Inefficient, unprofitable, but still on the track!
An exploration of why the Swiss have hardly dismantled their railway system.

Jonas Steinmann, University of Bern
André Kirchhofer, University of Bern

Conference paper STRC 2006
Inefficient, unprofitable, but still on the track! An exploration of why the Swiss have hardly dismantled their railway system.

Jonas Steinmann  
lic. phil. hist.  
Universität Bern  
Historisches Institut  
Abteilung für Wirtschafts- Sozial- und Umweltgeschichte  
Erlachstrasse 9a  
3012 Bern  
Phone: +41 31 631 52 32  
Fax: +41 31 631 44 10  
email: jonas.steinmann@hist.unibe.ch

André Kirchhofer  
lic. phil. hist.  
Universität Bern  
Historisches Institut  
Abteilung für Wirtschafts- Sozial- und Umweltgeschichte  
Erlachstrasse 9a  
3012 Bern  
Phone: +41 31 631 52 32  
Fax: +41 31 631 44 10  
email: andre.kirchhofer@hist.unibe.ch

March 2006
Abstract

In the course of the 20th century the Swiss railway industry, which has to be considered an anomaly because of its division into a state sector and a so-called private one, got into financial difficulties, as did the railways in other countries. Almost all enterprises constantly operated at a loss and experienced low profitability as soon as they were deprived of their hitherto existing transportation monopoly by the upcoming motor carrier. But unlike other European countries, Switzerland has so far renounced to dismantle its railway system to a large extent. Even in the remote areas where freight and passenger traffic has become less profitable – and often very much so – over the decades, the network is still maintained in these days as it was built up in the 19th century. First of all, this article describes the development of both the Swiss Federal Railways and the many private railway companies with regard to their performance in transportation, to the operating revenues, and to their labour and capital productivity. Secondly, given the fact that fully private incorporations would have filed for bankruptcy on the same conditions, the paper focuses on the question of how Swiss railway policy dealt with the financial constraints of the whole rail industry and, above all, why it did so. In answer to that, it has to be pointed out that the state constantly provided generous funding, which was due to the strong conviction that railway companies were absolutely indispensable to the further growth of the national economy. On the other hand, the companies themselves did not always rely on these public grants (for which they were blamed by some scholars of economics), but instead tried to reform their tariff systems – with the disappointing result that they were deterred from doing so by some trade associations.

This paper reflects two ongoing PhD-projects of the authors in the field of economic, financial and political history at the University of Bern and in cooperation with ViaStoria.

All quoted sources and statements were originally written in German and have been translated into English by the authors of this paper.

Keywords

1. Introduction

In Switzerland the interpretation of one’s own history as a "special case", different from and not comparable to other nations, is an almost traditional way of thought. The mystified Swiss railway history, so far written by interested engineers rather than academically trained historians, including for instance the heroic tunnelling of the Alps in the 19th century, the fast and nationally connoted electrification in the first half of the 20th century\(^1\), or the extraordinary density of the Swiss railway network up to now, rarely went beyond straightforward explanations of the causes of different historic developments. In view of the outstanding importance of transport services for the economic life, this is amazing. Transport is the fundament of almost every modern economic activity, rendering possible the function of the market economy.\(^2\) In the 19\(^{\text{th}}\) and 20\(^{\text{th}}\) century, the railways played a decisive role within the transport system. Politicians never failed to recognise that, neither did they in Switzerland. On the contrary: while in the second half of the 20\(^{\text{th}}\) century economists more and more held on to the point that the mode of transportation was secondary and that in a service economy transport costs were about to become less important to the economic development, politicians clung on to the belief of indispensable railways, protecting them from the menace of the free market. So, we believe that railway history should be rewritten as a political history of a still very important part of the economy.

In this paper, we would first like to provide a short outline of the organisational pattern of the Swiss railway system and of the economic decline mainly of the private companies within the railways industry. With our railway-history database TRAINBASE we have an appropriate working tool. In TRAINBASE, we have digitalized parts of the Swiss railways/Swiss traffic statistics for the period of 1920-1982. So we have the possibility to compare the accounts of all suppliers of railbound-transport services.\(^3\) In the second part, we are going to illustrate the “countermeasures” of the Swiss state against the “malaise”; and finally, we will try to outline some of the underlying causes and justifications for the depicted policies.

