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# DEINSTITUTIONALIZATION OF ACTIVITY BASED COSTING: ANALYSIS FROM THE NEW INSTITUTIONAL SOCIOLOGY PERSPECTIVE

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## ABSTRACT

This study aimed at investigating, under the perspective of New Institutional Sociology, what factors led to the weakening and abandonment of Activity Based Costing in two companies. The study was based on a qualitative research method through case studies and evaluated the stages of ABC' adoption, institutionalization stages and variables of deinstitutionalization. As a result, Beta reached the third stage and Gamma reached the second ABC adoption stage. The normative isomorphism encouraged by the recommendation of consulting firms presented a lot of importance in both companies, while the remaining isomorphism, mimetic, coercive and competitive, had smaller relevance. Neither company reached the stage of full institutionalization, reaching only the pre-institutional one. Evaluating the factors of abandonment and deinstitutionalization of ABC, the assumption with highest expression was social pressure, for not bringing informational innovation, not being a requirement of the head quarter, besides the lack of fiscal incentives. In the categorization of the critical points, ten factors were mapped to the abandonment of ABC: six factors of which are not covered by and four that reinforced the current literature. The conclusion highlights the number of findings that allowed the development of a basic structure for academics and practitioners to analyse it before incurring investments and allocation of employees who will not bring the expected financial results due to the discontinuity of the system adopted by the company.

**Keywords:** Activity based costing. New Institutional sociology. Managerial accounting.

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## DESINSTITUCIONALIZAÇÃO DO CUSTEIO BASEADO EM ATIVIDADES: ANÁLISE SOB A ÓTICA DA NOVA SOCIOLOGIA INSTITUCIONAL

### RESUMO

A pesquisa teve como objetivo geral investigar, sob a ótica da Nova Sociologia Institucional, quais fatores contribuíram para o enfraquecimento e abandono do Custeio Baseado em Atividades nas empresas objetos do estudo, Beta e Gama. As publicações sobre o Custeio Baseado em Atividades aumentaram expressivamente a partir de 1985, porém não obtiveram sustentabilidade no longo prazo. Percebeu-se muita confusão nos conceitos sobre o método de custeio e resultados não comparáveis, o que contribuiu para o seu desentendimento conceitual e potencial abandono do método. O caminho que levou aos achados teve base em pesquisa qualitativa e nas empresas estudadas foram avaliados os estágios de adoção do ABC, estágios de institucionalização e as variáveis de desinstitucionalização. Pelos distintos objetivos que motivaram a adoção do ABC, a empresa Beta alcançou o terceiro e a Gama o segundo estágio de adoção. O isomorfismo normativo, incentivado pela recomendação de consultorias, apresentou muita importância nas empresas, enquanto os demais isomorfismos, mimético, coercitivo e competitivo, apresentaram menor relevância. Durante o período de vigência do método de custeio nenhuma das empresas alcançou o estágio de total institucionalização, situando-se no pré-institucional. Ao avaliar os fatores de abandono e desinstitucionalização do ABC, o pressuposto com maior expressão foi o de pressão social, por não trazer inovação informacional, não ser uma exigência da matriz, além da falta de incentivos fiscais. Na categorização dos pontos críticos, foram mapeados dez fatores para a continuidade do ABC sendo desses, seis inovações não previstas na literatura consultada e quatro que reforçaram a literatura atual. A originalidade deste trabalho reside no conjunto de achados que permitiram o desenvolvimento de uma estrutura básica para que acadêmicos e profissionais o analisem antes de incorrer em investimentos e alocação de colaboradores que não trarão o resultado financeiro esperado pela descontinuidade do artefato adotado pela empresa.

**Palavras-chave:** Custeio baseado em atividades. Nova Sociologia Institucional. Contabilidade gerencial.

### 1 INTRODUCTION

Activity Based Costing gained notoriety in the 1980s and 1990s, mainly by the spread through management consultants, with the promise to improve the allocation of indirect costs, providing accurate information analysis and business profitability (JONES; DUGDALE, 2002).

However, recent research has shown a low ABC adoption rate and, among the companies that have implemented it, many did not achieve the expected benefits (VELMURUGAN; NAHAR, 2010). In the 1990s, surveys reported interruptions in ABC implementation process. According to Ness and Cucuzza (1995) thousands of companies have adopted and explored the feasibility of ABC; however, less

than 10% used it to support the management decision making process and the other 90 % abandoned or stalled its use.

From the market perspective, in 1995 ABC was the 11th most used management tool, according to a study by Bain & Company (STRATTON et al. 2009), but for many companies, the cost/benefit perception was negative and at the end of 2002, the same study reported a drop to the 22th position in the ranking.

From the academic point of view, Gosselin (2007) verified the evolution of the number of published articles relating to ABC and, in 2004, there was noticeable reduction in publications, which shows a decline in the interest of researchers on the subject. In Brazil, Diehl and Souza (2008) concluded that the lower demand of enterprises for ABC may have also reduced the academic interest, as the percentage of publications on the topic also reduced in the Brazilian Cost Congress.

In this scenario, the validity of the benefits of this costing method has been challenged, thus resulting in the ABC paradox: if ABC effectively yields benefits, what are the reasons for not having a larger quantity of companies using it? (GOSSELIN, 1997; KENNEDY; AFFLECK-GRAVES, 2001).

Many studies deal with the attainment and adoption of ABC, denoting that the primary focus is limited to the choice and the use of the method: Ness and Cucuzza (1995), Shields (1995), Gosselin (1997), Kennedy and Affleck -Graves (2001), Souza, Lisboa and Rocha (2003), Cohen, Vernieris and Kaimenaki (2005), Kaplan and Anderson (2004, 2007), Wegmann and Nozile (2008), Velmurugan and Nahar (2010) Byrne (2011) and Pike, Tayles and Abu Mansor (2011).

However, it was found in our studies that in the extensive search for understanding the behavior of the adoption of ABC, a major group of companies is generally despised in the samples, ie, those that have implemented and abandoned its use after a certain period. In Byrne's research (2011) on the determinants of ABC implementation success, 36 % of companies were excluded from analysis, because these were organizations with exactly this characteristic: they had abandoned or rejected the use of ABC.

Deinstitutionalization or abandonment is the process by which an institutionalized organizational practice is impaired or discontinued; so, the analysis of this event enables explaining a wide range of changes in organizations, neglected by an institutional perspective, as the abandonment of habits and practices and the deterioration of an organizational consensus (OLIVER, 1992).

Therefore, in the organizational-sociological context, the Institutional Theory from its New Institutional Sociology (NIS) approach, can contribute with possible responses to this situation, since it is based on the idea that the structures used by organizations are reflexes of the environment arising from the myths in which they operate, not necessarily taking into account the real needs of their practices (ZUCKER, 1987).

This situation has given rise to the research question: **From the NIS perspective, which factors have contributed to the weakening and abandonment of ABC in the two investigated companies?**

This study seeks to contribute to the theory and its application, primarily because a large number of publications does not exist relating to the deinstitutionalization of management practices, especially about ABC, since most of the papers with the theoretical framework of institutional theory seek to understand the institutionalization process (BERLAND; JOANNIDES; LEVANT, 2010).

