

The adoption of informational proxies as an alternative to the absence of formal management control mechanisms in startups

A adoção de proxies informacionais em alternativa à ausência de mecanismos formais de controle gerencial em startups

La adopción de *proxies* informativos como alternativa a la ausencia de mecanismos formales de control de gestión en las startups

Alexandre Coradini Ribeiro*

Mestre em Ciências Contábeis (UFMS) Doutorando em Contabilidade (UFPR), Curitiba/PR, Brasil alexandrecoradinir@gmail.com

https://orcid.org/0000-0002-3647-5521

Elisabeth de Oliveira Vendramin

Doutora em Controladoria e Contabilidade pela FEA (USP) Professora no Programa de Pós-graduação em Ciências Contábeis (UFMS), Campo Grande/MS, Brasil elisabeth.vendramin@ufms.br

https://orcid.org/0000-0002-9082-2256

Márcia Maria dos Santos Bortolocci Espejo

Doutora em Controladoria e Contabilidade pela FEA (USP)
Professora nos Programas de Pós-graduação em Administração,
Administração Pública em Rede Nacional e Ciências Contábeis
(UFMS), Campo Grande/MS, Brasil
marciabortolocci@gmail.com

https://orcid.org/0000-0002-9081-781X 5

0002 0001 7017

Flaviano Costa

Doutor em Controladoria e Contabilidade pela FEA (USP)

Professor no Programa de Pós-graduação em

Contabilidade (UFPR), Curitiba/PR, Brasil
flaviano@ufpr.br

https://orcid.org/0000-0002-4694-618X

Primary contact address for correspondence*

Avenida Prefeito Lothario Meissner, 632, Jardim Botânico, CEP: 80210-070 - Curitiba/PR, Brasil

Abstract

The aim of this study was to understand how the startups management process occurs through the use of informational *proxies* as an alternative to the absence of formal mechanisms of management control. To achieve this objective, basic or generic qualitative research was adopted as a strategy. Seven entrepreneurs who had different basic and complementary backgrounds, as well as varied professional experiences were interviewed. Regarding the findings, it was observed that startups adopt informational *proxies* to be the foundation in the construction of organizational discourses. The identified *proxies* are usually derived from formal artifacts and which act as auxiliary tools for entrepreneurs/managers in the decision-making process and in aligning their actions with organizational objectives. Finally, the reports obtained and analyzed in this study showed that, if not all, most of the identified *proxies* contributed, according to their peculiarities, from the initial trajectory to the current moment of the business.

Keywords: Innovation; Startups; Management Control; Informational Proxies

Resumo

O objetivo deste estudo foi compreender como ocorre o processo de gestão de *startups* por meio do emprego de *proxies* informacionais em alternativa à ausência de mecanismos formais de controle gerencial. Para o alcance deste objetivo, adotou-se como estratégia a pesquisa qualitativa básica ou genérica. Sete entrepreneurs que apresentavam formações básicas e complementares diversas, bem como experiências profissionais variadas foram entrevistados. Em relação aos achados, observou-se que as *startups* realizam a adoção de *proxies* informacionais para serem o alicerce na construção dos discursos organizacionais. As *proxies* identificadas são derivadas, usualmente, de artefatos formais e que se comportam como instrumentos auxiliares aos entrepreneurs/gestores no processo de tomada de decisões e no alinhamento de suas ações com os objetivos organizacionais. Por fim, os relatos obtidos e analisados neste estudo evidenciaram que, se não todas, a maiorias das *proxies* identificadas contribuíram, consoante suas peculiaridades, da trajetória inicial até o momento atual do negócio.

Palavras-chave: Inovação; Startups; Controle Gerencial; Proxies Informacionais



Resumen

El objetivo de este estudio fue comprender cómo se da el proceso de gestión de startups mediante el uso de *proxies* informativos como alternativa a la ausencia de mecanismos formales de control de gestión. Para lograr este objetivo, se adoptó como estrategia la investigación cualitativa básica o genérica. Se entrevistaron a siete emprendedores que tenían diferentes antecedentes básicos y complementarios, así como variadas experiencias profesionales. Respecto a los hallazgos, se observó que las startups adoptan *proxies* informativos para ser la base en la construcción de discursos organizacionales. Los *proxies* identificados suelen derivar de artefactos formales y que actúan como herramientas auxiliares para los empresarios/gerentes en el proceso de toma de decisiones y en la alineación de sus acciones con los objetivos organizacionales. Finalmente, los informes obtenidos y analizados en este estudio mostraron que, si no todos, la mayoría de los *proxies* identificados contribuyeron, según sus peculiaridades, desde la trayectoria inicial hasta el momento actual del negocio.

Palabras clave: Innovación; Startups; Control de Manejo; Proxies informativos

1 Introduction

Startups are organizations designed for creating products and services and they are inserted in high risk and uncertainty environments (Ries, 2011). At national scenario that term is increasingly highlighted over the past years, specifically when youngsters had the opportunity to raise their own innovative business and spread the term, explaining definitions and information about the mentioned companies (Dullius & Schaeffer, 2016). The terminology started being spread from 1996 to 2001, and it was defined as a replicable, scalable business model created by people to work under extreme uncertainty conditions (Santos *et al.*, 2022).

Startups have features that make them different from small traditional business, such as not knowing the profile of customer market, ignoring the suitable commercialization way, competing for investment even knowing financial sources, besides facing higher risks (Dullius & Schaeffer, 2016; Frare *et al.*, 2021). However, despite the divergences, *startups* and small traditional business are connected by something in common. Specifically, that link occurs due to the high mortality level they both present, with or without the innovative potential (Nogueira & Oliveira, 2014).

In their research, Nogueira and Oliveira (2014) present determinant factors for startups survival and discontinuity. Among factors responding for discontinuity is the lack of management knowledge by entrepreneurs/managers. Such obstacle, in special, promotes a discussion on the existence of a management control for those organizations (Daciê *et al.*, 2017). Despite they have a control, usually centered on founders, such as small business (Feuser *et al.*, 2016), they need information to validate their decisions, making these enterprises a field to be explored by studies on management control (Dullius & Schaeffer, 2016).

Management control is a set of instruments implemented by managers to guide employees actions, so that organization goals are assured to be reached (Malmi & Brown, 2008). Daciê *et al.* (2017) agree with that understanding, stating management controls serve as facilitators for achieving organization goals which, *a priori*, are based on optimizing resources, in a perspective of long-term results. Thus, the integration of these tools represents an important communication factor according to the goals settled, since it both facilitates and supports decision making process (Otley, 2003).

Fonseca *et al.* (2020) mentions the existence of alternative management or informational controls in organization environment and reinforces that they also constitute the Management Controlling System (MCS). Such mechanisms usually derive from consolidated artifacts but posing as auxiliary ones to entrepreneurs/managers. It is also reinforced that alternative or informal controls are also able to influence the adoption of strategies by employees, aiming at reaching organization goals (Anthony & Govindarajan, 2008).

Frezatti *et al.* (2014) feature alternative or informal controls as informational proxies and acknowledge the crucial importance of the accounting speech in supporting, facilitating, and restraining competitors' organization speech since it shows how the lack accounting centers power in organization environment. In summary, informational proxies are controls used as an alternative to artifacts stiffening known in management literature or their absence in small organizations, such as startups and small traditional business (Feuser *et al.*, 2016; Daciê *et al.*, 2017).

By appealing to literature, it is possible to find a significant number of studies relating startups to management control (Goebel & Weibenberger, 2017; Costa *et al.*, 2021; Gomez-Conde *et al.*, 2021; Pavlatos, 2021). However, the research found evidence systems formed by formal management control mechanisms (Davila & Foster, 2005; Davila & Foster, 2007; Sandino, 2007; Davila *et al.*, 2010). Some research even propose that future studies must investigate the adoption of alternative or informal management controls by startups (Carraro *et al.*, 2018; Crespo *et al.*, 2019). So, the present study is guided by the following question: How does startups management process takes place by means of the use of informational proxies as an alternative to the lack of formal management control mechanisms?