---


\(^3\) Visit our database online: [www.trainbase.ch](http://www.trainbase.ch)
2. Financial Constraints

Starting with the general observation that the Swiss railway system has not been reduced like the networks of other comparable nations, a closer look at the specific structures inside the Swiss railway system seems to be worthwhile. One of the most eye-catching factors of the Swiss railway industry is its twofold structure including -- beside the state-owned Swiss Federal Railways (SBB) -- a rather fragmented "private" sector consisting of about 60 (1982: 58) different companies. In terms of the length of the track operated in each of the two sectors, this organisational separation seemed to be very considerable, as figure 1 shows. While the federal railway company SBB even managed to extend their network by 4.5 per cent between 1920 and 1982, the private sector diminished by some 300 km or about 13 per cent in the same period of time.

In the first Swiss Railways Act ("Bundesgesetz über den Bau und Betrieb von Eisenbahnen im Gebiete der Eidgenossenschaft vom 28. Juli 1852"), against the will of the majority of the parliamentary commission which had first dealt with the draft version of the act\(^4\), the Swiss Parliament chose to leave the construction and operation of the new mode of transport to private stock-companies under the authority of the cantons. The foundation of the SBB in 1902 did not totally revoke this decision. The Federal Railways Act ("Bundesgesetz betreffend die Erwerbung und den Betrieb von Eisenbahnen für Rechnung des Bundes und die Organisation der Verwaltung der Schweizerischen Bundesbahnen vom 15. Januar 1898"), by which the SBB were established as an autonomous part of the federal public administration, rather complemented than substituted the present railway legislation: the nationalization affected only the five biggest private railway companies while the concerns of the remaining companies were still regulated by the revised railways act of 1852/1872. So unlike in Britain, France and Germany, the nationalization of railways remained uncompleted in Switzerland. The foundation of the SBB left two railway sectors which differed legally, showed various organisational patterns, and started off from very unequal economic premises. The latter is illustrated in figure 2, showing the transport performance of both sectors between 1920 and 1982 in “unit-km”, a number composed of freight and passenger traffic services rendered in one accounting year. As the five in the SBB unified corporations represented the main axes of the Swiss railway network, it is not astonishing that the importance of the state railway for the whole transport sector was incomparably higher than the private sector. Apart from that, the number of employees in the private sector oscillating around 8000 over the whole period was relatively low compared to the SBB, which employed almost 40’000. The private railway industry of Switzerland ran mainly the bylines of the whole network, far from the big flows of goods and

\(^4\) BBL 1852/II, pp. 49-127.
passengers, connecting the economically rather underprivileged and peripheral alpine regions to the more prosperous regions of the central plateau. Compared to the SBB, they were to a lesser degree affected by economic contractions because of a far smaller income share from freight transports, but while the federal railways by 1982 had achieved to push their transport output to the fivefold amount of 1920, the private sector only managed to triple their services.

As to its structure, the private sector presented itself extraordinarily fragmented. In 1920, an archetypal railway company operated only 22 km of track. Due to a number of closures and mergers which reduced the number of corporations in operation from 80 (1920) to 58 in 1982, the average track length rose up to 33 km. However, this must not necessarily mean that the private railway sector had to be less profitable. It is evident that not the dimension of a company but their productivity decides over profit or loss. As figure 3 shows clearly, labour and capital productivity of the private companies were inferior to those of the SBB over the whole period under review. At the end of the 1970s, none of the railways, not even the SBB, compensated the drifting down of the transport prices by a sufficient enhancement of overall productivity. Figure 4 illustrates the operating expenditure - income ratio in both sectors per transport unit (person or freight-ton / km). It is apparent that overall transport costs sank slightly faster than consumer prices after World War II, experiencing an accelerated downturn.
from the beginning of the 1970s. Profits from freight and passenger transport ceased to counter the costs of rendering those transport services.