From another point of view, this work is relevant to encourage managers and practitioners to think about the process of implementing management artifacts, contributing to the knowledge of the factors that weakened the use of ABC. This view, covered in this paper, seeks to positively influence the adoption levels of management practices, optimizing scarce financial and human resources. Once companies invested intellectual and financial capital in the implementation of an artifact that was later discontinued, they may lose competitiveness in their markets, as that resources could have been applied in other activities or projects with higher profitability, contributing positively to their financial results and return.

Extrapolating the dimension of the cost measurement artifact, the results of this work may facilitate future comparative studies with other artifacts, whether management or measurement, contributing to identify convergent and divergent factors in relation to abandonment and weakening of management artifacts.

## **2 LITERATURE REVIEW**

### **2.1 The ABC**

For Kaplan and Cooper (1998), ABC is an economic mapping of the costs and profitability of the organization based on the identification of the most relevant organizational activities. ABC identifies key activities in a company and determines its cost and performance (BRIMSON, 1996). For Martins and Rocha (2015), ABC is a method of cost analysis, especially for overhead management, focused on the concepts of processes, activities and cost drivers.

Literature shows several applications for this costing method, such as changing product mix, products and customers profitability analysis; management of processes and activities for operational improvement; price management; performance evaluation; eliminating activities that do not add value and improving activities that do (MARTINS; ROCHA, 2015; SHANK; GOVINDARAJAN, 1997). However, in practice, the implementation of ABC may face a high degree of difficulty (NESS; CUCUZZA, 1995; SHIELDS, 1995; SHANK; GOVINDARAJAN, 1997; KAPLAN; ANDERSON, 2004; DALMÁCIO; RAO; AGUIAR, 2007; VELMURUGAN; NAHAR, 2010).

#### **2.1.1 Critical factors for successful ABC implementation**

ABC implementation is generally complex since it involves many inputs from various areas of the organizations, such as financial information, estimated and actual volumes, organization chart, structure of processes and mapping of activities, drivers, investment in information technology etc. (MARTINS; ROCHA, 2015).

For Velmurugan and Nahar (2010), the difficulties of ABC implementation and the cost for maintenance can be seen as an obstacle in continuing its use. For the

authors, the lack of relevance in business, the prior existence of a sufficiently appropriate cost management system, lack of necessary knowledge and the absence of interest by managers are the main factors that contribute to certain companies' disregard to ABC adoption.

According to Malmi (1997), factors such as cost/benefit, organizational and political power and organizational culture may explain the resistance to the use of ABC. Additionally, the low adoption rate supported by restricted use in some companies can be explained by factors such as: (i) high cost of implementation and maintenance, (ii) failures in the application of the method and (iii) high complexity of the method (COHEN et al., 2005; KAPLAN; ANDERSON, 2007; WEGMANN; NOZILE, 2008).

The lack of robust training appears to be one of the determining factors of the low implementation rate and ABC abandonment because it brings deficiencies in understanding the method, besides the lack of insight into the company's business model and dynamics of costs (NESS; CUCUZZA, 1995; KAPLAN; ANDERSON, 2004; DALMATIUS et al., 2007). On the critical factors for the success of ABC, Cokins (1999) states that the main factor responsible for the failure to implement ABC is the loss of senior management support.

Gosselin (1997) provides some explanations in his study of the contextual factors that influence the spread of an innovation in management accounting, specifically regarding ABC. To assess the level of adoption and implementation of ABC, Gosselin (1997) defines an approach named Activity Management (AM), consisting of three stages: (initial) Activity Analysis (AA), (intermediate) Activity Cost Analysis (ACA) and the full version (final) Activity Based Costing (ABC).

Activity Analysis is the first and simplest level (first stage). It is to identify the most relevant processes and activities for conversion of material, labor and other product resources. This stage does not require cost analysis and does not necessarily lead to a new overhead allocation method. Martins and Rocha (2015) present the following criteria for selection of these activities: (i) have significant costs, (ii) have differentiation potential, (iii) have an own cost driver (specific), (iv) generate an output - good or service - for which there is a market.

The analysis of the cost of the selected activities is considered the second stage of the process and it identifies the costs of each activity identified in the previous phase, as well as the factors that lead to such cost variation. Some authors relate this level to identify and analyze the activities of the cost drivers (SHANK, 1989; NANNI; DIXON; VOLLMANN, 1992).

ABC is the level that allows management to measure the costs of products, services and other cost objects. Such stage allocates costs to services and products at two levels: (i) overhead costs are identified and grouped into homogeneous groups and (ii) the so pooled costs are then directed to products, services etc.

Shields (1995) found that the factors for the success of the ABC method are (i) support of senior management, (ii) adequacy of resources, (iii) continuing education, (iv) performance evaluation and reward relationship, and (v) intensity of competition.

Innes, Mitchell and Sinclair (2000) found the trend in the use and adoption of ABC in the UK and concluded that the use of purposes have been changed in the period, and the top management support is the main factor for the success of the method.

For Kaplan and Anderson (2004), the main reason for the abandonment ABC is due to the fact that its updating brings very high costs, as well as dissatisfaction with the difficulty faced by employees involved in the process.

Surveys conducted in Brazil also noted the difficulty in continuing the use of ABC, one recurrent feature, particularly the complexity in appropriating indirect costs to the activities and products (BEUREN; ROEDEL, 2002; SOUZA et al., 2003; MIRANDA et al., 2007).

Byrne (2011) continued the Shields research (1995) in order to identify the determinants of ABC success. As a result, only the factors (i) top management support, (ii) adequacy of resources and (iii) continuing education, correlated with the success of ABC but the factors (iv) performance evaluation and reward and relationship with (v) the intensity of competition, showed no significant association with the success of ABC.

Contrasting the findings of Cokins (1999), Shields (1995) and Byrne (2011), Pike et al. (2011) found that, according to the perception of users, the success of ABC not only depends on the support of management, appropriate rewards or team with high qualification, but rather the assessment of the needs of users, such as ease of use and potential awareness of ABC, or intensive training for those involved.

## 2.2 Institutional Theory

The Institutional Theory has been used as theoretical basis for several studies in social sciences (MEYER; ROWAN, 1977; DIMAGGIO; POWELL, 1983; ZUCKER, 1987; SCAPENS; ROBERTS, 1993; SCAPENS, 1994; COVALESKI; DIRSMITH; SAMUEL 1996; RIBEIRO; SCAPENS, 2006; ROCHA; GUERREIRO, 2010; SANTANA; COLAUTO; CARRIERI, 2012).

For NIS, institutions are made up of regulatory frameworks, normative and cognitive, which provide stability and meaning to social behavior and that, if adopted, become a socially legitimate organization (Scott, 2001). As Zucker (1987) states, institutionalization is a process by which individual actors transmit what is socially defined as real, ie a manufacturing process based on truths.

NIS portrays what actions and decisions in the organizations lack objectivity and rationality, that is, they are much more related to the social relations to which they are immersed (PALMER; BIGGART; DICK, 2008). In Scott's view (1987), individuals and organizations adopt certain models to not simply "fad" but rather, because they are a source of legitimacy, recognition and resources, allowing actors to increase their chance of survival. Legitimacy is a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some system of rules, socially constructed values and definitions (SUCHMAN, 1995).

