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# The South Manchuria Railway Company and its Interactions with the Military: An Accounting and Financial History

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## ABSTRACT

This study examines aspects of the accounting and financial history of the South Manchuria Railway Company (SMR) from its formation in 1906. In particular we focus on the 1930s, a period in which the activities of the SMR became increasingly dominated by the demands of the Kwantung Army which effectively controlled Manchuria. As a special company, the SMR had always faced the dilemma of pursuing the private interest of shareholders as a business enterprise against the backdrop of the requirement to serve the national interest. Following the formation of the State of Manchuria in 1932, the Kwantung Army placed significant and growing financial demands on the SMR while at the same time wishing to alter the juridical personality of the company. Such demands were repelled by the SMR's management for fear that the change in its legal status would cause problems in obtaining the finance necessary to carry out the army's requirements for new lines and improvements to the existing railway network in Manchuria. This problem, and its eventual resolution through the State of Manchuria taking an equity stake in the company in 1940, provides important insights into the impact of military power and wartime conditions on the operation of special companies. In this way, this study contributes to filling a gap in Japanese accounting and financial history research by examining the motives, commitments and (inter)actions of the various parties concerned - the company's management, the Japanese government, the Kwantung Army and the State of Manchuria - and the interaction of such factors with the social, political and economic conditions surrounding the SMR's operations in Manchuria.

*JEL Classification:* M41; N45; N75

*Key Words:* The South Manchuria Railway; Special Company; The Kwantung Army; The State of Manchuria; Juridical Personality

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## 1. Introduction

'Special companies' (tokusyu kaisha), such as the Oriental Colonization Company, the South Sea Colonization Company and the South Manchuria Railway Company (SMR), were semi-private, semi-public institutions which were each established by the promulgation of a special law, which provided them with the protection of, but also close supervision by, the state. A special company was normally formed with joint investment from both the public sector, as represented by the national government, and the private sector, and this was the case with the SMR which, like other special companies, was charged with leading Japan's economic growth and consolidating, and if possible expanding, the area of its Asian empire during the early decades of the twentieth century. While the pre-World War II accounting and financial practices of special companies, including the SMR, have been researched by Yamaguchi (1998; 2000; 2001), Takahashi (1986), Kaneko (1991), Yasutomi (1995) and Kurose (2003), the relationship of such companies with the Japanese army in general, and the accounting and financial implications thereof have not been comprehensively addressed.

By examining the case of the SMR and the changing nature of the relationship, especially in the 1930s, between the company's management and the Kwantung Army, this paper answers the call of Funnell (2009: 575) for research into 'the influences that the military might have had on business accounting' in 'non-Anglophone settings'. Military historians and economists have long recognised that railways had the potential for altering the way in which wars were conducted, though the precise role which they have played has been the subject of some debate (see section 2). More recently, the importance of railways has been noted by Heier (2010) in his study of the accounting history of the Louisville and Nashville Railroad during the American Civil War, while Funnell and Chwastiak (2010: 150-151) have pointed out that, in providing the infrastructure needed for military operations, during periods of war railway company managements face 'a number of challenges that may not have been experienced with [simple] commercial uses'. The examination of the case of the SMR in this study provides additional material for international comparative research on the relationship between railways, the military, war and accounting.

One factor influencing the behaviour of railway management is the legal environment within which railway companies operate, but their juridical status is something which has varied both between countries and over time. In the case of the SMR, its juridical status became an issue of political debate following the outbreak of the Second Sino-Japanese War in July 1937. The Kwantung Army (Kanto Gun), that part of the Imperial Japanese Army stationed in the northeast part of China, became increasingly powerful, both militarily and politically, following the establishment of the State of Manchuria in 1932. With the declaration of war against China in 1937, the Army sought to transform the corporate entity of the SMR from a special company with a legal basis in Japan to one based in the State of Manchuria (Manchukuo), thereby giving it greater power over the railway and its operations. The change was resisted by the company's management, which recognised that it could have a serious impact on the financial position of the company, especially its reliance on private sector capital.

As with all special companies during times of military uncertainty and war, by the late 1930s SMR's management found itself facing an extreme version of the problem that existed at the heart of such organisations, namely resolving the problem of simultaneously serving the interests

of the nation and those of private-sector investors (Kurose 2003: 2). If the pursuit of 'self-interest' was to be continuously sacrificed in favour of the execution of 'national policy', a special company would be in danger of failing, while attempts to avoid such an outcome might mean having to compromise on national policy goals. While resolution of this dualistic problem may prove manageable in peace time, when the two aims could be mutually compatible, during times of military uncertainty and war they could become mutually exclusive. As we will show below, while the SMR's juridical personality did not ultimately change, the debate concerning its legal status further complicated the problems faced by the company's management in the late 1930s. Required to expand the railway network to meet the growing military demands of the Kwantung Army, the company's management needed to raise ever larger amounts of capital from the private sector, something which required the railway network being operated profitably in order to pay dividends at a level sufficient to compensate private-sector investors for the risks taken.

Through an examination of the finances of the SMR and the debate surrounding the issue of the company's juridical personality, this paper reveals the nature of the pressures faced by Japanese special companies and how, as a result of changing social, political and economic conditions, these altered during war times. It illustrates how the management of one special company juggled the competing aims which it faced, and thereby the impact that war could have on accounting and financial issues. The study is organized as follows. The next section examines various contexts in which the SMR was formed and developed, covering the company's whole life from its formation in 1906 through to its demise following Japan's defeat in World War II in 1945. Having provided the background context for this study, Section 3 examines the data sources used in the paper, explaining the nature of the accounting information generated by the SMR from 1933 and how this was influenced by its relationship with the Kwantung Army. Section 4 analyses the performance of the SMR, highlighting the factors affecting the operation of the company's core business - the railway. Section 5 examines the financial features of the company, in the context of ever increasing intervention by the army, especially its reliance for funding on the issue of corporate debentures. Section 6 clarifies key factors that conditioned and influenced the debate surrounding the issue of the change in the juridical personality of the SMR and how this was linked to the issue of financing the company's activities. The final section summarizes the key insights gained from the study.

## 2. The South Manchuria Railway Company

### *2.1 The Context of Railways and Imperialism*

For many, the significance of railways in developing the modern world is undeniable. Nevertheless the precise role played by the railways is a matter of much debate. There are those like Otte and Neilson (2006: 1), who have claimed that: "The advent of the railway had a greater and more immediate impact than any other technological or industrial innovation before or since". However, while Headrick (1981) has seen railways as one of the tools of empire during the nineteenth century, in his review of Otte and Neilson's work he considered their claim to be 'astonishing' and noted that the collection of essays contained therein, rather than showing how important were the railways in international relations and warfare, merely revealed "how much railways once occupied the attention of European diplomats and strategists" (Headrick 2007). As Lee ('Tools': 1) has pointed out, "the idea of dominating, enjoying and transforming the world

with rails of steel and power of steam was widespread, even commonplace in the half century or so before 1914". But he goes on to add that whilst it was initially a "distinctively Western idea ....it soon came to be embraced by Asian modernisers as well" (Lee, 'Tools': 1). The South Manchurian Railway provides a clear illustration of this process and the importance of railway construction as part of that "large and complex phenomenon, the age of the new imperialism of the late nineteenth century" (Lee, 'Potential': 2).

In 1898, the Russian Empire obtained a lease for 25 years of territories in the Liáodōng peninsula from China, a region which included the port of Lushun (renamed Port Arthur by the Russians and later Ryojun by the Japanese). The Russians immediately developed the town of Dal'niy (renamed Dalian) to the north, and then, in order to strengthen Russia's Far Eastern Empire, the Russian Finance Minister, Count Sergei Witte, embarked on the construction of the Trans-Siberian and Chinese Eastern railways. A railway was simultaneously constructed northwards from Port Arthur, through Dalian to link with the Chinese Eastern Railway at Harbin. This line was what was later called the South Manchurian Railway.

Built to the Russian gauge of 5 feet (1525mm), the construction of the Chinese Eastern and South Manchurian railways "involved such enormous political and military Russian privileges for their 'protection' that their concession [by China] came close to anticipating a virtual Russian protectorate over all of Manchuria" (Lee, 'Tools': 5). This expansion of Russia into China through railway construction, however, ran counter to Japanese designs in the region, and especially the territory of Manchuria where the construction of the South Manchurian Railway represented the 'sharp end' of Russian Imperialism (Patrikeeff and Shukman 2007: 2). The result was the Russo-Japanese War of 1904-5, which resulted in September 1905 in the South Manchurian Railway being "handed over to Japan in the peace treaty signed at Portsmouth, New Hampshire" (Patrikeeff and Shukman 2007: 2).

The impact of the construction of the South Manchurian Railway by the Russians in the early twentieth century was therefore two-fold. On the one hand its construction created a perceived threat to Japanese ambitions in the territory while, on the other hand, it greatly influenced the nature of the war itself. According to Patrikeeff and Shukman (2007: 4 - emphasis in original), the Russo-Japanese War "would not have been fought on the scale that it was, had the railway not been built, and indeed could not have been fought at all in the railway's absence". In their eyes the significance of the Russo-Japanese War went further than this, adding that railways on a continental scale "would henceforth be seen as crucially important [strategically speaking] for the transport of war" (Patrikeeff and Shukman 2007: 4).

However, there is much debate about the precise role of railways in relation to war. If railways can play a key strategic role, how was it that the Japanese army was able to defeat the Russian army supplied by its railway network in the region? While the possibility of using railways to help wage war was recognised almost from the time that they had first been developed (see van Creveld 1977: 82-3), van Creveld (1977: 88) has argued that during the wars of the middle of the nineteenth century it was not the lines that were constructed within a country which proved significant for belligerents, but rather those which existed outside of the country. Taking over such lines enabled advancing armies to rapidly gain territory and bring up supplies to support forward troops. However, as van Creveld (1977: 233) has also pointed out, due to their limitations (for example, they do not go everywhere), railways may be good at supporting an army that is standing still, but are less useful in the case of an army moving forward rapidly. Thus, from the perspective of relations between war and the role of railways therein, while

strategy can be important in war, what is much more important is logistics which, in the view of van Creveld (1977: 231), "make up as much as nine tenths of the business of war". Logistics is "the practical art of moving armies and keeping them supplied" (van Creveld 1977: 1) and railways are not necessarily of paramount importance in this respect.[1] Indeed, as van Creveld has shown, the famous Schlieffen plan drawn up in Germany prior to the First World War, while recognising the importance of speed in mobilization, deployment and execution, somehow neglected the role that would, and could, be played by railways, with the result that the plan failed when Germany attempted to invade France in 1914 (van Creveld 1977: 139).

Nevertheless, when the Japanese secured control of the South Manchurian Railway in 1905, contemporary opinion was clearly of the view that railways were vital to both empire building and waging war. From the perspective of empire building, any further development of Manchuria by Japan was crucially seen to depend not only on the railway itself, but developments which would be made possible along the route of the railway. Under the short tenure of the Russians, neither the South Manchurian Railway nor the Chinese Eastern Railway had brought about the desired economic development which the Russian government in St. Petersburg had hoped for (Patrikeeff and Shukman 2007: 2). If Japan was to achieve widespread economic development within that section of Manchuria it controlled, known as Kwantung, the South Manchurian Railway was going to have to be at the centre of that development. Hence it is unsurprising to find that the control of the railway and the economic development of the territory were subsequently placed in the hands of a single entity, namely the 'special company' known as the South Manchuria Railway Company.

### *2.2 The Kwantung Leased Territory and the Establishment of the SMR*

Under the Treaty of Portsmouth (September 1905) resulting from the Russo-Japanese War, Japan acquired (1) the leasehold rights to the tip of the Liáodōng Peninsula, (2) ownership of the Chinese Eastern Railway's southern branch line connecting Changchun and Lüshun, (3) ownership of all the properties located in the southern part of Sakhalin, and (4) the fishing rights around the maritime provinces and the Kamchatka coast (Motoki Yamazaki's South Manchuria Railway related documents, R-82, management archives of the South Manchuria Railway, part 1 - hereafter MY SMR R-82, part 1). This territory, which became known as Kwantung, comprised an area of 3,462 sq. kms. and to administer it the Japanese government established the Governor-General's Office of Kwantung (Kwantung Agency from 1919, following the creation of the Command of the Kwantung Army[2]) (MY SMR R-82, part 1).

To operate the acquired railway, and the 62-metre wide strip of land on either side of the tracks, the Japanese government, through decree No.142 promulgated on 7 June 1906, established a special company called the South Manchuria Railway Company (SMR). In return for handing over the railway assets in Kwantung to the SMR, the Japanese government was

[1] An increasing exploitation of technology does not necessarily improve the overall speed and effectiveness.

[2] This was originally a small garrison of the Governor-General's Office of Kwantung which was formed to undertake the defense of the Kwantung Territory and the land belonging to the SMR from attack by Chinese warlords. The strength of the military in Kwantung, initially a simple troop. Steadily increased, coming to form a distinct army in its own right. With this increase in size came an increase in power, the Kwantung Army coming to develop its own military and security agenda and priorities, which were often different from those enshrined in the fundamental defence policy of the General Staff Office and the Ministry of the Army within Japan. This difference in priorities was clearly shown by the events of the Huanggutun Incident in 1928 and the Manchurian Incident in 1931.

allotted 100m. yen of the 200m. yen share capital in the SMR, with the Imperial Household holding a further 1% stake (Litvin 2003: 93). Article 9 of the decree setting up the SMR empowered the Japanese government to appoint the top executives, thereby providing an element of state control of its actions, whether this be financial, economic or political. The SMR, which formally commenced operations on 1 April 1907, was placed in control of railway routes totalling 1,142.3 kilometres (MY SMR R-82, part 1), and a total land area of 250 square kilometres, on which it was required to establish settlements and economic activities. In effect, the SMR became responsible for the management of the Kwantung territory, and securing and protecting the special rights and interests which Japan held there.

The headquarters of the SMR were established in Dalian (renamed Dairen) and Count Goto Simpei, formerly Japanese Governor of Taiwan, was appointed as first president of the company. The SMR converted the track to standard gauge (4ft. 8 ½ ins.), imported US rails, signalling equipment and locomotives, and quickly set about improving its network and developing repair shops for the purpose of ensuring the maintenance of the locomotives, rolling stock and tracks. Warehouses were built for freight storage, additional harbour facilities were added, and Japanese immigration was encouraged through the building of townships complete with schools, libraries, hospitals and public utilities. The employment of Japanese and Chinese workers by the SMR increased rapidly from 9,000 and 4,000 respectively at the end of 1907, to 35,000 and 25,000 by 1910.

During the next 20 years, as part of its mission to enhance the economic power of Japan through developing Kwantung, the SMR became involved in a number of activities in addition to operating the railway network, including the manufacture of iron and steel, oil and fat, flour milling, sugar refining, glass and chemical manufacture, and the establishment of electricity-generating plants, shale oil plants and coal mines. From time to time some of these activities were spun off as wholly- or partly-owned subsidiary companies. Between 1908 and 1930, as a result of the expansion of its railway and other operations, the company's assets rose from 163m. yen to over 1 billion yen, making the SMR by far the largest corporation in Japan.

Between its founding in 1906 and 1928, when the Huanggutun Incident occurred, in which the local Chinese warlord, Zhang Zuolin, was assassinated by members of the Kwantung Army, who blew up the SMR train on which he was travelling, the SMR had 'managed to conduct its business by relatively peaceful means' (Litvin 2003: 87). Thereafter, however, the company became embroiled in the battle within Japanese political circles between those who wished to enhance the Japanese Empire through cooperative diplomacy and trade, which included the majority of the SMR's directors, civilian bureaucrats and the Japanese foreign ministry, and those who favoured a more assertive approach, not least some members of the Japanese military and, in particular, the leaders of the Kwantung Army (Litvin 2003: 100). Then, in September 1931 the army took matters into its own hands, embarking on a takeover of the region. The so-called 'Manchurian Incident' led to the army establishing the puppet State of Manchuria in 1932.[3] This was nominally ruled by Pu Yi, the Chinese emperor who had been deposed in 1912, but was, in effect, controlled by the Kwantung Army, which not only controlled Manchuria but increasingly

[3] As a result of the unilateral declaration of the foundation of the state of Manchuria, Japan subsequently seceded from the League of Nations in March 1933. There was a rapid expansion of military expenditure to build up the country's armaments, resulting in the Japanese economy in general experiencing a boom which brought about rapid inflation and a sharp fall in the exchange rate.

attempted to assert its authority over the SMR (Litvin 2003: 108). An economic plan drawn up for Manchuria in 1932 stated: '[i]n view of the evils of an uncontrolled capitalist economy, we will use whatever state power is necessary to control that economy' (quoted in Litvin 2003: 108). With its enhanced powers, the Kwantung Army, as will be seen later, in 1933 undertook the consignment of the management of the National Railway of Manchuria to the SMR, and subsequently imposed increasing burdens on the latter's management up until 1945.

The supervisory mechanism in the region was also transformed in 1934 with the Kwantung Agency being replaced by the Kwantung Bureau, which was newly established under the power of the Ambassador Extraordinary and Plenipotentiary resident in Hsinking, capital of the State of Manchuria. The Ambassador Plenipotentiary was, in fact, an additional post held by the Commander of the Kwantung Army (Mantetsu-kai 1986: 100-101), and he assumed responsibility for supervising the work of the Kwantung Bureau, whose activities included supervision of the operations of the SMR (Mantetsu-kai 1986: 101). With the power of the Kwantung Army increased, the SMR came to operate the whole of the railway network in Manchuria from 1933 (see next section), while in December 1937 many of the SMR's other activities and subsidiaries, including its industrial holdings, with the exception of coal, were transferred to the newly created Manchuria Heavy Industry and Development Co., Ltd. (Litvin 2003: 108). This completely separate special company was established as part of the revision of the five-year industrial plan for Manchuria undertaken following the outbreak of the Second Sino-Japanese War in 1937 (see below).[4]

### *2.3 The Development of the Railway Network*

From its inception, the SMR controlled not only the trunk line connecting Changchun and Lushun but also the Anpo line connecting Andong and Mukden (present-day Shenyang) and other branch lines, covering 1142.3 kms. in total (MY SMR R-82, part 1). The extent of all the railway networks controlled by the SMR remained largely unchanged up to 1933, but major developments were to occur thereafter (see Appendix Table 1).

Following the Manchurian Incident in 1931 and the foundation of the State of Manchuria in 1932, the Empire of Japan requisitioned all Chinese railways and postal administration services within the territory, in order to establish a national railway system for the new state (Mantetsu-kai 1986: 34). The task of managing and expanding the main transportation systems of the State of Manchuria, consisting mainly of 2968.5 kilometres of the National Railway of Manchuria (NRM), were consigned, through the mediation of the Kwantung Army, to the SMR in 1933 (Yasutomi 1995: 164). In addition, later the same year the management of the North Korean Railway (NKR), including the harbours of Ch'ŏngjin and Yuki (Sŏnbong), were entrusted to the SMR, this time through a consignment made by the Korean Governor-General's Office (Mantetsu-kai 1986: 22). With the addition of the NKR lines to the network, and the simultaneous development of the port of Rajin, the SMR gained a connecting route, through the eastern part of Korea, to Japan (Mantetsu-kai 2007: 178). The development of this route through the Sea of Japan led to a decline in the importance of Dairen, which had been the main port of entry into Kwantung since the company's foundation in 1906 (Mantetsu-kai 2007: 137).

[4] Amongst the most significant of the activities handed over was the Showa Steel Works, which had been originally established in 1918 as the Ansan Steelworks. It had been reformed and spun-off in June 1933 and was subsequently transferred from the SMR to the Manchuria Heavy Industry and Development Co. Ltd. in 1937.

Over the years to 1939 more than 400 kms. of new line were added to the NRM's network each year under 'a direct command from the army' (Mantetsu-kai 1986: 163; Jilin Province, the Academy of Social Science, the Archives of the South Manchuria Railway, 20083 - hereafter JP, ASS, SMR 20083). When the North Manchuria Railway was acquired in March 1935 from the Soviet Union in exchange for a payment of 170m. yen, a further 1,721.4 kms was added (Mantetsu-kai 1986: 255). This was incorporated into the system of the NRM and immediately consigned to the SMR for management purposes. As a result, the SMR came to control the whole of the railway network in Manchuria, which continued to expand up until 1945 when Japan's military defeat, following the bombings of Hiroshima and Nagasaki, led to the SMR's ultimate demise. At the time of Japan's defeat, the SMR managed a total distance of 12,493.2 kilometres of lines (Mantetsu-kai 1986: 168), more than 10 times the original distance which it had controlled when it commenced its operations in 1907. Under the occupying forces of the allied powers, the SMR, like many other special companies, was designated as a close-down institution and its assets and the railway network were returned to China and North Korea.

