

**EARLY MANAGEMENT ACCOUNTING PRACTICES IN JAPAN – THE CASE
OF THE MITSUBISHI MAIL STEAMSHIP COMPANY**

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ABSTRACT

Purpose – This paper examines early stages of the development of management accounting practices in Japan, specifically the case of Mitsubishi Mail Steamship Company.

Design/methodology/approach – Using the archives of Mitsubishi Shiryokan, this paper presents a historical analysis of the role of operating units (branches and ships) and the further development of double-entry bookkeeping with the introduction of budgeting. Our analyses assume a contingent relationship between the organization and its accounting system with a variety of environmental forces, such as competition, governmental subsidies, economic conditions, etc.

Findings – The analysis demonstrates the development of reporting systems for the purpose of management of the managers and illustrates the development of operating units (branches and ships) at a time, the early Meiji era (1870s), which is considered to have had a great impact on the Japanese economy and society with the opening of the country. Shipping and shipping firms played a significant role in maintaining Japan's independence and promoting its economic development. Personnel transfer, the dual control of information, collectivism, and the initial focus on revenues were observed to be important features of the accounting and reporting structure. These findings are discussed in relation to the management practices of the Tokugawa era as well as modern Japanese business.

Originality/value –We analyze the accounting system to reveal and demonstrate particular features of Japanese companies. In doing so, this study aims to contribute to the extant research available to conduct comparative international management accounting research.

Key words: Japanese management accounting, double-entry bookkeeping, budgeting, Meiji Japan, governmental subsidies.

Paper type Research paper

I. Introduction

When Japanese management accounting practices garnered much attention from the West in the 1980s, not only particular management accounting techniques were analyzed, but also logic within the organizational context (Hiromoto, 1988, 1991; Yoshikawa 1994, 2001; Okano 2006; Okano and Suzuki, 2007; McMann and Nanni, 1995; Johns, 1998 etc). Okano (2006) argues that accounting history in Japan previously has focused on the development process of bookkeeping, accounting regulations and auditing. However, research that encompasses the comprehensive study of the history of management accounting has been lacking.

Okano provided following reasons for this lack of research. The first is the difficulty of conducting historical research itself due to the necessity of examining not only the calculating system within a company, but also the relationship between this system and its external environment, its particular strategy, as well as organizational innovation. At the same time, the need exists to accumulate and analyze a wide range of archival resources. Second, prior management accounting history research has emphasized the technical side of management accounting techniques, such as budgeting and standard costing. However, research incorporating the relationship of organizational design (management system) and a 'social system' with the management accounting system has been insufficient. Therefore, the common assumption has been that management accounting in Japan was an imported product and no 'home-grown' management accounting existed (Okano, 2006:99). These factors have provided initial motivation for our research.

Prior research into Japanese management accounting has concentrated more extensively on the period following World War II (WWII), due to the development of the so-called Japanese original management accounting practices, such as the Toyota production system, and mini profit centres, which were developed in the 1960s. Meanwhile, in spite of its significant effect on Japan's economic development, developments during the Meiji era have not received comparable attention. The post-war and the Meiji period demonstrate some similar features: significant external pressures (unequal treaties, the threat of colonization in the Meiji era and influence of the Allied Command after WWII); the sense of backwardness in relation to the West (influence of isolation in the Meiji era and defeat in WWII); the rapidity of the 'catching-up process' (speed of industrialization in the Meiji era and becoming a leading industrial power after WWII). These similarities suggest that further study of the early Meiji era is warranted.

The greatest issues confronting the Meiji government were how to achieve complete

independence and how to avoid the threat of colonization (Mukai and Toshitani,1967:31). The solution to this issue was Japan's modernization in all aspects, all the while introducing Western knowledge and technology. Therefore, this period saw vast changes in Japan's economic, political and legal systems, and institutions. However, this importation process did not mean simply copying Western practices but their adaptation through a kind of customization process. We are making an assumption at this stage that this customization was also a factor with the introduction of Western-style double-entry bookkeeping and other accounting techniques.

Many authors suggest the introduction of Western-style double-entry bookkeeping in the Meiji era (1870s) was one of the important movements in accounting history. Someya (1989) highlights it as one of the accounting revolutions that was partly a result of Japan's rise from a feudalistic economy to a position as a leading industrial power. A number of authors provide evidence and illustration of the technical and educational implementation of Western-style bookkeeping. For instance, McKinnon (1994) discusses the historical and social context of the introduction of double-entry bookkeeping, Fujita(1966), Hisano (1970), Chiba (1987), Someya (1989), Coke (1991) discuss the introduction of Western double-entry bookkeeping as a part of the evolution of financial reporting; Shimme (1937) and Tanaka (2005) illustrate the first Japanese literature on Western-style bookkeeping, and the origins of the educational system of bookkeeping and accountancy in Japan; Kudo and Okano (2012) discuss the diffusion of Western-style bookkeeping as social knowledge; Tsumura and Shimizu (2012) examine the influence of Japan on the introduction of Western-style double-entry bookkeeping to China and Korea.