Figure 2 Transport performance of Swiss railway companies in unit-km, 1920-1982

It is not surprising that the private railways lesser and lesser managed to break even. There is a widespread range of indices assessing the shortfall of the railway corporations. An indicator that was used often once was the so-called operating coefficient ("Betriebskoeffizient"), a number which showed the extent of how much operating costs exceeded operating revenues. In the 1970s, experts proposed other indices such as the "Eigenwirtschaftlichkeitsgrad", making use of four different and by far more sophisticated methods of calculation in order to estimate the state-dependency of the industry more precisely. Figure 5 shows a maybe less accurate but easily traceable number, the ratio of operating incomes and operating expenditures, a cipher out of the Swiss railways statistics where the financial costs of the companies are not contained. Because a number of costfactors are not included in the operating accounts, this ratio should – for a financially sound company – exceed the 100 per cent mark. From the beginning of the 1960s, the private railways sector altogether failed to generate sufficient income to cover operating expenditures in spite of increased governmental funding.
The financial failure of the private sector had its consequences, but it was not the closing of railway routes that followed. Instead, the Swiss Parliament forced the federal treasury to help the cantons concerned to balance the books of those railways with highly devaluated capital ("Privatbahnhilfegesetz"/ "Sanierungshilfen").\(^5\) Through those financial amendments by the cantons and the federation, private capital was more and more pulled out of the railway industry and was substituted by public funds. For fully private incorporations, bankruptcy would have been the logic consequence of financial performance of the Swiss private railway companies as demonstrated so far.

Without a doubt, the Swiss state suspended the functions of the free market in favour of the rail-bound transport industry. But how and above all why did the Swiss save a good part of their economically obsolete railroad system?

### Figure 3  
**Labour- and capital-productivity of the Swiss railways, 1920-1982**

![Graph of labour and capital productivity](source: Jonas Steinmann (Ed.): Trainbase. WSU and Viastoria, 2006. http://www.trainbase.ch)


---

\(^5\) BBL 1939/I, pp. 579-583.
Figure 4  Costs and Earnings per transport unit, 1920-1982

Figure 5  Operating income – expenditure ratio, private railways 1920-1982

3. Political reactions to the financial constraints

3.1 Public funds from World War I to the 1970s

After a prolonged period of increasing operating revenues, the Swiss railway industry experienced low profitability again when World War I broke out. On the eve of it, most of the companies operated at a loss and would have filed for bankruptcy if there had been a mere thought of economic effectiveness and success. But instead of taking into consideration the closure at least of a part of the whole network, a vast majority of the contemporary policy makers upheld the conviction that railways were an indispensable element of the national transport system. As a consequence, the Parliament decided to intervene and conceived a concept of financial aid which has been applied since then. So after years of having been reluctant to grant public funds in favour of the persistence of the enterprises – but not, nota bene, to subsidies for their initial construction –, the federal state renounced its former principles and provided generous funding even for the daily business operations. Finally, the first federal decree in aid of the afflicted companies was enacted by the Federal Assembly on December 18th 1918, a step foreshadowing more ambitious initiatives in the following years, so that it can be said to be a real break in the regulatory regime in Swiss railway policy.

After this turning point which obviously has to be seen in the context of wartime economy, three types of grants were designed within the next forty years. Firstly, the legislator framed a so-called emergency aid for the maintenance of business ("Krisenhilfe zur Aufrechterhaltung des Betriebes"), covering operating losses in order to prevent short-term cases of insolvency. As a result of that, companies facing failures were offered the chance to request governmental assistance as soon as the total amount of their operating expenses exceeded the revenues. But for fear of benefits to private stakeholders, it was not allowed to pay interest, to return loans, and to distribute dividends at the expense of the state. Secondly, caused by these last re-

