ACCOUNTING IN THE BRAZILIAN MONARCHY PERIOD: EXTRACTS FROM THE LEDGER BOOK OF H. KETTENBURG & CO.

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Abstract: This paper analyzes an accounting book used to record the transactions of H. Kettenburg & Co. in the nineteenth century in the South of Brazil. The objective of this research is to present a general view of the accounting entries made in the Ledger Book of this firm, discussing the usefulness of the accounting practices adopted and identifying the accounting themes deemed relevant and of interest, at the time of the Brazilian Monarchy. For this purpose, the paper presents a descriptive and qualitative analysis of the contents extracted from the Kettenburg’s Ledger, between 1868 and 1875. The evidence presented in the Ledger supports the existence of accounting and management control techniques adopted by the firmin the midst of the incipient industrialization of the Province of Rio Grande. The findings highlight the importance of accounting records for the provision of management information to support corporate decision-making. The study also enabled the authors to infer the influences that the Germanic culture had on this family-run business. The Ledger was recorded in German, notwithstanding the Brazilian Commercial Code, which demanded that all accounting documentation should be bookkept in the official language of the country, in other words, Portuguese. This is explained by the fact that the Journal (mandatory by law) was meant for external disclosure and the Ledger (optional), for internal management motivation, in the company’s process of management control.

Keywords: Accounting practices, Bookkeeping processes, Accounting in Brazil, Accounting rules.

CONTABILIDAD EN EL PERÍODO DE LA MONARQUÍA BRASILEÑA: EXTRACTOS DEL LIBRO MAYOR DE H. KETTENBURG & CÍA

Resumen: Este trabajo analiza un libro de contabilidad utilizado para registrar las transacciones de H. Kettenburg & Cía en el siglo XIX en el sur de Brasil. El objetivo de esta investigación es proporcionar una perspectiva general sobre los registros contables realizados en el libro Mayor de esta compañía, con el fin de discutir la utilidad de las prácticas contables adoptadas e identificar los temas contables considerados relevantes y de interés, en dicha época, para la Historia de la Contabilidad en Brasil. Para ello, el trabajo presenta un análisis descriptivo y cualitativo de los contenidos extraídos del libro Mayor de la empresa Kettenburg, en el período 1868-1875, proporcionando una visión del papel de este libro contable para el desarrollo de esta empresa comercial. Las evidencias presentadas en el Mayor apoyan la existencia de
La incipiente industrialización de la Provincia de Rio Grande. Los hallazgos resaltan la importancia de los registros contables para proporcionar información de gestión para apoyar la toma de decisiones. El estudio también permitió inferir las influencias que la cultura germánica tenía en este negocio familiar. Curiosamente, los apuntes de ese libro de contabilidad están escritos en alemán cuando las normas contables brasileñas hacían obligatorio el uso del idioma oficial del país para todos los registros contables, es decir, el portugués. Esto se explica por el hecho de que el Diario (libro obligatorio definido por ley) estaba destinado a la divulgación externa, en términos comprobatorios, y el Mayor (de carácter opcional) era utilizado por motivos de toma de decisión interna en el proceso de control de gestión de la empresa.

Palabras clave: Prácticas contables, Teneduría de libros, Contabilidad en Brasil, Reglas contables.

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1. Introduction

Accounting history is an established and growing body of research, marked by different schools of thought, a tremendous opportunity to study primary source material, and an energetic and internationally diverse academic group [Fleischman and Radcliffe, 2003]. However, because English is traditionally the lingua franca used for the communication of historical studies about accounting archives, linguistic barriers have limited the exhibition of primary sources in languages other than English [Fleischman and Tyson, 2003].

From Fleischman and Tyson’s perspective, primary sources are essential for the formulation, development and validation of a theory itself and also as a response to ideas proposed by other academics. According to Luna [2012], the historical research obtained through primary archives enables the recovery of concepts, techniques and procedures, inserted in a framework that helps explain the decisive factors and the implications of changes. These contribute to confirm, integrate, complete or even correct historical aspects studied in other sources. In the opinion of Fleischman and Tyson [2003], historical research stemming from a primary source is equal to starting off with enthusiasm down a research road where the journey, in part, can be as gratifying as the final product. For these authors, the emotion of finding treasures buried in the form of a key document or a letter, is most of the time unmatched in comparison with other forms of academic research in accounting.

According to Vollmers [2003], the work of a historian contains elements of science and art. Historical work is not a science in a logical positivist sense, though. History does not find statistically significant experimental results nor identifies immutable laws that permit prediction. In the contrasts between the narrative and the interpretative types of historical inquiry, historians, following a principle of methodological concern, need to be creative and adaptive in addressing each historical situation, while respecting the uniqueness inherent therein [Previts, Parker and Coffman, 1990a]. “Accounting researchers may draw useful insights into present and possible future issues, supplementing the 'positive' (is) and the 'normative' (ought) with the
"historical (was)” [Previts, Parker and Coffman, 1990b: 151]. Vollmers [2003] believes that the historian organizes the data and the evidence chronologically, and places them within the prevailing culture and context to the degree that they are understood and explanatory. This implies in the adoption of the narrative method, which, in the understanding of Hernández Esteve [2013: 67], does not mean the exclusion of any attempt or willingness to explain and interpret the facts exposed, but the way of organizing the presentation of historical material in sequential chronological order, in a manner that the content forms a single coherent story. Similarly, Brazil is a part of this accounting history universe that has not been fully explored yet. Traditionally, most of its accounting researchers have shown little interest in retrieving facts related to the accounting activity in Brazil, although they hold the keys to many phenomena related to it, for example, during the Empire of Brazil (1822-1889). At that time, the Brazilian accountants were fully aligned with international methodological accounting approaches, especially the Italian and French cultures.

With this in mind, the intention of this paper is to consider some subjects associated with the main accounting records made in the Ledger of a trade firm founded in the State of Río Grande do Sul by Germanic immigrants, during the Brazilian monarchical government. The evidences found in the accounting records of the Kettenburg’s Ledger reveal the economic reality of this trade firm over the period analyzed, showing the role played by accounting information in the support to the owners in conducting their business.

The analysis of this book revealed that, in a nation jealous of its native language, which ranked Roman Catholicism as the official religion, and whose constitution established a clear distinction between native Brazilians and immigrants, a company headed by immigrants from the Protestant religion was able to maintain accounting records in the German language. Note that the accounting entries of the Kettenburg’s Ledger were intended primarily to report to the owners their relationship with agents and correspondents.

The objective of this study is to better understand the development of the accounting practices carried out by Kettenburg during the Brazilian Monarchy Period. To achieve this, it was sought to:

(i) Describe the operation of bookkeeping and accounting techniques used at H. Kettenburg & Co., a firm that, shortly after the time period of the Ledger, started to be referred to as C. Albrecht & Co., and later took on the name W. Albrecht & Co. (for the remainder of this paper, these companies will be referred to as "Kettenburg");

(ii) Analyze the economical and historical impacts of Kettenburg’s accounting practices, presenting a qualitative descriptive examination extracted from the bookkeeping mechanisms used; and

(iii) Discuss the theoretical importance of the bookkeeping system employed in the accounting book studied in this research, making use of the literature on accounting by means of the documentation of the activities of the above-mentioned trade firm established in Brazil in the nineteenth century for the express purpose of import and export trading.

This research seeks to contribute to the literature, exposing the research carried out about the accounting history of a non-English accounting sample. The structure of this research is historiography [Previts, 1984] and the methodological procedure applied is a narrative [Previts, Parker and Coffman, 1990b] based on the development of a case study [Eisenhardt, 1989], using the deductive method. This qualitative approach enables a detailed exploratory investigation of how the research is conducted within a real-life situation and it provides a comprehensive analysis of the process of conducting research [Yin, 2014]. In others words, the case study method helps address the questions posed,
with the results being restricted to the case being analyzed. The study presents an overview of the facts as they occurred by means of an analysis of archives of primary source, and of the research of the existing literature on the investigated subject.