As to the theoretical contributions aimed to be obtained from this study, there is a broader

understanding of alternative or informal management controls, so called informational proxies in this study, on startups, contributing with their survival and continuity. In addition, it aims at contributing with Frezatti *et al.* (2014), Daciê *et al.* (2017), and Fonseca *et al.* (2020) researches when analyzing management process by means of using either alternative or informal controls as an alternative to the lack of formal artifacts for management control. Besides these studies do not aim at studying innovative organizations, they all investigate the adoption of alternative or informal management controls.

As to the research management contributions, it is expected that the results from this study help entrepreneurs/managers and other parties involved with those companies to identify which alternative or informal management controls, that means, informational proxies, may be used by the startups in the absence of formal mechanisms of management control. Regardless the fact that startups usually have their control centered on their entrepreneurs/managers, they need information to validate their decisions, causing those organizations to be a field to be explored by accounting and management control studies (Dullius & Schaeffer, 2016).

2 Theoretical Referential

2.1 Management Control and Their Alternative or Informal Instruments

Anthony and Govindarajan (2008) state the role of management controls as mechanisms generating information used as subsidy to managers actions. Simons (1995) mentions that the set of these information, applied to maintaining activities, following processes, and the application of corrective measures, constitute the Management Controlling Systems (MCS). Following, the relation of the controls constituting these MCS represents a relevant communicational factor, according to the goals settled, since it enables and supports decision making process (Otley, 2003).

In management literature, since Frezatti *et al.* (2014) study, there is evidence the MCS are also constituted by alternative or informal controls (Daciê *et al.*, 2017; Fonseca *et al.*, 2020). Such controls show up as alternative or informal ways, but auxiliary in decision-making process of entrepreneurs/managers (Feuser *et al.*, 2016). The increasing helping role in activities, such as leading tasks or solving problems, reinforced the evolution of the mentioned mechanisms, especially in the context of small business (Frezatti *et al.*, 2014).

So, aiming at the equivalence of information provided by the formal management control instruments they are, mostly designed for medium and large organizations, the use of such alternative or informal control takes place (Fonseca *et al.*, 2020). However, due to a common confusion, it is necessary to understand that these alternative or informal controls are not, in their amplitude, the informal controls described in classic studies, that is, cultural and personal controls (Simons, 1995; Merchant & Van Der Stede, 2012).

Alternative or informal management controls correspond to mechanism raised not only from cultural and personal controls but also from planning and financial controls, that is, they are controls derived from formal (results and action) and informal (personal and cultural) controls already known in management literature (Merchant & Van Der Stede, 2012; Goebel & Weibenberger, 2017). Authors Frezatti *et al.* (2014), imagining a possible confusion between these definitions, name the alternative or informal management controls, as in the present study, as information proxies.

Subsequent studies, such as Feuser *et al.* (2016), Daciê *et al.* (2017), and Fonseca *et al.* (2020), in their turn, name the alternative or informal management controls as management control proxies. Despite the difference in denomination between Frezatti *et al.* (2014) pioneer study and the others developed later, all investigations agree in stating information or management proxies are alternative or informal controls searching for the equivalence of information provided by formal instruments for management control.

Referred investigation evidence the *proxies* inserted in given dimensions. In general terms, there are four dimensions identified in the studies, being: planning, financial controls, market aspects, and personal controls. As to analysis elements inserted in these dimensions, there are: operational, action, and investment plan, costs and expenses control, future income and expenses prevision, performance evaluation, customer satisfaction measurement, partnerships, awareness of market risks, marketing, employees performance evaluation, training, among others.

These dimensions, such as the analysis elements, are evidenced in Feuser *et al.* (2016) study. In the mentioned research it was checked whether there is a difference as to the use of proxies with regards to entrepreneur/manager in small business in Paraná State. Findings evidenced that male respondents were more prone to use proxies in their enterprise as a support to decision making process when compared to female respondents. In addition, results found corroborate the idea that female individuals are motivated by personal relationships in their decisions while male respondents are driven by rational evidence.

Daciê et al. (2017), in turn, aimed at checking if the entrepreneur psychological characteristics would influence the management control proxies and the performance of the companies sharing the same institutional environment. Among the findings of his research authors found that proxies have a positive effect of 46.42% on companies' performance. The characteristics of entrepreneur orientation had a positive influence on the use of management controls, in approximately 38.38%, and 14.90% of companies'

performance included in the study sample.

Fonseca *et al.* (2020), in order to understand the influence of an entrepreneur characteristics on both financial and non-financial organization performance, looked for evaluating the mediator effect of informational proxies in that relation. With regards to that studies' results, mediation of informational proxies, in the relation obtained, occurs in a partial, concurrent way. Final model indicated that entrepreneur characteristics have a direct, negative influence on organization performance of 36.4%, while by means of informational proxies the positive effect was 41.3%.

In this direction, it is inferred that the use of management controls, either alternative or not, produce information that are aligned to organizations will and they are relevant to the decision-making process. Besides, their use may facilitate companies' management and allow following activities towards their goals (Otley, 2003). Also, some studies relating management control and startups are presented. In addition, at the end of the section investigations motivating the development of the present study are presented, that is, the gaps found which the present study aimed at fulfilling.

2.2 Researches on Management Control and Startups

Investigations discussed in the present subsection were selected aiming at providing a current scenario of the discussions about management control in *startups*. It was aimed introducing national and international studies, intending to know the discussions on the issue in Brazil and compare to the discussions in other countries. However, it is understood that there are other relevant studies which were not properly mentioned, mainly due to page limitation, being a limitation of the study. As expected, any of the studies found, selected, and discussed mention informational proxies or alternative controls, showing the uniqueness of the present research.

Carraro *et al.* (2018) examined possible combinations of management controls leading *startups* to a high performance. Results obtained revealed that, for reaching high performance, clients need controls, strategy, information systems, performance, risks, and budget. Samagaio *et al.* (2018) investigated the causal complexity behind the use of MCS, checking how internal and external factors influence companies in the adoption of management controls. In general, results confirm the complexity that characterizes the use of MCS, since there are several combinations leading to the adoption of these controlling systems.

Crespo *et al.* (2019) focused on the role of factors and internal context such as antecedents in the adoption of different MCS types. The antecedents were cultural context, strategy, organization structure, and performance based on the country. Minimum partial square and qualitative comparative analysis of diffuse set were used for testing the hypotheses proposed to a high technology, intense knowledge sta*rtups* sample from Portugal and Norway. By differentiating the four MCS types (financial, human resources, strategy, and sales management), it was seen that the combination of causal conditions leading to the adoption of those MCS vary considerably. The results from both methods identify Norwegian companies are pore propense to adopting strategical systems.

Akroyd and Kober (2020) aimed at understanding the influence of founders on MCS design and use by means of a theoretical lens known as *imprinting*. Authors evidenced that the mark of the commitment plan of a founder reflects on the design and use of cultural controls and the selection of employees to establish a working place that promotes an intense emotional attachment and identification comparable to a family, with an organization culture in which employees are committed and love the company. Results reveal a dependence on cultural controls and that employee's selection is not exclusive but supported and strengthened by means of design and the use of personal, action, penalties, and cultural controls.

Costa *et al.* (2021) investigated the influence of environmental uncertainty by manager and performance measurement by means of financial and non-financial indexes on startups performance. Results indicate that financial indexes help managers in evaluating startups reality and contribute with their performance perception. On the other hand, non-financial indexes and environmental uncertainty perceived had no influence. Moderating effects of environmental uncertainty seen in the relation between performance measurement and performance were also investigated. In this case, it was observed that environmental uncertainty seen by entrepreneurs did not influence startups performance and the significant use of financial indexes for improving decision making process.

Frare *et al.* (2021) aimed at understanding the relation among MCS, entrepreneur orientation, and the development of Brazilian *startups*. Findings show that cultural and planning controls were the only two MCS dimensions included in all MCS. The authors also found that entrepreneur orientation has a positive influence on company's performance by means of MCS. Pavlatos (2021), in turn, investigates the use of MCS in 176 startups of travel and tourism in Europe and sees a relation between the use of those systems and specific features of both internal and external environment. In face of the evidences, the author infers historical financial performance of startups of travel and tourism affects the use of MCS.