### *2.4 The SMR's Relationship with the Military*

As in the case of other special companies, the decree under which the SMR was established contained provisions through which the Japanese government could exert influence over the management of the company. The decree included the following clauses:

> Article 7: The company shall have one president, two vice presidents, four or more directors, and three or six inspectors...
>
> Article 9: The government appoints the president and the vice presidents of the company by decree. The term of office is assumed to be five years. The government also appoints the directors of the company. The term of office is assumed to be four years.
>
> (South Manchuria Railway Company, Establishment Decree No. 142, 7 June 1906 - hereafter SMR decree)

From its commencement, the SMR was required, under instructions from the ministries of Communication, Finance and Foreign Affairs, to have its business plan for the forthcoming year approved by the Japanese government (SMR decree, Article 20). The Ministry of Finance was specifically concerned with the financial aspects of the SMR's operations, as set out in its annual budget plans and financial accounts, whereas the Ministry of Communication and Transport was concerned with the practical aspects of the company's railway operations, especially the maintenance of an effective and secure transportation network. Legally, supervision of the company's operations came under the Prime Minister's jurisdiction, but the primary supervisory role was in fact carried out by the Governor-General's Office of Kwantung (thereafter the Kwantung Agency and subsequently the Kwantung Bureau) as the direct supervisor of the colony (Mantetsu-kai 1986: 97). In 1919, a revision to Article 13 of the SMR's decree was made, in which it was provided that 'the Commander [of the Kwantung Army]...can issue instructions relating to the operation of the company for military purposes, and can issue military orders relating to the operation of the company when at war or in relation thereto'.

Despite such revision, for much of the company's first 20 years or so of existence, the SMR was managed at arms-length from both the Japanese government and the Kwantung Army. Nevertheless, the SMR was occasionally involved during this era in political disputes and

scandals. The latter included the company's purchase of other companies originally owned by leaders of the two main political parties, the Friends of Constitutional Government Party (Rikken Seiyukai) and the Constitutional Party (Kensei Kai). The ability of SMR's management to act autonomously, however, became increasingly difficult from the late 1920s, not least because of the impact of the Great Depression and the growing power of the Kwantung Army in Manchuria. As the establishment of a war regime progressed, the army made ever-increasing demands of the SMR and exerted a growing influence over its affairs. This created something of a conflict for SMR's management: on the one hand, as a business enterprise there was the need to satisfy the shareholders' demands for dividends but, on the other hand, as a special company it was required by the army to carry out activities which ran somewhat counter to this aim. In particular, the need for increased capital expenditure on lines required by the army raised issues of financing, while at the same time undermining the company's ability to finance such expenditure, both internally and externally, since such lines increased operating costs without necessarily generating a concomitant increase in operating income. This undermining of net income from the railway department affected the company's ability to both maintain dividend and interest payments, while at the same time reducing the availability of funds for extending the railway network.

On handing over the management of the NRM's network to the SMR in 1933, the Kwantung Army instructed the company's management to establish, independently of the company's own headquarters in Dairen, the General Railway Bureau through which the NRM's operations would be controlled (Mantetsu-kai 1986: 153). Similarly, the SMR was required to establish a separate North Korean Railway Administration Bureau to oversee the operation of the NKR system. Having three separate administrative bureaus, however, was not conducive to the smooth operation of the entire network and so, in 1936, the SMR's management established the Total Railway Bureau in Mukden to form a single unified structure for overseeing the management, improvement and extension of the entire railway system of Manchuria (Mantetsu-kai 1986, 154). This not only enabled the railway operations to be streamlined but also helped the SMR's management counter, to a certain extent, attempts by the army to intervene in the operation of the network, something which increased following the drawing up of a five-year industrial plan for Manchuria (see next subsection).

### *2.5 The Five-year Industrial Plan for the State of Manchuria*

In August 1936 an 'outline of the economic construction for the State of Manchuria' was issued by the headquarters of the Kwantung Army, under which a joint defence system between Japan and the State of Manchuria was to be established. In this plan, the development of fundamental industries such as iron, coal, oil and electricity was stressed. Following deliberations between the Kwantung Army, the State of Manchuria and the SMR, the frame of a five-year plan was rapidly formed in October 1936. This made possible the release, on 25 January 1937, by the headquarters of the Kwantung Army, of 'The essentials of the five-year industrial plan of the State of Manchuria'. The section of the plan dealing with minerals and industry, while envisaging the establishment of munitions industries such as armaments, airplanes, cars and vehicles, stressed the development of fundamental key industries such as iron, liquid fuel, coal and electric power. It was also noted that railways and ports would need to be improved if the industrialization envisaged in the plan was to occur. The plan foresaw a total expenditure of about 2,600m. yen, 1,400m. yen of which was earmarked for minerals and industry.

A key component of this plan to enhance the economic development in the region was the strengthening of the economic connections between the State of Manchuria and Japan. To realise this plan, especially the movement of large quantities of coal, required a secure transportation system, and this had important implications for the railway network controlled by the SMR. Following the outbreak of the Second Sino-Japanese War in July 1937 and a further increase in Japanese military expenditure, the operations of the SMR more than ever came to be dictated by military needs. The Japanese National Mobilization Law (Kokka Sodoin Ho), promulgated in April 1938, strengthened the government's control over the Japanese economy and a general mobilization plan was accordingly established in June 1938. In the following year a material mobilization plan was also formulated for the State of Manchuria. As a result, the scale of the transportation of munitions between Japan and Manchuria, through both China and Korea, increased rapidly. Moreover, reflecting the 'Third Strategic Instruction' which had been issued in 1936 by the Commander of the Kwantung Army (JP, ASS, SMR 20083), the SMR was required to implement a programme of reinforcement of its railway facilities in order to enable a significant increase in the amount of military transportation. Although the SMR's management recognised that, as a special company, it had an obligation to observe such a 'supreme order of the nation' (JP, ASS, SMR 20083), the demands of the army significantly impacted on the ability of the company's management to dictate its own operations.

Before examining the impact of such demands on the financial history of the SMR, we first consider the accounting data sources available.

## 3. Data Sources

As a special company set up to operate railway lines in Manchuria on behalf of the Japanese government, the SMR was required to submit information to the government and the National Diet. At the end of the SMR's financial year on 31 March, the company's management was required to submit figures on its operations and performance, while financial accounts, together with a proposed dividend plan, normally had to be submitted by the end of June. In addition, the company was required to submit, normally by the end of November, a budget for the forthcoming financial year. This budget, which had to be approved by the government by the end of March, formed the basis of the company's operations for the forthcoming financial year commencing on 1 April. In the main, this study utilises the accounting information which has survived in various archives and which was prepared by the SMR and submitted to the government in fulfilment of these requirements. In addition, we utilise non-financial data such as the amount of freight carried and the number of passengers transported contained in the annual Statistical Yearbook produced by the SMR between 1907 and 1939. Thus the bulk of the data presented in this paper, whether financial or non-financial, are taken directly from the SMR's archives or the Statistical Yearbooks; percentage figures and other simple calculations found in the various tables presented in the appendix of the paper have usually been added by the authors.

The changes to the administrative structure of the SMR following the consignment of the management of the NRM and NKR networks in 1933 complicate the interpretation of the financial data for the SMR. As previously noted, the SMR was required to set up two additional administrative bureaus separate from the company's own headquarters: the General Railway

Bureau for the NRM in Mukden and the North Korean Railway Administration Bureau for the NKR in Ch'ŏngjin. In part this reflected the fact that the SMR was required to keep separate accounts for the NRM (from 1 April 1933) and for the NKR (from 1 October 1933). Separate budgeting procedures for each network also had to be conducted, although the methods used to construct the budgets appear to have been the same. Despite the similarities, the method by which the SMR managed the NRM differed from that employed in the case of the NKR. Management of the NRM was performed under authority from the Kwantung Army, and hence most of the profits earned from the operation of the NRM lines (after deducting interest accruing to the company on loans made to the State of Manchuria and other items) were supposed to be transferred to the army to cover its own military costs (see Hirai (2012) for further details), while profits from the management of the NKR, entrusted to the SMR by the Korean Governor-General's Office, were incorporated into the accounts of the SMR itself as an item of 'other' income. In effect, although both the NRM and the NKR remained separate entities with their own special accounts, the main difference was the transfer to the SMR's own accounts of the net income of the NKR, i.e. the difference between its operating income and expenses (Nagahiro 1933: 351; Mantetsu-kai 1986: 330). In relation to capital expenditure, all construction expenses incurred in relation to the NRM system were processed as advances to the State of Manchuria. However, the bulk of the capital expenditure for the NKR was covered by the Korean Governor-General's Office, although a small part was incurred directly by the SMR itself and treated in its accounts alongside construction expenses for its own network (Mantetsu-kai 1986: 328).

Thus for the period from 1933 through to 31 March 1940, there are three sets of accounts: for the SMR's own network (hereafter CON); for the NRM; and for the NKR. From 1 April 1940, with the agreement of the Kwantung Army, the accounts and budgets of the entire network managed by the SMR, including the NRM and the NKR, were in large measure integrated into a single accounting system. Following this reform, current assets, debts, and operating income and expenses became unified, and thus net income of the NRM was consolidated into the SMR's accounts in exchange for the company paying annually a fee to the State of Manchuria of 15m. yen (Yasutomi 1995: 185-186).[5] However, capital expenditure on the NRM system, which continued to be processed as loans to the State of Manchuria, remained outside of this integration (Mantetsu-kai 1986: 547). The basis of SMR's managerial control of the NKR was also changed in July 1940 from that of a commission into a management lease. Thus, from July 1940 (until finally becoming part of the SMR on 1 April 1945), all of the management and the construction work of the NKR became the company's own responsibility, in exchange for the company paying the Korean Governor-General a sum equal to a fixed fraction of the amount of investment already made in the NKR lines (Mantetsu-kai 1986: 328).

These changes mean that it is possible to obtain data for CON from 1907 through to 1939, but thereafter it is only possible to obtain data for the network as a whole. The existence of separate data for most aspects of the operation of each network between 1933 and 1939 enables us, to a certain extent, to reconstruct data for this period on the same aggregate basis as from

[5] In addition, it was also agreed that the loans which the SMR had already provided to the State of Manchuria for construction of new lines and improvement of existing lines were assumed to be non-interest bearing and, if there remained any unpaid interest, the state was exempted from the need to repay any debt extending back to the date of agreement by which management rights over the NRM had been assigned to the SMR (Yasutomi 1995: 185-186).

1940, thereby providing evidence on the network's performance over a longer period of time. Unless otherwise indicated, Tables presented in the appendix of the paper (e.g. 2, 5, 6a) containing data both before and after 1933, reflect the SMR as legally constituted in each particular year. Where data have been aggregated for 1933-39 (e.g. Tables 1, 4, 6b, 7), this will be so indicated. In some cases (e.g. Tables 3a-3c), for purposes of comparing the performance of the individual networks, we provide the same information for each network as available in the original sources. Although our main focus is on the railway operations of the SMR, we also present some data (Tables 8-11) relating to the financial structure of the entire company, while Table 12 examines the financial performance of each of the SMR's main operating departments.

## 4. Operation and Performance of the SMR and its Railway Department

While the main activity of the SMR was running the railway system, as already noted it was also engaged in numerous other activities connected with managing and developing the area of Kwantung on behalf of the Japanese government. Activities such as developing schools and hospitals, conducting colonial management, etc., were carried out by the SMR's local administration department. This continuously involved the company in significant expense (see Figure 5 and Appendix Table 12), which was largely paid for out of the net income generated by the railway department. Hence the success of the railway department was vital to the overall success of the company, in its mission to contribute to the national interest, and the development of Kwantung. Indeed prior to the impact of the world slump in 1930 and 1931, which led amongst other things to a sharp fall in the value of silver coinage, the financial performance of the railway department was one of consistent success. Following the Manchurian Incident and the establishment of the State of Manchuria, the company's performance recovered quickly as the development of Manchuria gathered pace (South Manchuria Railway Company 1938: 575), though the company's net income began to stagnate after 1937 and in 1941 was slightly below that recorded in 1937 (see Appendix Table 11). Following the outbreak of the Pacific War, however, net income grew sizably in both 1942 and 1943.

### *4.1 Rates of Return*

In this section we report two measures used to assess the performance of the SMR and its railway department: (1) the rate of return on invested capital (ROIC), calculated as net income divided by the accumulated capital (construction) expenses incurred by the company;[6] and (2) the rate of return on sales (ROS), calculated as the ratio of net income to operating income. As noted above, constructing financial data series for the whole period of the company's life is complicated by the changing nature of the arrangements by which the SMR was required to account for its activities, in particular the construction expenses of the NRM. Before considering the performance of the railway department we first provide an overview of that of the company as a whole.

[6] Since the company inherited the existing assets of the railway, these figures do not reflect the return on the total investment in the railway from its inception, but simply the return on the investment carried out by the company following its taking over of those assets.

*(i) Performance of the SMR*

As the business developed the ROIC of the SMR, as constituted at different dates, rose to over 5% in 1917 and then fluctuated between 5% and 7.62% between 1917 and 1929 (see Appendix Table 11). During the world slump ROIC fell to under 2% in 1931, but then fluctuated around the 4% level for the rest of the 1930s, before falling to under 3% in the 1940s. The fall in the 1940s is accounted for by the aggregation of the accounting figures which occurred in 1940, but it should be noted that the post-1940 figures, like those from 1933-1939, overestimate the ROIC since the total of fixed capital is understated because it does not include the loans made by the SMR to the State of Manchuria in connection with the expansion of the NRM network carried out from 1933.

Since the overall performance of the SMR depended crucially on the performance of the railway department, we focus in the remainder of this section on the latter.

*(ii) Performance of the railway department*

As Figure 1 indicates, after the first few years of the SMR's existence the ROIC for the CON was remarkably constant between 1917 and 1929, averaging more than 28% per annum, and once the effect of the world slump was overcome it again averaged 26.5% per annum between 1933 and 1939 (see also Appendix Tables 2 and 3a). Figure 1 suggests that the ROIC improved in the early 1940s, but this is a statistical illusion created by the fact that whilst the net income of the NRM has been added to that for the CON (including the NKR), the construction expenses of the NRM were still not integrated into the accounts of the SMR and continued to be treated as advances to the State of Manchuria. Figure 2 indicates that if the construction expenses for the NRM were accounted for in the same way as were those for the CON, the ROIC of the entire network controlled by the SMR actually declined to below 10% after 1940 (see also Appendix Table 4). This reduction reflects the fact that the NRM and NKR systems recorded much lower ROICs than did the CON, especially that for the NRM which was less than 5% (see Appendix Tables 3b and 3c). Accordingly, after the consignment of the NRM in 1933 the ROIC of the entire network operated by the SMR, as shown in Figure 2, only averaged 11.6% over the period up until 1939 inclusive, before falling further in the early 1940s (see also Appendix Table 4).

The high ROIC figures for the CON over most of its lifetime pale into insignificance when compared with the ROS figures, which averaged over 60% between 1908 and 1937, as indicated in Figure 1 (see also Appendix Table 5). From 1940, however, when the SMR data include those for the NRM, the ROS figures fall dramatically to just over one-third of those exhibited up to 1937, mainly due to the fact that the NRM exhibited a much lower ROS than the CON during the 1930s, as indicated in Figure 3 (see also Appendix Tables 3a and 3b).

The above data relating to the performance of the SMR's railway department, as measured by ROIC and ROS, clearly indicate that its overall performance, which was very good until the world slump, deteriorated after the company was required to take over the management of the NRM and NKR systems from 1933. The key influence here was the much lower performance levels returned by the NRM system.[7] Despite the fact that the performance of the SMR's railway department never recovered its previous levels, the CON nevertheless performed exceptionally

[7] The NKR, due to its very much smaller size than either the CON or the NRM, had little effect on the overall performance ratios.

FIGURE 1: PERFORMANCE OF SMR'S OWN NETWORK (CON), ROIC AND ROS, 1907-1943

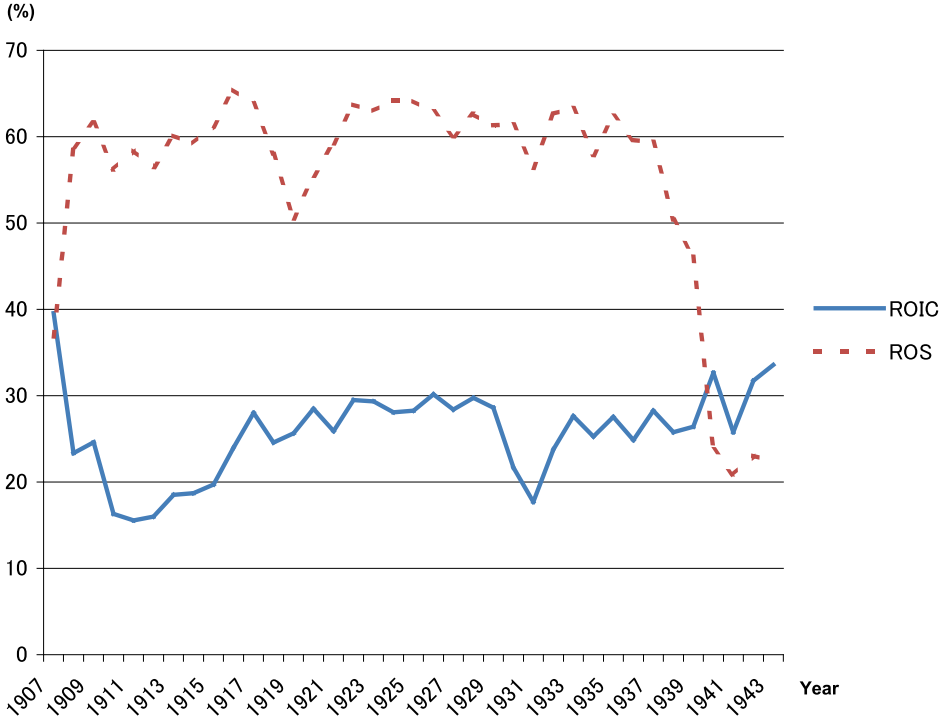



FIGURE 2: PERFORMANCE OF SMR'S OWN NETWORK (CON) AND ENTIRE NETWORK (INCLUDING NRM), ROIC, 1925-1943

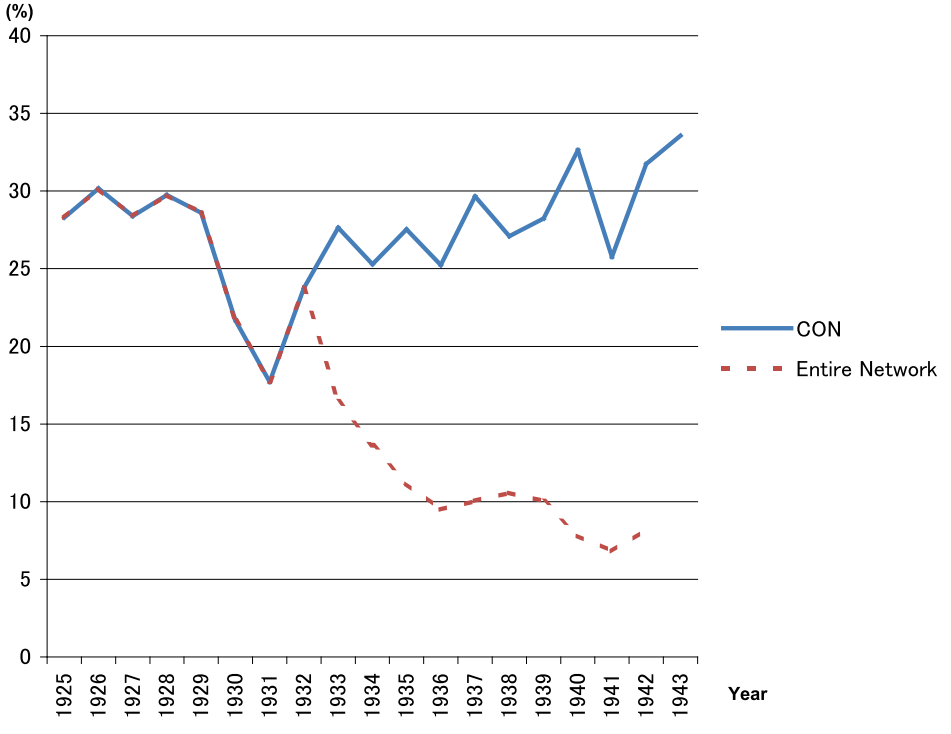
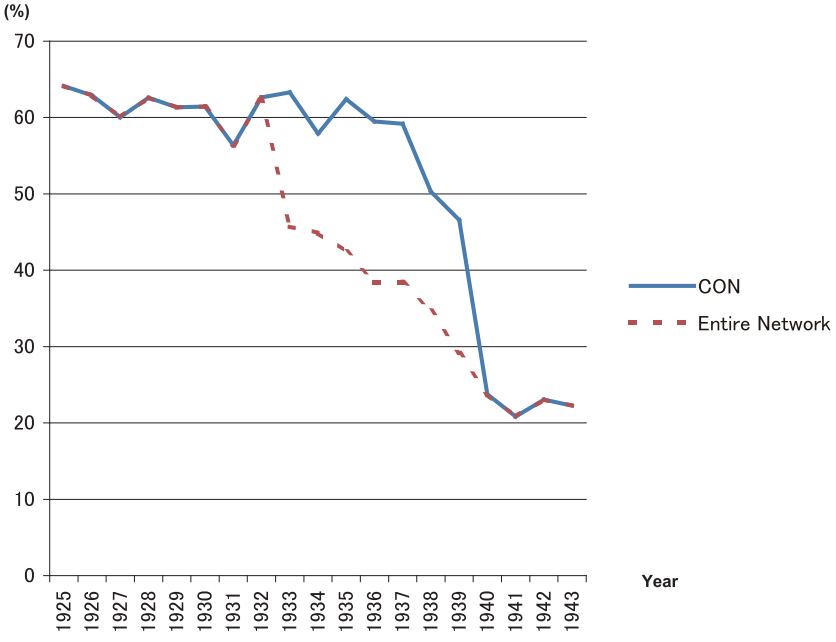


FIGURE 3: PERFORMANCE OF SMR'S OWN NETWORK (CON) AND ENTIRE NETWORK (INCLUDING NRM), ROS, 1925-1943




well over its lifetime, and continued to generate, even after 1940, an ROS for the entire network in excess of 20%.