This study may have some limitations. First, the research was built around a single accounting book. As far as it was possible to search, finding the "Ledger Book of Kettenburg from 1868 to 1875" was relevant as it was the only important outlasting accounting piece available to study the trajectory of the original trade firm. Unfortunately, access to the other accounting books of this company, mainly the Journal Book, was not possible, because they were not preserved. To promote more improvement in the analyses made, there was an attempt to find secondary sources corresponding to the social, political and economic context of this ledger book.

Therefore, there was no intention to ignore the historical evolution of accounting research in the last few years, despite the studies not having been based on a complete set of records. However, such a limitation does not invalidate the contribution of the article as it provides evidence of a consistent study of a particular aspect of the accounting reality in a third-world country in the context of a family of European origin. Although many accounting historians understand that the study of a single accounting book cannot bring relevant contributions to the accounting history literature, this position should be reconsidered in the case of the Kettenburg’s Ledger. By itself, the longevity of the company already constitutes a singularity, both in Brazil’s Empire and in current Brazil’s Republic.

In addition, regarding the fact that we focused our analysis on one accounting book only, it must also be considered that the international accounting literature is full of classic texts on the history of accounting where the authors analyzed only one piece or book, which have been published in books and periodicals renowned in the area [we cite as examples, Peragallo, 1938, 1977, 1981 and 1983; Lee, 1977 and 1994; Nobes, 1994]. Furthermore, the research approach is of qualitative nature. For this reason, the observed results and respective analyses can be susceptible to errors of interpretation or understanding of the historic phenomena investigated by the researchers. However, some authors in the accounting history area, Richardson [2018] for example, have been arguing that qualitative research is suitable for theory development in accounting. Moreover, this research is based on a specific case study. Thus the results derived from the analysis can be justified only in the particular context of the situation of the firm investigated.

The paper is organized as follows: in addition to this introduction, containing some preliminary considerations about the paper, Section 2 presents an overview of Cerboni’s postulates in the nineteenth century and comments on their reflexes in Brazil. Section 3 begins with a presentation of the context of historical and geographical factors that induced the appearance and performance of Kettenburg in Brazil’s Imperial times. Section 4 presents a brief description of the history of the aforementioned firm, in terms of its core business, shareholders’ composition and the source of the Ledger. Section 5 summarizes the main characteristics and legal formalities of the Kettenburg's Ledger. Section 6 focuses on a contextualized overview of the bookkeeping procedures used by the firm for maintenance of its accounting entries and describes the research methodology, the bookkeeping method used in the Ledger Book and the main accounts classified in it. Section 7 shows an analytical description of the accounting records that are of interest to theoretical and academic accounting in the historical terms found in the analysis of the document. In Section 8, conclusions and final thoughts on the subject are presented, followed by the references used in the analysis of the study.

2. Cerboni’s postulates in the nineteenth century and their reflexes in Brazil
As pointed out by Sá [2008:4], the study of accounting history requires that researchers be transported to the times when the facts occurred. Only in this way is it possible to minimize the risk of not being able to understand ancient accounting with the exact adequacy and significance that it may deserve. "The historian does bring present beliefs, understandings, and modern common sense into the past" [Vollmers, 2003: 52].

Therefore, although many professionals and contemporary students of accounting tend to see the propositions of the Cerboni Personal School as an outdated view of accounting practices, it seemed to us most appropriate for the understanding of the manner of grouping and classification of the accounts handled by Kettenburg and the correspondent analysis of their records1. This analysis is based on the ideas presented by Cerboni [1980] in the XI Congress of Italian Scientists in Rome in 1873, who represented a line of thought in diffusion in Italian circles at the end of the second half of the nineteenth century, although it was only systematized internationally through the publication of his work in Italy in 1878 [Cerboni, 1878a].

Giuseppe Cerboni (1827-1917) was an original and innovative Italian pioneering scholar in the early nineteenth-century accounting research who "not only aimed at a 'logical' double-entry approach, but also at one applicable to government no less than to private business" [Mattessich, 2008: 24]. He was one of the "giants of accounting" [Galassi and Mattessich, 2004: 62], and together with Giovanni Rossi (1845-1921) and Fabio Besta (1845-1922) dominated Italian accounting during the second half of the nineteenth century [see Mattessich, 2003]. Chief accountant of the public treasury in the Italian kingdom, Cerboni advocated a legal approach to accounting, based on a series of legal and economic relationships that linked the owner to their property [Silva, 1959: 69].

In order to do so, he devised a method of closing balance, called "logismography", where the accounting mechanism was structured in the use of a personalistic system in which the accounts had rights between each other and the equity issues were duties and obligations. In other words, it mixed the managerial contents of accounting with legal doctrine, imagining debt and credit as people (owner, agents and correspondents). Personal accounts were settled, debiting everything that was credited (receiving) and crediting everything that was returned (payment), using the terms "Debet" (should give) and "Credit" (should have) [Amorim, 1969: 241].

In the Cerbonian thesis, the asset was a right of the equity and the liability an obligation, without considering the changes of the same wealth, with its respective costs, expenses, revenues, equity fund and net situation [Silva, 2008]. According to Mattessich [2008: 24], Giuseppe Cerboni's system (popular known as 'logismografai) as some claim from the Greek for 'logical recording' or 'tabular recording', "consisted of two summary accounts, one for the owner, the other for the 'agents and correspondents', and used a peculiar tabular form (giornale logismografico - with the potential of creating many sub-and sub-sub-accounts in separate ledgers.) This system influenced not only many Italian accountants but also foreigners, which was the case with the accounting profession in Brazil.

Therefore, in view of the significant progress made in the field of accounting, mainly in France, Italy and Germany, Europe's influence on the accounting culture in

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[1] It should be clarified that Cerboni disclosed his theory of "logismography" in 1878, but the Kettenburg Ledger's bookkeeping covers an earlier period (1868-1875). Despite this time difference, we pointed out that the personalistic approach of the accounts was already widely disseminated in the Italian accounting practices of the time, although this author had not exposed his ideas in a printed book yet. On the other hand, we do not assert that Kettenburg used the Cerbonian technique in their accounting records, but rather that the classification of their accounts under the personal approach of Cerboni into accounts of the owner, agents and correspondents would show more adequately a uniform view of the accounts and enable a consistent analysis of the patrimonial facts, given the absence of a formal Chart of Accounts of that company and the difficulty of access to the corresponding Journal book, if it still exists.
Brazil has become unequivocal [Sá, 2008: 6]. This can be partly explained by the fact that, "even politically independent, Brazil continued to depend on European nations, especially on England. This is because this country preserved the economic guidelines of the colonial period, which privileged the supply of agricultural products to European nations according to the interests and needs of those nations" [Leite, 2005: 42].

On the other hand, only a few documents and books of the companies that used bookkeeping procedures in Brazil have been preserved to the present day. It has not even been established which criteria prescribed, including Cerboni’s methodology [1878b], had to be generally followed so strictly, since, until the publication of the Brazilian Commercial Code in 1850, there was no official obligation to maintain accounting books.

The number of trades in the hands of foreigners (mainly English, French and Portuguese) made these merchants bring with them the accounting culture in force in their countries of origin, which led to a mixture of knowledge, and influenced accounting practices in Brazil, although still lacking uniformity of procedures. At this time there were still no institutions focused on accounting training, which was learned through the transmission of experience aimed at maintaining bookkeeping, which was usually carried out by bookkeepers.

Those who were able to have more scientific knowledge of accounting had developed their learning in Europe, particularly in France and Italy. Therefore, there was not a genuinely Brazilian accounting culture yet, which only began to occur in the nineteenth century, with the formal establishment of the first accounting education schools in Brazil and the beginning of the implementation of the first regulations in the field of accounting [see Peleias and Bacci, 2004; Iudícibus and Ricardino, 2002].