Authors Gomez-Conde *et al.* (2022) addressed the recent appeal for a better comprehension of MCS effects on *startups*. By using a sample of incubated startups, the effects of performance alignment between MCS and innovation strategies were analyzed. Regression analysis show a higher performance when financial MCS are associated to an emphasis on exploratory innovation strategies. In general, the study

contributes with the comprehension of contingent MCS effects and innovation strategies in startups linked to incubators, as well as the consequences on their results and survival.

Santos *et al.* (2022) analyzed the influence of using different types of management controls (costs and budget information, non-financial indexes, and personal and cultural controls) about products innovation mediated by sharing knowledge and moderated by technological turbulence. As to the results, it was seen that personal and cultural controls and non-financial indexes are used for products innovation, while budget and costs information do not show to be directly linked to products innovation. However, as technological turbulence increases, budget information becomes particularly relevant to innovation process.

These investigations evidenced several gaps and recommendations for future studies. Among the recommendations, there is the comprehension of how management process takes place by means of using alternative or informal controls (Carraro *et al.*, 2018; Crespo *et al.*, 2019). That recommendation was the starting point for the development of the present study, aligned to the research developed at national level by Frezatti *et al.* (2014) who aims at understanding management process by adopting informational proxies (alternative or informal controls) in a traditional Brazilian company in the absence of formal mechanisms for management control.

3 Methodological Procedures

The present study features, as to the approach to the problem, as a qualitative one, and as to goals as an exploratory-descriptive one since it explores the adoption of informational proxies by companies with innovation potential and for describing the informational proxies used as an alternative to the lack of formal instruments for management control. With regards to procedures, Merriam (1998) proposal of a basic or generic qualitative study was used, since they understand methods property, as to researches which focus is not either culture (such as in ethnographical research) or the analysis of a particular unit, as proposed by the case study.

For evidence construction the technique of semi structured interview was used (Sampieri *et al.*, 2013). So, seven interviews were performed, recorded upon interviewee allowance, and transcribed. Thus, seven written documents formed the data bank in this research. Interviews were performed from 23 October 2020 and 02 December 2020 and generated over 4 hours and 30 minutes of recorded audios and 61 transcribed pages. Details of the interviews performed are presented in Table 1, as follows:

Table 1 Interviews Details

Interviewee	Gender	State	Date	Means	Duration	#° Pages
Entrepreneur 1	Male	AC	10/23/2020	Online via Google Meet	00:37:47	8
Entrepreneur 2	Male	PR	10/27/2020	Online via Google Meet	00:49:17	11
Entrepreneur 3	Male	RS	11/03/2020	Online via Google Meet	00:38:48	9
Entrepreneur 4	Male	MS	10/28/2020	Online via Google Meet	00:54:05	11
Entrepreneur 5	Male	SC	11/10/2020	Online via <i>Skype</i>	00:13:49	3
Entrepreneur 6	Female	SP	11/11/2020	Online via Google Meet	00:35:35	10
Entrepreneur 7	Male	SC	12/02/2020	Online via Google Meet	00:44:30	9
Total					04:33:51	61

Source: Designed by authors (2022).

The group of entrepreneurs was formed by six interviewees of male gender and one only from female gender, owners of *startups* from distinct themes or area/segment which will be presented later. Each participant in the research presented different levels of academic experience, professional experience, and motivation for enterprising. As to those entrepreneurs' enterprises, they are described in Table 2. Criteria for choosing the startups included in the research group were: a) business stage, and; b) segment/area of action. Although business stage was one of the choice criteria, all startups that accepted participating in the research are in the commercialization stage, only varying as to the time during which they are commercializing.

All seven *startups* already integralized innovation ecosystems, being linked to innovation projects, accelerators, or incubators, and two of them also have some kind of relation to these agents (*Startups* of Entrepreneurs 2 and 6). As to financing ways, startups search angel-investors, subventions, public notices, and study grants. However, as for the *Startups* of Entrepreneur 1, most of his capital is formed by his own money or sourced by family and friends. A final refers to the fact that all startups locate in large centers, including *Startups* of Entrepreneur 6 is an *Agtech* one.

As to the interviews performed, the total over 4 (four) hours and 30 (thirty) minutes were transcribed and inserted into *QSR-Nvivo software*, version 11, by making use of their benefits directed to data analysis in studies with qualitative approach. Data treatment was performed according to Flores (1994) proposal about the interpretation of text information content. In this context, for analyzing, reading, and ranking information obtained, data apprehended by means of interviews in depth, were exhaustively manipulated in order to

search for standards, coherence, and meaning central nuclei.

Table 2
Characteristics of the startups investigated in the research

Startup	Segment/Action Area	Business Stage	Team	
Startup Entrepreneur1	Medical/Health	Commercializes over a year	Up to ten employees	
Startup Entrepreneur2	Safety and Health at Work	Commercializes over five years	Up to ten employees	
Startup Entrepreneur3	Information Technology	Commercializes for approximately five years	Up to ten employees	
Startup Entrepreneur4	Financial Services	Commercializes for approximately ten years	Up to five employees	
Startup Entrepreneur5	Business Analytics	Commercializes over two years	Up to five employees	
Startup da Entrepreneur 6 Agriculture		Commercializes over five years	Up to ten employees	
Startup Entrepreneur7	Public Policies for Education/Social Assistance	Commercializes for approximately ten years	Nearly thirty employees	

Source: Designed by authors (2022).

Evidence buildup and analysis based on the constructs in Table 3, listed under categories, subcategories, and analysis instruments, besides references. Interview script used was validated by means of a pre-test with two companies incubated by a Federal College.

Table 3

Categorization, detailment, and analysis elements investigated in the research

Category	Subcategories	Analysis Elements	Analysis Instruments	References
Informational <i>Proxies</i>	Planning Financial Controls Market Aspects	Mission, Vision, and Values Operational Plan Action Plan Investment Plan External and Internal Environment Analysis Costs and Expenses Control Prevision of Future Income and Expenses Separation of Personal Finances Cash Flow Statement (CFS) Period Income Statement (PIS) Financial Statements (FS) Performance Evaluation (PE) Customer Register Measurement of Customer Satisfaction Established Assistance Policies Partnership with other Startups Market Risks	Interviews, documents, and observation	Frezatti <i>et al.</i> (2014), Feuser <i>et al.</i> (2016), Daciê <i>et al.</i> (2017) e Fonseca <i>et al.</i> (2020).
	Personal Controls	Marketing Evaluation of Employees Performance Training Reward Policies Responsibility Assignment		

Source: Designed by authors (2022).

With methodological procedures explained, in the next section the evidence built are analyzed and discussed.

4 Evidence Analysis and Discussion

4.1 Planning: "You must make it work"

Evidence built cleared several proxies related to startups planning. The following proxies are examples of it: a) Mission, Vision, and Values; b) Operational Plan; c) Action Plan; d) Investment Plan, and; e) External and Internal Environment Analysis. Concepts of strategic planning found in literature emphasize that one of the first elaboration steps is settling business mission, vision, and value (Fischmann & Almeida,

2007; Andrade & Amboni, 2010). Investigations also report that one of the ways to access management policies of a company is by means of analyzing those organization guidelines (Bethlem, 2009). In addition, they evidence excerpts from interviewees with entrepreneurs who mention the use of that *proxy*:

We set mission, vision, and values at the very beginning and we changed it little by little along time. (Entrepreneur 2).

[...] we have set (DEFINE MISSION, VISION, AND VALUES) but it was not the staring point. [...] but even, when you subscribe to a public notice, they ask for that, so we do it (Entrepreneur 6).