---

stricting conditions and given the fact that meanwhile most of the originally private companies were state-owned, there were two Redevelopment Acts ("Sanierungshilfen"). They answered the demand of consolidating the balance sheets on which the equity ratio appeared too low and both the credit capital and the invested capital were too high. Indeed, such liabilities and overvalued assets eliminated any possibility to roll over or repay the obtained credits or even to attract investment capital for required improvements; but for public redevelopments, the companies weighted down by debts would not have been financially viable in the long run.\textsuperscript{11} Thirdly, as a further reaction to such paralytic symptoms on part of the companies, the state got engaged in their technical modernisation, and the outcome was a first investment assistance ("Investitionshilfe"), the Electrification Act of 1919. Passed at a time when public interest in a fully functional transportation system was threatened by the postwar economic crisis and especially by rise in coal prices,\textsuperscript{12} this type of railway legislation rendered it possible to change the traction system towards the domestic electricity.\textsuperscript{13}

<table>
<thead>
<tr>
<th>year</th>
<th>emergency aid</th>
<th>investment assistance</th>
<th>redevelopment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1918</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1919</td>
<td></td>
<td>32.8</td>
<td></td>
</tr>
<tr>
<td>1933</td>
<td>0.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1939</td>
<td></td>
<td></td>
<td>140</td>
</tr>
<tr>
<td>1940</td>
<td>0.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1951</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1957</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>total amount</td>
<td>14.5</td>
<td>32.8</td>
<td>140</td>
</tr>
</tbody>
</table>


But in spite of this wide range of public funding, the underlying basic law on railways dating back to December 20\textsuperscript{th} 1872, did neither envisage state activities like these nor provide any


\textsuperscript{12} Steinmann, Jonas, \textit{Bahnen unter Strom! Die Elektrifizierung der Schweizerischen Bundesbahnen in historischer Perspektive} (lic. phil. hist. Universität Bern), Bern 2003, pp. 000-000.

further specifications about them. Therefore, whenever new financial measures were planned, the Parliament – both the National Council and the Council of States – had to approve them every single time by a specific act. As a result, the rhythm of the subsidies granted did not follow a regular pattern but accelerated as soon as the outbreak of an extraordinary event such as the Great Depression starting from 1929 or World War II ten years later, requested to deal with the problem of an ailing rail industry. Nevertheless, the more the required sums were increasing (Table 1), the more there was an urgent need for a sufficient basic law that would enable to grant financial aid in a greater amount and, above all, at regular intervals.

Hence, for the sake of a standardized form of subsidiation, all important trade associations, different labour unions, all political parties, and the railways themselves pushed for a new all-embracing law that would offer financial security to the railway system as a whole. Even in the early 1940s they still hoped for a sudden increase of rail passenger and freight transportation and they tenaciously refused any change in railway policy. Track shortages, mergers, or conversion to bus services were discussed but strictly refused, even by politicians who were generally in favour of free market and extremely disinclined to regulatory measures. So after a perennial period of negotiations, delayed by other ongoing law projects, the long-desired renewed federal statute providing guidelines for the Swiss railways was passed on December 23rd 1957.

In this act, a specific chapter VII entitled "Financial Aid" perpetuated the existing public grants and offered the possibility -- but did not impose an obligation (!) -- of supporting all railway companies with regular financial contributions. Firstly, this involved the well-known emergency aid for the maintenance of business that was codified in article 58. Again, it was aimed to prevent the companies from collapsing, but now with the decisive difference that the depreciation and amortisation of fixed capital was counted as part of the operating expenses. As a result, the available and paid-out funds were constantly rising for the next decades, above all from 1972 onwards when article 58 was integrated in the ordinary federal budget.

Secondly, the previous Redevelopment Acts and the investment assistance were merged into article 56 thanks to which the companies stood to benefit from allowances for the technical

---


improvement of their infrastructure.\textsuperscript{18} Thirdly, as an amendment reflecting the predominant emergence of new modes of transportation, article 57 allowed the state to encourage a company by public funds to transform into a bus service. So on the face of it, the state seemed to signal a renunciation of the (so far) existing insistence on an area-wide railway system for the first time ever. But in fact, this new trend proved to be a sheer dissimulation in the course of the next decades because in many cases the companies did not invoke this article, and neither did the policy makers.\textsuperscript{19}

**Figure 6: Public funds for private railways from 1958 to 1972**

\[\text{Mio. Fr.}\]

In addition to that, the National Assembly extended the range of financial aid by framing a completely new form of public funds. Whereas the traditional ways had formed a pure ex post reaction to the malaise, the legislator now had the intention to prevent in advance that the enterprises would not get into trouble. For this purpose a sector VI was inserted in the renewed Railway Act by the two Councils against the declared will of the Government and the Federal Administration. It was reflected in Article 51 on the idea that the railways should be paid

\textsuperscript{18} Kieliger, *Subventionen*, pp. 45–53.

