore, an intervention was planned in three different stages (before, during and after the first application of the method), in an attempt to answer the research question, i.e., *Can we improve the internal efficiency of a non-profit organization by means of an intervention using CPS?*

Let us recall the organizational context before the intervention, summarizing the representations and perceptions of the various subjects involved. Management perceptions, concerning the operation, were anchored in the absence of a united leadership, at executive level, between the technical and the administrative areas, and a lack of unifying strategy, between the board and management, that could bring a clear direction to the organization. The Centre was based on a context where difficulties in teamwork, time management, and communication, emerged as obstacles that reinforced the coexistence of two different realities within the same organization. This vision was coincident with the existing view of the other layers: the employees of a department accused the ones of the other department of not doing their job, in a daily conflict between individuals and groups, one department being seen as of lower importance than the other.

In this particularly adverse context to the development of innovative behaviours, the intervention identified 93 problems, 40 during the first intervention and the remaining during the follow-up sessions. All of them contributed to the transformation of tacit into explicit knowledge, thus expanding the understanding of the organization. During the intervention a new awareness was created and expressed, regarding the way internal conflicts were preventing the organization from focusing on its real mission. Alongside with the knowledge that was being produced, the team revealed autonomy and initiative to reinvent itself, thus unlocking a significant number of organizational constraints.

The method and the facilitation skills extended themselves to the actions of more teams, beyond the dynamics generated during the initial intervention, and giving rise to a system of

organizational innovation, combining the formal structure with a matrix structure, at least during the period of the project implementation.

The implementation phase covered a period of seven months and included several reframed statements of the initial action plan. The progresses and setbacks, occurring while the team and the individuals dealt with the obstacles and resistances, were acknowledged, as well as the observed group dynamics during the four follow-up sessions.

The first follow-up session began with the sharing of the obstacles found, highlighting the resistance of the colleagues from the other sectors to talk openly about their problems. At first, the co-workers had not been informed, thus enhancing the resistance while revealing the malfunctioning of the team responsible for the communication project. This led the researchers to conclude that the major challenge was to change this mind-set, and get people to believe that there were things to improve and problems to solve. Hence, we established a dynamic in which the group could criticize its own functioning, through the “eyes of the other”. During the course of this session, the frontier between the administration (client) and the group (participants) was getting thinner, given the mobilization provided by the on-going projects. The absence of a shared vision, uniting both departments, prevented people from focusing on the ultimate organizational goal (the care of children and elderly), and the angry feelings that precluded them from seeing each other’s point of view.

These issues lead to the conclusion that the ability to introduce changes in the organization requires individuals to step out of their comfort zone and challenge beliefs and rationalities (Sousa, Monteiro, and Peñalver, 2012). Somehow the group expressed this capacity, representing a significant change when comparing with the observations before the intervention. This session ended up with the reframing of the initial problem, which changed its focus from the relationship between sectors (efficiency) to the need to concentrate on the institution’s customer (effectiveness).

In the second follow-up session, both executive managers began working together and with a third element, from the IPSS’s board. This allowed a broader vision and more enthusiasm about the project, due to a feeling of being contributing to the fall of the interdepartmental barriers. As some projects were not achieved, the situation demanded a more active role from the facilitator; questioning the group and encouraging the participants to verbalize some of the difficulties met during the execution. Asked about what might be missing to achieve the coordination and to provide a better service, the group reacted, seeking for an answer. This gave rise to the expression of various feelings, summarized as “fear of innovation”: on one hand, organizations want the new but, instead, they try hard to prevent anything different to happen (Dughigg, 2012).

In the third follow-up meeting, the team was enlarged and the goal was reframed in the search for organizational effectiveness (customer service improvement). During this session, the choices made expanded the interaction between employees from different functional areas. Members from the initial team were designated to give birth to five new teams, under a new project manager.

In fourth and last follow-up session, the five teams made the debriefing of the results of the ten projects executed, in a completely autonomous way, involving more people from the Centre, concluding that, *...people stopped, sat down and there was a lot important things spoken between them... so when people started talking about the different sectors, they came to the conclusion that they were very closed in their sectors....*

The identification with the new dynamics was reinforced by the results of the interviews, even though some scepticism persisted regarding its future sustainability. Such unexpected changes needed time to consolidate and to earn the individuals’ belief in its continuity.

5.1 Limitations

One of the major limitations had to do with the fact that the president of the board did not accept to engage himself at any stage of the process. Another was related with the management of the communication during the intervention. When the pre-consult with management was completed, a specific communication plan, transversal to the whole organization, was defined but did not come into reality and, furthermore, the communication projects proved to be ineffective. This feature limited the intervention's success, as the whole organization was not informed. Thus, the innovative potential produced, and its ability to reach the majority of the organization's members, was restrained.

The fact we have only dealt with a single case study does not allow for any generalizations. Despite the intervention has occurred during eight months, we are convinced that a longer longitudinal approach would allow to evaluate and monitor the observed changes. We know now, a year after, that the board has designated a vice president to work closely with management, thus ensuring greater unity between the two departments. We also learned that the "Co-worker's Day", the video and the reception manual are still in use. The only feature detected previously that still deserves to be addressed relates to internal communication.

5.2 Conclusions and Recommendations

To conclude, we have seen that, at team level, the CPS method helped to create an organizational microstructure in a real context, in which it was possible to observe the effects of a more participative management and project engagement, encouraging the individuals to contribute to a common goal. The major project undertaken was composed mostly of short-term projects, and the observable results produced new inputs (transformation of implicit knowledge into explicit), new practices (greater interaction between the departments and greater engagement of the board; a more participative leadership style; new communication channels), and an attitude change (greater capacity for self-criticism; greater ability to make diagnosis).

The main implications for practice are related to the fact that the new dynamics created, characterized by greater participation and involvement of all in the organizational objectives, allowed the stereotypes to be reframed, and the emergence of a wider openness to change. The CPS methodology helped to stimulate knowledge sharing, interaction and a focus on common goals, which had a positive impact in attitudes and behaviours, influencing directly customer service quality and producing concrete tools, such as the reception manual, video and corporate image. Finally, the simplicity of the method implementation led the team to a fast appropriation of the process, incorporating CPS in the activity, without the help of external facilitators.

Regarding the implications for theory, it is considered that the methodology, designed to improve the innovation capabilities of a team, assisted the changes by developing an organizational development process, and allowed us to evaluate in a real environment, the impact of the produced changes. By involving management, from the beginning of the process, and allowing for a deeper interaction between different hierarchical and functional levels, this methodology fostered the reflection on power, leadership and communication systems, thus acting on the factors that may cause entropy and resistance to change.

As to the recommendations for practice, we think that this institution should continue to re-evaluate its leadership system, and to develop a vision and a unifying strategy. Although we have acknowledged the appointment of a vice president for this purpose, we think that if no other structural changes are introduced, there is some probability that the changes and the matrix structures created with the intervention will fade away.

Finally, it seems imperative that a considerable effort be put on the communication strategy, which must be the central part of the whole strategy. And this must be done, not

by management or even by a project team, alone, but by the whole organization, including representatives of clients, suppliers and partners.

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CULTURE OR NATURE: A SPACE-TIME ANALYSIS ON THE DETERMINANTS OF TOURISM DEMAND IN EUROPEAN REGIONS

CULTURA OU NATUREZA: UMA ANÁLISE ESPACIO-TEMPORAL DAS DETERMINANTES DA PROCURA TURÍSTICA EM REGIÕES EUROPEIAS

João Romão

ABSTRACT

Despite the close relationship between tourism and territory, the application of spatial analysis methods in tourism is not abundant in the literature. Nevertheless, the recent developments in the analysis of space-time models, the existence of geo-referenced information and the availability of suitable software tools has created new opportunities for studying the role of space in tourism activities. A space-time panel data model is developed in this work in order to analyse the relations between tourism demand and the existence of infrastructures, cultural assets and natural resources in European regions, including the analysis of spatial effects. The results reveal the positive impacts of the explanatory variables on tourism demand and the clear existence of spatial correlations, suggesting that regional tourism demand benefits from the dynamics registered in neighborhood regions. Policy implications - including the need for a multi-regional approach for planning and promotion of tourism - are discussed.

Keywords: Space-time Model, Panel Data, Spatial Analysis, Tourism Demand

RESUMO

Apesar da estreita relação entre as atividades turísticas e o território, a utilização de métodos de análise espacial em estudos sobre turismo não é abundante na literatura. No entanto, os recentes desenvolvimentos na análise de modelos espacio-temporais, a existência de abundante informação georeferenciada e a disponibilidade de ferramentas de software adequadas têm vindo a criar novas oportunidades para o estudo do papel do espaço nas atividades do turismo. Neste trabalho é desenvolvido um modelo espacio-temporal, com o objectivo de analisar as relações, em regiões europeias, entre procura turística e a existência de infraestruturas para turismo, recursos culturais e recursos naturais, incluindo a análise dos efeitos espaciais. Os resultados revelam os impactos positivos das variáveis explicativas sobre a procura turística e a existência de correlações espaciais, sugerindo a existência de benefícios sobre a procura turística regional resultantes da dinâmica registada na vizinhança. Implicações políticas - incluindo a necessidade de uma abordagem multiregional para o planeamento e promoção do turismo - são discutidas.

Palavras-chave: Modelo Espacio-temporal, Dados de Painel, Análise Espacial, Procura Turística

JEL Classification: C21

1. INTRODUCTION

The importance of natural resources and cultural heritage for the sustainable development of tourism is broadly documented in the literature. In fact, the creation of a differentiated experience in each tourism destination depends on the ability to integrate these local and specific assets into the tourism supply: unique experiences can only be created if they are based on local characteristics of the territory, and cannot be reproduced in other places (Hassan, 2000; Williams and Shaw, 2008). This exploitation of local resources raises the question of the potential negative impacts on the territories (Weaver, 2006; Celant, 2007) and establishes a link between the concepts of competitiveness - the ability to compete in global markets for the attraction of tourists - and sustainability - the ability to preserve local resources in the long run (Ritchie and Crouch, 2003; Hall, 2007).

Williams and Ponsford (2009) synthesize this issue calling it the “environmental paradox”: the production of tourism experiences depends on the exploitation of local resources and, in the long run, it also depends on its preservation. The importance of this question for destination management and regional policies has led, over the last years, to the proposal of guidelines and orientations in order to ensure a sustainable process of development for tourism activities by international tourism organizations (European Commission, 2007; UNWTO, 2007; UNESCO, 2000, 2005).

The purpose of this work is to provide a comprehensive analysis, at European level (NUTS 2 regions), of the importance of local resources – both cultural and natural – for regional tourism demand. Assuming tourism as a place oriented activity, where territories interact with each others, the analysis will test and evaluate the existence of spatial effects among the regions under analysis.

As the aim of this study is to analyze a large group of regions over a period of ten years, a panel data model has been chosen. These methodologies have been developed since mid 20th century, but only over the last three decades have they become generalized, due to the large increment of geo-referenced statistical information available and the development of easy-to-use software tools (Florax and Vlist, 2003). Software development (Matlab, Stata or R) for cross-sectional data and spatial panels certainly contributed for the maturity of spatial econometrics, with an exponential growth in the number of researchers applying these methodologies in the last years Anselin (2010).

Panel data models include a time-series dimension of the data reflecting the evolution over time and a cross-sectional dimension that reflects the differences among regions, allowing for the development of complex analyses of economic processes and their spatial effects. This also allows for the consideration of more information, increases the variation and reduces the collinearity between variables, which results in an increment in the degrees of freedom and more efficient estimation (Elhorst, 2003; 2014).

Several applications of panel data models in tourism studies have been developed, mostly over the last ten years. Narayan et al. (2010) or Proença and Soukiazis (2008) evaluate the relationship between tourism and economic growth, while Keum (2010) or Romão et al. (2013) focus on the analysis of other impacts (taxes, trade or cultural and natural resources) on tourism activities. Song et al. (2012) summarize these contributions, considering that panel data analysis in tourism studies is still limited to a few exceptions.

