THE EFFECT OF MANAGEMENT PRACTICES ON THE BUSINESS INCUBATORS PERFORMANCE: TOWARDS AN AGENDA FOR STRATEGIC ENTREPRENEURSHIP

Selma Regina Martins OLIVEIRA (Orcid Id: 0000-0003-0591-4955)
Sandro TRENTO (Orcid Id: 0000-0002-5037-3409)
Fluminense Federal University, Brazil
**University of Trento, Italy*

ABSTRACT

This research aims to evaluate the effect of management practices on the business incubators (BIs) performance towards an agenda for strategic entrepreneurship. The study was applied in BIs from Chile, Israel and Italy. A survey was conducted with experts. Data were collected through a scalar questionnaire, in which the specialists gave their judgments. Soon after this procedure, the data were analyzed from the application of statistical method using R and SPSS Statistics software, multi-criteria analysis and multivariate analysis techniques, with the support of the Electre III, Compromise Programming and Promethee II methods. There is a gap in the literature concerning management practices and BIs performance towards strategic entrepreneurship in the three countries. It is hoped that this research will stimulate future studies from a suggested agenda. Additionally, it is hoped that this study can improve the decision-making process of BI entrepreneurs and public managers, expanding investments in innovative businesses such as BIs. Therefore, the management policy for business incubators in this category should be anchored by efficient strategic planning. Finally, this study helps decision-makers, BIs managers or governments about how best to plan their strategies to achieve better performance for creating value for customers or businesses.

Keywords: Management Practices, Business Incubators Performance, Strategic Entrepreneurship, Chile, Israel and Italy

INTRODUCTION

Business incubators (BIs) constitute a strong instrument to promote innovation, entrepreneurship (Aerts, Matthyssens, and Vandenbempt, 2007), economic development and employment growth (AL-Mubaraki and Busler, 2014), with several facilities, from office space and capital to management support and knowledge (Aerts, Matthyssens, and Vandenbempt, 2007), as well networks for contacts, to accelerate the development of entrepreneurial companies (AL-Mubaraki and Busler, 2014). In other words, an incubator provides resources like space, goals, marketing, management, structure and financing to knowledge and technology intensive new technology-based firms (NTBFs) (Aaboen, 2009). BIs is spreading all over the world and require considerable money investments and this way, the identification of BIs management practices is a substantial issue; and also it is important to evaluate the performance of these instruments (Bergek and Norrman, 2008). To Aerts, Matthyssens, and Vandenbempt (2007), "the success of an incubator depends on the performance [...]".

Thus, "[...] evaluations are needed to understand whether business incubation is effective [...]' '(Ozdemir and Sehitoglu, 2013). In this sense, this research aims to verify the effect of management practices on performance based on value creation, towards strategic entrepreneurship. The study was applied in BIs in Chile, Israel and Italy. To Barney (1991, p. 102), "sustainable competitive advantage is based on implementing a value creation strategy […]" (Memili, Fang and Welsh, 2015) and only value creation is not sufficient for an impact superior in firm performance [...] (Mizik and Jacobson, 2003; Lepak et al., 2007; Reitzig and Puranam, 2009). Acording to Shamah (2012), successful organizations create value for customers, employees, investors, suppliers and others (O'Malley, 1998). In this way, entrepreneurship has

long been considered as the source of job creation and an engine of economic growth (Chu et.al., 2011), particularly the strategic entrepreneurship [...] (Dogan, 2015), creating value and enabling organizations to achieve competitive advantage.

Thus, this study requires a balance between management practices, value-based performance, and strategic entrepreneurship in light of BIs in the three countries. Thus, there is a gap from literature concerning about this object. This choice is justified by the relevance that entrepreneurship and BI assume as an instrument to boost economic development and innovation. This way, it is hoped that this research will stimulate future studies from a suggested agenda. Additionally, it is hoped that this study can improve the decision-making process of BI entrepreneurs and public managers, expanding investments in innovative businesses such as BIs. Therefore, the management policy for business incubators in this category should be anchored by efficient strategic planning. Thus, this study was based on the questions as follows:

Q1: What are the effects of management practices on BIs performance in perspective of value creation for customer (VCC); value creation for economy of region (VCE); and value creation for business (return) (VCB), from Chile, Israel and Italy?

Q2: What are the effects of management practices on BIs performance in perspective of (global) value creation performance from Chile, Israel and Italy?

From the answers to these questions, an agenda can be presented to drive strategic entrepreneurship, such as: What are the main challenges to adopting management practices and strengthening value creation for customers (BIs)? How can entrepreneurs encourage value creation for stakeholders in the supply chain? [...] Others. Within this context, this paper is structured according to the following sections: background theoretical, methodology, results and underlying analyses, the paper concludes with the final considerations.

LITERATURE REVIEW

Entrepreneurship and innovation have been widely accepted as mechanisms to support the creation of high value-added jobs and economic development (Özdemir and Sehitoglu, 2013). To Dogan (2015), BI is an important strategy to foster entrepreneurship and innovation. Today's companies have to be strategic and entrepreneurial and with the greatest potential to create value for customers and other stakeholders (Dogan, 2015). Considering the relevance of BIs, identifying management practices is essential. According Ferreira (2018), a practice can be understood as the processes that a company applies to improve the way it manages its business (Hanson and Voss, 1995). The basic subsidies of a practice are routines that are often standardized with institutional rules and operating procedures (Wellstein and Kieser, 2011). The term management considers developing things effectively through people with a view to achieving the desired results, combining leadership communication and people skills (Lucke, 2011). The identification of management practices is elementary in the context of this research, considering that the objective is to evaluate the effects of management practices on the performance of BIs in Chile, Israel and Italy. To Ferreira (2018), the purpose of measuring performance is to help predict future actions and performance based on historical data, help identify areas that need management attention, and areas considered successful (Mobley, 2004, p. 374). According to literature (Sonnentag and Frese, 2002; Abbad, 1999; Fernandes; Fleury; Mills, 2006 apud Brandão, Borges-Andrade, Guimarães, 2012), performance is a concept associated with the achievement of results, expresses the idea of action to achieve objectives, judgeable in terms of adequacy, efficiency and effectiveness, refers to the results achieved by it in a certain period, which can be assessed by quantifiable parameters called indicators. To Barbero et.al. (2012), an incubator is justified based on superior innovation performance. Although there are a variety of measures of incubation performance or outcomes such as occupancy rate, added value of incubator service [...] jobs and wealth created (Phan et al. 2005, Chan and Lau 2005, Hackett and Dilts 2008) number of patent applications per firm (Colombo and Delmastro, 2002); there is no consensus. Thus, we evaluated the performance based on value creation in perspective economic and finance, customers and business return.

