

AN OVERVIEW OF MANAGEMENT CONTROL THEORY

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ABSTRACT

Over several decades, management control theory has raised managers' attention and carried out several research projects to develop knowledge in both areas, namely academia and organisations. Managers and academics felt that the focus on single traditional accounting indicators was not enough to guide decision towards the defined strategy. Following this path, Management Control Tools have been recognized as relevant tools to guide managers in monitoring an organisation's performance, considering a relationship between the organizations' strategic objectives and their performance measurement. To achieve this alignment, organizational leaders are uninterruptedly facing the challenge of measuring their performance to fit shareholders' expectations, which led them to implement Management Control Tools to meet this challenge. On the hand of management tools, managers can align the measurement of performance according to the individual indicators, which at the end flow towards the fulfilment of organisational strategy.

Bearing in mind the review of the relevant literature, managers are still seeking more trustful and integrated Management Control Tools from time to time. This search is linked to the fact that they still need to define what they intend to measure and precisely. Considering that this research field is not embryonic but still is not exhaustively detailed, this research highlights the relevance of Management Control Tools to foster further empirical research of management control tool implementation in organisations related to services and industries.

This research aims to clarify in which way Management Control Tools can be used to support managers in engaging their performance objectives. The contribution of this conceptual research is helpful for both academics and managers as it aligns the features of Management Control Tools with performance management in organizational strategy.

Keywords: Management Control Tools, Performance, Organisational Strategy

INTRODUCTION

The aim of control theory is important for organisational control as referred by (Green & Welsh, 1988), so as, for the definition of organisation's strategy (Ouchi, 1977a; Ouchi & Maguire, 1975) in the development and design of organisational structure (Ouchi, 1979), in the selection, socialisation and staff evaluation (Koontz & O'donnell, 1977), leadership and motivation (Lower, 1976).

Carenys (2012) defined that the unit of analysis of control theory consists in organisational control, so as in the implementation of an efficient control system, taking into account control mechanisms, cultural relations and the different behaviours of its members (Ouchi, 1975, 1977, 1979; Collins, 1982; Fisher, 1995) and organisational culture

as an internal variable (Flamholtz, 1996; Flamholtz, Das & Angeles, 1985). Traditional Management Control Tools focus their attention on retrospective indicators, providing information of the past, devoting little attention to future indicators, namely trend indicators. Several organisations started to implement Management Control Tools to improve their performance, as managers were forced to define their goals and global objectives (Quesado, Guzmán & Rodrigues, 2018). Traditional performance indicators are based only on accounting systems that just provide part of the organisation's information (Lau & Moser, 2008; Oliveira, Martins, Camilleri & Jayantilal, 2020). Consequently, the dashboards have added value due to the interconnection and communication of strategic objectives. Considering the need to broaden the scope of action, involving financial and non-financial, medium and long term indicators, several management instruments emerged to provide comparisons between indicators to assist managers in the strategic decision (Gautier & Lupe, 1975; Parker, 2020; Sterling, 2003). Indicators need to be defined to assess critical factors and measure performance. Bearing this in mind, all employees should be involved in an integrated manner to enable a more efficient evaluation of processes and resources (Lau, 2011; Wegmann, 2008).

Management tools should promote an alignment between organizational strategy and performance evaluation so that planning is in line with performance evaluation, reflecting the expectations of shareholders (Atkinson, Waterhouse & Wells, 1997; Hartmann & Slapničar, 2009; Kaplan & Norton, 1992; Neely, Platts, Neely, Gregory & Platts, 2005; Taticchi, Tonelli & Cagnazzo, 2010). Several managers devote special attention to define organisational strategy, but after this definition, less attention is given to communicate and execute the strategy (Iyer & Reckers, 2011). Communication of organizational strategy is relevant to lead an organization's business performance (Meng & Pan, 2012). Despite the recognized relevance of performance management tools, some failures in monitoring are conveyed (Alsharari, Eid & Assiri, 2019; Dimitropoulos, Kosmas & Douvis, 2017).

LITERATURE REVIEW

Management Control Tools

Planning a strategy and implementing it successfully is one of the critical and urgent management tasks to contribute to achieving and maintaining high organisational performance (Kaplan & Norton, 2008; Mankins & Steele, 2005).

Balanced indicators, on hand of the Balanced Scorecard (BSC), are relevant to integrate and align different managerial areas (Atkinson, 2006; Balakrishnan & Atkinson, 1997; Banker, Chang, Janakiraman & Konstans, 2004; Kaplan & Norton, 1996, 2004, 2008; Tapinos, Dyson & Meadows 2011) providing more balance and focus on the measured strategy (Dyson, 2000).

