



Discussion Papers In Economics And Business

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in Germany? : Malfunction of the German Imperial Railway Office
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What caused the failure of nationalisation of the railway system in Germany? : Malfunction of the German Imperial Railway Office (*Reichseisenbahnamt*) in the 1870s and 1880s. *

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Abstract

This paper identifies the causes of failure of the nationalisation of the German railway system by the Imperial Railway Office (*das Reichseisenbahnamt*; *REA*) that was established during 1873–1874 under the order of Otto v. Bismarck, the first Imperial Chancellor (*Reichskanzler*). The *REA* was not able to keep railways in the *Reich* (unified Germany) under its perfect control as provided by the German Imperial Constitution. What impeded the *REA*'s mission? We must pay attention to the *REA*'s problems as an organisation. As the official documents of the *REA* suggested, the organisation was not free from bureaucratic inflexibility in both structural and personal matters. Furthermore, compared with the other railway administration bodies in Germany in the 19th century, I point out the *REA*'s incapability in collecting regional information. The *REA*, the central bureau in the German-Prussian capital, had no regional unit. Its top-heavy structure and the higher-ups in the bureaucracy did not collect the non-lettering information from those who were doing the actual work at each railway, and this caused a criticized 'disproportionate emphasis on documents'. To illustrate this point, I focus on the failure by the *REA* in playing the leading role in compiling the first German national railway statistics.

JEL : N43, N73, N83

Key Words : railways, Germany, nationalisation, statistics, the 19th century

* A first draft of this paper was given at the conference of EBHA – BHSJ on 'Business enterprises and the tensions between local and global', Paris, 30 Aug-1 Sep., 2012. I would like to thank all the participants for their helpful comments and suggestions. I am particularly indebted to François Caron, the Chairman of our session 'Nationalisation of the railways reconsidered'.

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Introduction

This paper identifies the causes of failure of German railway nationalisation by the Imperial Railway Office (*das Reichseisenbahnamt; REA*) that was established during 1873–1874 under the order of Otto v. Bismarck, the first Imperial Chancellor (*Reichskanzler*). In the beginning of German unification, the *Reich* (the so-called second German Empire), Bismarck designed a national unified railway system. However, the *REA* that he founded was unsuccessful in creating a German national railway system; that is, nationalisation. This paper examines the details of the *REA*'s malfunctioning as a superintendent of railway nationalisation in this sense.¹

Much ink has been spent on German railway nationalisation in the 19th century. Too many studies on traditional railway history narrate institutional development.² In Japan, scholars who analysed German research have made many attempts to show the similarity of Japanese railway nationalisation with the German experience in the third-quarter of the 19th century. Japanese Marxist historians have often expressed 'Bismarckian Nationalisation' as a cliché to describe railway nationalisation, in which a government gave the military the highest priority. According to F. Engels, they considered that the authoritarian bureaucracy led Japanese nationalisation, which was, therefore, economically unnecessary such as the Prussian-German case.³

Over the past few decades, a renewed interest in railway nationalisation⁴ occurred and historians in Germany shed new light on the subject. From the angle of economic history that considered the importance of the effects of the leading sector of German industrialisation, the periodical work by Fremdling (1975) on German railway history pointed out the vitality of private railway companies alongside the insignificance of state ownership for the development of German railways in the 19th century. 'The state-ownership (*Verstaatlichung*) reproduced merely this inefficient traffic performance, only on another level'.⁵ Fremdling also referred to a nationalisation and stated that, '(f)irst a state-ownership on the *Reich* level, like the one planned by Bismarck, could have prevented this (inefficiency)'.⁶ In contrast, Kocka (1987) stressed the influence of German state bureaucracy on railway management. This remark represented feedback on the evaluation of the American railroad company as the model of the organisation of a modern enterprise by Chandler Jr. Then (1997), who examined the organisation of German railways in detail and pointed out that the transition to state ownership was 'the last entrepreneur's decision'. Ziegler (1996) followed the development of railway policy of German land states and concluded the birth of the German intervention state in the process from the predominance of private companies over state railways to state ownership. In a Japanese study on German railway history, Yamada (2001) investigated the regional structure of German railway development and reviewed the research on Japanese railway nationalisation that referenced the German experience and criticized the notion of 'Bismarckian Nationalisation' from the standpoint that regional diversity (that is, not a national convergence) was essential to German industrialisation.⁷

However, those studies paid little attention to the *REA*, the incomplete headquarters of railway

nationalisation (nationwide unification of railway system and nation-state ownership) that was planned by Bismarck. To date, only a few studies have been conducted on the bureau, partly because Bismarck's attempt was not successful in the end. The *REA* itself published no jubilee issues⁸ and the official documents on its organizational and personnel matters have been examined only fragmentarily.

One of a few exceptions is Kunz (1996), who offered the first historical grasp of the development of the imperial bureau. Kunz (1996) took a fresh look at the development of the *REA*, investigated its activities and evaluated its achievements. Research on the direction of examination of the *REA* as an organization has taken important steps, but closer study of the organisation is lacking. The question that has yet to be explored is what was lacking in the *REA* as superintendent of railway nationalisation. Even recent studies that referred to the *REA*, including Ziegler (1996), Mitchell (2000) and Yamada (2001), considered the failure of the nationalisation plan of Bismarck primarily in the political context; that is, the particularisms of Imperial Germany. Certainly, the problem of German particularism cannot be overemphasized in gaining a good grasp of the political and institutional development of German railway nationalisation. However, little is known about the role of the *REA* as an organization with a mission. Therefore, whether (and how) the bureau itself caused the failure of German railway nationalisation remains unsettled.

Therefore, this study considers the organisational problems of the *REA*. We focus on the early *REA* in the 1870s and in the beginning of the 1880s when it actively attempted to formulate railway policy.

This paper falls into three sections. Describing the political development of railway nationalisation by Bismarck and a legislative examination of the *REA* is desirable before addressing the primary objective of this paper, which is attempted in Chapter I through a discussion of a chronological list of events between the 1870s and 1880s. We then point out the necessity of analysing the organizational aspects of the *REA*, which started as an executive organ of the railway nationalisation laws submitted by Bismarck. Chapter II attempts to illustrate the defects of the *REA*'s organizational structure. A comparison with other organizations that administered German railways (the Association of German Railway Administration (*Verein für Deutschen Eisenbahn Verwaltungen*; *VDEV*) and the Prussian State Railways) is helpful in illuminating the problems of the *REA*. Chapter III focuses on the process of obtaining the first national railway statistics to analyse the reasons for the *REA*'s organisational incapability as presented in the last chapter. To end this section, we illustrate territorial conflicts between the *REA* and other official bodies (the Prussian Ministry of Public Works (*Kgl. Ministerium für Oeffentlichen Arbeiten*) and the Imperial Statistical Office (*Reichs Statistisches Amt*). In the last chapters, summing-up of examinations, we present an outlook on the background of the *REA*'s organizational problem, which was the precarious position of the *Reich* as an economic unit between regions and Europe.

I

Before possibly entering into a detailed examination, we must first attempt to clarify the chronological development of the *REA*. The results primarily from the foregoing research are presented in

Table 1. This abbreviated chronological table indicates that (1) the *REA* was originally designed to be the executive office for the Imperial Railway Law (*Reichseisenbahngesetz*) that aimed to place German railways under the control of the Imperial government, (2) the bills of the Imperial Railway Law were not realized as they were voted down in the Upper House (*Bundesrat*) in the mid-1870s, (3) especially after the rejection of the second bill and A. Maybach's resignation as the President in 1877, the *REA*'s impotence in railway policy was obvious when compared with that of the Prussian Ministry for Public Works, (4) the heads of the bureau of the *REA* (given the vacancy of the President) repeated requests for an increase in the number of personnel at least in 1879 and 1885, but the government rejected these proposals and (5) by the mid-1880s, the significance of the *REA*'s existence was in doubt and the government and the Reichstag considered whether to continue or abolish the *REA*.

In sum, in the 1870s, the *REA* fell short of the Bismarck government's expectations.

The question now arises: why was the *REA* incompetent in establishing a German national railway system?