\textsuperscript{19} Kieliger, *Subventionen*, pp. 57–58.
compensation for the services they render to the general economy. So unlike the previous financial aid, this type of public allowances was not considered to be a subsidization but a real indemnification ("Abgeltung") of the so-called fundamental obligations ("gemeinwirtschaftliche Pflichten") under which the companies had been since the time of the monopoly. Or, to put it differently, most of the contemporary politicians, economists, and the companies themselves took the position that on the one hand the railways had rightly been entitled to such a contribution and that on the other hand this would diminish the "real" public grants to a minimum.\textsuperscript{20}

But instead of the hoped-for heavy decrease, the federal expenditures for railway service and infrastructure actually skyrocketed within the next fifteen years (Figure 6), to the bitter disappointment of the actors involved. So in conclusion, it has to be stated that the primary measures that have been taken against the financial constraints of the railways in Switzerland consisted in public funding for the benefit of all cash-strapped companies since 1918. But in spite of this remarkable generosity which lasted at least until the late 1970s, the state and the policy system did not succeed, as pointed out earlier, in bailing the companies out of their financial difficulties.

### 3.2 Railway Policy in the Name of Public Utility

As a consequence of the rising railway expenses of the state, the railway system as a whole increasingly came under suspicion of being sluggish, profligate and inefficient. Seen from this point of view, most of the companies aspired to obtain public funds as much as they could, whereas they failed to achieve increased earnings or at least to improve their performance.\textsuperscript{21} Furthermore, referring to the ongoing deterioration of railways, the critics blamed the regulatory apparatus of the state both for stifling any innovation and for hampering intermodal competition. According to them, the situation could not improve unless the financial aid, which they regarded as the very reason for the weakening rail economy, would be stopped or at least reduced. Accordingly, signalling a fundamental change in philosophy, they urged an end to


state control over the rail industry and asserted that a greater reliance on the marketplace would be essential in order to achieve maximum utilisation of railways.\footnote{22 cf. Ruchti, Erwin, \textit{Problematische Abgeltung der Eisenbahnen}, in: Schweizerisches Archiv für Verkehrswissenschaft und Verkehrs politik 28/2, 1973, pp. 127–146.}