Regarding the well known Management Control Tools, although both tools, Tableau de Bord and Balanced Scorecard (BSC), use financial and non-financial indicators, the BSC incorporates cause-effect relationships among indicators grouped into four perspectives (Bourne, Neely, Platts & Mills, 2002; Kaplan & Norton, 1992). The BSC, in turn, shows to be more dynamic, as it resorts to the use of trend indicators, which allow making future projections, which can provide relevant strategic reorientation information (Oliveira, 2020; Russo, 2015). Among the various Management Control Tools, the BSC is often compared to the Tableau de Bord, despite the differences between the tools, since both tools have the global vision of the organizational strategy (Bourguignon, Malleret & Nørreklit, 2004; Lebas, 1994). It is also known that the Tableau de Board is mainly used by French organisations and preceded the emergence of the BSC. This management tool is based on an integrated reporting system, adopting a pyramid organisational analysis, particularly strategy, organisational management and operational management (Lebas, 1994). Through the implementation of one of these tools, namely the Tableau de Board or

BSC, the organisation obtains a global vision of the organisation, thus allowing the reinforcement of the learning and improvement capacity (Dyer, Kale & Singh, 2001). As referred, the Management Control Tools, which existed previously to the BSC, did not incorporate indicators beyond the financial ones and worked more as a checklist. In contrast, the BSC allows assessing the cohesion degree between indicators and strategy (Kaplan & Norton, 1993). The possibility of aligning strategy with indicators emphasized the importance of non-financial indicators, allowing the transition from an operational checklist to a comprehensive strategy implementation system (Kaplan & Norton, 1996). According to the competitive advantage, the BSC reflects the turbulence of technological nature and enables a positioning, sustained on the holding of intangible resources. Business relations, innovative products, information, technology, and the ability to solve problems are intangible resources (Bratianu, 2018; Kaplan & Norton, 1996, 2001; Marr, Gray & Neely, 2003; Sveiby, 2001). Regarding the BSC implementation, it is performed from the strategic level to the operational levels (Norreklit, Jacobsen & Mitchell, 2008). Considering the overall alignment of strategic communication and its complexity, the BSC implementation and further periodic update might be difficult (Lueg & Julner, 2014).

Evolution of Management Control Tools

Planning, organizing and controlling are vital functions in the management process of organizations (Bedeian & Giglioni, 1974). The function of control has only recently begun to be analysed in a systematic way, which does not mean that the concern with control has no history (Bedeian & Giglioni, 1974) such as:

- Taylor (1906) considered control as a goal in his experiments;
- Copley (1923) stated that control was the central idea of Scientific Management.

(Flamholtz, Das & Angeles, 1985) argued that there are three significant perspectives in the study of organisational control, which are (Table 1):

Perspectives	Emphasis	Author
	In the organisation as a whole and in the groups.	Weber (1947)
Sociological		Thompson (1967)
	In the individual and in departments within the organisation.	Davis (1940)
Administrative		Koontz (1959)
		Urwick (1928)
	On the individual, in terms of his or her behaviour in relation to the group and the organisation's objectives.	Tannebaum (1968)
		Lawler (1976)
Psychological		Flamholtz (1979)

Bedeian & Giglioni (1974) present a summary of the evolution of the concept of control (Table 2), citing several authors:

Author	Contribution
Emerson (1911)	He drew up the twelve principles of efficiency, in which he emphasised the importance of control. It did not recognise control as an independent function of management.
	He identified five organic functions of administration, one of which is control. He

Church (1914)	defined control as the function that coordinates all the others.
	He considered that control is the method by which managers show their authority according to the organisation's laws.
Diemer (1915)	
	It identified three main elements of control: expected results, recording of results and comparison of expected results with recorded results.
Robison (1925)	
	He listed five principles of control: the principle of accountability, the principle of evidence, the principle of standardisation, the principle of comparison and the principle of utility.
Urwich (1929)	
	He argued that planning, organising and controlling are the three organic functions of management. He defined the sub-functions of control: routine planning, scheduling and preparation, dispatch, direction, supervision, comparison and corrective action.
Davis (1934)	
	He concluded that control is identified more with a process, which involves an objective, procedures and evaluation.
Holden (1941)	
	He identified control as one of the functions of the manager. Control means checking that everything is going according to the plan adopted, the instructions issued, and the principles established.
Fayol (1949)	
	He presented the main steps in the control process: setting standards, checking and reporting on performance and taking corrective action.
Newman (1951)	
	They provided an outline of the control system, identifying only twelve principles.
Koontz & O'donnell (1972)	

From the perspectives of strategic operations research (Dyson, 2000; Dyson, Bryant, Morecroft & O'Brien, 2007; Forrester, 1961; Serman, 2000), both the strategic development process and the control of strategic implementation procedure should work well, considering that strategy development and evaluation seems to be the centre of attention (Sull, Homkes & Sull, 2015). Nevertheless, the devoted attention at the implementation stage is criticized as insufficient, and strategic execution rates are described to be high (Alexander, 1985; Cândido & Pereira dos Santos, 2015; Kaplan & Norton, 2004, 2008; Mankins & Steele, 2005; Sterling, 2003).

Carenys (2012) pointed out that several authors defined a control system as a process in which managers use subjectivity to influence the performance and behaviour of individuals in organisations in order to put their strategies into practice and thus achieved their objectives (Amat, 1992; Collins, 1982; Fisher, 1995; Inzerili & Rosen, 1983; Tannebaum, 1967). On the other side, it is known that this process involves norms, supervision of individuals' behaviour, measurement (Ouchi, 1975, 1979). (Ouchi, 1977) also emphasised the behaviour of individuals but distinguished between behaviour and outcome control.