Shimme (1937) refers to the Yokosuka Steel Works' 1865 bookkeeping system as one of the first technical implementations in Japan, in this case as part of a general organizational plan for the steel works, drawn up (in collaboration with shogunate officials) by the French envoy to Japan, a French naval engineer and a French naval accountant. Shimme (1937:292) provides two other examples of the adoption of Western double-entry bookkeeping at this time: Nagasaki Iron Works, the predecessor of the Mitsubishi Dockyard Company; and a machine factory in Kobe, which later became the Kawasaki Dockyard Company Ltd. However, Shimme (1937) did not illustrate double-entry bookkeeping in these examples.

Hisano (1970:94) and Takadera (1970:3) suggest that the adoption of "Western style double-entry bookkeeping" in the Mitsubishi Mail Steamship Company (hereinafter Mitsubishi) was the earliest example amongst *zaibatsu* (conglomerate) companies and other private sectors. Nishikawa (1969), Hisano (1970), Yamaguchi (1988, 1998, 1999,

2007, 2008) examine bookkeeping and accounting regulations at Mitsubishi. However their research is restricted to discussions of the technical side of accounting.

Western double-entry bookkeeping had a significant role in the diffusion of bookkeeping knowledge in Japan. Prior to this diffusion, bookkeeping education in the merchant houses of the Tokugawa era was based on on-the-job training and kept secret and private from outsiders (Tanaka K., 2005:133). Ogura (1982), Nishikawa and Takadera (1984) illustrate that the merchant houses, Nakai Family and Mitsui House respectively, applied the double calculation of profits for a hundred years to control geographically-dispersed branches prior to the introduction of Western-style bookkeeping. However it is not evident how accounting and management practices of the Tokugawa era influenced companies after the Meiji era. Much remains to be revealed about how the organizational context particular to Japanese companies developed after the drastic changes of the Meiji restoration which brought the end in 1868 to Japan's self-imposed isolation that had lasted for two centuries.

We have adopted the case of the Mitsubishi Mail Steamship Company as a research site. This choice is due first to the significant role played by shipping in Japan's economic development, and the maintenance of its independence. The significance of this industry reflects the importance of the Japanese government's shipping protection policy. Based on a contingent relationship between the accounting system and environmental forces, we discuss governmental influence, together with other environmental forces, on the organization's management system. Second, Mitsubishi was one of the first private companies to introduce Western-style double-entry bookkeeping. Third, on the practical level, we had access to archival records to undertake an in-depth case study.

Our research is organized as follows. In the next section, we present a brief review of prior research into Mitsubishi. We then outline our research approach, followed by our case study. The final section offers concluding remarks.

II. Literature Review

If we observe the historical introduction process of management accounting practices in the United States, they were developed initially in textile companies in the early-19th century, then in railroad companies, steel companies, and wholesale companies (Johnson and Kaplan, 1987, p.19). In contrast, textile factories in Japan first appeared only in the mid-Meiji era (after 1890), which was comparatively late relative to developments in the West. In case of Japan, railroad companies were earlier to grow

large in scale relative to textile companies. However, railroad companies were only able to adopt comparatively simple functionally departmentalized organizational structures before they were nationalized in 1900 (Suzuki etc, 1987:193-194). For Japan, as an island country, the shipping industry was a highly essential industry for enhancing not only trade and economic growth, but also for military purposes connected with defense and/or expansion of the Japanese empire. The shipping industry was a pioneer in the application of new management practices.

Mitsubishi, in spite of its later establishment when comparing with Mitsui in 1673 and Sumitomo in 1590, became one of the three biggest *zaibatsu* companies in Japan in a short period (Mishima, 1979:12). One of the reasons for Mitsubishi's being successful lies upon its employment of university graduates without restricting the business to family members, as well as the employment of foreigners and the adoption of foreign knowledge. Therefore, research into Mitsubishi's management accounting and management system offers insights into knowledge transfer of accounting and management practices to Japan from the West after the Meiji restoration, as well as insights into the *zaibatsu* management model, which was a unique and prominent feature of pre-World War II Japan.

Research into Mitsubishi emerged beginning around 1965, due to the public release of "Mitsubishigoushi Shashi" (historical records) in the form of micro films. Indeed, research examining Mitsubishi's accounting and management started in 1960s (Nishikawa(1967)) and has continued to the present; in the 1970s, Kuno (1970), Takadera (1974), and Nagasawa (1977, 1979); in the 1980s, Tanaka (1986) and Yamaguchi (1988); in the 1990s, Tanaka (1991) and Yamaguchi (1998, 1999); and more recently, Suzuki (2000, 2001), Sekiguchi (2002), Oishi (2005), and Yamaguchi (2007,2008). This research has continued to flourish given the access of Mitsubishi-shiryokan records to researchers and the subsequent publication of their work in *Mitsubishi-shiryokan ronshu* (the Mitsubishi archives journal) by the Mitsubishi Economic Research Institute.