RESEARCH DESIGNER

This research was addressed to BIs in Chile, Israel and Italy (Survey). We investigate the "management practices" in BI performance in different sectors. Data were collected using a scalar questionnaire prepared from specialized literature. Previously, the instrument was pre-tested with business incubators managers. The pilot interviews served as a pre-test for instrument external validation (with experts). The purpose of the pretest was to eliminate the possible inconsistencies identified in the instrument, such as degree of compreehension, redundancies, time to answer, others. The questionnaire was translated to Spanish, English, Italian and Hebrew. The instrument was prepared according to sections dealing with: general information of incubators, management practices of BIs, priorization of management practices and its effects on outcomes performance. The actual survey was carried out between April and June 2019, which involved 97 specialists. Of the 97 specialists, 85 completed questionnaires were retuned. Thus, the sample comprised 85 specialists. This sample is sufficient to carry out the analysis. The questionnaire was sent to the respondents through Googleforms and email. The experts were selected by technical and scientific criteria, with experience and knowledge of: innovation, business, technology, knowledge, business incubators, project management in investigated incubators, strategies and management, and the following skills: Managers of BIs and policy makers (government). To achieve the outcomes with greater precision, were applied the methods and techniques as follows: Software R, Law of Categorical Judgments psychometric scaling method (Thurstone 1927), multicriteria analysis, and neuro-fuzzy technology. Next, these procedures are detailed.

The research was elaborated as follows:

Phase 1: Identification and grouping of management practices and conceptual framework of BIs in Chile, Israel and Italy

Phase 2: Management practices and its effects on BIs performance (outcomes) in Chile, Israel and Italy

Phase 3: Assessing the Impacts of management practices on Global Value Creation Performance Next, these procedures are detailed.

Phase 4: Identification and grouping of management practices and conceptual framework of BIs in Chile, Israel and Italy

In this phase, at first, we identified (2789) the independent variables of the conceptual framework based on literature (Ferreira and Oliveira, 2018) from Emerald, IEEE, ISI Web of Science and Science Direct. For better understanding, these practices were grouped based on process of clustering. In order to calculate similarity between management practices, Euclidean distance was used. This procedure was based on "R". To identify the best cluster quantity were performed tests using dendogram (grouping hierarchically). For better characterization of groups, we used Term Cloud (Figure 1).

Figure 1. Word Clouds – Keywords of the Clusters (Based on literature (Ferreira and Oliveira, 2018)

Based on word clouds, we presented the most important management practices.

- **Group 1** – Organizational Capacity Management (OCM): The strongest words in this group are: Organization Capacity
- **Group 2** – Information System Management (ISM): Here, the strongest word in this group is: System.
- **Group 3** – Process Flow Management: The strongest word in this group is: Process Flow
- **Group 4** – Risk Management: In this group, the strongest word in this group is: Risk
- **Group 5** – Projects Leadership Management (PLM): The strongest word in this group are is: Team Management
- **Group 6** – Clients Management (CM): This group, the strongest word in this group is: Clients Satisfaction
- **Group 7** – Innovation Management (IM): Here, the strongest words in this group are: New products and Innovation
- **Group 8** – Strategic Planning Management (SPM): In this group, the strongest words are: Strategy and Planning.
- **Group 9** – Supply Chain Management (SCM): The strongest word in this group is: Supply Chain Management
- **Group 10** – Best Practices Management and Ethics (SCM): The strongest words in this group are: Best Practices and Ethics
- **Group 11** – People Management (PM): The strongest words in this group are: Employment, Training and Program

Based on Terms Cloud, we identified the independent variables (IVs).

Conceptual Framework: Constructs and propositions

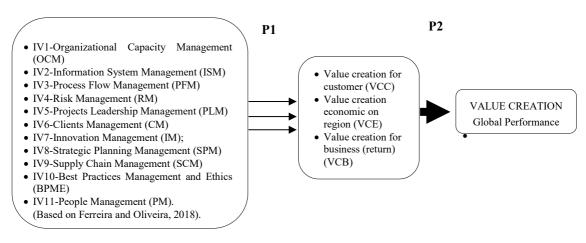Figure 2 shows the conceptual framework for the current study.

Figure 2. Conceptual framework

Figure 2, which illustrates the essential constructs included in this study, will serve to guide subsequent discussions. From the conceptual framework, the following independent variable, dependent variable and prepositions were made:

- **Independent Variables (IVs)**: The IVs – "management practices in BIs" - were identified in the literature as follows: Organizational Capacity Management (OCM); Information System Management (ISM); Process Flow Management; Risk Management; Projects Leadership Management (PLM); Clients Management (CM); Innovation Management (IM); Strategic Planning Management (SPM); Supply Chain Management (SCM); Best Practices Management and Ethics (SCM); People Management (PM) (Ferreira and Oliveira, 2018).
- **Dependent Variables (IVs):** The DVs were extracted from the specialized literature as follows: value performance on: clients, economic and business return.
- **Proposition 1**: Management practices positively effect on BI performance: value creation for customer (VCC); value creation for economy of region (VCE); and value creation for business (return) (VCB), in Chile, Israel and Italy.
- **Proposition 2**: The management practices have effect to a greater or lesser degree on the BIs global performance in perspective Chile, Israel, Italy.