*4.2 Income structure*

The data collected for the operating income and expenses of the railway department of the SMR, especially those for the CON, (see Appendix Tables 3a-3c and 5) indicate that, when measured in terms of operating income, the railway operation grew steadily between 1907 and 1939, save for the problems experienced during the world slump of 1929-32. Until the late 1930s the growth of net income mirrored the trend of operating income, but this link became increasingly tenuous following the outbreak of the Second Sino-Japanese War in 1937, as indicated in Figure 4. The effects of the war were to cause a rise in accumulated capital and operating income. Although net income in 1943 was almost triple that of 1936, it had grown much less rapidly than operating income due to the much faster increase in operating expenses. This picture of developments in the later 1930s and early 1940s is, however, not only complicated by the wartime conditions but also, as already noted, by the method of presenting accounting data on the company's operations. The separate figures for the CON, the NRM and the NKR networks from 1933 to 1939 indicate clearly that the last of these was very small by comparison with the other two (see Appendix Table 3c). Moreover, it can be seen that the relative sizes of the two former systems changed dramatically between 1933 and 1937. In 1933 the total operating income of the NRM was less than 50% of that of the CON but by 1937, as a result of the expansion which the SMR was required to undertake by the Kwantung Army, the NRM's operating income came to exceed that of the CON (see Appendix Tables 3a and 3b). Thereafter it continued to grow more rapidly, so that in 1939, the last year for which separate

FIGURE 4: OPERATING AND NET INCOME OF SMR'S OWN NETWORK (CON) AND ENTIRE NETWORK (INCLUDING NRM), 1907-1943

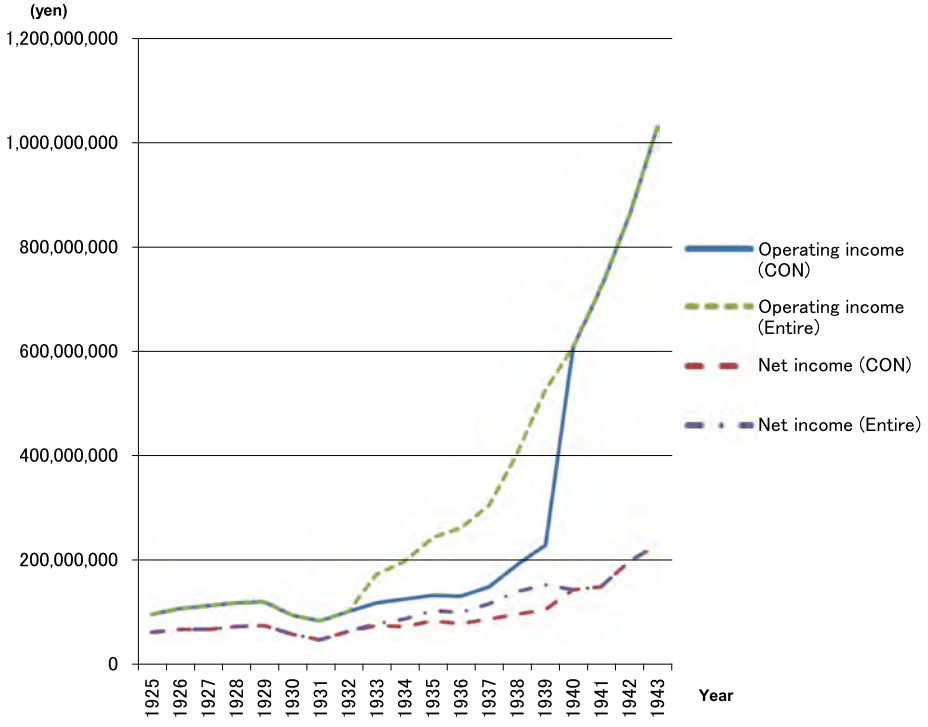



FIGURE 5: INCOME STRUCTURE OF SMR'S OWN NETWORK (CON) AND ENTIRE NETWORK (INCLUDING NRM), 1925-1943

figures are available, the NRM's total operating income, at almost 300m. yen, was almost 30% greater than that of the CON.

The rapid growth in the scale of the NRM following its coming under the management of the SMR also had an impact on the relative importance of different sources of income. The income of the SMR's railway department emanated from three sources: passengers, freight transport and 'other' miscellaneous sources, including dining cars, hotels and hospitals. Prior to 1924 it is not possible to determine the breakdown of the operating income for the SMR's own lines between freight and passenger transport due to the lack of data, but throughout the 1920s and early 1930s freight was clearly dominant, accounting for 80% or more of total operating income, with passenger transportation accounting for up to 16% and 'other income' for less than 7%, as indicated in Figure 5 (see also Appendix Table 6a).

In contrast, the contribution of passengers and freight to the income of the NRM was somewhat different, over 25% of operating income coming from passengers and only around two-thirds from freight (see Appendix Table 3b). The rapid expansion of the NRM network in the late 1930s therefore resulted in a rise in the proportion of the aggregate operating income of the SMR provided by passengers from 22.52% in 1938 to more than 30% by the early 1940s, as shown in Figure 5 (see also Appendix Table 6b). With the onset of the Pacific War it grew even faster, reaching 42% in 1943. With 'other' income also rising to between 15.8% and 16.2% between 1940 and 1943, the relevance of freight as a source of income had declined by 1943 to under 42%, in marked contrast to the 80% exhibited in the 1920s and early 1930s. Thus the impact of the SMR taking over the NRM network, together with that of the Sino-Japanese and Pacific Wars, resulted in the relative importance of passenger and freight traffic being reversed.

The share of income represented by passenger transportation is, of course, the result of a combination of passenger numbers and the average fare paid by each class of passenger, while that of freight transport is a combination of the amount carried, the distance it is carried and the rates charged. The growth in the railway network, especially that belonging to the NRM, led to a rapid increase in the number of passengers and amount of freight transport carried by the SMR: freight carriage increased over 50% from 42.11m. tons in 1936 to 64.51m. tons in 1940, while the number of passengers transported rose by almost 200% over the same period, from 34.68 million persons to 97.82 million (Mantetsu-kai 1986: 163). In addition to the Renkyo line (connecting Dairen and Hsinking via Mukden), the trunk line of the CON, developments to the Hosan line (connecting Mukden and Shanhaiguan), the Keito line (connecting Hsinking and Tumen) and the Hokitsu line (connecting Mukden and Jilin), all of them being in the system of the NRM, were particularly remarkable, providing a trunk line connecting the northern end of Korea through Manchuria, especially Mukden, to the northern part of China (Mantetsu-kai 2007: 198, 200).

When the data of the average income per passenger and average income per ton of freight carried for each of the three networks operated by the SMR for 1933-39 are examined (see Appendix Tables 3a-3c), the CON's average income per passenger fell between 1928 and 1930, but then remained fairly constant until 1938, with the exceptions of 1932 and 1933, at between 1.4 and 1.5 yen. In 1938, following the outbreak of the Second Sino-Japanese War, the CON's average income per passenger increased rapidly and between 1940 and 1943 rose from less than 2 yen to more than 2.6 yen (see Appendix Table 3a). The increase between 1939 and 1940 (1.67 to 1.99 yen) is accounted for by the integration of the accounting systems in 1940, not least since the NRM recorded an average income per passenger of over 2 yen for most of the late 1930s (see

Appendix Table 3b).[8] By contrast, the average income per ton of freight of the CON, which had declined from 5.967 yen in 1926 to 4.588 yen in 1931, stayed below the level of 5 yen for most of the remaining period, except for sporadic jumps in 1932, 1941 and 1944 (see Appendix Table 3a). Interpreting the data is complicated by the fact that the pre-1940 figures are only for the CON, not the whole network, but since the average income per ton of freight on the NRM was slightly lower than that of the CON before integration in 1940, it probably imparted a downward bias on aggregation of the data in 1940.

*4.3 Performance under War Conditions*

Strengthening economic ties with Japan was an indispensable condition for economic development in Manchuria and securing the means of transportation was an important factor for this purpose, which naturally affected the management policy of the SMR, not least decisions concerning freight rates. A fundamental revision of freight rates was made in February 1936 reflecting concerns over the cost of transportation. Instead of the conventional method of charging for agricultural products, such as soya beans, on the basis of a certain amount per kilometre transported, a system was introduced by which the unit price per kilometre declined with distance. A specific freight rate system for farm products was also enacted at this time to promote the development of the hinterland in the northern part of Manchuria. These changes caused the operating income of the SMR to fall in 1936 compared with the previous year, despite an increase in traffic volume. Thus, the ROS declined from 62.39% in 1935 to 59.49% in 1936 for the CON and from 42.45% to 38.28% for the entire system including the NRM, as indicated in Figure 3 (see also Appendix Tables 6a and 6b).

The five year industrial plan for the State of Manchuria originally put in motion in January 1937 was soon subjected to a major revision, as the demand for supplies in Japan increased sharply after the outbreak of the Second Sino-Japanese War in July. In response, a revised plan, which doubled the targets of the original plan, was set out initially in December 1937 and finalised in May 1938.[9] A key component of the revised plan for the SMR was a further change in the system by which freight rates were determined. Under the revised plan, the SMR in October 1938 adopted a uniform long distance reducing fare structure for freight transport on both the CON and the NRM, an action which resulted in a further significant decrease in operating income per ton in 1939 (see Appendix Tables 3a-3c). As shown in Figure 3, the ROS figures for the CON fell to 50.3% in 1938 and 46.6% in 1939, while those for the entire network fell to 34.7% and 29.2% respectively (see also Appendix Tables 6a and 6b). Moreover, the specific freight rate system was vastly extended by the 1938 reforms to cover products such as cereals, livestock, wood, coal and ore (Mantetsu-kai 2007: 51), with a significant reduction in the

[8] The NRM had passenger numbers in 1939 which were 50% above those of the CON. If we consolidate the data for 1939 for the whole network, it is found that the average income per passenger rose only marginally between 1939 and 1940 from 1.973 to 1.992 yen.

[9] The revised plan differed greatly from the original, both in its size and nature. The total necessary funds were increased from about 2,600 m. yen to about 5 billion yen, with that available for minerals and industry being increased from 1,400 m. yen to about 4 billion yen. The revised plan also recognised the need for a business entity to administrate the overall development, the Manchuria Heavy Industry and Development Corporation being established in December 1937 for this purpose. The Nissan group, one of the emerging zaibatsu, played a key role in this process. Under the revised plan, the SMR was required to transfer many of its industrial enterprises, but excluding the railway and coal businesses, to the newly established company.

rates for coal and ores being made in order to promote their production (Mantetsu-kai 1986: 218-219). This led to a remarkable jump in the carriage of coal and ores, in contrast to that of farm products, including soya beans, which stagnated after 1937 (see Appendix Table 7). Following the outbreak of the Second Sino-Japanese War, the transportation of war materials also significantly increased, as did that of the company's own cargo (mainly consisting of coal as fuel) (see Appendix Table 7).[10]

In order to respond to the increased demand for freight transportation and simultaneously to reduce operating expenses, enhanced efficiency was called for. In addition to the use of 'open wagons' and 'loading in bulk', 'increased loading' of 10% was performed from about September 1938 in order 'to load as much cargo as possible' but only 'as long as the loadable capacity of a freight car allows' (Manchuria Daily Newspaper 23.9.1938).[11] In spite of these efforts, the SMR was unable to suppress a sharp increase in operating expenses (see Appendix Table 5).

The material mobilization plan for the State of Manchuria, put into effect in January 1939, further influenced the operation of the SMR. With the initiation of this plan, the controlled economies of Japan and the State of Manchuria were even more closely linked, with Manchuria being required to vastly expand the supply of materials, such as coal and iron, to Japan to aid the war effort. As a result, the general principle for economic development in Manchuria envisaged in the original five-year plan was abandoned and instead it was converted after May 1940 to the 'priority principle', giving top priority to increasing the production of steel, coal, hydro-electric power, nonferrous metals, etc. in order to increase the supply of basic materials to Japan. This switch of emphasis further enhanced the need for transporting coal and iron, which in turn severely affected the operating income of the SMR since, as indicated above, in October 1938 the company had adopted a uniform long distance reducing fare structure for specific priority items including coal and minerals.[12]

Since operating expenses tended to increase with the rise in the price of coal and other forms of energy, not to mention increases in personnel costs, the SMR increasingly felt the need to modify the system of long distance reducing fares and increase tariffs (Chugai Commercial Newspaper12.6.1941). Accordingly, a modification to limit the application of this system was implemented in December 1940 but because it was only minor in nature it proved insufficient to cover the damage that income from freight transport had suffered. Therefore, the SMR simultaneously revised passenger fares, the first time on the CON since 1917, with the aim of increasing its operating income (Mantetsu-kai 1986: 203). Such fare increases had to be agreed by the Japanese government, and the SMR used the budgeting process to justify such increases (see Noguchi and Boyns 2013).

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[10] The transportation of soya beans had been a major source of income for the SMR, half of the world's supply of soya beans coming from Manchuria by 1927. The SMR's attempts to encourage the expansion of production and the transportation of the produce to the ports for export prior to the 1930s represents a classic example of an extractive colonial economy dependent on a single product (Young 1998: 31-32).

[11] According to Keijo Daily Newspaper (11.7.1942), 'reinforcement of transportation capacity is planned at the SMR through a supplementary budget of 30m. yen. The transportation is currently being carried out through a ten percent increase in the volume per freight car [of 30-ton loading], i.e., 3 tons'.

[12] It was reported in June 1940 that 'long distance transportation of specific goods (iron ore and charcoal) is congested by the 'priority principle' adopted in coping with the mobilization of resources executed in the State of Manchuria' (Chugai Commercial Newspaper 12.6.1941).

## 5. Financial Structure of the SMR

### *5.1 Fund Raising and Use*

As indicated in earlier sections, capital expenditure during the 1930s was increasingly dictated by the needs of the Kwantung Army. Expansion of passenger and freight transportation from the mid-1930s was facilitated through an enlargement of the carrying capacity of each train, not least through the utilization of larger locomotives designed for long-distance transportation of freight (Mantetsu-kai 1986: 163). The use of such locomotives, however, necessitated increased capital expenditure for replacing and strengthening the tracks (Mantetsu-kai 1986: 163).

From 1933 the SMR came to need large sums of money for two main purposes: the expansion of the railway network; and the development of coal and other enterprises under the industrialization plans for Manchuria. Moreover, under the wartime conditions from 1937, the SMR came to be charged with strengthening the railway networks for military purposes and securing them against enemy sabotage, besides undertaking the construction of double-track lines in specific regions (Mantetsu-kai 1986: 164). In fact, the demand for funds by the SMR rapidly increased after the commencement of the Second Sino-Japanese War in 1937 (see Appendix Table 8). Improvements to, and the expansion of, lines in operation were performed in response to instructions from the Kwantung Army which pushed the establishment of a war transportation system, the construction of new lines being advanced on a large scale (JP, ASS, SMR 20083). Of particular importance in this respect was the development of the lines belonging to the NRM system, the financial loans advanced to the State of Manchuria by the SMR for construction purposes increasing significantly, quickly reaching in excess of one billion yen in 1940 and exceeding 2.5 billion yen in total by the end of the war in 1945 (Mantetsu-kai 1986: 566).

The principal part (48.3%) of the funds required for the above expansion was supplied through the issue of corporate debentures (see Appendix Table 9). Although the SMR was entitled to issue debentures up to the limit of twice the amount of paid-up equity capital,[13] from September 1937 the issue of corporate debentures in Japan was placed under state control through the promulgation of the Law for Temporary Funds Adjustment (Rinji Shikin Chosei Ho), necessitating government approval in advance. The issue of SMR debentures was initially underwritten by a syndicate comprising Japan's major first-class banks and trusts with a high credit capability and expertise, including the Industrial Bank, Yokohama Specie, the Bank of Korea, Daiichi, Mitsui, Mitsubishi, Sumitomo, Yasuda, etc. However, in March 1938, faced with the necessity of increasing the amount of funds raised annually from 300m. to 500m. yen, the SMR's management became uneasy about continuing to rely so heavily on corporate debentures. There were several reasons for such concern. First, the management of the SMR regarded the issue of debentures as uncertain in nature 'since debentures do not have legal force unlike the collection of payment of equity capital' and because an issue 'could succeed or not depending on the conditions of the financial market' (JP, ASS, SMR 20260). Indeed, in 1937 sales of the company's debentures were very low (see Appendix Table 9).

Second, although the bond flotation market had recovered due to the monetary easing

[13] The limit was raised to three-fold in January 1945 (Mantetsu-kai 1986: 543).

measures taken by the Japanese government after the outbreak of the Second Sino-Japanese War, dependence on the issue of debentures and underwriting by the first-class syndicates was not something limited to the SMR but also applied to other special companies recently formed in connection with the administration of the State of Manchuria, such as Manchuria Colonization (formed in 1935) and Manchuria Heavy Industry and Development (1937). The debentures of these companies, together with the national bonds of the State of Manchuria, were also underwritten by almost the same syndicate as those of the SMR. Furthermore, while the payment of both the principal and interest of the debentures of these other companies was guaranteed by the state, this was not the case for those of the SMR (JP, ASS, SMR 20344; 105835).[14] As long as their activities were consistent with the aims of the Law for Temporary Funds Adjustment, i.e. they met war purposes, the allocation of funds was preferentially assigned to the debentures of these other companies, regardless of their financial performance, with the result that the issue of debentures by the SMR was to some extent constrained (JP, ASS, SMR 20344).

To cope with the uncertainty surrounding the issue of corporate debentures, the management of the SMR sought to undertake two important measures. One was to strengthen the system of underwriting: the SMR sought to avoid reliance on the main banks and trusts alone by adding regional banks and savings banks to the existing syndicate, while simultaneously planning to set up a more comprehensive organization of underwriting, through incorporating credit unions and Treasury deposits based on postal savings (JP, ASS, SMR 20344). The other measure was to seek another source of funds, i.e. equity capital.