Amongst them, Nishikawa (1967) discussed the introduction of double-entry bookkeeping and organizational structure in 1875; Hisano (1970) examined accounting regulations at Mitsubishi; Takadera (1974) questioned amortization and depreciation techniques. Yamaguchi (1988, 1998, 1999) started his research with comparative studies of the accounting regulations and budgeting practices at Mitsubishi Mail Steamship Company and those of the Nihon Yusen Company. In later research, Yamaguchi (2007,

2008) described the 1873 income statement and the ship accounts for the year 1874. Tanaka (1986) introduced research into the budgeting report for fiscal 1885 including its compilation process. He argued that the study of the development of management accounting in *zaibatsu* companies was not only meaningful for the examination of Japanese management accounting history but also important for conducting comparative international research. In spite of its importance, he noted that no research had been undertaken into the development of management accounting (without restricting to cost accounting) based on archival records. He also stated the difficulty of studying management accounting without restricting it to a particular technique (such as standard costing) and considered the research of Tanaka (1986) to be preliminary. Little progress has been made on Tanaka's research regarding the development of management accounting at Mitsubishi (Tanaka, 1986:371). All of the above-mentioned research is restricted to the analysis of a single accounting technique and the technical side of accounting practices.

Certain studies have examined only a single aspect of the management system. For instance, Nagasawa (1977) questioned the formation process of an organization; Suzuki (2000, 2001) examined personnel affairs including foreign employees; Suzuki (1981, 1992) examined investment policy (1981) and personnel management (1992); Sekiguchi (2002) studied the relationship between Mitsubishi (Iwasaki family) assets and its shipping business; Oishi(2005) examined the funds cycle; Kasuya (2002) examined influence of the government's shipping protection policy; Ishikawa(2003) illustrated the development of shipping operations and the opening of the Hokkaido routes. Mitsubishi's business history in the English language can be found in Yamamura (1967) and Wray (1984). All these studies offer insights into Mitsubishi's business practices and policies in the early Meiji era.

However, prior research has not considered *how* accounting practices were applied and *how* they functioned in interaction with the management system. This study aims to fill this gap by focusing on the total management system and illustrating the further development of double-entry bookkeeping, specifically with the introduction of budgeting. In doing so, this study aims to contribute to the extant research of the comprehensive study of the history of management accounting in Japan.

III. Theoretical framework

Management accounting does not simply mean a particular calculating system or a technique, but questions its function (Miyamoto, 1969:35; Mizoguchi, 1952:4). The role

of management accounting is to provide managers and executives with the necessary accounting information for their management control activities (Okamoto, 1972:137). Here an object of management control is the managerial organization. The term ‘management accounting’ and its body of knowledge appeared in the 1920s, however its practice has a longer history starting from the use of double-entry bookkeeping as a management system (AAA, 1958:1; Hiromoto, 2008:9-10). Management accounting that used double-entry bookkeeping as a management system is a bookkeeping system which combines regular reports with results by sectors for the purpose of management of the managers (Kazusa, 1999:102). Therefore, we focus on development of reporting systems for the purpose of ‘management of the managers’ by discussing the development of operating units (branches and ships). Using the archival evidence of Mitsubishi Shiryokan, we examine the role of operating units (branches and ships) and the further development of double-entry bookkeeping with the introduction of budgeting.

Our analyses assume a contingent relationship between the organization and its accounting system with a variety of environmental forces, such as competition, governmental subsidies, economic conditions, etc. The contingency approach to management accounting is based on the premise that there is no universally appropriate accounting system which applies equally to all organizations in all circumstances. Rather, it is suggested that particular features of an appropriate accounting system will depend upon the specific circumstances in which an organization finds itself (Otley, 1980:413). We examine how the management system (organizational structure, accounting system, etc.) developed along with environmental changes (managerial environment, managerial task, strategy, etc.) as depicted in Figure 1 in the period 1880-1885¹.

(Figure 1 here)

Otley (1980: 426) emphasizes that highly interconnected nature of the components that make up an organizational control package suggest that the management accounting information system cannot be studied in isolation from its wider context. He concludes, “the development of a theory of management accounting which explains how it is affected by various contingencies and how it is integrated into its wider context of organizational control mechanism is an important task (Otley, 1980: 426)”. Research on management accounting in a wider organizational context or as a total management

¹ For the 1870-1880 period, we draw upon Kasimova (2012).

system has been emphasized by other scholars to clarify particular characteristics of Japanese management accounting (for instance Tanaka (1986), Kazusa (1999), Okano (2006), and Hiromoto (2007)). Therefore, we examine management accounting as a total management system focusing on the organizational context to illustrate particular features of Japanese companies.

IV. The case of the Mitsubishi Mail Steamship Company

The history of Mitsubishi started in 1870, when Iwasaki Yataro started his shipping business with 3 ships, lent by Tosa Domain as the “Tsukumo Shokai Company”. The company was renamed several times as “Sankawa Shokai” (named by Yataro’s three subordinates whose names included the word “kawa”-river), “Mitsubishi Shokai”, “Mitsubishi Steamship Company”, and later in 1875 as the “Mitsubishi Mail Steamship Company” due to the government’s order. This name was used until the merger with the Kyodo Unyu Company after severe price competition in 1885. As a brief introduction, we describe the highlights until the 1880s.