A look on the background of the accounting history literature shows that in Brazil there are few studies on the nineteenth-century and the fact is that the accounting history subject has been under-researched in the academies so far. Many accountancy academics as practitioners have strategically sought to study the history of accounting in Brazil based on contemporary facts and elements. They have been involved in a strong effort to investigate and to disseminate the accounting practices, treatises and theories, and the accounting profession based on a cultural primacy of the positive theory in the accounting field, according to the mainstream.

Among the few studies regarding the accounting practices adopted by Brazilian companies, there is the research developed by Rodrigues, Ricardino and Martins [2009], who analyzed issues related to corporate governance in Brazil at the time of the Empire. Moreover, it is worth highlighting some accounting research, based on primary sources, which studied the accounting and business practices of Brazilian trading firms in the late nineteenth century in Northeastern Brazil [Cosenza, De Rocchi and Ribeiro, 2012; Cosenza et al., 2013; Silva et al., 2013; Cosenza, De Rocchi and Ribeiro, 2014a; Cosenza, De Rocchi and Ribeiro, 2014b; Cosenza and Rezende, 2018].

The evidence found in Cosenza and partners’ investigations leads to an important way in the development of future research on the history of accounting in the Northeast of Brazil. Using primary archives referring to the Brazilian imperial period, these authors verified the influence of the French culture in the bookkeeping of the business transaction of the commercial companies operating in the northeastern region of the country at that time. The accounting books analyzed also made it possible to document the accounting practices adopted in Brazil by those family-run commercial companies during the transition period from the Empire to the Republic.

In addition, they also found evidence that revealed the use of the accounting system as a management control mechanism and an instrument for monitoring the equity
evolution of the capital invested in the company by the partners. In the accounting records of these companies’ accounts, they also observed the use of several practices currently taught in the accounting academies, for example: write-down, net realizable value, inventories and estimates of losses with doubtful accounts, appropriation of depreciation of fixed assets and the interest accounting of interest on shareholders’ equity.

This paper is in line with this type of research issue (to investigate de accounting procedures and practices in trade companies in the nineteenth century) and hopes to provide evidence concerning the levels of development and adequacy of the accounting practices adopted by Brazilian trading firms along the transition period from the Empire to the Republic in Brazil.

3. Historical and geographical context of H. Kettenburg & Co.

*Rio Grande do Sul* is the southernmost state of the Federal Republic of Brazil. At present times, it possesses as limits the State of Santa Catarina to the north, the Atlantic Ocean to the east, Uruguay to the south, and Argentina to the west. Its inhabitants enjoy being called *gaúchos*.

The State of Rio Grande do Sul presents a rich cultural diversity. In a brief way, it can be affirmed that the "Gaúcho State" culture has two lines:

(i) The primitive *gaúchos*, a crossbreed of Iberians, Brazilian Indians and Africans, who inhabited the pampas, heirs and guardians of a transnational culture, are also found in the Uruguayan plains and in the Argentinian pampas, keeping old traditions of a rural way of life, and the extensive livestock system in the great fields of the pampa; and

(ii) The European cultural line, brought by the European colonization, is composed mainly by Portuguese and Spanish settlers, and more recently by German and Italian immigrants.

At the time of the Discovery of Brazil (this is the official denomination to designate the beginning of the conquest of the current Brazilian territory by Portuguese adventurers in 1500), *Rio Grande do Sul* was part of the Spanish kingdom, because its territory was located totally to the west of the "La Raya", a meridian line determined by the Treaty of Tordesillas, celebrated between the Kingdom of Portugal and the then recently formed Kingdom of Spain, on June 7, 1494, to share the "discovered and still-to-be-discovered lands" outside Europe, between both Iberian Crowns.

*Rio Grande do Sul's* territory began to incorporate into the Portuguese Empire and, by extension, into the future Brazilian nation, in the year 1737, when a military expedition, commanded by Portuguese Army’s Brigadier José da Silva Paes, was sent to guarantee to the Portuguese Crown the ownership of the lands in the north of *Colonia do Sacramento*, object of disputes between Portugal and Spain. In that same year, in order to render that ownership military, José da Silva Paes built a fortress on the sandbar of the *Lagoa dos Patos*, which was the origin of the city of *Rio Grande*, first mark of the Portuguese colonization in the State of *Rio Grande do Sul*.

Nevertheless, despite its military function as protection to the Portuguese domains at a time of confrontation with Spain, it also functioned as a commercial supply warehouse of the region, which until then was scarcely inhabited [Alves and Torres, 1997: 35]. Soon, the initial strategic-military function of the *Vila de Rio Grande* gradually gave way to another, more profitable one, based on the flow of *Rio Grande* production [Pelissari, 2012: 35-36]. This strategic location and the availability of a maritime port gave a commercial character to the economy of *Rio Grande*, which led to
the consolidation of an intense import/export maritime trade with countries in Europe and the British colonies of North America.

At the beginning of the nineteenth century, a new stage of the colonization of Rio Grande do Sul by European immigrants started, among them Italians and Germans. The first ones to arrive were the German immigrants, on July 25, 1824, settling in what is now the city of São Leopoldo. German immigration to Brazil was an attempt to replace slave labor by employment, in addition to promoting the permanent occupation of areas of low population density, as was the case in the southern region of Brazil. Each family was promised 50 hectares of land, besides pigs, horses and seeds. Still, the German settlers were given the pieces of land only, being quickly abandoned to their own fate in the first years. As the area was covered by forests, the immigrants had to build their own houses and to develop the land for their own survival.

During the first six years after the permission for European settlers' immigration, about 5,350 German people entered Rio Grande do Sul. In spite of having been abandoned by the Brazilian government, the settlers expanded to the whole area of Rio dos Sinos Valley, staying far from the "estancieiros gaúchos" [big landowners], who were in search of cheap labor to raise their cattle.

Refusing to accept badly paid jobs and having no future prospects, and in the practical impossibility of developing their rural properties donated by the Brazilian government, many German settlers — and also some from other European ethnicities — decided to go on a partial return trip towards the south of the Lagoa dos Patos, seeking to get established closer to their arrival point in Brazil. Neves [1980: 19] points out that some German and Italian immigrants remained in Rio Grande and, together with the Portuguese ones, had a great influence on the economy in both the commercial and industrial sectors.

These days, descendants of these immigrants are found in the cities of Camaquã, Pelotas, Rio Grande, São Lourenço do Sul and Tapes. According to Torres [2010: 164], a large number of the trading companies set up belonged to traders linked to the export and import business, many of them being subsidiaries of English, German, Italian and French companies. Neves [1980: 31-34] said that with this there was a high commercial expansion with the emergence of several merchants who created trading businesses in the city, such as: Fraebe & Cia (1829), Otero, Gomes & Co., and Augusto Leivas & Co. (1867), Jose da Silva Fresteiro & Co. (1878), Joaquim Martins Garcia (1879), Bromberg & Co. (1887), Campos Assumção (1889), Corrêa Leite & Co. (1895), and George Wachtel & Co. (1897).

Torres [2010] points out that, from the nineteenth century on, the presence in the city of Rio Grande of commercial houses that worked with the exportation of articles derived from livestock, especially jerked beef, intensified. Besides these export-oriented commercial companies, an economic sector of great importance for the development of the city and also for the capture of labor, there was the growth of an incipient industrial park, enviable for the time, based on the large-sized industries focused on the central Brazilian market, in the textile, food canning and preserving, and tobacco sectors [Torres, 2010: 163]. This is the case of the Rheingantz Factory, also known as União Fabril, one of the largest textile factories in Southern Brazil, founded in 1873, which was one of the bases on which the economy and urbanization of the city of Rio Grande was articulated, constituting itself as a reference and symbolic landmark of the modern gaúcho industry. There is also the Companhia & Tecelagem Italo-Brasileira, or the popular Fábrica Nova (New Factory), a textile industry created in 1896; the Biscuits and Preserves Factory Leal Santos, founded in 1889, which, besides biscuits, worked with various food products.
(vegetable and fruit preserves, juices, pickled fish, peas, among others); and the Poock Cigars Company (successor to Poock & Co.), established in 1891.

