Measuring **innovation** in **travel agencies** from Recife (Brazil): An analysis focused on the **supply dimension** of the Innovation Radar

Medindo a **inovação** em **agências de viagens** do Recife (Brasil): Uma análise focada na **dimensão da oferta** à luz do Radar da Inovação

JUSSARA AIRES * [jussaradma@ua.pt]

FILIPA BRANDÃO ** [filipa.brandao@ua.pt]

MANOELA VALDUGA *** [manoelavalduga@ua.pt]

Resumo | Diagnosticar o grau de inovação empresarial se traduz numa necessidade para a melhoria do desempenho organizacional. No entanto, essa prática ainda é pouco desenvolvida em micro e pequenas empresas do sector de turismo e carece de investigações no campo acadêmico. Assim, este artigo busca analisar o desempenho quanto ao grau de inovação de agências de viagens do Recife (PE – Brasil) com foco na dimensão Oferta à luz de uma ferramenta chamada Diagnóstico Radar da Inovação, aplicada no contexto do Programa Agentes Locais de Inovação (ALI). Os dados foram coletados no período de agosto de 2012 a março de 2014. A pesquisa se caracteriza como exploratória e descritiva, contando com tratamento e análise de dados efetuados sob abordagens quantitativa e qualitativa. Considerando, a classificação de Bachmann e Destefani (2008), verificou-se que a maioria das empresas investigadas apresentou aumento nos escores, passando da condição de "pouco ou nada inovadoras" para "inovadoras ocasionais ou sistêmicas", tanto com base nos resultados do Grau de Inovação Global, quanto nos escores da Dimensão Oferta. Constatou-se que apesar dos avanços, ainda persistem barreiras que limitam a capacidade inovadora dessas empresas.

Palavra-chave | Desempenho, grau de inovação, oferta, radar da inovação, agências de viagens

Abstract | Diagnosing the innovation degree of firms derives from a need towards the improvement of organizational performance. However, this practice is still underdeveloped in tourism micro and small

* **Mestre em Ciências Sociais** pela Universidade Federal do Rio Grande do Norte, Brasil. **Doutoranda em Turismo** pela Universidade de Aveiro, Portugal

** **Mestre e Doutora em Turismo** pela Universidade de Aveiro, Portugal, **Professora Adjunta Convidada** da Escola Superior de Hotelaria e Turismo do Instituto Politécnico do Porto e **Professora Auxiliar Convidada** da Universidade de Aveiro.

*** **Mestre em Turismo** pela Universidade de Caxias do Sul, Brasil. **Doutoranda em Turismo** pela Universidade de Aveiro, Portugal e **Docente** da Faculdade de Turismo e Hotelaria da Universidade Federal Fluminense, Brasil.

firms as well as there is a lack of related academic research. Thus, this paper seeks to analyze the performance regarding the degree of innovation of travel agencies located in Recife (PE - Brazil) focusing on the supply dimension, as defined by a tool called Innovation Radar, applied in the context of Local Innovation Agents Program (LIA). Data were collected from August 2012 to March 2014. The research is characterized as exploratory and descriptive. Data processing and analysis is conducted under quantitative and qualitative approaches. Considering Bachmann and Destefani (2008)'s classification, it was found that the majority of the analysed firms demonstrate an increase in the scores, moving from a 'little or not innovative" to "occasional or systemic innovative", both based either on the results of the Global Innovation Degree, as well as on the scores of the supply dimension of Innovation Radar. Despite the registered progress, there are still barriers that limit the innovative capacity of these firms.

Keywords | Performance, innovation degree, supply, innovation radar, travel agencies

1. Introduction

Tourism as one of the main international economic sectors, presents significant growth trends, even in a context of global crisis (WTTC, 2009). In Brazil, tourism industry is predominantly composed of micro and small businesses (97%), and stands out for generating jobs and income (employ about 60% of the sector's workforce), including higher rates than officially planned (Costa & Hoffmann, 2014).

For the constant economic prosperity of tourism, the activities of travel agencies are essential. This is a promising segment, formed by a large number of Micro and Small Enterprises (MSEs), which moves more than R $ 60 billion per year in the country (Ministry of Tourism, 2014). It is linked to an extensive supply chain that includes a tangle of companies - hotels, airlines, car rental agencies and restaurants - representing a total of 52 segments of the economy (SEBRAE, 2013).

Similairly to other economic activities, the competitiveness of travel agencies is crucial to their survival and results from the ability of its managers to innovate and to seek to constinuosly upgrade innovations (Machado, Dreher & Gorni, 2009; Salvado, 2009). Aware of this need, the Brazilian Micro and Small Business Support Service (SEBRAE) developed, in partnership with the Brazilian National Council for Scientific and Technological Development (CNPq), the Local Innovation Agents Program (LIA), nationwide, aiming to raise awareness and encourage firms to develop effective forms of innovation (Carvalho, Silva, Póvoa & Carvalho, 2015).