### *5.2 Equity Capital*

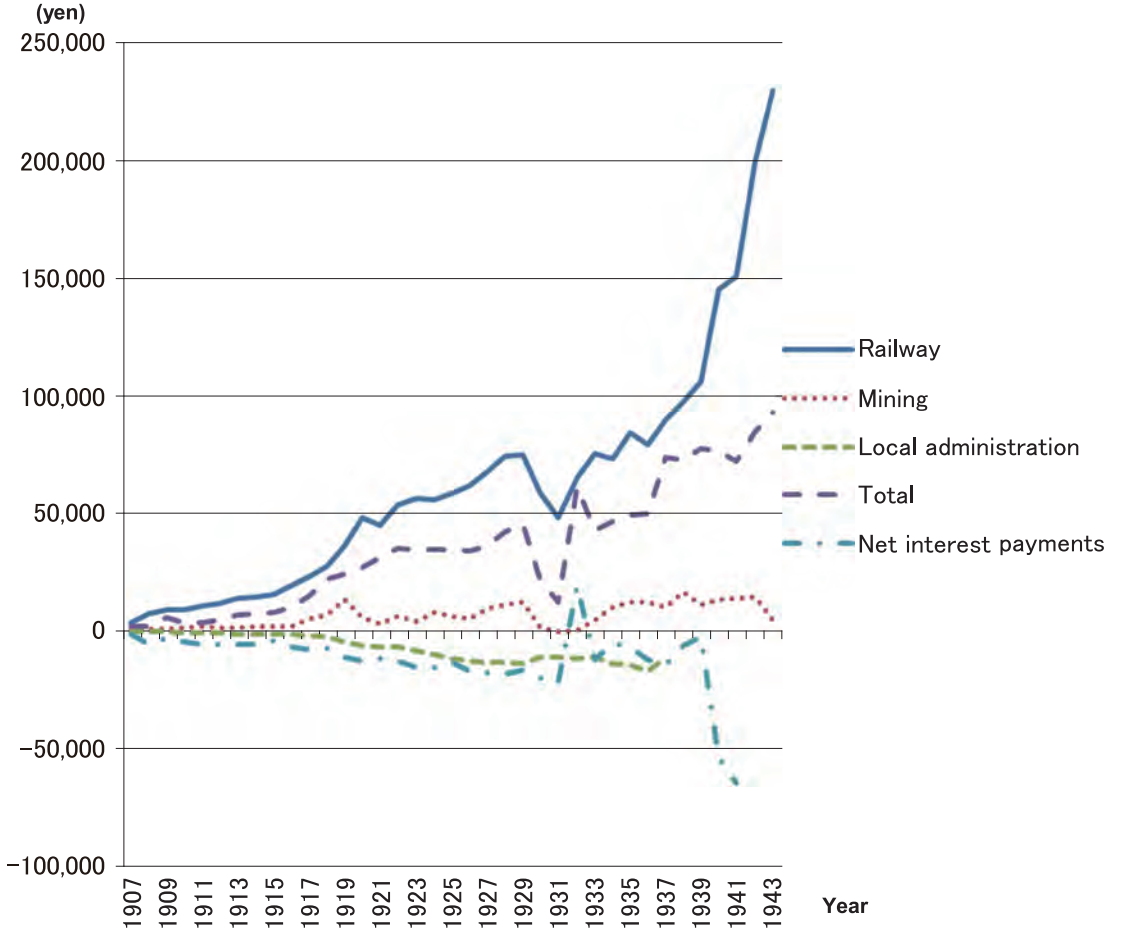
Initially the SMR examined the possibility of raising equity capital directly from the Japanese government, not least because the state continued to be a major shareholder in the company. However, by 1934, the paid-up equity held by private investors exceeded that held by the government (see Appendix Table 10). Moreover, due to the large number of other special companies which had been established in the second half of the 1930s, many related to the administration of the State of Manchuria, the SMR judged that little could be expected of the government (JP, ASS, SMR 20260). The SMR thus sought an increase in equity capital from the private sector.

In planning for an increase in its capital, the SMR was concerned about the company's share price. In March 1938 it was 59.10 yen (for a common share with a face value of 50 yen and an 8% payout ratio), below that of shares in all the other main railway companies in Japan which had similar payout ratios of between 7% and 10%. Thus, Hankyu shares traded at 90 yen while the price of Nankai Railway shares was 86.30 yen (JP, ASS, SMR 20260). Under such competitive circumstances the management of the SMR determined that it would be necessary to attain a share price of 70 yen or more if a successful issue of new share capital was to be made. In its attempts to maintain and possibly enhance the share price, the SMR's management emphasised the importance of maintaining the level of dividend payments.

The data collected indicate that dividend payments to the government and other shareholders

[14] Although the government guaranteed interest payments for the corporate debentures of the SMR, guarantees of repayment of the principal were limited to situations where it was vitally important, namely when foreign debentures were issued.

FIGURE 6: NET INCOME OF SMR'S MAJOR DEPARTMENTS, 1907-1943




were constant throughout much of the SMR's existence (see Appendix Table 11). After 1920, with the exception of 1931, the SMR paid a dividend of 4.3% or more to the government, and 8% or greater to other shareholders. Despite, as noted above, the entire business of the SMR suffering a declining ROIC after 1932, maintaining dividend levels was necessary to induce investors to continue purchases shares and debentures in the company (JP, ASS, SMR 20260). As the amount of paid-up equity capital rose, the maintenance of stable dividend payments required a steady growth of net income. As already noted, the overall performance of the SMR depended on the profitability of the railway department. This was where the bulk of the company's net income was generated, as revealed in Figure 6 (see also Appendix Table 12), and hence the performance of the railway department formed the basis for the SMR's dividend payments.

Net income also played an important role as one of the principal financial sources for the SMR, totalling almost 1,400m. yen from 1932 to 1943 for the railway department. This sum more than covered the interest accrued on debentures issued and the deficits of other departments, such as that of the local administration department, yielding a net income for the company as a whole of more than 800m. yen, as indicated in Figure 6 (see also Appendix Tables 11 and 12; JP, ASS, SMR 20083). This figure was then used to cover total dividend payments

of about 540m. yen during the same period of time, leaving a residual net income of 260m. yen.[15] Thus we can see how the net income generated by the railway department was important not only for covering the interest payments accrued on the increasing amount of debentures outstanding and the dividends on the equity capital but also achieving the ultimate goal of providing the funds necessary for expanding the railway network.

In March 1938, the SMR's management was somewhat optimistic about the future profitability of the railway department, expecting operating income would increase with 'the active movement of goods' resulting from the implementation of the State of Manchuria's five-year industrial plan (JP, ASS, SMR 20260). However, the management of the SMR was anxious that investors might be distrustful of the company's ability to pay dividends as a result of the onset of the Second Sino-Japanese War. Many investors were concerned that, as a special company, the SMR would have to construct and operate unprofitable lines for military purposes, and more than that might be subjected to fare reductions, thereby undermining its ability to continue to pay dividends at the traditional rate of 8% or more (JP, ASS, SMR 20260). To retain investor confidence, the SMR's management determined to try to maintain recorded net income at a level sufficient to maintain dividend payments.

It was against this complicated background that the issue of a possible change in the juridical personality of the SMR began to develop as a serious problem amongst the three key stakeholders: the company's management, the Kwantung Army and the State of Manchuria.

## 6. The Issue of Change in the Juridical Personality of the SMR

Following the establishment of the State of Manchuria in 1932, all special companies subsequently formed within Manchuria were set up, on the joint initiative of the Kwantung Army and the bureaucrat of the State of Manchuria, as corporations having the juridical personality of Manchukuo, rather than Japan (Manchurian Newspaper 28.8.1934; 22.9.1934). As a special company established in Japan, the position of the SMR was therefore at odds with that of the other special companies operating in Manchuria from 1932. With the outbreak of the Second Sino-Japanese War, the company's position became further complicated since the extra-territoriality of Japan and the Japanese within the State of Manchuria was abolished in December 1937, while at the same time the army wished to strengthen its supervisory powers over the company (Manchuria Daily Newspaper 6.11.1937).

Recognising the importance of the SMR, the company was afforded temporarily the juridical personality of foreign citizenship under an exceptional provision of the Foreign Companies Act promulgated in the State of Manchuria at the same time. Technically such status was to be reserved for corporations established under treaty, but it was extended to the SMR even though it had not been established in this way (Hochi Newspaper 10.10.1937). However,

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[15] A newspaper article emphasized the importance of net income as a source of funds as follows: '[i]n the SMR, two businesses of ammonium sulphate and steel will be started as new businesses, in addition to railway construction... Since the net income from most businesses will be appropriated for the cost of railway improvement next year, construction expenses for these, i.e. 79m. yen for railway, 5m. yen for ammonium sulphate and 13m. yen for steel (all are to be continuing operations for two to three years), totaling 97m. yen for all, will be divided between 3 separate enterprises, and will all be financed by the issue of debentures' (Osaka Asahi Newspaper 13.10.1932).

for the Kwantung Army, this solution was unsatisfactory:

> The issue of change in the juridical personality of the South Manchuria Railway is a very important matter related to the preparation for war. It is an issue of whether the railway should be regarded as a strategic arm for war purposes or not.[16] Since the State of Manchuria (Manchukuo) was established and raised as a state for the national security of Japan and the railway has a close relationship indivisible from the politics and economics of Manchukuo, it is unnatural for it to remain outside the control of the Manchukuo government as a foreign corporation originating in Japan. The juridical personality [of the SMR] should be changed and put under supervision and instruction of both of the governments of Japan and Manchukuo as a joint corporation. (Kojima 2007: 112)

The army was also of the view that:

> The railway should be considered as a strategic arm to be integrated with the army. The railway, which executes operations in conjunction with the army under the supreme command of Japan, during times of peace should be instructed to, and should undertake preparations so that it can be used freely by the Japanese army. This is natural. (Kojima, 2007: 112)

In contrast, the management of the SMR was opposed to the proposed change in the company's juridical personality, fearing that this would have direct and indirect consequences on the financing of the company, which had become paramount following changes to the industrial plan for Manchuria and the move to the priority principle for transport movements (see sections 4 and 5 above). Of particular concern to the SMR's management was that a change in its juridical personality would restrict access to funds. Given former clashes between the company on the one hand and the Kwantung Army and the bureaucrat of the State of Manchuria over the control effected by the General Railway Bureau between 1933 and 1936, the SMR's management was fearful that it would find itself in an inferior position in respect of access to funds compared with other special companies established in Manchuria (JP, ASS, SMR 20344). In particular, the SMR's management was apprehensive that economic control effected by the State of Manchuria would make it more difficult to raise the funds, both internally and externally, needed to carry out the construction of new lines and improvements to the existing network which it was being required to undertake.

As has already been noted, residual net income (i.e. net income after dividend and interest payments) was vital to the process of internal financing, and so the SMR's management was keen to avoid being subjected by the State of Manchuria to policies which might restrict net income, such as controls over fares. As a foreign corporation, the SMR remained outside of the price controls which were implemented by the State of Manchuria following the rapid rise of prices after the start of the Sino-Japanese War in 1937 (JP, ASS, SMR 20344). However, with railway

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[16] In fact, it was stated in 'the Fundamental Policy of the Greater East Asia Traffics' adopted by the Japanese cabinet on 1 July 1942 that 'transportation facilities need to be considered for conversion to war purposes, [because] the government should give priority to taking measures to enhance the national defense and secure the circulation of [military] goods' (Mantetsu-kai 1986: 164).

fares having an important impact on prices throughout the economy, there was pressure to change the SMR's legal status, an action strongly opposed by the SMR's management which recognised that both internal and external funding depended on maintaining high levels of residual net income. With freight transport still remaining as the most important source of net income it was important to avoid further reductions in freight rates, and hence the SMR's management resisted attempts to alter its juridical personality (JP, ASS, SMR 20344). The SMR's management was particularly fearful that any such change, leading to the operations of the company being subjected to government policy aims, would lead a fall in investor confidence and hence its ability to raise external funding, whether from debentures or equity capital (JP, ASS, SMR 20260).

The SMR's management was also concerned that any change in its juridical personality would affect the traditional remittance route by which the company received funding from Japan. Up to this time, the SMR had remitted funds raised in Japan to Manchuria through the Bank of Korea, using such funds to invest in both its own activities and those of its affiliated companies in Manchuria. However, a priority of the government of the State of Manchuria, in cooperation with the Kwantung Army (JP, ASS, SMR 105835), was to concentrate the remittance of funds between Japan and Manchuria through the Central Bank of Manchuria (JP, ASS, SMR 105835; JP, ASS, SMR 20344). If the SMR became a corporation of the State of Manchuria it would have been required to change its remittance route, thereby losing the preferential treatment received from the Bank of Korea, namely loan advances based on the security of the amount to be raised through the issue of debentures and low interest rates (JP, ASS, SMR 20344). Although the government of the State of Manchuria offered alternative preferential treatments to the SMR, comprising dividend guarantees and low interest rate loans, in compensation for losing its traditional funding route, the management of the SMR concluded that the benefits of the traditional route, built up over 30 years, more than outweighed the potential benefits offered by the untried mechanisms proposed by the State of Manchuria (JP, ASS, SMR 105835). In particular, the SMR's management viewed the proposed changes as destroying the traditional ties with the banks, which would be detrimental to the company's plans to strengthen the syndicate organization which had to date underwritten the issue of the company's debentures (JP, ASS, SMR 20344).

All in all, the SMR's management concluded that 'no matter what opinion was currently indicated for change in the juridical personality it has serious defects. Since what is to be lost by this change would be greater than the gains to be obtained, the company should absolutely be opposed [to such an opinion]' (JP, ASS, SMR 105835). In the end, an arrangement was agreed between the SMR and the State of Manchuria by which a portion of the company's equity was assigned to the government. This occurred in January 1940 when the company finally succeeded in increasing its capital, and provided the State of Manchuria with a means of being able to exercise some influence over the management and railway operations of the SMR through the appointment of one of the directors (Yasutomi 1995: 181; Osaka Asahi Newspaper 9.12.1939; 10.12.1939).

## 7. Summary and Conclusion

This study has examined aspects of the accounting and financial history of the SMR,

especially those during the 1930s, in the light of the changing balance between the company, the Kwantung Army and the State of Manchuria. The formation of the State of Manchuria in 1932, the military uncertainties of the mid-1930s and the Second Sino-Japanese and Pacific Wars all impacted heavily on the operations of the SMR between 1932 and 1943. In examining these events and their impact on the juridical personality of the SMR, we fill a gap in Japanese accounting and financial history research.

Until it was hit by the deep slump of 1930 and 1931, the SMR, largely as a result of the performance of its railway department, had returned consistent and successful financial results. Prior to the late 1920s, the SMR's management had largely been able to keep itself at arms-length from the Japanese government and the Kwantung Army, but such autonomous management became increasingly difficult from this time, especially following the Manchurian Incident and the declaration of the State of Manchuria. The growing power of the Kwantung Army in Manchuria, together with the consignment of the management of the NRM and NKR networks to the SMR from 1933, not only reduced the overall performance of the SMR's railway operation but also brought about the transformation of its income structure. Transportation of minerals, industrial products and military goods increased, while that of agricultural products fell. However, due to state control of freight rates, operating income from freight transportation did not increase, with the result that passenger transportation became increasingly important to the SMR.

As the military situation developed, the Kwantung Army required the SMR to undertake construction work and make improvements to the railway network, in particular the NRM network, for military purposes. This pressure grew particularly following the outbreak of the Second Sino-Japanese War in 1937. Since it heavily relied on the issue of debentures for financing construction, the SMR's management was worried by controls on the bond market introduced through the promulgation by the Japanese government of the Law for Temporary Funds Adjustment in September 1937. To overcome such difficulties, the SMR attempted to reinforce the system of underwriting its debenture issues by increasing the number of members of the syndicate used for such purposes. However, government profit controls worried investors with the result that the company's share price remained at a low level. To help dispel investor fears, the SMR needed to keep recording high levels of net income in order to maintain dividend and interest payments.

It was against this background that the issue of a change to the juridical personality of the SMR arose, potentially impacting on the balance between the company's activities as a private business enterprise and its public duties as a special company. The Kwantung Army wished to place the operation of the SMR under its sole control by transforming the SMR into a corporation with a juridical personality in Manchuria. However, the SMR's management was concerned about the potential harmful effects, direct and indirect, of such a move on the financing of the company. Against the background of the Second Sino-Japanese War, a resolution to this issue was of great importance, and intensive exchanges took place. In the end, the matter was settled through the State of Manchuria taking an equity stake in the SMR in 1940.

Despite the uncertainties faced by the company during the period from 1932, it was able to undertake substantial investment in the railway network which it controlled. The SMR required funds for construction works on the CON and the NRM, the expenditure on the latter being treated as loans to the State of Manchuria, for investment in non-railway activities and the

payment of dividends. The amounts required annually for these purposes more than doubled between 1934 and 1943, from 261.9m. yen to over 609m. yen (see Appendix Table 8). Despite the financial and other pressures it faced during this period, the SMR was able to raise large amounts of finance between 1934 and 1943 (see Appendix Tables 9 and 11) mainly due to the continued growth in net income of the SMR's railway department, which increased from 73.2m. yen to 229.6m. yen between 1934 and 1943. This enabled the company to increase its paid-up equity capital from 548.2m. yen to 1,216.2m. yen over the same period, while maintaining the rate of dividend payments at traditional levels (the payments themselves rising from 33.3m. yen to 72.3m. yen between 1934 and 1943). The growth in net income from the railway department also enabled the amount of debenture capital outstanding to increase even more rapidly from 537.6m. yen in 1934 to 2,167.1m. yen in 1943, over 200m. yen being added to the total annually from 1939 to 1943.

In this way, the SMR's management was able to fulfil its responsibilities, both to the private sector investors in the company and to the Japanese state. The case of the SMR illustrates how the balance between national and private interests, an important feature of Japanese special companies, could be a source of conflict and create particular problems, especially under war conditions. Nevertheless, it also shows that it was possible to resolve such conflicts successfully and enable a sufficient inflow of funds into the business to satisfy the requirement of all stakeholders.

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Appendix Table 1: Average Length of Lines Operated by the SMR and Open to Traffic During the Years 1925-1943

| Year | Kilometres | Year | Kilometres | Year | Kilometres | Year | Kilometres |
|---|---|---|---|---|---|---|---|
| 1925 | 1118.2 | 1930 | 1122.1 | 1935 | 7758.4 | 1940 | 10848.5 |
| 1926 | 1116.1 | 1931 | 1125.1 | 1936 | 8962.6 | 1941 | 10975.6 |
| 1927 | 1111.7 | 1932 | 1127.1 | 1937 | 9814.4 | 1942 | 11366.1 |
| 1928 | 1111.7 | 1933 | 4621.0 | 1938 | 9943.1 | 1943 | 11941.2 |
| 1929 | 1111.8 | 1934 | 5210.5 | 1939 | 10099.9 | | |

*Sources:* South Manchuria Railway Company 1929: 81; Mantetsu-kai 1986: 171; 257-261; Mantetsu-kai 2007: 258-259.

