

Management Control Systems Focused on the Customer: Evidence from Brazil

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Abstract

The turbulent changes in the business environment and the trend in new technologies for the management of customer bases signal the way for administrators to manage and maximize the value of a company's customer base. Thus, this study seeks to understand the Brazilian business environment and the influence of external and internal customer-focused contingency factors in the design and use of management control systems (MCSs) from the perspective of contingency theory. Data from a sample consisting of 83 Brazilian companies were collected through survey-type research. For data analysis, we adopted the technique of structural equation modelling using the partial least squares (PLS) estimation method. The results confirm all the research hypotheses. We conclude that the characteristics of the environment play a considerable part in decisions involving the internal configuration of these contingency factors and the design of customer-focused MCSs. The design of a customer-focused MCS serves as a diagnostic tool in monitoring and controlling targets, making adjustments to the budget and reviewing goals. Furthermore, through critical review, MCSs make it possible to identify threats and opportunities, turning unprofitable customers into profitable customers. As well as providing elements for the appropriate allocation of resources to obtain and retain loyalty.

Keywords: Management control systems. Management accounting. Customer focus. Contingency theory.

1. Introduction

The importance of the customer for the long-term success of any organization has long been a central theme in discussions in the business sector. Companies seeking competitiveness have discovered in their clients an opportunity to leverage their results. It is recognized that all businesses have customers, but these customers cannot be retained indefinitely if companies fail to meet their needs (Atkinson, Banker, Kaplan, & Young, 2000). For Gupta & Lehmann (2006), customers are important assets of the company and represent the reason for the existence of any organization. In addition to adopting such a strategic approach, as pointed out by Peppers & Rogers (2005), account can be taken of the fact that customers are different, allowing for a clear understanding of their wants and needs for products and services and enabling companies to provide an adequate response to their value proposition (Desarbo, Jedidi, & Sinha, 2001).

The concepts of value creation and customer profitability are predominantly found in the marketing and accounting literature and, in the latter, particularly that relating to hotels and banks. In general, in the accounting literature, these concepts are known as customer accounting or customer-focused bookkeeping (Guilding & McManus, 2002; Lind & Strömsten, 2006; Weir, 2008). The contingency approach, associated with managerial accounting, is based on the premise that there is no single model of MCSs that can efficiently and effectively be applied to every type of organizational form, as this varies according to the influence of contextual factors (Donaldson, 2001).

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Contingency factors, such as environment, strategy, business structure and size, are variables that influence the choice and use of tools, techniques and accounting practices. Therefore, the design and use of accounting systems focused on customers should also be appropriate to assist managers in achieving organizational goals. Given these considerations, this study aims to investigate the relationship between attributes of an accounting system focused on customers, contingency factors, the intensity of use of these systems and their performance. With the aim of understanding the relationships between these variables, we formulate the following research questions: What influences do contingency factors exert on the design of management control systems (MCSs) focused on customers? What are the influences of this design and its use on system performance?

The main contributions of this study are: i) it has parallels with the study of McManus (2006), making it possible to evaluate and correlate the results obtained; ii) it adds to research in managerial accounting through the examination of customer-focused accounting, the relationships between contingency factors and key constructs, and the effects on system performance.

2. Theoretical Framework

2.1. Contingency Theory

Contemporary studies on organizations show the emergence of a new theoretical perspective: the structure of the organization and its functioning are dependent on their interface with the external environment. Different environments require different designs for organizational efficiency. Therefore, it becomes imperative to develop an appropriate model for each situation (Ferreira & Otley, 2010; Merchant, 1984; Tillema, 2005).

Within the context of evolutionary environmental change lies contingency theory, the basic premise of which is that higher performance is associated with firms that develop a more beneficial fit with their environment. Thus, organizational performance can be seen as a set of environmental forces and the result of the strategic actions of the company (Wright, Kroll, & Parnell, 2000, p.32). According to Donaldson (2001, p.1), the essence of the paradigm of contingency theory is the effectiveness of organizations, which is achieved through the adjustment of their own characteristics, such as their structure, to contingencies that reflect their situation. Donaldson (2001) defines contingency as any variable that moderates the effect of organizational characteristics on the performance of the organization. Studies addressing MCSs have used contingency theory to explain the relationships between contingency variables, such as environment, strategy, organizational structure, technology and the scale of the design of such systems (Ferreira & Otley, 2010).