Phase 2: Management practices and its effects on BIs performance in Chile, Israel and Italy

This section evaluates the effect of management practices on BIs performance in Chile, Israel and Italy. This procedure was developed using the multi-criteria analysis. In this phase are evaluated the effects of management practices on the BIs performance of three countries using the multicriteria methods: Compromises Programming, Electre III and Promethee II. These methods are appropriate to evaluate qualitative variables. This procedure is based on the results of the judgement of specialists, where they juldge (1-low effect; and 5 - high effect) the IVs in relation to the DVs. The specialists evaluated the effects of management practices on value creation performance: customers; economic and finance; and business return. The architecture of this methodology is presented according three levels:

- **Level 1:** IVs - BIs Management Practices: Organizational Capacity Management (OCM); Information System Management (ISM); Process Flow Management; Risk Management; Projects Leadership Management (PLM); Clients Management (CM); Innovation Management (IM); Strategic Planning Management (SPM); Supply Chain Management (SCM); Best Practices Management and Ethics (SCM); and People Management (PM).
- **Level 2:** DVs - Performance 1 - Value creation for customer (VCC); Performance 2: Value creation economic on region (VCE); Performance 3: Value creation for business (return) (VCB)
- **Level 3:** DVs - Performance (Global) - Value Creation

The results (Figure 4) confirm **proposition 1**: Management practices positively effect on BI performance: value creation for customer (VCC); value creation for economy of region (VCE); and value creation for business (return) (VCB), in Chile, Israel and Italy. Tables 1, 2 and 3 show the results produced.

Table 1. Assessing the effects of management practices on BIs Performance in Italy

Management practices in BI	Promethee II	Compromise Programming	Electre III
Projects Leadership Management (PLM)	2ª	2ª	1ª
Customers Management (CM)	1º	1ª	1ª
Strategic Planning Management (SPM)	1ª	1ª	2ª
People Management (PM).	2ª	2ª	3ª

Table 2. Assessing the effects of management practices on BIs Performance in Israel

Management practices in BI	Promethee II	Compromise Programming	Electre III
Projects Leadership Management (PLM)	2ª	2ª	1ª
Customers Management (CM)	1º	1ª	1ª
Strategic Planning Management (SPM)	1ª	1ª	2ª
People Management (PM).	1ª	1ª	1ª
Innovation Management (IM)	1ª	1ª	2ª

Table 3. Assessing the effects of management practices on BIs Performance in Chile

Management practices in BI	Promethee II	Compromise Programming	Electre III
Projects Leadership Management (PLM)	2ª	2ª	1ª
Customers Management (CM)	2º	1ª	1ª
Strategic Planning Management (SPM)	1ª	1ª	1ª
People Management (PM)	2ª	2ª	3ª
Best Practices Management and Ethics (SCM)	3ª	3ª	3ª

Based on judgment specialists and the Commitment Programming, Electre III and Promethee II methods, the "strategic planning management" and "customers" management practices. Particularly, Israel includes as high effect practices: "people and innovation management". From efficient strategic planning, BI decision makers can focus on objectives, goals, strategies and resources for better control and monitoring of the business or redefinition of the business model, assessment of economic, financial and environmental scenarios, definition of partnerships and strategic alliances to the achievement of competitive advantages in the value chain, identification and assessment of inherent business risks such as political, market, environmental, technical and legal / legislation and regulation risks. Based on efficient strategic planning, decision makers can also define pricing and cost reduction policies, demand and competition control and tracking, a cost reduction policy, and an efficient policy for a product and / or services and pricing policy, as well as reducing uncertainties and unpredictability. Finally, based on efficient strategic planning, decision makers can define strategies for efficient human resources policy in BIs focusing on creating value for: customers, regional economy and business return in BIs.

Phase 3: Assessing the Impacts of management practices on Global Value Creation Performance

This phase presents the assessment of the impact of management practices on customer value creation performance, regional economy and business return in three countries: Chile, Israel and Italy. This procedure was based on specialists answers (judgment matrix 1 - low impact and 5 - high impact). Results and analysis are presented as follows.

Chile

Table 4 shows the impact of management practices on customer value creation performance, regional economy, and business returns.

Table 4. CHILE: Results of management practices and value creation performance

CHILE	Value Creation - Customers				Value Creation – Regional Economy				Value Creation - Return of Business			Total
Management Practices	M	DP	*α		M	DP	*α		M	DP	*α	Mean
OCM	2,6	1,0	0,85	OCM	2,7	1,15	0,87	OCM	2,7	0.9	0,86	2,6
ISM	2,8	1,0	0,85	ISM	2,9	1,15	0,87	ISM	3,1	1,1	0,85	2,9
PFM	2,8	1,1	0,85	PFM	3	1,04	0,87	PFM	3	1,0	0,88	2,9
RM	2,4	1,0	0,87	RM	2,8	1,14	0,88	RM	2,8	1,1	0,88	2,6
PLM	3,3	1,0	0,86	PLM	3,4	1,12	0,84	PLM	3,3	1,1	0,86	3,3
CM	3,5	1,0	0,86	CM	2,8	1,13	0,85	CM	3,1	1,1	0,87	3,1
IM	3,3	1,1	0.86	IM	3,0	1,04	0.84	IM	3,0	1,0	0.88	3,1
SPM	3,5	1,1	0.89	SPM	3,5	1,07	0.86	SPM	3,5	1,1	0.88	3,5
SCM	3.2	1,1	0,85	SCM	3,2	1,07	0,84	SCM	3,0	1,0	0,87	3,1
BPME	3,0	1,1	0,86	BPME	3,0	1,02	0,87	BPME	3,0	0,9	0,86	3
PM	3,2	1,0	0,85	PM	3,2	1,16	0,87	PM	3	0,8	0,88	3,1
$\sum \bar{x}$	3,04	1,04	0,8		3,04	1,1	0,86		3,04	1,0	0,87	3,0