Although there is a close relationship between tourism activities and the characteristics of territory, the use of spatial panel data models for tourism analysis is scarce. In fact, only over the last few years have works using this type of space-time models been published: Patuelli et al. (2013) develop a spatial interaction model to study the effects of heritage sites on tourism, Marrocu and Paci (2013) analyze demand and supply determinants of domestic

tourism in Italy, Yang and Fik (2014) focus on spatial effects in regional tourism growth and Ma et. al (2015) study the relation between tourism spillover effects and urban growth.

In this paper, a space-time panel data model is developed in order to provide an innovative analysis of the spatial effects of tourism infrastructures, natural resources and cultural assets on regional tourism demand. In a first stage, the evolution over ten years in 252 European regions is considered and this information is presented, synthesized and geographically represented in Section 2. In a second stage, due to the limitations of the modeling process, only 237 regions have been considered (islands have been excluded) and an exploratory spatial data analysis is developed in Section 3, clearly revealing the existence of spatial interactions among the variables under analysis. A space-time panel data model and its results are presented in Section 4 and Section 5 concludes and discusses the achievements of this analysis, including some relevant policy implications.

2. TOURISM DEMAND, CULTURE AND NATURE: DATA AND VARIABLES

In the first stage of this work, 252 NUTS 2 regions have been included in the analysis, considering the existence of comparable secondary data available at the European level (UNESCO, Eurostat, European Commission – DG Environment) from 2003 to 2012. All NUTS 2 regions from Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxemburg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and United Kingdom have been considered. Other European regions have not been included due to the lack of statistical information.

Although NUTS 2 regions can not exactly be considered tourism destinations (they can include several destinations with different characteristics), generally they have some territorial coherence and a specific institutional framework for regional and tourism policies, opening the possibility for policy recommendations. A more detailed analysis using NUTS 3 regions can be considered in the future, but it requires information that is not available at this moment.

Tourism demand (the dependent variable to be considered in the model presented in Section 4) is measured based on Eurostat data and taking into consideration the nights spent at tourist accommodation establishments (including hotels, holiday and other short-stay accommodation, camping grounds, recreational vehicle parks and trailer parks). Some missing data were detected and estimated considering existing information and the observed trends immediately before or after the missing information.

The information for the most recent year (2012) is represented in the map in Figure 1 and the growth rates between 2003 and 2012 are shown in Figure 2. The classes were created based on quintiles (a similar number of observation in each class) and the same method was applied to the remaining maps. Atlantic islands (Madeira, Azores and Canarias) have been “relocated” in order to facilitate the presentation of the information.

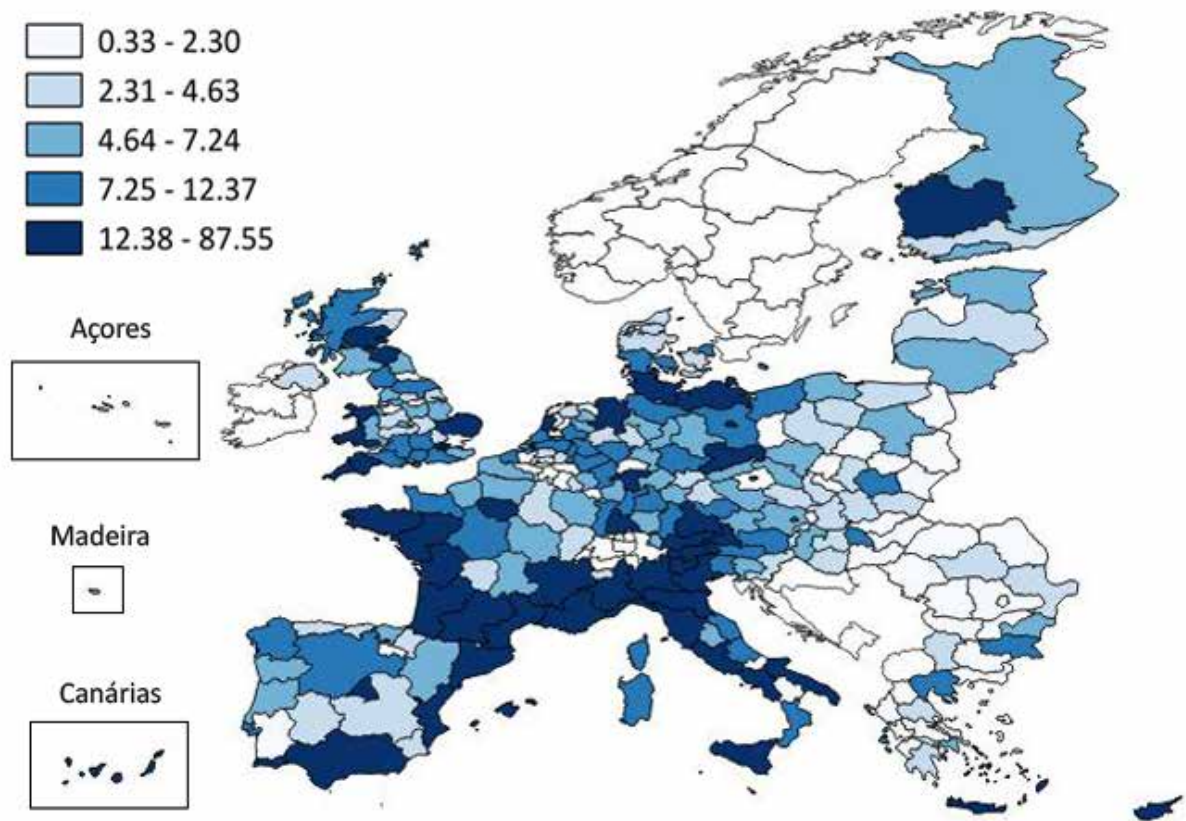


Figure 1: Nights spent at tourist accommodation establishments in 2012 (millions)

Figure 1 clearly shows the importance of Southern European regions in the context of European tourism, but in Figure 2 it is possible to observe that most of the regions showing higher growth rates between 2003 and 2012 are located in the East side of Europe, suggesting a tendency for a spatial reorganization of European tourism destinations. This information can be confirmed in the left side of Table 1, showing that 4 Spanish, 3 French and 2 Italian regions are among the 10 regions with higher tourism demand.

The presence of Outer London in the “Top 10” and the fast growth of Berlin reveal the importance of urban tourism in some major European cities. On the other hand, the right side of Table 1 reveals the growing importance of tourism in regions from Bulgaria, Poland, Latvia or Lithuania.

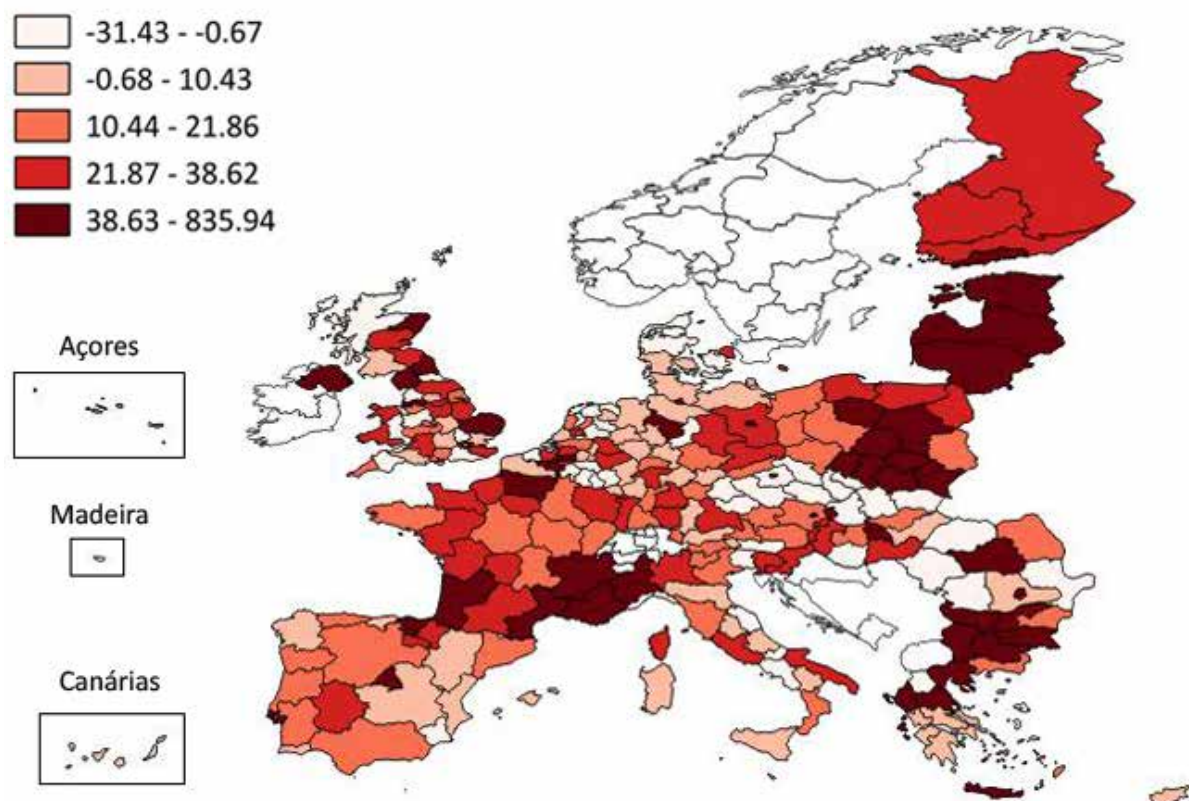


Figure 2: Nights spent at tourist accommodation establishments (% growth 2003-2012)

Table 1: Tourism demand in volume and growth – regions with higher and lower values

Millions of nights				Nights (% growth)		
TOP + 10	ES70	Canarias	87,5	UKI2	Outer London	835,9
	FR10	Île de France	78,1	LT00	Lithuania	245,9
	ES51	Cataluña	69,7	EL12	Kentriki Makedonia	143,3
	ES53	Illes Balears	64,7	PL33	Swietokrzyskie	137,4
	ITH3	Veneto	62,4	UKD7	Merseyside	125,3
	FR82	Provence-Alpes-Côte d'Azur	55,5	BE32	Prov. Hainaut	117,9
	ES61	Andalucía	51,5	DE30	Berlin	116,8
	FR71	Rhône-Alpes	48,7	BG31	Severozapaden	112,3
	UKI1	Inner London	44,8	BG34	Yugoiztochen	106,0
	ITI1	Toscana	42,7	LV00	Latvia	96,2
TOP - 10	PT20	Açores	1,0	SK02	Západné Slovensko	-15,7
	PL34	Podlaskie	1,0	CZ02	Strední Čechy	-16,5
	BE32	Prov. Hainaut	0,9	CZ08	Moravskoslezsko	-17,2
	BG32	Severen tsentralen	0,7	ITI3	Marche	-18,8
	PL52	Opolskie	0,6	BE35	Prov. Namur	-22,3
	ITF2	Molise	0,5	BE34	Prov. Luxembourg (BE)	-23,0
	BG31	Severozapaden	0,5	SK04	Východné Slovensko	-24,7
	BE31	Prov. Brabant Wallon	0,4	UKD4	Lancashire	-29,1
	FI20	Åland	0,4	ITF2	Molise	-29,8
	EL13	Dytiki Makedonia	0,3	EL13	Dytiki Makedonia	-31,4

The explanatory variables considered in the model presented in section 4 include infrastructures for tourism (measured by the number of beds available in tourist accommodation establishments, according to Eurostat, with some missing information calculated based on the tendencies registered before or after the missing data), cultural assets (measured by the number of sites classified as World Heritage, according to UNESCO) and natural resources (measured by the percentage of the regional territory included in the Natura 2000 network, according to the data of the European Commission – DG Environment). As in the previous case, information for the NUTS 2 regions and for the period 2003-2012 is considered.