2.2. Management Control and MCSs

The terms management accounting, management accounting systems, management control systems and organizational control are sometimes used interchangeably (Chenhall, 2003, p.129). However, as observed by Frezatti et al. (2009, p.12), although used synonymously, these terms in fact each relate to very specific concepts.

Many authors, in the opinion of Merchant & Otley (2007), when they refer to management as a synonym for control of power do so to highlight it as part of a generic process of management, which involves: i) setting objectives; ii) decision making to determine the best strategy to achieve the goals defined; iii) implementing the chosen strategies; iv) ensuring that nothing, or as little as possible, goes wrong. As noted by Langfield-Smith (2007, p.754), types of control have been categorized in several ways. She cites as examples: formal and informal (Anthony & Govindarajan, 2008, behavioural outcomes (Ouchi, 1979), market, bureaucratic and social groups (Ouchi, 1979), administrative and social (Hopwood, 1976), result, action and personnel (Merchant, 1984), bureaucratic and organic (Chenhall, 2003) and diagnostic and interactive (Simons, 1995).

Another definition of management control is given by Anthony and Govindarajan (2008), who view it as the process by which managers influence other members of an organization to implement their strategies. This process involves a series of activities that include planning, coordination, communication, evaluation, decision making and influencing people.

2.2.1. Structure of an MCS

An MCS is structured based on two fundamental dimensions: i) design and ii) use. The design of an MCS, in accordance with Ferreira & Otley (2009), can be conceptualized in two ways.

The first relates to the attributes of the MCS, segmented by the characteristics of information contained therein (Chenhall & Morris, 1986; Gordon & Miller, 1976; Merchant, 1984; Simons, 1987) and the second concerns the characteristics of the articles employed of which it is composed.

The design of the GCS is configured from a set of control techniques, represented by “artefacts” that are normally used and jointly cover a wide area of aspects of interest to the organization. Among these areas are: i) short- and long-term planning and control; ii) performance evaluation; iii) product costing; iv) gathering information supporting the decision-making process. The characteristics of these devices are classified under traditional and contemporary MCS (Chenhall & Langfield-Smith, 1998; Ferreira & Otley, 2009).

2.2.2. Four levers of control: Simons' theoretical model

In the opinion of Simons (1995, 2000), an MCS may be defined as information systems, routines and formal procedures that managers use to maintain or change the models of organizational activities, including the information used in the process of planning, budgeting and cost control, perceptions of the environment, competitor analysis, performance evaluation, resource allocation and rewarding employees. According to Simons (2000), four important aspects are associated with this definition of MCSs:

- They are systems which provide financial and non-financial information that influence decision making and managerial action.
- They represent routines and formal procedures.
- They are designed to be used by managers and their purpose is to generate relevant information for management.
- They are used to maintain or modify the activities of the organization members.

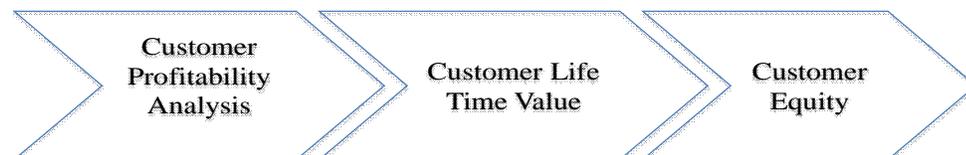
From the results of a series of case studies, Simons (1995, 2000) developed a theoretical model – “the levers of control framework” – for the control of corporate strategy. According to Simons, the search for a balance between innovation and control reflects the central management challenge. The model consists basically of four systems: i) belief systems; ii) system restrictions (boundary systems); iii) diagnostic control systems; iv) interactive control systems. The construction of these four systems have as their backdrop the concept of dynamic tensions generated by use of the MCS; these tensions arise when the organization wants a certain degree of complementarity and balance between organizational goals, but managers are then faced with the need to achieve organizational goals that may conflict (Henri, 2006; Oyadomari et al., 2009).