(1) Government’s protection policy and first organizational regulations

After beating the semi-government company, the Yubin Jokisen Kaisha (Steamship Mail Co.), and gaining the government’s trust during the Taiwan expedition and Saga Rebellion in 1874, Iwasaki Yataro received an offer of government protection. The offer included 31 ships in total, including those owned by the government and those of a recently dissolved semi-government company, the Steamship Mail Co., along with an annual subsidy of 250,000 yen for the next 15 years. Apart from ships and subsidies, Mitsubishi also assumed ownership of several other assets and by doing so, eventually became a large shipping company. In return, Mitsubishi had to accept several restrictions and obligations stated in “The First Decree”, such as the consignment of postal and government items, the establishment of shipping routes ordered by the government, the government requisition of ships, government audit, change of the company name to “Mitsubishi Mail Steamship Company”, and the restriction of the firm’s business to shipping alone. However, the company was free to use its ships and the manager free to manage the company, as long as it would not bring loss to the government².

Just before the introduction of the government’s protection policy, Yataro with the help of Shoda Heigoro³ established the first formal organizational regulations, the

² Mitsubishi-shashi, Vol.3, p.386

³ Heigoro was a graduate of Keiyo-Gijuku University, the leading establishment of higher education of the time established by Fukuzawa Yukichi in 1870. Fukuzawa Yukichi was the author of the first textbook on bookkeeping, entitled *Choai-no Ho* (A Method on Bookkeeping) published in 1874, based on the translation of *Bryand and*

“Mitsubishi Steamship Company Regulations” which consisted of three parts, “company form”, “delegations of duties”, and “regulations of duties” (*Mitsubishi-shashi* Vol.2, p.37). Nagasawa (1977) refers to this organizational regulation as one of the oldest after the Yokosuka Steel Works’ 1870s organizational regulation. A motive for the organizational regulation was to comply with government requirements as well as to deal with business expansion (Nagasawa, 1977:27). What should be underscored is the fact that Mitsubishi was neither a partnership nor a family business. Neither was it a semi-government company as the regulation, the first part - “company form” started with the statement that says “the company belongs to the president of the company”. The organizational regulation of 1875 introduced several modifications, however kept the following hierarchical bases: company director – general managers – department/branch/ship superintendents⁴, and clerks. The second part, “Regulation of duties” had also been critical in controlling geographically-dispersed branches and ships, providing manuals for all operations and procedures. It also supported the personnel transfer system which was established for internal control purposes.

(2) Satsuma Rebellion and the first bookkeeping regulations

In 1877, the Satsuma Rebellion occurred. As a government-protected company, Mitsubishi had to employ almost all of its ships in government service. Even with all its fleet, Yataro confronted a shortage of ships and ordered several huge tonnage ships. However the revolution was concluded in such an unexpectedly short time that the surplus of ships was evident even before the newly ordered ships arrived.

Another important factor affecting Mitsubishi’s policy and then management system was criticism of Mitsubishi’s high profits during the Satsuma Rebellion. Yataro estimated the value of 31 government-granted ships at 12 million yen and applied for a government grant of this capital to be paid during the following 50 years with no interest. These two factors, the surplus of ships and the government grant, influenced the efficiency and profitability of each ship (capital), which gave rise to the understanding of “depreciation”, and different kinds of “reserves” in the 1877 accounting regulation.

Mitsubishi defeated its overseas competitors (British P&O Navigation CO., French Messagerie Impériale and US Pacific Mail Steam Ship Company) and enjoyed a monopoly until 1881 when Mitsubishi lost its government support.

Statton’s Common School Book-keeping, 1871. Shoda Heigoro was Fukuzawa’s disciple and assisted him in translation of the book before joining Mitsubishi (Hisano, 1970). Mitsubishi hired many graduates of Keiyo-Gijuku. This tendency has been considered of particular significance when comparing Mitsubishi to other conglomerates such as Mitsui and Sumitomo (Mitsushim, 1979).

⁴ The term superintendent for the departments was later changed to department heads, for the branches – branch managers.

(3) Change in Government's protection policy and intensification of competition

Figure 2 illustrates the breakdown of total earnings from 1876 to 1885. The following points are noteworthy:

- Earnings from shipping was the major income source.
- Income from the government service was very unstable; high in unusual circumstances such as wars, for instance, the Satsuma Rebellion in 1877.
- The government subsidy was a fixed amount regardless of Mitsubishi's performance.
- A drastic decrease in total earnings occurred due to decline in shipping income; Figure 3 also illustrates this decline in business performance after 1881.
- Other earnings were from varied business operations such as coal mining, metal mining, and exchange operations.

Other than the above-mentioned business operations, Mitsubishi also had a shipping school and metal works. All these operations might seem unrelated at first sight; however each had an important relationship to the main shipping business. Undeveloped related industries were part of a diversification motive. For instance, initially almost all ship captains, engineers, and ship crews were foreigners. To mitigate the necessity to rely on foreign expertise, the shipping school was established in 1876. Ships were taken to Shanghai and sometimes to London for maintenance. Again to reduce this reliance, a metal works unit was later established where ships were repaired. Coal mining supplied the fuel for ships, metal mining supplied the materials for the ship repairs, exchange operations supported geographically-dispersed branch operations.