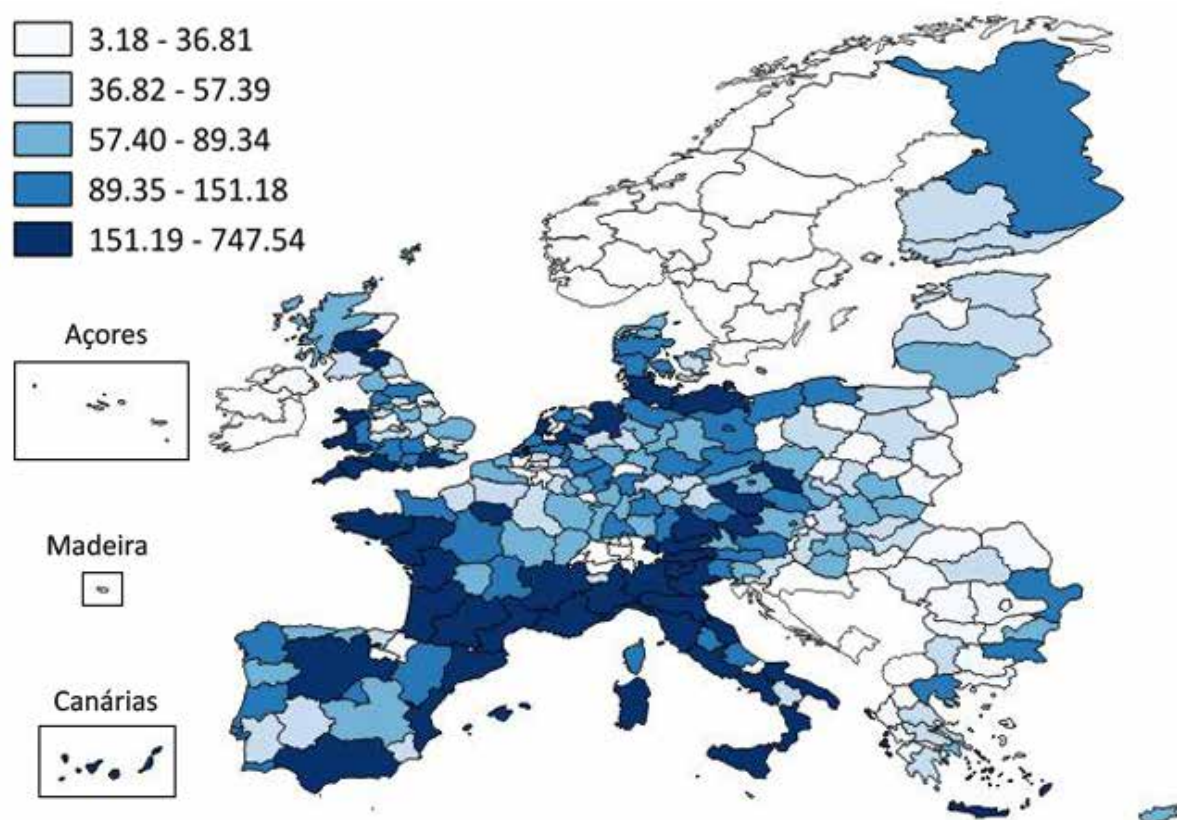


Figure 3: Beds in tourist accommodation establishments in 2012 (thousands)

Figure 3 shows the geographical distribution of bed places in tourism establishments in the European regions under consideration, for the most recent year analysed (2012). The spatial pattern observed is similar to that observed for tourism demand, revealing the importance of South European regions and suggesting a relative adequacy of the infrastructures for tourism. The information in the left side of Table 2 confirms this tendency, with 9 regions from Spain, France and Italy in the “Top 10” of regions with more beds available.

Nevertheless, the pattern observed in Figure 4, regarding the growth rate between 2003 and 2012, does not show the same concentration of “fast-growth” regions in the East side of Europe (comparing with Figure 2), revealing the importance of some regions in the UK or in the Centre and North of Spain. In fact, 8 regions from UK are included in the “Top 10” European regions with higher growth rates of beds available (presented in the right side of Table 2).

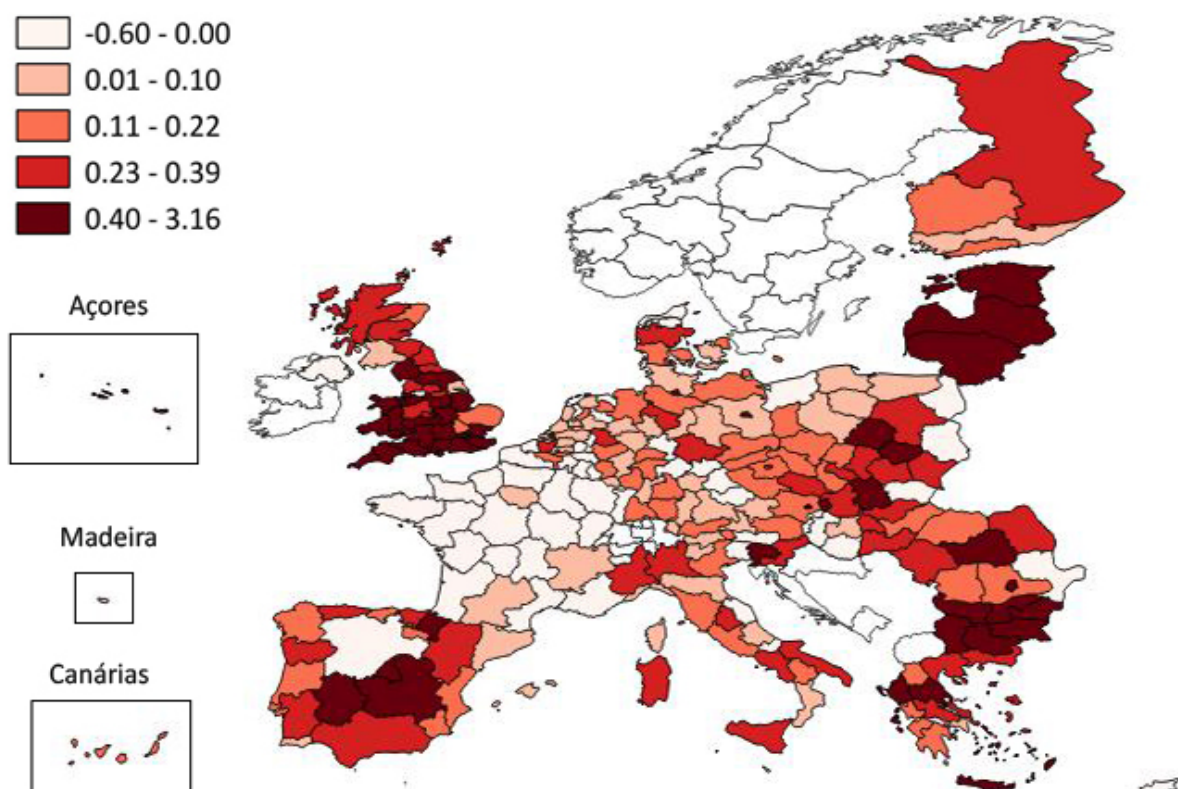


Figure 4: Beds in tourist accommodation establishments (% growth 2003-2012)

Table 2: Beds available in volume and growth – regions with higher and lower values

			<i>Beds (thousands)</i>			<i>Beds (% growth)</i>
TOP +10	ES51	Cataluña	747,54	UKK3	Cornwall and Isles of Scilly	316,41
	ITH3	Veneto	717,10	UKK2	Dorset and Somerset	267,03
	FR82	Provence-Alpes-Côte d'Azur	640,85	UKL1	West Wales and The Valleys	178,22
	FR71	Rhône-Alpes	609,04	UKD6	Cheshire	162,85
	AT31	Oberösterreich	571,79	UKL2	East Wales	161,88
	ITI1	Toscana	525,65	BG34	Yugoiztochen	155,30
	FR81	Languedoc-Roussillon	518,59	UKK4	Devon	153,01
	FR61	Aquitaine	508,62	UKJ3	Hampshire and Isle of Wight	138,55
	ES61	Andalucía	488,87	LT00	Lithuania	129,73
	ES53	Illes Balears	469,56	UKJ2	Surrey, East and West Sussex	115,94
TOP - 10	PL34	Podlaskie	12,41	FR53	Poitou-Charentes	-18,22
	BG32	Severen tsentralen	11,89	FR41	Lorraine	-21,37
	ITF2	Molise	11,40	FR25	Basse-Normandie	-21,68
	BE32	Prov. Hainaut	9,66	UKD3	Greater Manchester	-22,27
	PT20	Açores	8,96	BE35	Prov. Namur	-25,03
	BG31	Severozapaden	8,78	FR23	Haute-Normandie	-25,31
	PL52	Opolskie	7,87	RO22	Sud-Est	-31,11
	FI20	Åland	7,51	ES41	Castilla y León	-43,89
	EL13	Dytiki Makedonia	7,37	FR22	Picardie	-45,09
	BE31	Prov. Brabant Wallon	3,18	FR30	Nord - Pas-de-Calais	-59,76

The natural resources of each region have been measured taking into consideration the percentage of the territory of each region included in the Natura 2000 network. This information is available until 2011 and, for the computation of the model presented in section 4, no changes have been considered for the last year under analysis (2012), once the differences are extremely small over the last years, after the registration of most sites. Although the protected areas included in Natura 2000 are not necessarily tourism attractions, they reveal the biodiversity of each region and, in that sense, can be used as a proxy for the attractiveness of natural resources for tourism demand in each region.

The map presented in Figure 5 represents this information for the most recent year available (2011), showing the importance of biodiversity in Southern European regions. This is confirmed by the information in the left side of Table 3, showing 8 regions from Portugal, Spain, Italy and Greece among the 10 with highest proportion of their territory included in Natura 2000. On the other hand, there are 9 regions from the UK among the 10 regions with a smaller part of their territory under this type of environmental protection.

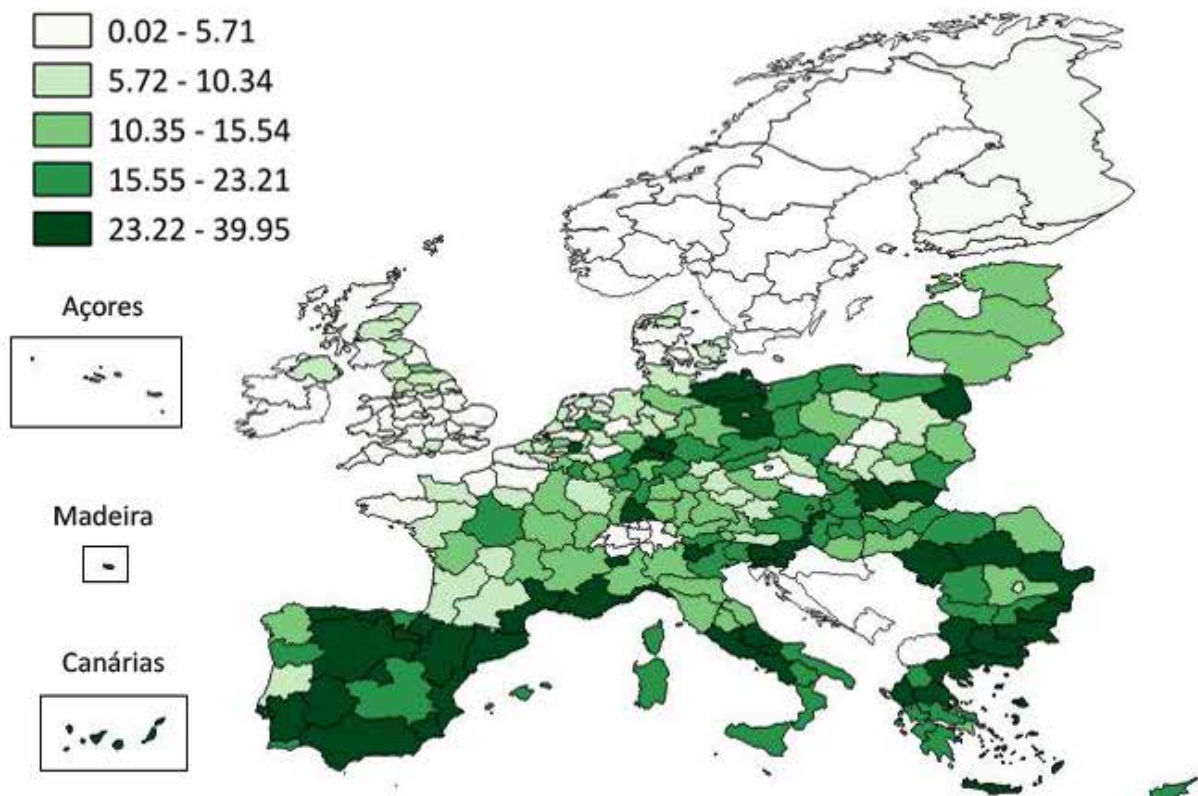


Figure 5: Territory in Natura 2000 (%)