Imported products had a much greater diversification than those exported through the Port of Rio Grande. According to Torres [2010], the imported products included: fabrics, cement, wire, groceries, sugar, rice, salt, coffee, flour, kerosene, gasoline, coal, ironmongery, ironworking machines, tillage machines, sewing machines, typewriters, lubricating oils, turpentine, paper, tinplate, vermout, wines, galvanized sheets, caustic soda, coal, cutlery, articles for boats, and so on. Exports, according to the author, were mostly made up of non-industrial products, related to livestock and agriculture: jerked beef, leather, horsehair, horns, tallow, bones, hides, wool, tobacco, manioc flour, tapioca flour, local wine, etc.

The current old Port of Rio Grande was the scenario through which a considerable part of the production and wealth originated from the economy of Rio Grande do Sul flowed abroad. Trade was concentrated on Rua da Praia (now Rua Marechal Florianor Peixoto), and after 1826, with the opening of Rua Nova das Flores (now Rua Riachuelo), a large part of the commercial houses concentrated near the port. English, German, Italian, French and Portuguese companies founded branches in the area [Torres, 2010].

In fact, "the economic participation of entrepreneurs linked to the export and import trade is fundamental to understand the history of the city of Rio Grande” [Torres, 2010: 163], since "the progress and development generated by the commercial function of then Vila do Rio Grande are closely linked to the action of a wealthy commercial elite, which began to form as from 1780" [Queiroz, 1987: 156]. Heinrich Kettenburg was one of the first German immigrants to settle in the city of Rio Grande. Although the company he founded, the early "H. Kettenburg & Co.", had its corporate name changed to C. Albrecht & Co. in 1896, it is correct to state that the company continued until 2004, remaining active for over a century.


The Kettenburg firm was founded in 1857 by Heinrich Kettenburg, Hermann Kettenburg, and a minority partner with joint responsibility (Johannes Fr. Breyer). The company was managed by Heinrich, and advised by Johannes. The Ledger accounting records provide strong evidence that there was a fourth partner, named Heinz Kettenburg, probably Heinrich’s father, brother or cousin. There is no evidence that Heinz participated in the management of the company. These hypotheses are based on the movement of "Heinz Kettenburg - Wechsel Conto" and "Heinz Kettenburg - Reis Conto". These accounts will be mentioned again in this article.

The connection between the families Albrecht and Kettenburg is important to assess the historical value and correctly interpret the bookkeeping techniques used in the Kettenburg’s Ledger. The relationship between them began when Carl Albrecht, born in the Hanseatic City-state of Hamburg in 1852, immigrated to Brazil. He had been brought up in his hometown, where he also studied and practiced commercial techniques for three years. He immigrated to Brazil in 1871, where he apparently changed his name to Carlos Albrecht, Sr. [Torres, 2010].

Carlos Albrecht, Sr. joined the Kettenburg firm as a bureaucratic employee, probably performing the roles of correspondent and bookkeeper simultaneously. At the time portrayed, the commercial correspondent job was of high importance, and went on so until being considered more important than the one of bookkeeper; during the whole
period of time, the one that refers to the accounting records made in the Kettenburg’s Ledger became effective law, the Brazilian Commercial Code (Law No. 556, of June 25, 1850) determined in its Article No. 11 that every merchant had to maintain a Journal Book and an Invoice Copies Book.

Therefore, Carlos Albrecht, Sr. started to occupy the managerial position of the Kettenburg’s firm and was promoted to the position of company’s procurator. In 1895, former partners Heinrich Kettenburg and Heinz Kettenburg decided to quit the business and go back to Europe and C. Albrecht became the company’s director. In 1896, Carlos Albrecht, Sr. acquired the control of the company and changed its name to C. Albrecht & Co., taking on his two sons as partners. Carlos Albrecht, Jr. and Franz Albrecht were born in Rio Grande do Sul, but were educated in Germany and for three years they practiced the trade, not only in Hamburg but also in Manchester, England. When they came back to Brazil, they started to take part in the management of the firm. Carlos Albrecht, Jr. replaced his father in the conduction of the business due to the latter’s advanced age.

The company had its name changed to W. Albrecht & Co, when Walter Albrecht, the founder’s grandson, became the head of the company in the 1950s. Such denomination remained until the company closed down, in 2004. Its central office was located at 176 Rua Marechal Floriano Peixoto, in Rio Grande City, distant just one block away from where the primitive Kettenburg’s headquarters (see Figure 1) was located; and both were situated very close to the Porto Velho do Rio Grande docks. This harbor was a logistic support point for the large sailing boats that at that time made the link of the Province of São Pedro do Rio Grande do Sul across the Atlantic with Europe.

**Figure 1 —** The store of H. Kettenburg & Co., in Rio Grande City

Source: Reginald, Feldwick and Delaney [1913: 856].
This commercial house traded fabrics in general and articles of haberdashery such as buttons, threads and accessories, providing raw material for handicrafts (crochet, knitting, costume jewelry, ornaments, paintings, embroidery). The products sold were imported mainly from Europe, but also from the United States of America. Its sales were made through four commercial representatives who traveled across the various rural areas of the Province of Rio Grande do Sul. H. Kettenburg & Co. also sold consignment products obtained from producers to local manufacturers.

5. Characteristics and Legal Formalities

While examining the bookkeeping aspects of the Ledger used by Kettenburg, it was observed that the book abided by the legally intrinsic formalities and valid techniques of the time. It followed the precepts of the Italian literature that took cultural leadership of international accounting after the publishing of the "Tractatus de Computis et Scripturis" by Fra Luca Pacioli in 1494. For adequate control, accounting entries focused on clarity and data reliability (healthy and convincing documentation), which justified the economic registers made (events and values), employing the double-entry method, rigorously respecting the chronology of events and making reference to the corresponding register in the Journal.

The Kettenburg’s Ledger, which was used to record business of that firm for seven years in the third quarter of the nineteenth century, is in perfect condition. The book is bound in cardboard hardcover imitating dark green plastered marble, covered by varnished fabric, lined with cotton or linen cloth, with unmarked spines. In the opinion of the Curator of the Rio Grande Museum, its binding follows the "Dentelle style", which is a type of binding in which the ornamental elements imitate lace. This book bears many resemblances to a diary book manufactured by JC König & Ebhardt, Hannover, which was owned by Carlos Hoepcke S/A, in the period between August 30, 1913 and August 25, 1914. This book is today in exhibition at the Historical Museum of São Francisco do Sul. Everything leads one to believe that the Kettenburg’s Ledger was made by that same German manufacturer. It weighs approximately five kilograms, containing 400 printed, typographically numbered pages in sequence, and was made in Germany and crafted by the classic binding system of various folded sheets of paper and a sewn and glued binder.

The pages inside the book are made of gypsum paper and the effective records in this book were entered using the double-entry method, in German language, handwritten, with no errors, erasure or reversed entries, and followed the principles of Giuseppe Cerboni’s personalistic school (Account of the Owner, Account of the Agents, and Account of the Correspondents). The last 25 pages of this Ledger contain an index of accounts and their corresponding page numbers, with each account taking up two pages of the Ledger being the left page reserved for the debit entries and the right page for credit.

Criteria and solid accounting techniques are found in the Kettenburg’s Ledger. In terms of transcription aspects, except for the use of German, the records were maintained according to the Brazilian legal framework of the time, therefore following the formalities adopted, as exemplified below.