Other *proxies* mentioned by entrepreneurs and inserted into planning dimension refer to the development of an operational and action plan, that is, setting organizations goals and the procedures to be performed in order to achieve them. According to Shrader *et al.* (1989), operational plan refers to the most detailed part of planning not only for companies with innovative potential but traditional companies as well. By looking at entrepreneurs' sayings it was possible to infer that startups pay attention to the development and execution of short- and medium-term goals. It can be explained by the fact that they are inserted into highly uncertain environments, being very difficult to develop and execute long term goals. Besides that, several entrepreneurs did not have any experience related to enterprises, causing the path to be slightly rougher:

[...] we had no knowledge about entrepreneurship, so we did not know what to do at medium and long term, for example. We knew that at short term it was about solving that problem now, finally. [...] in our experience (EVENT NAME) none had a medium- and long-term planning, we only knew what we were doing at short term. (Entrepreneur 1).

In the beginning you only have short term goals [...] you have to make it work [...] You have the long-term goal, of course, that is the impact you intend to reach, isn't it? But there are sharper short- and long-term goals. Nowadays we do have short-, medium-, and long-term goals. [...] and (ACTION PLAN) in it incubations help a lot. [...] Now with the Covid-19 we must make much quicker decisions, isn't it? Previously we planned over a year and checked it each six months. Now we "take a look" on the plan each 15 days, since things have changed. (Entrepreneur 6).

As for the Operational and Action Plans, Investment Plan was other proxy identified in entrepreneurs' speeches. That plan basically refers to the study on investments of a company aiming at short-, medium, and long-term results. So, they are the measures and procedures adopted for guiding the business resources towards scopes and goals previously established (Calvo, 2020). Entrepreneur 4, in a given moment in the interview, reports participating on an online event focused on startups financial aspects, where debaters emphasize the lack of skills of several individuals as to investments. The entrepreneur mentions, also, that such lack of startup entrepreneurs' knowledge is intrinsically related to the lack of skill of traditional business entrepreneurs:

[...] when talking about financial questions, people (ENTREPRENEURS) get lost for nothing. I say so because I mentor some startups and they know what they need but they don't have that financial planning. [...] startups start in informality as well, they will try, will validate the problem, will validate solution, etc. [...] they (ENTREPRENEURS) have that difficulty. They know how to elaborate the product, they even know how to sell it well, but they don't know how to control their finances, their planning, they can't differentiate expense from investment, etc. (Entrepreneur 4).

I admit it was not some mature thing, it was kind of "Let's go with the flow", I think we must invest here", but we had no specific metrical for that. [...] So, we started ripening it by now. (Entrepreneur 7).

[...] I even made some plans (INVESTMENT) right in the beginning, when started looking for investors, in 2016. But then we stepped back, and we no longer search for investors, now it is all upon self-capital. So, that investment plan was left aside since its goal was searching for investors only. (Entrepreneur 5).

Finally, another *proxy* identified on the evidence built is the External and Internal Environment Analysis. Regardless being a company with innovative potential or not, a very relevant step in an enterprise planning is the external and internal environment analysis (Feuser *et al.*, 2016). Such analyses basically consist in checking strengths, weaknesses, opportunities, and threats of the company (Daciê *et al.*, 2017). That analysis described, specifically, refers to the SWOT Matrix. Four entrepreneurs mention in their speech that, in the beginning or at a given time, they performed the referred analysis, being: Entrepreneur 2, Entrepreneur 4, Entrepreneur 6, and Entrepreneur 7:

We used the SWOT Matrix, the Business Model Canvas, the Value Proposition Canvas, and one thing required the other to be done, that is, we firstly applied the SWOT and then applied the others. (Entrepreneur 2).

[...] all startups come to a given moment when they need to search for investment, either small or large one [...] a SWOT analysis will certainly be performed. (Entrepreneur 4).

We apply SWOT analysis yearly. Every year, in the end of the year, so we can make the next year planning, we do it. (Entrepreneur 6).

[...] we are implementing some methods, building up a SWOT analysis, etc. so we are elaborating our opportunities and threats, our strengths and weaknesses. (Entrepreneur 7).

Some results obtained are supported by investigations found in the theoretical framework. Feuser *et al.* (2016) research, for example, evidenced the use of proxies ização das *proxies* Mission, Vision, Value, Operational Plan, and Action Plan in small traditional businesses (with no innovative potential). On the other hand, researchers did not find enough evidence to state those small businesses applied the External and Internal Environment Analysis, as well as if they develop an Investment Plan, as identified for the startups studied in the present paper.

4.2 Financial Controls: "Now, with the Covid-19, we must make much quicker decisions"

Related to financial controls, informational proxies identified in the startups by means of the speech of the entrepreneurs interviewed were: a) Costs and Expenses Control; b) Prevision of Future Income and Expenses; c) Separation of Personal Finances; d) Financial Statements (CFS, PIS, AND FS), and; e) Separation of Personal Finances. The first proxy identified refers to organization costs and expenses control. Startups trying to manage their finances in a correct way tend to make better investments, either in innovation, products, or improvements in their organizational structure (Dullius & Schaeffer, 2016). As seen in entrepreneurs' speeches, such controls are not well structured at business conception, but are being improved over years:

The example (COSTS AND EXPENSES CONTROL) of my startup is precarious. [...] it was precarious in the beginning. Then we "saw" the need for hiring third party services [...] we decided to hire services from a startup (STARTUP NAME) to help us, specifically, on costs and expenses control. [...] after that, things turned much calmer. Before that it was a problem, we didn't know how much we were spending so planning was so hard. (Entrepreneur 1).

[...] let's imagine a startup yet informally established or in initial steps, they will make their own control. But see, they need a history so they can reach an investor later. So yes, they do it but in a very informal way, and get formalizing it from the moment they look for such professionalization. (Entrepreneur 4).

Other entrepreneurs emphasized, in their speech, the prevision of future income and expenses as a control of them. Prevision of future income and expenses is, unquestionably, a crucial mechanism for managing innovative organizations as well as traditional ones (Fonseca *et al.*, 2020). Medium and large port companies, as well as innovative ones (which already performed their business model), performed the budget, which consists in a formal prevision tool. However, several small business and startups, just because of their peculiarities distinguishing them from other companies, perform more basic, simple, or informal controls:

[...] last year was the first when we did (A PREVISION OF FUTURE INCOME AND EXPENSES), and this is the second year. We have some yearly duties as information technology service provider. [...] So, this is all done, usually, in December, one or two weeks before New Year recess. (Entrepreneur 3).

We do perform (PREVISION OF FUTURE INCOME AND EXPENSES) it is kind of a budget, isn't it? At the moment I have it in hands covering up to July 2021. [...] Now with the Covid-19 we must make much quicker decisions, isn't it? Previously we planned over a year and checked it each six months. Now we "take a look" on the plan each 15 days, since things have changed. So, we have to recalculate the path quickly, isn't it? (Entrepreneur 6).

In face of the fact they start in informality, such as small traditional entrepreneurs, it was possible to see several difficulties referent separating personal finances from business ones. One of the first lessons taught to entrepreneurs relates to the total separation of their finances from company's finances and any mentor has that lesson such as a starting point to talk about entrepreneurship (Daciê *et al.*, 2017; Dullius &

Schaeffer, 2016). However, some entrepreneurs still end up committing such mistake due to their lack of knowledge (Raifur, 2013). On entrepreneurs' speeches it is noticed that, despite any possible compensation, such separation caused problems in the beginning of the business:

In the beginning we had a problem, it was the credit card. [...] some company billings ended up in my credit card. [...] even so, there has always been a compensation of "one to one". [...] so, it was all written down, that split of members finances from the company's money was always done, even when we used my personal card. [...] So yes, we have such division. (Entrepreneur 2).

There has always been (SEPARATION OF PERSONAL FINANCES), we have always been as I told you, careful as to values, isn't it? So, in the beginning, I insist, everything is very very hard when the company begins. So, we've always been aware that if we don't separate, if we mix things or "it is my money, so it is also company's" things turn into a big mess. So, we always tried to separate everything. Since the company's first month, we had expenses, we had no clients, but we already had expenses. (Entrepreneur 3).