Table 3: Territory in Natura 2000 and heritage sites – regions with higher and lower values

		<i>% of regional territory in Natura 2000</i>	<i>Number of sites classified by UNESCO</i>	
TOP +10	ES30 Comunidad de Madrid	39,95	ITC4 Lombardia	8
	EL41 Voreio Aigaio	39,64	ES41 Castilla y León	7
	ES52 Comunidad Valenciana	37,29	FR81 Languedoc-Roussillon	7
	PT18 Alentejo	37,19	ES51 Cataluña	6
	RO12 Centru	36,16	ES61 Andalucía	6
	BG41 Yugozapaden	36,15	FR82 Provence-Alpes-Côte d'Azur	6
	EL14 Thessalia	35,93	ITF3 Campania	6
	EL12 Kentriki Makedonia	35,73	ITI1 Toscana	6
	ITF1 Abruzzo	35,65	PL21 Maloposkie	6
	EL21 Ipeiros	34,23	8 regions	5
TOP -10	UKI2 Outer London	0,91	82 regions	0
	UKJ1 Berkshire, Buckinghamshire and Oxfordshire	0,70		
	UKG2 Shropshire and Staffordshire	0,69		
	UKF2 Leicestershire, Rutland and Northamptonshire	0,45		
	FI20 Åland	0,45		
	UKI1 Inner London	0,40		
	UKF3 Lincolnshire	0,28		
	UKH2 Bedfordshire and Hertfordshire	0,27		
	UKG1 Herefordshire, Worcestershire and Warwickshire	0,19		
	UKG3 West Midlands	0,02		

The regional cultural assets were measured taking into consideration the number of sites classified as World Heritage by UNESCO in each region. When the same site was distributed along different regions, one site per region has been considered. Of course other important cultural aspects are extremely relevant for the attractiveness of a tourism destination (like museums, events or local lifestyles) but it is not possible to have comparable quantitative information at the regional level for an international analysis.

Although the number of cultural sites is not so concentrated in the coastal areas of South Europe as was observed for previous indicators, it is still possible to observe from Figure 6 that Southern European regions generally present a richer cultural heritage when compared with the Centre and North of the continent. This can be confirmed by the information in the right side of Table 3, with 8 regions from Spain, France and Italy in the first 9 positions of the rank of European regions with higher number of cultural sites classified by UNESCO.

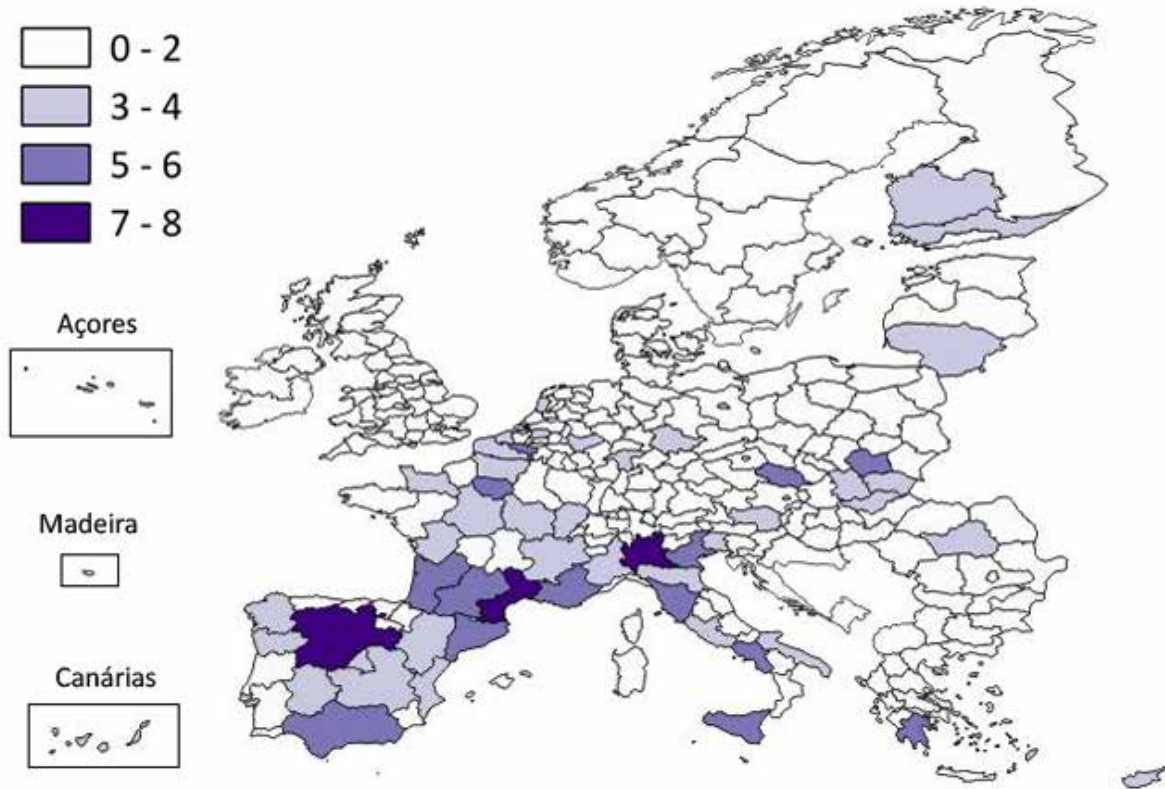


Figure 6: Sites classified by UNESCO as Cultural World Heritage (number)

3. TERRITORY: EXPLORATORY SPATIAL DATA ANALYSIS

The aim of this study is to analyse the effects of infrastructures (bed places in tourism accommodation establishments), natural resources (territory in Natura 2000) and cultural assets (number of classified heritage sites) on tourism demand (nights spent in tourism accommodation establishments) over 10 years (2003 - 2012) and considering a large number of European regions. A panel data model is a suitable tool for this purpose and no spatial effects will be considered in a first stage. Then, for the analysis of the potential spatial effects, a space-time panel data model will be used in Section 4.

For purposes of computation of the models, the data related to the dependent variable (number of nights in accommodation establishments) and one of the independent variables (number of bed places available) will be logarithmised (“logNIT” and “logBEDS”). Absolute values will be considered for the number of heritage sites (“HERIT”) and percentages for the portion of the territory included in Natura 2000 (“NAT”). Thus, the regression equation expressing this relation, in a model without spatial effects, can be defined as:

$$(1) \log NIT_{it} = \beta_0 + \beta_1 \log BEDS_{it} + \beta_2 HERIT_{it} + \beta_3 NAT_{it} + u_{it}$$

where i is an index for the regions, t is an index for the time period and u_{it} is the error term.

A Variance Inflation Test (VIF) was computed (using the package *car* in R) and the results revealed the absence of problems of multicollinearity: the scores obtained for all the independent variables ($\log BEDS = 1.166$; $NAT = 1.049$; $HERIT = 1,209$) are clearly below the threshold of 5 suggested by O’Brien (2007).

Finally, a fixed effects panel data model has been estimated (also using the package `plm` in R), revealing a positive correlation between the dependent variables and all the independent variables taken into consideration (these estimations are presented in Table 4). Nevertheless, despite the very high significance of all the parameters estimated (0,001 for all of them), the relatively low score obtained for the R-Squared (0.26) suggests that the estimations can be improved (a possibility is the introduction of spatial effects).

Table 4: Parameter Estimations for a panel data model without spatial effects

Parameters	Estimate	Std. Error	t-value
Intercept	10.1960	0.2089	48.8098***
LogBeds	0.4553	0.0190	24.0049***
NAT	0.0034	0.0010	3.4350***
HERIT	0.1063	0.0108	9.8615***

Note: *** indicates significance at a 1% significance level

For this purpose, several preliminary tests will be computed in order to develop an exploratory spatial data analysis. This includes the computation of Global and Local Indicators of Spatial Autocorrelation (Anselin, 2005; Anselin et al., 2006), considering spatially lagged variables (its value is obtained by computing the average value for its neighbors), both for the dependent and independent variables.

This spatial lag depends on the definition of a spatial weights matrix where the spatial impacts are defined (Anselin, 2005). In this case, a neighbor is defined according to the rook contiguity criteria (two regions are considered neighbors if they share a common border). A second assumption is that the spatial impacts occur not only in the immediate neighbors, but also in the “neighbors of neighbors” (second level contiguity). Although these are ad-hoc assumptions, the results obtained suggest that this impact matrix offers useful insights for the estimation of the spatial effects in this study.

Table 5 shows the results obtained (using Geoda 1.6.0) for the Moran I test for spatial autocorrelation (Anselin, 2005), providing a measure of global spatial correlation between neighbors for all the variables included in the model, and considering the first and last year of the observations. The critical values for this statistic is obtained through a random permutation procedure, being recalculated 99 times in order to generate a reference distribution. Finally, a pseudo significance level is computed, based on the comparison between the statistic and this reference distribution (the z-scores).

The values for the Moran I test range from -1 (perfect dispersion) to +1 (perfect correlation) and 0 indicates a random spatial pattern. The results obtained reveal the existence of spatial correlation in all the variables, which is confirmed by the z-scores obtained, all of them clearly above the threshold of 1.96 (5% significance level).

Table 5: Moran I tests for spatial autocorrelation

	Log N03	Log N12	Log B03	Log B12	H03	H12	NAT 03	NAT 12
Moran I	0.340	0.296	0.361	0.319	0.178	0.227	0.487	0.542
z-score	11.38	10.75	12.12	12.11	6.16	7.46	16.46	18.35

Local Indicators of Spatial Autocorrelation have also been computed (also with Geoda 1.6.0 and based on Anselin, 2005). Figure 7 represents the cluster distribution based on the local G statistics (Getis and Ord, 1992; Ord and Getis, 1995) related to each of the variables included in the model. The colored regions are those with statistically significant p-values (5% level). When this occurs and the z-score is positive (positive spatial autocorrelation), the distribution of high values over space is more clustered than would be expected if the random spatial processes were observed (red color), suggesting the existence of spatial diffusion or spillover effects; on the other hand, negative z-scores (negative spatial autocorrelation) represent clusters of low-values (blue color) and suggest a process of spatial competition.

The maps related to nights spent (top-left) or bed places available (top-right) in accommodation establishments reveal the importance of the Western Mediterranean area and suggests that the dynamics of each region is related to the dynamics of the neighbor; on the other hand – and despite the recent growth registered in that area – regions in the East side of the Mediterranean Sea still show low figures.

The map related to the portion of the territory included in Natura 2000 (down-left) clearly shows the importance of natural resources for the Mediterranean region, revealing the importance of biodiversity for their identity and differentiation. To a lesser extent, once this tendency is not observed in the South Eastern European regions, the map related to the regional distribution of classified World Heritage cultural sites reveals a similar tendency.