DiMaggio and Powell (1983) reported the existence of three institutional isomorphic change mechanisms. Coercive isomorphism, when the organization adopts practices by third-party pressures of which it is dependent on like the state and creditors, and that the pressure to conform to cultural expectations of society as a whole; mimetic isomorphism when, under conditions of uncertainty, the organization reproduces practices of similar organizations, regarded as the most successful or having the most legitimacy; and normative isomorphism, when the organization adopts practices due to pressure from professional groups.

Regarding the process of institutionalization, the Tolbert and Zucker (1999) model is divided into three stages (pre-institutional, semi-institutional and full institutionalization) and has the following phases: habituation, objectification and sedimentation.

The habituation, considered the pre-institutional stage, involves the generation of new structural arrangements in response to problems or sets of specific organizational problems and to formalize such arrangements in certain organizational policies and procedures or set of organizations that confront the same problems or similar. At this stage, the adoption of practices occurs if organizations are experiencing the same type of problem. It is natural that they take into account the solutions developed by other organizations (TOLBERT; ZUCKER, 1999).

Objectification is classified as a semi-institutional stage and involves the development of some degree of social consensus among organizational decision makers about the value of the structure and increasing adoption by the organization based on that consensus. Thus, from the collection and analysis of information on distribution in other organizations of the same field (inter-monitoring), there is diffusion of structure and increasing adoption by the management of organizations (TOLBERT; ZUCKER, 1999). In this stage, there are incentives for the consolidation and dissemination of structural arrangements through Champions, represented by managers or areas attempting to legitimize the costing method so that it becomes part of the management routines of the entire company (TOLBERT; ZUCKER, 1999).

The third phase (sedimentation) is a process that relies on historical continuity of the structure, especially in their survival by several generations of members of the organization. It is characterized by both the propagation of virtually complete structures of the entire group of actors theorized to be suitable adopters as also the perpetuation structures for a considerably long period of time. Tolbert and Zucker (1999) state that the phase of sedimentation leads to full institutionalization through the action of three variables: (i) the opposition groups; (ii) continued support of advocacy groups; (iii) positive correlation with expected results.

Santana et al. (2012) defined the institutionalization stages of a management tool in three phases: pre-institutionalization, semi-institutionalization and full-institutionalization. In the pre-institutional phase the following aspects are checked: (i) if the method triggered the creation of new structural arrangements from the organization's needs; (ii) if part of managers began design studies on the adoption of ABC in the practice of management and (iii) if it comes from the idealization of managers on the adoption of ABC for some departments, based on companies

that experience similar situations, and consider it to be adopted throughout the organization.

In the semi-institutionalization phase the following are checked: (i) if there were incentives for consolidation and dissemination of structural arrangements through the individuals who recognize the benefit of the method and try to ensure their dissemination throughout the organization; (ii) whether the method was already inserted in management practices and (iii) if there was development and dissemination of the method in the practices of other departments.

In the fase of full institutionalization some things are checked like: (i) if there was historical continuity and trend towards consolidation of the established structural arrangements; (ii) whether the method was consolidated in management practices and widespread in much of the organization, which would classify it as homogeneous and (iii) whether the method was incorporated into the management practices of the organization. Table 1 summarizes the stages and phases of institutionalization.

**Table 1: Stages of institutionalization and comparative dimensions**

Dimensions	Institutionalization stages and comparative dimensions		
	Pre-institutional stage	Semi-institutional stage	Full institutionalization stage
Processes Adopters Characteristic Impetus for Dissemination	Habitualization Homogeneous Imitation	Objectification Heterogeneous Imitative/legal	Sedimentation Heterogeneous Normative

Source: Tolbert and Zucker (1999).

This study focuses on deinstitutionalization, as the process by which an institutionalized organizational practice is weakened or discontinued. The factors that most affect the deinstitutionalization of an organizational practice can be political, functional or social pressure connotation (OLIVER, 1992; DAVIS, DIEKMANN; TINSLEY, 1994; FARJOUN, 2002).

In the view of Tolbert and Zucker (1999) deinstitutionalization is the reverse of an institutionalization process and its occurrence has as a prerequisite a major change in the environment that allows other players with other objectives who are repeatedly against the current environment or even to encourage their disadvantages. To Russo (2011), who researched the BSC (Balanced Scorecard) institutionalization process in SABESP (a Brazilian public company), the factors for assessing the deinstitutionalization of an artifact are: (i) competition for internal resources, (ii) the need for theorizing and (iii) internal diffusion of the artifact.

For construction of this work we used the deinstitutionalization assumptions proposed by Oliver (1992), similar to the model used in the work of Rao (2009).

**Table 2: Assumptions of deinstitutionalization**

Level of analysis	Political pressures	Functional pressures	Social pressures
Organization	Increase in performance crises	Change in economic utility	Increasing social fragmentation
	Conflicting internal interests	Increased technical specification	Breaking the historical continuity

	Increasing pressures for innovation	Increased competition for resources	Changes in values or institutionalized rules
Environment	Changes in external dependencies	Emerging data or event	Increase in structural breakdown

Source: Oliver (1992)

Table 2 shows the different types of pressures associated with deinstitutionalization process, and the political, functional and social pressures that work in order to explain how it triggers the deinstitutionalization process, in addition to pressures for inertia and entropy. The inertia hinders the process of deinstitutionalization and in the opposite direction; entropy accelerates this process (OLIVER, 1992).

### 2.3 Critical factors for the ABC abandonment

Based on the above, Items 2.1 and 2.2, are presented in Table 3 a summary of the critical factors for the ABC abandonment, to be used as a starting point for the analysis in this paper.

**Table 3: Critical factors for ABC abandonment**

Critical factors for ABC abandonment	Themes	Authors
High cost of implementation and maintenance	Activiy Based Costing	Kaplan and Anderson, 2007; Wegmann and Nozile, 2008; Cohen, Vernieris and Kaimenaki, 2005
Failures in applying the method		Kaplan and Anderson, 2007; Wegmann and Nozile, 2008; Cohen, Vernieris and Kaimenaki, 2005
High complexity of the method		Kaplan and Anderson, 2007; Wegmann and Nozile, 2008; Cohen, Vernieris and Kaimenaki, 2005; Beuren & Roedel, 2002; Souza et al., 2003; Miranda et al., 2007
Difficult to modify it		Kaplan and Anderson, 2004
Train and engage potential collaborators method		Ness and Cucuzza (1995); Shields (1995); Pike, Tayles and Abu Mansor (2011); Dalmácio et al. (2007)
Value for money ABC method		Stratton et al. (2009)
Top management support		Shields (1995); Cookins (1999)
Resource Adequacy		Shields (1995)
Performance evaluation and reward		Shields (1995)
Competition intensity		Shields (1995)
Ease of use and potential awareness		Institutional Theory
Resistance of employees	Ness and Cucuzza (1995)	
Participation exclusively of accountants in the development of the method	Ness and Cucuzza (1995)	
Organizations with centralized and complex characteristics, without adopting a structure for ABC	Dimaggio and Powel (1983)	
Lack of incentives for maintaining the structure	Tolbert and Zucker (1999)	

Entropy existence		Oliver (1992)
Internal dissemination of the artifact		Russo (2011)

Source: Developed by the authors

### 3. METHOD

To align the empirical research to the objectives, a multiple case study strategy was chosen. Companies were chosen to fit the expected profile, ie: ABC adoption process, using it during a certain period and discontinued its use as an organizational artifact. The choice of the cases occurred by direct accessibility, that is, we selected two companies by proximity with the overall objective of the work, as well as the feasibility of access to information and the possibility of conducting interviews with those people involved in the study process.