The internal consistency coefficient measured by Cronbach's alpha was above higher than 0.84 ($\alpha = 0.84$). Spearman's coefficient was applied to test the correlation (questionnaire). According to Tavakol and Denninck (2011), this value is acceptable. From the results achieved, it is possible to affirm that "strategic planning management" and "leadership management" practices have the low-moderate impact on value creation in BIs from Chile (Table 4). In general, the practices have been low (**M**) and moderate (**M**) for value creation for customers, the region's economy and also for business return. In our opinion this fact may be related to the organizational capacity of BIs and also to an industrial policy addressed to strategic and innovative entrepreneurship. Of course, other barriers may hinder the progress of these endeavors, such as legislation and regulations that often represent barriers to economic development. On the other hand, it is important to consider the correlation among practices. Practices that are strongly correlated should be implemented in an integrated manner and combined for desirable outcomes. To verify the correlations between management practices and value creation, we use the Spearman correlation technique (ρ). Results indicated positive correlations and with degree: low, moderate and high (Appendix 1). Practices CM and PM; COM and BPME; CM and PLM; COM and IM; SPM and CM; PLM and RM; has positive and moderate and strong correlation ($p < 0.05$). In general, all practices are positive (Appendix1). Decision makers should promote special attention to this category of practices.

Table 5. ITALY: Results of management practices and value creation performance

ITALY	Value Creation - Customers			Value Creation – Regional Economy				Value Creation - Return of Business				Total
Management Practices (MP)	M	DP	*α	MP	M	DP	*α	MP	M	DP	*α	Mean
OCM	2,80	1,10	0,77	OCM	3	1	0,87	OCM	3	0,9	0,77	2,9
ISM	3,00	1,00	0,76	ISM	3,01	1,04	0,77	ISM	3,11	1,04	0,75	3
PFM	3,00	1,00	0,75	PFM	3	0,77	0,75	PFM	3,04	1	0,76	3
RM	2,50	1,00	0,77	RM	2,7	1,1	0,77	RM	2,6	1,1	0,76	2,6
PLM	3,70	0,80	0,77	PLM	3,5	1,06	0,87	PLM	3,86	0,81	0,81	3,7
CM	3,70	0,80	0,75	CM	3,4	1,06	0,78	CM	3,8	0,82	0,79	3,6
IM	3,30	1,00	0,76	IM	3,1	1,04	0.79	IM	3,2	1,02	0.76	3,2
SPM	3,70	0,90	0,78	SPM	3,5	0,86	0.76	SPM	3,77	0,76	0.74	3,7
SCM	3,50	0,80	0,78	SCM	3,4	0,94	0,77	SCM	3,5	0,87	0,77	3,5
BPME	3,30	1,00	0,77	BPME	3,2	0,84	0,74	BPME	3,3	0,94	0,79	3,3
PM	3,40	0,90	0,75	PM	3,5	0,99	0,76	PM	3,4	0,94	0,79	3,4
$\sum \bar{x}$	3,26	0,94	0,76		3,21	0,97	0,79		3,33	0,93	0,78	3,3

The internal consistency coefficient measured by Cronbach's alpha was above higher than 0.74 ($\alpha = 0.84$). Spearman's coefficient was applied to test the correlation (questionnaire). According to Tavakol and Denninck (2011), this value is acceptable. From the results achieved, it is possible to affirm that "strategic planning management", "leadership management" and "customer management" practices have a moderate and strong impact on value creation in BIs from Chile (Table 5). In general, the practices have been moderate (M) for value creation for customers, the region's economy and also for business return. In our opinion this fact may be related to the organizational capacity of BIs and also to an industrial policy addressed to strategic and innovative entrepreneurship and innovation. Of course, other barriers may hinder the progress of these endeavors, such as legislation and regulations that often represent barriers to economic development. According to Auricchio et.al. (2014), in general, Italian BIs are small and the vast majority have management problems. This is balancing by the intervention of the public sector. In addition, and with a low propensity for innovation. In our opinion, this may be linked to the organizational capacity and government policy of incentives for strategic entrepreneurship and innovation. At first, Italy is an entrepreneurship country, but this is not enough to increase performance in results. It is necessary joint and integrated actions are needed with various actors: companies, startups, universities, research centers, governments and others. On the other hand, it is important to consider the correlation among practices. Practices that are strongly correlated should be implemented in an integrated manner and combined for desirable outcomes. To verify the correlations between management practices and value creation, we use the Spearman correlation technique (ρ). Results indicated positive correlations and with degree: low, moderate and high (Appendix 1). Practices CM and PM; COM and BPME; CM and PLM; COM and IM; SPM and CM; PLM and RM; has positive and strong correlation ($p < 0.05$). All practices are positive (Appendix1). Decision makers should promote special attention to this category of practices.