The Innovation Radar (IR) was the strategy used to accomplish that purpose. This tool, originally proposed by Sawhney, Wolcott and Arroniz (2006) and adapted to the reality of Micro and Small Enterprises (MSE) by Bachmann (2008) helped to diagnose the degree of innovation of micro and small tourism firms in thirteen different dimensions in Pernambuco (Brazil). Among them are included twelve travel agencies located in Recife, where the expansion of this segment is considered one of the most expressive in the country.

Since the main innovation actions implemented in these travel agencies includes aspects such as: performance in new markets, launching new products, product without market success removal, changes in the characteristics of services for environmental reasons, significant changes in product design and adoption of technological innovations, this paper seeks to demonstrate the innovation performance of these enterprises, focusing on the supply dimension.

Measuring and assessing innovation in different dimensions derives from a need towards the improvement of organizational performance. However, these strategies in the context of Tourism SMEs remain poorly developed and lack an adequate application framework. Thus, the few tools that fulfill this role deserve special attention (Hjalager, 2010; Carvalho et al, 2015.).

Moreover, in the context of this research, it is found a reduced number of papers that effectively approach the measurement of innovation and performance in the travel agency market (Machado et al, 2009). Thus, this study allows to advance knowledge that will contribute to a greater understanding of the innovation dynamics and trends of this segment. The results of this research may also subsidize the creation of new strategies and public and private sector policies for travel agencies.

Thus, considering the validity of the Innovation Radar as an instrument able to measure the global innovative capacity and business specific dimensions, this study presents the following research problem: concerning the degree of innovation, which is the performance presented by travel agencies, regarding the supply dimension?

The following sections present the theoretical context of the topic, namely the specifity of innovation in tourism, the existing tools for measuring innovation, and the Innovation Radar, focusing on the supply dimension. The research methodology is also approached, as well as the subsequent the analysis and discussion of the results, in order to confront them with the revised theory. The conclusions, present the main contributions and limitations of the study, and referrals for future research

2. Innovation in tourism

As clarified by Brandão and Costa (2014), there are different concepts of innovation, which vary depending on the approach, scientific area and field of application. In general, they are based on the Schumpeterian approach, as well as on the concept advanced by the Organisation for Economic Co-operation and Development (OECD), which gave an essential contribution to the standardization and application of the definition also to the services sector. According to the the Oslo Manual, innovation is defined as "[...] the implementation of new or significantly improved products (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations."(OECD, 2005, p.46).

Gomezelj (2016) believes that the above definitions fully apply to the manufacturing industry and that they have been adapted to the service sector in recent decades. However, the tourism sector is a key sector to evaluate because tourism firms have specific problems, characteristics and processes in each activity.

Hjalager (2010) argues that tourism has key characteristics and thus she adjusts the existing definitions and suggests additional typologies of innovation. In result six types of innovations in tourism are proposed:

(i) Product or service innovations (changes that can be directly observed by the tourist and other customers, with "new" meaning either never-before-seen or simply new to the particular enterprise or destination; these products and services are beneficial for tourists to such an extent that they may decide to purchase them solely based on their newness);

(ii) Process innovations (typically back stage initiatives aimed at improving efficiency and productivity; technology investments are the key factors of such innovations);

(iii) Managerial innovations (new ways of organising business processes, empowering staff, compensating exemplary work with

financial or non-financial benefits and improving workplace satisfaction; methods to retain employees are extremely valuable in the tourism sector, as it is highly labour-sensitive);

(iv) Management innovations (Collaborative structure leading to an improved business performance and tourist experiences)

(v) Marketing innovations (including new marketing concepts, such as loyalty programes and co-production of brands) and

(iv) Institutional innovations (new forms of collaborative/organisational structure, such as clusters, networks and alliances).

These are the taxonomies of innovation that have been adopted or rearranged in several studies. However, it is difficult to clearly distinguish among the five categories of innovation (product, process, management, managerial, marketing and institutional innovations), as they often overlap (Gomezelj, 2016).

Peters and Pikkemaat (2006) emphasize that in tourism, incremental innovations are more relevant, since radical (more visible) innovations are less frequent when compared with the former. According to Fayet (2010), most successful innovations are based on the cumulative effect of those incremental changes or the creative combination of existing techniques, ideas or methods.

Pinto and Cruz (2011) state that creation and offer of new products and services in the tourism chain are not frequent. They are usually derived from the pressure of suppliers, customers and even competitors. For these authors, many firms insist on reactive behaviour. In addition, Sundbo, Orfila-Sintes and Sorensen (2007) and Weidenfeld, Williams and Butler (2010) stress that innovations in tourism industry are easy to imitate because they are highly visible and their technological content is often unsophisticated, that is, they do not involve

significant technological advances and can rarely be patented.