But to be sure, the clamour for restoring competition and, as a consequence, for privately operated railways was hardly audible in the 1960s and the 1970s. Although state authority had not been able to change the situation until then, only a few academic studies blamed railway regulation as neither benefiting carriers nor consumers. Among the Swiss economists, \textit{Hans Reinhard Meyer} (1910–2005) an associate professor at the University of Bern, has been the one and only for a long time who called for a reduction of governmental control and constantly pointed to a waste of public funds.\footnote{23 cf. Meyer, \textit{Verkehrswirtschaft}, pp. 94.} Anyway, at the beginning of the 1990s most of his colleagues, some progressive politicians, and the liberal-minded media were disenchanted with federal administration of the carriers. Regardless of whether they were aware of their predecessor or not, they resumed Meyer’s discussion and questioned the wisdom of public financial assistance to the railways, renewing the request for privatisation. At the same time, railroads definitively got to the reputation of lacking entrepreneurial spirit, and again, the most common allegation that was made is that they were an idle beneficiary of the state which was wasting its money.\footnote{24 cf. e.g.: Bättig, Markus, \textit{Zukünftige Kooperationsformen bei schweizerischen Eisenbahnunternehmungen im Umfeld von Deregulierung, Privatisierung und Bahnenform: Ein Systemansatz} (Diplomarbeit phil. nat. Universität Bern), Bern 2003; Frey, Walter, \textit{Unter bestimmten Rahmenbedingungen reguliert der Markt am besten}. In: Blindenbacher, Raoul et al. (Hgg.): \textit{Vom Service Public zum Service au Public. Regierung und Verwaltung auf dem Weg in die Zukunft}, Zürich 2000: pp. 92–99; European Conference of Ministers of Transport, \textit{Privatisation of railways} (Report of the ninetieth Round Table on Transport Economics, held in Paris on 4th-5th February 1993), Paris 1993; Willeke, Rainer, \textit{Verkehrswissenschaft als Begleiter der Verkehrsentwicklung und Verkehrspolitik}, in: Zeitschrift für Verkehrswissenschaft 68/1, 1997: pp. 52–72; Blöchliger, Ueli, \textit{Deregulierung und Restrukturierung im schweizerischen Eisenbahnwesen} (Doppelsemesterarbeit rer. pol. Universität Zürich), Zürich 1993; Knieps, Günter, \textit{Privatisierung und Deregulierung im öffentlichen Personennahverkehr}, in: Zeitschrift für Verkehrswissenschaft 64/4, 1993: pp. 249–259; Weibel, Benedikt, \textit{Privatisierung – Modewort oder Heilmittel?} (Podiumsgespräch anlässlich der Generalversammlung des Arbeitskreises Kapital und Wirtschaft vom 21. April 1993 in Zürich), Zürich 1993; Brändli, Heinrich, \textit{Privatisierung, Harmonisierung, Regionalisierung, Deregulierung. Schlagworte auf dem Weg zu einem besseren öffentlichen Verkehr?}, in: Schweizer Eisenbahn-Revue 11, 1992: pp. 515–517; Kaspar, Claude, \textit{Herausforderungen der Liberalisierung des EG-Binnenmarktes für die Schweizer Verkehrspolitik}. St. Gallen 1990; Windisch, Rupert, \textit{Privatisierung natürlicher Monopole im Bereich von Bahn, Post und Telekommunikation}, Tübingen 1987.}
However, considering the antagonism between exploding public grants and the scepticism which this development provoked in the field of economic research, a critical history of transport has to raise the question of why the Swiss policy makers were always reluctant to minimize the financial aid – and accordingly why they still are. And furthermore, it would be worthwhile to analyse on which business strategy the companies really embarked during the years: did they really behave so indolently and rely on the state as they were blamed for?

As to the first problem, it is important to bear in mind its roots in the 19th century. Remember that the first railway lines were typically financed by local investors with the aid of state and local governments for the purpose of increasing commerce. Consequently, investors and government officials had a proprietary expectation that "their" company would primarily serve local interests. To give a short explanation for that, this was mainly due to the conviction that railways would stimulate both the economy and the growth of the population all over the country and especially in remote areas by keeping freight rates low. Whereas transport costs had been prohibitively high so far, caused by an energy input that was necessarily enormous, the railway made it possible for the first time to haul goods over long distances by land carriers. Under these conditions, when local manufacturing was gradually replaced with worldwide market integration and international division of labour, it was only a short step to treat private railway companies as an instrument of commercial policy. Anxious to guarantee that not only the rising cities and the centrally located areas gained an advantage by rail transportation, the state soon decided to adopt a command-and-control approach towards the whole business. Therefore the rail companies were more and more saddled with a rigid regulatory regime that mainly consisted in the above mentioned fundamental obligations. This means that they were legally bound to carry every freight and each passenger at any time and all-around at equal low rates. Or, in other words, the enterprises were not permitted to repudiate any of their potentially interested customers. Reflecting the strong conviction that railways touched the economic life of most people, this was targeted on ensuring an absolute equality


in the conditions of transport. No one should be discriminated, all the more so because rail traffic had a virtual monopoly at the close of the 19th century.\footnote{Bauer, Hans, \textit{Die Geschichte der schweizerischen Eisenbahnen}, in: EAV (Hg.): Ein Jahrhundert Schweizer Bahnen 1847–1947 (Bd. 1). Frauenfeld 1947: pp. 3–180; Spörri, Willy, \textit{Die Lasten und Leistungen der schweizerischen Eisenbahnen für Staat, Volk und Wirtschaft} (Schweizerische Beiträge zur Verkehrswissenschaft, Heft 4), Bern 1941; Saitzew, Manuel, \textit{Die volkswirtschaftlichen Aufgaben und die wirtschaftspolitische Behandlung der Eisenbahnen. Ein Beitrag zur Beurteilung des Wettbewerbes zwischen Eisenbahn und Automobil}, Bern 1932.}