The influence of the operational environment was seen in the ABC adoption in several studies related to the industrial sector (SHIELDS; YOUNG, 1989; ANDERSON, 1995; SHIELDS, 1995; FOSTER; SWENSON, 1997; KRUMWIEDE, 1998; MCGOWAN, 1998). However, when it comes to service sector, the volume of searches for this purpose is reduced considerably (BYRNE, 2011). The two companies investigated in this research belong to the service industry.

#### 3.1 Techniques of data collection and analysis

To understand the studied environment, the following data and evidence collection techniques were used: (i) semi-structured interviews; (ii) questionnaire with open questions; (iii) data triangulation through the use of interviews and documentary research.

As the interviews were semi-structured; it was possible, when necessary, the inclusion of secondary questions, which represented a way to encourage the respondent to share as much information as possible on the set of analyzed topics (COOPER; SCHINDLER, 2003; Yin, 2010). In the first research stage, the focus was on reasons that led to ABC implementation decision and previous expectations. In the second stage, the questions were focused on the factors that contributed to its discontinuation.

The interviews were applied to senior management controller. In one of the companies, considering that the current CEO hadn't participated of the ABC implementation, it was decided to interview the former one, as a matter of keeping the history of decision-making.

For getting details from Beta Company, seven people were interviewed, divided into two groups: (1) employees who worked in the period of the decision of implementation and (2) employees who worked in the period of maintenance and discontinuation of the method. In group 1, three people were interviewed: Processes and Costs Manager, Cost Analyst and Consultant; in group 2, four people: Vice President of Finance, Controlling Manager, Cost Engineer and Cost Analyst.

At Gamma Company, two people were interviewed, without segmentation into different groups as with the previous company; the employees who participated in the adoption of decision continued in the company until the

decision of discontinuing the method. Interviews were conducted with the controller and the cost analyst.

Initially an empirical research was made on the hierarchical structure of both studied companies, using previous interviews with the controller of each organization. The total duration of the two meetings was approximately four hours. Later, interviews to validate the information and clarify some doubts were made. The meetings lasted about one hour with each manager, always bounded by the corporate governance policy and confidentiality of information adopted by the company.

The stage of documental research was conducted by examining memos on procedures set by the controller or by other managers, since the time of the decision to adopt up until to the decision of discontinuing the use of the ABC method. This research was useful as a source of auxiliary data that supports a better understanding of the findings, and are very common in studies oriented by unconventional strategies, as the case study (MARTINS; THEÓPHILO, 2009).

To analyze financial information of the organization, we used the published financial statements of the 2006-2012 period. The purpose of analyzing these documents was to understand the size of the company in terms of revenue, relevance of costs compared to income, profitability and representativeness of the investment made with the ABC. As the decision to adopt ABC underwent an internal process called Annual Projects Cycle, memos, e-mails and other documents that contributed to the mapping of the arguments used at the time the decision were requested.

The period selected for data triangulation was 2006-2012 because a longitudinal analysis reveals changes in behavior management over time and identifies factors that potentially influence these changes. Finally, it has become possible to conduct content analysis of the interviews and triangulation with other data collected.

The content analysis technique (CA) was used to extract data from interviews, speeches presented in collected documents and answers to specific questions, complemented by observations made during personal meetings. According to Bardin (1977), CA is the analysis of communication using systematic procedures and content description of objectives that allow the inference of knowledge.

It is noteworthy that the modeling developed by the company for the implementation and maintenance of the ABC method has not been evaluated. During the interviews there were requested information such as volumetric allocation, list of activities, list of costing objects etc.; however, by the internal rules of the companies, both have chosen not to disclose. This event becomes a limitation of the research, because the quality of modeling and the criteria adopted for cost allocation could be considered a critical factor in the abandonment of the method.

The analyses were performed by comparing the content of interviews and documents collected from the extracted categories to literature review in order to classify the findings regarding the adoption stage, institutionalization stage and assumptions of deinstitutionalization, as follows.

### 3.2 Search categories

In line with the objective, which was to investigate the adoption stage of the ABC in the mentioned companies, we used the model proposed by Gosselin (1997): (initial) Activity Analysis (AA), (intermediate) Activity Cost Analysis (ACA) and the full version (final) Activity Based Costing (ABC).

To evaluate ABC institutionalization stages in the companies we used as classification: (i) pre-institutionalization phase, (ii) semi-institutionalization phase and (iii) full institutionalization phase, as Tolbert and Zucker (1999), adopted by Santana et al. (2012).

The categories of the research for the institutionalization of management tools stages were analyzed in a three-dimensional perspective: Processes, characteristics of adopters and impetus for dissemination, according to Table 1. These dimensions have the purpose of enabling the classification of ABC used in the practice of organizational management in each of institutionalization stages: pre-institutional, semi-institutional and full institutionalization.

Its operationalization was made as follows. In the processes dimension it was considered as an analysis criterion the temporal aspect, because it is understood that the longer the method is part of an organization's management process, the greater the chances of being accepted among decision makers and become part of the set of presuppositions and unquestioned beliefs of the organization. This criterion allows it to be classified in the habitualization, objectification and sedimentation phase, as cited by Tolbert and Zucker (1999) and thus verify if the ABC method is institutionalized or not.

The Characteristics of Adopters dimension can be classified as homogeneous or heterogeneous. The homogeneous feature means that all managers of companies or each department/section of the same company adopt similar articles due to the similarity of the situations experienced, that is, it refers to the ability of management to take into account the solutions developed by other firms or other sectors facing similar circumstances in changing its management structure. The heterogeneous characteristic is related to the adoption or change of artifacts according to the needs and peculiarities of each company, segment or area.

For the Impetus for Dissemination dimension, ABC was evaluated as for coercive, mimetic and normative isomorphisms, as proposed by DiMaggio and Powell (1991).

Finally, in order to capture the assumptions of deinstitutionalization and institutional isomorphisms in the development of the interview script, we used the central idea of Oliver (1992) and Rao (2009), as shown in Table 2. Thus, functional, political and social pressures were evaluated.

## 4 RESULTS

### 4.1 Beta Company

Beta has been operating for about ten years providing payment and financial solutions. Its organizational structure is segmented into two business units:

(i) prepaid cards and benefits and (ii) financial solutions; the first exists since the company's inception, in 2003, the second since 2011. The prepaid cards and benefits business unit is the focus of this study; it provides eight products – six were in operation and two under development since 2012, with release planned for 2014.