## Appendix Table 2: Construction Expenses and ROIC of the SMR's Railway Department (CON), 1907-1941

| Year | Amount of expenditure | Shared amount of administration costs | Amount of increase (yen) | | | Total | Amount of decrease (yen) | | | | | Total | Amount at the date of closing accounts | Accumulated amount | Net income | ROIC (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Amount of government investment property | Amount of property arrangement (revaluation of property, etc.) | Conversion from other accounts | | Amount of abolition | Amount of removal | Amount of depreciation | Amount of property arrangement (revaluation of property, etc.) | Conversion to other accounts | | | | | |
| 1907 | 9099914.08 | — | — | — | — | 9099914.08 | — | 612.75 | — | — | — | 612.75 | 9099301.33 | 9099301.33 | 3600756.71 | 39.57 |
| 1908 | 2171596.22 | 805878.54 | 331.92 | — | — | 2977806.68 | 7479.44 | 2084.49 | — | — | 1851.38 | 11415.31 | 22510759.38 | 31610060.70 | 7375734.87 | 23.33 |
| 1909 | 7925152.61 | 437157.10 | 421522.21 | — | 9648.32 | 8793480.24 | 416409.00 | 100401.32 | — | — | — | 516810.32 | 8276669.92 | 39886730.62 | 9808706.77 | 24.59 |
| 1910 | 14088657.91 | 656766.49 | 1507.38 | — | 44387.45 | 14791319.23 | 243641.79 | 450960.54 | — | — | — | 694602.33 | 14096716.91 | 53983447.53 | 8805510.94 | 16.31 |
| 1911 | 11082502.20 | 622579.62 | 1087398.68 | — | — | 12792480.49 | 744924.64 | 222188.64 | — | — | 15421.19 | 982534.47 | 11809955.02 | 65793402.55 | 10240595.98 | 15.56 |
| 1912 | 4778056.07 | 248469.63 | -62490.86 | — | — | 4964034.85 | 227357.29 | 194283.79 | — | — | 36015.68 | 457656.76 | 4506378.09 | 70299780.64 | 11245113.08 | 16.00 |
| 1913 | 2276820.23 | 116037.58 | 8325.56 | — | — | 2401183.37 | 213318.41 | 160150.58 | — | — | 65123.96 | 438592.96 | 1962590.41 | 72262371.05 | 13390906.43 | 18.53 |
| 1914 | 1431350.55 | 86200.58 | 397.70 | — | 8590.90 | 1526539.73 | 79058.17 | 211553.68 | — | — | — | 290611.85 | 1235927.89 | 73498298.94 | 13752940.77 | 18.71 |
| 1915 | 1098842.30 | 73267.11 | 173794.71 | — | — | 1345904.12 | 74092.80 | 99422.37 | — | — | 478477.88 | 651993.05 | 693911.07 | 74192210.01 | 14639549.17 | 19.73 |
| 1916 | 2082021.64 | 86497.61 | 9364.33 | — | 207735.51 | 2385619.09 | 45860.41 | 569984.08 | — | — | — | 615844.49 | 1769774.61 | 75961984.62 | 18212035.57 | 23.98 |
| 1917 | 1471593.94 | 171380.99 | 1633742.20 | — | 41134.69 | 3317851.82 | 66790.23 | 629448.67 | — | — | — | 696238.90 | 2621612.92 | 78583597.53 | 22001956.19 | 28.00 |
| 1918 | 5931555.81 | 229407.79 | 22263210.82 | — | — | 28424174.43 | 71813.92 | 766460.93 | — | — | 4551.65 | 842826.51 | 27581347.92 | 106164945.46 | 26095444.34 | 24.58 |
| 1919 | 26068976.59 | 947011.19 | — | — | — | 27015987.78 | 403859.45 | 224491.70 | — | — | 494167.31 | 1122518.46 | 25893469.32 | 132058414.78 | 33881053.27 | 25.66 |
| 1920 | 26338575.70 | 1500732.27 | — | — | 7537070.28 | 35376378.25 | 674716.49 | 534613.00 | — | — | — | 1209329.49 | 34167048.76 | 166225463.54 | 47350106.58 | 28.49 |
| 1921 | 12826938.87 | 855611.50 | — | — | — | 13682550.37 | 33217.35 | 109369.13 | — | — | 917903.30 | 1060489.78 | 12622060.59 | 178847524.13 | 46337477.23 | 25.91 |
| 1922 | 9832248.91 | 833229.25 | — | — | 323527.65 | 10989005.81 | 58920.50 | 161305.72 | — | — | — | 220226.22 | 10768779.59 | 189616303.72 | 55962258.15 | 29.51 |
| 1923 | 8429633.13 | 1091400.91 | — | — | — | 9521034.04 | 6254.56 | 133921.90 | — | — | 874135.87 | 1014312.33 | 8506721.71 | 198123025.43 | 58121452.87 | 29.34 |
| 1924 | 11796117.95 | 1114732.24 | — | — | 591000.42 | 13501850.61 | 42995.93 | 124788.56 | — | — | — | 167784.49 | 13334066.12 | 211457091.55 | 59386685.04 | 28.08 |
| 1925 | 8942295.36 | 554196.19 | — | — | 52380.17 | 9548871.72 | 26257.52 | 190842.08 | — | — | — | 217099.60 | 9331772.12 | 220788863.67 | 62448994.95 | 28.28 |
| 1926 | 9425785.13 | — | — | — | 108915.93 | 9534701.06 | 824935.70 | 3152298.96 | 1306961.04 | — | — | 5284195.70 | 4250505.36 | 225039369.03 | 67876905.25 | 30.16 |
| 1927 | 18502827.74 | — | — | 33794455.43 | — | 52297283.17 | 464949.92 | 2772952.06 | 3294893.03 | 30944767.73 | 341163.69 | 37818726.43 | 14478556.74 | 239517925.77 | 68008345.22 | 28.39 |
| 1928 | 17374955.40 | — | — | — | 1294349.38 | 18669304.78 | 1012144.90 | 3426632.96 | 4045223.63 | — | — | 8484001.49 | 10185303.29 | 249703229.06 | 74281024.43 | 29.75 |
| 1929 | 19054060.16 | — | — | — | 1179310.30 | 20233370.46 | 504162.17 | 3213065.95 | 4336993.35 | — | — | 8054221.47 | 12179148.99 | 261882378.05 | 74890234.92 | 28.60 |
| 1930 | 13228051.57 | — | — | 23383.17 | — | 13251434.74 | 523721.86 | 2366431.75 | 199431.40 | — | 1813267.20 | 4902852.21 | 8348582.53 | 270230960.58 | 58562153.87 | 21.67 |
| 1931 | 8002614.75 | — | — | — | — | 8002614.75 | 86040.32 | 1237072.59 | 4609759.37 | 105931.27 | 89414.69 | 6128218.24 | 1874396.51 | 272105357.09 | 48185482.24 | 17.71 |
| 1932 | 4683164.59 | — | — | 48158.59 | 2629041.79 | 7360364.97 | 105745.46 | 673787.06 | 5022949.27 | — | — | 5802481.79 | 1557883.18 | 273663240.27 | 65050664.85 | 23.77 |
| 1933 | 10256409.27 | — | — | 28428.21 | — | 10284837.48 | 2908084.55 | 1403663.55 | 5348418.23 | — | 40106.15 | 9700272.48 | 584565.00 | 274247805.27 | 75766354.01 | 27.63 |
| 1934 | 27572187.53 | — | — | 62317.60 | 144593.43 | 27779098.56 | 837794.75 | 2513720.59 | 8898851.56 | — | — | 12250366.90 | 15528731.66 | 289776536.93 | 73243744.22 | 25.28 |
| 1935 | 23956201.49 | — | — | 114473.92 | — | 24070675.41 | 1231407.70 | 1126441.80 | 5605697.85 | — | 687094.20 | 8650641.55 | 15420033.86 | 305196570.79 | 84030381.90 | 27.53 |
| 1936 | 17600939.92 | — | — | 56043.46 | 3382646.83 | 21039630.21 | 166821.73 | 768367.98 | 5202078.75 | — | — | 6137268.46 | 14902361.75 | 320098932.54 | 79597220.66 | 24.87 |
| 1937 | 11358364.05 | — | — | 166201.59 | — | 11524565.64 | 304773.98 | 2055144.95 | 5561595.66 | — | 62362889.94 | 14157804.53 | -2633238.89 | 317465693.65 | 89712967.42 | 28.26 |
| 1938 | 22320625.73 | — | — | 462954.56 | 50337277.11 | 73120857.40 | 590725.13 | 6782315.14 | 6349796.83 | — | — | 13722837.10 | 59398020.30 | 376863713.95 | 97117065.73 | 25.77 |
| 1939 | 37928656.90 | — | — | 204285.70 | 257535.58 | 38390478.18 | 354920.52 | 4551525.42 | 9242190.90 | — | — | 14148636.84 | 24241841.34 | 401105555.29 | 105922122.26 | 26.41 |
| 1940 | 42250474.60 | — | — | | 8052364.92 | 50302839.52 | — | | 7297312.49 | — | — | 7297312.49 | 43005527.03 | 444111082.32 | 144944831.00 | 32.64 |
| 1941 | 32776268.07 | — | — | | 116617310.15 | 149393578.22 | — | | 8872498.31 | — | — | 8872498.31 | 140521079.91 | 584632162.23 | 150589397.30 | 25.76 |

*Sources:* South Manchuria Railway Company, Yearbook of Statistics 1939: 50-53; Business Reports 1940-41; Mantetsu-kai 1986: 565.

## Appendix Table 3a: Business Performance (ROIC, ROS) of the SMR's Railway Department (CON), 1925-1943

| Year | Construction expenses (yen) | Company's own lines: Income from passenger transportation (yen) | Total number of passenger transportation (person) | Passenger transportation income per person (yen) | Income from freight transportation (yen) | Total number of freight transportation (tons) | Freight transportation income per ton (yen) | Other income (yen)* | Total operating income (yen) | Total operating expenses (yen) | Net income (yen) | ROIC (%) | ROS (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1925 | 220788863.67 | 14530941.59 | 9109004 | 1.595 | 80535820.25 | 13649089.0 | 5.900 | 2328465.70 | 97395227.54 | 34946232.59 | 62448994.95 | 28.28 | 64.12 |
| 1926 | 225039369.03 | 15216352.54 | 8290085 | 1.835 | 89513059.01 | 15000728.0 | 5.967 | 3194154.98 | 107923566.53 | 40046661.28 | 67876905.25 | 30.16 | 62.89 |
| 1927 | 239517925.77 | 16102953.35 | 8263089 | 1.949 | 94040818.67 | 16717678.0 | 5.625 | 3100408.13 | 113244180.15 | 45235834.93 | 68008345.22 | 28.39 | 60.05 |
| 1928 | 249703229.06 | 17619293.34 | 9702119 | 1.816 | 97738146.93 | 17530324.0 | 5.575 | 3281649.32 | 118639089.59 | 44358065.16 | 74281024.43 | 29.75 | 62.61 |
| 1929 | 261882378.05 | 17451585.31 | 10410579 | 1.676 | 101089474.20 | 18562959.0 | 5.446 | 3562683.13 | 122103742.64 | 47213507.72 | 74890234.92 | 28.60 | 61.33 |
| 1930 | 270230960.58 | 11461175.32 | 8115808 | 1.412 | 77936687.75 | 15193272.0 | 5.130 | 5932867.24 | 95330730.31 | 36768576.44 | 58562153.87 | 21.67 | 61.43 |
| 1931 | 272105357.09 | 9135663.19 | 6331760 | 1.443 | 70897755.74 | 15454213.2 | 4.588 | 5442878.79 | 85476297.72 | 37290815.48 | 48185482.24 | 17.71 | 56.37 |
| 1932 | 273663240.27 | 14812045.02 | 8610159 | 1.720 | 85022314.40 | 16572815.7 | 5.130 | 4012152.41 | 103846511.83 | 38795846.98 | 65050664.85 | 23.77 | 62.64 |
| 1933 | 274247805.27 | 18757363.98 | 11633875 | 1.612 | 94263019.12 | 18850840.2 | 5.000 | 6656357.92 | 119676741.02 | 43910387.01 | 75766354.01 | 27.63 | 63.31 |
| 1934 | 289776536.93 | 20332876.15 | 13786403 | 1.475 | 101489276.22 | 21671341.7 | 4.683 | 4703223.68 | 126525376.05 | 53281631.83 | 73243744.22 | 25.28 | 57.89 |
| 1935 | 305196570.79 | 22412222.40 | 15122922 | 1.482 | 103362261.44 | 20980701.3 | 4.927 | 8911692.14 | 134686175.98 | 50655794.08 | 84030381.90 | 27.53 | 62.39 |
| 1936 | 313667457.54 | 22302298.56 | 15749786 | 1.416 | 103165249.11 | 21365653.1 | 4.828 | 7565242.01 | 133032789.68 | 53885245.03 | 79147544.65 | 25.23 | 59.49 |
| 1937 | 300114129.65 | 24877527.35 | 17515000 | 1.425 | 115558375.07 | 24331000.0 | 4.749 | 9899849.18 | 150335751.60 | 61340050.12 | 88995701.48 | 29.65 | 59.20 |
| 1938 | 357299551.57 | 33940296.53 | 21001612 | 1.616 | 135088530.64 | 26994205.8 | 5.004 | 23378011.94 | 192406839.11 | 95628871.81 | 96777967.30 | 27.09 | 50.30 |
| 1939 | 379249287.81 | 50206761.29 | 30825386 | 1.629 | 153151204.99 | 32038198.3 | 4.780 | 26471724.57 | 229829690.85 | 122744282.13 | 107085408.72 | 28.24 | 46.59 |
| 1940 | 444111082.32 | 194843000.00 | 97822000 | 1.992 | 318876000.00 | 64506000.0 | 4.943 | 9626048.42 | 609979484.42 | 465034653.45 | 144944830.97 | 32.64 | 23.76 |
| 1941 | 584632162.23 | 223381000.00 | 103683000 | 2.154 | 391354000.00 | 74576000.0 | 5.248 | 108698448.62 | 723433448.62 | 572844051.28 | 150589397.34 | 25.76 | 20.82 |
| 1942 | 627806000.00 | 307691000.00 | 132153000 | 2.328 | 418454000.00 | 84441000.0 | 4.956 | 137775702.00 | 863920702.00 | 667659835.00 | 199260867.00 | 31.74 | 23.06 |
| 1943 | 684271000.00 | 436025000.00 | 163544000 | 2.666 | 429076000.00 | 84984000.0 | 4.931 | 167178539.00 | 1032279539.00 | 792643067.00 | 229636472.00 | 33.56 | 22.46 |

## Appendix Table 3b: Business Performance (ROIC, ROS) of the NRM, 1933-1939

| Year | Construction expenses (yen) | National Railway lines: Income from passenger transportation (yen) | Total number of passenger transportation (person) | Passenger transportation income per person (yen) | Income from freight transportation (yen) | Total number of freight transportation (tons) | Freight transportation income per ton (yen) | Other income (yen)* | Total operating income (yen) | Total operating expenses (yen) | Net income (yen) | ROIC (%) | ROS (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1933 | 208434848.00 | 14711341.00 | 7869115 | 1.870 | 36081524.00 | 8917826.0 | 4.046 | 3212027.00 | 54004892.00 | 50350390.00 | 3654502.00 | — | 6.77 |
| 1934 | 364417870.00 | 17851909.00 | 8814508 | 2.025 | 50513474.00 | 11873101.5 | 4.254 | 3784120.00 | 72152603.00 | 56209879.00 | 15942624.00 | 4.37 | 22.10 |
| 1935 | 626949667.00 | 28678252.00 | 13279957 | 2.160 | 72833515.00 | 14956210.7 | 4.870 | 9119130.00 | 110630897.00 | 90531440.00 | 20099457.00 | 3.21 | 18.17 |
| 1936 | 754744376.00 | 33539720.00 | 16758775 | 2.001 | 85475065.00 | 18658198.8 | 4.581 | 11633576.00 | 130648362.00 | 108852922.00 | 21795440.00 | 2.89 | 16.68 |
| 1937 | 872640857.00 | 41561353.00 | 18731000 | 2.219 | 101804542.00 | 21050000.0 | 4.836 | 12837372.00 | 156203267.00 | 128016813.00 | 28186454.00 | 3.23 | 18.04 |
| 1938 | 971706644.42 | 57217719.84 | 28893819 | 1.980 | 131105669.48 | 27792256.1 | 4.717 | 24079886.56 | 212403275.88 | 169066412.15 | 43336863.73 | 4.46 | 20.40 |
| 1939 | 1157040761.84 | 100181693.68 | 45390000 | 2.207 | 167211924.47 | 37050640.9 | 4.513 | 30972182.23 | 298365800.38 | 250194128.44 | 48171671.94 | 4.16 | 16.15 |

## Appendix Table 3c: Business Performance (ROIC, ROS) of the NKR, 1933-1939

| Year | North Korea Railway lines | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Construction expenses (yen) | Income from passenger transportation (yen) | Total number of passenger transportation (person) | Passenger transportation income per person (yen) | Income from freight transportation (yen) | Total number of freight transportation (tons) | Freight transportation income per ton (yen) | Other income (yen)* | Total operating income (yen) | Total operating expenses (yen) | Net income (yen) | ROIC (%) | ROS (%) |
| 1933 | — | 506500.62 | 746890 | 0.678 | 1134444.71 | 519238.0 | 2.185 | 102498.16 | 1743443.49 | 1641075.22 | 102368.27 | — | 5.87 |
| 1934 | — | 1126757.26 | 1611337 | 0.699 | 2500987.39 | 1122588.0 | 2.228 | 327377.35 | 3955122.00 | 3842249.13 | 112872.87 | — | 2.85 |
| 1935 | — | 1175059.74 | 1718170 | 0.684 | 3351435.30 | 1474439.0 | 2.273 | 478437.04 | 5004932.08 | 4485873.01 | 519059.07 | — | 10.37 |
| 1936 | 6431475.00 | 1516619.16 | 2169513 | 0.699 | 4787019.27 | 2088842.0 | 2.292 | 416901.87 | 6720540.30 | 5435018.79 | 1285521.51 | 19.99 | 19.13 |
| 1937 | 17351564.00 | 1789763.00 | 1991000 | 0.899 | 5842003.00 | 2432000.0 | 2.402 | 507871.00 | 8119636.00 | 6557092.00 | 1562544.00 | 9.01 | 19.24 |
| 1938 | 19564162.38 | 2317288.79 | 3059678 | 0.757 | 8082161.84 | 3085369.2 | 2.620 | 570321.95 | 10969772.58 | 9461907.09 | 1507865.48 | 7.71 | 13.75 |
| 1939 | 21856267.48 | 3736686.54 | 4509259 | 0.829 | 8894103.52 | 3957201.1 | 2.248 | 888810.79 | 13519600.85 | 13482812.36 | 36788.49 | 0.17 | 0.27 |

*Note:* Other income comprises income generated by other non-railway operations of the SMR's railway department, e.g. income from dinning cars, hotels and hospitals. The figures of net income for the CON during the period from 1936 to 1939 shown in Table 3a differ slightly from those indicated in Table 2. This is due to changes made in the classification of elements of operating income and operating expenses between departments. The figures of net income for the CON in Table 2 are based on the classification effective in each year while the figures of operating income and operating expenses in Table 3a are based on the classification in practice at the beginning of 1940. However, the differences are only minor.

*Sources:* South Manchuria Railway Company, Yearbook of Statistics: 1927: 34-35; 66-70; 1928: 54-55; 104-108; 1930: 54-55; 124-128; 288, 290-291, 295, 305; 1932: 62-63; 148-149; 292, 294-295, 299, 307; 1934: 60-61; 138-140; 278, 280-281, 284-285, 293, 947; 950-951; 952-953; 957; 960-961; 962-963; 1936: 68-69; 146-150; 276; 278-279, 282-283, 293, 983-4, 990-993, 1015; 1018-1023; 1939: 72-73; 142-148; 194-195; 198-199; 224-227, 290-295; 330-332; South Manchuria Railway Company, *The Third 10 years of the South Manchuria Railway*1938: 462-464; 517-518; 576-577; ; 1156-1157; 1207; 1428; Mantetsu-kai 1986: 205, 211-212, 224; 275, 278, 336; Mantetsu-kai 2007:252; South Manchuria Railway Company, Explanatory notes for the Imperial Diet, 1938: 128-129.