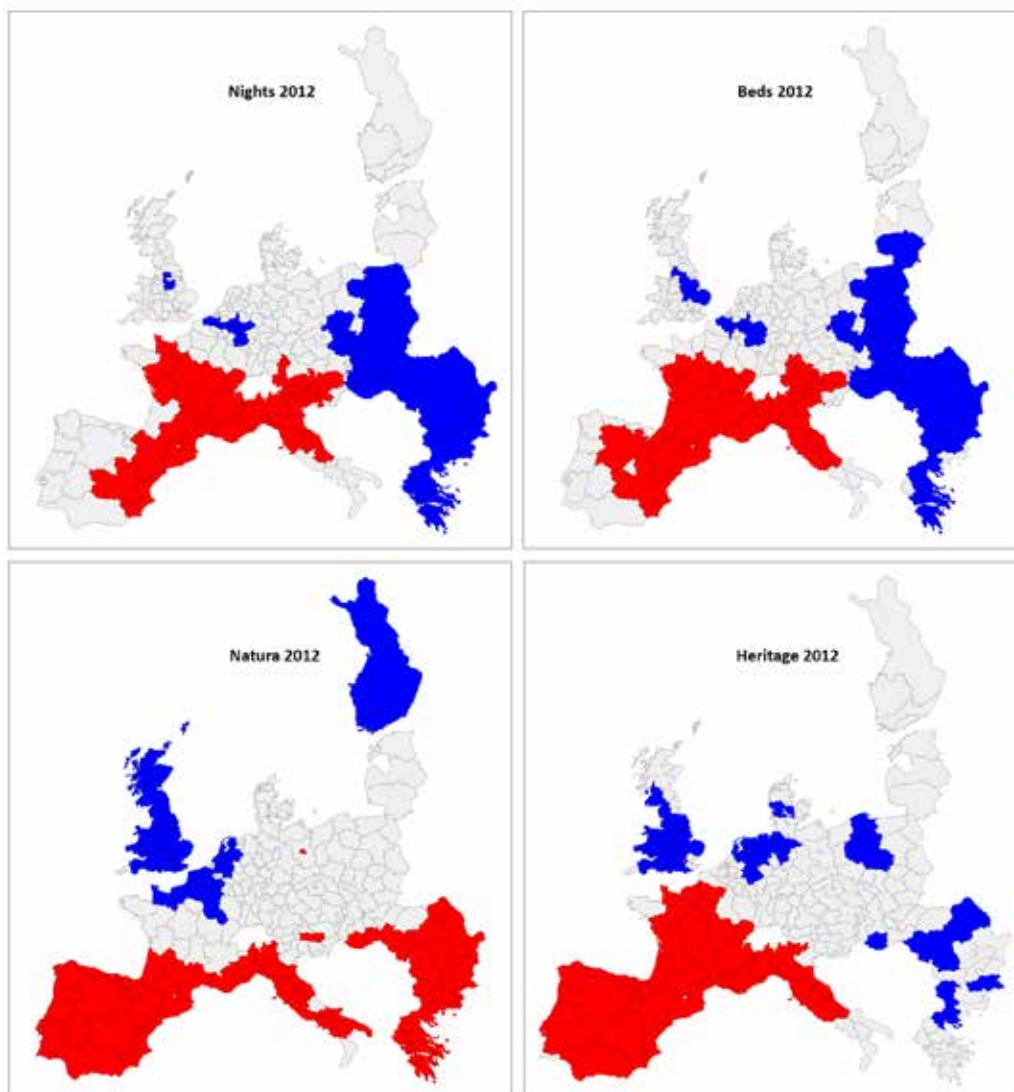


Figure 7: Clusters based on Local G statistics

Finally, a bivariate analysis based on the Local Moran I indicator for spatial autocorrelation has been applied, relating the non-lagged dependent variable (tourism demand, measured by the nights spent in accommodation establishments) with each of the 3 lagged dependent variables (bed places available, natural resources and cultural resources). The maps in Figure 8 represent these relations, considering a 95% significance level and their interpretation is similar to the previous indicators. A cluster occurs when the value (high or low) registered at a specific location is more similar to its neighbors (the spatial lag - weighted average of the neighboring values) than it would be in case of spatial randomness.

The dark red color represents regions where the value for the explanatory variable considered is high and tourism demand in the surrounding regions is also high; the dark blue color represents regions where both values are low. These cases are usually classified as spatial clusters, as a result of the observed positive local spatial autocorrelation. On the other hand, light blue is for regions with high values for the explanatory variable and low tourism demand, while light red represents the opposite situation. These are the spatial outliers, where negative local spatial autocorrelation occurs.

It is possible to observe that the positive spatial correlation between tourism demand, bed places available and natural resources is clearly registered in the Western Mediterranean area, despite the existence of regions with less bed places and higher tourism demand in some Spanish regions (a small number of spatial outliers). The East side of Europe shows low values for both cases.

The existence of clusters of regions with high tourism demand and high level of protected natural resources is clear for some regions of Portugal, Spain, France, Italy or Austria (dark red), while low values for both cases (the other case of positive autocorrelation) can be identified mostly in Northern European regions (dark blue). Nevertheless, it is also possible to observe a large number of regions with an inverse relationship between these variables: most of the French regions show high values for tourism demand with a low proportion of natural protected areas (light blue), while many Eastern European regions reveal the existence of relatively low levels of tourism demand, with high level of natural resources (light red). The existence of many spatial outliers and the diversity of spatial correlations observed for these two variables can have implications on the spatial regression model to be computed in the next section.

The positive spatial correlation between tourism demand and the existence of classified heritage sites is also mostly observed in the West Mediterranean regions, while a negative correlation can be mostly observed in the East side of Europe. The existence of regions where an inverse relation occurs (spatial outliers, with low score for one variable and high score for the other) is clearly smaller than for the relation between natural resources and tourism demand, although it can be observed in some regions of Spain, France, Italy and Austria (high number of sites for low tourism demand – light blue) and in some East European regions (high number of sites and low tourism demand (light red).

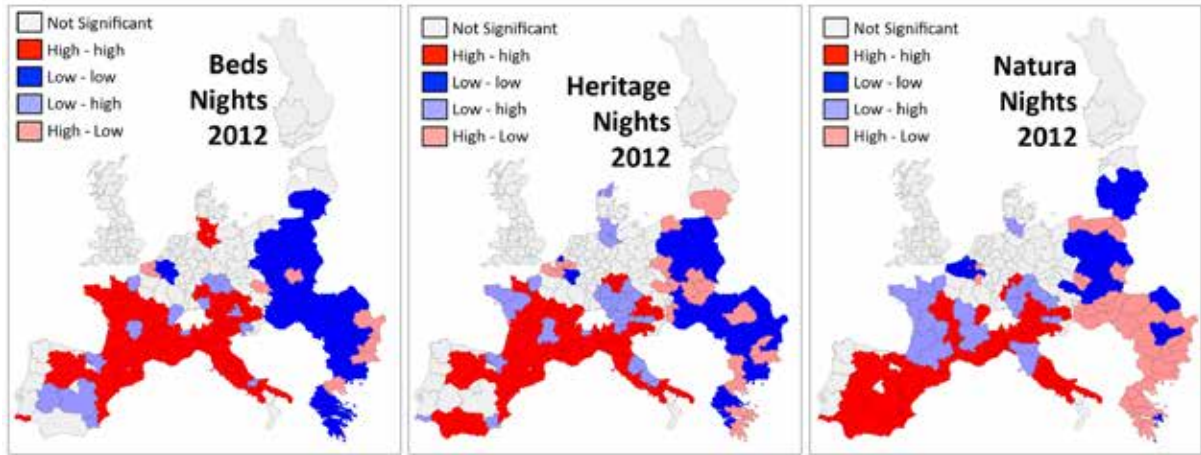


Figure 8: Bivariate analysis based on Local Moran I statistics

4. DETERMINANTS OF TOURISM DEMAND: A SPACE-TIME PANEL DATA MODEL

A spatial regression will be developed in this section, adding explicit spatial effects to the panel data model computed in the previous section (1). In this case, the model will consider a spatially lagged endogenous variable (included as one more explanatory variable and capturing the endogenous interaction effects), and spatial effects in the error term (a spatial multiplier that will capture unmodelled spatial effects expressed in the interaction among the error terms). In a general form, a space-time panel data model with spatial effects among the dependent variables and errors can be specified as:

$$(2) Y_{it} = \rho WY_{it} + X_{it}\beta + u_{it},$$

$$(3) u_{it} = \lambda Wu_{it} + \varepsilon_{it}$$

In this case:

- Y represents the dependent variable (number of nights in tourism establishments, as a proxy for tourism demand; for computation purposes, logarithms will be applied and it will be defined as LogNIT);
- X_{it} represents a $1 \times K$ vector the independent variables including:
 - Number of bed places in accommodation establishments, as a proxy for tourism infrastructures; for computation purposes, logarithms will be applied and this variable will be defined as LogBEDS);
 - Percentage of the territory under ecological protection, classified in Natura 2000, as a proxy for natural resources (defined in the model as NAT);
 - Number of sites classified as World Heritage by UNESCO, as a proxy for cultural assets (defined in the model as HERIT);
- β is a $K \times 1$ vector of unknown parameters;
- W is a nonnegative $N \times N$ matrix of known constants describing the spatial impacts; the element w_{ij} indicates the intensity of the relationship between cross sectional units i and j and the diagonal elements are set to zero because no region can be its own neighbor; neighborhood is defined by “rook-contiguity” (when there is a common portion of the border between two regions); for the immediate neighbors (contiguity level 1), a score of 1 has been assigned; for the “neighbors of neighbors” (contiguity level 2), a score of 0,5 has been assigned; the rows of this matrix show the scores for

the neighbors (level 1 or 2) of each region and these values have been normalized, assuming that the potential spillover effects are the same, independently of the number of neighbors;

- WY_{it} represents the endogenous interaction effects among the dependent variables;
- Wu_{it} shows the interaction effects among the disturbance terms of the different units;
- ρ is called the spatial autoregressive coefficient;
- λ the spatial autocorrelation coefficient;
- i is an index for the regions and t is an index for the time period.

Since the potential spatial effects can be related to different factors (regional effects between the dependent variables or more general effects identified in the spatial distribution of errors), different types of models can be specified: for the first case, a spatial lag model would be more suitable ($\lambda = 0$) and, for the second case, a spatial error model (ρ) would be more appropriate. The selection of the model to be applied in this case is based on tests proposed by Baltagi et al. (2003; 2007) and computed with the *splm* package in R (Milo and Piras, 2012).

The first test is the joint LM (Lagrange Multiplier) test for no random effects and no spatial autocorrelation ($H_0: \lambda = \rho = 0$), under the alternative hypothesis that at least one component is not zero. The results obtained for the Baltagi, Song and Koh SLM1 marginal test was 7476.685, with a p-value $< 2.2e^{-16}$, leading to the rejection of the null hypothesis. This result suggests the possibility of existence of spatial effects, both regarding the spatial interaction related to the dependent variable and/or the spatial correlation among the error terms.

In fact, the Moran I test computed in the previous section already had shown the existence of spatial effects for the dependent variable (nights spent in accommodation establishments).

Finally, applying the Baltagi, Song and Koh conditional test $LM\lambda$ for no regional effects expressed in the error term ($H_0: \lambda = 0$), a score of 39.1526 was obtained, with p-value $< 2.2e^{-16}$, leading to the rejection of the null hypothesis.

Combining the results of these tests, the existence of spatial effects in both cases must be considered, leading to the computation of a general spatial Cliff-Ord type model (Cliff and Ord, 1981) that includes a spatially lagged dependent variable and a spatially autocorrelated error term. Finally, the choice between a fixed and random effects model is based on the computation of a Spatial Hausmann test. The results obtained ($\text{chisq} = 61.6913$, $\text{df} = 3$, p-value $= 2.558e^{-13}$) lead to the rejection of the null hypothesis - one model is inconsistent and a fixed effects model is the best option.

This spatial lag and spatial error model (with: $Y = \text{LogNIT}$; $X = \text{LogBEDS} + \text{NAT} + \text{HERIT}$) is defined according to expression (1), considering random effects and specifying the disturbances assuming that spatial correlation applies to the individual effects and to the error term ("kkp" type) [Kapoor et al, 2007]. The results obtained based on a maximum likelihood estimation are presented in Table 6:

Table 6: Estimates for a spatial lag model with random effects

Parameters	Estimate	Std. Error	t-value	$\text{Pr}(> t)$	Significance
Intercept	14.7480	0.2738	53.8551***	$< 2.2e^{-16}$	0.001
LogBeds	0.3996	0.0229	17.4585***	$< 2.2e^{-16}$	0.001
NAT	0.0002	0.0012	0.1783	0.86	

HERIT	0.0781	0.0110	7.0969***	$1.3e^{-12}$	0.001
Spatial auto-regressive coefficient	-0.2478	0.0260	-3.2941***	0.0009	0.001
Error variance (spatial)	0.6535	0.0386	16.947***	$< 2.2e^{-16}$	0.001
Error variance (non spatial)	16.4451	1.9384	8.484***	$< 2.2e^{-16}$	0.001

The results clearly show a positive correlation between tourism demand and the explanatory variables, except for the natural resources. In fact, this variable lost its significance, comparing with the model without spatial effects estimated in the previous section. A possible explanation for that is the fact that the patterns of spatial autocorrelation between this variable and the dependent variable are extremely diverse, as was described in the previous section and shown in Figure 8 (with the existence of many spatial outliers, where an high value for one of these variables corresponds to a low value for the other). Nevertheless, it was clear that a positive relation between the existence of natural protected areas and tourism demand is observed in the South Western European regions, revealing the importance of these ecosystems for tourism activity.