In 2012 the company's sales amount reached between BRL\$760 million and BRL\$1 billion and net income between BRL\$160 million and BRL\$180 million; the gross profit margin was 82% and net income margin was 20%.

One of the most important operational volume basis for the business unit is the amount of active cards (quantity of available cards or quantity of credit card transactions in the last 30 days); in 2012 it reached between five million and six million cards. Another operational indicator is the quantity of captured transactions (purchase transactions in accredited stores, restaurants and supermarkets); in 2012 it reached somewhere from 300 to 400 million.

The annual budget is the main management tool since it has never been discontinued; so, each year the level of informational detail generated by the controller is raised. One of the justifications for this is to use the managerial artifact for monthly monitoring of the corporate goals, and indicators for individual variable compensation payment.

In 2006, the discussion period for ABC adoption, cost management was under responsibility of the Process Management area, under the CEO and in pair with Strategic Planning area. In 2007, the company organization chart was restructured; costs management became subordinated to controllership, under Vice President of Finance responsibility. The reason for that change was the access to financial information, since it was understood that the Controller would have more ease and flexibility in data extraction and development analysis for decision making support.

#### **4.1.1 ABC assessment at Beta**

Beta began discussions on the adoption of ABC in mid-2005 in the Processes and Cost Management area, with no reported relationship with the Controller; the implementation project of the new costing method began in 2007 and ended after seven months.

The purpose of ABC adoption was marked by the company's managers desire to be a reference in management methods such as managerial tools to support analyses such as product and customer profitability (ABC), and also the BSC.

Since Beta used a variable commissioning model for its selling agents based on adjusted contribution margin (revenues less variable costs less overhead allocated – e.g., information technology and overhead), ABC was considered a method that would improve this allocation. Once the company followed a policy for strategic planning to outsource its processes, it was expected that ABC would help. Regarding the use of this costing method to improve pricing, it was not seen as a differential method, distinguishing from the ideas of Martins and Rocha (2015).

During the cost method design discussions, it was decided that the updating would be made monthly, as a current cost accumulation system, again diverging from Martins and Rocha's (2015) recommendation. In the view of the respondents, another key point for Beta's adoption of ABC was the fact that another group company was using ABC and the majority shareholder company also was using it annually. This situation indicates the possible presence of isomorphism, both the mimetic as the normative (DI MAGGIO; POWELL, 1983). The costs involved in the deployment project amounted around BRL\$500 thousand, which represented approximately 4 % of the total estimated budget for projects for 2007.

During the interviews it was discovered that a critical factor for updating ABC was to change the organizational structure and internal processes, as occasioned recurring changes in the cost model. Early in the project, mapping activities and processes was Process Management area responsibility; however, with the evolution of the project, the Controller became responsible for mapping new processes and updating the existing ones. Another critical factor was the allocation of personnel costs and the percentage of time dedicated per employee because the managers did not have frequency in the distribution of such information.

The lack of senior management support, as already shown in previous researchs (FOSTER; SWENSON, 1997; SHIELDS, 1995; COKINS, 1999; INNES et al. 2000), was also one of the facilitators for ABC discontinuation, perceived in interviews with both group 1 and group 2.

The informational level of detail was also another critical factor, as the company aimed to cover all microactivities, which increased the complexity of system maintenance. Indeed, ABC complexity is criticized in Velmurugan and Nahar (2010); Kaplan and Anderson (2004) and Kaplan and Anderson (2007).

In summary, respondents of Group 1 stated that ABC had not been consolidated nor spread across the enterprise. The Controller sought to simplify the understanding of the method, but failed; the areas did not understand the relevance and the goals of the new costing method. There was not a widespread perception that the actions of an entity were desired or appropriate within a system; it was not identified the existence of legitimacy, which, as Meyer and Rowan (1977), is the keyword of Institutional Theory and occurs after the stage of rapid diffusion and saturation (LAWRENCE; WINN; JENNINGS, 2001).

One of the group 1 managers was categorical in stating: "rationally analyzing, the company did not need ABC". Such sentence was justified because it was understood, after the ABC implementarion, that the previous costing method and practiced cost analyses met the organization's needs. Gerreiro, Bio and Casado (2004) stressed that managers and accountants are aware of the limitations of management artifacts, but believe that they are suitable for effective management; so, the conceptual debates are situated in the behavior dimension, not in knowledge of the techniques.

In group 2, one of the listed factors was the lack of technical knowledge of the managers involved in the adoption of ABC, ie, essentially the group 1 members. This statement was ratified by the lack of performance indicators of the project, for example, cost reduction goals after the adoption, better profitability

analysis and process reengineering. As discussed in Section 2, the issue about the lack of technical knowledge and training has already been addressed by Velmurugan and Nahar (2010); Ness and Cucuzza (1995); Kaplan and Anderson (2004); Dalmatian et al. (2007) and Shields (1995).

An interesting statement by Group 2 is: "the company mistook the ABC implementation with a software implementation." To this group, the company expected not to need dedicated resources for updating and maintaining the model. To update the model there was Microsoft Office (Excel and Access), but for cost calculation and allocation to cost objects it was used a well-known software in the market, MyAbcm®. In the perception of both Groups 1 and 2, systemic tools fully met the upgrade requirements of the costing method.

The ABC model comprised between 300 and 350 activities, which in the view of Group 2 members shows the lack of objectivity. "The managers wanted to control everything, but they did not have the dimension of complexity." The discussion on the definition of activities is presented by Martins and Rocha (2015), which define some criteria given in Section 3.3 for selection activities in order to prevent complexity and bring objectivity to the method.

Finally, it was reinforced by the respondents that the ABC update did not contribute to significant changes in the company, from the point of view of cost savings and for the review of internal processes.

#### **4.1.2 Discussion of the Beta NIS factors**

The assessment of ABC adoption and implementation level was based on Gosselin's (1997) construct, as outlined in Sections 2 and 3. Among the three stages presented by Gosselin (1997), Beta company was at the third stage, costing based on activities. The implemented costing system allowed activity analysis, activity cost analysis and cost objects measurement, like products and services.

From the cost objects perspective, Beta company had costs allocated by product, by channel and by customer. It was not our goal to check the quality of cost allocations (the accuracy). However, it was noticed during interviews that the need for tracing all costs and the desire of costing all activities and cost objects at the lowest level ended up raising the system complexity, so it contributed to its discontinuity.

According to the perception of the respondents, between the adoption and the maintenance of ABC, discussions about activity selection and definition of homogeneous cost groups were not exhaustive; this may have contributed to increase its complexity. Beta used ABC for two years, but not monthly. Additionally, other aspects were evaluated during the interviews; eg. looking for incentives for consolidation and diffusion through the ABC champions. For Russo (2011), the lack of internal diffusion of the artifact is one of the factors for assessing deinstitutionalization.

We also searched for historical continuity and trend for ABC consolidation; however, there were not identified elements to drive encouragement of recurrent use. For Tolbert and Zucker (1999), creating strong incentives is needed to institutionalize practices in companies.