2.2.3. Customer-focused MCSs

In their search for competitiveness, companies have discovered in their clients an opportunity to leverage their results, transferring to them the focus of a number of strategic actions. It is recognized that all businesses have customers and no business can exist indefinitely if it fails to meet the needs of these clients (Atkinson et al., 2000). Therefore, there is a platform for managers to understand the effects of the differences between clients, demonstrating the usefulness and application of customer-focused accounting (Kaplan & Narayanan, 2001). Concepts regarding the assessment of the value of customer profitability are predominantly found in the marketing literature (Pfeifer, Haskins, & Conroy 2005) and especially in the literature related to the spheres of accounting, the hotel industry and banking (Weir, 2008). In general, in the accounting literature, evaluation metrics and customer profitability are contextualized holistically as “customer accounting”, or client-focused accounting (Guilding & McManus, 2002; McManus & Guilding, 2008; Lind & Strömsten, 2006; Mulhern, 1999).

According to Weir (2008), there are three stages in the development of the systematization of customer-focused accounting practices, each related to its own set of techniques and procedures, as shown in Figure 1

Figure 1: Stages in the Development of Customer-Focused Accounting. Weir (2008)



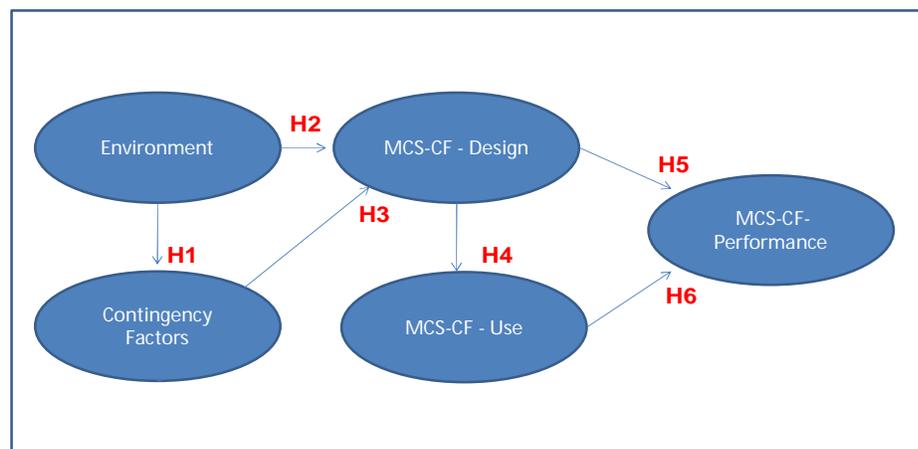
The first stage simply refers to the calculation of income in relation to the client, termed the analysis of customer profitability or the profitability analysis of a segment of customers. The second stage takes into account the results derived for the customer throughout the relationship cycle (the customer relationship cycle). The third and final stage relates to the notion of evaluating the client as an active member forming one of the assets of the company, termed the economic value of the customer.

2.3. The Contingency Framework in a Customer-Oriented MCS

Chenhall (2003) provides an overview of contingency-based studies in management accounting. These studies have a long tradition dating back to the works of Gordon & Miller (1976) and Ferreira & Otley (2009) and the contingency approach has become the dominant paradigm in empirical management accounting research (Cadez & Guilding 2008). In contrast, the customer or the customer base of a company, although accorded an important place in marketing research, has only very recently been addressed by researchers in management accounting from the perspective of customer-focused accounting (Guilding & McManus, 2002; Lind & Stromsten, 2006) or as a category of strategic management accounting (Cadez & Guilding, 2008).

Contingency factors, such as environment, strategy, business structure and size, are variables that influence an organization's choice and use of tools, techniques and accounting practices. Therefore, the design and use of accounting systems focused on customers should also be appropriate in assisting managers to achieve organizational goals. Guilding and Cadez (2010) take the view that the ultimate goal of contingent accounting research should be to develop and test a comprehensive model that includes multiple elements of accounting systems and multiple contingent variables. Figure 2 presents a model concerned with the contingency context of customer-orientated MCSs.

Figure 2: Conceptual design



2.4. Hypothesis development

2.4.1. Relationship between Environment and Internal Contingency Factors

The environment is the context in which the organization is externally involved, i.e. the situation within which an organization operates. Everything that occurs externally in the environment exerts an influence on what happens internally in the organization (Chiavenato, 2004, p.512). The characteristics of the forces present in the environment and its constant state of change require organizations to be flexible and adaptable; this capability has a direct on organizations' results, which reflect and determine their prospects of continuity in an essentially dynamic environment (Pereira, 1999, as cited in Catelli, 1999). At the fundamental level, MCSs are designed with the aim of aiding administrators in decision-making processes, providing them with information that is known to be influenced by the nature of the external environment. Such information enables companies to increase their organizational effectiveness, determining the optimal way to deal with the uncertainty and unpredictability of the external environment (Ferreira & Otley, 2010).