Table 6. ISRAEL Results of management practices and value creation performance

ISRAEL	Value Creation - Customers			Value Creation – Regional Economy				Value Creation - Return of Business				
Management Practices (MP)	M	DP	*α	MP	M	DP	*α	MP	M	DP	*α	
OCM	3,6	0,9	0,86	OCM	3,7	1	0,88	OCM	3,7	0,9	0,88	3,7
ISM	3,7	1,1	0,87	ISM	3,7	1,1	0,87	ISM	3,8	1	0,88	3,7
PFM	3,7	1	0,87	PFM	3,6	1,1	0,88	PFM	3,7	1,1	0,87	3,7
RM	3,6	1,1	0,88	RM	3,5	0,9	0,88	RM	3,5	1,1	0,88	3,5
PLM	3,8	0,9	0,86	PLM	3,8	1	0,87	PLM	3,8	1	0,87	3,8
CM	4	0,9	0,87	CM	4	0,9	0,87	CM	4	0,9	0,88	4
IM	4,2	1	0,88	IM	4	1	0.88	IM	4	1	0.87	4
SPM	4,2	0,9	0,88	SPM	4,2	1,1	0.88	SPM	4,2	0,9	0.87	4,2
SCM	4	1,07	0,87	SCM	3,9	0,9	0,88	SCM	3,6	0,9	0,88	3,8
BPME	4	1	0,87	BPME	3,8	1,1	0,87	BPME	3,9	1	0,88	3,9
PM	3,8	0,9	0,88	PM	3,8	0,9	0,88	PM	3,8	0,9	0,88	3,8
$\sum \bar{x}$	3,87	0,97	0,87		3,81	1	0,87		3,8	0,97	0,87	3,8

The internal consistency coefficient measured by Cronbach's alpha was above higher than 0.86 (α = 0.86). Spearman's coefficient was applied to test the correlation (questionnaire). According to Tavakol and Denninck (2011), this value is acceptable. From the results achieved, it is possible to affirm that "strategic planning management", "strategic planning management", "customer management", "innovation management", supply chain management" and "best practices management and ethics" and "leadership management" practices have a strong impact on value creation in BIs from Chile (Table 6). The results showed that Israel is an entrepreneurial and innovative country (from specialist answers). In general, the practices have been strong (M) for value creation for customers, the region's economy and also for business return. In our opinion this fact may be related to the organizational capacity of BIs and also to an industrial policy addressed to strategic and innovative entrepreneurship and innovation. On the other hand, it is important to consider the correlation among practices. Practices that are strongly correlated should be implemented in an integrated manner and combined for desirable outcomes. To verify the correlations between management practices and value creation, we use the Spearman correlation technique (ρ). Results indicated positive correlations and with degree: higher (Appendix 1). Practices CM and PM; COM and BPME; CM and PLM; COM and IM; SPM and CM; PLM and RM; has positive and strong correlation (p < 0.05). All practices are positive (Appendix1). Decision makers should promote special attention to this category of practices.

• Thus, these results presented in this phase confirm the **Proposition 2**: The management practices have effect to a greater or lesser degree on the BIs global performance in perspective Chile, Israel, Italy.

Based on results achieved, Israel management practices have the high effect on value creation for clients, with superior performance (above-average performance). Also management practices in Chile and Italy have moderating effect on value creation, focusing more on business returns. According Shamah (2012),

to increase value created, the company increases benefits to its clients (Spulber, 2009)[...]. To Shefer and Frenkel (2002), [...] the prominent advantage of the BI program in Israel is its ability to actualize high-risk projects[...]. [...] the program has provided opportunity for many projects, in the hi-tech industry and encouraging the creation of entrepreneurships.

- In study developed on BIs in Italy, Corsi and Di Berardino (2014) verified that:
- There is a relationship positive ratio between the presence of incubators and R&D personnel and spending [...]
- There is significant positive ratio is the one between the presence of public-sector incubators and corporate R&D spending [...]
- There are significant positive relationships between financial-institution participation incubators and corporate service development, industry added value as well as the many variables linked to local research and innovation potential [R&D corporate spending, innovation potential, R&D staff] [...]
- There is the significant positive relationship between university participation incubators and the number of local businesses [...].
- Finally, On the other hand, although incubation programs in Chile focus on entrepreneurship and innovation, Chilean incubation programs are still incipient. We believe that management practices are also in development and have a long way to go.

From the results achieved, ie, from the judgment of the BI managers, it is possible to affirm that the management practices in the incubator programs of the three countries can be influenced by several origins and factors, such as geographic, central, or peripheral area, generic or specialized, public or private, among others. It is also possible to say that superior performance in outcomes depends on the investment policy of the government. High risk projects in general should be funded by the government. [...] Unlike the private sector, government programs can make long-term plans, thus promote projects that seem unattractive during their initial stages (Shefer and Frenkel, 2002)[...].

We understand that management practices must be combined and integrated with a number of other factors to promote substantial impacts on customers value creation, economic and financial value for the region, business return and finaly, value creation for the ecosystem as a whole, as partners, suppliers and others. The results show that even if countries adopt the same management practices, results may differ according to each country, because results may also depend on the characteristics and ways of doing business of BIs. BIs in the three countries have as their central element encouraging entrepreneurship and innovation, especially Israel. According to the managers, the results also indicate that even with high performance to create value for customers, with superior technological capacity (high standard), other challenges still need to be solved, such as access to distribution channels and strategic partners. The management practices should be guided by strategic business plans from pre-incubation to post-incubation, with the application of indicators at all stages. In addition, the priorities of management practices should be permanently reviewed.

Summarizing, to managers, BIs are indeed strategic instruments for promoting entrepreneurship and innovation, with substantial impacts on job creation and regional development. By observing the value creation for clients, economic and business return, there is a greater intensity of dependence to the management practices "strategic management", "people management", "innovation management" and project management. The results showed that "strategic planning management" is the practice that most influences value creation the value creation for customers, economic and business return in business incubators.