Regarding the processes dimension, Beta was in the habitualization phase. Based on the interviews, it was found that managers had adopted ABC because of the similarity with the situations experienced in other companies. Other information gathered during the interviews shows that the adoption of ABC did not discontinue the company's previous costing method, as it continued using the Absorption Costing Method.

The ABC adoption and maintenance during the months in which it was updated, did not drive any changing process in the area nor in the company as a whole. Although the respondents highlight that fact, from the interviewer's point of view the adoption of the method actually impacted the area, because the restriction of domestic remedies and the competition between the demands contributed to the method discontinuation.

While assessing the Impetus for Dissemination dimension, ABC was evaluated in light of mimetic and normative isomorphism (DiMaggio and Powell, 1991). When respondents were asked about the use of some organization as a reference for defining the adoption of ABC, two references were cited: (i) a group company and (ii) the stockholder.

According to the factors and context presented, it was inferred that the dimension to diffusion is more related to Imitation; however, it was found that there was also consulting firms recommendation, what contributes for the non-dismissal of the Normative aspect. In the work of Santana et al (2012), ABC was ranked in the semi-institutional stage, but to reach this stage there was a reduction in its level of detail.

In short, in the evaluation of Beta, due to the lack of incentives for ABC consolidation and dissemination, since it was not inserted into the company's management practices and having no historical continuity, it can be said that the corresponding stage of these features was pre-institucionalization. This classification applies to the processes, Characteristics of Adopters and Impetus for Dissemination dimensions. Although it is not relevant to the analysis, it is important to highlight that for the dissemination dimension, an aspect which refers to the semi-institutionalization stage was identified, but not as a predominant feature therefore disregarded in the actual stage classification.

In the evaluation of the deinstitutionalization factors, based on the adapted models of Rezende (2009) and Oliver (1992), 13 items were related to institutional isomorphisms and 18 served to assess the assumptions of deinstitutionalization.

The analyses developed in this section were segmented between the two groups, considering each participation from the adoption to the discontinuation of the method. Both in Groups 1 and 2 the importance degree identified for institutional isomorphism presented some relevance. For the conditions of deinstitutionalization, the result was shown according to the above, representing some importance.

To analytically evaluate the types of institutional isomorphism, it is clear that the normative presented more importance for Group 1. This fact can be explained because this Group, in the adoption decision period, suffered more influence of consultant and syndicate recommendations. The findings of Rezende (2009),

whereas applied to other accounting practice, identified as most significant the coercive isomorphism, followed by normative.

Coercive isomorphism had no relevance for Group 1, which can be explained because it is a management device (ABC). The use and disclosure of information generated by ABC is not required by law and there are also no regulatory mechanisms by entities such as CVM4, which implies a lesser degree of priority for managers.

The political pressure assumption presented much importance, both in Groups 1 and in 2. This finding is explained by the sentences: ABC does not represent informational innovation to the capital market, the headquarter did not require the use of the cost method, there were no tax incentives and the customers, suppliers and the financial market do not require ABC.

In terms of functional pressure, whereas it had shown some importance, it is noteworthy to say that the statement: "the costs of maintaining the practice outweigh the benefits of information generated and constraints the use of resources internally" demonstrated high importance to the assumptions of deinstitutionalization.

The evaluation of social pressure assumption had some importance; however, depending on the analysis to the functional pressure, two issues emerged and presented relevance during interviews: change the internal managers and the change in organizational structure.

Ten critical factors were identified for Beta; however, only four out of them have been identified in previous researches. The other six factors are: (i) changing the firm's organizational structure; (ii) changing firm's internal processes; (iii) non-involvement of the personnel from the process management department; (iv) recurrent (monthly) update; (v) little discussion on the definition of the activity; and (vi) little discussion on the definition of homogeneous cost groups. These six factors are important findings of this study, once – so far–there is no literature evidence that they have been identified as critical for ABC continuity.

## **4.2 Gamma company**

Gamma Company has been operating for over 40 years in the medical diagnostic services segment; its business units are divided into three categories: (1) outpatient and inpatient; (2) support for laboratories; and (3) public sector. Unit 1 provides clinical analysis and diagnostic imaging; Unit 2 provides services for small and medium laboratories; Unit 3 has auxiliary diagnostic support services for the public sector.

In 2012 sales amount reached between BRL\$2 billion and BRL\$2.4 billion and net income between BRL\$80 million and BRL\$100 million. For that year, the gross margin was 31% and the net income margin of 4%. The most important volumetric that directly affects all brands and business units are: (i) the number of tests produced, (ii) the number of requests for medical tests and (iii) the number of radiology imaging. The business model has national coverage, so it is part of the strategic planning of the organization the recurrent discussion on the maintenance

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<sup>4</sup> Comissão de Valores Mobiliários, in Brazil, corresponds to Securities and Exchange Commission in USA.

and growth of the service network. At the time of the interviews, the service network contained between 500 and 600 units.

According to information gathered in the interviews and published evidence on the market, after several acquisitions made by the company, between 2009 and 2010 the organization received the guideline from Strategic Planning to reduce costs and harmonize the cultures of the acquired companies. During this period, the company has undergone several restructurations and the organizational chart has changed completely, with a view to adopt modern management processes.

To follow up these changes and for a shareholders guideline, the company began to use ZBB (Zero Base Budget) in 2010 and historically used the traditional budget, a budget model similar to the Beta Company. For ZBB at each planning period, the starting point for each budgeted item line is zero, therefore, the aim is to better allocate the scarce resources of the company for the proposed expenditures that will best accomplish the goals (ATKINSON et al., 2011).

Also in 2010, it was initiated discussions for the adoption of ABC, so that the adoption project started in January and ended in April of that year.

The Cost area is subordinated to the Board of Finance and has as pair areas: Accounting and Administration, Business Controller and Investor Relations. The management processes does not have hierarchical relationship with the Vice President of Finance, that is, it is under the CEO and had no involvement in the implementation of the ABC project.

In the interview it was informed that the chart did not change during the adoption period until the discontinuation of the method, however, it was highlighted by the respondent that several changes of Vice President of Finance staff occurred.

#### **4.2.1 ABC assessment at Gamma**

Gamma began discussions and idealization of ABC adoption in mid-2010 in the Cost Control area, as explained in the previous section. Between 2007 and 2010, the company underwent some restructuring and acquisitions, which motivated it to seek artifacts that could contribute to result optimization. After this period, the new costing method implementation project started in 2010 but ended after three months, with the support of a Consulting activity.

The ABC method adoption goal was guided by a desire to know the activities and business processes as well as to eliminate overlapping activities and seek synergy between the acquired companies. During the interviews, a sentence emerged that reinforces the above objectives, "the company needed to understand the activities and what needed to be discontinued; we had no intention of using ABC for pricing, because we use Variable Costing".

In the costing method design phase discussions, it was decided that the update would be monthly as a cost accumulation system, as defined with the Beta Company, again diverging from Martins and Rocha (2015). In the view of respondents, during the choice of the method a market comparison was not performed to assess whether their competitors used ABC. A raised factor is that

Gamma Company's shareholders also did not use ABC. The decision to use ABC was coming from the Vice President of Finance. The previous two aspects contribute to identify Isomorphism evidence focused on the coercive and normative aspects (DIMAGGIO; POWELL, 1983).