As was also shown in the previous section, the positive effects of tourism infrastructures (bed places available) and cultural assets on tourism demand have different impacts in different regions. Nevertheless, as Figure 8 also shows, the relations between these explanatory variables and the dependent variable are clearly more stable than in the case of natural resources (with much less spatial outliers), and they are still statistically significant in the estimated model.

The existence of spatial effects among regions regarding tourism demand is also clear. The result obtained for the spatial autoregressive coefficient (-0.248) suggest the existence of a competitive process, implying that tourism demand in one region can have a negative effect on the neighbors. Nevertheless, when the space related error variance parameters (0.653) is taken into account, the net spatial effect observed is clearly positive. This means that, globally, there is a positive impact of tourism activity (and its determinants) on the neighborhood of each region. In fact, this had been observed in the previous section, when the bivariate analysis showed clear processes of spatial autocorrelation between tourism activities and the dependent variables in the model.

5. DISCUSSION

A first relevant result of this work is the confirmation of the potential of spatial analysis for tourism studies. Although this kind of methodology had few applications in the field of tourism so far, the results of this work clearly show the existence of spatial patterns in tourism demand and, at least, some of its determinants.

The data presented in Section 2 revealed that tourism in Southern European regions – where natural resources play a decisive role - is still very important in the European context. Nevertheless, this information also showed that urban tourism (at least in some major cities) and the Eastern side of Europe have registered higher growth rates over the last decade, suggesting a shift in travel motivations and spatial patterns.

The exploratory spatial analysis conducted in Section 3 clearly revealed the existence of spatial effects for regional tourism attractiveness and also for the determinants of tourism demand considered in this study. Taking these specific variables into account, the identified spatial effects are, in general, clearer in the Southern European regions. This suggests that the attractiveness of these regions is related, not only to their natural and cultural resources, but also to the resources available in the neighbor regions, which has clear implications in

terms of tourism promotion and infrastructure planning (transports, accommodation, etc). As a further development of this work, other type of information can be considered in order to capture stronger spatial effects for tourism activity in Central and Northern European regions.

The spatial effects identified in the model computed in Section 4 reveal the existence of a competitive process expressed in the negative value of the spatial autoregressive coefficient, showing that tourism demand in one region can have negative consequences in the contiguous regions. Nevertheless, the spatial error variance parameter was almost three times higher, revealing the positive impacts of unmodelled effects. Considering the exploratory analysis conducted in Section 3, these impacts can be related to the natural and cultural resources existing in the neighborhood. Nevertheless, a more detailed model for regional tourism demand, including other variables, can be another interesting development of this work.

As the focus of this work was mostly on the spatial effects of natural and cultural resources on regional tourism demand, the analyses provides satisfactory results for the Southern European regions, clearly showing that common promotional strategies, transport systems and accommodation provision can be more efficiently planned if there is some collaboration among clusters of regions with similar characteristics, even if they do not belong to the same country. For the Northern European regions, other kind of information related to natural and cultural assets can provide more accurate results in terms of spatial impacts, although there is not enough comparable information at the international level, at this moment.

Finally, another possible development of this work relates to the scale of analysis. In fact, NUTS 2 regions can include different tourism destinations within the same territory (Andalucia, in Spain, is mostly a sun-and-sea destination, but it includes also an important winter sports destination and some interesting cities for cultural tourism). In this case, the NUTS 3 level can be more appropriate, when comparable relevant statistical information is available.

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KNOWLEDGE SPILLOVERS WITHIN THE ALGARVE TOURISM REGION. EVIDENCE TO IDENTIFY A REGIONAL INNOVATION SYSTEM

SPILLOVERS DO CONHECIMENTO NO TURISMO DA REGIÃO DO ALGARVE

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ABSTRACT

Studies of local knowledge spillovers have often focused on empirical evidence for core regions, and been related largely to manufacturing, neglecting behavior in less innovative economic sectors in peripheral regions. Tourism in the Algarve region is the main engine of its regional economy. Although frequently considered as a low-moderate innovative sector, competitive tourism firms are becoming increasingly Knowledge Intensive, which may create positive advantages for regional growth. This may improve conditions for the creation and diffusion of knowledge, with cooperative and collaborative interaction contributing to the consolidation of a regional innovation system (RIS). The goal of this study is to provide preliminary evidence of the main sources and vehicles of regional knowledge spillovers affecting tourism firms in the Algarve, generally considered to be a peripheral region. The main sources of knowledge used by micro and small tourism firms (MSTF) are human resources and formal and informal networks. This study detected specific features of a regional innovation platform which, eventually, may give way to a RIS.

Keywords: Tourism, Innovation, Knowledge Spillover, Knowledge Intensive Services, Regional Innovation System, Algarve Region

RESUMO

Muitos estudos sobre divulgação de conhecimentos locais, geralmente elaborados com base na evidência empírica das regiões centrais, tendem a negligenciar comportamentos em sectores económicos menos inovadores das regiões periféricas. O caso estudado aponta o Turismo na região do Algarve como sendo o principal motor da economia regional. Embora frequentemente considerado como um sector pouco inovador, as empresas de turismo têm vindo a tornar-se mais competitivas, mais ricas em conhecimento, o que pode criar vantagens positivas para o crescimento regional. Melhorando as condições para a criação e difusão de conhecimento, com a interação cooperativa e colaborativa provamos que é possível contribuir para a consolidação de um sistema regional de inovação (RIS). O objetivo deste estudo é fornecer evidências sobre as principais fontes e veículos de divulgação de conhecimentos regionais que afetam as empresas de turismo no Algarve, geralmente considerada como uma região periférica. As principais fontes de conhecimento utilizadas por empresas de turismo, de micro e pequenas dimensão, são os recursos humanos e redes formais e informais. Este estudo detetou características específicas de uma plataforma regional de inovação, que, eventualmente, pode originar um RIS.

Palavras-chave: Turismo, Inovação, Spillover do Conhecimento, Conhecimento Intensivo em Serviços, Sistema Regional de Inovação, Algarve

JEL Classification: P25

1. INTRODUCTION

In the last two decades, an extensive body of theoretical literature and research related to regional innovation systems (RIS) has been developed, demonstrating how evolved economic and cultural processes may support the generation of innovations in leading and high-technology core regions. RIS have commonly been considered as an open social and economic system with institutional behavioral support in which innovations result from interactions between organizations and the systematic use of accumulated local knowledge and learning (Isaksen, 2001; Evangelista, *et al*, 2002; Cooke, 2003; Cooke, *et al*, 2007; Asheim & Coenen, 2004; Asheim, *et al*, 2011; Bracayk, *et al*, 2004; Doloreux & Parto, 2005).

However, the operation of RIS in peripheral and small and medium-sized regions, with low technology innovation systems, requires more empirical evidence (Wiig, 1996; Andersson & Karlsson, 2004). Current research shows that RIS in peripheral regions are characterized by a less developed cultural and economic environment for innovation. They also lack a critical mass of activity supporting institutions and organizations, including networking among regional agents and interactions with external innovative hotspots. Industrial patterns are dominated by less developed low-technology clusters, mostly comprising small and medium enterprises (SMEs) with low absorptive capacities. Innovations are more related to incremental and process innovations, since firms are more inclined to adopt and receive technical knowledge than to act as a diffuser of novel knowledge. In this context, learning-by-doing and learning-by-using are more common processes in generating new local knowledge (Tödtling & Trippl, 2005; Doloreux & Dionne, 2008; Asheim & Isaksen, 2000).

In accordance with the characteristics of peripheral or non-core regions identified by Legendijk and Lorentzen (2007), the Algarve region is therefore still dependent on a low-technology tourism industry that commonly generates only incremental and process innovations. It is also quite isolated in relation to Portuguese and European metropolitan areas, knowledge sources, R&D expenditures and high technology agglomerations. In this context, it offers a timely case study of a peripheral region in rural surroundings, with low population and education levels, focusing especially on the development and effects of regional, national and international linkages among the key regional agents (Huggins & Johnston, 2009). In this same context, the region also offers the possibility of considering whether tourism firms may act as knowledge intensive services (KIS) (Sundbo, 2010). Although more detailed information may be needed, as a first step, it may be of interest to understand the different mechanisms used by tourism firms to absorb, utilize and generate new knowledge at a regional level in order to increase competitive advantages and maintain and capture new markets.

Many industries involving tourism, some more than others, have had to move further toward a more intensive utilization of knowledge while at the same time providing and diffusing knowledge to other organizations and customers in order to solve specific problems, deliver high quality products and have a wide range of competitive services around the world and in Algarve specifically, has experienced an increasing demand and growth. Tourism is the

main economic income in Algarve featuring a well developed, productive net of firms around all sub-sectors that participate in this economic activity.

The main objective of this study is therefore to determine the importance of local knowledge spillovers among regional organizations and tourism firms in the Algarve region, and the role played by the regional innovation platform as in increasing competitiveness. The main sources of knowledge are identified, highlighting the capabilities and absorptive capacities of firms, as a basis for moving toward a KIS-based tourism industry seeking to improve business opportunities.

2. TOURISM INNOVATION, KIS AND KNOWLEDGE SPILLOVERS

“Services” have become fundamental to modern economies, providing an important source of employment, productivity and economic development, while also acting as an interconnector and facilitator for the development of other economic activities. The specific subgroup of KIS has been studied from different perspectives (OECD, 2007; Müller and Doloreux, 2007; Miles, 2008a; Rubalca, *et al*, 2010), giving rise to different conceptual approaches and definitions depending upon the focus and type of service firms. Important inputs from the analysis of KIS may be used to understand the tourism Industry.

Merino and Rubalcaba (2006) maintain that the primary causes of the increasing importance of KIS are linked to the consolidation of a knowledge based society. Adopting a knowledge perspective to understand patterns of innovation in services, as suggested by Miles (2008a, 2008b), the tourism industry is increasingly characterized by KIBS features. This is especially noticeable through the dependence of tourism on human qualities, with employees focused on problem-solving/client-firm interactions, professional and specialized knowledge in relation to the use of information and communications technologies (ICTs) and reliance on tacit knowledge, including “experience”. Miles (2008b) has classified tourism as a KIS, even though the main economic activities generally linked to tourism, including hotels, restaurants, catering, transport services and travel agencies, are usually associated with “less knowledge intensive” market services.

In a RIS context, it is recognised that KIBS play an important role as intermediary players, promoting innovations through outsourcing and collaboration activities (Howells, 2006). They may act as node functions in the creation, diffusion and implementation of knowledge, essentially through face to face communication and the diffusion of tacit and localized knowledge among regional agents supporting learning by interaction (Doloreux, *et al*, 2008; Thorsten & Böhn, 2003; Koch & Stahlecker, 2006). Rubalcaba, *et al* (2010), emphasises that innovations in the service sector should be assessed in the context of the interactions and interdependencies of innovation systems. The characteristics of KIBS are important in understanding the dynamics and evolution of RIS, acting as suppliers of expertise to other firms, promoting and helping them in the innovation process (dos Santos Ferreira, 2010).

Hjalager (2002) argues that, although the tourism industry displays various obstacles to knowledge transfer hampering innovation processes, including low-skilled employees, four main sources can be identified that identify channels of knowledge transfer: a) Trade systems, cof knowledge embedded in associations or tourism organizations and transferred in conferences, forums, sector surveys, etc; b) Technological systems: knowledge embedded in technologies, c) Infrastructural systems: knowledge embedded in free goods and, d) Regulation systems, knowledge embedded in regulations or mandatory actions promoting innovation.