That other German land states (*Länder*) and their governments claimed a degree of autonomy with respect to railway policy and held their position to the end, which is commonly accepted and seems to hold much truth. As Mitchell (2000) showed in full detail, '(i)n the German railway industry, particularism and not nationalism was triumphant before 1890'.⁹

However, one thing is certain; the *REA* itself was frequently criticized for being impotent as a concerned authority. The second president of the *REA*, A. Maybach, who devoted himself to German railway nationalisation in compliance with Bismarck's wish, decided to leave the post and moved to the Prussian Ministry of Public Works to pursue railway nationalisation through another channel, that of Prussian state possession of railways. What made Maybach forsake the newly established Imperial office?

Reflecting on the development in the 1870s and the early 1880s makes clear that central to the failure to create a national railway system was not only the problem of German particularism but also the inability of the *REA* as the executive. Even the *Reich*'s ownership of all German railways, as Bismarck first wished, was objected to and rejected by the German land state governments, the *Reich*-wide supervision of railways should have at least partially been realized, as the Imperial Constitution determined so au fond.

As previously noted in (4), the parties concerned (and contemporaries of those days) pointed out that the *REA* was too small with respect to finances and personnel. However, these characteristics failed to account for Bismarck's rejection of the request for an increase in personnel. It is likely that Bismarck found other factors in *REA* that were responsible for the failure of railway nationalisation.

A general view of the organisation and a close examination of the personnel affairs of the *REA* in II provides the key to understanding the failure of the *REA*.

Kunz (1996) paid attention to the personnel aspects of the *REA* and made an important statement on the ability of President Scheele, the first president of the *REA* and who was censured for failing to start the organisation as a supervising bureau of the national railway system. His failure was not the result of his inexperience, as the retired Prussian finance official and ex-executive of *Diskontgesellschaft* was also the specialist of the railway as the director of the Berlin-Anhalt Railway Company. The efforts of the German land states stood in the way of the *REA*.¹⁰ Despite his (and Maybach's, the second president) leadership and zeal, the *REA* made no satisfactory progress since its establishment in 1873. After all, the problem was not just lack of a top leader's talent.

The argument that the incompetence of the *REA* brought about its unclear legal status¹¹ because of failure to pass the law of nationalisation was convincing. Yet, was it impossible for the *REA* to adopt itself to the unfavourable institutional circumstance and pursue its original goal? Kunz (1996) evaluated that 'the specialist competence of the office was undisputed' in the 1870s.¹² Why did such a competent office need to consider its abolishment after 10 years of existence?

One must extend the examination and focus attention on the human composition of the *REA*.

According to 'The Handbook of German Empire (*Handbuch für das Deutsche Reich*)' from 1882, the organisational structure of *REA* in 1881 was as follows. At the top of the bureau was the president (*Präsident*), but the post remained vacant since Maybach's resignation in 1877. After he abandoned the activities of the *REA*, the leadership of the office was entrusted to the Councillors (Presentation-Councillors; *Vortragende Rate*). There were the seven Councillors (Körte, Kraefft, Gerstner, Streckert, Wiebe, Crause and Gimbel) and, among them, three were administrative officials and four technicians. As the tasks were divided by field, they built the two departments in the office with each leader.¹³ Their titles were Privy Upper Governmental Councillor (*Geheimes Ober Regierung Rath*) (5) and Privy Governmental Councillor (*Geheimes Regierung Rath*) (2). The Emperor directly appointed the chairman and other councillors. In addition, at most two assistants (*Hilfsarbeiter*) could be appointed and Governmental Councillor (*Regierung Rat*) Emmerich worked as the Permanent Assistant (*Stänfiger Hilfsarbeiter*) in 1881. In the secretariat, under the chairman were the Calculation Councillor (*Rechnung Rath*) Ende, 14 secretaries and calculators, four registrars and six clerks. The Reichstag permitted almost 20 established posts. Added to these, the three Legal Members (*Richtlicher Mitglieder*) and three Deputy Legal Members (*Stellvertretende richtlicher Mitglieder*) were appointed from the governmental jurists from Prussia (2), Stuttgart (Württemberg), Darmstadt (Hessen), Mecklenburg and Bremen. They all were *Nebenamt*; that is, actively related to each governmental office. They were appointed for the so-called Augmented (*verstärkte*) *REA*, which was originally designed to be a kind of court of justice for German railways. However, this expected early function of the *REA* was unrealized.¹⁴

What organisational problem can we identify in this, one of the highest Imperial bureaus?

First, we must point out the small-scale of the *REA*.

The *REA* located at Linkstrasse in Berlin has responsibilities of the German Empire as provided by the Constitution:

1. carry out the correct supervision of the railway system;

2. take care of the execution of the regulations contained in the Imperial Constitution, especially the laws concerning the railway system and constitutional instructions; and
3. resolve the disconnection of the emerging defects and evils with regard to the railway system.

To fulfil these national tasks, the approximately 20 established posts in the capital seemed insufficient. As Table 1 shows, the eldest Councillor Körte called for an increase in personnel to ensure the successful passage of the bill for railway nationalisation; however, Bismarck rejected his request in 1879.¹⁵ Some press comments also criticized the shortage in personnel and argued for an increase in the labour force, especially for the statistical work.¹⁶

As we examine the organizational problem of the *REA*, keeping in mind the composition of the personnel is useful. As previously noted, among the seven Councillors, three were administrative officials (Körte, Kraefft and Gerstner) and four technicians (Gimbel, Streckert, Wiebe and Crause).¹⁷ Whether this ratio of technicians was reasonable is an important and difficult question. While the *REA*'s main activity was considered about technical matters by the persons considered¹⁸ and the technicians held a majority of the board of executive positions, the chair during the vacancy of the President (1877–1890) was always held by administrative officials Körte and Kraefft, the eldest Councillors. After the retirement of Körte in 1887, Kraefft was promoted to the chairman of the board of Councillors through seniority. He immediately had to submit a request for time off of three–four months because of his poor health,¹⁹ but he maintained the position after returning to the office under Friedrich Schultz, who was the acting President (from 1887, seemingly as a result of the absence of Kraefft). Schultz became the third president of the *REA* in 1890. Before being appointed as the acting President of the *REA*, Schultz, who was born in 1840, was a jurist and worked in the directions of the Braunschweig Railway and the Alsace-Lorraine (*Elsass-Lothringen*) Railway.²⁰ During the third-quarter of the 19th century, loud cries of discontent over the advantage that the administrative officials had over technical personnel in promotions and lifelong earnings were voiced among technical officials in the Prussian State Railway.²¹ We can safely state that such predominance of jurists in the Prussian State Railways was about the same in the *REA*.

However, the more crucial point is whether the arrangement of work in the *REA* was proper. We consider whether a 'small scale' or 'shortage of personnel' existed in the *REA*, which was deplored by the insider and the bystander only in this sense. A headquarters need not be large scaled. Because the augmented *REA* was not realized as of the beginning of 1883, Körte did not request Bismarck to make up for a complement of the Deputy Legal Members in the *REA* when von Monroya, a jurist sent on loan from the Duchy of Mecklenburg, was transferred to the High District Court in Rostock. Whether a supplement of a vacancy itself was to be realized was left in the hands of the Duchy.²²

In other words, the efficiency of the organisation depended on whether excessively heavy work was to be done by administrative or technical officials in line of organisational order.²³ From this viewpoint, we can guess whether the task of technical officials on the councillor-board was excessive or inclined to the particular person(s). In 1883, after the death of Councillor Wiebe, a Prussian railway technician, the *REA* requested the promotion of Hülfsarbeiter Emmerich, a technical official in the Prussian State Railways, to councillor.²⁴ Because A. Maybach, ex-president of the *REA* and Minister of Public

Works,²⁵ interrupted this request to Bismarck, Körte refuted his claim that no need existed to fill a vacancy of technicians by listing the diversity of the technical tasks by the late Wiebe. The tasks were as follows:

1. handling overall timetable;
2. handling reports of the railway administrations and other presentations concerning railway accidents;
3. handling reports of railway administrations concerning late train arrivals;
4. handling matters concerning calling railway officers regarding the light railway formation; and
5. managing transactions to prepare the railway for military use of railways in the event of war.