The fact that both sheets of each page of the book were used for the same account affected the use of the first and last sheet, in terms of accounting records. Consequently, it was expected that those pages would be employed for the transcription of the “Opening Terms” and “Closing Terms.” Nevertheless, these documents do not exist, and the book creator preferred to glue the first page to light brown thin cardboard,
which was the same material used for the trimming inside the covers of the Ledger Book. Its last page was used.

It seems that, during the Brazilian Empire, opening and closing terms for auxiliary accounting books were still not in use, as, according to the Brazilian Commercial Code that was valid during that time, Law nº 556, from June 25, 1850, the only mandatory accounting books were the “Journal” and the “Invoice Copies”. These were legally the supporting documents for business operations, which meant they should obey the extrinsic and intrinsic formalities of accounting information.

The opening and closing terms of these books required formalities, which should be signed by the Bookkeeper - a term which in present day means Accountant -, be sealed, containing the signature of a Customs employee, and subsequently recorded in the Commercial Registry, receiving the signature, on the first and last pages, and the rubric for the remaining pages, in the upper corner of the left page, made by the employee responsible for the procedure.

In this manner, as the Ledger Book had no legal weight, but only managerial meaning, it was possibly for this reason that Kettenburg had not formally written opening and closing terms pages. On the other hand, the use of German in the Ledger accounting entries of this business is a little odd, despite the fact that it was not a mandatory accounting book. However, the bookkeeping made of accounting entries in the German language was recorded compulsorily in Portuguese in the Memorial Book and in the Journal Book. It does not make sense the fact that the Ledger Book was written in German, while these other two books, by legal device, had to be recorded in Portuguese.

6. Bookkeeping Procedures Used by Kettenburg

The main piece researched in this paper, the Ledger Book, was used to disclose the accounting records of the activities of the Kettenburg’s firm. The main sources of data collected are detailed commercial transactions, which had been carried out between 1868 and 1875. This paper exhibits a historical perspective of the evolution of the above-mentioned trade firm’s bookkeeping system throughout seven consecutive years, based on a rare accounting book. Currently it is part of the collection of the Rio Grande Museum, classified as "Old Ledger Book, with padlock, which belonged to C. Albrecht & Company". Although the Rio Grande Museum classified the piece this way, the accounting records accomplished in it refer to the predecessor shareholder’s business, which operated under the denomination Kettenburg. But this small mistake is totally excusable. In the same way that the new society's successor, the old firm was established to explore commercial representation activities.

The Museum is housed at an old historical building in the city of Rio Grande, near the only seaport of the State of Rio Grande do Sul. The Kettenburg Ledger was donated to the Museum by Walter Albrecht, at the time Honorary Consul of the Kingdom of Denmark in Rio Grande, for considering, according to his own words, the importance of that piece. For that reason, we believe that it should be preserved and put at historians’ disposal. Almost at the age of 95, Walter Albrecht still actively participated in the cultural life of the city of Rio Grande. He died on February 14, 2014, in that city, victim of a stroke. In a previous commentary about the Kettenburg's Ledger, he said that this book had initially belonged to this original trade firm and when that society was acquired by C. Albrecht & Co., the book was kept in the archive of this new society. Later on, a new transfer of property of the book happened when the firm started to operate under a new denomination: W. Albrecht & Co.
The Ledger Book of Kettenburg was manufactured in such a way as to be kept in a lying position inside a safe. The safety of the book is guaranteed by a latch with two folding axles, with one end firmly fastened to the back cover. At the other end is the padlock. When the latch is placed in "closed" position, the padlock pawl is set against the "mirror" braced on the front cover of the book. A simple turn of the key closes the book, not allowing the opening of its folding axles, with one end firmly fastened to the back cover. At the other end is the padlock. When the latch is placed in "closed" position, the padlock pawl is set against the "mirror" braced on the front cover of the book. A simple turn of the key closes the book, allowing its opening.

What draws the most attention in the Kettenburg’s Ledger is the clever use of latches and locks. This system, despite constructing a clock system, is rather solid, and its violation by any unauthorized person, who does not possess the key, would certainly leave signs of fraudulent behavior. Thus any attempt to open the book without the use of the key would be easily noticed.

The manuscript was designed to be handwritten using "duck feathers", and placed on tables or bureaus with sloping tops about 30 degrees in relation to the floor. The set formed by the padlock and the extended [open] latch presented no difficulties for the bookkeeping in this Ledger. Unfortunately, most museums set restrictions on photographing their collections.

Considering that the Kettenburg and Albrecht families controlled the company, it is worth describing how the commercial and social relations between them evolved. Formally, the bookkeeping procedures adopted in Brazil originated from Portuguese Governmental Accounting, with the publication of the Magna Carta by Prince D. João VI, in 1808, which referred to the official bookkeeping and accounting reports through the Royal Exchequer’s double-entry bookkeeping method [Sá, 1980]. But the first reference in Brazil of accounting practices regulation was established by Law No. 556, published on June 25, 1850.

This law established the Brazilian Commercial Code that determined the obligation of commercial companies to bookkeep their activities, elaborating a consolidated yearly balance sheet, which should include all movable property and livestock, merchandise, money, credit notes, and any other kinds of value, as well as all debts and obligations. This Code was an adequacy regulation for the commercial activities and it officially mandated that the trader should keep a uniform order of bookkeeping, and had the necessary accounting books for this purpose, aiming at the annual disclosure of the company’s balance sheet of assets and liabilities (Art.10). This should be dated and signed by the trader to whom it belonged in accordance with the aforementioned Code. Traders should necessarily keep the following accounting books: the General Journal Book and the Invoice Copies Book (Art. 11).

In the former book, all the economic data should be entered individually and clearly in order to portray the business operations and their consequences, and in the latter book, the businessman had to record all correspondences that were made, along with the accompanying bills, invoices or instructions (Art. 22). Both books should be bound, numbered, sealed and initialed on all pages by one of the local Council members of the jurisdiction at hand, containing subscript opening and closing terms made by the secretary and signed by the president of that jurisdiction (Art. 13). The bookkeeping should be carried out in the mercantile way, in other words, double-entry, in chronological order, by day, month and year, without white spaces, interlineation, blots, trimmings or corrections (Art. 14); the occurrence of any of these specific issues would render the book legally null and void (Art. 15).
The entries were written in chronological order and the text is legible, written without any gaps. A look at the manuscript showed that this book can be classified as a complete accounting information system due to the fact that adequate instruments and procedures for internal controls and orientation for administrative operations were found. It is important to observe that, taking into consideration the breadth of the business, the environment in which the business was operated and the nature of operations carried out, the bookkeeping techniques that were used in this Ledger were the most appropriate and effective to support the asset control and to help the decision-making processes. In addition, it was also important for disclosing business performance and measuring results.

In the Kettenburg’s Ledger, all records were bookkept manually. In the manual accounting system, the same kind that was used by Kettenburg, the bookkeepers initially indicated all the operations recorded in the Memorial. After checking the accuracy of the records, they transcribed the entries, in digraphic structure, to the Journal and, subsequently, recorded the same entries in the respective debtor and creditor accounts in the Ledger Book.

As observed, even with the simplest entries, two transcriptions are required, involving nothing less than three accounting books: Memorial, Journal and Ledger Book. It is important to remember that, in the case of the Ledger Book, debit should be recorded on one page and the corresponding credit on another page. Cash Book, Merchandise Stocks, Checking Accounts, etc. also involve records in the appropriate subsidiary accounting books. This multitude of records and transcriptions certainly explains, in many respects, why the accounting records from last century are frequently laconic, especially in terms of the Ledger Book.