Although some have portrayed tourism as a sector with a low capacity to develop innovation systems, others have identified tourism innovation systems, including institutional innovation based on collaboration and spin-offs between highly interrelated agents. In this, each may take different roles, some acting as drivers of the process and others assuming more peripheral functions, creating synergy and mutual benefits. In this process, firms take advantage of externalities and other innovation system outputs (Hjalager, 2010b). Prats, *et al.*, (2008) have focused on the evolution of tourism destinations using a model approach based on tourism innovation systems, adding evidence on the generation of social networks and the distribution of benefits among firms.

2.1 Sources and Vehicles of Knowledge Spillovers

The last few years have stressed the importance of adopting a cluster approach to the study of the tourism industry to analyse issues of regional specialization through innovation and knowledge management by tourism firms (a complete bibliography revision can be found in Hall & Page, 2008; Hjalager, 2010a). However, only incipient research initiatives have tried to understand tourism from a RIS approach, emphasising the need for new evidence (Sundbo, *et al.*, 2007; Hjalager, 2010b).

Many of the new, marketable ideas about products or services offer a mixture of tacit and explicit knowledge (Shaw & Williams, 2009). Since innovation by firms is crucial in gaining new markets and more competitiveness. It is important to support their capabilities to generate, absorb and use knowledge in producing more and better products and services (Cohen & Levinthal, 1990; Noronha Vaz & Nijkamp, 2009). Although some authors have noted the low capacity of small firms to absorb knowledge and information, because of their low proportions of skilled workers and high labour mobility (Sundbo, *et al.*, 2007), other studies have stressed the capacity of some tourism firms to gain knowledge both from tourism and other economic sectors (Plaza, *et al.*, 2010).

The main models of innovation in tourism and services (Decelle, 2004; Cooper, 2006; Hertog, den, *et al.*, 2006), including variable reflecting knowledge spillovers, categorise different dynamics separately as vehicles and sources, depending on their direct or indirect capacity to influence innovation in firms. Regional variables have a major impact in these processes because they are used by firms as free externalities produced by high regional specialization in tourism. Considering processes of knowledge transfer in peripheral tourism regions, the Shaw and Williams model (2009) examines indirect diffusion and the direct transfer of knowledge in tourism, as well as the knowledge spillovers studied by Hjalager (2002) and Sundbo, *et al.* (2007), and variables utilized in studies of other economic sectors such as labour mobility and formal-informal networks (Kesidou & Romijn, 2008; Boshuizen, *et al.*, 2009). The central idea of this categorization is that firms take advantage of accumulated knowledge as a result of regional concentration and specialization in tourism activity and that these processes could be further developed, directly or indirectly.

This paper focuses on the role, linkages and knowledge spillovers currently shaping the “regional innovation platform” in the Algarve. A regional innovation platform consists of innovation patterns supporting low levels of evolution of an “emerging RIS” (Chaminade & Vang, 2006, pp. 11), “*where some of the building blocks of the RIS are in place but where the interactions among the elements of the RIS are still in formation and thus appear fragmented*”. On the other hand, knowledge spillovers are seen as the prime source of agglomeration economies and innovation systems (Caniëls & Verspagen, 2001). They support the diffusion of knowledge from where it is created or from one agent to another. This is how it becomes useful and acquires societal value (Stough & Nijkamp, 2009). In this context, we examine how specialized tourism knowledge is diffused in the Algarve region and the extent to which these processes may contribute to the evolution of an Algarve RIS.

3. METHODOLOGY

In this work we seek to obtain preliminary perspectives about KIS and knowledge transfer processes in building a RIS in a peripheral region based on tourism. The Algarve region of Portugal was selected as a suitable case study. It is located in the southern part of the country and occupies approximately 5% of continental Portugal, with a total area of approximately 5.000 km². In the 1960s, the Algarve became popular as a tourism destination for North European countries, and a good place for retirement and second or vacation homes. Although beginning as an up-market destination, it progressively lost this characteristic, mainly as a result of inefficient tourism planning. In the 1980s the number of arrivals grew rapidly, but in the 1990s, there was a marked slowdown due mostly to high prices, making the region less competitive for its particular types of tourist compared with Spain.

Over a long period policy-makers recognized tourism as the best base to ensure continued growth in the region. Indeed, in spite of its extreme dependence on tourism, regional GDP has shown continued growth, with a significant impact on urban growth and a steep rise in real estate prices. In 2008, around 200 km² of land was urbanized from which about 50 km² for tourism activities (CCDR Algarve, 2007).

In 2007-8, tourism generated 10.5% of the total GDP of Portugal and contributed 8 per cent of employment (OECD, 2010). In the Algarve, tourism contributed 47 per cent of the regional GDP and 35.4 per cent of the total national overnight stays (INE, 2008a). The population employed in the service sector reached approximately 72% of total employment, highlighting the structural importance of tourism activity in the region (INE, 2008b).

This research applied a case study approach to the Algarve, and a qualitative methodology of analysis (Yin, 2003; Clark & Fast, 2008; Phillimore & Goodson, 2004):

- Information was collected from 20 semi-structured and extensive interviews with major regional stakeholders between February and April 2011. A flexible interview guide with open questions was used to gain depth in the responses.
- Regional dynamics and innovation behaviour in tourism firms were first categorized into specific research topics and then integrated. This procedure was designed to develop preliminary conclusions about tourism dynamics in this peripheral region, in the absence of fuller data evidence.

The use of open interviews therefore sought the formal views of regional stakeholders, usually shaped by their legal and organizational perspectives. The method nevertheless shed light onto how institutional-social systems have developed in the Algarve region, and how far key regional players are linked. The twenty interviews included representatives of five regional business associations, one regional non-governmental organisation, five public organizations supporting innovation, four tourism organizations, two municipalities and three educational organizations, of which two were universities. The results provided insights into regional tourism strategies and innovation practices at the micro level.

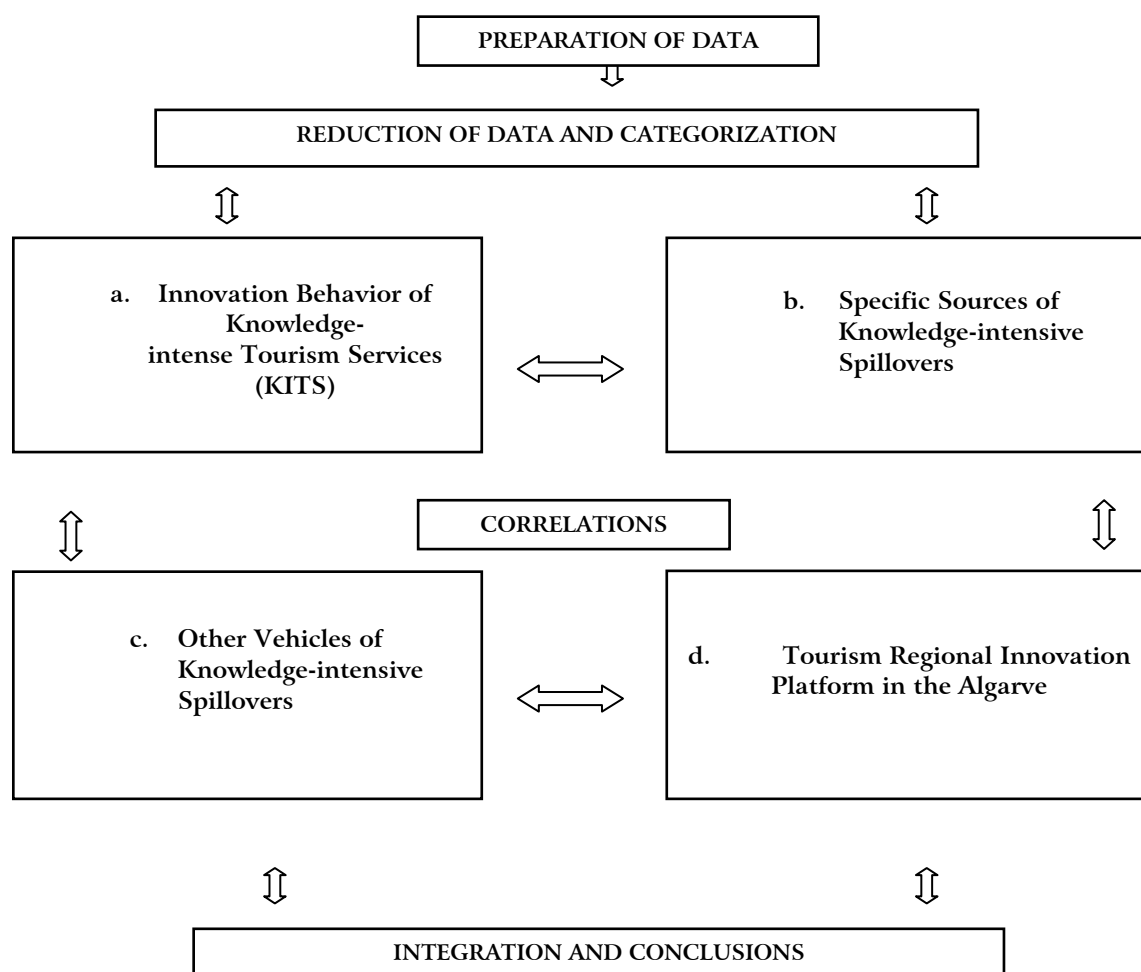


Figure 1: Organization of a content analysis method

The interviewees were chosen because of their direct access to relevant information and specific knowledge, but a regional perspective was encouraged to stress links among different topics, including knowledge transfer, the roles of business associations, interactions between large and small tourism firms, and specific innovation efforts.

The resulting primary information was studied through content analysis using the ATLAS.TI software tool. The resulting texts were analysed through the classification and categorization of specific topics and sub-topics, allowing direct correlations to be found relating to research goals, patterns of common expression and key differences about key points. The information was analysed according to the methodological model set out in Figure 1, integrating 20 different perspectives around the four topics. These were finally combined with secondary information to support the main research findings and conclusions.

4. DISCUSSION AND EVIDENCES

A) Innovation behaviour of Knowledge Intense Tourism Services (KITS)

There is an important lack of statistical information about innovation activities among tourism firms in the Algarve. However, according with a common vision collected with the interviews, public tourism organizations and regional business associations stress the important differences between the large, international tourism companies and the greater number of Micro and Small Tourism Firms (MSTF) in the region, especially when considering

innovative behaviour, regional business networks, market share, inter-firm linkages and territorial impacts:

- The MSTF are commonly based on obligatory or necessity entrepreneurship and familiar subsistence related to entertainment, tourism accommodation, travel agencies, restaurants, natural and cultural tourism business, etc.
- The large companies, however, belong to international hotel chains and tour operators, linked to the region through local travel agencies. The large hotel chains have investments in the country and around the world, supporting systematic innovation activities, modern business structures and innovative processes of marketing. They incorporate advanced technologies, employing skilled human resources with knowledge of hotel management in vertically organized operations.

The Algarve region and tourism are both characterised by these co-existent forms of business: According to the Portuguese National Institute of Statistics (INE) (2008b), in 2007, around 96 per cent of the regional firms had fewer than 10 employees, 3.7 per cent 10 – 49, and only 0.3 per cent had between 50 and 250 employees.

In this context, large companies benefit from the region mostly through the exploitation of geographical conditions and low cost labour compared to the rest of Europe. When introducing innovations, they display low levels of interaction and knowledge diffusion with other regional firms and institutions. In addition, returns created by these companies in the region are not systematically reinvested there, since productive cooperation and commercial linkages are fragile, and better opportunities are commonly available elsewhere. Because of the significant presence of MSTF, Korres (2007) has suggested that it should be possible to gain competitiveness through scope economies. This argument is complemented by geographical qualities based on social and geographical proximity in a spatial context in which tourism activity may be developed on the basis of rivalry and competition.