Ouchi & Maguire (1975) conducted a study on organisational control in the hierarchy of organisations, which includes selection, training, socialisation processes, bureaucracy, formalisation and measurement of results. Thus, they identified two modes of organisational control, which are behaviour control (based on personal surveillance) and outcome control (based on measurement) of input and output (Ouchi & Maguire, 1975).

Although many studies have concluded that the use of personal surveillance (behavioural control) is a substitute for the management of records or outputs (outcome control), there is a logical reason to believe that the two modes of control are independent as they serve different purposes, one aims at the social part and the other aims at measurement (Ouchi & Maguire, 1975). (Ouchi, 1977, 1977) also emphasised the behaviour of individuals but distinguished between behaviour and outcome control. (Ouchi, 1977) conducted a study to analyse the transmission of control within the organisational hierarchy, addressing the impact of outcome control and behavioural control on this transmission. He states that, in the organisational hierarchy, policies and objectives

are set by top managers, who, in turn, communicate them to lower levels so that they undertake actions for their realisation; it is also up to managers to determine whether such objectives have been achieved or not and to take the appropriate corrective measures. This is the control process, which can be summarised as the process of monitoring and evaluation. In a hierarchy, managers should define the modes of control for their immediate subordinates but also provide a mode by which they have control over subordinates below them, and so on.

In an organisation, only behaviour and results can be monitored and evaluated. However, control by results is transmitted with greater consistency and precision at the various levels of the hierarchy, leading to less loss of control (Ouchi, 1977).

It is also important to understand the link between organisational structure and control, where structure and control are not identical concepts. The control needs of an organisation and its level of technology affect the structure to be adopted (Ouchi, 1977). The degree of loss of control in the hierarchy depends on the number of existing levels and is related to (Ouchi, 1977):

- The technological characteristics of the organisation;
- The type of structure (centralisation versus decentralisation, for example);
- The size of the organisation itself;
- The validity of the information and confidence in the measurement system;
- The cost/benefit ratio.

A further question arises related to evaluating a control system, where control boils down to rulemaking, monitoring and evaluation through the hierarchy (Ouchi, 1979; Wilkins & Ouchi, 1983). This author identified three control mechanisms to solve the problem of control evaluation which are (Table 3):

Mechanisms	Description
Markets	Focused on the evolution and results of the transaction (Price).
Bureaucracy	Emphasis on monitoring, specification and enforcement of rules.
Clā	Emphasis on informal controls. Traditions, values and beliefs motivate individuals to adopt the organisation's objectives.

Source: Ouchi (1979)

In choosing the control mechanism, the social factors of the organisation and the necessary information must be taken into account. However, the bureaucracy is the control mechanism most adopted by organisations (Ouchi, 1979).

Straub & Zecher (2013) reviewed the literature on the developments developed in the control system concept, citing some authors who contributed to the understanding of this system (Table 4).

Author	Contributions
Eilon, (1962)	Distinguished categories along the management process, where the first step is the understanding of how objectives are determined, planned and executed, which is

	implicit in the control process, while the last step encompasses measurement, evaluation and feedback.
Ouchi (1977, 1979, 1985)	As already mentioned, the control system is divided into three types (market, bureaucracy and clan).
Jaeger & Baliga (1985)	Addressed bureaucracy and culture as two control mechanisms, where the former is the formal control mode, and the latter is the informal control mode.
Flamholtz et al., (1985)	Mentioned that control plays an important role in the management of an organisation and that it has a significant impact on the behaviour of the individuals within it; they also argued that control, in the long term, can become a competitive advantage. Thus, the control system should be composed of the following levels: a central control system (hardcore), which includes planning, operations, measurement and evaluation; an organisational structure (e.g., centralisation/decentralisation); an organisational culture, as a set of values, beliefs and social norms shared by individuals and which influences their behaviour
Flamholtz (1996)	
Lebas & Weigenstein (1986)	Divided the control system into three types, but with different names: market, rules, and culture.
Simons (1995, 1990)	Studied the strategic aspects of control, in which he defined the belief system (values), boundary system (risks to be avoided), diagnostic system (critical performance variables) and interactive system (uncertain strategies).
Whitley (1999)	Introduced the sociological perspective to the concept of control system, in which four types of control are distinguished: bureaucracy, result, delegation and patriarch.
Spekle (2001))	Defined three types of control system, which are: market control (based on competition), exploratory control (convergence of perceptions) and boundary control (emphasises behaviours to be avoided).