The organization of operational proofs was an important factor in the final result of any accounting system, be it manual or mechanical. First, the entries to be recorded were based on external and internal documents, which required, a priori, classification and numbering. Second, for the entry of records there was also a need for a previous rationalization of the work to be performed. Yet, in manual bookkeeping, it can be observed that this issue becomes even more relevant. This is due to the fact that this system obligates the accountant to pay close attention to the task to be performed, in order to avoid possible transcription errors. In practice, in manual accounting, it was very difficult to verify the tenor of the documents and corresponding book entries, faced with the obligation of visually locating the place in which the entry should be made.

Another negative aspect was related to the fact that bookkeeping books (Memorial, Journal, Ledger, Stock Register and Checking Accounts) are bulky and need a place to rest, aside from having to be manually recorded in gothic script for the accounts and history titles and subtitles. An arduous and tiring job was necessary for mental calculation, and at the end of the day for register closing, as there were no calculators at that time.

To be effectively used as an instrument of management and business control, an accounting system needs to be reasonably structured and organized, in such a way as to contemplate economic events derived from business activities in the specific books for their operations.

Accounting records are traditionally kept in books, inspired as “proof”, and organized entrepreneurs have kept this criterion for dozens of centuries. Kettenburg followed this logic for accounting records, and systematized the volume of transactions related to financial activities carried out by the business, aiming to generate information for the managing partners, as is the case of the Ledger analyzed in this paper.
The accounting entries that are recorded in the Kettenburg’s Ledger were started on January 1, 1868, and the first page was reserved for the Balance Sheet. The first 112 pages of the book were used and the last entries are from 1875.

Surprisingly, as already commented, the text in the Ledger was written cursively in German on both sides of two sheets, except a few Latin formulae possibly for the title of the accounts recorded on sheet number 74: “Encomenda Conto – 1872” and “Molhados Conto” Accounts (in English, Consignation Accounts and Groceries Accounts). A doubt arose about the language used to name the account recorded on page number 85 “Delcredere Conto”, as the type of operation in question could have been recorded in German, as “Delkredere Conto”, or “Burgschaftsvergütung Conto”. The small difference in spelling in the first of the terms cited above will be referred to later.

The writing is reasonably well preserved and legible and the entries in the book may be compared to the bookkeeping of a modern ledger. No errors, overwriting nor reversed entries were found in the Kettenburg’s Ledger book. The writing, in beautiful cursive, was most likely by C. Albrecht himself, utilizing the “duck feather quill pen” and durable black ink, which remains unchanged after more than a century. The letters are from the Roman alphabet, as compared to Gothic letters that were used by the German people.

As previously observed, the historical descriptions of the entries were very synthetic. The records from “Bilanz Conto”, which are on the first page of this Ledger, are described in Figure 2. This type of record can be considered typical to the disclosure procedure that was used in the Kettenburg’s Ledger. It is further determined that Kettenburg operated through semi-annual balances.

Figure 2 — Columns Used in the Kettenburg’s Ledger Book

![Figure 2](image_url)

Source: Illustration developed by the authors from the data of the Ledger of Kettenburg

The use of "Latin" in this account is noteworthy, considering that German is the predominant language in the notes of the Ledger of Kettenburg. Since the information from this account was transcribed directly from the accounting entries recorded in the Journal book (by the compulsory commercial legislation in force, under penalty of loss of the probative value of the aforementioned accounting book), everything leads us to believe that this is a way of offering the judges a greater comprehensibility of the
business event, in case of judgment of possible disputes with the correspondents, because Latin is more used in the Brazilian legal language than German.

Oddly, the second page of this Ledger book was opened for the “Kettenburg – In Liquidation” Account. It was not possible to determine the reason for this name. It is most likely that the previous company was closed to make room for the other company, with the same company name, and it is this second firm that had its bookkeeping demonstrated in the manuscript that is being studied in this paper.

In the absence of a chart of accounts that had been used by Kettenburg, a technical criterion was attempted to group and classify the accounts that were operated by the business, given that in this way the best conditions to analyze the records would be achieved.

In line with Cerboni’s basic idea, the accounts were classified in the following groups: Owner, Consignee Agent and Correspondent. Many professionals and academics might complain, alleging that this proposition of Giuseppe Cerboni’s Personalistic School is completely outdated. Still, this classification seemed the most appropriate for the study at hand [see Note 1].

7. Research Findings

This section provides some evidence found in the analysis developed in the accounts of the Kettenburg’s Ledger. The comments show our view of the accounting entries used in this accounting book. Figure 3 shows some of the main accounts used by Kettenburg in their accounting records.

Kettenburg’s accounts were drawn up and presented according to the classic bookkeeping system, in which the Memorial received notes as the company carried out its operations or business transactions. The adoption of this accounting book was due to the need to keep simple notes that would serve as a reminder when recording them in the Journal. Note that at that time not every company could count on a full-time accountant. Then an assistant would leave a draft in the Memorial of what should be recorded by the company. Subsequently, after sorting the documents, the accountant would make the accounting entries of the patrimonial facts in the Journal in chronological order. From these records, he also transcribed them to the General Ledger, according to the accounts movements. Periodically, every six months, he elaborated the General Balance (required by law), from the accounts in the General Ledger, in order to control the transcription of the Journal on the General Ledger.
Notwithstanding all this formalization, Kettenburg's bookkeeping mechanism did not have an institutionalized chart of accounts (no official list of accounts). Only a hierarchy of accounts was created for the purpose of preparing the balance sheet every six months. Nor was there a classification of accounts (no coding), which made the bookkeeping process even more complex and subjective. The monthly accounting records followed a standardized chronological order of accounting, and showed small variations from one month to the next (see Appendix, page 25).

In general, the monthly accounting of the company's operations used few accounting entries in the recording of transactions in the assets, liabilities, revenues and expense accounts. In the month of the balance sheet closing, accounting entries were made for the closing of the income statement for the period through the "Balance Sheet Account", which acted as the year-end closing account and the calculation of results. In relation to the end of the accounting period, there is a lack of preparation of the "Income Statements", since a transitional account was used to calculate Profits & Losses, where records of changes in equity were made through debit and credit entries related...
respectively to the calculation of the result in the various accounts of expenses and of the
revenues that occurred during the fiscal year. After recording the results of the various
expense and revenue accounts at the end of each period, this account was closed in
counterpart with the "Capital Account", according to the number of accounts of each
member. The accounting closure of Kettenburg & Co. was carried out on a semi-annual
basis, using as reference the periods from January 1 to June 30 and July 1 to December
31 of each year.

In addition to the more frequent accounting entries, there were also some
accounting records not very usual for the time, especially the recording of exchange
variation effects on capital (Heinz Kettenburg - Currency Account) and the use of
shareholders' equity accounts related to contingency reserves (Bankruptcy Reserve
Account). In the period under review, there was no Cost of Sales account, and the gains
and losses were calculated using the "Groceries Account". The financial costs (Interests),
customer discounts (guaranteed by Del Credere Accounts) and currency variations (Heinz
Kettenburg - Currency Account, and Louis Dubois - Currency Account) were written as a
direct counterpart of Profits & Losses. It should also be noted that the taxes were
aggregated and debited to the "Operations Expenses" account, and there were no taxes
payable, since most of the few existing taxes were charged in cash, being credited
directly against the account "Cash on Hand".

Regarding the composition of the company's results, it is noted that: (1) the
personal expenses of the partners were recognized as expenses in the company's
accounting, reducing the capital value of each partner (counterpart of the Capital
Account); (2) no systematic procedures for the depreciation of movable and immovable
property have been identified, a fact which is inconsistent, raising a certain question,
since although Kettenburg did not own any kind of property, they would very certainly
use machines, equipment and furniture and utensils in the exercise of their activities.

7.1 Owner’s Accounts

The Kettenburg firm maintained these two classes for the owner’s accounts:
(i) Integral Classes, whose balances should come from the Balance Sheet; and
(ii) Differential Accounts [or Result Accounts], which were balanced in the
"Bilanz Conto", for credit calculation.