Hauser, Tellis and Griffin (2006) argue that innovative capacity is limited by the ability to learn, generate and absorb knowledge. The authors also indicate the need for diverse articulations to absorb the tacit knowledge existing in the environment. In this sense, Brandão and Costa (2014) assert that in tourism SMEs, the majority of human resources present low levels of education, or education in other areas (not related to tourism) which can lead to lack of ability to create and use knowledge for the development of innovation.

In general, the knowledge related to the implementation of innovation in SMEs is unsatisfactory, even in Brazil (Machado et al., 2009). It seems appropriate to justify this, based on a conception of Bes and Kotler (2011): it still reigns in the entrepreneur the thought that innovation must necessarily be something completely new and that involves high technology and high investments.

Bittar, Siqueira, Luz and Chacon (2014) consider that there are obstacles that prevent the majority of Brazilian entrepreneurs from making effective commitments to innovation. They do not have enough knowledge to lead them to innovate. They do not yet consider innovation as a crucial factor for the business. In fact, there are some constructive pro-innovation elements, which are either absent or deficient in the country, namely: the aversion to risk, the dependence of the State, little or no investment in Research & Development (R&D), lack of pro-innovation culture (protected market, option to buy technology, etc.) and a reduced approximation or lack of more pragmatic interlocution between universities and enterprises (Bittar et al., 2014).

3. Innovation Radar and its dimensions

Measuring the degree of innovation of an or-

ganization is not an easy task, since there is no consensus about the most appropriate model for accomplishing it (Cavalcanti, Cavalcanti Filho & Oliveira, 2012). In Bautzer's (2009) conception, a good diagnosis should, through a formal structured process, identify elements such as flexibility, competitiveness, degree of vulnerability and capacity to implement new strategies.

In a favourable perspective to this need, Sawhney, Wolcott and Arroniz (2006) proposed a tool called Innovation Radar (IR), which identifies the dimensions through which a firm can search for ways to innovate. Initially, this tool brought together four macro-strategic dimensions known as business anchors, namely: (i) the supply created for the consumer market; (ii) the clients served and their perceptions about this process; (iii) the productive, sales and management processes; and (iv) the business/commercial structure (Sawhney et al 2006). In this paper, the results of this study are presented. These dimensions contemplate the technique 3W1H (What?, what will be done - action, steps, description; Where?, where will be done - place; Who?, by whom will be done - responsibility for the action and How?, how will be done - process).

Sawhney et al. (2006) decided to add eight dimensions: platform, brand, solutions, relationship, value aggregation, organization, supply chain, and network. In turn, Bachmann and Destefani (2008) added the concept of environment conducive to innovation or innovative ambience to the 12 dimensions of Sawhney et al (2006). The relevance of this contribution can be understood and justified, among other aspects, by the influence of the human resources to the in their firms, contributing to the process of incorporation of the innovation culture.

In Table 1, the dimensions of innovation proposed by Sawhney et al (2006) and complemented by Bachmann and Destefani (2008) are presented,

as well as a brief definition of each dimension. A radar chart is used to make the presentation easy to understand and highlight the most significant results when the aggregated values of various dimensions are compared. According to Ketokivi and Ali-Yrkkö (2010), innovation actions have impacts on multiple dimensions of radar, but differently for each company. Regardless of the origin of the innovation, whether in the launch of a new product or a sales strategy, or other action, there will be an impact in the other dimensions. The authors consider the IR a measure of maturity of the process of innovation in SMEs, based on their processes, results and on the importance given to knowledge as a primordial tool for innovation and that, therefore, aims at competitiveness.

Oliveira, Cavalcanti and Paiva (2013) point out a disadvantage of the tool: "the innovation radar, especially the degree of innovation, has a problem that is not to approach firms taking into account the heterogeneity of the sectors to which they belong."(Oliveira et al., 2013, p.15). The authors highlight the rigour and attention that should exist when adapting questions of the Radar to the industry and service sectors, including tourism. In accordance, Ketokivi and Ali-Yrkkö (2010), conclude that the impact and influence that the innovation actions of a certain radar's dimension exert on others, vary among sectors.

According to Bachmnn and Destefani (2008), the determination of the innovation degree following the Radar is a structured method that can offer the following advantages: quantitative measurement, reduced subjectivity, references for improvements and possibility of sectoral, regional and historical evaluations. The evaluation of the degree of innovation is based on three pillars: what to evaluate (dimensions of innovation), how to measure (used scale) and what period of time to consider.