Figure 2 here

Figure 3 here

One of the main forces influencing Mitsubishi's business performance was the change in government in 1881. Along with the change in government, the government's objectives for its shipping protection policy changed. The new government disapproved of Mitsubishi's monopoly. The criticism of Mitsubishi's monopoly and Mitsubishi's diversification strategy resulted in the establishment of Kyodo Unyu Company under the co-support of the government. After severe price competition, these two companies merged in 1885. In the next section, we discuss how this competition affected Mitsubishi's management system.

(4) New strategy –shift to regular services

Mitsubishi's operations were mainly based on irregular services focusing on discount agreements with major freight customers. This practice was due to weather conditions as well as demand instability and the small percentage of passenger revenues compared

to freight revenues. However, when competition became severe, those discount agreements with major clients started to break down; clients started to switch to other cheaper shipping companies. With a greater emphasis on each ship's profitability, ships tried to sail with a full load, which increased waiting times and decreased voyage frequency, eventually resulting in inefficiencies. Mitsubishi later started to focus on each branch's cargo/passenger collection capability by introducing budgeting to forecast revenues and changing its reporting system from an import-based (calculating profit and loss after ship arrived) to an export-based approach (calculating profit and loss before ship departures). Eventually, branches became profit centres and Mitsubishi expanded regular services. We now turn to the analysis of the management system.

V. Management system

(1) Organizational structure

The necessity to divide Yataro's personal assets from those of the shipping business, the expansion of other business units, and the emphasis on branch cargo/passenger collection capability resulted in the company's reorganization in 1882 (Figure 4). The reorganization concentrated control in three head-office departments, main business – in charge of shipping business, accounting, and the general affairs department.

There were also two supplementary departments, foreign employees and internal affairs. The first was in charge of foreign employees as Mitsubishi hired many foreign captains and ship crews. The other department was established to control business units other than shipping. In this structure we focus our analysis on branch management.

Figure 4 here

(2) Branch management

First, in November 1881, directions for budget compilation were announced⁵. Due to this policy, each branch was to submit a rough statement of revenues based on prior experience and last year's conditions for the period of January 1st to December 31st, where ships were estimated to be the same number as in the previous year. Intra-branch revenue was to be divided equally between branches and foreign currency revenues of overseas voyages were to be separated.

Second, in January 1882, regulations for branch accounts were established⁶. The regulation started with the division of regular revenues (all fare charges, boating,

⁵ Nov.1881 Directions for budget compilation (MA-10192)

⁶ Jan.1882 Regulations of branch accounts(MA-09642)

operating sundry revenues) regular expenses (branch expenses, ship expenses, boat expenses.) and irregular revenues and expenses. Ship and branch salary expenses, compensation fees were to be calculated each time and payment made by the head office. Branches, which were also responsible for exchange operations, were to report deposits or tentative payments at each occurrence.

Branches were responsible to report daily to head office and submit monthly settlement of accounts: cash report and adjustment report (exported freight passenger revenues, and branch fees (departure and arrival expenses).

Third, in March 1883⁷, the responsibilities of branch managers and branch accountants were clarified with the division of cash and booking responsibility⁸. This clarification of responsibility was introduced due to criticisms of the weak responsibility of branch managers with concentration of both cash and booking responsibilities solely with branch accountants. In the new regulation, branch managers were responsible for external affairs, such as control of revenues and expenditures, correspondence to passengers and freight owners, while branch accountants were in charge of internal affairs, such as completing journals, accounts, regulation of statistical tables, noting of outgoing and incoming letters between clients and head office. Prior to the reorganization, branch accountants had greater responsibility.

Fourth, in September 1883, further instructions on branch accounting and budgeting were announced⁹. This instruction clarified the breakdown of ship expenses (travel, telegraph and mailing, human power, meals, tax, ship supplies, room and board, barges, laundry, ship attendants, ballast, fuel transshipment, washer). Branch managers were to calculate ship expenses per ship. Fuel charges were not included in ship expenses, but noted as to be controlled at head office. The instruction also strictly called for adherence to the budget report deadlines.

Fifth, in August 1884, bookkeeping procedures were standardized¹⁰. Due to this policy, each branch had three books, the cash book, daily journal, and the general ledger. Branches were responsible for the general-ledger balance (cash balance, unpaid freight revenues, and tentative payments).

Figure 5 summarizes the development of branch management in relation to environmental forces, business size and strategies¹¹.

⁷ Mar.1883 Reorganization of branches(MA - 00027)

⁸ Dual control of information – the separation of cash and booking responsibilities – had been applied since the early years in the form of ship captains and ship clerk, and ship superintendent and branch manager.

⁹ Sept.1883 Budget and accounting procedures (MA-00270)

¹⁰ Aug.1884 Branch bookkeeping (MA-00350)

¹¹ For developments prior to 1881 we draw on Kasimova (2012).