From the analysis of Table 4 the following considerations are made:

- Control, as a management system, has always been of interest to academics. Some authors have distinguished themselves on hand of the importance of their contributions and analysis to understand the control system through various approaches (interdisciplinarity).
- Among the authors of the table mentioned above, there is a common point between them, in which all understand that the design of the control system of an organisation has to go through, firstly, the determination of the organisation's objectives and its agreement and interaction with the personal objectives of its employees (Straub & Zecher, 2013). This argument is implicit in the type of control mechanism to be implemented (formal or informal), such as those evidenced by (Ouchi, 1975), which were adopted by other authors referenced in the mentioned table, with some "nuances", but whose final objective was congruent.
- Simons (1995) elaborated a conceptual framework defining four levels of control already mentioned and which are developed around the business strategy, where the values influence the belief system, the boundary system defines the risks to be avoided, the diagnostic system defines the critical performance variables, and the interactive system is influenced by the uncertainty strategies.
- Flamholtz et al. (1985) devised another scheme from another perspective, in which there are external and internal influences.

Collier (2005), citing Chenhall (2003) and Abernathy & Chua (1996), concluded that the definition of management control systems has evolved over the years, from a focus on formal control, on measurable financial information, on non-financial information, to social and cultural control mechanisms, in which the choice of the same is influenced by

the institutional environment and by the strategy to be adopted. There are several schemes to understand management control, namely those based on informal controls (Otley & Berry, 1980; Simons, 1995) and those based on formal controls (Ditillo, 2004; Ouchi, 1979).

Collier (2005) argued that organisations are driven by their objectives, with control being exercised by the actual use of resources to pursue those objectives by influencing those resources' behaviour and changes in the environment.

Nixon & Burns (2005) understood that organisations nowadays focus on their shareholders and the legitimacy of interactions with individuals. Trust is always something important at work, in organisations, in suppliers and business-to-business relationships. However, there is significant evidence, which suggests that the growth of knowledge in the global economy may tend towards a greater reliance on trust (Samkin, Baldvinsdottir, Burns, Norreklit & Scapens, 2010). In this sense, managers must build and maintain the total trust of the company's shareholders through the assertions of openness, transparency and accountability. Thus, the balance between the technical and the behavioural aspects, between the small or large dimension of control, implies a re-evaluation of the concepts of control and the like, because the traditional planning and control have been changed by the impact that the competitiveness factor has assumed in the 21st century (Liu, Meng, Mingers, Tang & Wang, 2012). (Nixon & Burns, 2005), in line with the above, also stated that currently, managers often deal with different technologies and volatile economies, under conditions of uncertainty, so that new business models are emerging, which involve alliances, clusters and partnerships, outsourcing, technology transfer and intellectual property. Firms have to compete simultaneously at several levels, where knowledge and the intangibility of resources are becoming increasingly important in developed economies as drivers of competitive advantage (Wu, 2010). (Nixon & Burns, 2005) refuted that the traditional management control system is obsolete in the aforementioned context. Other authors also share this statement (Adler, 2001; Dekker, 2004; Dent, 1996; Widener, 2004) who have referred to the introduction of new concepts in management control, namely regarding strategic management, organisational structure, corporate governance, management risk, alliances and clusters, information and technological communication, society and human resources management.

Consequently, this implies the emergence of a new development of management control schemes. (Henri, 2006) citing (Simons, 1987) defined management control system as a formalisation of procedures and systems, which uses information to maintain and change patterns in organisational activity. This definition includes planning systems, reporting systems and monitoring procedures, always based on the use of information.

Barney et al., 2001; Hoopes, Madsen, Tammy & Walker (2003) argued that in recent years, the competitive advantage of organizations seen as originating in the Resource-Based View (RBV) had become an important and influential scheme in the field of strategy. This author mentioned that the concept of strategy had been examined as a choice at various levels, namely, market position, pattern, mission and strategic priority.

The Effect of RBV on Management Control

Research has emerged that has emphasized the effect of the management control system on the organization's strategy. They conclude that strategy is influenced by the management control system, its dynamic approach, and interaction and dialogue (Chapman, 1997, 1998; Dent, 1987).

Through Barney's (1991) exposition, it is notorious that in an environment of competition, a company with foundations on its resources and unique capabilities can become even more efficient in the eyes of its rivals. For that, its resources and capabilities must be developed and controlled dynamically. With encounter to that objective, resources must maintain heterogeneous so that a specific product is not implemented in the same

period as its competition. Following this resource definition, according to the same characteristics mentioned by (Barney, 1991), organizations can achieve a competitive advantage by the junction of strategies that focus on the creation of value that could hardly be reproduced by its rivals (Barney, Wright & Ketchen, 2001; Wernerfelt, 1984). Companies that own valuable, rare, inimitable and non-substitutable resources can achieve a competitive advantage through value creation strategies, unreachable to its competition (Barney, 1986; Grant, 1991; Wernerfelt, 1984). In this sense, the resource theory became an alternative to that time's industrial organization since this wave appeals to competitive advantage, based on the company's competence. This theory is considered the main theory of organizational strategy (Hoopes, Madsen & Walkers, 2003). In this field, the resource based theory was clearly an outstanding starting point, that influenced mainly the field of business strategy. It was so notorious that allowed it the classification of pattern theory on the strategy field (Barney et al., 2001; Wernerfelt, 1984).