Guilding and McManus (2002), in their pioneering work, studied the effects of contingency factors such as intensity of competition and market orientation in relation to the use and perception of the merits of customer-focused MCS practices. In terms of competition, Khandwalla (1972) developed a taxonomic approach operationalizing the environment variable construct, which suggests that the higher the level of competition, the greater the requirement for MCSs. This model has been used in research in management accounting, generally with the aim of investigating the associations between environmental contingency factors and the design of MCSs (Gordon & Narayanan, 1984; Guilding & McManus, 2002; Sharma, 2002).

It is expected that active forces in the external environment will influence internal contingency factors, such as strategy, structure, size and technology. Thus, we formulate the following hypothesis:

H1: The contingency factor “environment” has a positive association with internal contingency factors.

2.4.2. Relationship between Environmental And internal Contingency Factors and Customer-Focused MCS Design

The term strategy can be observed in a wide spectrum of concepts with numerous applications in practice. In the context of the company, according to Wright, Kroll, and Parnell (2000, p.24), strategy refers to the plans of senior management to achieve results consistent with the overall mission and goals of the organization. The focus of business strategy is to improve the competitive position of the organization’s products and services in the industry or sector in which it operates and can be classified as competitive (facing all competitors to gain an advantage), cooperative (working with one or more competitors to gain advantage over others), or a combination of both (Hunger & Wheelen, 2002). Porter (1990), cited by Hunger & Wheelen (2002), proposes two “generic” competitive strategies to outperform competitors: lower cost and differentiation. These strategies are called generic because they can be followed by a company of any size or type, even by non-profit organizations.

Organizational structure refers to the ways in which roles and responsibilities are allocated to individuals and also how individuals are grouped into offices, departments and divisions, and roles to the members of an organization (Chenhall, 2003, Wright et al., 2000). Technology in an organizational context has several meanings in a broad sense. Chenhall (2003) defines technology as relating to the way in which the organization operates, i.e. how it transforms its resources into products or services. Technology here includes hardware (such as machines and tools), materials, people, software and knowledge.

There are many pressures in ensuring functional efficiency in accounting with regard to the production of information to support decision making and control. Accounting information must be accurate, consistent, objective, systematic and on time, but also produced rapidly and efficiently. Information technology can aid in achieving all these goals (Granlund, 2007). The size of the organization is a variable widely used in research on contingent factors and MCSs. This is not only due to its ability to capture much of the complexity of organizations, but especially as a means of indicating the need for formal systems of managerial control (Ferreira & Otley, 2010). Large organizations tend to have access to a greater source of financial and human resources, as well as technical knowledge, and thus can derive benefits from economies of scale in investing in the adoption, implementation and use of contemporary systems of management control (Ferreira & Otley, 2010). Thus, it is expected that both active forces in the external environment and internal contingency factors will influence the attributes of management accounting systems in terms of a focus on customers. Hence, we formulate the following hypotheses:

H2: The contingency factor “environment” has a positive association with the attributes of customer-focused management accounting systems.

H3: Internal contingency factors have a positive association with the attributes of customer-focused management accounting systems.

2.4.3. Customer profitability analysis

The authors Guilding & McManus (2002) recognize Bellis-Jones’ (1989) article entitled “Customer Profitability Analysis” as the first work to employ the client-focused accounting (CFA) approach in the literature on management accounting. Based on this framework, interest in research on the topic has increased and of various accounting approaches focused on the customer, “analysing customer profitability” is the one that is the best understood and most widely used (Roslender & Hart, 2010).

Given that the same amounts of revenues contribute differently to profit, researchers have discussed the importance of understanding how customers contribute to the generation of a company's profit; it is apparent that some customers are more profitable than others (Doyle, 2000; Foster, Gupta & Sjoblom, 1996; Helgesen, 2007; Kaplan & Narayanan, 2001; Lind & Strömsten, 2006; Reinartz, Thomas, & Kumar, 2005). The analysis of profitability can be undertaken at different levels: in Van Raaij (2005) and Van Triest (2005), the analysis of customer profitability describes the process of the allocation of revenues and costs for individual customers or segments of customers so that the profitability of these can be calculated. The results of such analyses can be more or less sophisticated. Malmi, & Sehm (2004) argue that the more sophisticated the analysis, the more likely it is that decisions can be taken to achieve better financial results.