At the same time, networking and cooperative behaviour between institutions, allowing knowledge transfer, may support a cluster, with repercussions on the capacity to innovate by tourism firms. Tourism products are experience services, based in specific tourism destinations, where a set of complex, interlinked elements may be involved in a specific location (Decelle, 2004; Hjalager, 2010b). In the Algarve several projects support such an interpretation. Two examples are:

- Plano Estratégico da Bacia do Arade – a development plan for the restricted area of Arade river by Portimão resulting from the cooperation of cross border municipalities, the Universidade do Algarve, the Institute of Employment and Training (IEFP), the regional office of the Ministry of Economy, Innovation and Development (DRE) and the Coordination Commission for Regional development (CCDR).
- A Rota da Cortiça – the so-called “Cork Route”, through the Serra do Caldeirão showing the production of cork, cork extraction and industrial processing. The programme, one of the most integrative in joining institution such as DRE, the Algarve Regional Tourism Office (ERTA), the Association of Municipalities of Algarve (AMAL), the Business Association of Algarve, NERA, CCDR and several enterprises, is also contributing to protect and promote the only product in which Portugal is the world leader.

From the perspective of any emergent innovation system, the tourism industry needs to generate new knowledge through partnerships, collaboration and networking among MSTF, large firms and other regional players. A capacity to create value and competitive advantage in specific destinations must involve many firms. A systemic approach is therefore needed rather than the promotion of innovation in individual firms (Plaza, *et al*, 2010). Tourism is therefore still an open field for analysis (Hjalager, 2010b).

Currently, among the important features of tourism are interactivity, based on client-tourism firm contacts, and intangibility, through the intensive use of new technologies and data. Tourism innovations are therefore mostly based on incremental processes, through “Project management and on-the-job innovations” (Miles, 2008a, pp. 115). In our survey, most of the key players cited examples of innovations in tourism firms incorporating new technological innovations such as the ICTs:

- Improving the generation of new client interfaces and new service delivery systems. The utilization of internet Web pages and internet and computerized booking systems have reduced the costs of transactions and direct relationships with customers. Additionally, computerized communication and internal task and cost software have improved the internal efficiency of firms – VISUALFORMA is one such company, awarded a prize as one of Portugal’s most innovative SMEs.
- Sometimes, such programmes have required organizational, back-office improvements and more skilled employees. Frequently, however, these tasks have been subcontracted to emerging small firms specialized in supplying such services to hotels and restaurants (e.g. ALGARDATA has expanded as a result of the use of such skills).
- Some innovations, such as lower internet prices and the promotion of tourism packages (especially in low seasons), co-branding initiatives, the intensive use of internet and mobile phone tools for promotion via social media channels, and multi-lingual interfaces have been developed by both large firms and MSTF. This supports the need to incorporate increasingly specialized knowledge capabilities, especially in the use of these technology tools.
- Private and public Algarve tourism agencies have built regional internet interfaces including all tourism firms in the Algarve, where it is possible to identify the activities of firms and their regional location, providing efficient communication channels among suppliers and client-tourism firms. An example is the ALGARVE DIGITAL portal. Such new marketing techniques and new communications channels have provided opportunities for many small firms, in particular in relation to property sales and rental markets.

As well as developing knowledge and information networks for tourism destinations, it is more important on a daily basis to develop regional tourism products themselves. Tourist regions may build a RIS by developing systematic knowledge spillovers and absorption capabilities, based on linkages among regional, national and international agents, reinforcing learning behaviour through regional private and public partnerships. Sundbo (2010) considers such a case including tourism as a KIS (featuring the development of destinations and new tourism systems) focusing on public-private network collaboration to promote cities and regions. In the Algarve many public private partnerships now shape the institutional framework of tourism activities. The strongest such case relates to sporting activities (e.g. Estádio do Algarve for EURO 2004) or the construction of infrastructure for environmental improvement (e.g. management and recycling of water and waste products and the construction of industrial parks in the various municipalities).

B) Specific Sources of Knowledge-intensive Spillovers

The presence of knowledge spillovers influencing innovative performances in KIBS depends on the nature of the activities (de Jong, *et al.*, 2003). Doloreux (2010) confirms that KIBS behaviour is quite distinct in peripheral areas. While most of the literature shows that innovation in peripheral regions suffers from a lack of critical mass and low densities of actors and relationships, strategic choices may be able to overcome such bottlenecks.

Most of our stakeholder respondents agreed that the promotion of education and information regarding R and D were two important tasks of regional policy targeting potential bottlenecks. In the Algarve, the success rate in secondary education only reaches 76.1 per cent, compared with 79.7 per cent in Portugal. Around 70 per cent of the population has schooling for fewer than 12 years and the educational attainment rate in higher education reaches only 19.9 per cent, compared with a national rate of 29.7 per cent (INE, 2008).

As well as complex challenges such as improving educational levels, market necessities must also be addressed to promote and improve tourism professionalism. This includes adopting new tourism business models, mostly based on e-tourism, e-commerce and ICT as the principal agents of change in the structure of the industry (Hjalager, 2002). Requirements for more skilled human resources are reflected in recent public and private initiatives in tourism training. This may become an important source of knowledge for innovation, encouraging the rise of more technology-based firms or KITS. Recent initiatives include:

- Tourism in Portugal (RTA and EHTA), the Ministry of Labour and Social Solidarity (through IEFPP), and the Ministry of Education have developed regional programmes in secondary level education and vocational training in tourism to support tourism firms. The Escola de Hotelaria do Algarve provides excellent conditions for implementing many such programmes.
- Respondents to our survey drew attention to many schemes through which project leaders gain access to specific knowledge through more advanced training in tourism. For example, CCDDR, the University of Algarve, NERA, AMAL and the Association of Hotels and Tourist Enterprises of Algarve (AHETA) are major knowledge providers in the region. Formally or informally, they incorporate knowledge management tools in their training, supporting MSTF in being competitive enterprises by assisting them in gaining access to new technologies, organise business plans, acquire new partners and respond to marketing trends.
- In contrast, owners or founders of tourism firms who are not able to access suitable knowledge, especially by increasing or incorporating new skills, they find it difficult to be competitive and invest in their companies. In turn, they fail to generate access to financial backers willing to support improvements in firm performance. Respondents confirmed that this may be the most common behaviour of small tourism firms.

Interaction and the sharing of a common business language related to tourism are important in a small territory such as the Algarve, where geographic proximity is important role in facilitating new business and innovative activities.

As a stakeholder representing a European agency at the CCDDR pointed out, there have been some regional projects in which firms cooperated to structure a specific product or create an external marketing platform to improve the promotion and sales of their products. Without this, the region's size and investment capacity would not have allowed them to fund such a project.

Spinoffs from the Universidade do Algarve can also be considered, both as isolated sources of knowledge at the regional level and when they include cooperation with the private sector. Currently, only a few tourism companies have generated cooperative relationships linking universities and commercial knowledge from specific projects. One of this is the planned IIEAT (International Institute for Advanced Studies in Tourism).

Key players have shown concern about the fact that firm-university relationships in the region that might have helped commercialize particular expertise have not had the needed impact, not just in the tourism sector. The Algarve Region Innovation Centre (CRIA) is

putting significant effort into promoting possible partnerships at this level, including joint R and D projects and other actions in areas of marine sciences and new technologies.

In the Algarve, there are also MSTF that participate in regional development bodies. Business Associations are important, in which formal and informal networks are used by firms to gain tourism knowledge, including AHETA. Tacit knowledge is shared and absorbed by the owners of hotels and tourist enterprises and transferred to other tourism firms. Business Associations are also involved with regional tourism bodies (ERTA) which commonly discuss and propose guidelines regarding the specific role that tourism has to play in regional development. These instances provide all regional players with a significant role in the development of the region. They promote increased interaction among public, private and Non Governmental Organizations (NGOs) such as GLOBALGARVE, a regional agency, responsible for a number of initiatives to promote regional growth and firm competitiveness.

Regional business associations, such as NERA, including micro, small and medium tourism firms, also act as a source of knowledge for innovation and entrepreneurship by promoting the diffusion of ideas, projecting opportunities, and issues of financing, business plans, etc. Although there are only a few such forums, sector meetings or seminars coordinated by business associations also allow the exchange of ideas and business experiences among private enterprises and with other regional or international players.

Generally, there are still no permanent structured relationships in the region to spread good practices to small businesses, for example by following those implemented by large tourism companies. Only a few large companies offer such knowledge openly in forums or seminars where information about the company may help smaller firms by spreading knowledge about innovative activities, adapted to their fields of action and development.

C) Other Vehicles of Knowledge-intensive Spillovers

Public initiatives to promote and regulate tourism and innovation in the Algarve, designed to improve processes of knowledge-intensive spillover, are contained in the National Strategic Reference Framework, 2007 – 2013. This is focused around guidelines provided by the European Union. In this national context, the main regional private and public actions are elaborated in the “Algarve Development Strategy 2007 – 2013”, which also considers lines of action contained in the Regional Land Plan of the Algarve. Headed by the Regional Coordination and Development Committee of Algarve (CCDR), this document emphasizes the need to increase regional competitiveness and skilled employment. In turn, the “Operational Program of the Algarve Region”, based on the three lines of structural investment (innovation and knowledge, environmental qualifications, and territory) has become an important regional public policy (PO ALGARVE 21). On the other hand, specific suggestions for national tourism activity are contained in the Strategic Plan for Tourism Development (PENT, 2007). As part of the national structural policy programme promoting knowledge creation and diffusion across Portuguese regions, the “Regional Plan for Innovation” was also elaborated by the Universidade do Algarve in 2007. This initiative aimed to generate a technical and productive redefinition of the region and create conditions supporting a RIS to promote Algarve strategically as a competitive region, in particular in through tourism.

The many small companies involved in the regional tourist system in the Algarve face many difficulties and lack the technical and operational resources needed to carry out innovation activities. The most innovative tourism firms are generally belong to large, vertically integrated economic groups, in which the use of knowledge is organized within their own companies or groups. These operate globally and, through their organizations, are able to gain scale economies, helping to reduce final prices.

Hjalager (2002) and Sundbo, *et al*, (2007) have questioned the capacity of tourism workers as sources of innovation because of low levels of training. One of the reasons for this is the seasonality of the sector. This applies in the Algarve, even though many efforts have been made to reduce uneven activity through the year by offering a more diversified set of regional tourist products and services. Examples include eco-tourism initiatives, aquatic entertainment, golf facilities, activities and recreation for seniors and intensification of international sport contests. External factors have also influenced the capacity to attract larger numbers of tourists, including the economic crisis and the devaluation of the Pound against the Euro, reducing the numbers of British tourists, the main source of international visitors.

High seasonality and the low-skill levels of tourism jobs are the main reasons for strong labour mobility between jobs and places within the region. However, the high employment offered by large companies in the busy season acts as a source of specialist knowledge, including efficient organizational and business practices that can be acquired by workers. Labour mobility therefore spreads the organizational models of these companies across the tourist area as the technical and operational profile of human resources is internalized, diffused and reproduced in different firms as workers are contracted around the region .

D) Conclusion: A Tourism Regional Innovation Platform in the Algarve

The primary and secondary information collected through our series of interviews with regional stakeholders included all the actors reported in Figure 2. This is one of the major conclusions of this work, drawing links between all the implicated actors and confirming the existence of an extensive Regional Innovation Platform for tourism in the Algarve. This platform has the following characteristics:

- It is composed of international, national and regional public and private agents, which are still unable to build an interconnected innovative system because of the fragility of regional interaction and coordinated initiatives so far.
- Institutional routines to generate innovation are still emerging, despite their active promotion, since they remain quite isolated from each other.
- Private initiatives in the region have made advances, generating interesting results through informal and formal networks supporting regional sources of knowledge about innovation in tourism firms.
- The most important effects of public policies in relation to innovation has been through the regional training support used mainly by small tourism firms to increase skilled human resources.

The competitiveness achieved by tourism in the Algarve has stimulated the need for public sector support, for example, through the promotion of tourism studies in the Universidade do Algarve, and also to focus regional growth on the exploitation of tourism activities (for example, as part of specific programmes from the Social Cohesion Fund). Furthermore, many other international programmes, mainly from the European Union, have sought to favour improvements of competitiveness in more peripheral regions through specific regional programs (e.g. LEADER, MED). These are led by public institutions supporting private projects to shape economic resources and human skills in support of regional tourism development.

From the governance point of view, it is also important to generate a clear regional leadership for the emerging RIS, a role that should be taken up by the regional tourism agency, ERTA. Although regional strategies can assert key policy areas, operational application need to be improved through efficient instruments and policies towards greater participation and communication among regional players.

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