APPENDIX TABLE 4: CONSTRUCTION EXPENSES AND NET INCOME OF THE ENTIRE NETWORK OPERATED BY THE SMR 1925-1943 (YEN)

| Year | Construction expenses | | | Net income | | | ROIC |
|---|---|---|---|---|---|---|---|
| | CON | NRM | Total | CON | NRM | Total | (%) |
| 1925 | 220788864 | | 220788864 | 62448995 | | 62448995 | 28.28 |
| 1926 | 225039369 | | 225039369 | 67876905 | | 67876905 | 30.16 |
| 1927 | 239517926 | | 239517926 | 68008345 | | 68008345 | 28.39 |
| 1928 | 249703229 | | 249703229 | 74281024 | | 74281024 | 29.75 |
| 1929 | 261882378 | | 261882378 | 74890235 | | 74890235 | 28.60 |
| 1930 | 270230961 | | 270230961 | 58562154 | | 58562154 | 21.67 |
| 1931 | 272105357 | | 272105357 | 48185482 | | 48185482 | 17.71 |
| 1932 | 273663240 | | 273663240 | 65050665 | | 65050665 | 23.77 |
| 1933 | 274247805 | 208434848 | 482682653 | 75766354 | 3654502 | 79420856 | 16.45 |
| 1934 | 289776537 | 364417870 | 654194407 | 73243744 | 15942624 | 89186368 | 13.63 |
| 1935 | 305196571 | 626949667 | 932146238 | 84030382 | 20099457 | 104129839 | 11.17 |
| 1936 | 313667458 | 754744376 | 1068411834 | 79597221 | 21795440 | 101392661 | 9.49 |
| 1937 | 300114130 | 872640857 | 1172754987 | 89712967 | 28186454 | 117899421 | 10.05 |
| 1938 | 357299552 | 971706644 | 1329006196 | 97117066 | 43336864 | 140453929 | 10.57 |
| 1939 | 379249288 | 1157040762 | 1536290050 | 105922122 | 48171672 | 154093794 | 10.03 |
| 1940 | 444111082 | 1415000000 | 1859111082 | 144944831 | | 144944831 | 7.80 |
| 1941 | 584632162 | 1630000000 | 2214632162 | 150589397 | | 150589397 | 6.80 |
| 1942 | 627806000 | 1797000000 | 2424806000 | 199260867 | | 199260867 | 8.22 |
| 1943 | 684271000 | N/A | N/A | 229636472 | | 229636472 | N/A |

*Note:* Data for the amount of construction expenses for the NRM are not available for 1943.
*Sources:* As for Tables 2 and 3b; Yasutomi 1995: 211.

## Appendix Table 5: Operating Income and Expenses of the SMR'S Railway Department (CON), 1907-1943 (yen)

| Year | Operating income | Operating expenses | | | | | | | | | | Total expenses | Net income or losses | ROS (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Normal expenses | Weight of normal expenses to total expenses (%) | Special salaries | | | Depreciation and removal expenses | | | | | | | |
| | | | | Bonuses | Retirement service bonuses | Company houses expenses | Total | Depreciation expenses | Amount of removal | Extra depreciation expenses | Total | | | |
| 1907 | 9768887.11 | 6101614.87 | 98.92 | 66515.54 | — | — | 66515.54 | — | — | — | — | 6168130.41 | 3600756.71 | 36.86 |
| 1908 | 12537142.42 | 4925118.65 | 95.42 | 233907.58 | — | — | 233907.58 | — | 2381.32 | — | 2381.32 | 5161407.55 | 7375734.87 | 58.83 |
| 1909 | 15916198.08 | 5789560.47 | 94.79 | 263450.66 | 25707.55 | — | 289158.21 | — | 28772.63 | — | 28772.63 | 6107491.31 | 9808706.77 | 61.63 |
| 1910 | 15671604.84 | 6092451.82 | 88.73 | 287631.55 | 35822.83 | — | 323454.38 | — | 450187.70 | — | 450187.70 | 6866093.90 | 8805510.94 | 56.19 |
| 1911 | 17526287.86 | 6690936.76 | 91.84 | 310927.44 | 66410.66 | — | 377338.10 | — | 217417.02 | — | 217417.02 | 7285691.88 | 10240595.98 | 58.43 |
| 1912 | 19907456.28 | 7653630.98 | 88.36 | 326894.16 | 62897.73 | 425628.46 | 815420.35 | — | 193291.87 | — | 193291.87 | 8662343.20 | 11245113.08 | 56.49 |
| 1913 | 22275132.04 | 7752437.27 | 87.26 | 350939.49 | 61291.98 | 558045.77 | 970277.24 | — | 161511.10 | — | 161511.10 | 8884225.61 | 13390906.43 | 60.12 |
| 1914 | 23216721.52 | 8133226.78 | 85.94 | 492384.33 | 71507.36 | 554602.85 | 1118494.54 | — | 212059.43 | — | 212059.43 | 9463780.75 | 13752940.77 | 59.24 |
| 1915 | 23894203.79 | 8074167.42 | 87.24 | 457737.48 | 75793.98 | 546602.77 | 1080134.23 | — | 100352.97 | — | 100352.97 | 9254654.62 | 14639549.17 | 61.27 |
| 1916 | 27815348.54 | 7864697.09 | 81.90 | 520532.25 | 98193.84 | 548647.61 | 1167373.70 | — | 571242.18 | — | 571242.18 | 9603312.97 | 18212035.57 | 65.47 |
| 1917 | 34457922.72 | 10568184.30 | 84.84 | 622553.82 | 306350.79 | 668327.89 | 1597232.50 | — | 290549.73 | — | 290549.73 | 12455966.53 | 22001956.19 | 63.85 |
| 1918 | 44992871.67 | 16273036.88 | 86.11 | 740179.49 | 309343.68 | 809747.32 | 1859270.49 | — | 765119.96 | — | 765119.96 | 18897427.33 | 26095444.34 | 58.00 |
| 1919 | 67060720.03 | 30218709.30 | 91.08 | 1195799.19 | 309699.34 | 1145230.67 | 2650729.20 | — | 310228.26 | — | 310228.26 | 33179666.76 | 33881053.27 | 50.52 |
| 1920 | 85316806.02 | 32119733.85 | 84.60 | 1823907.82 | 1496483.39 | 1577575.87 | 4897967.08 | — | 948998.51 | — | 948998.51 | 37966699.44 | 47350106.58 | 55.50 |
| 1921 | 78204132.38 | 25891138.58 | 81.25 | 2167058.49 | 242260.20 | 1845077.31 | 4254396.00 | — | 1721120.57 | — | 1721120.57 | 31866655.15 | 46337477.23 | 59.25 |
| 1922 | 87813029.33 | 26031280.60 | 81.73 | 2191163.48 | 791133.62 | 1749795.07 | 4732092.17 | — | 1087398.41 | — | 1087398.41 | 31850771.18 | 55962258.15 | 63.73 |
| 1923 | 92269703.67 | 26320438.18 | 77.08 | 2425539.49 | 2465283.83 | 1861385.11 | 6752208.43 | — | 1075604.19 | — | 1075604.19 | 34148250.80 | 58121452.87 | 62.99 |
| 1924 | 92561732.31 | 27002783.43 | 81.39 | 2385381.61 | 767102.01 | 2027915.59 | 5180399.21 | — | 991864.63 | — | 991864.63 | 33175047.27 | 59386685.04 | 64.16 |
| 1925 | 97395227.54 | 26860667.01 | 76.86 | 2009038.01 | 1817452.69 | 1695096.74 | 5521587.44 | — | 2563978.14 | — | 2563978.14 | 34946232.59 | 62448994.95 | 64.12 |
| 1926 | 107923566.53 | 29603887.35 | 73.92 | 2052603.98 | 1153759.00 | 1929491.87 | 5135854.85 | 3152298.96 | 2154620.12 | — | 5306919.08 | 40046661.28 | 67876905.25 | 62.89 |
| 1927 | 113244180.15 | 31674737.26 | 70.02 | 2181613.61 | 2921949.71 | 2335326.15 | 7438889.47 | 3280081.54 | 2297648.41 | 544478.25 | 6122208.20 | 45235834.93 | 68008345.22 | 60.05 |
| 1928 | 118639089.54 | 30832456.46 | 69.51 | 2345934.95 | 944884.30 | 2796056.66 | 6086875.91 | 3998747.19 | 2858442.97 | 581542.63 | 7438732.79 | 44358065.16 | 74281024.43 | 62.61 |
| 1929 | 122103742.64 | 33171800.82 | 70.26 | 2456578.59 | 1461349.05 | 2703577.97 | 6621505.61 | 4296212.95 | 2735433.40 | 388554.94 | 7420201.29 | 47213507.72 | 74890234.92 | 61.33 |
| 1930 | 95330730.31 | 27628471.91 | 75.14 | 2541282.39 | 2021795.65 | 2073051.05 | 6636129.09 | 142073.22 | 2361784.42 | 117.80 | 2503975.44 | 36768576.44 | 58562153.87 | 61.43 |
| 1931 | 85476297.72 | 26202838.83 | 70.27 | 1676721.90 | 1491345.64 | 2107127.69 | 5275195.23 | 4595524.55 | | 1217256.87 | 5812781.42 | 37290815.48 | 48185482.24 | 56.37 |
| 1932 | 103846511.83 | 27942342.46 | 72.02 | 1794927.46 | 1852018.41 | 1816999.28 | 5463945.15 | 4714484.92 | | 675074.45 | 5389559.37 | 38795846.98 | 65050664.85 | 62.64 |
| 1933 | 119676741.02 | 31955367.70 | 72.77 | 2326719.71 | 1824862.28 | 1962281.40 | 6113863.39 | 4729441.57 | | 1111714.35 | 5841155.92 | 43910387.01 | 75766354.01 | 63.31 |
| 1934 | 126525376.05 | 36245906.22 | 68.03 | 2633590.56 | 1306275.76 | 3158679.08 | 7098545.40 | 7443004.43 | | 2494175.78 | 9937180.21 | 53281631.83 | 73243744.22 | 57.89 |
| 1935 | 134686175.98 | 37269081.55 | 73.57 | 2881950.76 | 1027402.53 | 3551245.42 | 7460598.71 | 4857039.72 | | 1069074.10 | 5926113.82 | 50655794.08 | 84030381.90 | 62.39 |
| 1936 | 133482465.69 | 39843952.27 | 73.94 | 3098715.87 | 1684155.32 | 3554469.08 | 8337340.27 | 4961834.29 | | 742118.20 | 5703952.49 | 53885245.03 | 79597220.66 | 59.63 |
| 1937 | 151053017.54 | 45384867.23 | 73.99 | 3236273.25 | 1667309.62 | 3668585.73 | 8572168.60 | 5335379.48 | | 2047634.81 | 7383014.29 | 61340050.12 | 89712967.42 | 59.39 |
| 1938 | 192745937.54 | 69327155.70 | 72.50 | 4472944.38 | 1723463.15 | 7423983.55 | 13620391.08 | 6121382.88 | | 6559942.15 | 12681325.03 | 95628871.81 | 97117065.73 | 50.39 |
| 1939 | 229829690.25 | 92560995.35 | 74.70 | 8063301.67 | 1351859.85 | 8420729.11 | 17835890.63 | 8979896.69 | | 4530785.32 | 13510682.01 | 123907567.99 | 105922122.26 | 46.09 |
| 1940 | 609979484.40 | — | | — | — | — | — | (19195421.80) | — | — | — | 465034653.50 | 144944831.00 | 23.76 |
| 1941 | 723433448.60 | — | | — | — | — | — | (25446773.60) | — | — | — | 572844051.30 | 150589397.30 | 20.82 |
| 1942 | 863920702.00 | — | | — | — | — | — | — | — | — | — | 667659835.00 | 199260867.00 | 23.06 |
| 1943 | 1022279539.00 | — | | — | — | — | — | — | — | — | — | 792643067.00 | 229636472.00 | 22.46 |

*Note:* The figures of net income for the CON during the period from 1936 to 1939 shown in Table 5 above differ slightly from those indicated in Table 3a. This is due to changes made in the classification of elements of operating income and operating expenses between departments. The figures of net income for the CON in Table 5 are based on the classification effective in each year while the figures of operating income and operating expenses in Table 3a are based on the classification in practice at the beginning of 1940. However, the differences are only minor.

*Sources:* South Manchuria Railway Company, Yearbook of Statistics 1939: 108-109; Business Reports, 1940-43; Mantetsu-kai 1986: 568.

## Appendix Table 6a: Income Structure of the SMR's Railway Department (CON), 1925-1943 (yen)

| Year | Income from passenger transportation | (%) | Income from freight transportation | (%) | Other income* | (%) | Total operating income | Net income | ROS (%) |
|---|---|---|---|---|---|---|---|---|---|
| 1925 | 14530942 | 14.92 | 80535820 | 82.69 | 2328466 | 2.39 | 97395228 | 62448994.9 | 64.12 |
| 1926 | 15216353 | 14.10 | 89513059 | 82.94 | 3194155 | 2.96 | 107923567 | 67876905.2 | 62.89 |
| 1927 | 16102953 | 14.22 | 94040819 | 83.04 | 3100408 | 2.74 | 113244180 | 68008345.2 | 60.05 |
| 1928 | 17619293 | 14.85 | 97738147 | 82.38 | 3281649 | 2.77 | 118639090 | 74281024.4 | 62.61 |
| 1929 | 17451585 | 14.29 | 101089474 | 82.79 | 3562683 | 2.92 | 122103743 | 74890234.9 | 61.33 |
| 1930 | 11461175 | 12.02 | 77936688 | 81.75 | 5932867 | 6.22 | 95330730 | 58562153.8 | 61.43 |
| 1931 | 9135663 | 10.69 | 70897756 | 82.94 | 5442879 | 6.37 | 85476298 | 48185482.2 | 56.37 |
| 1932 | 14812045 | 14.26 | 85022314 | 81.87 | 4012152 | 3.86 | 103846512 | 65050664.8 | 62.64 |
| 1933 | 18757364 | 15.67 | 94263019 | 78.76 | 6656358 | 5.56 | 119676741 | 75766354.0 | 63.31 |
| 1934 | 20332876 | 16.07 | 101489276 | 80.21 | 4703224 | 3.72 | 126525376 | 73243744.2 | 57.89 |
| 1935 | 22412222 | 16.64 | 103362261 | 76.74 | 8911692 | 6.62 | 134686176 | 84030381.9 | 62.39 |
| 1936 | 22302299 | 16.76 | 103165249 | 77.55 | 7565242 | 5.69 | 133032790 | 79147544.6 | 59.49 |
| 1937 | 24877527 | 16.55 | 115558375 | 76.87 | 9899849 | 6.59 | 150335752 | 88995701.4 | 59.20 |
| 1938 | 33940297 | 17.64 | 135088531 | 70.21 | 23378012 | 12.15 | 192406839 | 96777967.3 | 50.30 |
| 1939 | 50206761 | 21.85 | 153151205 | 66.64 | 26471725 | 11.52 | 229829691 | 107085408.7 | 46.59 |
| 1940 | 194843000 | 31.94 | 318876000 | 52.28 | 96260484 | 15.78 | 609979484 | 144944831.0 | 23.76 |
| 1941 | 223381000 | 30.88 | 391354000 | 54.10 | 108698449 | 15.03 | 723433449 | 150589397.3 | 20.82 |
| 1942 | 307691000 | 35.62 | 418454000 | 48.44 | 137775702 | 15.95 | 863920702 | 199260867.0 | 23.06 |
| 1943 | 436025000 | 42.24 | 429076000 | 41.57 | 167178539 | 16.20 | 1032279539 | 229636472.0 | 22.25 |

For *Note* and *Sources* see Table 6b below.

Appendix Table 6b: Income Structure of the Entire Railway Network Operated by the SMR, 1925-1943 (yen)

| Year | Income from passenger transportation | (%) | Income from freight transportation | (%) | Other income* | (%) | Total operating income | Net income | ROS (%) |
|---|---|---|---|---|---|---|---|---|---|
| 1925 | 14530942 | 14.92 | 80535820 | 82.69 | 2328466 | 2.39 | 97395228 | 62448995 | 64.12 |
| 1926 | 15216353 | 14.10 | 89513059 | 82.94 | 3194155 | 2.96 | 107923567 | 67876905 | 62.89 |
| 1927 | 16102953 | 14.22 | 94040819 | 83.04 | 3100408 | 2.74 | 113244180 | 68008345 | 60.05 |
| 1928 | 17619293 | 14.85 | 97738147 | 82.38 | 3281649 | 2.77 | 118639090 | 74281024 | 62.61 |
| 1929 | 17451585 | 14.29 | 101089474 | 82.79 | 3562683 | 2.92 | 122103743 | 74890235 | 61.33 |
| 1930 | 11461175 | 12.02 | 77936688 | 81.75 | 5932867 | 6.22 | 95330730 | 58562154 | 61.43 |
| 1931 | 9135663 | 10.69 | 70897756 | 82.94 | 5442879 | 6.37 | 85476298 | 48185482 | 56.37 |
| 1932 | 14812045 | 14.26 | 85022314 | 81.87 | 4012152 | 3.86 | 103846512 | 65050665 | 62.64 |
| 1933 | 33468705 | 19.27 | 130344543 | 75.05 | 9868385 | 5.68 | 173681633 | 79420856 | 45.73 |
| 1934 | 38184785 | 19.22 | 152002750 | 76.51 | 8487344 | 4.27 | 198674879 | 89186368 | 44.89 |
| 1935 | 51090474 | 20.83 | 176195776 | 71.82 | 18030822 | 7.35 | 245317073 | 104129839 | 42.45 |
| 1936 | 55842019 | 21.18 | 188640314 | 71.54 | 19198818 | 7.28 | 263681151 | 101392661 | 38.45 |
| 1937 | 66438880 | 21.67 | 217362917 | 70.91 | 22737221 | 7.42 | 306539019 | 117899421 | 38.46 |
| 1938 | 91158016 | 22.52 | 266194200 | 65.76 | 47457899 | 11.72 | 404810115 | 140453929 | 34.70 |
| 1939 | 150388455 | 28.47 | 320363129 | 60.65 | 57443907 | 10.88 | 528195491 | 154093794 | 29.17 |
| 1940 | 194843000 | 31.94 | 318876000 | 52.28 | 96260484 | 15.78 | 609979484 | 144944831 | 23.76 |
| 1941 | 223381000 | 30.88 | 391354000 | 54.10 | 108698449 | 15.03 | 723433449 | 150589397 | 20.82 |
| 1942 | 307691000 | 35.62 | 418454000 | 48.44 | 137775702 | 15.95 | 863920702 | 199260867 | 23.06 |
| 1943 | 436025000 | 42.24 | 429076000 | 41.57 | 167178539 | 16.20 | 1032279539 | 229636472 | 22.25 |

*Note:* Other income comprises income generated by other non-railway operations of the SMR's railway department, e.g. income from dinning cars, hotels and hospitals.
*Sources:* The same listed for Table 3a-3c.

## Appendix Table 7: Principal Items of Freight Carried on the Entire Network Under the Control of the SMR, 1924-1941 (000 tons)

| Year | Private cargo | | | | | | | | Weight of private cargo (%) | Military cargo | Weight of military cargo (%) | Company's own cargo | Weight of company's own cargo (%) | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Soya beans | Foxtail millet, wheat, and cereals | Wood | Coal | Iron ore | Minerals | Others | Total | | | | | | |
| 1924 | 1775 | 493 | 474 | 6380 | 87 | 141 | 3442 | 12792 | 93.73 | 19 | 0.14 | 837 | 6.13 | 13648 |
| 1925 | 2130 | 583 | 417 | 7269 | 78 | 227 | 3494 | 14198 | 94.65 | 8 | 0.05 | 795 | 5.30 | 15001 |
| 1926 | 2446 | 611 | 421 | 8011 | 80 | 277 | 3803 | 15649 | 93.61 | 14 | 0.08 | 1055 | 6.31 | 16718 |
| 1927 | 2566 | 539 | 557 | 8680 | 109 | 310 | 3656 | 16417 | 93.65 | 26 | 0.15 | 1087 | 6.20 | 17530 |
| 1928 | 2991 | 457 | 475 | 8937 | 163 | 351 | 3737 | 17111 | 92.18 | 14 | 0.08 | 1438 | 7.75 | 18563 |
| 1929 | 2002 | 356 | 291 | 7800 | 126 | 366 | 2875 | 13816 | 90.94 | 14 | 0.09 | 1363 | 8.97 | 15193 |
| 1930 | 2923 | 405 | 234 | 7326 | 125 | 289 | 2862 | 14164 | 91.65 | 275 | 1.78 | 1015 | 6.57 | 15454 |
| 1931 | 3142 | 377 | 292 | 7304 | 149 | 290 | 3580 | 15134 | 91.32 | 821 | 4.95 | 617 | 3.72 | 16572 |
| 1932 | 2558 | 445 | 480 | 8653 | 183 | 404 | 4726 | 17449 | 92.56 | 442 | 2.34 | 960 | 5.09 | 18851 |
| 1933 | 2768 | 529 | 657 | 9300 | 314 | 462 | 5558 | 19588 | 90.39 | 441 | 2.03 | 1642 | 7.58 | 21671 |
| 1934 | 2440 | 477 | 531 | 9571 | 383 | 735 | 5165 | 19302 | 92.00 | 349 | 1.66 | 1330 | 6.34 | 20981 |
| 1935 | 2139 | 459 | 490 | 9749 | 551 | 803 | 5604 | 19795 | 92.65 | 381 | 1.78 | 1190 | 5.57 | 21366 |
| 1936 | 2125 | 406 | 537 | 9512 | 591 | 1062 | 6276 | 20509 | 84.29 | 1834 | 7.54 | 1989 | 8.17 | 24332 |
| 1936 | 2643 | 1168 | 1706 | 11050 | 615 | 0 | 11460 | 28642 | 71.39 | 3968 | 9.89 | 7512 | 18.72 | 40122 |
| 1937 | 2952 | 1140 | 2090 | 11890 | 843 | 0 | 13984 | 32899 | 68.75 | 7070 | 14.77 | 7886 | 16.48 | 47855 |
| 1938 | 2207 | 1344 | 3189 | 12055 | 1052 | 874 | 16493 | 37214 | 63.12 | 9539 | 16.18 | 12208 | 20.71 | 58961 |
| 1939 | 1350 | 669 | 3572 | 13110 | 1229 | 1057 | 16523 | 37510 | 59.18 | 11898 | 18.77 | 13979 | 22.05 | 63387 |
| 1940 | 1406 | 1004 | 3438 | 15795 | 1783 | 820 | 15413 | 39659 | 53.18 | 20517 | 27.51 | 14400 | 19.31 | 74576 |
| 1941 | 1519 | 674 | 3414 | 17212 | 2563 | 1114 | 17853 | 44349 | 52.52 | 21968 | 26.02 | 18126 | 21.47 | 84443 |

*Note:* Data to 1936 apply just to the CON; following the creation of the Total Railway Bureau by in October 1936, data refer to the entire network operated by the SMR, i.e. including the NRM and the NKR.
*Sources:* Mantetsu-kai 2007: 250-251.