Henri (2006) focused his study on the analysis of the traditional rules of the management control system as a support for the implementation of strategy and understanding that the Resource-Based View (RBV), paraphrasing (Barney, 1991), includes resources that are irreplaceable, inimitable, valuable and rare and are a means to achieve sustainable competitive advantage. Thus, for him, resources can be human, tangible and intangible assets (competencies, skills), where innovation, organizational learning, market orientation, and entrepreneurship are primary capabilities to achieve this advantage, influencing the management control system. However, the effective use of the management control system will have to include a performance measurement system, which may create a dynamic organisational tension with both negative (if the control system is only used to diagnose deviations and corrections) and positive (if the control system is also used as a means of dialogue and interaction) forces that this entails.

Widener (2007) analyzed the management control system, applying the four levels of control defined by (Simons, 1995), which are the level of beliefs (values), the boundary level (restrictions), the level of diagnosis (monitoring) and the interactive level (involvement), which among themselves may generate tension (already mentioned above), but considering the uncertainties of the variables of the organizational environment, such as the uncertainty of the strategy, and the risk. He concluded that there is a multiple and complementary interdependence relationship between the four levels of monitoring and the uncertainty and the risk. The use of a performance measurement system, with emphasis on attention and organisational learning, is important. (Malmi & Brown, 2008) defined control system by the implementation of cultural controls (clans, values and symbols), planning controls, cyber controls (financial and non-financial), reward systems and administrative controls (management and organisational structure and procedures and standards). (Mundy, 2010) also addressed the issue of dynamic tension created by the management control system, following the approach of the author mentioned earlier (Henri, 2006), in which he points out that the application of these levels of control facilitates the development of organisational capabilities (Henri, 2006), such as innovation, learning, market orientation and entrepreneurship. He also stated that tension is dynamic between the various levels of control and is related to the management of conflicts arising from the personal interests of individuals and those of the organisations.

Another study emphasized the relationship between two competitive forces - the threat of foreign competitors and the bargaining strength of buyers (Porter, 1991) - and organizations, particularly multinationals, concerning the importance of the configuration of management control systems. It highlighted the need for organizations to emphasize the management control system practices to support their objectives of accessing and exploiting global market opportunities and resources more effectively and efficiently (Connor, Muñoz & Chan, 2011). Following the guidance of authors already cited, another study emerged, which analysed the relationship of the management control system, based on the four levels of control (Simons, 1995), with strategy, whose conclusion reformulated

that the components of the management control system are a means of facilitating and preventing the integration of strategy sustainability (Gond, Grubnic, Herzig & Moon, 2012).

Interdisciplinarity

Another concept, also important and current, to include in management control systems is "Corporate Social Responsibility", as a potential means to develop competitive advantage, the management control system being a vehicle to help managers identify and manage threats and opportunities (legislative, environmental, social, institutional), through the application of the four levels of control already mentioned (Arjaliès & Mundy, 2013).

Management risk has also assumed importance in organisations and its connection with management control systems and even accounting systems, which is related to recent global events (e.g. crisis in the eurozone). In this context, tighter legislation has emerged worldwide (e.g. COSO - Committee of Sponsoring Organizations of the Treadway Commission) and a growing interest in corporate governance. This focus on risk implies changes in the management control practices, in which it is assumed that the greater the risk, the greater should be the degree of control, as a consequence of the cybernetic model of control (Soin & Collier, 2013).

The study of organisational control is related to Sociology, Psychology and Administration (Flamholtz, Das & Angeles, 1985). (Yu & Ming, 2008) researched the application of control theory and control systems in agency theory for organisational development, emphasising control, modes of control and reward system implemented through management control. They defined management control systems as the implementation of structures to monitor results, evaluate performance and remunerate according to those results against objectives. (Zecher, 2013) summarised the connection of control theory (control systems) with other approaches by citing some authors (Table 5):

Approach	Author	Types of control mechanism
		Market, bureaucracy and clan.
	Ouchi (1977, 1979, 1985)	
Costorientation		
Transactionsavings		Culture, market and market rules and their conditions, the mechanism ("machine"), exploitative control (hierarchical or hybrid), boundaries of control (hierarchical or market-based).
	Lebas & Weigenstein (1986), Spekle (2001)	
		Bureaucracy, control of results, delegation and patriarchal control.
Sociologicalorientation	Whitley (1999)	
	Eilon (1962)	Measurement, evaluation, reaction.
Cyber orientation		
	Flamholtz, et al., (1985)	Planning, measuring, feedback and evaluation.

Das (1989) argued that traditional theories of control are influenced by the cybernetic orientation, which views organisations as a system controlled by mechanisms. (Straub & Zecher, 2013) characterised cybernetic controls as a combination of financial controls and non-financial controls.

The first studies on control focused on a cybernetic vision of formal controls. In order to overcome this mechanism, other approaches emerged, focused on informal controls, emphasising human relationships, leadership, motivation and taking into account the influences of the members of the organisation and the surrounding environment (Carenys, 2012). In addition to the various references on control approaches between 1911 and 1972 (Table 1) (Bedeian & Giglioni, 1974; Ouchi, 1977,1979) was also one of the pioneers in emphasising the control process (Green & Welsh, 1988).