The expenses involved in the deployment project were lower compared to Beta Company, around BRL\$300 thousand, and it was not possible to assess the representativeness of that from the total amount estimated investment for the year 2010 because the company chose not to disclose such values. During the interviews, it was realized that the main difficulty in updating the ABC was the turnover of those involved in the process, as reported by one respondent: "every time that a employee who was responsible for sending us some information left the company, it was like we started the project from ground zero."

The costing method implementation project did not have the involvement of the entire company, the Process area was not responsible for providing and updating the activities, processes and the value chain used on ABC. In one of the interviews, it was mentioned that: "I doubt that people working at the company knew what ABC was".

As showed by the respondents, the Finance area had strong influence on the company, however, by high turnover and by the leaving in 2011 of main key managers, as Vice President of Finance, the Director of Finance and Controlling Cost Manager, the area had lost influence in the corporation at the end of that year. As appeared in Beta, the lack of management support was also one of the obstacles perceived in the interview (FOSTER; SWENSON, 1997; SHIELDS, 1995; COKINS, 1999; INNES et al., 2000).

The volumetric and percentage allocation of the employees were received every month by requests from controllership, and in the perception of respondents this process did not generate complexity in updating ABC, corroborated by the following: "updating ABC was difficult, but not it was the main offender to discontinue". Although the developers had reinforced that it did not generate complexity in updating the method, it was reported that in the months when the Controllership did not strongly demand the other areas, necessary information was not received.

The interviews about the survey of the activities and processes were carried out by Controllership with other areas and lasted about 30 minutes; however, the involved people perceived strength according to the quote "the respondents showed resistance to provide us with reliable information, as distrusted on the developments of the analysis." In the literature review, the employee resistance was an aspect studied by Malmi (1997), Ness and Cucuzza (1995).

To update the model Microsoft Office tools like Excel and Access were used, but for the calculation and allocation of costs to cost centers a known software named Sollus ABM® was used. In the perception of respondents, systemic tools met the upgrade requirements of the costing method.

In the evaluation of the developed model, Gamma's ABC had between 100 and 150 activities because those involved in the Finance team intended to reduce overlap of items of activities and processes, "we wanted the most detailed level activities possible because without this we could not assess inefficiencies."

During the interview, it was verified the existence of conflicting interests with updating ABC because the team involved was composed of an analyst, a consultant and a manager, and they did not devote full time to the update method. The critical point was that this team was also responsible for other Controlling activities such as the annual budget, during the budget construction period, and the ABC updating was paralyzed.

The ABC lifetime in the company was about 6 months, but even in a short period, the method brought cost reduction through elimination of duplicate activities and processes, besides measuring the costs of activities that were classified as strategic by the company. We could not validate the cost savings and review processes statements, because no evidence was available to confront the respondent's quotes.

#### **4.2.2 Discussion of NIS factors at Gamma**

To evaluate the level of ABC adoption and implementation, the Gosselin (1997) model was used. Of the three stages presented, Gamma Company was at the second stage named cost analysis of activities. The implemented cost method allowed activities and the cost of activities analysis, but did not have the measurement of cost of goods and costing objects. Gosselin's research (1997) found that only 15% of the companies had adopted the stage named cost of activities analysis, similar to the case of Gamma company.

In the cost objects dimension, Gamma Company had expenses allocated by process and by brand. Just as in Beta the quality of allocation of the cost method used was not analyzed, however, the managers sought to cost all activities at the lowest possible level, which contributed to the complexity of the method. During interviews at Beta company, and also with the Gamma company, it was asked if discussions for the selection of activities and definition of homogeneous groups of costs were not exhaustive, a fact that may have contributed to increase the complexity of the method.

Company Gamma used the ABC method for 6 months in 2010, but not in monthly recurrent basis. No incentives were identified for the consolidation and dissemination of ABC through champions, and also there is no historical continuity and tendency to consolidate the costing method.

The presented facts allow us to infer that in the processes dimension, the company was in the habitualization phase. During the interviews, it was found that the adoption of ABC did not influence the discontinuation of another costing method, so that the absorption and variable costing methods were still being used.

In the processes perspective it was classified as habitualization; in the adopters characteristic dimension it was classified as homogeneous; and in the impetus for dissemination as essentially imitation and to a lesser weight as normative. In short, after analysis of the processes, adopter's characteristics and impetus for dissemination, it was concluded that it was in the pre-institutional stage.

In the deinstitutionalization factors evaluation, unlike the Beta Company, the degree of importance identified to institutional isomorphism was of little importance. For the assumptions of deinstitutionalization, the result was different with the previously presented, as it presented some importance.

The analytical assessment of the types of institutional isomorphism has shown that the normative presented much importance, like the Beta Company. This can be explained by the fact that the company had been influenced by the consultant's recommendations. The coercive and mimetic isomorphisms had no relevance for two reasons: (i) the use and dissemination of information generated by the ABC are not required by law or by an outsider who had power over the company; (ii) competitors who were using the costing method were not evaluated.

Both the functional pressure assumption as the political and social ones had some relevance. Relative to functional pressure it is noteworthy that the sentences "has no informational content for investors and shareholders" and "the costs of maintaining the practice outweigh the benefits of the information generated showed high importance to the deinstitutionalization assumptions".

In terms of political pressure the sentences that had greater relevance were: the headquarter does not require it, lack of tax incentives, customers and suppliers do not require changing in laws on management information publication.

Regarding the social pressure assessment, the result indicates some importance, but according to the result in Beta the following sentences showed high significance during the interviews: change of internal managers and change in organizational structure. The advent of the internal change management and organizational structure was corroborated by the statement of the respondents: "the turnover of employees involved in the ABC costing process was one of the main problems for its discontinuity."

There were identified seven critical factors in Gamma Company, however, only 2 of these have been identified in previous research. Other factors: (i) change in the organizational structure, (ii) change in internal processes, (iii) involvement of the Processes area, (iv) monthly recurrence update and (v) little discussion about the definition of activities. The factors listed above represent an important finding of this study, since they were not listed as critical to the continuity of the method in other works.

### 4.3 Comparison of the analysis and results

To facilitate the understanding and comparison of the two cases studied in depth, some tables were developed summarizing the main findings. Table 4 ranks in 8 groups the characteristics of Beta and Gamma companies for evaluation of the factors that contributed to the weakening and abandonment of ABC.