Adding to these tasks, Körte suggested the significance of Emmerich's task in connection with compiling annual statistics on railways for Germany. Meanwhile, he reminded the Chancellor on 3 August, 1881 of his former request to fill the vacancy for another assistant.²⁶

Evaluating the ability of the staff of the *REA* is difficult. Certainly, as indicated in Table 2, the Councillors were expert and veteran state officials. However, they sometimes brought criticism into the circle of state bureaucracy and on themselves through their achievements. The Councillor, Dr Gerstner, made an official report as representative of the *REA*, and suggested a form for statistics on railway transportation. However, his plan was almost ignored by the Imperial Statistic Office and the Prussian Minister of Public Works.²⁷ Even by starting to compile statistics on railways, Scheele first asked the Austrian railway engineer, M.M. Weber, for a view on the introduction of the forms of Prussian railway statistics.²⁸

The criticism of the *REA* by A. Maybach is suggestive. When he was asked an opinion about promoting Emmerich to take over Wiebe's tasks, as was previously discussed, he answered in the negative.

I do not know personally the Permanent Assistant in Imperial Railway Office and Government Councillor Emmerich. ... From the enquiry into his earlier bureau works, Emmerich is a qualified and efficient technical official with apparently some too strong self emotion and pigheadness. ... I do not know if he has corrected himself in these points by now. ... Thanking your Excellency for considering my opinion, I think, therefore, that it would be better if the promotion of Emmerich to the Presentation Councillor in the *REA* will be called off, and one will monitor him for a fixed period of time—at least six month—to prove himself, because he has never held leadership as a member of railway managing bureau (direction). ... By a cancel of his promotion he cannot feel neglected incidentally with reason, as in his position he has already outshined a great number of the longer-served and almost equally qualified technical officials in the Prussian State Railway Administration.

Maybach devalued the ability and achievement of one of the leading technicians in the *REA* and began to criticize the *REA*'s present situation. His remark on the *REA*'s organisational problems deserves more than passing notice.

If one does not fill the Wiebe's post temporarily, as long as I consider, it will not be an

official disadvantage. The right field is not found at present as a supposed far-reaching effectiveness of the *REA*, especially in the pure technical field. I must regard as a great, important thing that the *REA* will keep in closer contact with the Prussian Ministry that grasps all action and will try its best to avoid an unnecessary over production of documents (*überflüssige Vielschreiberei*) that was the results of insufficient activity.²⁹

The lack of contact with the Prussian Ministry of Public Works and the ‘overproduction of documents’ must constantly be borne in mind in our further arguments.

Against Maybach’s opinion, Körte insisted again on supplementing Wiebe’s tasks in the *REA* by promoting Emmerich; however, the promotion was realized at length on 6 October 1884 as Maybach insisted. The realisation was the consequence of a petition by Körte on 10 September 1884, stressing that ‘Mr Minister of Public Works, as I can add on the basis of explicit authorisation, has no objection against the promotion of Emmerich’.³⁰ The Prussian Minister of Public Works had a significant influence on decisions made related to the personnel affairs of the *REA*.

The *REA*’s personnel matters were not completely independent because of the promotion of high officials through the organization and the appointment of Legal Members and Deputy Legal Members. By supplementing Legal Members in another bureau (*Nebenamten*) with personnel reshuffle in their main workplace, the choice of a new member was always entrusted to the governmental offices from which they came.³¹

These aforementioned organisational problems of the *REA* that contemporaries pointed out were valid in these ways. However, the question remains unanswered on the essential factors that caused the failure of the *REA* as the headquarters of railway nationalisation.

Let us now examine the *REA* organisation in comparison with the other railway administrative bodies, including the *VDEV* and German regional state railway offices, especially Prussian State Railways. The *VDEV* was the international association of railway administrations in Germany and other western and central European states, and the ‘veteran champion of a mixed system of railroad governments’ in the 1870s. Maybach took umbrage at the *VDEV*’s achievement of technical standardisation and its generally admitted internationality.³²

First, the high-ranked officials in the *REA* and the executive members of the *VDEV* did not differ much in their careers. Table 3 shows the careers of the eight executive members of the *VDEV* from Prussia, who were conferred the decoration to commemorate the 50th Anniversary of the Association by the Prussian government in 1896. A comparison of Tables 2 and 3 shows that almost all of the men of both bodies were bureaucrats. This is not just because the progress of Prussian state-purchase of private railway companies after 1879 and especially since 1884, but when the Berlin-Stettin Railway in charge of the secretary of the Association was state owned, the direction was grasped by the Prussian Royal Railway Direction in Berlin.³³ Clearly, as Kocka (1987) emphasized, the German bureaucracy in the 19th century was one of the most important personnel sources of railway managers.³⁴ They had in common a highly qualified educational background and passed official certifying examinations for administrator, jurist or technician without exception. When a railway officer was a technician, his engagement in the railway industry began

just after the start of his career. All of them were entitled to ‘Councillor (*Rath*)’, ‘Privy Councillor (*Geheimes Rath*)’ or ‘Upper Privy Councillor (*Geheimes Ober Rath*)’ by the government. These characters were given based on seniority. In *REA*, a Performed Councillor with the title of *Regierungs Rat* was promoted automatically after six years to *Ober-Regierungs Rat* in the same position.³⁵ For a *VDEV* administrative member, the period of his engagement in the railway industry averaged (only) a little longer than an administrative Councillor of the *REA*.

If no great (and probably no essential) difference existed in the quality of the personnel between the bodies, problems can be found by comparing the structure of the organizations.

In the mid-1870s, the German state railway administrations had organisations with layers divided into two categories—the central administration (*Central-Verwaltungen*) and the special administrative branches (*Spezialle-Verwaltungenzweige*). The Prussian State Railways with the most complicated administrative structure concerning the preliminary works (*Vorarbeiten*), concession (*Konzessionswesen*), organisation (*Organisation*) and building and operation institution (*Bau- und Betriebs-Einrichtungen*) had eight strata from the Ministry of Public Works and Railway-Directions to the civil servants on site (railway maintenance persons, brakemen, porters and so forth). The administration of the Württemberger State Railway had a seven-layer organisation, and the Saxon and the Baden had six layers.³⁶ The *REA* lacked such a vertical structure and the line from the top to the bottom on site and it had no regional unit. Certainly, this was often the case with a central bureau in the capital. However, the *REA* was not designed just to be an advisory board for the government. For the purpose of this paper, is it unnecessary to pursue a closer examination?

A comparison with the structures and personnel customs of the state railways and other railway companies in Prussia may be helpful. To point out the existence of an internal labour market (ILM) and the custom of ‘exceptional’ appointment of non-qualified persons to state officials in the Prussian (State) railways before the Prussian railway nationalisation goes to the very heart of our problem; what the *REA* organisation lacked.

A comparison with some conditions related to the existence of an ILM (lifetime employment, vertically divided structured career path (*Laufbahn*), non-wage benefits and so forth) confirmed whether such a market was formed in the Prussian State Railways (containing the private railways that were state owned in the 1880s). Analysis of the personnel records allowed us to state that the employment relationship in the Prussian State railways had some features of ILM.³⁷ Evidence of the establishment of long-time employment and a promotion process was found in each railway line from the relatively early phase of the state railways (since the 1850s). Each line likely had ILM before the progress of Prussian nationalisation. One explanation for the results may be that the Prussian state railways from the 1850s operated a promotion system with a job ladder that was rational and came from the view of introducing, securing and improving general skills and region- and firm-specific employee skills. If each private company and line operated its respectively peculiar ILM, the establishment of ILMs in the state railways was not an institutional decal or imitation of the Prussian state bureaucracy. The existence of plural ILMs fit in the regional-divided railway lines with each non-uniform organisation structure with the view of accumulating region- and

company-specific skills. Workers had to earn such skills during OJT in the Prussian railways for which off-JT was not sufficiently systematized before the 1880s.³⁸

In the earlier phase of German railway development, during the line construction period in the 1850s and 1860s, cases of ‘irregular’ employment of non-qualified persons as government officials with the state railway existed. According to the basic regulation for the employment of civil servants in the state railways from 1850, only retired military men had the official capability of employment (*Anstellungsfähigkeit*) of low- and middle-ranking employees in the Prussian State Railways. The official record of employment in the state railway³⁹ showed 74 ‘exceptional’ appointments of non-qualified persons to the Prussian official railway sector, in other words, people who gained appointment to the government office without authorisation. In the case of exceptional adoption, ‘the knowledge on the district’ (*genaue Lokal- und Sachkenntnis*)⁴⁰ and ‘the merchant negotiation’ were often treated as the basis, coinciding with one aspect of the circumstances in railway construction: to have knowledge of the regional price difference for materials bought in the case that railway construction was recognized as the *causa sine qua non* of the railway engineer who ordered the construction work.⁴¹

One may point out the function of ‘exceptional’ appointment in the Prussian State Railways during the ‘mixed system’ period before the nationalisation of the railways in the Prussian Kingdom. This appointment was a device to introduce and stabilize the necessary labour force that had regional and often tacit knowledge. The ILMs were also considered such a device.⁴²

For the early state railway system, some feedback between part of the work scene and the administration nucleus was indispensable for the development of management skills.⁴³ The earlier established railway administrations developed the structure for this purpose. The *VDEV*, the association of railway companies and administrations, also comprised such a structure related to feedback between layers.