Fifty years later, in the interwar period and far beyond, the same attitude towards rail industry and its obligations did not have changed, notwithstanding the first critical remarks in scholarly pieces since the late 1960s. Along with the promise of economic growth, railways still played a key role in the contemporary concept of transportation. Yet, with a renewed emphasis on their function of being promoters of the economic development, the railways were regarded as a public work, established by public authority, intended for the public use and benefit, the use of which is secured to the whole community. Even the rise of the motor carrier as a strong competitor which radically modified the market situation was not able to prevent this opinion from being echoed by all political parties as well as by the media and, above all, by trade associations. And exactly this was the very reason why the liquidation of any company was deemed totally unacceptable, although their maintenance and modernisation gobbled up more and more public grants. Moreover, despite the obviously decline of most of the companies and the falling off of railway traffic, the legislator did not feel compelled to justify the financial aid in a detailed way. In fact, in the period between 1918 and the late 1970s it was always absolutely sufficient to bring forward the argument of the railway that occupied – thanks to its fundamental obligations – a central place in the economic life of the whole country.\footnote{Kirchhofer, «Unentbehrliche Eisenbahn», pp. 113–165.}

Finally, with reference to the allegations made first by Meyer and now by the vast majority of the economists, the question arises whether the asserted bottleneck as well as the complete standstill of the railway companies have to be revised in the light of historical research. But given the fact that the railway policy in the course of the 20th century shows conspicuous gaps in historiography, filling a space so large is obviously beyond the scope of this paper. Therefore, the problem can best be illustrated with the activities of the enterprises in view of their tariff structure during the 1940s and 1950s. For this purpose, the key to establish understanding is to know that every change of freight and passenger rates, whether a reduction or a rise, requested regulatory approval in the first place. Unlike the truck drivers who could bargain directly with shippers and passengers over scales, railways had lost that privilege and were
not allowed any tariff reforms before they had worked their way through a system of public supervision. Furthermore, apart from this time-consuming procedure which lasted several months on the average, most of the national trade and industrial associations, such as the Swiss Farmer's Union and the representative bodies of coal, wood-working, or export-oriented industry, were given a say in all decisions on rates. So whenever the companies announced to make a few adjustments, their plans had to be discussed in the so-called Commercial Conference. ³⁰

A short glance at the first all-out tariff reform ever which took place from 1946 to 1952 reveals that this programme was originally initiated by the companies themselves. As soon as they realised in the postwar period that their legally founded rate structure did not meet their need in the hard-fought transport market, they wanted to revolutionize it. Above all, their efforts focused on adjusting all taxes to their real cost structure. Whereas lower charges for agricultural products had been made up for by higher rates on other goods so far, this company-internal burden sharing should come to an end as soon as possible. Pointing out the losses which they constantly had to bear, the companies attributed the necessary modifications to the fact that their inflated rates on high-priced goods had frequently been undercut by motor carriers in a strategy of cream-skimming. But as ambitious they were, it was a dead duck to persuade their negotiating partners to accept their new tariff scheme. Both the representatives of the economy and the deputies of the cantons refused to abandon the traditional rate system. Without any restrictions, the more lucrative freights should still contribute to the unprofitable charges, as the policy-makers were convinced that favorable rates should be fixed to assist ailing segments of the economy. For instance, the Cantonal Council of Grisons laid stress on the argument that public utility would be predominant also in questions of transportation rates: «We feel strongly confident that the general interest of a country has to prevail over the profitable efficiency of the railway enterprises in any case.» ³¹ And likewise, Ernst Jaggi (1917–2004), the then director of the Swiss Farmer's Union, denied any claims by the companies to operating at a profit: «It is not allowed to pursue a railway policy only on principles of profitability.» ³² At last, such objections were taken into account when the Federal Council which figured as the supreme authority in the event of dissension within the Commercial Conference, had finally to decide about tariff issues. In 1952, the rate structure of the railways showed the same peculiarities as it had done before and will do until the late 1970s because of the failure of several ensuing reform projects. So to sum it up, the remote areas as well as