2.4.4. Customer lifecycle value or lifetime customer value

A widely accepted definition of customer lifecycle value is that it comprises the period from the beginning to the end of the customer relationship with the company; i.e. it is a model of customer relationship development that reflects the customer-company relationship over time (Wangenheim & Lentz, 2006). For Bolton, Lemon & Verhoef (2002) and Verhoef (2003), the value of customer relationships is the net present value of all profits (i.e. revenue minus costs) from an individual client, where "all profits" include multiple customer behaviours. These behaviours include time (retention), depth (frequency of purchase) and amplitude (cross-shopping). According to Gupta et al. (2006), lifetime customer value (LCV) is the expected present value of a customer throughout the lifecycle of their relationship with the company. Bauer & Hammerschmidt (2005) concur, stating that from the point of view of the supplier, the value of the customer relationship is reflected in a thorough understanding of customer value, as this is able to measure the earnings derived from a client over the entire lifecycle.

The model for measuring the value of the customer relationship is similar to the approach to discounted cash flow used in finance, except that it acknowledges that some customers are more important and more profitable than others and incorporates the possibility of the withdrawal of certain customers in the future (Gupta et al., 2006). In this vein, Weir (2008) reiterates the orientation towards the future and highlights the model's foundation in finance, asserting that the model emulates a form of calculating net present value.

2.4.5. Customer equity

The economic value of the customer (EVA) is commonly described as the sum of the individual results of the LCV for both existing customers and potential customers. The calculation of these results takes into account the length of time over which customers conduct business with the company (Blattberg et al., 2001; Rust, Zeithaml, & Lemon, 2000; Weir, 2008). The basic premise of the value of customer equity is straightforward: the client is a financial asset that organizations should measure, manage and maximize like any other type of asset (Blattberg et al., 2001; Villanueva & Hanssens, 2007; Wiesel, Skiera, & Villanueva, 2008).

This approach was initially proposed using a measure to determine the balance between three variables – acquisition, retention and the realization of cross-sales – to achieve the greatest possible EVA and maximize the LCV throughout the cycle of the company-customer relationship (Blattberg et al., 2001). Some studies on EVA have shown its use as a process to increase returns to shareholders (e.g. Doyle, 2000); others, more recently, have used EVA as a proxy for assessing the value of the company (Bauer & Hammerschmidt, 2005; Gupta et al., 2006; Srivastava, Shervani, & Fahey, 1998).

When considering the customer equity (CE) of a company, according to Bauer & Hammerschmidt (2005), it is necessary to consider two fundamental aspects: i) the value of relationships with current and future customers (LCV); ii) the aggregation of all the values of individual clients. Thus, one must consider, in addition to the discounted value of current customers, the value of potential customers (prospects) (Jain & Singh, 2002; Rust et al., 2000). A quantitative approach typically used to determine the rate of customer acquisition is suggested by Blattberg et al. (2001), represented by the number of potential customers acquired against the number of potential customers desired. This constant expresses the effectiveness of the activities directed at acquiring customers.

Based on the above, it is expected that the attributes of management accounting systems focused on customers may influence how these are employed by the users of accounting information. Thus, we formulate the following hypothesis:

H4: There is a positive association between the attributes of customer-focused management accounting systems and the way in which they are employed by the users of accounting information.

2.4.6 Diagnostic and interactive use of a customer focused MCS

In general, the diagnostic control system receives limited attention from top management. In practice, accountants prepare periodic exception reports for senior management. The intervention of these managers begins only in the case of substantial deviations, focusing their actions on understanding the causes and developing corrective action plans. Thus, the diagnostic use is a way of ensuring that the organization achieves its goals whilst saving managers as the involvement of top management in a continuous monitoring strategy is not necessary (Simons, 1995, 2000).

The use of a diagnostic control system is viewed as a negative force that creates restrictions and ensures compliance with the rules. According to Henri (2006), two factors that represent a negative force are: i) a focus on mistakes and negative changes; ii) the occurrence of a discrepancy between the deviation signalled, the response in terms of the adjustment process and the comparison of the results and targets.