Table 1 |Definition of the dimensions of the Innovation Radar

Dimensions	Definition
Supply	Development of products with innovative characteristics
Process	Redesign of productive processes in order to increase the operational efficiency
Customers	Identification of customer needs, or new niche markets
Places	Identification of new forms of commercialization and/ or distribution
Platform	Relationship with the adaptability of the production system in view of the diversity of demanded products
Brand	How companies transmit their values to customers
Solutions	Systems or mechanisms to facilitate customer's difficulties
Relationship	Relationship between customer's experience and the firm
Value aggregation	Improvements in identifying the value of products perceived by customers and suppliers
Organization	Improvements in the structure of the firm
Suppy Chain	Increase logistics with suppliers and customers, internal or external
Network	Communication between the elements in the supply chain
Innovative ambience	Relationship with the firm's professionals and who collaborate with the culture of innovation

Source: Adapted from Sawhney et al. (2006) and Bachmann and Destefani (2008)

The application of this instrument allows an analysis and demonstration of the innovations carried out by the company during the previous three years, at the same time as it explains its capacity to be (or not) competitive. It may be used at different times according to the needs of the firm. The Global Innovation Degree (GDI) evolves (or not) in function of the behavior of the scores of each one of the thirteen dimensions (Bachmann & Destefani, 2008).

For Carvalho et al. (2015), the IR can effectively be used as a tool that provides advantages for companies, since it allows them to visualize how they are positioning themselves in the conduct of the business and to identify where are obstacles to improvement (dimensions little explored), establishing, therefore, actions that favour the upgra-

ding of its performance and competitive capacity.

4. Metodology

This study consists of an exploratory and descriptive research. Data analysis includes quantitative and qualitative approaches. The study was theoretical-empirical, using primary data, through questionnaires used in the second edition of LIA program in Pernambuco from August 2012 to March 2014. In addition, during the execution and attendance of the program, some entrepreneurs' speeches were recorded (duly authorized) and thus, their statements were used in order to complement the quantitative data. Empirical data

were confronted with the main theories discussed.

Non-probabilistic sampling was used, which as Mattar (2005) asserted is one in which the selection of the elements of the population to compose the sample depends at least in part on the researcher's judgment. In this sense, the data collected were gathered in twelve SMEs that attended the program.

The local innovation agents were fellowships of CNPq for two years. They were trained in innovation by SEBRAE, and supervised by a senior business consultant. The agents accompanied the firms during the following stages: after adhesion, an initial firm diagnosis was done through the IR (stage R0). Then, a report including an action plan with suggestions for innovative actions (to be implemented under the responsibility of the firm) and the indication of possible solution providers were delivered to the entrepreneur. In a second moment, a new diagnostic cycle (stage R1) was carried out to observe the evolution of the firm and new actions were proposed. The cycle finished when at least three of those actions are implemented. It was the moment to deliver the final report (stage R2), demonstrating the evolution (or not) of the firm performance regarding the degree of innovation and the main results achieved.

Data collection was carried out through the application of IR with the purpose of measuring the degree of innovation of the companies in the 13 dimensions already presented, through objective questions (multiple choice), addressed to the directors and partners of the firms. The answers for each one had scores that allowed the calculation of the Global Innovation Degree (GID).

The measurement was made with a 3 point Lickert scale includes the following options (but with an increased graduation from 1 to 5): (1) little or no innovative organization; (3) occasional innovative organization and; (5) systemic innovative organization. It was established that if the score obtained (either by specific dimension or global degree), would vary between 1.0 and 3.0, it means that it is a little or non-innovative organization. If the variation is between 3.0 and 5.0, it indicates that the company innovates occasionally or systematically (Bachmann & Destefani 2008).

The data collected from the firms were analyzed by specialists, adapted, inserted, processed and translated into report for the entrepreneurs. These reports, while showing the managerial performance, the evolution (through charts and tables) and justifications of the degree of global innovation and per each dimension during the stages (R0, R1 and R2), made possible the construction of scenarios that outlined the strengths, weaknesses, opportunities and threats (SWOT) analisys. Also, based on this information, action plans were prepared, in accordance with the priority needs of them.

5. Results

5.1. Profile of managers and companies

Regarding the gender, it was identified the significant male predominance in the management of the firms, in a percentage equivalent to 75% of the sample. In many cases, agencies are legally represented by heads of households, but are also managed by members of the family, who are often partners. However, for the purposes of clarification, the presented percentage contemplates only the legal representatives.

About half of the respondents stated that they had completed at least one graduation course (in Administration or Tourism), followed by postgraduates (25%) and those who only finished high school (17%). Only one manager regretted not having completed higher education (8%). It was noticed that those act intuitively in their business decisions, only based on the daily experience.

Regarding the age group, the predominance of

adults between 30 and 49 years old was identified among the respondents (50%). Adults aged between 50 and 60 years are equivalent to 33% of the sample and the remaining ones (17%) are between 20 and 29 years old. It was noticed a strong resistance, mainly by the public between 50 and 60 years old on the adhesion to the Program. In fact, the moments of awareness and follow-up were particularly opportune to demystify the concept of innovation, present in the perception of these entrepreneurs, as predicted by Bes and Kotler (2011). The demystification of these ideas considered the conception of Bautzer (2009).