Another important *proxy*, which was identified on companies in the present study, relates to the use of Financial Statements as a support for decision making process. Such reports detail an enterprise financial situation in a general way and having them as a support, it is possible to perform taxes ascertainment, controlling cash flow, perform better investments, and have a better management of all aspects of the company (Frezatti *et al.*, 2014). In addition, financial statements are very relevant as to search for investors and they can evidence if the company is a profitable, safe investment or not. All entrepreneurs manifested in favor of using financial statements as a support for decision making process, such as Entrepreneur 2 and Entrepreneur 6:

Nowadays, CFS (AS A SUPPORT FOR DECISION MAKING PROCESS) is the one of choice. Sometimes I analyzed the PIS but being honest with you, I am not so "clear" about that issue so that tool served me in a cool way. But, you know, I've used it a few times. We usually make use of CFS, we notice where the money is being used, etc. (Entrepreneur 2).

I have a sheet basing all our PIS, isn't it? I send my accountant that sheet and he prepares the PIS. His one is pretty much more formal, so I don't use the PIS, he sends me later, I do use my sheet for decision making process, which is pretty complete in my opinion. So, it shows me CFS, income, expenses. So yes, I use it every day; as a matter of fact, I use it for my decision making, not the one my accountant sends me. (Entrepreneura 6).

Finally, another *proxy* identified on companies in the present study was the Measurement of Business Performance. It is crucial for a good quality management and the success of the enterprise, and, besides that, it is essential for the entrepreneur to be aware of what is still needed for reaching the goals set at planning step and then, making any adjustment needed (Raifur, 2013). When analyzing entrepreneurs' speeches, the use of several performance indexes is seen, from the simplest to the must structured ones. Among them, there are: yield index, level of delivery service, sales success rate, turnover index, return on investment, payback, among others:

Yes, there is a performance measurement in a startup. The main way to know if a startup is "having" a good performance are "sales" (OF BOTH PRODUCTS AND/OR SERVICES) you cannot know if a startup is "having" good results, if not on sales, if not with people who want to pay for its product/service. That is, if it was to be summarized into a single word, it would be "sales". (Entrepreneur 1).

[...] nowadays we use several metrics. I am talking in general, if you take the simpler startups they'll say, "Oh I have so many followers in social media". [...] So, startups that are a little riper, they really look for having such metrics since they are requirements of their own medium, startups moves. So, they are a lot of indexes, ROI, Payback, etc. (Entrepreneur 4).

Such results, as those from previous section, are partially supported by previous investigations. Fonseca *et al.* (2020) evidenced that, for example, small traditional businesses from agribusiness segment use the Financial Statements and Costs and Expenses Control proxies. On the other hand, they did not find needed evidence to state proxies such as Performance Evaluation, Future Income and Expenses Prevision, and Separation of Personal Finances are used by those companies.

4.3 Market Aspects: "We have a more careful look"

By means of analyzing data collected it was possible to identify proxies related to market aspects

(market and customer) by *startups*. *Proxies* identified were: a) Customer Register; b) Measurement of Customers Satisfaction; c) Established Assistance Policies; d) Partnership with other *Startups*; e) Market Risks, and; f) Marketing. In the interviews performed it was evidenced that most entrepreneurs have a customer's register. With such register, entrepreneurs can have more knowledge about their behavior and interests, even from potential buyers. Concomitantly, it was evidenced that some startups have established assistance policies. Such policies refer, basically, to a set of rules and norms directed to standardization and optimization of assistance (Feuser *et al.*, 2016). In addition, measurement of customers' satisfaction was observed by organizations. According to Normand (2015), satisfaction can be understood as a feeling built by customer as soon as a product or service is purchased:

It varies a lot, depends on startup to startup. In my case, there is an evaluation form where customer expresses, from 0 (zero) to 10 (ten) his satisfaction as to our service. (Entrepreneur 1).

[...] we have a register where we enroll 100% of effective customers, isn't it? They are our customers. And since the (NAME OF STARTUP) focus today is assisting legal entities, so we have a legal entity register in our system and from one to three contacts of that legal entity in our system. [...] Today we have satisfaction implemented at the "system of calling", it exists there, but for us to operate with it, it would demand a huge training time with customer. [...] we do not issue any satisfaction report to monitor that customer question (INSATISFACTION). (Entrepreneur 3).

Another *proxy* identified relates to projects *startups* have in partnership with other *startups*. Such partnerships focus on benefiting both parties in some way and do not restrict, exclusively, in partnerships to other innovative companies, being either traditional small-, medium-, or big size companies (Dullius & Schaeffer, 2016). All those details were noticed in parts from entrepreneurs' interviews. Entrepreneur 2, for example, mentions a partnership he witnessed closely, in the incubator he is inserted in. a similar happening was described by Entrepreneur 4. The entrepreneur, who is also director of a speeding up company and performs mentorships in it, is following a partnership between two *startups* which have different solutions and are becoming united to look for new investors:

[...] we have some partnerships; we have a partnership with a company from an action area/segment similar to ours. [...] I believe it happens (PARTNERSHIP BETWEEN STARTUPS) mainly as to market, for example, sometimes a startup works in a "type of market" and addresses that market's needs, and another startup has a different solution addressing the same market. So, they are complimentary. (Entrepreneur 2).

[...] with other startups and also traditional companies as well. If not, the movement "Open Innovation", the open innovation, would make no sense. [...] So yes, there is a relation between traditional companies and startups also relate to other startups. Also, from the same segment, even competitors sometimes. I have seen several startups making partnerships, alliances with competitors I am helping here, with a partnership [...] of course they are not direct competitors, but they end up being indirect competitors. [...] they will unite forces by the fact that one of them can "play a good role" while the other can "play the other good role" (Entrepreneur 4).

Being aware of market risks was one of the *proxies* identified and inserted in this dimension/category. In some parts from interviews with entrepreneurs it was possible to notice such lack of knowledge. Entrepreneur 1, for example, expatiates on the "novice" entrepreneur and emphasizes he has no idea of market risks. Entrepreneur 2 and Entrepreneur 3 comment on a careful look on environments surrounding their organizations. Entrepreneur 2, for example, reports the follow up of economical moves, competitor solutions, and also possible changes in rules currently in force. Entrepreneur 3, in turn, emphasizes the careful market look they have to develop in face of the pandemics:

Novice entrepreneur is not aware of market risks. [...] you are investing money, investing time on something which will bring you no return. But there are also risks that come "from nature", such as Covid-19 pandemics itself. Companies closed their doors, and, in the opposition, other opportunities came, that is, enterprising is very good when you know how to deal with the business. (Entrepreneur 1).

We are always observing solutions from our competitors, we are well "tunned" too, as to news about our market. [...] we are monitoring it all the time; we monitor official news regarding changes in rules and we monitor our competitor companies. [...] Besides, we also follow market economy moves. (Entrepreneur 2).

[...] we have a more careful look as to market and I believe pandemics itself caused us to be more careful with investments. [...] today I can say we are much more cautious about planning, investments, and so

on, which we were not in the beginning. [...] today our conditions are a little better, we look in a more cautious way. (Entrepreneur 3).

The last *proxy* identified refers to marketing in *startups*. Marketing can be understood, in a simple and objective way, as the art of exploring, creating, and delivering value to address market needs by means of products or services that can be interesting to customers. All entrepreneurs manifested on the way marketing takes place in their business. With no exceptions, all entrepreneurs stated marketing takes place by means of social media: *Facebook, Instagram, Websites, LinkedIn, Blogs*, etc:

Marketing process is fully online. Social media: Facebook, Instagram, contacting people by e-mail, online calls. (Entrepreneur 1).

Today our marketing happens by creating content, so we create blogs, issues, e-books, info graphs, all sort of content about work safety in our page (site). [...] Then, with that content, we have all our social media and publish by means of them. (Entrepreneur 2).

So, we work our social media a lot, our blog where we bring contents both from education and social. (Entrepreneur 7).