CONCLUSION, IMPLICATION AND RESEARCH AGENDA

Conclusion

This research aims to evaluate the effect of management practices on the BIs performance in Chile, Israel and Italy. This study from within a gap in the literature on this object. From these priorities, managers can decide which enabling management practices are important for value creation for customers, economic

and finance, and business return. In promoting the success of business incubators, the "strategic management, innovation management and people management" has the highest priority for value creation for client and others stakeholders. The BIs, with their entrepreneurial teams, support start-ups by several facilitators, as consulting, network of activities with customers and suppliers, network of activities with companies, marketing assistance, among others. In this context, the strategic entrepreneurship has been an important instrument for potentially the BIs.

Implications

We highlight that management practices have substantial impacts on BI outcomes, particularly for BIs in Israel. We look at the impact of each group of BI value creation practices. The results showed that the most important groups are planning and strategy, team, and leadership, and innovation management. This require support from managers in order to contribute to best BIs performance. For policy makers, we hope to be facilitators and carefully consider incentive policies for new ventures, with initiatives which are necessary to BI development. Thus, the governments must implement plans and goals, contributing entrepreneurship and innovation. We understand that the challenges that permeate BIs in a context of innovation is not a simple task, especially in light of management practices. Thus, we understand that the promotion of BIs capacity should be guided by the confluence of strategies that allow a correct evaluation of the alternatives that are presented. And finally, we hope this research will illuminate issues that are still little explored in the context of BIs. It is necessary to keep in mind that instruments or techniques or methods do not always allow to achieve practical results, since situations demand singularities, differing from similar and apparently comparable situations. Social, cultural, economic, political, and especially technological conditions are different.

Suggestions for a research agenda from the effects of management practices on value creation in BIs-towards strategic entrepreneurship

Finally, we have a research agenda as follows:

- How can policy makers help strengthen the innovation and strategic entrepreneurship (BIs)?
- How Bıs managers can potentialize the strategic entrepreneurship and innovation?
- What are the main challenges to adopting management practices and strengthening value creation for customers (BIs)?
- How can entrepreneurs potentialize the organizational capacity management and potencialize
- value creation for customers?
- How can decision makers encourage the adoption of innovation practices?
- How can entrepreneurs encourage value creation for stakeholders in the supply chain?
- How can entrepreneurs potentialize BIs risk management?
- How can one overcome the main barriers to implement the management practices in BIs and e strength value creation for customers (BIs)?
- How can decision makers help strengthen the process flow management in BIs?
- How can leadership management encourage the entrepreneurial teams (BIs)?
- What are the characteristics of entrepreneurial teams that focus on value creation for customer (BIs)?
- How is it possible to encourage the entrepreneurial teams to create value for costomers (BIs)?
- How do leadership support value creation for customers (BIs)?

REFERENCES

Abbad, G., Borges-Andrade, J. E. (2004). Aprendizagem humana nas organizações e trabalho. In: J. C. Zanelli, J. E. Borges-Andrade, and A. V. B. Bastos (Orgs), Psicologia, Organizações e Trabalho no Brasil, 237-275, Porto Alegre: Artmed

Aerts, K., Matthyssens, P., and Vandenbempt, K. (2007) Critical role and screening practices of European business incubators. Technovation, 27 5, 254-267.

AL-Mubaraki and Busler (2014), Incubator successes Lessons learned from successful incubators towards the twenty-first century, World Journal of Science, Technology, and Sustainable Development, 11, 1, 44-52

Aaboen, L. (2009) Explaining incubators using firm analogy, Technovation, 29, 10, 657-670

Auricchio, di M., Cantamessa, M., Colombelli, A., Cullino,R., Orame, A., and Paolucci, E.(2014) Gli incubatori d'impresa in Italia, In book: Banca d'Italia, Chapter: Gli incubatori d'impresa in Italia, p.36.

Barbero, J. L., Casillas, J. C., Ramos, A., and Guitar, S. (2012) Revisiting incubation performance. Technological Forecasting & Social Change, 79 5, 888-902

Barney, J. (1991), Firm resources and sustained competitive advantage, Journal of Management, 17, 1, 99-120.

Bergek, A. and Norrman, C. (2008). Incubator best practice: a framework, Technovation, 28 (1/2), 20-8.

Brandão, H. P., Borges-Andrade, J. E. and Guimarães, T. A. (2012) Desempenho organizacional e suas relações com competências gerenciais, suporte organizacional e treinamento. Revista Administração – RAUSP, 47,4, 523-539

Chan, K.F. and Lau, T. (2005) Assessing technology incubator programs in the science park: the good, the bad and the ugly.Technovation, 25 10, 1215–1228.

Chu, U.M.; Kara, O.; Zhu, X.; and Gok, K. (2011) Chinese entrepreneurs: Motivations, success factors, problems, and business-related stress, Journal of Chinese Entrepreneurship, 3, 2, 84-111 · June

Colombo, M.G. and Delmastro, M., (2002) How effective are technology incubators? Evidence from Italy. Research Policy 31 7, 1103–1122.

Corsi, C. and Di Berardin, D. (2014) Assessing the business incubators performance referring the local development in Italy. European Scientific Journal September SPECIAL/ edition 1, 323-334.

Dogan, N. (2015) The Intersection of Entrepreneurship and Strategic Management: Strategic Entrepreneurship, World Conference on Technology, Innovation and Entrepreneurship, Procedia - Social and Behavioral Sciences 195, 1288 – 1294.

Fernandes, B.H.; Fleury, M.T.; Mills, J.(2006) Construindo o diálogo entre competência, recursos e desempenho organizacional. Revista de Administração de Empresas (RAE), São Paulo, 46, 4, 48-65, out./dez.

Ferreira, M.A.M. (2018) Avaliação da influência das práticas de gestão na performancedas universidades federais brasileiras sob o efeito moderado de recursos organizacionais, Dissertação apresentada ao Programa de Mestrado Profissional em Administração Pública na Universidade Federal Fluminense como requisito para a obtenção do grau de Mestre em Administração Pública – PROFIAP.

