

# Planned stagnation? The economic plan vs. reality in the Czechoslovak railway sector of the 1970s and 1980s

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**Abstract:** The article deals with the state of the railway sector in a centrally planned economy in Czechoslovakia in the 1970s and 1980s. It compares the “to-be” position of the Czechoslovak state railway with the real situation in the railway sector. The Czechoslovak railway sector changed a lot during the two analysed decades – it lost its superior position to road transport and showed evident signs of stagnation, even though a big part of economy was dependent on the railway transport. The position of railway transportation had weakened within the two decades and the country lost its stage by stage initiative in modernisation of the railway sector. The railway sector lost its pre-1970s sovereignty in transport and had become more dependent on the general situation of the Czechoslovak economy. It was the reason for stagnation as a result of development of the railway sector in late socialism in Czechoslovakia.

**Keywords:** Czechoslovakia; Czechoslovak State Railway; centrally planned economy; socialism

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## Introduction

Czechoslovakia was one of the many countries in the late 1940s whose economies were substantially under the control of the state. The Communist coup of 1948 hastened the suppression of private enterprise and saw the introduction of Soviet-style multiyear central economic planning. In the beginning, the plans – initially two years and later five years in length – were seen as a way of speeding up the post-war renewal of the economy and implementing a significant investment. However, the weakness of this chosen approach had become apparent by the first half of the 1950s, and at its end lay the start of the economic stagnation that peaked in the 1970s and 1980s.

Nearly forty years later, state planning of the economy came to an end with the Velvet Revolution of 1989. In addition to a political change, the revolution ushered in an economic transformation that led the country back to a market economy. Today, however, nearly three decades since the start of the transformation process, the consequences of the central planning era have proven difficult to root out and certain

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sectors keep witnessing its shortcomings. The potential explanation for their persistence is the approach the central planners applied in the sectors and the criteria by which they were evaluated. These tended to be quantitative in nature – the results for the entire sector were "objectivized" by the central organs of power. This entailed the equalization of the output of individual enterprises or subsegments within the sector, usually by the utilization of reserves or unplanned surpluses in other parts of the sector. After this intervention, the goals for the sector under the plan were always more or less met. The question of quality and further development was then always put aside. The fundamental political task of the elite of the time was to fulfil the plan and everything was subjected to it. The failure to fulfil the plan was a political anathema likely to be interpreted as incompetence.

The aim of this article is to closely examine the railway sector that allows the approach taken to central planning and the ideas behind it, and to compare it to the sector's internal reality and its actual functioning. The paper also reveals how the criteria for centralized economic plans were set, monitored and fulfilled, and what impact the failure of other sectors in the state economy had on the rail sector. Another objective is to investigate whether any prevailing economic conditions contributed to the corresponding developments in the railway sector, or if the goal had simply been to "fulfil the plan". This provides an insight into the sector's real ability to fulfil the tasks set for it and to create specific mechanisms within the country's economic system, as well as a look at the impact this had on its capability and functioning. Czechoslovak Railways (full name: Czechoslovak State Railways – ČSD) present a unique case in which a sector of key importance for the economy was almost entirely dominated by a single enterprise. Bus company ČSAD was divided into many regional sub-companies at the same time. ČSD may be used to illustrate several examples of how the principles of central planning were applied in practice. The choice of the 1970s – 1980s period allows for an insight of a central planning in an era in which it was well-established, having passed through the initial post-war developmental and renewal phases of the economy, including several attempts at a reform. It also was a time of political stability and normalization, a period after the Soviet invasion of Czechoslovakia in 1968, without any shocks in either domestic or foreign politics.

The state of the railway sector after the centrally planned economy had come to an end may only be evaluated on the basis of figures from the beginning of the post-1990 economic transformation. By that time it had become clear that the sector was internally spent. It provided slow inferior service in both personal and freight transport and was inefficiently operated. Compared to railway companies in the West (DB in West Germany or SNCF in France), Czechoslovak Railways were well behind on most quality criteria – the state of its infrastructure, the development of modern traction, the quality of its fleet, as well as its customer service. The question of importance is how it got to that point despite the interest in rail travel declared by many of the country's highest political bodies – the very bodies whose wishes the central plan was supposed to fulfil. Consequently, a potential connection between the state of Czechoslovak Railways and the overall state of the Czechoslovak economy should also be examined.

The methods leading to the answers to these research questions apply a comparison of two cases with the planned position of ČSD in centrally planned economy and with the reality of the railway sector. However, we must first describe the systematic approach to

Czechoslovak Railways embodied in the national economic plan versus the real state of fulfilment of the plan for the sector, especially with regard to meeting the sector's operational and developmental needs. Similarly, the conditions imposed on the functioning of Czechoslovak Railways by the economic plan and the state of the economy and thus on its ability to play its role in fulfilling the plan must also be taken into account. This will not provide a complete picture of the individual issues that affected the functioning of the centrally planned economy in Czechoslovakia, but a number of other economic sectors worked on a similar basis: they were governed by similar mechanisms and a systemic conception behind the plan, and all were subject to the same overall economic conditions. Based on that, the findings may be further generalized.