In terms of these accounts, it is worth mentioning that the Balance Sheets, or the
Income Statements, are pieces of accounting that only came about at the beginning of the
twentieth century.

To improve the visualization and clarity of this information, the Owner’s Accounts,
which were maintained by Kettenburg during the period analyzed, are listed in the Appendix.

As for the Integral Accounts, it is noted the absence of a Social Capital account or a
similar name. The Kettenburg’s accountant preferred (or this was the procedure adopted
at the time) to record the initial capital (increased from gains and subtracted from losses)
directly for each partner and for the value that they held in the firm. A natural procedure,
when one assumes – in accordance with the Personalistic School – that accounts represent
people.

The only reserve account that Kettenburg used, during the period covered by the
records in the Ledger book, has the name “Reserve Account für Falliten”. It was hard to
find an adequate translation for this account, but the chosen option was “Bankruptcy
Reserve Account”. If this translation is completely right, it can be proved that, during the
In the Brazilian Empire, the responsibility of partners in a Solidarity Society was rather limited, and business was effectively risky.

In relation to the differential accounts, it was natural to determine the synthetic nature of the records. Only nine titles were used to detail all the different kinds of revenue and expenses, and the “Bilanz Conto” functioned for a year-end closing and results calculation.

These differential accounts provided us with a series of surprises. It was not possible to find any title that referred to taxes or fiscal charges. At that time, the taxation in Brazil was recorded only on property. As the taxes recorded by business transactions of Kettenburg were a small amount, they did not justify opening a specific title in the Ledger book, thereby being recorded under “Handlungs Unkosten” or Operational Expenses.

The title “Commission” appears self-explanatory; but, there were no German words with this spelling. This title may deal with commissions received in business payments with agencies, but it would have been preferable to carry out research in other books and records at Kettenburg to understand the real meaning of this account, based on complementary analyses.

Equally surprising is the absence of an account for “Insurance Policies”. As will be demonstrated shortly, Kettenburg did business mainly with companies headquartered in the Port of Hamburg, a city that at the time was part of the Prussian Kingdom. This fact presupposes that goods acquired in Europe were destined for the Rio Grande Port, which, at that time and until the year 1915 - when it obtained a definitive settlement and canal access - was one of the most dangerous in the world, due to shipwrecks and stranded ships. Aside from that, the Prussian Kingdom was at war with France in 1870, and this certainly represented additional risks for ships leaving from or destined for the Hamburg Port. The Freights Bills probably reflected the expenses with insurance policies.

7.2 Consignee Agents’ Accounts

Kettenburg commercialized articles imported from Europe and the United States (fabrics and utensils for sewing and packaging), which were sold throughout the State of Rio Grande do Sul by four commercial representatives [Torres, 2010: 166]. This trade firm also sold manufactured goods locally.

The limited number of accounts used in the Kettenburg’s Ledger book in this group is surprising. There were only five accounts of this kind, shown below in the Appendix.

Except for the writing used in the “Encomenda Conto – 1872” and “Molhados Conto” Accounts, it is not necessary to further comment on these accounts. Yet, it was not possible to interpret the expression E/R used in the “Waaren für E/R” Account (a direct translation would be Commodities for E/R), but there is a tendency to believe that this is an abbreviation for “Goods for Sale,” “Goods for Delivery to Third Parties” or a similar name.

With respect to this class of accounts, it was surprising to acknowledge the absence of titles that were already in routine use in Financial Statements at the time, such as “Property”, “Furniture and Utensils”, “Livestock”, etc. In current-day accounting terms, it is presumed that the Kettenburg firm did not possess Fixed Assets\(^2\), a fact that is contradictory, given that the business sustained itself until the last few years of the twentieth century, more than a century since its foundation.

The long lapse of time during which the accounts “H. Kettenburg & Co – In Liquidation” and “Bank Account” - were used seems to demonstrate the slowness with

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\(^2\) At the beginning, Kettenburg probably had only a lease with the owner of the property, and this fixed asset was finally acquired later around 1914.
which the business operation was processed in the nineteenth century. In this respect, it is worth mentioning that business between the Province of São Pedro do Rio Grande do Sul and Continental Europe did not have telegraphic communication nor other facilities. The only form of transport and communication was by sea.

7.3 Correspondents’ Accounts

As presented in the Appendix below, the Correspondent’s Accounts are composed of a class that presented the most accounts in the Kettenburg’s Ledger. Aside from that, the accounts in this group present more use than the accounts from other classes.

For the convenience of the analysis process, this class was subdivided into two account groups:

A – Accounts involving partners of the firm; and
B – Accounts involving transactions with third parties.

The first group enables the identification of Social Capital and, by extension, the structure of the decision-making process at Kettenburg. In evaluating the analysis of the Ledger, and the impossibility of accessing the Memorial and the Journal, the conclusion is that the firm was run by Heinrich Kettenburg, who was assisted by Johannes Fr. Breyer.

The entries in the Ledger offer strong evidence that there was a third partner, by the name of Heinz Kettenburg, probably Heinrich Kettenburg’s father, brother or cousin. However, he did not directly participate in the management activities of the business, residing outside Brazil. These assumptions are based on the use of the accounts “Heinz Kettenburg – Wechsel Conto” and “Heinz Kettenburg – Reis’ Conto”.

Besides, the title of this second account seems to demonstrate that the currency of the Brazilian Empire already presented a tendency to rapidly depreciate, in relation to other monetary standards, most likely due to the inflationary effects in Brazil.

The accounts maintained by Kettenburg in conjunction with third parties and that constitute the second group of Correspondent’s Accounts illustrate and explain the business the firm did. As can be observed in the Appendix, most transactions were made with the market in Hamburg; therefore, the main port belonged to the Prussian Kingdom. Businesses headquartered or with branches in London and Paris also did business with Kettenburg. It is observed that the spelling of the company’s name is characteristically German.

Kettenburg, in compliance with Article 10, Item 4, of the Brazilian Commercial Code of 1850, annually needed zero balances in the accounts at the end of the accounting period to disclose their assets and liabilities in a General Balance Sheet. This procedure, called "zeroing", consisted of the balance sheet, and followed a specific classification order designed by the Kettenburg’s accountant. Liability accounts were supposedly listed in alphabetical order of the correspondent accounts toward the owner’s account. In the asset accounts, the order of disclosure followed an apparent standard, beginning with the "Cash on Hand" account followed by the correspondent debtors in alphabetical order. Compared to today, it is observed that there was not a single account for the clients and another for the suppliers, demonstrating a personalistic approach to the accounting of the time. The closure of the asset and liability accounts was made with reversing entry in the "Profit & Loss" account. Every credit entry should be countered with a debit entry in the "Profit & Loss" account and vice versa to debit entry. In order to start the new fiscal year, the Kettenburg’s bookkeeper had to proceed with the reverse accounting entries of the

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3 The first official currency of Brazil was the real (Plural: Réis), a currency of the Portuguese Empire. It was in use in Brazil from the earliest days of the colonial period and the times of the Brazilian Empire, and remained in use until 1942.
closed accounts, to create the new asset and liability accounts for the new accounting period.

The account named “U. Zellweger & Co. – Paris” draws attention and invites deep analysis. This account was related to the transactions made with this French company at the time the Prussian Empire and France were involved in the Franco-Prussian War. The treaty of Frankfurt, signed on May 10, 1871, put an end to the war between France and Germany. According to the terms of this treaty, the French province of Alsace, except for Belfort and part of Lorraine, including Metz, should be handed over to the German Empire, and France should pay for war damages worth five million francs in gold, as well as accept German occupation until the payment was made in full. This heavy burden was completely settled in September of 1873, and in this same month, after an occupation of around three years, the German troops left French territory.