In what concerns the size, 25% of the firms are small, with the majority (75%) being micro-enterprises. The "time of atuation and experi-ence on the market"item divided them into three groups: between 1 and 5 years (50%); between 6 and 9 years 25%, and 10 years more (25%). The minimum and maximum number of employees under a formal contract system in all travel agencies ranged from 2 to 5.

5.2. The Global Innovation Degree (GID) of the travel agencies

The IR diagnosis was applied three times (steps R0, R1 and R2) in all agencies. Scores were generated for each one of the thirteen dimensions of the diagnosis, providing the results of the Global Innovation Degree, as shown in table 2:

Table 2 | Global Innovation Degree (GID) of the travel agencies

Firms	Global Innovation Degree(GID)		
	GID(R_0)	GID(R_1)	GID(R_2)
A	2,9	3,2	3,8
B	2,5	2,8	3,5
C	3,4	3,8	4,3
D	3,4	3,6	3,9
E	2,5	2,9	3,6
F	2,8	3,4	3,9
G	3,0	3,4	4,0
H	2,8	3,6	4,2
I	2,7	3,1	3,9
J	2,3	2,6	3,2
K	2,9	3,2	3,6
L	3,1	3,6	4,3

Source: Own construction

From these results, it is possible to conclude that there was increase of the GID in all the analyzed companies. These advances were unanimous both from stage R0 to R1 and from R1 to R2, showing the fulfillment or conclusion, by the entrepreneurs, of the actions suggested in the plans or through the accompaniment of the local innovation agent.

It was found that in all the travel agencies, after the LIA Program intervention, the number of implementations of incremental innovation actions, especially in the improvement of products or services, was very expressive, as will be seen later. This finding corroborates the Peters and Pikkemaat (2006) conception that in tourism this type of innovation occurs much more frequently and is of higher relevance.

Taking into account the classification of Bach-

mann and Destefani (2008), it can be said that most of the companies that started the program with a score that classified them as little or non-innovative, reached stage R2, achieving a level that qualified them as occasional innovators or systemic innovators.

The strategy envisaged by the LIA program to provide the entrepreneur, through the IR, with an analysis of the business situation, identifying elements such as flexibility, competitiveness, degree of vulnerability and ability to implement innovative actions, is relevant, successful and effective, according to the perspective of Bautzer (2009). Its importance was further explained by the statement of one of the entrepreneurs: "Participating in the Program was very useful [...]. Diagnosing the company and the forces that interfere with its operation were fundamental to defining the most important actions to be developed"(A.S.L, 2014)[1]

This statement also includes the belief of Carvalho et al., (2015), according to which the sensiti-

zation and stimulation of the practice of innovation through the LIA program, constitute a successful initiative, with significant advantages to the entrepreneurs. Throughout the program, it was sought to stimulate the practice of sustainable innovation, through gradual improvements in products or services, organization, marketing or company processes. All efforts were made based on guidelines. Thus, a step-by-step approach was followed, as suggested by Bautzer (2009), Fayet (2010) and Bes and Kotler (2011).

5.3. The Global Innovation Degree (GID) of the travel agencies

The scores related to the supply dimension, as well as the GID, presented significant increases throughout the execution of the LIA program's stages. Table 3 shows the evolution of the scores registered in the supply dimension.

Table 3 | Evolution of the scores obtained in the supply dimension

Firms	Comparison of the scores obtained in the supply dimension		
	Supply (R_0)	Supply (R_1)	Supply (R_2)
A	2,0	2,5	3,5
B	1,0	1,5	2,0
C	1,5	2,5	3,0
D	3,5	3,5	4,0
E	1,0	2,5	3,0
F	2,0	2,5	3,5
G	3,5	4,0	4,0
H	1,0	2,0	2,5
I	2,0	2,5	3,5
J	1,5	2,0	2,5
K	2,0	2,0	2,5
L	2,0	2,5	4,0

Source: Own construction

---

[1] A. S. Lins, personal interview, 9th Jan. 2014. Recife, 2014. 1 archive. mp3 (23 min.).

As presented in table 3, none of the analyzed companies reached step R2 with the same score obtained in the initial stage. In 83% of the cases, this evolution occurred both from R0 to R1, and from R1 to R2. The data also shows that the improvements in scores were insufficient only in four companies (23%), as they remained little or non-innovative. The other firms became occasional or systemic innovators, based on the classification of Bachmann and Associados (2008). Many incremental innovative actions, besides contributing to increase the supply dimension scores have positively impacted other radar dimensions, as observed by Ketokivi and Ali-Yrkkö (2010). In fact, these results have demonstrated that there is a close interplay among the innovation dimensions (Gomezelj, 2016).