(3) Accounting system

Forecasting annual revenues and setting regular services were the trigger for the introduction of budgets in an environment of severe competition. Budgets consisted of revenue and expense budgets and were compiled in a bottom-up style starting from branch revenue and expense budgets, due to heavy reliance of the head office on branch information. There were no budget targets. However, as the head office centralized control of main expenses – salary and fuel, it could still reflect its expectation in the budgets. Fare charges (prices) were set at the head office based on information from each ship. However, branches could demand the size of ship or additional voyage schedules. Moreover, during the period of severe competition, archival evidence suggests that the branches were able to cut prices to some degree and its reasons for doing so.

With the introduction of budgeting, accounting procedures were standardized among branches and the double-entry bookkeeping system replaced the deposit-based reporting system. Branches, which previously were regulators of voyages, now became profit centres (except for fuel and salary expenses). They began to report on annual budget performance, monthly profit and loss, and daily balances. Budgeting replaced *ex-post* control of branches and contributed the most to the control of branch expenses as depicted in Figure 6. It was during this period that the number of branches increased dramatically from 17 in 1880 to 74 in 1885 contributing to the need for increased budgetary control.

Alternatively, ships, which previously had focused on profit and loss, became responsible for efficiency targets and time schedules. Their efficiency was monitored and controlled via the analysis of coal consumption and other statistical data maintained at the head office.

Figure 6 here

Voyages were analyzed by examining data of each voyage's per-day revenues. This information presumably helped the head office to allocate ships and schedule voyages. From this daily revenue (not profit) figure and from the absence of profit targets, we observe more emphasis on revenues rather than profits. This emphasis has similarities to the emphasis in present-day Japanese companies on increasing revenues and the revenue ratio.

No connection existed between budget performance and bonuses, a feature considered to be characteristic of Japanese management. There were group bonuses, and an

objective incentive system. A salary grading system served as an incentive system for promotion. Foreign employees and middle-low class employees did not serve for extended periods. Only upper classes of management, such as general managers, did so.

One of the main purposes of the management accounting system at Mitsubishi was to control managers and personnel from fraud and inadequacy. For this purpose, regular reports, internal audit system dividing cash and booking responsibilities, management rotation (personnel transfer), standardization of all operation and the diffusion of procedural manuals, fraud prevention and penalty systems were developed within the management system.

VI. Concluding remarks

This paper examined the development of reporting systems for the purpose of management of the managers and illustrate the development of operating units (branches and ships) at a time, the early Meiji era (1870s), which is considered to have had a great impact on Japanese economy and society with the opening the county, in a case of shipping company which played a significant role in maintaining Japan's independence and enforcing its economic development. We illustrated further development of management accounting based on the bookkeeping system initially used at head office, and at branches with the introduction of budgeting and the shift to regular services.

Branch management, profit centres, efficiency analysis and other practices were quite similar to those of Western shipping business practices of the time. What we highlight as differences are the “personnel transfer” (personnel rotation system), dual control of information dividing booking and cash responsibilities (internal check), collectivism (nationalistic spirit, no relation between budget and performance), and the primary focus on revenues. Some of the above-mentioned features had been in place since the Tokugawa era, and some can be seen in present-day Japanese businesses. For instance, personnel transfer can be interpreted as a *'sankinkotai'* system of the Tokugawa era, in which the *daimyos* spent alternate years in residence in Edo, which was expected to control and compensate for the extra authority invested in *daimyos*. Alternatively, the revenue focus, as well as the lack of a relationship between budgets and the bonus system (often highlighted in present-day Japanese firms) had roots back in the Meiji era. We find it interesting that salary expenses were deducted from branch profit-and-loss responsibility¹².

¹² In the value-added per hour system of Kyocera Corporation today, salaries are not considered as an expense and deducted from ameba's profit-and-loss responsibility (Ameba Keiei Gakujitsu Kenkyuukai, 2010). Profit centres called “ameba” are Kyocera's fundamental unit of operations. An ameba has responsibility for all of the planning,

This exploratory paper has outlined some key features of the early management accounting of the Mitsubishi Steamship Company. Further analysis of the influence of Tokugawa Merchant double-entry bookkeeping (such as dual control of information with separation of responsibilities) and the transmission and diffusion of foreign knowledge and practice are areas for further research which will enable us to enrich our analyses.

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decision making, and administrative activities attributed to it. Amebas are the smallest organizational unit of operations inside Kyocera; they vary in size from a minimum of three to a maximum of 50.