Ferreira, M.A.F. and Oliveira, S.R.M. (2018) Evaluating the Influence of Management Practices on the Performance of Brazilian Federal Universities, European Journal of Scientific Research, 151, 2, December, 205-220

Ferreira, M.A.F. and Oliveira, S.R.M. (2018) Evaluating the Influence of Management Practices on the Performance of Brazilian Federal Universities under the Moderating Effect of Organizational Resources, European Journal of Scientific Research, 151, 2, December, 221-232

Hackett, S.M. and Dilts, D.M., (2004). A systematic review of business incubation research. The Journal of Technology Transfer 29 1, 55–82.

Hackett, S. M. and Dilts, D. (2008). Inside the black box of business incubation: Study B - Scale assessment, model refinement, and incubation outcomes. Journal of Technology Transfer, 33, 5, 439-471.

Hanson, P. and Voss, C. (1995) Benchmarking Best Practice in European Manufacturing Sites. Business Process Re-engineering & Management Journal, 1 1, 60-74

Lepak, D.P., Smith, K.G., and Taylor, M.S. (2007) Value creation and value capture: a multilevel perspective, Academy of Management Review, 32, 1, 180-194.

Luke C. Ng (2011) Best management practices, Journal of Management Development, 30, 1, 93-105 · January

Memili, E.; Fang, H.C.; and Welsh, D.H.B. (2015) Value creation and value appropriation in innovation process in publicly-traded family firms, Management Decision, 53, 9

Mizik, N. and Jacobson, R. (2003) Trading off between value creation and value appropriation: the financial implications of shifts in strategic emphasis, Journal of Marketing, 67, 1, 63-76.

Mobley, R. K. (2004) Maintenance Foundamentals, 2nd edition. [S.l.]: [s.n.]

O'Malley, P. (1998) Value creation and business success, The Systems Thinker, 9, 2.

Özdemir, O. Ç. and Sehitoglu, Y. (2013) Assessing the Impacts of Technology Business Incubators: A framework for Technology Development Centers in Turkey. 2nd International Conference on Leadership, Technology and Innovation Management. Procedia – Social and Behavioral Sciences, 75, 282-291

Phan, P. H., Siegel, D. S., and Wright, M. (2005). Science parks and incubators: observations, synthesis and future research. Journal of Business Venturing 20, 2, 165-182.

Reitzig, M. and Puranam, P. (2009) Value appropriation as an organizational capability: the case of IP protection through patents, Strategic Management Journal, 30, 7, 765-789.

Shamah, R.A.M. (2012) Innovation within green service supply chains for a value creation, Journal of Modelling in Management, 7, 3, 357-374

Shefer, D. and Frenkel, A., (2002). An evaluation of the Israeli Technological Incubator Program and its projects. IFISE Report, The Samuel Neaman Institute for Advanced Studies in Science and Technology, Israel.

Sonnentag, S., and Frese, M. (2002). Performance concepts and performance theory. In: S. Sonnentag (Org.), Psychological management of individual performance,3-27. Great Britain: John Wiley & Sons Ltda

Spulber, D.F. (2009), Economics and Management of Competitive Strategy, World Scientific Publishing, Hackensack, NJ.

Tavakol, M. and Dennick, R. (2011) Making sense of Cronbach's alpha. International journal of medical education, 53, 2

Wellstein, B. and Kieser, A. (2011) Trading best practices - A good practice? Industrial and Corporate Change, 20, 3, 683-719 · May

APENDIX 1: Positive, null and negative correlation management practices and performance of value creation: for customers, economic and return business – Tables 7,8,9,10,11,12,13,14 and 15– CHILE, ITALY and ISRAEL.

CHILE

(7)

	IV1	IV2	IV3	IV4	IV5	IV6	IV7	IV8	IV9	IV10
IV1	0.69	0.48	0.43	0.48	0.61	0.63	0.71	0.39	0.34	0.76
IV2		0.66	0.47	0.54	0.58	0.45	0.44	0.27	0.15	0.45
IV3			0.54	0.47	0.45	0.46	0.27	0.18	0.23	0.37
IV4				0.67	0.56	0.45	0.48	0.65	0.18	0.26
IV5					0.66	0.71	0.38	0.72	0.18	0.32
IV6						0.58	0.36	0.33	0.32	0.77
IV7							0.41	0.57	0.48	0.57
IV8								0.44	0.26	0.22
IV9									0.48	0.39
IV10										0.54

(8)

	IV1	IV2	IV3	IV4	IV5	IV6	IV7	IV8	IV9	IV10
IV1	0.69	0.48	0.43	0.48	0.61	0.63	0.77	0.39	0.34	0.77
IV2		0.66	0.47	0.56	0.58	0.44	0.44	0.26	0.15	0.47
IV3			0.54	0.47	0.41	0.52	0.27	0.14	0.23	0.39
IV4				0.77	0.56	0.39	0.48	0.75	0.16	0.22
IV5					0.78	0.41	0.38	0.77	0.11	0.32
IV6						0.58	0.36	0.33	0.32	0.78
IV7							0.41	0.57	0.48	0.57
IV8								0.44	0.26	0.22
IV9									0.48	0.39
IV10										0.64

(9)

	IV1	IV2	IV3	IV4	IV5	IV6	IV7	IV8	IV9	IV10
IV1	0.66	0.48	0.44	0.48	0.64	0.63	0.22	0.37	0.39	0.71
IV2		0.68	0.47	0.53	0.58	0.45	0.44	0.27	0.17	0.43
IV3			0.48	0.51	0.45	0.48	0.22	0.20	0.23	0.37
IV4				0.72	0.56	0.45	0.52	0.71	0.22	0.26
IV5					0.71	0.44	0.36	0.72	0.14	0.32
IV6						0.57	0.32	0.33	0.32	0.71
IV7							0.39	0.57	0.48	0.71
IV8								0.47	0.26	0.22
IV9									0.48	0.39
IV10										0.54