5.4. The Global Innovation Degree (GID) of the travel agencies

The presentation of the results of the variables comprising the supply dimension was divided in: (1) new products; (2) enterprising; (3) response to the environment; (4) design; and (5) technological innovations. In stage R0, the radar questions focused on the changes made in the firm in the last three years. Throughout the stages, this interval of time was reduced, according to the situation of each firm. Based on the concept that an innovative firm has a relevant part of its revenue associated with the creation of new products or services, the evaluation of the innovation degree included the question: "Has the company successfully launched any new product or service in the market in the last months?"The majority of the travel agencies (more than 80%) claimed to have launched new services between the phases R0 and R1 and from R1 to R2. This demonstrates that the trend towards the creation of products and servi-

ces, initially seen as unlikely, has changed over the course of the program's intervention.

Another factor of influence observed in this item relates to the changes in the conceptions of the entrepreneurs regarding innovation and its importance. The speech of a businessman (verbal information) who started the Program with a score of 2.0, reaching 2.5 in the following stage and 4.0 in R2 phase reinforces this influence, while justifying the progress: "[. . .] From 2012 until now, we created five services: the express delivery, home delivery, VTN card, credit card with the company's flag and offer of customized packages, exploring new destinations"(A.S.L., 2014) [2]

The express delivery and the VTN (Visa Travel Money) card were also mentioned by other entrepreneurs. It has the purpose of sending funds (money) from Brazil to abroad, upon confirmation of payment from the customer. In turn, the VTN card is an international prepaid card, that is rechargeable in foreign currency and allows the customer to make purchases in the Visa network and withdrawals in ATMs with Visa Plus flag, always in the local currency of the destination. The following speech (verbal communication) shows the impact of this innovation on the company G: "[...] Yes, the creation of the VTN card and the express delivery are products that were very successful [...] they contributed to increase our revenue in more than 20% last year compared to 2012" (P. T. G., 2014) [3]

From the application of the diagnostics, interviews, and the observations during the monitoring of the travel agencies' performance, it was verified that they assumed a reactive behavior, offering services in result of the pressure of customers and suppliers, as asserted by Pinto and Cruz (2011).

Despite the increase in the scores, and based on Hauser et al. (2006), it can be argued that the innovative capacity of most of the firms in this research was partially compromised, as business ow-

---

[2]A. S. Lins, personal interview, 9th Jan. 2014. Recife, 2014. 1 archive. mp3 (23 min.).
[3]P. T. Gomes, personal interview, 22th Jan. 2014. Recife, 2014. 1 archive. mp3 (23 min.).

ners declared and demonstrated to act intuitively, based only on their experience. It is worth remembering the strong influence that the capacity to learn, to generate and to absorb knowledge exerts on the ability to innovate. That are diverse articulations to absorb the tacit knowledge existing in companies that are also indispensable (Hauser et al., 2006). However, these needs are incipient or non-existing practices in the companies analyzed. The lack of qualified and internally trained employees (corroborating Brandão and Costa's, 2014 conceptions), the absence of inter-company partnerships and among companies and universities as Bittar et al., 2014 pointed) were some of the most frequent complaints presented by most business owners.

Regarding the Enterprising question, that is, the willingness to take risks, the evaluation through the IR included the following question: "Has the company taken out of the market any product or service that was not successful?"The business owner C's answer (verbal communication) contemplates the reality of four other business men: "Yes, we had to take out the home delivery service because it was something that brought many of problems and unnecessary costs for us [...] we had bad luck to find rogue bikers and in many cases, our customers were bored. We are always ready to please the customers"(R. L. C., 2014) [4]

The creation of new services is as susceptible to failure as to success, but it is important that managers have the sensitivity to understand and take out the market products or services that do not please their customers, nor attend their needs and expectations. That is in accordance with Pinto & Cruz's (2011) notion, according to which clients exert strongly influences on product and services innovations.

The lack of qualified and internally trained employees (as argued by Brandão and Costa, 2014), the absence of inter-company partnerships and between companies and universities (as stated by

Bittar et al, 2014) were some of the most frequent complaints presented by entrepreneurs.

With the rapid evolution of consumer behaviour, which is increasingly demanding, especially in terms of sustainability issues, the questionnaire also included the question: "In the recent months has the company changed any characteristics of its products or services for environmental reasons?"Only three business managers said they had done so, citing as example the adoption of strategies such as: the use of recyclables for the production of promotional materials and gifts, document digitization, digital marketing and the certification for sustainability support.