Ouchi & Maguire (1975) demonstrated two basic modes of control: The control of behaviour and the control of results. Later, they identified control mechanisms: the market, the bureaucracy, and the clan, which would control outcomes, behaviour, and symbols, respectively (Ouchi, 1979). Another issue is the emphasis organisations place on bureaucratic control (Ouchi, 1977), which may be a subject for future research. (Ouchi, 1977) argues that the problem is to understand how organisations can achieve control without the use of bureaucracy, which is at odds with the current characteristics of organisations. Other authors also mentioned this aspect, who stated that the analysis of control has to be more dynamic to cope with the changes in the current organisations (Cardinal, Sitkin & Long, 2004).

Berry, Coad, Harris, Otley & Stringer (2009) argued that the control system remains a significant concern for organizations of all types. Changes in individual expectations, the social and economic environment, and technological capability have transformed control practices, so much more future research is needed on the topic, namely by introducing new variables of analysis, such as managing risk, social control, technology, knowledge transfer, organisational culture, and changing expectations of new generation individuals.

Carenys (2012) argues that the organizational changes caused by the internationalization process, the increased competition, and the markets' changes affect the performance of organizations. In this sense, he concluded that the design of control systems in informal controls has become important due to the limitations of formal (mechanistic) controls. Organizations are seen as an open system.

Straub & Zecher (2013) argue that the various schemes of control systems design reveal that their essential elements are the planning, the performance measurement and inherent reward system and the information feedback, and some also emphasize the individuals' behaviour within the organizations. They also conclude that regardless of the system adopted, these primarily provide important information for the decision-making process by top managers and shareholders. There must be a congruence of individual objectives and those of the organisation as a whole. This era of functioning in networks is an emerging aspect in recent years, which requires different forms/mechanisms of control, coupled with the change of mentality of the new generation of members of the organisations. (Olejniczak & Yasuyuki, 2014) addressed the application of control by bureaucracy and culture in the organisation's life cycle, taking into account the size and strategy of the organisation, providing a new contribution of control to the success of organisations in current times.

CONCLUSIONS

Considering the wide literature review that was performed along with this conceptual paper, bearing in mind that this research aimed to identify how along several decades Management Control theory has elevated managers' consideration. Nowadays, managers and academics still feel the need to go beyond single accounting indicators to decide the defined strategy. Along with this research, the relevance of management control tools has been reconfirmed as appropriate tools to guide managers in orientating organisation's performance, interlinking organizations' strategy and performance.

Based on the relevant literature of this research, field managers still seek to obtain a global and integrated management overview. Several interlinkages, for instance, the

resource-based view or organisational culture, have been integrated to achieve this. Furthermore, based on this conceptual evidence, further empirical research should be performed to confirm the relevance of Management Control Tools.

On the hand of this research, it was confirmed that Management Control Tools could support managers in engaging their performance objectives. The contribution of this conceptual research is helpful for both academics and managers as it aligns the features of Management Control Tools with performance management in organizational strategy.

REFERENCES

- Adler, P.S. (2001). Market, hierarchy, and trust. *The Knowledge Economy and the Future of Capitalism*, 12(2), 215–234.
- Jaeger, A., & Baliga, B. (1985). Control systems and strategic adaptation: Lessons from the Japanese Experience, 6(February 1984), 115–134.
- Arjaliès, D.L., & Mundy, J. (2013). The use of management control systems to manage CSR strategy: A levers of control perspective. *Management Accounting Research*, 24(4), 284–300.
- Atkinson, A.A., Waterhouse, J.H., & Wells, R.B. (1997). A stakeholder approach to strategic performance measurement. *Sloan Management Review*, 38(3), 25–38.
- Barney, J. (1986). Strategic factor markets: Expectations, luck and business strategy. *Management Science*, 32(10), 1231–1241.
- Barney, J. (1991). Competitive advantage. *Journal of Management*, 17(1), 99–120.
- Barney, J., Wright, M., & Ketchen, D.J. (2001). The resource based view of the firm: Ten years after 1991. *Journal of Management*, 27, 625–641.
- Bedeian, A.G., & Giglioni, G.B. (1974). A conspectus of management control theory: 1900-1972. *Academy of Management Journal*, 17(2), 292–305.
- Bedeian e Giglioni*. (n.d.).
- Berry, A.J., Coad, A.F., Harris, E.P., Otley, D.T., & Stringer, C. (2009). Emerging themes in management control: A review of recent literature. *The British Accounting Review*, 41(1), 2–20.
- Bourguignon, A., Malleret, V., & Nørreklit, H. (2004). The American balanced scorecard versus the French dashboard: The ideological dimension. *Management Accounting Research*, 15, 107–134.
- Bourne, M., Neely, A., Platts, K., & Mills, J. (2002). The success and failure of performance measurement initiatives Perceptions of participating managers. *IJOPM International Journal of Operations & Production Management*, 22(11), 1288–1310.
- Bratianu, C. (2018). Intellectual capital research and practice: 7 myths and one golden rule. *Management and Marketing*, 13(2), 859–879.
- Cardinal, L.B., Sitkin, S.B., & Long, C.P. (2004). Balancing and rebalancing in the creation and evolution of organizational control. *Organization Science*, 15(4), 411–431.
- Collier, P.M. (2005). Entrepreneurial control and the construction of a relevant accounting. *Management Accounting Research*, 16(3), 321–339.
- Connor, N.G.O., Vera-muñoz, S.C., & Chan, F. (2011). Competitive forces and the importance of management control systems in emerging-economy firms: The moderating effect of international market orientation. *Accounting, Organizations and Society*, 36(4–5), 246–266.
- Dekker, H.C. (2004). Control of inter organizational relationships: Evidence on appropriat-ion concerns and coordination requirements, 29, 27–49.
- Dent, J.F. (1996). Global competition: Challenges for management accounting and control, 247–269.
- Ditillo, A. (2004). Dealing with uncertainty in knowledge-intensive firms: The role of management control systems as knowledge integration mechanisms. *Accounting, Organizations and Society*, 29, 401–422.
- Dyer, J.H., Kale, P., & Singh, H. (2001). How to make strategic alliances work. (cover story). *MIT Sloan Management Review*, 42(4), 37–43.
- Eilon, S. (1962). Elements of production planning and control. Macmillan.
- Zecher, E.S.C. (2013). Management control systems: A review. *Journal of Management Control*.
- Flamholtz, E.G. (1996). Effective organizational control: A framework, applications, and implications. *European Management Journal*, 14(6), 596–611.
- Flamholtz, E.G., Das, T.K., & Angeles, L. (1985). Toward an integrative framework of organizational control. *Accounting Organizations and Society*, 10(1), 35–50.
- Gautier, M., & Lupe, M.C. (1975). *Function dashboards personnel*. Paris: D’Edition. Entreprise Moderne.
- Gond, J.P., Grubnic, S., Herzig, C., & Moon, J. (2012). Configuring management control systems: Theorizing the integration of strategy and sustainability. *Management Accounting Research*, 23(3), 205–223.
- Grant, R.M. (1991). The resource-based theory of competitive advantage: Implications for strategy formulation. *California Management Review*, 33(3), 114–135.