As to the findings evidenced in this section, they are partially similar to Feuser *et al.* (2016). The authors showed the Customer Register, Customer Assistance Policies, and Market Risks Knowledge are proxies not used by organizations included in the research. On the other hand, the proxies Measurement of Customer Performance, Marketing, and Partnership Projects with other Companies were also identified such as in the present study.

4.4 Personal Controls: "Business will only be successful [...] if a qualified professional is involved"

In this dimension, personal controls, proxies identified were: a) Employees Performance Evaluation; b) Training; c) Reward Policies, and; d) Responsibility Assignment. An evaluation of employees performance consist, basically, in a tool establishing a comparison between the expected performance and that one presented by individuals in an organization (Daciê *et al.*, 2017). In a general way, all interviewed entrepreneurs evaluate their employee's performance. However, most of these evaluations are not so structured, that is, several times employees are evaluated by the simple fact of arriving at correct working time:

We have (AN EVALUATION) but it is "too short". We have an evaluation, but it is weak as to shifts and alike. (Entrepreneur 1).

[...] we evaluate by actions, attitude, the way they answer to customers, the way they relate to their own customers, customers give us several feedbacks as to assistance, so we have the tool "calling" where they have to register everything they do, register solutions, register tasks, isn't it? They are the tools we have to make a single evaluation. (Entrepreneur 3).

We have some goals, specifically, for some functions. [...] Such goals, or better saying, reaching them are used for paying a variable wage, commission, etc. as to the others (EMPLOYEES), we make a "qualitative" evaluation, that is, we follow tasks daily. (Entrepreneur 2).

Startups locate in environments with fast changes which require from entrepreneurs to take precise actions and decisions in a short frame of time (Dullius & Schaeffer, 2016). Such agility forces an increasing number of qualifications from entrepreneurs and other individuals aiming at increasing productivity, competitive advantage, reduction on costs, besides improving organizational mood. As seen on Entrepreneur 6 speech, incubated companies or those linked to some kind of innovation program/project are in advantage in that aspect because they are under constant training. In turn, Entrepreneur 4 highlights the importance of training when mentioning a startup can get, at shorter time, to be successful in its activities when counting on qualified professionals:

[...] it is because we are always through some acceleration process. Since conception, there was no moment we were not into it. And in processes there are lots of mentorship and training. These are the one (TRAININGS) from processes, there are no others. (Entrepreneur 6).

Riper startups offer training on assistance, behavior analysis, as well as for their products. So, riper startups do, but as to those ones starting now, validating their solution, searching for the first customers, maybe there is not such an offer of training. Should it offer? Certainly! Because the business will only

succeed in a faster way when counting on a qualified professional. (Entrepreneur 4).

Another *proxy* identified relates to Reward Policies referring to a set of mechanisms constituting the counterpart of the contribution delivered by employees to business results. Such rewards may be direct, such as money payments, or indirect, such as non-monetary benefits. In general, it is seen that those rewards are aligned, mostly, to two big areas of the business: sales and marketing. However, it is important to highlight that they do restrain only to them. It can be proven in the speeches of Entrepreneur 1, Entrepreneur 2, and Entrepreneur 7:

As to sales and marketing, there are those reward established policies. [...] We made kind of a ranking, when employee is among the three first ones in the ranking, he is rewarded a wage bonus and the others remain a little lower, they do not get such bonus. (Entrepreneur 1).

In sales we have a commission, in pre-sales we have a commission, and at after sales we have a commission too. [...] it is difficult when you have several different activities, for sales it is easy, for sellers it means selling, and for pre-seller it means scheduling presentations. For the developer, however, you can fix a variable remuneration to a task or another, you can compromise another type of activity which is not being rewarded. (Entrepreneur 2).

Now we have benefits to employees, culture tickets, loyalty bonus, etc. each year you stay with us you are rewarded 10% on your salary. So, in the first year you get 10%, the second you get 20%, and so on. We have employees with six years of work, they get 60% on their salary as a bonus, isn't it? Then these are some incentives. (Entrepreneur 7).

The last *proxy* inserted in this dimension/category refers to Responsibility Assignment. When an enterprise is started many functions are performed by the founder himself, that is, the entrepreneur does the organization marketing, assists customers, responds for sales, as well as after sales, among other tasks (Raifur, 2013). However, as years go by and the structuring of their business, employees are being hired to respond for some areas/sector. From entrepreneurs' speeches it is evident that all employees hired already have their responsibilities preestablished:

In the beginning, it is always the entrepreneur. In the beginning of his idea, it's all up to you! Operational, marketing, finances, direction, and managing, it is always about the entrepreneur. (Entrepreneur 1).

Usually, when we hire, we already establish one's function. So, an example is the pre-sales sector, when we hire someone, his responsibilities were yet calling customers, qualifying these people, etc. (Entrepreneur 2).

When hiring takes place it is already addressed to a given demand, isn't it? With regards to members, some area division was set from the beginning. (Entrepreneur 5).

These informational *proxies*, such as those identified in previous dimensions, find partial support from studies such as Daciê *et al.* (2017). According to the authors, the *proxy Training* is used by most companies analyzed (75.51% from the total). However, the *proxies* Responsibility Assignment, Evaluation of Employees Performance, and Rewards Policies were not seen in any enterprise analyzed.

4.5 Results Discussion

Management controls are evidenced both theoretical and empirically as facilitators for achieving organizational goals, which are initially based on optimizing resources, under a long-term results perspective (Bedford, 2015; Chenhall & Moers, 1986; Davila *et al.*, 2015). Investigations agree when stating the adoption of management controls (either formal, informal, or alternative) provide information needed for entrepreneurs/managers in the daily decision-making process (Daciê *et al.*, 2017; Fonseca *et al.*, 2020; Frare *et al.*, 2021).

Specifically in *startups*, as they are in the starting life cycle of an innovative business, it was seen the controls used do not restrain to the formal ones, they can be either alternative or informal management controls, in this study featured as informational *proxies* (Frezatti *et al.*, 2014). Informational *proxies* found in small traditional business (Feuser *et al.*, 2016), such as: a) Performance Evaluation; b) Partnerships, and; c) Trainings, were also found in startups investigated in this study. On the other hand, *proxies*: a) Reward Policies, b) Use of Financial Statements, and; c) Operational Plan, identified in startups, showed low use percentage in small traditional business.

Some other investigations, such as Raifur (2013), Abbade *et al.*, (2012), and Becker *et al.* (2001) support results obtained from this study. Such as for this study, *proxies* Operational Plan and Costs and

Expenses Control were found in Raifur (2013) research. In turn, Abbade *et al.* (2012) study concluded that some proxies such as: Customer Satisfaction and Market Risks Knowledge, inserted in market aspects dimension, are also used in the companies studied in this research. Finally, Becker *et al.* (2001) evidenced that the enterprises studied in the present research use proxies Training and Employees Performance Evaluation.

Frezatti *et al.* (2014) study provided evidence when emphasizing the adoption of proxies takes place in face of the support to organization speech and they derive from formal instruments for management control (Akroyd & Kober, 2020; Costa *et al.*, 2021; Frare *et al.*, 2021; Gomez-Conde *et al.*, 2022; Santos *et al.*, 2022). Entrepreneurs' speeches composing the group of individuals in this research align to what Frezatti, Carter and Barroso (2014) reinforce. For example, Entrepreneur 6 mentions that the proxy Future Income and Expenses Prevision composing her *startup* MCS looks for following the peculiarities of the budgets realized by big organizations.

So, it is understood that even formal controls prevented from being completely replaced, proxies show up as instruments with very similar features and with the ability to perform an important role in the buildup of the organization speech (Daciê *et al.*, 2017; Fonseca *et al.*, 2020; Frezatti *et al.*, 2014). Daciê *et al.* (2017) also reinforces that in any result-oriented environment there is the need for discussing them. Thus, although small businesses and startups entrepreneurs/managers do not use tools the way they are described in literature, the need for information and result measurement remains.