---


³² BAR 8100 (B), 1973/154, Bd. 92: EPED, Protokoll vom 22. Dezember 1951, p. 5.
some industrial sectors, above all agriculture which relied on the axiom of public utility, seemed to be the only profiteers of Swiss railway policy. They all prevented the rail industry from working more efficiently, whereas the cost-conscious companies strove for increasing revenues and a higher profitability. Therefore, the scathing attack on the performance and management of the railways, primarily launched by Meyer and his successors, had to be reconsidered and to be put into historical perspective at least for the period between 1945 and 1975.\(^{33}\)

4. Conclusion

In the period under review the Swiss rail industry has been structurally split into two sectors, featuring the Swiss Federal Railways (SBB) as a state-run enterprise and a private sector of around 60 to 80 stock companies that were in fact owned by the state the longer the more. The SBB as a conglomerate of the five most important private companies of the 19th century operated the most profitable axes of the Swiss railway network. Due to their economies of scale, they managed at least to break even until the end of the 1960s, whereas the private companies experienced a much lower productivity. Therefore, answering the question of why the Swiss did not dismantle their railway network as did most of the European nations, one has to focus on the private sector which always represented the real candidates for track shortages.

The Swiss, being aware of the financial difficulties of the private railways, span an elaborated security net, granting operating losses, fostering investment for the improvement of the capital stock and compensating services in favour of the general economy. This system which had its roots in the Railway Act of 1957 has worked in part to this day, having undergone some conceptual changes during the Railway Reform in 1996. On the level of the National Assembly, this policy was constantly justified with positive externalities of the railways which they were supposed to have on the economy especially in remote areas. On the lower level of government, for instance in the bargains over tariff rates made in the Commercial Conference or within the democratic structures of the cantons, clearly definable interests of local pressure groups like the farmer’s union or tourism, but also trade unions were of great importance. The political system of our country and the special organizational structure of our railway system allowed local interest groups to participate actively in the shaping of national railway policy and thereby to avoid the reduction of the network.
1. Expensive and hardly available 2. Innovative means of transport 3. Watch to keep updated 4. Spectacular but useless 5. Another stage in music history 6. Search that never ends 7. Difficult to use 8. More options. A. History has taught us that humans are the most curious and smartest living organisms on the planet and as a result of this we invent new things. Despite the fact we have hardly spent fifteen years in the new millennium, our century is already full of great and not-so-great inventions. It reminds us that no matter how advanced our society might be, human curiosity always looks to Why We Explore. Human Space Exploration. Humanity’s interest in the heavens has been universal and enduring. Humans are driven to explore the unknown, discover new worlds, push the boundaries of our scientific and technical limits, and then push further. The intangible desire to explore and challenge the boundaries of what we know and where we have been has provided benefits to our society for centuries. This is the beginning of a new era in space exploration in which NASA has been challenged to develop systems and capabilities required to explore beyond low-Earth orbit, including destinations such as trans lunar space, near-Earth asteroids and eventually Mars. NASA will use the International Space Station as a test-bed and stepping stone for the challenging journey ahead. These smaller stores are open long hours, but their sales are small, so it results in higher prices. Supermarket shopping can give you some extra savings especially for large orders. Choosing a supermarket may be difficult. Some stores try to draw in shoppers with attractive specials. Hardly anybody is in normal state of mind on a 1… Either one 2… far too early and is irritated by the waste of time involved in 3…, or one has left for 4… too late and is afraid to leave 5… behind, or to forget 6…, or 7…, or 8… altogether. All one’s natural kindness and good manners seem to disappear on the railway station and in the train which is about 9… One rushes for 10…, looks at 11… who come into the same 12… As the time of 13… of the train draws nearer, the anxiety increase.