In contrast, the *REA*, the central bureau in the German–Prussian capital, had no regional unit. Its top-heavy structure and the higher-ups in the bureaucracy did not collect the tacit knowledge that came as non-lettering information from those who were doing the actual work in each railway vertically.

This defect offers the key to understanding the criticism by Maybach, as previously noted. As long as collecting (regional) information onsite was necessary for (national) administration, the absence of information suppliers at the relatively lower layers made it necessary for the *REA* to have a close connection with an organisation that had branches semi-nationwide, such as the Prussian State Railways, as Maybach insisted. When these connections were insufficient, as Maybach severely commented, the disproportionate emphasis on documents in the bureau was unavoidable. This organisational defect caused a bureaucratic demerit when attempting to collect the information.

Here, we may safely assume that the *REA* had a defect in its personnel device for collecting information, which was the essential organisational problem that caused the failure of administration in German railways.

However, room for further investigation exists. To possess actual proof for the argument, we must focus on the compilation of the first set of statistics by the *REA* from the mid-1870s to the early 1880s. One can compensate for lack of collection of individual embodied information by obtaining statistical data. If

one may state that the *REA* succeeded in compensating for its lack of data in this manner, the core of its organizational problem must be sought in other directions. An examination of the process of compiling railway statistics provides the key to understanding this matter.

III

Kunz (1996) summed up an examination of the *REA* and listed the ‘the achievements of the *REA*’. According to his evaluation, these achievements included ‘the introduction of unified instructions for railway building, management and traffic; the regulation of connection with military, post and telegraph administrations; the military organisation of railways during wartime;⁴⁴ and the compilation of a unified statistic for all German railways’.⁴⁵ Even a critic of those days said that the *REA*’s activities did not go beyond the statistical survey and recognized these statistics as the only achievement of the *REA*.⁴⁶ However, a close examination of the process of compilation of the German national statistics of railways shakes this general belief and provides a good example that supports our argument in II on the organisational problems of the *REA*.

We will begin by gaining perspective of how the compilation of the national statistic progressed to the first issue in 1882. As shown in Table 4, before the foundation of the *REA*, the necessity of compiling statistics on the national railway was fully recognized by the Reichstag. In the beginning, Dr Hammacher, a member of the Reichstag, pointed out the necessity of clarifying the actual situation of the newly acquired Alsace-Lorraine Railway in real numbers. He then referred more generally to the value of the publication of ‘official, reliable, comparable statistical numbers about management and situation of railways for the all German Empire, as have been made in the Prussian Kingdom for many years’. Ending his interpellation, Hammacher stated that great value for such a statistic for the German Reichstag was plausible. Herzog, the Federal Commissioner (*Bundeskommisarius*), consented to the request and the Reichstag decided to ask the Imperial Chancellor the annual publishing of the statistical survey of all railways in the German Empire based on a uniform foundation, as well as a yearly report on the administration, management and building of Alsace-Lorraine Railway.⁴⁷

The compilation of railway statistics was one of the most counted tasks of the *REA* from the mid-1870s, almost at the start of the *REA*. On 22 September 1873, the President of the newly established *REA* (on 27 June of 1873), Scheele, was entrusted by the Chancellery.⁴⁸

This order was not fulfilled immediately. The first publication of German railway statistics for the business year 1880–1881 was in 1882. From the very beginning, the complicated work needed significant time, and the work was also suspended in the latter half of the 1870s. In 1877, for example, a French advocate referred German railway statistics to the *REA*, but the *REA* replied that it was not able to comply with his request to send statistics on German railways, because ‘such a thing on our part has not been set up yet’. The *REA* recommended that the French apply either to each railway directions or the executive office of the *VDEV* for this matter, ‘because the latter has published a statistic of the German and non-German

railways that belong to the association for many years'.⁴⁹ First, on April 1878, a plan for the standard forms of booking and statistics on receipts and disbursements by German Railway administrations was provided and, in February 1879, after detailed revisions, the 'Booking-Form of German Railways' was completed. However, even the introduction of this form to all German railway administrations since January or April 1880 resulted in the establishment of only a uniform base (*gleichförmige Grundlage*) of a compilation of national statistics.⁵⁰ In fact, the complicated task of using table forms still existed, and finishing the forms took six months and a total of 42 meetings in the *REA*.⁵¹

What caused this delay?

The *REA* explained that the delay was caused by the difficulty of the tasks, which resulted from German particularism. Among German railways, the booking forms were full of variety and a collection of necessary records for the compilation of a uniform statistic from many land states was laborious. From 9 June 1874, when the *REA* inquired with all railways regarding introduction of the Prussian form of railway statistics into future German statistics, a seesaw battle of arguments for and against the Prussian forms continued to 1875. To investigate all calculation patterns of German railways and their opinions, and then adjust individual needs with developing uniformity, the *REA* wasted too much time relying on the delegates from the Prussian Ministry of Trade.⁵² The *Elberfelder Zeitung* pointed out the lack of cooperation from each land state administration in the presentation of the necessary materials, although the *REA* denied that each government presented their materials 'only in hesitation and with protest', with the unsigned marginalia '?!'.⁵³

A shortage of personnel can also be noted. In 1880, with the prospect of publishing the first statistics on German railways, the *Buhren Zeitung* commented on the necessity of increasing *REA* personnel. Accordingly, an increase by 12 posts was to be requested in the next budget bill because 'one can now safely recognize that the current labour-forces in the *REA* were not enough to cope with the task'. The newspaper said that everyone who knew the preceding Information Papers of Prussian Railways (*Nachrichten über die Preussischen Eisenbahnen*), which were edited by the technician department of the Prussian Ministry of Public Works, would not be surprised that a great increase in the labour force of the *REA* was needed to regularly publish new railway statistics, such as the '*Nachrichten*'.⁵⁴ Almost simultaneously, the *Berliner Zeitung* criticized the shortage of personnel using the compilation of the statistic and perfectly the same points.⁵⁵

Directing our attention to the measures that both of these newspapers insisted on is helpful for our understanding. The comments stressed that Maybach, Minister of Public Works, should lend the forms of '*Nachrichten*' and should transfer a few officials in the technical department of his Ministry to the *REA*. The remarks shed light on the essence of the personnel problem, which was a delay in the compilation of statistics by the *REA*. We must focus on the *REA*'s lack of cooperation with the administration of the Prussian State Railway.

From the beginning, the *REA* depended on the Prussian Ministry of Trade, Industry and Public Works (the forerunner of the Ministry of Public Works), especially to make the forms of the railway statistics. Based on the advice from the Austrian railway engineer, M.M. Weber, who was chairman of the

Austrian imperial and royal commission, to work out a new Austrian railway statistics,⁵⁶ the first President Scheele asked the Ministry of Trade to inform the *REA* if reasons existed to alter the orders and column-patterns of the Statistical Information Papers of the Prussian Railways.⁵⁷

However, a communication gap existed between the *REA* and the Ministry.