Simons (1995, 2000) defines interactive control systems as formal information systems that managers use to involve themselves regularly and personally in decisions concerning the activities of their subordinates. According to Simons (1995), top management can change any diagnostic system for an interactive system, allowing constant interest in and attention to organizational processes. In contrast to the diagnostic system, which strives to achieve planned goals, the interactive system demonstrates how control systems can have a role in shaping strategies by focusing on the need for innovation and creativity.³ This system encourages the search for new opportunities and promotes organizational learning, which can lead to the formation of emergent strategies (Simons, 1995, 2000).

The use of the interactive system is a positive force as MCSs are used to expand the search for opportunities and generate organizational learning. Interactive use focuses attention and forces dialogue through reflection on signals sent by top management. It stimulates the development of new ideas and initiatives through a focus on strategic uncertainties, leading to the formulation of new strategies.

Based on the above, we hypothesize as follows:

H5: There is a positive association between the attributes of customer-focused management accounting systems and the perceived performance of these systems.

H6: There is a positive association between the ways in which customer-focused management accounting systems are used and the perceived performance of these systems.

3. Research Method

In line with the purpose of the study, underpinning by contingency theory, this research is descriptive and causal. We adopted a survey-type approach, using an electronic questionnaire as the instrument for data collection. The cross-sectional study was developed in an environment that describes the real conditions in which organizations are embedded. The non-probabilistic sample was composed of non-financial companies operating in the Brazilian market. Data collection was undertaken from July to November 2011. Of the questionnaires returned, 83 were recovered with valid responses. The respondents were company representatives, analysts, managers, controllers, or similar. The sample was validated using the G*Power 3 software. For the test, we adopted the values recommended by Hair et al. (2005), i.e. a level of significance of 5% and statistical power of 80%, in addition to the consideration of two predictors. With these parameters, the software returned a sample size equal to 68. Thus, the sample obtained comprising 83 cases met the requirements of the structural model and satisfied requirements concerning the reliability of the results of the analysis.

The electronic questionnaire contained 61 items and demographic information divided into five blocks. The questions were structured to operationalize latent variables of the second order, based on the works of Kandwalla (1972), Porter (1990), Guilding & McManus (2002), Sharma (2002), Laudon & Laudon (2007) Lord (2007) and Ferreira & Otley (2010).

³There is a third mode, "dysfunctional", pertaining to the use of the control system for purposes other than those originally intended, i.e. neither diagnostic nor interactive. However, we do not dwell on this as it is not within the scope of the paper.

The respondents were asked to indicate the extent of their agreement/disagreement with statements on a scale of 1 to 7, with 1 being "totally disagree" and 7 "strongly agree". For data analysis, we used the techniques of descriptive statistics and structural equation modelling with partial least squares path modelling (PLS-PM). The software used in this analysis was SPSS (Statistical Package for Social Sciences) version 16.0 and Smart PLS version 2.0.

4. Results

The analysis of the measurement model must precede the analysis of the relationships between constructs; for this purpose, we examine the convergent validity, composite reliability and discriminant validity. The latent variables, both first and second order, showed an average variance extracted (AVE) greater than 50%, which meets the criteria of Chin (1998) and Hair et al. (2005) confirming convergent validity. The presence of higher loading of items on their own latent variable than on any other is an indication that there is discriminant validity.

Table 1 shows the correlations between variables.

Correlation Matrix	Environment	Customer Life Time Value	Performance	Strategy	Contingency Factors	Customer Profitability Analysis	Structure	Tecnology	Diagnostic	Interactive	Customer Equity
Environment	1,00	0	0	0	0	0	0	0	0	0	0
Customer Life Time Value	0,32	1,00	0	0	0	0	0	0	0	0	0
Performance	0,40	0,72	1,00	0	0	0	0	0	0	0	0
Strategy	0,66	0,40	0,26	1,00	0	0	0	0	0	0	0
Contingency Factors	0,56	0,48	0,43	0,73	1,00	0	0	0	0	0	0
Customer Profitability Analysis	0,44	0,76	0,70	0,41	0,54	1,00	0	0	0	0	0
Structure	0,34	0,38	0,36	0,36	0,81	0,42	1,00	0	0	0	0
Tecnology	0,33	0,35	0,39	0,39	0,85	0,46	0,61	1,00	0	0	0
Diagnostic	0,36	0,62	0,61	0,47	0,58	0,75	0,42	0,49	1,00	0	0
Interactive	0,17	0,75	0,71	0,29	0,36	0,64	0,28	0,29	0,62	1,00	0
Customer Equity	0,37	0,81	0,76	0,32	0,47	0,75	0,42	0,38	0,68	0,73	1,00

The structural model concerns the relationship between the variables: environment, contingency factors, design of the customer-focused MCS, and the use and performance of the customer-focused MCS. Table 2 shows the relationships between the constructs of the research.