**Tabela 4: Comparison of two cases of ABC adoption and abandonment**

Segment	Items studied	Providing payment	Hospital
Name		Beta	Gamma
Context	Perform organizational restructuring?	Yes	Yes
	Employs advanced technology?	Yes	Yes
	Is there an annual budget?	Yes	Yes

	Main objective in adopting	Improve profitability; Outsourcing activities	Improved synergy of activities and processes
Time	Project start	jan/07	mar/10
	Project time	7 months	3 months
	Recurrence desired	Monthly	Monthly
	Project completion	jul/07	jun/10
Complexity	Number of products/brands	6	25
	Number of activities	350	150
	Number of drivers	60	15
	Number of costing objects	30	25
	Number of months updated	12 months (2008)	6 months (2010)
	Decision to discontinue	mar/09	jun/11
	Estimated value of the project	BRL\$ 500 thousand	BRL\$ 300 thousand
	Lifespan of ABC	2 years	1 year
Structure	Existence of unique resource to update ABC	No	Yes
	Amount of resources allocated in the update	2	3
	Process area involved early in the project	Yes	No
	Process Area involvement in the maintenance of the project	No	No
Level	ABC Level	Activity Based Costing	Analysis of the activities cost
Stage	Institutionalization stage	Pre-institutional	Pre-institutional
Institutional isomorphism	Competitive	Little	No
	Coercive	Some	Little
	Mimetic	Some	Little
	Normative	Much	Much
Deinstitutionalization assumptions	Functional pressures	Some	Some
	Political pressures	Much	Some
	Social pressures	Some	Some

Source: Developed by the authors

After analysing Table 4 it is possible to make some comparisons: (i) the companies went through several internal restructurings, (ii) the ABC method had been discontinued, but the annual budget, management device used by the companies did not have the same end, which implies questioning the benefits of the costing method compared to the costs generated by the update process.

The objectives of the adoption of ABC were different, for example, in Beta the focus was on outsourcing and on increasing profitability, while in Gamma it

was in activities cost analysis and processes synergy. The different objectives may have contributed to fact that the stages of adoption proposed by Gosselin (1997) also diverge between companies, since Beta reached the third stage (Activity Based Costing) and Gamma reached the second stage (Analysis of activity cost).

Another commonality between the cases was the complexity of the method, both the amount of activity was up to 150 and 350 for Companies gamma and beta, respectively. The issue of ABC method's utility as a monthly recurrence artifact was common between companies, a factor that also contributed to the increased complexity of the method.

Regarding to isomorphisms it was found that the normative type was very important in the two companies.

About the aspects that led to the ABC deinstitutionalization, we can analyze the relationship with the institutionalization stage (TOLBERT; ZUCKER, 1999). No company exceeded the pre-institutionalization stage, a factor that may have contributed to the abandonment of the method because since there was no historical continuity, this was not consolidated and institutionalized in management practices nor widespread in much of the organization. Thus, there was no deinstitutionalization of ABC in Beta and Gamma companies, but an abandonment.

To understand the factors that contributed to ABC weakening and abandonment in the analyzed companies Table 5 was developed, which includes ten critical factors to the continuity of the method.

**Table 5: Key points for continuity of ABC in the two cases studied**

Items	Critical points	Present in		
		Literature	Beta Company	Gamma Company
1	Change in the organizational structure	No	Yes	Yes
2	Changes in the internal processes	No	Yes	Yes
3	No involvement of the Process area	No	Yes	Yes
4	Monthly recurrence update	No	Yes	Yes
5	Little discussion about the definition of the activities	No	Yes	Yes
6	Little discussion about the definition of the homogeneous cost groups	No	Yes	No
7	Model complexity - Sending the percentage of dedication of employees for the activities - Very analytical informational level - High amount of activities	Yes	Yes	Yes

8	Lack of senior management support	Yes	Yes	Yes
9	Training and technical knowledge in ABC	Yes	Yes	No
10	Restriction of internal resources	Yes	Yes	No

Source: Developed by the authors

Among all the factors identified, 70 % were identical in the two companies, for instance, frequent changes of the internal structure, both at the level of individuals as processes, non-involvement of the processes area, the ABC method treatment as an artifact of monthly update, the complexity of the method for non-engagement of the areas involved and the lack of senior management support. It is noteworthy that among the factors listed in this paragraph, only the lack of management support was already foreseen by existing literature about the subject.

Thus, the main contributions of this work are related to factors unforeseen by literature, for example, items 1-5 in Table 5 (change of the organization structure; changes in internal processes, non-involvement of the Process area; recurrence monthly update; little discussion about the definitions of activities), found in the two companies and the item 6 (little discussion about the definition of homogeneous cost groups) found in Beta. The remaining items as provided in the literature, contributed to strengthen the existing theory, since these aspects were also identified in the analyzed companies.

## 5 CONCLUSION

The need for a cost method to make available accurate information contributed to the diffusion of ABC, in academia and in the business world. However, this spread was unsustainable in the long run, which raised concern and prompted the aim of this study: to investigate from the perspective of NIS which factors contributed to the weakening and ABC abandonment in the Beta and Gamma companies.

In the evaluation of the ABC adoption process (GOSSELIN, 1997) it was found that Beta reached the third stage (ABC), and Gamma had reached the second stage (ACA), a fact that was explained by the different drivers of adoption which influenced the design of cost modeling and informational needs. The findings for adoption, based on NIS, showed that in the two companies only the normative isomorphism presented much importance, which may be explained by the influence of consultants recommendations.

The deinstitutionalization assumptions, based on NIS, showed different results between the companies. In the case of Beta, the functional and social pressures had some importance, but the emphasis was turned to political pressure, due to its great importance; mainly by ABC not bringing informational innovation, it is not a requirement of the headquarters, customers, suppliers and financial markets, beyond the lack of tax incentives. The Gamma company showed no difference in the importance of the deinstitutionalization assumptions but functional, political and social pressure got some relevance.

The contributions of this study reinforced the findings of other research to confirm the existence of factors that influenced the abandonment of the ABC, for example, the complexity of the model, the lack of senior management support, the need for training and technical knowledge of ABC, the restriction of internal resources and many organizational restructurings.

One of the main contributions of this work was the illustration of factors not covered in the literature to explain ABC abandonment, for example, frequent change in the organizational structure, changes in internal processes, non-involvement of the Processes area, monthly recurrence update and little discussion about the definition of activities.

The reflections and conclusions presented in this study may consist of a basic structure for academics and professionals (managers, consultants, directors and presidents) to consult in order to identify weaknesses and mitigate any factors that may contribute to the discontinuation of the method. This critical reflection can prevent unnecessary investments for the implementation of the artifact, and the consumption of internal resources to an activity that does not add value to the business.

For future researchers who want to study the subject of this work or make comparisons with its results, we recommend the following research branches:

- i . Investigate additional factors that contribute both to the adoption and to the ABC abandonment from the perspective of Contingency Theory, relating size, segment, nationality, number of employees etc.
- ii . Investigate additional factors that contribute both to the adoption and for the ABC abandonment, assessing the internal power relations in the organization.
- iii . Assess whether the articles published on ABC, especially research on the survey strategy treat indeed the ABC or a pseudo ABC.
- iv . Evaluate how educators teach the ABC, if they emphasize only the positive aspects and to know fully the peculiarities of adopting and maintaining this costing method.

In summary, this work contributed with important findings for theory and practice. It brings the need for managers and professionals to reflect about the implementation process of management artifacts. It is necessary to reduce spending on useless management devices, as companies may lose competitiveness, as these resources could have been applied in other activities or projects with better profitability. Finally, it is important for companies because they can assess the critical factors that contributed to the ABC abandonment and thus make the decision for adoption only after the elimination of all potential risks for institutionalization of a new artifact.

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