To clarify, we use an example from the negotiations between these government offices on the compilation of the statistics. From 1874 to 1879, the Prussian Ministry gave notices of 21 regulations used to make the Statistical Information Papers for the Prussian Railway administrations. Among these regulations, the *REA* was informed of eight. In 1874, three of all five regulations that were noticed from 1872 to 1874 were informed to the *REA*. From 1875 to 1878, almost none were informed; none in 1875, none of three in 1876, one of four in 1877 and none of three in 1878. However, three of five were informed in 1879.⁵⁸ The promise of the Prussian Ministry of Trade in response to Scheele's request in 1874⁵⁹ was broken from August 1875 to May 1879. In the autumn of 1878, the newly separated Ministry of Public Works was led by Maybach, the ex-President of the *REA*, but two regulations were not informed even in 1879.

Certainly, the contribution of Maybach's Ministry was decisive. In the previously described case, one must pay attention to the dates of the issue of regulations by the Prussian Ministry and their notices to the *REA*, in addition to the number of correspondences. The two regulations of 21 October 1872 and 28 February 1873, before the establishment of the *REA*, were informed to the *REA* on 20 March 1874. On 8 April 1873, a notice of completion of the forms of 23 March 1873 was provided. From 1875, two were informed on the same day of notices of the regulation and one was informed in three weeks. The regulation on the alteration of the form of the tables that was noticed on the Prussian railway directions on 2 July 1879 was informed on 2 June 1879, before the Prussian notice. The Prussian Ministry noticed the *REA* of the regulation in advance,⁶⁰ illustrating the re-start of the statistic compilation at the *REA* at the end of the 1870s with the help of the Ministry of Public Works.

During that final state of compilation for the first national railway statistics at the turn of the decades, lively discussions occurred between the offices. Detailed investigations on the plan of table forms were held intensively by cooperating with the Prussian Ministry of Public Works. From 1 December 1879 to 10 May 1880, the Commission had 42 meetings at the *REA*. The Commission consisted of five members from the Prussian Ministry of Public Works, one (Schultz, the future President of the *REA*) from the Imperial Office of Administration of the Imperial Railways (*Reichsamt für die Verwaltung der Reichseisenbahnen*) and two (Gerstner and Streckert) from the *REA*. After approval by the Commission at the last meeting, the *REA* 'immediately' sent 141 copies of the form to the Prussian Minister of Public Works (and other German railway administrations, including the Bavarian State Railways) on 30 May 1880.⁶¹

However, immediately after the forms were sent to the railway administrations in the German Empire, the press criticized Maybach's lack of cooperation, as previously noted. Because their argument for the need for an increase in personnel to compile statistics coincided clearly with the request for maintenance of special directions for creating statistical tables in the *REA* by Körte,⁶² we suppose that the

press comments reflected the *REA*'s intention. However, in 1879, the government rejected the request for increased personnel, as shown in Table 1.

Here, we recollect the critical comment regarding the performance of the *REA* in the 1883 by Maybach, as cited in II of this paper. The criticism of the *REA*'s lack of cooperation with the Prussian State Railway accorded with Bismarck's reconsideration in 1877, after the second bill of law for nationalisation was discarded. Bismarck's remark that the leadership of the *REA* was identified with that of the Prussian Railways⁶³ implied his regret over the essential failure of the organisation of the *REA*.

Maybach stressed that the *REA* would maintain closer contact with his Ministry but did not expect that the two entities were on equal footing, especially after his transfer to the Prussian Ministry. What Maybach meant by keeping close contact with the *REA* was to subordinate it to his Ministry. Under Maybach, the Prussian State Railway administration was the perfect working bureaucratic organization, where the objectives of the central leadership were implemented at the lowest regional levels and the necessary information was absorbed from each level (that is, each official rank) through various paths. Maybach did not have a good opinion of the *REA*, because it was not possible for an office without such a well-functioned organisational structure to fulfil a complicated and nationwide task independently.

As the Imperial office under the 'President', the high officer directly appointed by the Emperor, the *REA* was not able to renounce its independence. From the start, the linkage with the Prussian Ministry of Public Works was inevitable for the national office without regional units, but perfect identification with the Prussian Ministry was impossible for a national office consisting of non-Prussian officials. The relationship with the Prussian Ministry had to be very delicate. The vacancy of the presidency after the resignation of Maybach was considered the symbol of the *REA*'s impotence. This impotence was reflected in the bureaucratic inflexibility of personnel affairs not only in the *REA* but also around the Imperial government. However, in a sense, it could help relieve the strained situation. For the eldest Councillor Körte, as the de-facto acting President, Maybach was his ex-superior in the *REA*. The activity's dependence on the Prussian Minister of Public Works pretended to be very personal. However, Körte, who was unable to be promoted to the presidency, was a little older than Maybach and his career had no contact point with the Prussian railway office before entering the Imperial offices (see Table 2).

Nevertheless, Maybach did not consider such a delicacy. When the *REA* and the Prussian Ministry of Public Works became successful through a large part of the compilation of statistics on the first national railway, Maybach began to compile these distribution statistics (transportation of goods; *Güterbewegung*) on German railways without consulting the *REA*.

Since then, the *REA* has never been unconcerned with the compilation of national distribution statistics. These statistics were originally part of its task to compile railway statistics. At the latest, in 1876, Councillor Gerstner sent to the President (Maybach) the plan with reference to the former research and primarily after the trial products by the *VDEV*. This plan was transferred to the Imperial Statistics Office, but they returned it on 16 May 1877, replying that it had made the 'Promemoria' for recording the distribution by the German Railway and the plan for such recording and its necessary regulations, and sent them on 26 April to the *REA*. Beek, the Statistic Office, gave notice that a commission to compile the

distribution statistics would be called in the near future and recommended the *REA* wait for the progress on its results of the commission.⁶⁴ The notice of regulation of goods transportation in the Prussian Railway Directions was not informed by the Ministry of Trade in 1876, because it believed that the *REA* was not compiling such a type of statistic.⁶⁵ In this field, the *REA* tended to be criticized by the colleague offices and was not expected to succeed.

Meanwhile, on 15 July 1881, the Imperial Home Office (*Kaiseramt des Innern*) warned the *REA* that the Prussian Ministry of Public Works would collaborate with the Imperial Statistic Office in compiling distribution statistics.⁶⁶ Boetticher of the Home Office informed the *REA* of the development in 1880 through a copy of a petition letter to Bismarck,⁶⁷ and the list of members of the commission in the Ministry.⁶⁸ After hearing the news that Maybach called a meeting of the representatives of the Prussian Railway Directions in the Ministry, the *REA* remained tranquil as it was criticized and claimed to demand an explanation of ignoring the *REA* from the Minister. According to the reply to the Home Office, the belief in the value of cooperating to compile such a statistic was expressed, 'taking into consideration the compilation of general railway statistic that arose here'.⁶⁹ Maybach responded curtly to the inquiry from Bismarck, as follows:

...The Director of Imperial Statistic Office, Imperial Privy Upper Governmental Councillor, Dr Becker, is given a special invitation to the conference. Giving consent to the wish expressed in the letter of the 11th August of this year, R.E.A. 8414, I have let the *REA* attend the conference of commission as it likes.⁷⁰

The experience of cooperation with the *REA* for the compilation of the first set of national railway statistics after many twists and turns confirmed the conviction of the Prussian Minister of Public Works that the *REA* had limited organizational ability and deserved no further cooperative task for the national unification of German railways.

Conclusion and Outlook

Therefore, we conclude the following. (1) Because of the discarding of the Nationalisation Law, the *REA*, as headquarters of unification of German railways, faced an organisational problem that it had no vertical structure with its own regional units. Its top-heavy organisational structure and the higher-ups in the bureaucracy did not collect non-lettering information from those who were doing the actual work at each railway. This defect caused bureaucratic inflexibility, including the criticized disproportionate emphasis on documents. (2) To supplement the organisational problem, the *REA* was linked with a perfect working bureaucratic organization that engaged in interactive information feedback in a vertical structure, that is, the Prussian State Railways under the Ministry of Public Works. (3) The failure in the linkage with the Prussian State Railway and ambiguous jurisdiction in railway administration led to the malfunctioning of the *REA* and unsatisfactory achievement of its activity to promote national unification of German railways.