As shown in Table 2, all combinations among the variables show values for the t-test above the critical level of 1.645 and statistical significance at the 0.05 level, thus confirming the validity of all relationships in the structural model.

Table 2. Relationship between constructs

Relationship between constructs	Structural Coefficient	Average Structural Coefficient	Standard deviation	T statistics	P Value
Environment --> MCS-CF -Design	0,236	0,236	0,107	2,364	0,02
Environment --> Contingency Factors	0,511	0,526	0,080	6,404	0,00
Contingency Factors --> Design	0,350	0,348	0,122	2,839	0,00
MCS-CF-Design --> MCS -CF - Use	0,712	0,715	0,059	12,571	0,00
MCS-CF-Design --> Performance	0,386	0,378	0,124	3,215	0,00
MCS-CF-Use --> MCS -CF - Performance	0,465	0,472	0,111	4,268	0,00

For multivariate analysis of the survey data, we used structural equation modelling with PLS-PM. This model allows the estimation of relationships between latent variables that are characterized both as formative and reflective. Furthermore, it is appropriate in the statistical treatment of small samples. The study was conducted taking into account the attributes and performance of customer-focused MCSs, based on the studies of Guilding & McManus (2002) and Ferreira & Otley (2010). The survey results met the research objective and all hypotheses were tested and proven. The external contingency factor "environment" is related to the organization's internal contingency factors: the environment exerts a significant influence on internal contingency factors (strategy, organizational structure, technology and size). Thus, we conclude that the characteristics of the environment play a considerable part in decisions involving the setting of internal contingency factors (H1). "Environment" also has an association with the design of the customer used MCS, exerting an influence, albeit slight (H2).

Furthermore, “internal contingency factors” have attributes associated with client-focused MCSs: internal contingency factors were found to exert an influence on the design of customer-focused MCSs although, as in the effect of the environment, the relationship is weak (H3). These associations are consistent with the findings of Guilding & McManus (2002), Ferreira & Otley (2010) and Junqueira (2010).

In terms of the “attributes of the client-focused MCSs”, the design of the MCS had the strongest relation to the intensive use of these systems (H4). Furthermore, the attribute “customer satisfaction” was found to play a key role in the use of MCSs. For attributes in the form of artefacts, the analysis of customer profitability, LCV and EVA were found to contribute to the economic performance of the organization (H5).

Finally, “intensive use of the customer-focused MCS” has an association with the performance of these systems (H6); similarly, intensive use, represented by the joint diagnostic and interactive use of MCSs, contributes to the performance of the system itself and the economic performance of the organization. These results are consistent with the findings of Widener (2007), Ferreira & Otley (2010) and Junqueira (2010).

5. Final Remarks

This study has sought to understand the Brazilian business environment, the influence of internal and external contingency factors in the design and use of management control systems focused on customers, and whether both can in practice contribute to improving the performance of these systems in organizations. From our analysis, we conclude that the characteristics of the design of customer-focused management control systems adapt to the demands of the environment in which these companies are competing. Thus, these systems prove to be responsive in terms of strategic choices, both related to process improvements and reducing the costs of serving the customer, facilitating innovation activities and engendering customer loyalty.

Proper adoption of a management control system focused on the customer has direct implications for the intensity of its use and the fluidity of the results obtained. Besides serving as instruments for diagnostic control (e.g. monitoring targets, making adjustments to the budget and revising goals), customer-focused management control systems can also – through critical review – identify threats and opportunities and thereby transform unprofitable customers into profitable customers. The perception of the performance of customer-focused management control systems is related to the degree of user satisfaction in the results achieved. This satisfaction translates into an ongoing process of supporting decision making in relation to relationship strategies, prioritizing profitability and the growth potential of customers and provide elements for the appropriate allocation of resources to foster customer loyalty.

In relation to the research findings, it should be noted that the study has certain limitations in terms of generalizability, specifically, the reliance on the respondents’ perspectives, the sample size and the profile of respondents. These limitations open up new research opportunities in particular suggesting the potential for subsequent research to addressing the possibility of establishing the degree of fit between the contingency factors, the design and the use of customer-focused management control systems and performance.

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