- Green, S.G., & Welsh, M.A.N.N. (1988). Cybernetics and dependence : Reframing the control concept. *Academy of Management Review*, (1968), 287–301.
- Hartmann, F., & Slapničar, S. (2009). How formal performance evaluation affects trust between superior and subordinate managers. *Accounting, Organizations and Society*, 34(6–7), 722–737.
- Henri, J. (2006). Management control systems and strategy : A resource-based perspective. *Accounting, Organizations and Society*, 31, 529–558.
- Hoopes, D.G., Tammy, L.M., & Walker, G. (2003). Guest editors' introduction to the special issue: why is there a resource- based view? Toward a theory of competitive heterogeneity. *Strategic Management Journal*, 24, 889–902.
- Hoopes, D., Madsen, T., & Walkers, G. Hoopes, M., & Walkers. (2003). *Journal of Strate—gy and Management*, (24), 889–902.
- Carenys, J. (2012). Management control systems: A historical perspective. *International Journal of Economy, Management and Social Sciences*, 1(1), 1–18.
- Kaplan, R.S., & Norton, D.P. (1992). The balanced scorecard: Masures that drive performance. *Harvard Buiness Review*, 70, 71–79.
- Kaplan, R.S., & Norton, D.P. (1993). Putting the balanced scorecard to work. *Harvard Business Review*, 71, 134–147.
- Kaplan, R.S., & Norton, D.P. (1996). Using the balanced scorecard as a strategic management system. *Harvard Business Review*, 74, 75–85.
- Kaplan, R.S., & Norton, D.P. (2001). Transforming the balanced scorecard from performance measurement to strategic management: Part 1. *Accounting Horizons, March*, 87–104.
- Kaplan, R.S., & Norton, D.P. (2007). Using the balanced scorecard. *Harvard Business Review, Managing f*(January-February), 150–161.
- Lau, C.M. (2011). Nonfinancial and financial performance measures: How do they affect employee role clarity and performance? *Advances in Accounting*, 27(2), 286–293.
- Lau, C.M., & Moser, A. (2008). Behavioral effects of nonfinancial performance measures: The Role of procedural fairness. *Behavioral Research in Accounting*, 20(2), 55–71.
- Lebas, M., & Weigenstein, J. (1986). Management control: The roles of rules, markets and culture. *Journal of Management Studies*, 23(3), 259–272.
- Lebas, M. (1994). Managerial accounting in France: Overview of past tradition and current practice. *European Accounting Review*, 3(3), 471–488.
- Liu, W.B., Meng, W., Mingers, J., Tang, N., & Wang, W. (2012). Developing a performance management system using soft systems methodology: A Chinese case study. *European Journal of Operational Research*, 223(2), 529–540.
- Malmi, T., & Brown, D.A. (2008). Management control systems as a package: Opportunities, challenges and research directions. *Management Accounting Research*, 19, 287–300.
- Marr, B., Gray, D., & Neely, A. (2003). Why do firms measure their intellectual capital? *Journal of Intellectual Capital*, 4(4), 441–464.
- Mundy, J. (2010). Creating dynamic tensions through a balanced use of management control systems. *Accounting, Organizations and Society*, 35(5), 499–523.
- Neely, A., Platts, K., Neely, A., Gregory, M., & Platts, K. (2005). Performance measurement system design: A literature review and research agenda. *International Journal of Operations & Production Management*, 25(12), 1228–1263.
- Nixon, W., & Burns, J. (2005). Management control in the 21st century. *Management Accounting Research*, 16, 260–268.
- Olejniczak, T., & Yasuyuki, K. (2014). Bureaucracy and culture: Toward two-factor theory of organizational control. *Management and Business Administration. Central Europe*, 22(1), 70–87.
- Oliveira, C., Martins, A., Camilleri, M.A., & Shital, J. (2020). Using the balanced scorecard for strategic communication and performance management (Strategic).
- Oliveira, C. (2020). Building future competences - Challenges and opportunities for skilled crafts and trades in the knowledge economy - The role of leadership styles towards the bcs implementation (First Edit, Vol. 1; F. K. P. D. Dlin Heidrun Bichler-Ripfel, Ed.). Vienna: Publisher: IAGF – Institute for Applied Research on Skilled Crafts and Trades, Vienna, Austria.
- Ouchi, W.G. (1975). Markets, bureaucracies and clans. *Adminis*, 25, 129–142.
- Ouchi, W.G. (1977a). The relationship between organizational structure and organizational control. *Administrative Science Quarterly*, 22(1), 95.
- Ouchi, W.G. (1977b). The transmission of control through organizational hierarchies. *Stanford University*.
- Ouchi, W.G. (1979). A conceptual framework for the design of organizational control mechanism. *Management Science*, 25(9).
- Ouchi, W.G., & Maguire, M.A. (1975). Organizational control : Two Functions. *Administ--ative Science Quarterly*, 20(4), 559–569.
- Ouchi, W.G. (1979). A conceptual framework for the design of organizational control mechanisms. *Management Science*, 25(9).