From these observations, we determine the outlook that this failure reflected the precarious position of the *Reich* (Empire) itself. The *Reich* was unstable as an economic unit. More recently, Wolf (2006) showed the regional segmentation of the German market on its way to national unification in the 19th century.⁷¹ Viewed from this, the ‘German nation state’ in the 19th century was economically incorporeal. Therefore, we can say that the German national economy was left dangling between the economy of each region and the European sphere. The *Reich* economy was not a place where innumerable market information assembled automatically, and its central government had no tool for collecting such numberless information, with exception to the case of institutional compulsion. Such a compulsion had a limit, as was noted in one case of German particularism in the railway policy. In this sense, the miscarriage in the German railway nationalisation by the *Reich* governmental bureau was unavoidable.

Year			
Year	the REA: Organisation and Personnel		Law/Ordinance
1871	The new Reich's railway policy belonged to the Reichskanzleramt.		Reich Constitution (Reichsverfassung) Art.41-42, 43-44 45, 47 provide the authority of railway nationalisation.
1872			
10.May	"A Reich-Railway Authority (eine Reichs-Oberaufsichts-Instanz f. d. Eisenbahnwesen)" was planned and introduced. = not passed in the Reichstag.		
1873			
26.Apr.	Elben (Wurt. Reichstagsabgeordnete)		Bill for the law concerning reimbursement of railway officials introduced in Reichstag.
7.March	Plan for establishment of an Imperial bureau of monitoring Railways	Bismarck as Foreign Minister	Rundschreiben an d. Deutsch. Missionen
27.June		Bismarck to the Emperor	Law of the Establishment of Imperial Railway Office (Gesetz ueber die Einrichtung des Reichseisenbahnamtes)
8.July	F.W.Scheele	1.President (Präsident) (-9.5.1874)	
16.Sep.	Activity began (budget: 59100 Mark)		
1874			
May	1.Bill for Imperial Railway Law (1. Entwurf eines Reichseisenbahngesetzes)withdrawal		
9.May	Scheele resigned.		
17.May		Bismarck	Decree concerning "the Getting of a statistic survey of the complaint about railways".
10.Aug.	A.Maybach	2. President (-26.2.1877)	
1875			
April	2.Bill for Imperial Railway Law (2. Entwurf eines Reichseisenbahngesetzes)withdrawal		
1876	"The REA revealed its impotence" (Kunz(1996)).		
1877			
Feb.	Maybach resigned.		
May	Bismarck regret the organisational failure that there was no identification of the REA with the Prussian State Railways.		
Dec.	Bismarck remarked "Nationalisation has failed". Influence of the REA in the railway policy was diminishing.		
1879			
March	Maybach assumed the office of the Ministry of Public Works.		
May	Bill for prussian railway "Verstaatlichung" (making railways state-owned) to the Bundesrat ="Prussia could go it alone." = the acquisition of private firms by Prussian State		
Dec.	A bill permitting an "Verstaatlichung" of Prussian railways was passed into the law. Request of increase of personnel in the REA was not agreed by Bismarck		
1880			
Feb.			Prussia: Law empowered the Prussian State to proceed with the purchase of private companies.
1884			
Dez.	Considering whether to continue or abolish the REA in the Reichstag		
1885			
Juni	Bismarck ordered not to present a memorandum for post increase.		
1887	Korte resigned and Kraeffet took over the heading of the bureau. Schultz became "temporary leader (kommissarischer Leiter)"		
1888	Schultz complained the ignorance by the Bureau of the Major-Domo and its decreasing significance.		
1889	Problem of the mobilising the army :Bismarck und Maybach rejected the military request.		
1890			
18.Dez.	F.Schultz	3. President (-31.12.1909)	
Sources	Kunz, Wolfgang (1996) „Vom Reichseisenbahnmat (1830-1919) zur Gegenwart“, <i>Jahrbuch für Eisenbahngeschichte</i> 28, pp.5-26. Mitchell, Allan (2000) <i>The Great Train Race. Railways and the Franco-German Rivalry</i> , New York/Oxford.		

<Table 2> Careers of the Councilors of the Imperial Railway Office (Reichseisenbahnamt) in the 1870s and 1880s.

Name	Entering REA year	Releiving REA year	field	Career born in year	first job year	enter in railway sector year	occupational career year	Sources
Kürte Hermann	1877 Deputy of President	1886 Deputy of President	Admin.	1819	1842 Kgl.Oberlandesgericht in Oiegen	1877 REA	1846 holder of lawyer-post (Assessor) 1848 military service 1848 councillor by apperception judgement 1852 military service 1870 lawyer and notary by Prussian judgement 1872 Kammergerichtsrath 1873 Imperial state official	R43/1447 pp.37-38, 41-42.
Kraefft		1886 Deputy of President dead	Admin.	1830		1868 Chancery/Kanzlerin as Railway expert	1850 into official service	R43/1448 pp.26-28, 47.
Gerstner	1875 Councilor		Admin.					R43/1448 pp.26-28.
Streckelt	1873 Permanent Assitant		Tech.	1830	1848 Building Trainee of Kurf.Hess		by many Kurf.Hesse officialbodies 1852-53 Study in Poltech. And Uni. in Munich -65 by railways on Hesse, Prussia, Russia and Bavaria. 1865 Railway Inspector by ex-Hesse State Railway 1868 Building-Foreman by the Railway Technical Bureau in the Pruss. Ministry of Commerce 1869 Railway-Building-Inspector 1872 teacher at glBar-Akademie 1872 Building-Director in the German Railway Building Company 1873 into Imperial officials/REA 1875	R43/1448 pp.26-28
Crose			Tech.				1880 Councilor of REA	R43/1447 pp.80-81
Günibel			Tech.				1881 Councilor of REA	R43/1448 pp.26-28.
Ermerch	1881 Permanent Assitant	1890 Councilor	Tech.		1861 Prussian municipal service		1863 Prussian private railway company 1867 into Prussian officials Railway-Building and Management Inspector in the Prussian State Railway 1881 into Imperial officials/ REA 1884 Councilor of REA	R43/1447 pp.7-8; R43/1448 p.1, pp.15-18.

* "Admin": administrative official, Tech., technical officials

Source Bundesarchiv Berlin, 1447-1448, Akten betreffend die Mitglieder und hoheren Beamten des Reichseisenbahnamtes, Bd.1-2.

<Table 3> Prussian recipient of order in VDEV in the beginning of 1890s.