Legend (colour scale): 1, 0,8, 0,6, 0,4, 0,2, 0,0, -0,2, -0,4, -0,6, -0,8, -1

ITALY

(10)

	IV1	IV2	IV3	IV4	IV5	IV6	IV7	IV8	IV9	IV10
IV1	0.69	0.48	0.43	0.48	0.74	0.63	0.71	0.39	0.36	0.68
IV2		0.66	0.48	0.54	0.58	0.51	0.44	0.27	0.11	0.43
IV3			0.45	0.47	0.45	0.43	0.27	0.14	0.23	0.37
IV4				0.77	0.56	0.45	0.48	0.64	0.18	0.26
IV5					0.78	0.74	0.38	0.31	0.22	0.32
IV6						0.43	0.36	0.76	0.32	0.77
IV7							0.44	0.77	0.48	0.57
IV8								0.39	0.26	0.22
IV9									0.51	0.39
IV10										0.48

Scale: 1, 0,8, 0,6, 0,4, 0,2, 0,0, -0,2, -0,4, -0,6, -0,8, -1

(11)

	IV1	IV2	IV3	IV4	IV5	IV6	IV7	IV8	IV9	IV10
IV1	0.52	0.39	0.51	0.63	0.26	0.75	0.20	0.39	0.6	0.78
IV2		0.56	0.14	0.74	0.58	0.45	0.44	0.27	0.15	0.43
IV3			0.54	0.47	0.18	0.77	0.22	0.18	0.23	0.38
IV4				0.77	0.56	0.74	0.48	0.35	0.19	0.27
IV5					0.78	0.46	0.12	0.63	0.11	0.73
IV6						0.68	0.36	0.11	0.32	0.55
IV7							0.69	0.57	0.48	0.57
IV8								0.44	0.12	0.22
IV9									0.62	0.39
IV10										0.71

Scale: 1, 0,8, 0,6, 0,4, 0,2, 0,0, -0,2, -0,4, -0,6, -0,8, -1

(12)

	IV1	IV2	IV3	IV4	IV5	IV6	IV7	IV8	IV9	IV10
IV1	0.62	0.41	0.49	0.51	0.66	0.69	0.12	0.14	0.41	0.77
IV2		0.71	0.11	0.45	0.16	0.77	0.46	0.22	0.13	0.11
IV3			0.56	0.51	0,78	0.14	0.27	0.15	0.71	0.39
IV4				0.71	0.17	0.11	0.52	0.13	0.11	0.35
IV5					0.70	0.71	0.33	0.73	0.16	0.33
IV6						0.58	0.36	0.33	0.32	0.78
IV7							0.44	0.59	0.48	0.57
IV8								0.39	0.26	0.24
IV9									0.41	0.39
IV10										0.47

Scale: 1, 0,8, 0,6, 0,4, 0,2, 0,0, -0,2, -0,4, -0,6, -0,8, -1

ISRAEL

(13)

	IV1	IV2	IV3	IV4	IV5	IV6	IV7	IV8	IV9	IV10		
IV1	0.69	0.51	0.43	0.48	0.69	0.63	0.77	0.39	0.35	0.79		1
IV2		0.66	0.44	0.54	0.52	0.52	0.44	0.27	0.15	0.43		0,8
IV3			0.49	0.47	0.45	0.46	0.27	0.11	0.23	0.37		0,6
IV4				0.67	0.56	0.45	0.48	0.35	0.11	0.26		0,4
IV5					0.66	0.78	0.38	0.76	0.16	0.78		0,2
IV6						0.59	0.34	0.37	0.32	0.77		0,0
IV7							0.41	0.66	0.48	0.57		-0,2
IV8								0.44	0.24	0.22		-0,4
IV9									0.48	0.36		-0,6
IV10										0.58		-0,8
												-1

(14)

	IV1	IV2	IV3	IV4	IV5	IV6	IV7	IV8	IV9	IV10		
IV1	0.56	0.41	0.51	0.63	0.71	0.66	0.76	0.39	0.34	0.78		1
IV2		0.59	0.19	0.72	0.56	0.45	0.44	0.27	0.11	0.15		0,8
IV3			0.54	0.47	0.12	0.72	0.27	0.20	0.23	0.39		0,6
IV4				0.71	0.59	0.74	0.48	0.37	0.16	0.26		0,4
IV5					0.78	0.44	0.12	0.63	0.17	0.78		0,2
IV6						0.68	0.36	0.11	0.32	0.77		0,0
IV7							0.69	0.57	0.48	0.57		-0,2
IV8								0.44	0.19	0.22		-0,4
IV9									0.62	0.39		-0,6
IV10										0.71		-0,8
												-1

(15)

	IV1	IV2	IV3	IV4	IV5	IV6	IV7	IV8	IV9	IV10		
IV1	0.56	0.47	0.49	0.55	0.66	0.69	0.78	0.14	0.41	0.77		1
IV2		0.71	0.09	0.45	0.11	0.77	0.46	0.22	0.14	0.11		0,8
IV3			0.58	0.51	0,78	0.14	0.22	0.15	0.71	0.39		0,6
IV4				0.71	0.17	0.17	0.52	0.77	0.14	0.31		0,4
IV5					0.72	0.71	0.31	0.78	0.17	0.33		0,2
IV6						0.59	0.36	0.77	0.32	0.78		0,0
IV7							0.47	0.57	0.48	0.15		-0,2
IV8								0.56	0.28	0.18		-0,4
IV9									0.44	0.33		-0,6
IV10										0.59		-0,8
												-1