By analyzing evidence built, it was possible to understand that one of the main factors leading entrepreneurs to adopt informational proxies is facing obstacles found in the first stages of a business life cycle. In several moments Entrepreneurs 2 and 3, for example, emphasize these controls are determinant for their organizations continuity. Researchers Dullius and Schaeffer (2016) go deep into this discussion, mentioning the absence of management tools in startups may bring failure or even the death of a business, especially in the first stages.

Other investigations support the findings in the present study, such as Davila and Foster (2007), Nogueira and Oliveira (2014), and Gomez-Conde *et al.* (2022), who emphasize the importance of planning management controls for organizations survival and continuity. Thus, it is fundamental, for example, the use of proxy Business External and Internal Environment Monitoring. Feuser *et al.* (2016), in turn, evidenced that the adoption of informational proxies inserted into planning, financial control, market aspects, and personal control dimensions positively affect business performance and, thus, they guide the company towards the consolidation of the business model.

5 Final Considerations

The present study focused on understanding the way management process takes place in startups by means of using informational proxies as an alternative to the absence of formal mechanisms for management control. Evidence found allows some conclusions. Initially it was seen that, for being in the beginning of their life cycle as an innovative business and the lack of knowledge from their entrepreneurs/managers about management and formal artifacts for management control, startups investigated adopt alternative or informal controls, in the present study so called informational proxies.

It was seen that *startups* adopted these informational proxies such as shown by evidence in literature about informational proxies, aiming at the equivalence of information provided by formal instruments for management control which are, mostly, designed for medium and large companies. The mentioned proxies helped companies not only during the Covid-19 uncertainty scenario, but since conception, contributing with the survival and continuity of al innovative enterprises.

In general, it is concluded that, even in the absence of largely known, consolidated controls in management literature (Simons, 1995; Otley, 2003; Merchant & Van Der Stede, 2012; Goebel & Weibenberger, 2017), small innovative, traditional organizations (Frezatti *et al.*, 2014; Feuser *et al.*, 2016; Daciê *et al.*, 2017; Fonseca *et al.*, 2020) rely on alternative or informal controls, that is, informational proxies, evidencing that even in the absence of accounting, there is accounting.

5.1 Management and Theoretical Implications

The present investigation has management implications to those playing in the entrepreneur ecosystem. Firstly, for *startups* entrepreneurs/managers, evidence highlight the relevance for these companies to adopt a MCS with alternative or informal planning, financial, market, and personal controls, when known and consolidated artifacts in management literature are not possible. Management controls, either formal, informal, or alternative, such as those explored in this study, provide relevant information for the success of an enterprise, besides offering support for facing times of crisis, such as it was during Covid-19 pandemics.

Also, managers of technology parks, innovation projects, accelerators, or incubators, must consider transferring management knowledge, emphasizing the relevance of alternative or informal controls and adopting structured policies as to assure starting companies have them before they leave. When analyzing

evidence, it was possible to notice some of these innovation agents are already working for providing such management knowledge to entrepreneurs/managers who, mostly, are enterprising for the first time and need crucial features.

The present study contributes with the literature on MCS in *startups* (Davila & Foster, 2005, 2007; Davila *et al.*, 2015; Samagaio *et al.*, 2018; Crespo *et al.*, 2019; Pavlatos, 2021) and provides new evidence on the adoption of informational proxies (alternative or informal controls) in the absence of management control formal mechanisms in startups (Frezatti *et al.*, 2014; Feuser *et al.*, 2016; Daciê *et al.*, 2017; Fonseca *et al.*, 2020). It also contributes by reinforcing the importance of balance and communication among planning, finances, market, and personal *proxies* (Akroyd & Kober, 2020).

5.2 Limitations and Additional Researches

The present study has some limitations that can be approached in future researches. Being careful on generalizing data is crucial since the research could not explore startups from all areas across Brazil. Besides, oddly enough the study tried to survey startups at several stages, only one of them commercializes for approximately ten years, being difficult to picture and discuss whether there was evolution in terms of management controls, along years, that is, from business conception to current days. In summary, it is relevant to make a longitudinal analysis about adopting MCS in *startups*.

So, as recommendations for future research, it is suggested that other researchers look for understanding the settings of management controls in innovative organizations while startups and when they become innovative companies, a step where the business model is performed. It is believed that, by being at the extreme opposite of the life cycle of an innovative business, innovative companies adopt a MCS composed by consolidated, broadly known mechanisms such as strategic planning, BSC, budget, among others.

References

- Abbade, E. B., Zanini, R. R. & Souza, A. M. (2012). Orientação para Aprendizagem, Orientação para Mercado e desempenho organizacional: evidências empíricas. *Revista de Administração Contemporânea*, 16(1), 118-136. https://doi.org/10.1590/S1415-65552012000100008
- Akroyd, C., & Kober, R. (2020). Imprinting founders' blueprints on management control systems, *Management Accounting Research*, 46, 1-18. http://doi.org/10.1016/j.mar.2019.07.002
- Andrade, R. O. B., & Amboni, N. (2010). *Estratégias de gestão*: processos e funções do administrador. Rio de Janeiro: Elsevier, 266.
- Anthony, R. N., & Govindarajan, V. (2008). *Sistemas de controle gerencial*. 12. ed. São Paulo: McGraw- Hill. Becker, B. E., Huselid, M. A. & Ulrich, D. (2001). *Gestão Estratégica de Pessoas com "Scorecard"*. Rio de Janeiro: Campus.
- Bedford, D. S. (2015). Management control systems across different modes of innovation: Implications for firm performance. *Management Accounting Research*, 28, 12-30. https://doi.org/10.1016/j.mar.2015.04.003
- Bethlem, A. S. (2009). *Estratégia empresarial*: conceitos, processos e administração estratégica. 6. ed. São Paulo: Atlas.
- Calvo, J. M. (2020). *Plano de investimento*: Aprenda a fazer o seu. Disponível em https://www.palestrafinanceira.com.br/blog/2020/06/09/plano-de-investimento-empresarial/. Acesso em: 24/01/2021.
- Carraro, W. B. W. H., Meneses, R. & Brito, C. (2018). Combining Categories of Management Control Tools for High Performance of Start-ups. *Review of Business Management*, 21(4), 861-878. https://doi.org/10.7819/rbgn.v21i5.4022
- Chenhall, R. H., & Morris, D. (1986). The Impact of Structure, Environment, and Interdependence on the Perceived Usefulness of Management Accounting Systems. *The Accounting Review*, 61, 16-35.
- Costa, M. A. S., Guerino, G. C., Leal, G. C. L., Balancieri, R., & Galdamez, E. V. C. (2021). Exploring performance measurement practices in Brazilian startups. *Total Quality Management & Business Excellence*, 1-27. https://doi.org/10.1080/14783363.2021.1884063
- Crespo, N. F.; Rodrigues, R.; Samagaio, A.; Silva, G. M. (2019). The adoption of management control systems by start-ups: Internal factors and context as determinants. *Journal of Business Research*, 101, 875-884. https://doi.org/10.1016/j.jbusres.2018.11.020
- Daciê, F. P., Espejo, M. M. S. B., Gimenez, F. A. P. & Camacho, R. R. (2017). Os Semelhantes Se Diferem? Características Determinantes Do Uso De Controles Gerenciais Em Empresas Que Compartilham O Mesmo Ambiente Institucional. *Revista De Administração*, 52(3), 341-352. https://doi.org/10.1016/j.rausp.2017.05.006
- Davila, A., & Foster, G. (2005). Management accounting systems adoption decisions: Evidence and performance implications from early-stage/startup companies. *The Accounting Review*, 80(4), 1039-1068. https://doi.org/10.2308/accr.2005.80.4.1039