Name	Entering year	VDEV position	Title / Order	Present Occupation	Adress	Career born in	first job	Entering of railway sector year	job career	other orders	
1	Kranold	1893	Chair of the administration office (<i>Vorsitzenden d. Geschäfts-Fuehrenden Verwaltung</i>)	WGOR President of the royal direction of railways in Berlin	1893 Berlin	1838	1865 probationary of judicial court	1867 in the administration of the state railways	1884 President of the royal direction of railways in Breslau	RAO 4.cI. 2.cI	
2	Magnus	1882	at the same time of entering officials	GRR Upper Privy councillor of the royal direction of railways in Berlin	Berlin	1839	1867 probationary of judicial court	1870 Berlin-Hamburger-Railway Company	1873 Private company (Firmen F.Mart. Magnus) (... dissolution) 1879 assistant worker of Berlin-Anhalt Railway Company 1880 member of the direction of the B-A- railway company 1882 Railway Director (by the state-ownisation of the railway) 1886 Governmental Councillour 1891 Upper Governmental Councillour 1891 director of the department in royal direction of railways in Berlin 1895 retired of his official post (by the Law of Railway officers in 1894)	RAO 4.cI. KO 3.cI.	
3	Brecht		in the committee of works of use of wagons (<i>Anschluss für Angelegenheiten der Wagenbenutzung</i>)	GRR Railway Director	1878 Lubeck	1841	1870 probationary of judicial court	1872 in the administration of the state railways	1872 probationary of governmental office	EK, RAO	
					Chair of the direction of Lubeck-Buchen Railway Company				1876 member of railway direction 1878 administrative member of Lubeck Buchen Railway Company (after the retirement of state railways)		
4	Schubart		member of many kinds of committees (<i>Mitglied verschiedener Ausschüsse</i>)	ROA 3.cI Privy Counting Councillour	1896? Berlin	1845	1873 probationary of judicial court	1873 in the administration of the state railways	1874 probationary of counting office (Rechnungs Assesor) 1882 Counting Councillour ? member of railway directions Privy Counting Councillour and member of the 1894 General direction of Seehandlung Society (after the retirement of state railways)	RAO 4.cI	
					direktor of Breslauer Diskontbank (after the retirement of civi service)						
5	Kruger		many kinds of works of VDEV ("Er hat in seiner Stellung vielfach Gelegenheit gehabt, Interesse fuer die Angelegenheiten des Vereins zu bekunden.")	ROA 3.cI Railway Director	1895 Königsberg	1846	1871? probationary of judicial court	(1894?)	1871 probationary of judicial court judicial and managerial member of the direction of the company in the state governmental office		
6	Koch	Dr. jur.	chief editor of the organ of VDEV (<i>Zerlung des Vereins Deutscher Eisenbahnverwaltungen</i>)	ROA 3.cI chief editor of the organ of VDEV	in 1856-60 publish of studies of German railways in Berlin	1825	(1858-1860) probationary of Hessian government office in Magdeburg	1861 chief editor of the organ of VDEV			
7	Schubert		secretary of VDEV administration (<i>Sekretar des VDEV verwaltungen</i>)	ROA 3.cI	Berlin	1847		1868 civilian additional employer in the direction of Lower Schlesia Railway (Civil-Supernumerar bei der Direktion der Niederschlesisch-Markisch Eisenbahn)	1874 Railway management secretary (Eisenbahn-Betriebs Sekretar)	1875 railway traffic inspector (Eisenbahn Verkehrs Kontroler) 1890 secretary of VDEV	
8	ibitz		chair of office of VDEV (Bureau-Vorsitzender des VDEV)	ROA 3.cI	Berlin	?	deputation of the district court in Rügenwalde ? by special committee ? in the office of a lawyer	1861 office of the VEDV	1879 head of the office of the VDEV		
*	WGOR: Real Privy Upper Governmental Councillour (Winkl. Geheim. Regierungsrath) GRR: Privy Governmental Councillour (Geheim. Regierungsrath) RAO: Red Adler Decoration (Roten Adler Orden) EK: Iron Cross (Eisernes Kreuz) KO: Cross Decoration (Kreuz Orden) cl.: class										
source	Preuss. Kultur Besitz Geheimes Staatsarchiv Berlin-Dahlem IHA Rep.89 Geh.Zivilkabinett, juengere Periode Nr.29497, pp.47-48.										

Year	Date	The progress of compilation of the first German railway statistic by the Imperial Railway Office (the REA).
1873	11. June	The resolution of the Reichstag, calling upon the Chancery "the yearly publishing of statistical survey in the uniform basis."
	27. June	The Law of Establishment of the Imperial Railway Office (Gesetz über die Einrichtung des Reichseisenbahnamtes)
	22. Sept.	The Chancery entrusted the REA with the task of compilation of the railway statistic. (*1)
	27. Dec.	M.M. Weber, the Austrian railway engineer, advised the REA about the use of Prussian forms. (*2)
1874	24. Jan.	The REA asked the Prussian Ministry of Trade to inform of the needs of revisions in the foregoing orders and column-pattern in the Statistical Information Paper of Prussian Railways. (*3)
	9. June	The REA made a form of budget pattern on the basis of Prussian State Railways and referred to all German railways to the possibility of introduction.
-1875		German railways expressed the opinions about the form of REA : with strong opposition from the railways that had not introduced the Prussian forms.
1876	May	In accordance with the commissioner advices from the delegates of Prussian Ministry of Trade the REA made the form of calculation and referred to all German railways to the introduction of it. The drift of opinion in German railway administrations was toward the introduction of the form.
1877	Jan.	The Association of German Private Railways (Verein der Deutschen Privatbahnen; VDP) sent its opponent plan and the REA tested it.
1878	4. Apr. - 9. Apr.	The negotiations with representatives of land governments and the VDP for the commissioner advices in the REA. The result was a plan for "Standard Form of the Booking and Statistics of Receipts and Disbursements of German Railway Administrations". The plan was discussed article by article and was revised by the commissioner advices.
1879	25. Feb. - 27. Feb.	The closing conference in the REA provided "Standard Booking form of German Railways".
	6. Sept.	The Prussian Ministry of Public Works sent the list of 21 regulations on the Prussian railway administrations (1872-1879) to the REA. (*4)
	1. Dec.	The first commissioner meeting about making of the table forms was held.
1880	10. May	The 42nd and last meeting about making of the table forms was held and finished the form.
	30. May	The REA sent "immediately" the copies of the form to the Prussian Ministry of Public Works and other German railway administrations and asked them the fulfillment and send-back of the tables in 3-5 months. (*5)
	August	The press comments stressed the significance of increase of personnel for ongoing and future compilation of statistic in the REA, criticising Maybach. (*6)
1882		The publishing of the first Germany railway statistic ("Statistik im Betriebe befindlichen Eisenbahnen Deutschlands nach den Angaben der Eisenbahn-Verwaltungen bearbeitet im Reichs-Eisenbahn-Amt Band.1")
Sources		"Vorwort" in: <i>Statistik im Betriebe befindlichen Eisenbahnen Deutschlands nach den Angaben der Eisenbahn-Verwaltungen bearbeitet im Reichs-Eisenbahn-Amt, Band.1.</i> pp. I-VII. Bundesarchiv Berlin, R4101 Reichseisenbahnamt, 476-478. Aufstellung einer Eisenbahnstatistik für das Deutsche Reich, Band 1-3. Kunz, Wolfgang (1996) „Vom Reichseisenbahnamt (1830-1919) zur Gegenwart“, <i>Jahrbuch für Eisenbahngeschichte</i> 28, pp. 5-26.

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¹ As Mitchell (2000) correctly noted, the establishment of state ownership ('*Verstaatlichung*') of the railways was often a different concept from the nationalisation ('*Nationalisierung*') that occurred in Germany in the 19th century. In the divided German Federation (*Deutsches Bund*) and its successor, the German Empire (*Reich*), many regional land state (*Länder*) governments made railways in each of the states their own properties ('*verstaatlichen*'), but state-owned railways were split into regional systems and a newly established German nation state (*Reich*) owned almost no railways (except the newly captured Elsas-Lothoringen Railway). 'To speak of "the nationalisation of the Prussian railways from 1879 onwards" is perfectly oxymoronic' (p.129). The 'railway nationalisation' that Bismarck planned was the unification of those regional railway systems into the German national system, and his goal was for the *Reich* to own almost all German railways. In this sense, the railway nationalisation that Bismarck attempted in the 1870s was about consolidating railways *under the Reich*, that is, the '*Verreichung*' of railways. He and his comrade, Prussian Minister A. Maybach, progressed the Prussian state-owned railways with a view to compensate for the error of this Reich-wide unification of railways (Mitchell 2000, pp.127-129). In this paper, we need to restrict the phrase 'German railway nationalisation' to its original use.

² For example, Kech (1911).

³ Yamada (2001), pp.181-190.