The fourth and last item of the dimension refers to the technological innovations that companies have adopted from 2012 to 2014. As communication becomes increasingly necessary to reach the target audience, design is essential. Not only packaging, but regarding the product itself. In order to evaluate this question, business men were asked: "did any significant changes in aesthetics, design or subjective order occur in more than one product or service"?

The amount of companies that undertake significant transformations of subjective order in their products or services, in the aesthetics and in the design was more expressive. Among the examples were: redesign or creation and registration of brand, personalization and distribution of gifts to customers, workplace decoration, infrastructure reforms, expansion of physical space, opening subsidiaries, and equipment and resources acquisition to better serve customers. In the following report (verbal communication), other examples of innovative actions of subjective order and of aesthetics made in one of the analyzed agencies are mentioned: "The screen, illustrating travel pictures and testimonials of our clients was a sucessfull strategy [...] They found the new logo design better, which we also made a point of showing on

---

[4]R. L. Canejo, entrevista pessoal, 20th Feb. 2014. Recife, 2014. 1 archive. mp3 (21 min.).
[5]F. M. Ishoa, personal interview, 24th Jan. 2014. Recife, 2014. 1 archive. mp3 (42 min.).

the website, cards letterhead documents of the firm"(F.M.I, 2014)[5]

The imitative character of the innovations, as well as the low sophistication of its technological content (lack of involvement of firms with more advanced technologies), difficulties and lack of interest in brand and patent registration were mentioned by almost all companies (only 1 of the 12 mobilized efforts to register the brand). All these perceptions contemplate the considerations anticipated by Sundbo et al. (2007) and Weidenfeld et al. (2010).

None of the surveyed companies has reported any investing in R&D, although that is a common practice in technology-based companies, as Ketokivi and Ali-Yrkko (2010) have pointed out. Obstacles that hinder greater advances in innovation, as pointed out by Bittar et al. (2014), have shown to be in line with the results presented in this research.

6. Conclusions

This paper fulfilled the role of evaluating innovation degree, focusing on the supply dimension in the light of the IR in twelve travel agencies in Recife participating in the Local Innovation Agencies. The literature was reviewed and brought up relevant concepts and dialogues between some of the main authors that approach the phenomenon of innovation in the tourism and services context. Subsequently, these discussions were confronted with the empirical results.

The intervention of the LIA Program in the analysed firms was perceived as beneficial by the travel agencies managers due to the implementation of strategies that culminated in the improvement of the results of the initial the diagnostic. Taking into account the classification of Bachmann and Destefani (2008), it can be said that most companies started the program with a score that classified them as little or non-innovative and reached stage R2, in a level that qualified them as occasional or systemic innovators, both based on the results of the Global Innovation Degree and supply dimension scores.

From the results, in agreement with the theoretical discussions, it can be concluded that, despite the efforts that have caused significant contributions in these trave agencies, there are still barriers that limit their innovative capacity. In fact, the research reinforced the idea that the evolution of the capacity to innovate is also conditioned by forces external to the companies in such a way that regardless of the success of the efforts to develop innovation, if they occur in an isolated way, they limit the significance of the results relative to the whole.

Some research limitations, such as spatial concentration, the relatively small sample, the assessment focused on only one dimension of the radar, restricted the possibilities of making greater generalizations and confirm or refute theoretical discussions regarding the reality of tourism and more precisely of the travel agency segment, even at the regional level and there may be bias due to self-reported measures. It is therefore suggested the development of new research with more expressive samples covering other cities, states and regions of the country served by the LIA Program, focusing on evaluations of other segments of the tourism value chain and on all dimensions of the IR tool. It is stressed the usefulness of complement this study data with other tools and data.

Comparing the results of studies obtained in different areas of the national territory, and identifying the similarities and differences in the innovation processes contributes to a better understanding of the reality and trends of the industry and, therefore, to the elaboration of policies and strategies of public and private scope that solve or upgrade the effect on possible identified problems.

Finally, it was verified that the IR is an effective tool to measure the degree of innovation in

MSEs, but based on the identified fragilities regarding the best suitability in the tourism industry, it is recommended the development and application of models or tools that take into account all the specificities of tourism MSEs.

Acknowledgments

Referências

Bachmann, D. L. & Destefani, J. H. (2008). Metodologia para estimar o grau de inovação nas MPE. Curitiba.

Bautzer, Deise. (2009). Inovação: repensando as organizações. São Paulo: Atlas.

Bes, F. T. & Kotler, P. (2011). A Bíblia da Inovação: princípios fundamentais para levar a cultura da inovação contínua às organizações. São Paulo: Lua de Papel..