## Appendix Table 8: Major Expenditure Items Requiring Funding by the SMR, 1934-1943 (yen)

| Year | Construction expenses | Percent | Annual increase in loans (including those to the State of Manchuria) | Percent | Annual increase in investments | Percent | Dividend Payments | Percent | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1934 | 70,270,632 | 26.83 | 131,746,565 | 50.31 | 26,583,892 | 10.15 | 33,270,014 | 12.70 | 261,871,103 |
| 1935 | 55,950,273 | 21.96 | 122,717,638 | 48.18 | 39,907,976 | 15.67 | 36,150,014 | 14.19 | 254,725,901 |
| 1936 | 51,749,004 | 26.39 | 103,872,056 | 52.97 | 1,433,006 | 0.73 | 39,030,014 | 19.90 | 196,084,080 |
| 1937 | 50,280,013 | 26.86 | 143,757,057 | 76.79 | -49,285,291 | -26.33 | 42,463,461 | 22.68 | 187,215,240 |
| 1938 | 79,583,615 | 25.72 | 179,794,227 | 58.11 | 5,128,968 | 1.66 | 44,901,121 | 14.51 | 309,407,930 |
| 1939 | 94,221,391 | 21.63 | 237,415,938 | 54.51 | 57,435,730 | 13.19 | 46,453,435 | 10.67 | 435,526,493 |
| 1940 | 115,971,706 | 28.06 | 202,512,545 | 49.00 | 43,672,614 | 10.57 | 51,104,749 | 12.37 | 413,261,614 |
| 1941 | 91,441,963 | 22.21 | 226,953,696 | 55.11 | 35,860,262 | 8.71 | 57,546,121 | 13.97 | 411,802,042 |
| 1942 | 128,810,000 | 26.30 | 257,631,722 | 52.61 | 38,484,995 | 7.86 | 64,758,782 | 13.22 | 489,685,499 |
| 1943 | 91,773,000 | 15.06 | 411,698,324 | 67.56 | 33,621,054 | 5.52 | 72,305,501 | 11.87 | 609,397,878 |
| Average | | 24.10 | | 56.52 | | 4.77 | | 14.61 | |

*Note:* Construction expenses are gross except for 1943, where they are the net increase after the deduction of depreciation.
*Sources:* South Manchuria Railway Company, Business Reports, 1933-1943.

## Appendix Table 9: Major Sources of Funds Raised by the SMR, 1934-1943 (yen)

| Year | Annual increase in the amount of paid in capital | Percent | Annual increase in the amount of debentures | Percent | Net income for the year | Percent | Depreciation | Percent | Annual increase in arears | Percent | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1934 | 36,000,000 | 12.88 | 160,275,000 | 57.35 | 46,467,457 | 16.63 | 28,109,580 | 10.06 | 8616500 | 3.08 | 279,468,537 |
| 1935 | 36,000,000 | 16.12 | 114,775,000 | 51.38 | 49,624,142 | 22.22 | 26,585,203 | 11.90 | -3614431 | -1.62 | 223,369,914 |
| 1936 | 36,000,000 | 14.89 | 124,775,000 | 51.59 | 50,173,971 | 20.75 | 20,062,522 | 8.30 | 10833583 | 4.48 | 241,845,076 |
| 1937 | 56,000,000 | 32.03 | 20,775,000 | 11.88 | 73,929,495 | 42.28 | 26,548,866 | 15.18 | -2406647 | -1.38 | 174,846,714 |
| 1938 | 20,000,000 | 6.93 | 153,875,000 | 53.30 | 72,875,185 | 25.25 | 34,800,438 | 12.06 | 7120970 | 2.47 | 288,671,593 |
| 1939 | 40,000,000 | 9.46 | 215,165,000 | 50.90 | 77,848,456 | 18.41 | 49,800,763 | 11.78 | 39940559 | 9.45 | 422,754,777 |
| 1940 | 120,000,000 | 25.99 | 237,355,000 | 51.40 | 76,711,108 | 16.61 | 16,284,810 | 3.53 | 11419489 | 2.47 | 461,770,407 |
| 1941 | 100,000,000 | 21.44 | 270,755,000 | 58.06 | 72,131,419 | 15.47 | 19,278,845 | 4.13 | 4204410 | 0.90 | 466,369,674 |
| 1942 | 130,000,000 | 26.84 | 236,305,000 | 48.80 | 84,888,309 | 17.53 | 24,884,000 | 5.14 | 8187570 | 1.69 | 484,264,879 |
| 1943 | 130,000,000 | 24.60 | 255,655,000 | 48.37 | 92,956,889 | 17.59 | | 0.00 | 49922279 | 9.45 | 528,534,168 |
| Average | | 19.12 | | 48.30 | | 21.27 | | 9.12 | | 3.10 | |

*Note:* The amount of depreciation for 1943was offset against to the amount of construction expenses for the year as indicated in Table 10. Average of the amount of depreciation is thus for the period from 1934 to 1942.
*Sources:* South Manchuria Railway Company, Business Reports, 1933-1943.

APPENDIX TABLE 10: COMPOSITION OF THE PAID-UP EQUITY CAPITAL OF THE SMR, 1909-1943 (YEN)

| Year | Payment made by the government | | Payment made by the private sector | | Total |
|---|---|---|---|---|---|
| | amount | percent | amount | percent | |
| 1909 | 100,000,000 | 98.04 | 2,000,000 | 1.96 | 102,000,000 |
| 1910 | 100,000,000 | 98.04 | 2,000,000 | 1.96 | 102,000,000 |
| 1911 | 100,000,000 | 98.04 | 2,000,000 | 1.96 | 102,000,000 |
| 1912 | 100,000,000 | 91.74 | 9,000,000 | 8.26 | 109,000,000 |
| 1913 | 100,000,000 | 85.00 | 17,640,457 | 15.00 | 117,640,457 |
| 1914 | 100,000,000 | 80.86 | 23,666,663 | 19.14 | 123,666,663 |
| 1915 | 100,000,000 | 79.37 | 26,000,000 | 20.63 | 126,000,000 |
| 1916 | 100,000,000 | 76.92 | 30,000,000 | 23.08 | 130,000,000 |
| 1917 | 100,000,000 | 71.60 | 39,666,663 | 28.40 | 139,666,663 |
| 1918 | 100,000,000 | 65.79 | 52,000,000 | 34.21 | 152,000,000 |
| 1919 | 100,000,000 | 60.18 | 66,166,670 | 39.82 | 166,166,670 |
| 1920 | 147,186,568 | 62.35 | 88,876,710 | 37.65 | 236,063,278 |
| 1921 | 217,156,000 | 70.24 | 92,000,000 | 29.76 | 309,156,000 |
| 1922 | 217,156,000 | 68.04 | 102,000,000 | 31.96 | 319,156,000 |
| 1923 | 217,156,000 | 67.62 | 104,000,000 | 32.38 | 321,156,000 |
| 1924 | 217,156,000 | 67.62 | 104,000,000 | 32.38 | 321,156,000 |
| 1925 | 217,156,000 | 67.06 | 106,666,670 | 32.94 | 323,822,670 |
| 1926 | 217,156,000 | 64.41 | 120,000,000 | 35.59 | 337,156,000 |
| 1927 | 217,156,000 | 62.73 | 129,000,000 | 37.27 | 346,156,000 |
| 1928 | 217,156,000 | 60.55 | 141,506,845 | 39.45 | 358,662,845 |
| 1929 | 217,156,000 | 56.09 | 170,000,000 | 43.91 | 387,156,000 |
| 1930 | 217,156,000 | 56.09 | 170,000,000 | 43.91 | 387,156,000 |
| 1931 | 217,156,000 | 56.09 | 170,000,000 | 43.91 | 387,156,000 |
| 1932 | 217,156,000 | 53.78 | 186,666,663 | 46.22 | 403,822,663 |
| 1933 | 244,673,159 | 50.93 | 235,768,725 | 49.07 | 480,441,884 |
| 1934 | 256,207,991 | 48.32 | 274,000,000 | 51.68 | 530,207,991 |
| 1935 | 256,207,991 | 45.25 | 310,000,000 | 54.75 | 566,207,991 |
| 1936 | 256,207,991 | 42.54 | 346,000,000 | 57.46 | 602,207,991 |
| 1937 | 268,701,151 | 41.29 | 382,000,000 | 58.71 | 650,701,151 |
| 1938 | 291,221,693 | 42.13 | 400,000,000 | 57.87 | 691,221,693 |
| 1939 | 326,262,641 | 44.92 | 400,000,000 | 55.08 | 726,262,641 |
| 1940 | 386,235,395 | 47.61 | 424,931,513 | 52.39 | 811,166,908 |
| 1941 | 441,221,693 | 48.16 | 475,000,000 | 51.84 | 916,221,693 |
| 1942 | 513,742,257 | 49.46 | 525,000,000 | 50.54 | 1,038,742,257 |
| 1943 | 593,803,634 | 50.80 | 575,000,000 | 49.20 | 1,168,803,634 |

*Note:* The amounts in this table have been calculated on basis of dividend payments made to each category and the rate of such dividend.
*Sources:* South Manchuria Railway Company, Yearbook of Statistics 1939: 48-49; Business Reports, 1940-43; Mantetsu-kai 1986: 573.

## Appendix Table 11: Paid-up Capital, Corporate Debentures, Net Income and Dividend Payments of the SMR, 1907-1943 (yen)

| Year | Paid-up capital | | Corporate Debentures | | Total amount of fixed capital accumulated | Net income | Net income of railway department | Weight of railway department (%) | ROIC of the entire SMR (%) | Dividend payments Government | | Other shareholders | | Total amount |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Accumulated amount | Annual net increase | Accumulated amount | Annual net increase | | | | | | Amount | Rate of paid-up capital (%) | Amount | Rate of paid-up capital (%) | |
| 1907 | 102000000 | | 39052000 | | 141052000 | 2016585 | 3600757 | 178.56 | 1.43 | 0 | 0 | 120000 | 6 | 120000 |
| 1908 | 102000000 | 0 | 78104000 | 39052000 | 180104000 | 2113582 | 7375735 | 348.97 | 1.17 | 0 | 0 | 120000 | 6 | 120000 |
| 1909 | 102000000 | 0 | 78104000 | 0 | 180104000 | 5771699 | 9808707 | 169.94 | 3.20 | 2500000 | 2.50 | 120000 | 6 | 2620000 |
| 1910 | 102000000 | 0 | 136682000 | 58578000 | 238682000 | 3708316 | 8805511 | 237.45 | 1.55 | 1500000 | 1.50 | 120000 | 6 | 1620000 |
| 1911 | 102000000 | 0 | 117156000 | -19526000 | 219156000 | 3667428 | 10240596 | 279.23 | 1.67 | 1800000 | 1.80 | 120000 | 6 | 1920000 |
| 1912 | 112000000 | 10000000 | 117156000 | 0 | 229156000 | 4926045 | 11245113 | 228.28 | 2.15 | 2000000 | 2.00 | 540000 | 6 | 2540000 |
| 1913 | 120000000 | 8000000 | 117156000 | 0 | 237156000 | 7167279 | 13390906 | 186.83 | 3.02 | 2500000 | 2.50 | 1234832 | 7 | 3734832 |
| 1914 | 124000000 | 4000000 | 117156000 | 0 | 241156000 | 7541091 | 13752941 | 182.37 | 3.13 | 2500000 | 2.50 | 1893333 | 8 | 4393333 |
| 1915 | 128000000 | 4000000 | 117156000 | 0 | 245156000 | 8080499 | 14639549 | 181.17 | 3.30 | 2500000 | 2.50 | 2080000 | 8 | 4580000 |
| 1916 | 132000000 | 4000000 | 117156000 | 0 | 249156000 | 10107608 | 18212036 | 180.18 | 4.06 | 2500000 | 2.50 | 2400000 | 8 | 4900000 |
| 1917 | 142000000 | 10000000 | 127356000 | 10200000 | 269356000 | 14925643 | 22001956 | 147.41 | 5.54 | 2500000 | 2.50 | 3173333 | 8 | 5673333 |
| 1918 | 154000000 | 12000000 | 137156000 | 9800000 | 291156000 | 22193171 | 26095444 | 117.58 | 7.62 | 3500000 | 3.50 | 5200000 | 10 | 8700000 |
| 1919 | 180000000 | 26000000 | 197156000 | 60000000 | 377156000 | 24374964 | 33881053 | 139.00 | 6.46 | 3500000 | 3.50 | 6616667 | 10 | 10116667 |
| 1920 | 309156000 | 129156000 | 145000000 | -52156000 | 454156000 | 27391985 | 47350107 | 172.86 | 6.03 | 5445903 | 3.70 | 8887671 | 10 | 14333574 |
| 1921 | 309156000 | 0 | 175000000 | 30000000 | 484156000 | 31386139 | 46337477 | 147.64 | 6.48 | 9337708 | 4.30 | 9200000 | 10 | 18537708 |
| 1922 | 321156000 | 12000000 | 195000000 | 20000000 | 516156000 | 35080244 | 55962258 | 159.53 | 6.80 | 9337708 | 4.30 | 10200000 | 10 | 19537708 |
| 1923 | 321156000 | 0 | 219052000 | 24052000 | 540208000 | 34795592 | 58121453 | 167.04 | 6.44 | 9337708 | 4.30 | 10400000 | 10 | 19737708 |
| 1924 | 321156000 | 0 | 254052000 | 35000000 | 575208000 | 34552914 | 59386685 | 171.87 | 6.01 | 9337708 | 4.30 | 10400000 | 10 | 19737708 |
| 1925 | 337156000 | 16000000 | 243752000 | -10300000 | 580908000 | 34865280 | 62448995 | 179.12 | 6.00 | 9337708 | 4.30 | 10666667 | 10 | 20004375 |
| 1926 | 337156000 | 0 | 268452000 | 24700000 | 605608000 | 34157884 | 67876905 | 198.72 | 5.64 | 9337708 | 4.30 | 12000000 | 10 | 21337708 |
| 1927 | 355156000 | 18000000 | 278152000 | 9700000 | 633308000 | 36274323 | 68008345 | 187.48 | 5.73 | 9337708 | 4.30 | 12900000 | 10 | 22237708 |
| 1928 | 387156000 | 32000000 | 277627000 | -525000 | 664783000 | 42552861 | 74281024 | 174.56 | 6.40 | 11509268 | 5.30 | 15565753 | 11 | 27075021 |
| 1929 | 387156000 | 0 | 277102000 | -525000 | 664258000 | 45505857 | 74890235 | 164.57 | 6.85 | 11509268 | 5.30 | 18700000 | 11 | 30209268 |
| 1930 | 387156000 | 0 | 296577000 | 19475000 | 683733000 | 21673462 | 58562154 | 270.20 | 3.17 | 9337708 | 4.30 | 13600000 | 8 | 22937708 |
| 1931 | 387156000 | 0 | 316052000 | 19475000 | 703208000 | 12598620 | 48185482 | 382.47 | 1.79 | 4343120 | 2.00 | 10200000 | 6 | 14543120 |
| 1932 | 412156000 | 25000000 | 389527000 | 73475000 | 801683000 | 61287725 | 65050665 | 106.14 | 7.64 | 9337708 | 4.30 | 14933333 | 8 | 24271041 |
| 1933 | 512208000 | 100052000 | 377350000 | -12177000 | 889558000 | 42920554 | 75766354 | 176.53 | 4.82 | 10765619 | 4.40 | 18861498 | 8 | 29627116 |
| 1934 | 548208000 | 36000000 | 537625000 | 160275000 | 1085833000 | 46467457 | 73243744 | 157.62 | 4.28 | 11350014 | 4.43 | 21920000 | 8 | 33270014 |
| 1935 | 584208000 | 36000000 | 652400000 | 114775000 | 1236608000 | 49624142 | 84030382 | 169.33 | 4.01 | 11350014 | 4.43 | 24800000 | 8 | 36150014 |
| 1936 | 620208000 | 36000000 | 777175000 | 124775000 | 1397383000 | 50173971 | 79597221 | 158.64 | 3.59 | 11350014 | 4.43 | 27680000 | 8 | 39030014 |
| 1937 | 676208000 | 56000000 | 797950000 | 20775000 | 1474158000 | 73929495 | 89712967 | 121.35 | 5.02 | 11903461 | 4.43 | 30560000 | 8 | 42463461 |
| 1938 | 696208000 | 20000000 | 951825000 | 153875000 | 1648033000 | 72875185 | 97117066 | 133.26 | 4.42 | 12901121 | 4.43 | 32000000 | 8 | 44901121 |
| 1939 | 736208000 | 40000000 | 1166990000 | 215165000 | 1903198000 | 77848456 | 105922122 | 136.06 | 4.09 | 14453435 | 4.43 | 32000000 | 8 | 46453435 |
| 1940 | 856208000 | 120000000 | 1404345000 | 237355000 | 2260553000 | 76711108 | 144944831 | 188.95 | 3.39 | 17110228 | 4.43 | 33994521 | 8 | 51104749 |
| 1941 | 956208000 | 100000000 | 1675100000 | 270755000 | 2631308000 | 72131419 | 150589397 | 208.77 | 2.74 | 19546121 | 4.43 | 38000000 | 8 | 57546121 |
| 1942 | 1086208000 | 130000000 | 1911405000 | 236305000 | 2997613000 | 84888309 | 199260867 | 234.73 | 2.83 | 22758782 | 4.43 | 42000000 | 8 | 64758782 |
| 1943 | 1216208000 | 130000000 | 2167060000 | 255655000 | 3383268000 | 92956889 | 229636472 | 247.04 | 2.75 | 26305501 | 4.43 | 46000000 | 8 | 72305501 |

*Sources:* South Manchuria Railway Company, Yearbook of Statistics 1939: 48-49; Business Reports, 1940-43;Mantetsu-kai 1986: 573.