- Davila, A., & Foster, G. (2007). Management control systems in early-stage startup companies. *The Accounting Review*, 82(4), 907-937. https://doi.org/10.2308/accr.2007.82.4.907
- Davila, A., Foster, G. & Jia, N. (2015). The Valuation of Management Control Systems in Start-Up Companies: International Field-Based Evidence. *European Accounting Review*, 24(2), 207-239. https://doi.org/10.1080/09638180.2014.965720
- Davila, A., Foster, G., & Jia, N. (2010). Building sustainable high-growth startup companies: Management systems as an accelerator. *California Management Review*, 52(3), 79-105. https://doi.org/10.1525/cmr.2010.52.3.79
- Dullius, A., & Schaeffer, P. (2016). As capacidades de inovação em startups: Contribuições para uma trajetória de crescimento. *Revista Alcance*. 23. https://doi.org/alcance.v.23n.1.p34-50
- Feuser, H. O. L., Daciê, F. P. & Espejo, M. M. S. B. (2016). *O Uso de Proxies de Controle Gerencial em Micro e Pequenas Empresas Gerenciadas por Mulheres*. Anais do XVI International Conference in Accounting, São Paulo.
- Fischmann, A. A., & Almeida, M. I. R. (2007). Planejamento Estratégico na Prática. 2. ed. São Paulo: Atlas.
- Flores, J. (1994). *Aproximación interpretativa al contenido de la información textual*. In: Analisis de datos cualitativos aplicaciones a la investigación educativa. Barcelona: PPU.
- Fonseca, R. F. M. S., Espejo, M. M. S. B. & Queiroz, A. F. (2020). O efeito mediador das proxies de controle gerencial na relação características do empreendedor e desempenho organizacional. *Revista de Educação e Pesquisa em Contabilidade*, 14(3). https://doi.org/10.17524/repec.v14i3.2677
- Frare, A. B., da Cruz, A. P. C., Lavarda, C. E. F., & Akroyd, C. (2021). Packages of management control systems, entrepreneurial orientation, and performance in Brazilian startups. *Journal of Accounting & Organizational Change*. https://doi.org/10.1108/JAOC-04-2021-0052
- Frezatti, F., Carter, D. B. & Barroso, M. F. G. (2014). Accounting without accounting: Informational proxies and the construction of organisational discourses. *Accounting, Auditing & Accountability Journal*, 27(3), 426-464. https://doi.org/10.1108/AAAJ-01-2012-00927
- Goebel, S., & Weißenberger, B. E. (2017). Effects of management control mechanisms: Towards a more comprehensive analysis. Journal of Business Economics, 87(2), 185-219. https://doi.org/10.1007/s11573-016-0816-6
- Gomez-Conde, J., Lopez-Valeiras, E., Malagueño, R., & Gonzalez-Castro, R. (2021). Management control systems and innovation strategies in business-incubated start-ups. *Accounting and Business Research*, 1-27. https://doi.org/10.1080/00014788.2021.1986365
- Malmi, T., & Brown, D. A. (2008). Management control systems as a package: Oportunities, challenges and research directions. *Management Accounting Research*, 19(4), 287-300. https://doi.org/10.1016/j.mar.2008.09.003
- Merchant, K. A., Van der Stede, W. A. (2012). *Management control systems*: Performance measurement, evaluation and incentives. 3rd edn. Prentice Hall, Harlow.
- Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass Publishers.
- Nogueira, V. S., & Oliveira, C. A. A. (2014). Causa da mortalidade das startups brasileiras: como aumentar as chances de sobrevivência no mercado. *Nova Lima*, 9(25), 26-33. Disponível em: https://www.fdc.org.br/conhecimento/publicacoes/artigo-29767. Acesso em: 22/11/2020.
- Normand, R. (2015). *Vale do Silício*: entenda como funciona a região mais inovadora do planeta. Disponível em: www.valedosilicio.com. Acesso em: 23/10/2020.
- Otley, D. (2003). Management Control and Performance Management: Whence and Whither? *The British Accounting Review*, 35(4), 309-326, 2003. https://doi.org/10.1016/j.bar.2003.08.002
- Pavlatos, O. (2021). Drivers of management control systems in tourism start-ups firms. *International Journal of Hospitality Management*, 92, 102746. https://doi.org/10.1016/j.ijhm.2020.102746
- Raifur, L. (2013). Fatores determinantes de desempenho de pequenas e médias empresas da região centrosul do estado do Paraná. Tese (Doutorado em Contabilidade), Universidade de São Paulo, São Paulo.
- Ries, E. (2011). The Lean Startup. United States of America: Crown Business.
- Russo, P. T., & Guerreiro, R. (2017). As práticas de contabilidade gerencial mais usadas por empresas que operam no Brasil. Anais do Seminários em Administração (SEMEAD), São Paulo, Brasil.
- Samagaio, A., Crespo, N. F. & Rodrigues, R. (2018). Management control systems in high-tech start-ups: An empirical investigation. *Journal of Business Research*, 89, 351-360. https://doi.org/10.1016/j.jbusres.2017.12.028
- Sampieri, R. H., Collado, C. F. & Lucio, M. P. B. (2013). *Metodologia de pesquisa*. 5 eds. Porto Alegre: Penso.
- Sandino, T. (2007). Introducing the first management control systems: evidence from the retail sector. *The Accounting Review*, 82(1), 265-293. https://doi.org/10.2308/accr.2007.82.1.265
- Santos, V., Beuren, I. M., Bernd, D. C., & Fey, N. (2022). Use of management controls and product innovation in startups: intervention of knowledge sharing and technological turbulence. *Journal of Knowledge Management*. https://doi.org/10.1108/JKM-08-2021-0629
- Scapens, R. W. (1994). Never mind the gap: towards an institutional perspective on management accounting

practice. Management Accounting Research, 5, 301-321. https://doi.org/10.1006/mare.1994.1019

Shrader, C. B., Mulford, C. L. & Blackburn, V. L. (1989). Strategic and Operational Planning, Uncertainty, and Performance in Small Firms. *Journal of Small Business Management*, 27(4).

Simons, R. (1995). *Levers of Control*: How managers use innovative control systems to drive strategic renewal. Boston: Harvard Business Press.

* A preprint version of the paper was presented at the 21st USP International Conference in Accounting, 2021.

NOTES

ACKNOWLEDGMENT

This work was carried out with the support of the Coordination for the Improvement of Higher Education Personnel - Brazil (CAPES) - Financing Code 001.

AUTHORSHIP CONTRIBUTION

Conception and elaboration of the manuscript: Ribeiro, A. C., Espejo, M. M. S. B., Vendramin, E. O., Costa, F.

Data collection: Ribeiro, A. C. Data analysis: Ribeiro, A. C.

Discussion of results: Ribeiro, A. C., Espejo, M. M. S. B., Vendramin, E. O., Costa, F.

Review and approval: Espejo, M. M. S. B., Vendramin, E. O., Costa, F.

DATASET

The entire dataset supporting the results of this study was published in the paper itself.

FINANCING

This work was carried out with the support of the Coordination for the Improvement of Higher Education Personnel - Brazil (CAPES) - Financing Code 001.

CONSENT TO USE IMAGE

Does not apply.

APPROVAL OF THE RESEARCH ETHICS COMMITTEE

Does not apply.

CONFLICT OF INTERESTS

Does not apply.

USE LICENSE

Copyrights for articles published in this journal are the author's, with first publication rights for the journal. Due to appearing in this Public Access Journal, the articles are free to use, with their own attributions, in educational, professional and public management applications. The journal adopted the C BY NC ND. This license allows accessing, downloading, copying, printing, sharing, reusing and distributing the articles provided that the source is acknowledged, attributing the due authorship credits. In such cases, no permission is required from the authors or editors. Authors are authorized to assume additional contracts separately, for non-exclusive distribution of the version of the work published in this journal (eg, publishing in institutional repository or a book chapter).

PUBLISHER

Federal University of Santa Catarina. Accounting Sciences Course and Postgraduate Program in Accounting. Publication on the <u>UFSC Journal Portal</u>. The ideas expressed in this article are the responsibility of their authors, and do not necessarily represent the opinion of the editors or the university.

EDITORS

José Alonso Borba, Denize Demarche Minatti Ferreira, Carlos Eduardo Facin Lavarda.

HISTORIC

Received on: 28/09/2021 - Peer reviewed on: 10/11/2022 - Reformulated on: 16/12//2022 - Recommended for publication on: 21/12/2022 - Published on: 26/10/2023