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Figure 1. Analytical Framework

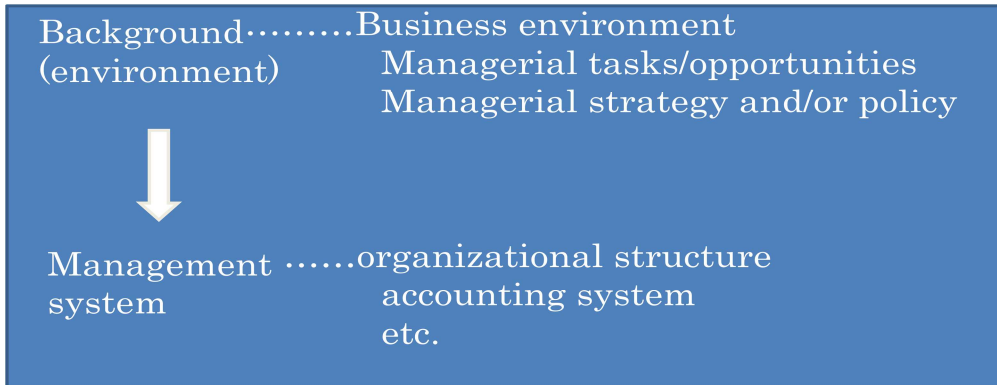
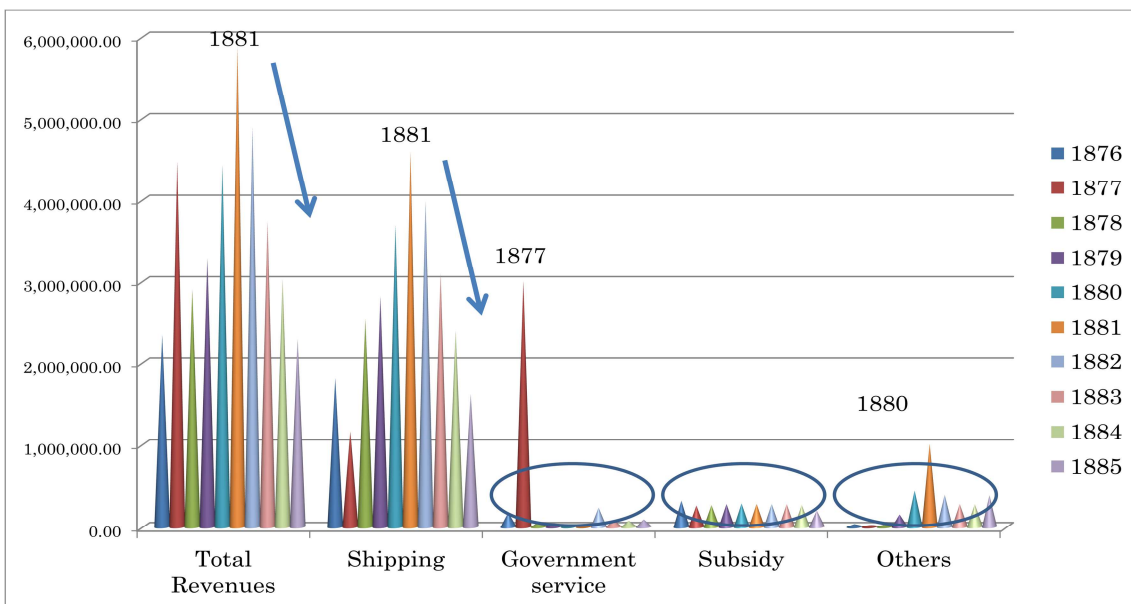
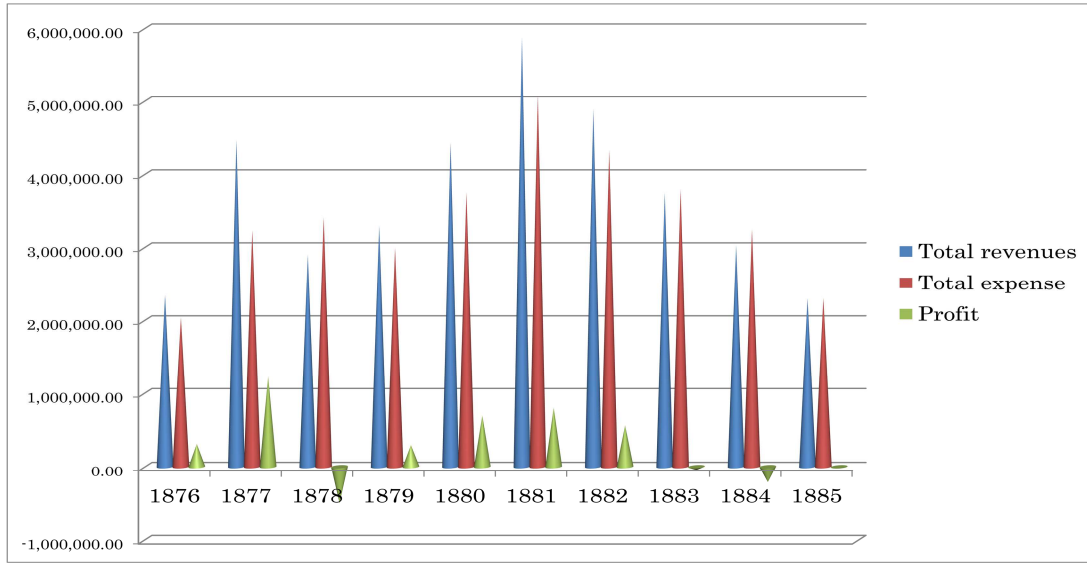