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- ⁴ See Bogart (2009).
- ⁵ Fremdling (1975), p.60.
- ⁶ Fremdling (1975), p.60, fn.210.
- ⁷ Yamada (2001), pp.165-190.
- ⁸ Mitchell (2000), p.84.
- ⁹ Mitchell (2000), p.129.
- ¹⁰ Kunz (1996), p.9.
- ¹¹ Kunz (1996), p.22.
- ¹² Kunz (1996), p.9.
- ¹³ From (Schutz) to N.N. 17.02.1895, BA R43/1448, pp.26-28:26.
- ¹⁴ *Handbuch für das Deutsche Reich 1882*, pp.166-167.
- ¹⁵ Kunz (1996), p.15.
- ¹⁶ See fn 54 and fn 55.
- ¹⁷ From (Schutz) to N.N. 17.02.1895, BA R43/1448, pp.26-28.
- ¹⁸ From Maybach to Bismarck, 07.02.1883, BA R43/1447, p.10 (1-3): (3); From (Schutz) to N.N. 17.02.1895, BA R43/1448, pp.26-28; 26-27.
- ¹⁹ From Körte to Bismarck, 28.02.1887, BA R43/1447, p.75; From Kräfft to Bismarck, 01/05.1887, R43/1447, p.76; From Kräfft to Bismarck, 01/05.1887, BA R43/1447, p.82.
- ²⁰ Kunz (1996), p.9.; BA R43/1448, p.29.
- ²¹ Gottgetreu, W., Zur Sozialen Frage der höhere Staatsbahn-Beamten in Preussen, GStA, I.HA Rep.89 (2.2.1), 29428, pp.289-290.
- ²² From Körte to Bismarck, 12.01.1883, BA R43/1447. pp.3-5.
- ²³ As was previously noted, Körte once made a very negative comment on the need to replace a Deputy Legal Member and maintain the number of personnel because the Augmented REA had not realized by 1883. From Körte to Bismarck, 12.01.1883, BA R43/1447, pp.3-5.
- ²⁴ From Körte to Bismarck, 30.01.1883, BA R43/1447, pp.7-9.
- ²⁵ From Maybach to Bismarck, 07.02.1883, BA R43/1447, p.10 (1-3).
- ²⁶ From Körte to Bismarck, 10.02.1883. R43/1447, pp.12-14.
- ²⁷ From Gerstner to Maybach, 30.07.1876, BA R4101/137, pp.2-4, pp.5-59; From Beeke to the REA, 16.05.1876, BA R4101/137, p.68, pp.69-84.
- ²⁸ From Weber to Scheele, Wien 27.12.1873, BA R4101/476. unpagged
- ²⁹ From Maybach to Bismarck, 07.02.1883, BA R43/1447, p.10 (1-3).
- ³⁰ From Körte to Bismarck, 18.09.1884, BA R43/1447, p.28.
- ³¹ For example, Schmalz, the Councillor of the Prussian Supreme Court and a Deputy Legal Member (from 27 October 1884) was transferred to the Councillor of the Imperial Court (*Reichsgerichtsrath*), and Körte of the REA asked Bismarck for permission to request the Prussian Ministry of Justice to indicate a suitable person to fill the vacancy with a Prussian judiciary (From Körte to Bismarck, 14.05.1886, BA R43/1447, p.33). About one and a half months later, Kraeffft asked for the appointment of Roehsel to the post, who was a councillor from the Prussian Supreme Court. He was nominated by the Justice Minister (From Kraeffft to Bismarck, 27.06.1886, BA R43/1447, p.35-36.)
- ³² Mitchell (2000), pp.127, 138-139.
- ³³ From Theilen (Minister of Public Works) to the German Emperor (Wilhelm II), Berlin, 02.02.1896, GStA I.HA Rep.89, 29497, pp.39-43: 41.
- ³⁴ Kocka (1987), pp.264—272.
- ³⁵ For example, about the case of Gimbel, see From Kraeffft to Bismarck, 14.04.1887, BA R43/1447, pp.80-81.
- ³⁶ ‘Schematische Zusammenstellung der Organisation der Staatseisenbahn-Verwaltungen sowie d. Bau- und Betriebseinrichtungen derselben in Preussen, Krg. Sachsen, Wüttembern, Baden, Oldenberg’, in Kinke (ed.), ‘Generelle Anordnungen über Vorarbeiten, Konzessionswesen, Organisation sowie Bau- und Betriebseinrichtungen, von dem deutschen Landesregierungen erlassen sind: Bemerk: Zusammenstellung der auf das Schreiben des Reichs-Eisenbahn-Amtes No. 6432 vom 6. October 1874 eingenommen Berichte’, 09.1880, BA R4101/1, pp.64-74: 69-74.

- ³⁷ Banzawa (2006) used as a data source the examination of personnel documents of state railway employees primarily in the mid-1870s and 1880s; GStA, I.HA. Rep.89 (2.2.1),.29 419-452 (Eisenbahnbeamte). They are part of the official records of the Royal Cabinet (Zivilkabinett), including petitions to the King. These official documents on railway civil servants were sent from each line and company to the Prussian Ministry of the Trade, Industry and Public Works (the Ministry of Trade), and were then brought up to the Prussian Privy Civil Cabinet (the Royal Cabinet).
- ³⁸ The ex-private railway employees had to be re-educated to adopt the state bureaucratic institutions (in particular, accounting methods) after nationalisation of the railways in the 1880s (Schmedding (1884), p.448). This also suggested the existence of firm-specific knowledge of the office work process.
- ³⁹ GStA I.HA, Rep.89 (2.2.1), 29419-452 (Eisenbahnbeamte: 29423 : Eisenbahnpersonal; 29449 : Ordens- und Titelverleihungen im Bereich der preußischen Eisenbahnverwaltungen 1845-1918).
- ⁴⁰ See GStA I. HA., Rep.89 (2.2.1) 29421, pp.154,189.
- ⁴¹ Engelhardt, Betrachtungen über den Eisenbahnbau in: *Eisenbahn Zeitung* 24 Aug.; 31 Aug.; 7 Sep. 1845:pp.288-89; 295-297;303-306, p.288.
- ⁴² See Banzawa (2006), Chapter 8 (Dai-8-Syo).
- ⁴³ Then (1997), pp.353-354.
- ⁴⁴ Mitchell (2000) had a similar view on this point. ‘Though scorned at the time and sometimes ridiculed since, the REA was in reality an active agent in representing military interests in the minutiae of planning and preparation’ (p.24).
- ⁴⁵ Kunz (1996), p. 23.
- ⁴⁶ Kunz (1996), p.15.
- ⁴⁷ *Stenograph Deutscher Reichstag –50 Sitzung am 11. Juni 1873*, P.1093.
- ⁴⁸ From the Chancellery to Körte, 22.11.1873, BA R 4101/476, unpagged.
- ⁴⁹ From Körte to Antonu Noulliet (Advocate, Paris Rue Faitbout 49), 08.04.1877, BAR 4101/476, unpagged.
- ⁵⁰ ‘Vorwort’ in: *Statistik im Betriebe befindlichen Eisenbahnen Deutschlands nach den Angaben der Eisenbahn-Verwaltungen bearbeiter im Reichs-Eisenbahn-Amt Band.1*, 1882, p.I-UII: VI.
- ⁵¹ ‘Zur Beratung des im Reichs-Eisenbahn-Amt angestellten Entwurfs von Tabellen-Formen’ (10.05.1880), BA R/4101/477, unpagged.
- ⁵² ‘Vorwort’ in: *Statistik im Betriebe befindlichen Eisenbahnen Deutschlands* , p.V.
- ⁵³ *Elberfelder Zeitung* (04.02.1879), 07.02.1879, BA R 4101/476, unpagged.
- ⁵⁴ *Bühnen Zeitung*, 380, in: 01.08.1880, BA R4101/478, unpagged.
- ⁵⁵ *Berliner Zeitung*, 178, in: 03.08.1880, BA R4101/478, unpagged.
- ⁵⁶ From Weber to (Körte), 27.12.1873, BA R 4101/476, unpagged.
- ⁵⁷ From Scheele to Aschenbach, 24.01.1874, BA R4101/476. unpagged.
- ⁵⁸ ‘Uebersicht der fürdie Aufstellung der statistischen Nachrichten von den Preussisichen Eisenbahnen an die Bahn-Verwaltungen ergangenen Bestimmungen’ (From the Ministry of Public Works to the REA, 12.09.1879), BA R/4101/477, unpagged.
- ⁵⁹ See fn.57.
- ⁶⁰ See fn.58.
- ⁶¹ From (Körte) to Maybach, 30.05.1880, BA R/4101/478, unpagged.
- ⁶² See fn. 61.
- ⁶³ Kunz (1996), p.15.
- ⁶⁴ See fn.27.
- ⁶⁵ See fn.58.
- ⁶⁶ From Boettiche to ‘the President of the REA’, 15.97.1881, BA R4101/137, pp.87-101:87.; The ambitious self-consciousness of the Reich’s statisticians in the Imperial Statistical Office as pointed out in Tooze (2001), p.21, is worth a passing mention.
- ⁶⁷ From (Maybach) to Bismarck, 25.06.1881, BA R4101/137,pp.87-101:88-89. BA R4101/137, pp.87-101:90-96.
- ⁶⁸ BA R4101/137, pp.87-101:90-96.
- ⁶⁹ From (Körte) to Boetticher, 11.08.1881,R4101/137. p.101.
- ⁷⁰ From Maybach to Bismarck, 14.10. 1881, R4101/137, p.104.
- ⁷¹ Wolf (2009).