- Ouchi, W., & Wilkins, A. (1985). Organizational culture. *American Review of Sociology*, 11(February), 457–483.
- Parker, L.D. (2020). The COVID-19 office in transition: Cost, efficiency and the social responsibility business case. *Accounting, Auditing and Accountability Journal*, 33(8), 1943–1967.
- Russo, J. (2015). *Balanced Scorecard for SMEs and Small and Medium Institutions (6th edition)*. Lisboa: Lidel.
- Samkin, G., Baldvinsdottir, G., Burns, J., Norreklit, H., & Scapens, R. (2010). Professional accounting media: Accountants handing over control to the system. *Qualitative Research in Accounting & Management*, 7(3), 395–414.
- Simons. (1995). Levers of control: How managers use innovative control systems to drive strategic renewal. *Haward Business School Press Books*.
- Simons, R. (1990). The role of management control in creating competitive advantage: New perspective. *Accounting, Organizations and Society*, 15, 127–143.
- Soin, K., & Collier, P. (2013). Risk and risk management in management accounting and control. *Management Accounting Research*, 24(2), 82–87.
- Spekle, R.F. (2001). *Explaining management control structure variety: A transaction cost economics perspective*, 26, 419–441.
- Sterling, J. (2003). Translating strategy into effective implementation: Dispelling the myths and highlighting what works. *Strategy & Leadership*, 31(3), 27–34.
- Sveiby, K.E. (2001). A knowledge based theory of the firm to guide in strategy formulation. *Journal of Intellectual Capital*, 2(4), 344–358.
- Das, T.K. (1989). Organizational control: An evolutionary perspective. *Journal of Management Studies*, 26(5).
- Taticchi, P., Tonelli, F., & Cagnazzo, L. (2010). Performance measurement and management: A literature review and a research agenda. *Measuring Business Excellence*, 14(1), 4–18.
- Wegmann, G. (2008). The balanced scorecard as a knowledge management tool: A French experience in a semi-public insurance company. *Journal of Knowledge Management*, 6(3), 22–38.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171–180.
- Whitley, R. (1999). Firms, institutions and management control: The comparative analysis of coordination and control systems. 24.
- Widener, S.K. (2004). An empirical investigation of the relation between the use of strategic human capital and the design of the management control system. 29, 377–399.
- Widener, S.K. (2007). An empirical analysis of the levers of control framework. *Accounting, Organizations and Society*, 32, 757–788.
- Wilkins, A.L., & Ouchi, W.G. (1983). Efficient Cultures: Exploring the relationship between culture and organizational performance author (s): Alan L.Wilkins and William G . Ouchi Source: Administrative Science Quarterly, 28, 3, Organizational Culture (Sep., Published b). *Administrative Science Quarterly*, 28(3), 468–481.
- Wu, L.Y. (2010). Applicability of the resource-based and dynamic capability views under environmental volatility. *Journal of Business Research*, 63(1), 27–31.
- Yu, B.T.W., & Ming, T.W. (2008). Effects of control mechanisms on positive organizational change. *Journal of Organizational Change Management*, 21(3), 385–404.