Figure 2. Breakdown of total earnings, 1876-1885



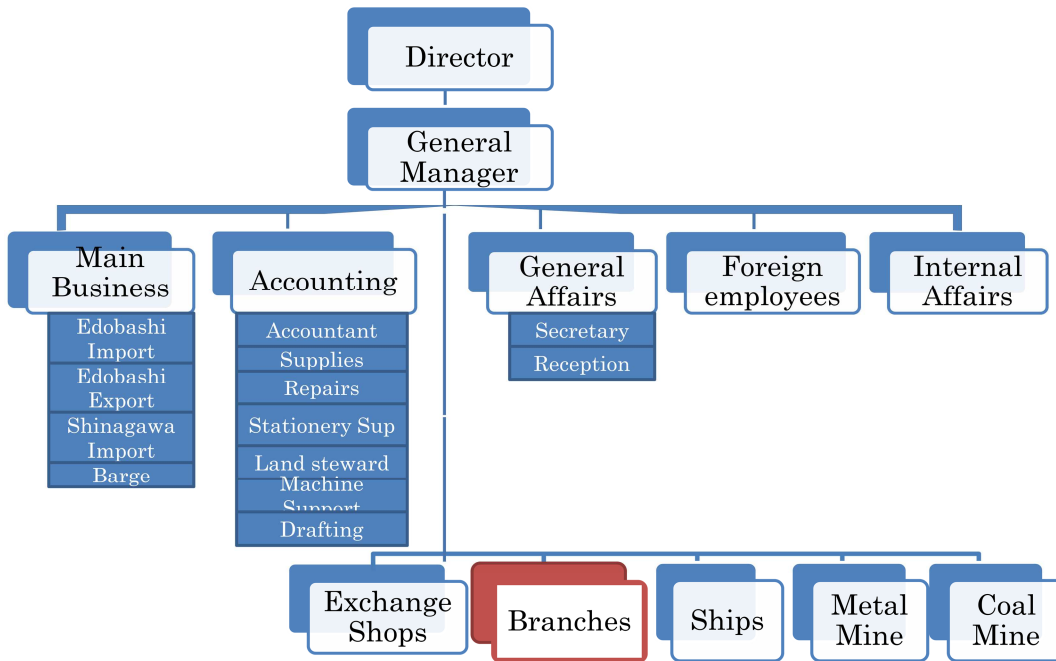
Source for Figure 2: Based on archival record numbers MA-08001-022, MA-08001-023, MA-08001-024, MA-08001-025, MA-08001-028, MA-08001-029 at Mitsubishi Shiryokan. The 1876 year is a business performance from Oct 1875 to Dec 1876.

Figure 3. Business performance, 1876-1885



Source for Figure 3: Based on archival record numbers MA-08001-022, MA-08001-023, MA-08001-024, MA-08001-025, MA-08001-028, MA-08001-029 at Mitsubishi Shiryokan. The 1876 year is a business performance from Oct 1875 to Dec 1876.

Figure 4 Organizational Structure, 1882



Source: *Mitsubishi-shashi*, Vol.10, p.409

Figure 5. Development process of branch management in relation to management policy

	1870-74		1875-76		1877-80		1881-1885	
Management Policy	Emphasis on direct revenues and expenses Reports based on division of cash (ship clerk) and booking (ship captain) responsibilities		Emphasis on territorial revenues Reports based on division of cash (Branch manager) and booking (ship superintendent) responsibilities; including voyage dairy reports from ship superintendents		Emphasis on each ship profitability Reports based on deposit systems from each ship/per voyage and each branch		Emphasis on each branch's cargo/passenger collecting capability Annual reports on budgets, monthly P/L reports, daily reports budgeting reports from each branch	
	Role	Performance	Role	Performance	Role	Performance	Role	Performance
Branch	Communicator	Personnel transfer	Collector	Control with statistics, personnel transfer	Regulator	Control with statistics, personnel transfer	Profit and loss	Profit centre
Number	4		15		17		74	
Ship	Income unit, efficiency	Internal check system, voyage number, voyage days	Efficiency	Efficiency analyses relation to ship tonnage , voyage distance, days, and coal consumption	Profit and loss focus	Profit and loss in introduction of depreciation and fund reserves	Schedule, efficiency control	Coal consumption analyses
Number	9		41		61		60	

Source: Based on the analysis of Kasimova (2012).

Figure 6. Analyses of budgets with actual performance

Year	Revenues from shipping operation		Branch expenses		Ship expenses	
	Actual (A) (A/B)	Budget(B)	Actual (A) (A/B)	Budget (B)	Actual (A) (A/B)	Budget(B)
1882	3,074,567 (85.3)	3,602,082	979,614 (99.9)	980,425	2,264,639 (105.8)	2,141,246
1883	2,242,868 (66.6)	3,367,493	939,213 (91.5)	1,026,351	1,826,795 (86.4)	2,114,168
1884	1,748,733 (84.4)	2,070,880	932,328 (98.8)	942,811	1,463,068 (86.9)	1,683,348
1885	1,103,961 (76.7)	1,439,381	913,823 (98.2)	930,812	1,114,511 (77.4)	1,440,447

Source: Tanaka, 1986:313