# Appendix Table 12: Operating Income and Expenses of Major Departments of the SMR 1907-1943 (thousand yen)

| Year | Railway | | | | | | Ports | | | | | | Mining | | | | | | Local administration | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Operating income | | Operating expenses | | Net income | | Operating income | | Operating expenses | | Net income | | Operating income | | Operating expenses | | Net income | | Operating income | | Operating expenses | | Net income | |
| 1907 | 966 9 | 77.09% | 610 2 | 57.97% | 369 6 | 183 .33% | 573 | 4.57% | 564 | 5.36% | 154 | 7.64% | 148 4 | 11.83% | 93 1 | 8.84% | 553 | 27.43% | 121 | 0.96% | 251 | 2.38% | -130 | -6.45% |
| 1908 | 1253 7 | 71.17% | 516 1 | 33.29% | 762 2 | 360 .72% | 1021 | 5.80% | 846 | 5.46% | 175 | 8.28% | 270 3 | 15.34% | 167 5 | 10.81% | 102 8 | 48.65% | 274 | 1.56% | 400 | 2.58% | -125 | -5.92% |
| 1909 | 1501 7 | 64.97% | 581 8 | 33.55% | 919 8 | 159 .38% | 1381 | 5.97% | 1134 | 6.54% | 248 | 4.30% | 402 6 | 17.42% | 279 6 | 16.12% | 123 0 | 21.31% | 371 | 1.61% | 601 | 3.47% | -230 | -3.99% |
| 1910 | 1567 2 | 63.25% | 654 3 | 31.06% | 947 1 | 255 .42% | 1213 | 4.90% | 1102 | 5.23% | 111 | 2.99% | 574 9 | 23.20% | 408 2 | 19.37% | 166 7 | 44.96% | 444 | 1.79% | 941 | 4.47% | -497 | -13.40% |
| 1911 | 1752 6 | 62.25% | 690 8 | 28.21% | 1061 8 | 289 .48% | 1257 | 4.46% | 1160 | 4.74% | 97 | 2.64% | 646 4 | 22.96% | 428 5 | 17.50% | 217 9 | 59.41% | 468 | 1.66% | 1083 | 4.42% | -615 | -16.77% |
| 1912 | 1990 7 | 59.34% | 784 7 | 27.42% | 1206 0 | 244 .82% | 1689 | 5.03% | 1489 | 5.20% | 200 | 4.06% | 919 4 | 27.41% | 734 7 | 25.67% | 184 7 | 37.49% | 633 | 1.89% | 1401 | 4.90% | -768 | -15.59% |
| 1913 | 2227 5 | 52.51% | 791 4 | 22.45% | 1436 1 | 200 .38% | 1912 | 4.51% | 1729 | 4.90% | 183 | 2.55% | 1437 2 | 33.88% | 1257 2 | 35.67% | 180 1 | 25.13% | 901 | 2.12% | 1952 | 5.54% | -1051 | -14.66% |
| 1914 | 2321 7 | 51.97% | 834 5 | 22.48% | 1487 1 | 197 .20% | 2291 | 5.13% | 1964 | 5.29% | 327 | 4.34% | 1407 6 | 31.51% | 1185 9 | 31.94% | 221 7 | 29.40% | 1779 | 3.98% | 2864 | 7.71% | -1086 | -14.40% |
| 1915 | 2389 4 | 54.57% | 817 5 | 22.90% | 1572 0 | 194 .55% | 2293 | 5.24% | 1922 | 5.38% | 371 | 4.59% | 1264 8 | 28.89% | 1064 1 | 29.80% | 200 7 | 24.84% | 1518 | 3.47% | 2492 | 6.98% | -974 | -12.05% |
| 1916 | 2781 5 | 53.08% | 843 6 | 19.95% | 1937 9 | 191 .74% | 2502 | 4.77% | 2138 | 5.05% | 364 | 3.60% | 1597 3 | 30.48% | 1389 6 | 32.85% | 207 7 | 20.55% | 1480 | 2.82% | 2747 | 6.49% | -1268 | -12.55% |
| 1917 | 3445 8 | 49.63% | 1085 9 | 19.92% | 2359 9 | 158 .12% | 3500 | 5.04% | 3107 | 5.70% | 393 | 2.63% | 2036 8 | 29.34% | 1504 8 | 27.61% | 532 0 | 35.64% | 1930 | 2.78% | 3539 | 6.49% | -1608 | -10.77% |
| 1918 | 4499 3 | 46.74% | 1703 8 | 23.00% | 2795 5 | 125 .96% | 4533 | 4.71% | 4494 | 6.07% | 39 | 0.18% | 3259 7 | 33.86% | 2551 5 | 34.45% | 708 2 | 31.91% | 2545 | 2.64% | 4952 | 6.69% | -2407 | -10.85% |
| 1919 | 6706 1 | 43.79% | 3052 9 | 23.71% | 3653 2 | 149 .87% | 6071 | 3.96% | 7405 | 5.75% | -1335 | -5.48% | 6120 1 | 39.97% | 4777 9 | 37.11% | 1342 2 | 55.06% | 3446 | 2.25% | 7662 | 5.95% | -4216 | -17.30% |
| 1920 | 8531 7 | 48.83% | 3676 0 | 24.95% | 4855 7 | 177 .27% | 7304 | 4.18% | 7867 | 5.34% | -563 | -2.06% | 6067 0 | 34.72% | 5486 8 | 37.24% | 580 2 | 21.18% | 3991 | 2.28% | 10150 | 6.89% | -6160 | -22.49% |
| 1921 | 7820 4 | 53.16% | 3317 3 | 28.67% | 4503 1 | 143 .47% | 7581 | 5.15% | 6912 | 5.97% | 669 | 2.13% | 4000 4 | 27.19% | 3670 8 | 31.72% | 329 6 | 10.59% | 3954 | 2.69% | 10386 | 8.98% | -6432 | -20.49% |
| 1922 | 8781 3 | 51.67% | 3416 9 | 25.33% | 5364 4 | 152 .92% | 8675 | 5.10% | 7392 | 5.48% | 1283 | 3.65% | 5314 0 | 31.27% | 4642 4 | 34.42% | 671 6 | 19.14% | 3995 | 2.35% | 10832 | 8.03% | -6836 | -19.49% |
| 1923 | 9227 0 | 49.69% | 3578 8 | 23.72% | 5648 2 | 162 .33% | 7893 | 4.25% | 7819 | 5.18% | 74 | 0.21% | 6391 5 | 34.42% | 5983 7 | 39.65% | 407 8 | 11.72% | 4524 | 2.44% | 12821 | 8.50% | -8298 | -23.85% |
| 1924 | 9256 2 | 47.67% | 3655 3 | 22.90% | 5600 8 | 162 .09% | 8763 | 4.51% | 8687 | 5.44% | 76 | 0.22% | 6869 8 | 35.38% | 6059 5 | 37.96% | 810 3 | 23.45% | 4363 | 2.25% | 14127 | 8.85% | -9764 | -28.26% |
| 1925 | 9739 5 | 48.31% | 3880 1 | 23.27% | 5859 5 | 168 .06% | 9656 | 4.79% | 9023 | 5.41% | 633 | 1.82% | 6845 3 | 33.96% | 6198 6 | 37.18% | 646 7 | 18.55% | 4531 | 2.25% | 15938 | 9.56% | -11407 | -32.72% |
| 1926 | 10792 4 | 50.05% | 4595 2 | 25.32% | 6197 2 | 181 .43% | 9931 | 4.61% | 8937 | 4.93% | 994 | 2.91% | 7615 4 | 35.32% | 7066 5 | 38.94% | 548 9 | 16.07% | 5241 | 2.43% | 17808 | 9.81% | -12567 | -36.79% |
| 1927 | 11324 4 | 49.12% | 4523 6 | 23.28% | 6800 8 | 187 .48% | 10276 | 4.46% | 9306 | 4.79% | 970 | 2.67% | 8278 7 | 35.91% | 7303 9 | 37.59% | 974 8 | 26.87% | 6098 | 2.64% | 19104 | 9.83% | -13006 | -35.85% |
| 1928 | 11863 9 | 49.34% | 4435 8 | 22.42% | 7428 1 | 174 .56% | 10785 | 4.49% | 8324 | 4.21% | 2462 | 5.79% | 8716 8 | 36.26% | 7556 5 | 38.19% | 1160 3 | 27.27% | 6230 | 2.59% | 19425 | 9.82% | -13195 | -31.01% |
| 1929 | 12210 4 | 50.67% | 4721 4 | 24.15% | 7489 0 | 164 .57% | 12276 | 5.09% | 8719 | 4.46% | 3557 | 7.82% | 8436 5 | 35.01% | 7209 0 | 36.88% | 1227 5 | 26.97% | 4690 | 1.95% | 18288 | 9.35% | -13599 | -29.88% |
| 1930 | 9533 1 | 50.68% | 3676 9 | 22.09% | 5856 2 | 270 .21% | 8559 | 4.55% | 6738 | 4.05% | 1821 | 8.40% | 6244 1 | 33.19% | 6062 8 | 36.43% | 181 3 | 8.37% | 4586 | 2.44% | 15305 | 9.20% | -10719 | -49.46% |
| 1931 | 8547 6 | 45.70% | 3729 1 | 21.38% | 4818 5 | 382 .45% | 8358 | 4.47% | 7069 | 4.05% | 1289 | 10.23% | 5273 2 | 28.19% | 5271 5 | 30.22% | 17 | 0.13% | 4489 | 2.40% | 15366 | 8.81% | -10877 | -86.33% |
| 1932 | 10384 7 | 42.22% | 3879 6 | 21.01% | 6505 1 | 106 .14% | 11406 | 4.64% | 8367 | 4.53% | 3039 | 4.96% | 5508 6 | 22.40% | 5494 6 | 29.76% | 538 | 0.88% | 4824 | 1.96% | 16511 | 8.94% | -11687 | -19.07% |
| 1933 | 11967 7 | 48.26% | 4391 0 | 21.41% | 7576 6 | 176 .52% | 13034 | 5.26% | 9817 | 4.79% | 3217 | 7.50% | 7097 6 | 28.62% | 6596 0 | 32.16% | 501 6 | 11.69% | 6185 | 2.49% | 16855 | 8.22% | -10670 | -24.86% |
| 1934 | 12652 5 | 46.75% | 5328 2 | 23.77% | 7324 4 | 157 .63% | 15730 | 5.81% | 12150 | 5.42% | 3580 | 7.70% | 8552 6 | 31.60% | 7513 4 | 33.51% | 1039 1 | 22.36% | 7274 | 2.69% | 20950 | 9.34% | -13676 | -29.43% |
| 1935 | 13468 6 | 44.57% | 5065 6 | 20.06% | 8403 0 | 169 .33% | 14394 | 4.76% | 10799 | 4.28% | 3595 | 7.24% | 9256 0 | 30.63% | 7986 2 | 31.62% | 1269 8 | 25.59% | 9407 | 3.11% | 23625 | 9.36% | -14218 | -28.65% |
| 1936 | 13348 2 | 44.64% | 5388 5 | 21.65% | 7959 7 | 158 .64% | 15229 | 5.09% | 11282 | 4.53% | 3946 | 7.86% | 8794 4 | 29.41% | 7569 4 | 30.41% | 1225 0 | 24.42% | 9473 | 3.17% | 26107 | 10.49% | -16634 | -33.15% |
| 1937 | 15105 3 | 42.54% | 6134 0 | 21.82% | 8971 3 | 121 .35% | 17724 | 4.99% | 12773 | 4.54% | 4951 | 6.70% | 91177 | 25.68% | 8067 2 | 28.70% | 1050 5 | 14.21% | 9063 | 2.55% | 20085 | 7.14% | -11022 | -14.91% |
| 1938 | 19274 6 | 49.75% | 9562 9 | 30.40% | 97117 | 133 .27% | 23084 | 5.96% | 17189 | 5.46% | 5895 | 8.09% | 10578 5 | 27.31% | 8920 6 | 28.36% | 1657 9 | 22.75% | | | | | | |
| 1939 | 22983 0 | 52.13% | 12390 8 | 34.13% | 10592 2 | 136 .06% | 28974 | 6.57% | 26031 | 7.17% | 2943 | 3.78% | 9135 0 | 20.72% | 8009 0 | 22.06% | 1126 0 | 14.46% | | | | | | |
| 1940 | 60997 9 | 76.31% | 46503 4 | 64.36% | 14494 5 | 188 .95% | 26174 | 3.27% | 24504 | 3.39% | 1670 | 2.18% | 8164 6 | 10.21% | 6815 9 | 9.43% | 1348 7 | 17.58% | | | | | | |
| 1941 | 72343 3 | 77.15% | 57284 4 | 66.18% | 15058 9 | 208 .77% | 30046 | 3.20% | 28683 | 3.31% | 1364 | 1.89% | 9434 3 | 10.06% | 8032 2 | 9.28% | 1402 1 | 19.44% | | | | | | |
| 1942 | 86392 1 | 78.09% | 66766 0 | 65.37% | 19926 1 | 234 .73% | 31806 | 2.88% | 31850 | 3.12% | -44 | -0.05% | 11155 9 | 10.08% | 9716 7 | 9.51% | 1439 3 | 16.96% | | | | | | |
| 1943 | 102228 0 | 78.85% | 79264 3 | 65 .86% | 22963 6 | 247 .03% | 26887 | 2.07% | 33132 | 2.75% | -6244 | -6.72% | 11829 4 | 9.12% | 11319 0 | 9.41% | 510 5 | 5.49% | | | | | | |

| Year | Oil | | | | | | Iron | | | | | | Net interest payments | | | | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Operating income | | Operating expenses | | Net income | | Operating income | | Operating expenses | | Net income | | Operating income | | Operating expenses | | Net income | | Operating income | Operating expenses | Net income |
| 1907 | | | | | | | | | | | | | 0 | 0.00% | 1094 | 10.39% | -1094 | -54.27% | 12543 | 10527 | 2016 |
| 1908 | | | | | | | | | | | | | 0 | 0.00% | 5372 | 34.65% | -5372 | -254.24% | 17615 | 15502 | 2113 |
| 1909 | | | | | | | | | | | | | 1359 | 5.88% | 4082 | 23.54% | -2723 | -47.18% | 23114 | 17343 | 5771 |
| 1910 | | | | | | | | | | | | | 433 | 1.75% | 4823 | 22.89% | -4390 | -118.39% | 24777 | 21069 | 3708 |
| 1911 | | | | | | | | | | | | | 787 | 2.80% | 6067 | 24.78% | -5280 | -143.95% | 28155 | 24487 | 3668 |
| 1912 | | | | | | | | | | | | | 265 | 0.79% | 5905 | 20.63% | -5640 | -114.49% | 33546 | 28620 | 4926 |
| 1913 | | | | | | | | | | | | | 746 | 1.76% | 6245 | 17.72% | -5499 | -76.73% | 42417 | 35250 | 7167 |
| 1914 | | | | | | | | | | | | | 625 | 1.40% | 6245 | 16.82% | -5620 | -74.53% | 44671 | 37130 | 7541 |
| 1915 | | | | | | | | | | | | | 381 | 0.87% | 4105 | 11.50% | -3724 | -46.09% | 43786 | 35706 | 8080 |
| 1916 | | | | | | | | | | | | | 132 | 0.25% | 6925 | 16.37% | -6793 | -67.21% | 52402 | 42295 | 10107 |
| 1917 | | | | | | | | | | | | | 1205 | 1.74% | 8693 | 15.95% | -7488 | -50.17% | 69429 | 54504 | 14925 |
| 1918 | | | | | | | | | | | | | 1145 | 1.19% | 8309 | 11.22% | -7164 | -32.28% | 96258 | 74065 | 22193 |
| 1919 | | | | | | | | | | | | | 1655 | 1.08% | 12309 | 9.56% | -10654 | -43.71% | 153133 | 128758 | 24375 |
| 1920 | | | | | | | 1581 | 0.90% | 8003 | 5.43% | -6422 | -23.44% | 2452 | 1.40% | 14981 | 10.17% | -12529 | -45.74% | 174738 | 147346 | 27392 |
| 1921 | | | | | | | 3607 | 2.45% | 6481 | 5.60% | -2874 | -9.16% | 3819 | 2.60% | 15453 | 13.35% | -11634 | -37.07% | 147101 | 115714 | 31386 |
| 1922 | | | | | | | 3387 | 1.99% | 6585 | 4.88% | -3198 | -9.12% | 5365 | 3.16% | 17971 | 13.32% | -12606 | -35.94% | 169957 | 134876 | 35080 |
| 1923 | | | | | | | 3704 | 1.99% | 5945 | 3.94% | -2241 | -6.44% | 5606 | 3.02% | 20862 | 13.82% | -15256 | -43.85% | 185698 | 150903 | 34795 |
| 1924 | | | | | | | 4431 | 2.28% | 7386 | 4.63% | -2955 | -8.55% | 5569 | 2.87% | 20790 | 13.02% | -15221 | -44.05% | 194182 | 159629 | 34553 |
| 1925 | | | | | | | 3987 | 1.98% | 7707 | 4.62% | -3720 | -10.67% | 8914 | 4.42% | 22057 | 13.23% | -13143 | -37.70% | 201598 | 166733 | 34865 |
| 1926 | | | | | | | 6897 | 3.20% | 10703 | 5.90% | -3807 | -11.15% | 5887 | 2.73% | 22631 | 12.47% | -16744 | -49.02% | 215615 | 181457 | 34158 |
| 1927 | | | | | | | 9223 | 4.00% | 9381 | 4.83% | -158 | -0.44% | 2483 | 1.08% | 19668 | 10.12% | -17185 | -47.38% | 230559 | 194284 | 36274 |
| 1928 | | | | | | | 9741 | 4.05% | 8525 | 4.31% | 1216 | 2.86% | 6241 | 2.60% | 24042 | 12.15% | -17801 | -41.83% | 240428 | 197875 | 42553 |
| 1929 | | | | | | | 8940 | 3.71% | 8397 | 4.30% | 543 | 1.19% | 7124 | 2.96% | 23516 | 12.03% | -16392 | -36.02% | 240998 | 195492 | 45506 |
| 1930 | | | | | | | 6641 | 3.53% | 7308 | 4.39% | -667 | -3.08% | 5357 | 2.85% | 25194 | 15.14% | -19837 | -91.53% | 188104 | 166431 | 21673 |
| 1931 | | | | | | | 7709 | 4.12% | 10689 | 6.13% | -2980 | -23.65% | 4997 | 2.67% | 26961 | 15.45% | -21964 | -174.33% | 187054 | 174456 | 12599 |
| 1932 | | | | | | | 10711 | 4.36% | 14611 | 7.91% | -3900 | -6.36% | 52241 | 21.24% | 32525 | 17.61% | 19716 | 32.17% | 245941 | 184653 | 61288 |
| 1933 | 5277 | 2.13% | 4452 | 2.17% | 825 | 1.92% | 3040 | 1.23% | 3584 | 1.75% | -544 | -1.27% | 16412 | 6.62% | 28558 | 13.93% | -12146 | -28.30% | 248002 | 205082 | 42921 |
| 1934 | 3884 | 1.43% | 3413 | 1.52% | 472 | 1.02% | | | | | | | 26093 | 9.64% | 31200 | 13.92% | -5107 | -10.99% | 270669 | 224202 | 46467 |
| 1935 | 6962 | 2.30% | 5911 | 2.34% | 1051 | 2.12% | | | | | | | 34267 | 11.34% | 40705 | 16.12% | -6438 | -12.97% | 302159 | 252535 | 49624 |
| 1936 | 7957 | 2.66% | 7035 | 2.83% | 922 | 1.84% | | | | | | | 31480 | 10.53% | 43756 | 17.58% | -12276 | -24.47% | 299044 | 248871 | 50174 |
| 1937 | 8517 | 2.40% | 7030 | 2.50% | 1487 | 2.01% | | | | | | | 33729 | 9.50% | 47844 | 17.02% | -14115 | -19.09% | 355048 | 281119 | 73929 |
| 1938 | 11190 | 2.89% | 8930 | 2.84% | 2260 | 3.10% | | | | | | | 45048 | 11.63% | 50846 | 16.17% | -5798 | -7.96% | 387412 | 314536 | 72875 |
| 1939 | 10382 | 2.35% | 9107 | 2.51% | 1275 | 1.64% | | | | | | | 58819 | 13.34% | 61061 | 16.82% | -2242 | -2.88% | 440907 | 363059 | 77848 |
| 1940 | 11427 | 1.43% | 10407 | 1.44% | 1019 | 1.33% | | | | | | | 18505 | 2.32% | 72062 | 9.97% | -53557 | -69.82% | 799328 | 722517 | 76711 |
| 1941 | 18629 | 1.99% | 16127 | 1.86% | 2502 | 3.47% | | | | | | | 19063 | 2.03% | 83317 | 9.63% | -64254 | -89.08% | 937672 | 865540 | 72131 |
| 1942 | 27476 | 2.48% | 24369 | 2.39% | 3105 | 3.66% | | | | | | | | | | | | | 1106265 | 1021376 | 84888 |
| 1943 | 91942 | 7.09% | 30914 | 2.57% | 1028 | 1.11% | | | | | | | | | | | | | 1296423 | 1203464 | 92959 |

*Note:* A percent after each numerical entry indicates a ratio of the numerical value to the total amount shown in the last column.
*Sources:* Mantetsu-kai 2007: 244-249.