Bittar, A. A. M., Siqueira, D. P., Luz, L.C. & Chacon, A. S. (2014). A dificuldade de pavimentar o caminho para a inovação tecnológica no Brasil: o retrato dos rankings, alguns indicadores e obstáculos à sua sustentabilidade. *Cad. Prospec,* 7(4), 472-482. Doi: 10.9771/S.CPROSP.2014.007.048

Brandão, F. & Costa, C. (2014). Inovação em Turismo: Uma abordagem sistémica e territorial. In: C. Costa; F. Brandão; R. Costa & Z. Breda (eds.). *Produtos e competitividade do turismo na Lusofonia.* (pp.70-89). Aveiro, Portugal: Escolar Editora.

Camisón, C. & Monfort-Mir, V.M. (2012), "Measuring innovation in tourism from the Schumpeterianandthedynamic-capabilitiesperspectives", *Tourism Management*, Vol.33 No.4,pp.776-789.

Carvalho, G. D. G., Silva, W. V., Póvoa A. C. S. & Carvalho, H. G. (2015). Radar da inovação como ferramenta para o alcance de vantagem competitiva para micro e pequenas empresas. *Revista de Administração e Inovação,* 12(4), 162-186.

Cavalcanti, A. M., Cavalcanti Filho, A. M. & Oliveira, M. R. G. (2012). Análise do desempenho em inovação das micro e pequenas empresas de TIC em Pernambuco. *Revista Brasileira de Administração Científica*, Aquidabã, v.3, n.2, p.41-56.

Costa, H. A. & Hoffmann, V. E. (2014). A cooperação entre micro e pequenas empresas (MPE) aglomeradas como recurso estratégico em destinos turísticos. In: C. Costa; F. Brandão; R. Costa & Z. Breda (eds.). *Produtos e competitividade do turismo na Lusofonia.* (pp.39-50). Aveiro, Portugal: Escolar Editora.

Fayet, E. A. (2010). Inovação: conceitos e teorias. In: Fayet, E. A. (Org.). *Gerenciar a inovação: um desafio para as empresas*. Curitiba: IEL.

Gomezelj, D. O. (2016),"A systematic review of research on innovation in hospitality and tourism", *International Journal of Contemporary Hospitality Management,* Vol. 28 Iss 3 pp. 516 – 558. Doi: http://dx.doi.org/10.1108/IJCHM-10-2014-0510

Hauser, J., Tellis, G.J. & Griffin, A. (2006). Research on Innovation: A Review and Agenda for Marketing Science. *Marketing Science,* 25(6), 687-717.

Hjalager, A. M. (2010). "A review of innovation research in tourism", *Tourism Management*, Vol.31, 1-12.

Ketokivi, M. & Ali-Yrkko, J. (2010). Innovation does not equal R&D: strategic innovation profiles and firm growth. Paper presented at Keskusteluaiheita, Discussion Papers, Helsinki, The Research Institute of the Finnish Economy, 22p.

Machado, D. P. N., Dreher, M. T. & Gorni, P. M. (2009). Inovação em serviços turísticos: a percepção desse processo em agências de viagens. *Observatório de Inovação do Turismo*, 4(1), 1-14.

Mattar, F. (2005). *Pesquisa de marketing*. São Paulo: Atlas.

OCDE. *Manual de Oslo*. (2005). 3ª ed. FINEP/OECD.

Oliveira, M. R. G., Cavalcanti, A. M. & Paiva Jr., F. G. de. (2013). Mensurando a inovação por meio do grau de inovação setorial e do característico setorial de inovação. In: *Simpósio de Administração da Produção, Logística e Operações Internacionais – SIMPOI*, São Paulo, 16, 1-16.

Peters, M. & Pikkemaat, B. (2006). Innovation in tourism. *Journal of quality Assurance in Hospitality & Tourism*, 6(1), 1-6.

Pinto, H. & Cruz, A. R. (2011). "Sistemas de Inovação e de Turismo: Complementaridades na Região do Algarve", *Journal of Tourism and Development* [Revista Turismo & Desenvolvimento], 15.

Salvado, J.O.M.G. (2009). Agências de viagens do futuro: um arquétipo para Portugal. (Dissertação de Mestrado não publicada), Universidade de Aveiro.

Sawhney, M., Wolcott, R. C. & Arroniz, I. (2006). The 12 Different Ways for Companies to Innovate. *MIT Sloan Management Review,* v.47, n.3, p.75-81.

SEBRAE. (2013). Agências de Viagens tem seu grau de competitividade avançado. Agência SEBRAE de notícias. Retrieved from: `www.revistapegn.globo.com/ Revista`

Sundbo, J., Orfila-Sintes, F., & Sorensen, F. (2007). The innovatine behaviour of tourism firms: comparative studies of Denmark and Spain. *Research Policy*, 36(1), 88-106.

Weidenfeld, A., Williams, A. & Butler, R. (2010). Knowledge transfer and innovation among attractions, *Annals of Tourism Research*, 37(3), 604-626.

WTTC. (2009). Travel and Tourism Economic Impact 2009, Executive Sumary, *World Travel and Tourism Council*