Based on this evidence, it is clear that this background can raise an interesting research question: Could Brazilian businesses – or those headquartered in Brazil – have served as intermediaries in business and financial relations involving capitalists in those warring countries? Possible answers to these questions in the Kettenburg’s bookkeeping would have been able to be found by linking this Ledger with other accounting books of Kettenburg, especially with the Journal and the Invoice Copies, which were not accessible.

8. Concluding Remarks

This paper has described the accounting practices that prevailed in the Kettenburg’s Ledger from 1868 to 1875 and discussed the possible motives for using such practices in the bookkeeping of this trade firm. Based on the account books of H. Kettenburg & Co., we analyzed the accounting practices in the context of Brazilian trading firms in the late nineteenth century, and examined a primary source material that included an accounting book that directly relates to Kettenburg activities and transactions, which could be seen as a representative example of the accounting practices of this firm over seven years.

The accounting entries in the Kettenburg’s Ledger enabled the firm to make use of an effective tool for business management and control of commercial transactions, using a reduced set of records. These records allowed for a detailed monitoring of receivables from customers and the amounts owed to various suppliers (they contained entries of the correspondents’ personal accounts), the quantities and amounts of goods held in inventory, as well as commercial credits and others.

In terms of the accounting rules used by Kettenburg, there are evidences of the influence of the Italian accounting literature in the practical bookkeeping of the Ledger book, following the principles of Giuseppe Cerboni’s personalistic school. Based on Giuseppe Cerboni’s system of 1875, the records correctly provided sufficient information for decision-making and were adapted to record the transactions related to specific goods or consignments. The accounting techniques used were the most appropriate for the disclosure of business performance and for the measurement of results. This article also demonstrates that the content of this Ledger shows economic and accounting events directly or indirectly associated with the historical and political facts, and that the bookkeeping met the shareholders’ needs.

During the development of this study, it was technically impossible to classify the title “Conto Pro Diverse”. This account, whose records take up two pages in the Kettenburg’s Ledger book, could refer to either diverse expenses – in which case it should be classified as an Owner’s Account – or to small transactions with various companies – in which case it would represent a Correspondent’s Account. Once again, for
the correct classification, it would be necessary to consult and analyze the Journal book, which was not available, to interpret the entry events.

The period of time covered in the Kettenburg’s accounting records comprise a time of profound political and social changes in the Province of São Pedro do Rio Grande do Sul. The Port of Rio Grande was located within this war zone. Despite being one of the most dangerous ports in the world, due to its navigation risks, it became an important point for logistics, because it was the only Brazilian port capable of serving as a back office and supply station for military operations that took place in the La Plata region.

Equally, the influence and interest of the British in the region during that time is a known and proven fact. The conceit and arrogance with which the British Crown conducted the Christie Affair clearly proves this fact. On the other hand, there are only a few studies about the possible actions of the Prussian Kingdom. Subsequently, the German Kingdom, then a new emerging power in Europe, showed interest in the Southern Cone. Besides, it could be questioned if this last hypothesis was actually tried out.

Books and documents similar to the Kettenburg’s Ledger could shed light on this issue, to help understand the volume, the quality, and those involved in trading and financial transactions with German firms and subsidiaries.

Before concluding, it is important to highlight that some anomalies were observed in the writing of various German words, which in this study were reproduced in the same form in which they were written in the Kettenburg’s Ledger.

In spite of the fact that the authors are not fluent in the German language, the writing that the Kettenburg’s bookkeepers used to title some accounts seems odd. The name “Conto,” for example, should be spelled “Konto”.

In a first analysis, it seems that it dealt with a linguistic distortion or the formation of a local dialect. But there is no error or distortion of the German grammar. There is a German-Portuguese-German dictionary issued in 1811, which belongs to the Archives of Rio Grande, also headquartered in Rio Grande and located near the Rio Grande Museum. With this dictionary, it was possible to check the writing, in terms of the period of the records [Schwikert, 1811]. In this respect, it is common knowledge that Wilhelm II, the German Emperor, commanded an orthographic reform in 1911, which happened after the last accounting records of the Kettenburg’s Ledger.

Another point related to the language used in the accounting book mentioned is the fact that the colony formed by German immigrants and their descendants in Rio Grande was always small in number, and, beyond that, the records correspond to the first years of German immigration. The use of German is not an attempt to hide facts, or a way to reduce the transparency of the company’s accounting records, or the evidence of the company’s real assets. It seems that the use of German is simply due to a cultural habit and the informative interests of the partners. From what could be surmised from our knowledge of the customs at that time, those partners would be the only users of the accounting information generated by the firm.

In fact, in the nineteenth century, and in normal situations in which the continuity of operations was confirmed, Financial Statements were of interest only to owners and partners. In other words, faced with a situation of bankruptcy or for means of evidence, the accounting books would interest a small group of external users: creditors, legal authorities and bankruptcy trustees. As already mentioned, only the Journal would possess legal value.

Even when observed separately from other accounting books, the Ledger of Kettenburg, taken by itself, clearly shows the effects of the Germanic migration flows, and helps find tracks that take us to find more detailed explanations about the political and cultural
environment found today in the extreme southern region of Rio Grande do Sul.

Finally, future research could investigate books and documents similar to the Kettenburg’s Ledger aiming to show the economic, cultural and political issues about the Germanic migration in the extreme southern region of Rio Grande do Sul. There are many questions unanswered, and new analyses should be carried out considering other social and political aspects.

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## Appendix

### Accounts Used at H. Kettenburg & Co.

<table>
<thead>
<tr>
<th>CLASS</th>
<th>GROUP</th>
<th>DESIGNATION IN THE LEDGER</th>
<th>ENGLISH TRANSLATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OWNER'S ACCOUNTS</strong></td>
<td>Integral Accounts</td>
<td>Heinz Kettenburg – Capital Conto  &lt;br&gt; Hermann Kettenburg – Capital Conto  &lt;br&gt; Johannes Fr. Breyer – Capital Conto  &lt;br&gt; Reserve Conto für Falliten</td>
<td>Heinz Kettenburg – Capital Account  &lt;br&gt; Hermann Kettenburg – Capital Account  &lt;br&gt; Johannes Fr. Breyer – Capital Account  &lt;br&gt; Bankruptcy Reserve Account</td>
</tr>
<tr>
<td></td>
<td>Differential Accounts</td>
<td>Agio  &lt;br&gt; Bilanz Conto  &lt;br&gt; Comissions  &lt;br&gt; Frachten Conto  &lt;br&gt; Gewinn &amp; Verlust  &lt;br&gt; Handlungs Unkosten  &lt;br&gt; Havarie Conto  &lt;br&gt; Verkaufs  &lt;br&gt; Verkaufs Spensen Conto – Porto Alegre  &lt;br&gt; Zinsen</td>
<td>Agio  &lt;br&gt; Balance Sheet Account  &lt;br&gt; Commissions  &lt;br&gt; Freights Bills  &lt;br&gt; Profits &amp; Losses  &lt;br&gt; Operations Expenses  &lt;br&gt; Mishaps Bills  &lt;br&gt; Expenses with Sales  &lt;br&gt; Expenses with Sales - Porto Alegre  &lt;br&gt; Interests</td>
</tr>
<tr>
<td><strong>CONSIGNEES’ ACCOUNTS</strong></td>
<td>Goods</td>
<td>Cassa  &lt;br&gt; Encomenda Conto - 1872  &lt;br&gt; Molhados Conto</td>
<td>Cash on hand  &lt;br&gt; Consignation Accounts - 1872  &lt;br&gt; Groceries Accounts</td>
</tr>
<tr>
<td></td>
<td>Rights</td>
<td>Delcredere Conto  &lt;br&gt; Waaren für E/R</td>
<td>Guaranteed by Del Credere Accounts  &lt;br&gt; Commodities for E / R</td>
</tr>
</tbody>
</table>

Source: Illustration developed by the authors from the data of the Kettenburg’s Ledger Book

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