The starting point of investigation of this topic primarily is archival material, together with a limited range of secondary literature. Authors who have written about central planning and its shortcomings for example are János Kornai or Lubomír Mlčoch. The integration of Czechoslovakia into the Council for Mutual Economic Assistance and the country's economic history have been tackled by, among others, Radek Soběhart (Soběhart 2013), Karel Kaplan (Kaplan 1995) or Václav Průcha (Průcha 2009). As for the rail sector, the most useful source is the archive of the Central Committee of the Communist Party of Czechoslovakia, the highest-ranking political body responsible for the most significant decisions. In addition, there is the Federal Ministry of Transport, specifically the collegia and meetings of the Minister of Transport. Archives that cover the 1970s and 1980s at lower administrative levels have not been processed enough to be worked with. For instance, materials from the State Planning Commission, the agency that put together economic plans, are to no use as they are in a state of complete disarray and thus inaccessible. It is likewise difficult to access Central Committee and Federal Transport Ministry materials at the trade union level.

Interviews with former stakeholders were used as an additional source. The system of a centrally planned economy included many dependencies which in the research remain between the lines. Former stakeholders, mainly higher officers and managers from the Ministry for Transport, ČSD and ČSD branch-enterprises offered their views based on their experience with and within the system of a centrally planned economy.

## **1. ČSD and the Central Plan**

Since their establishment in 1918, Czechoslovak State Railways had always been owned by the state. In the era of the First Republic, it gradually took over the vast majority of the remaining private railway firms; after the Second World War, nationalization was no longer necessary. The railways were of a crucial importance to the transport sector in the post-war economy of Czechoslovakia, dominating both personal and freight transport. This made them a focus of the first multi-year plan. Although by the turn of the 1970s road transport had begun to play an ever greater role in personal and freight transportation, the railways nevertheless retained their essential function. They lost the battle with road transport during the course of the 1970s in terms of the number of persons transported and freight tonnage, but still kept up their performance when it came to transport distance: their focus was on carrying passengers and freight over greater distances.

For Czechoslovak Railways, as for every other enterprise in the economy, the economic plan was the alpha and the omega of its functioning. Performance was planned, as was transport demand from other state enterprises. All that remained to be estimated was the behaviour of the populace and the demand for passenger transport as well as, to certain extent, the transit of people and goods. What needs to be discussed next is the mechanics of how this plan was put together: who composed it, how the tasks were defined for the railway sector from a transport policy standpoint, and how the criteria were established for Czechoslovak Railways and its hierarchical structures. The plan's key macro-level constraints were set by the Congress of the Central Committee of the Communist Party of Czechoslovakia who adopted the principles that would guide further economic development, and also were provided with evaluations of the current state of the economy. In between Central Committee meetings, the Bureau of the Central Committee would meet at least once a week to ensure the tasks set were being implemented and to discuss the broader agenda. Within the hierarchical structure of the state's power, the political organs of the Communist Party of Czechoslovakia took precedence over any executive bodies (Kabele 2003, p. 17), and, as a result, the task of putting together the precise form of the plan was delegated to the State Planning Commission.

The Commission was established in 1952 as a body specially charged with five-year national economic plans for all sectors. It de facto operated at the same level as the governmental ministries and oversaw a number of specialized departments mostly focused on economics. The Commission was headed by the Vice Premier of the Czechoslovak government, and the government's members were appointed (and removed) by the President of the Republic on the recommendation of Parliament. It likely attained its greatest influence in the 1960s when it became the centre of efforts to bring about an economic change and to reform the centrally-planned economic system (Šulc 2011, p. 79). As the central authority, the Commission developed sectoral proposals for five-year where their creation was shared by individual companies that submitted draft plans to senior authorities until the process reached the individual ministries. At all levels, the plans were supplemented and contextualized to take into account the needs and options of individual actors in the economy. In no sense, however, were the plans simply "glued together" to create a master plan. The Commission had its own vision of the development and potential of the economy that it tried to realize by adapting and integrating the plans.

During the Communist era, transport policy in Czechoslovakia was viewed as a part of the overall economic policy – this was true of the concept behind transport as well, which was primarily to satisfy the needs of the national economy and the population to the extent these needs were defined by the plan. When they indeed were satisfied, it was almost exclusively in terms of required transport volume. Until the 1950s, economic plans had explicitly stressed the development of the railroads; after that, the realization of new projects began to stagnate along with modernization efforts, while the quantity demands made on the railway system nevertheless continued to escalate. By the 1970s, the result was that the rail transport system became fully overwhelmed as it tried to cope

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<sup>2</sup> The State Planning Commission was established in 1959 with the transformation of the State Planning Office via a presidential decree dated 25/8/1945 (No. 63/1945 Coll.).

with the tasks it had been charged with, but without satisfactory growth conditions and capacity reserves having been created in advance. At the same time, the transportation sector was to achieve "maximum social efficiency" in transport. Under this concept, the individual transportation subsectors were expected to define their tasks and the scope of their activity in the national economy, utilizing only the most efficient subsectors and means of transport for specific activities.

Economic (and operational) efficiency was measured from an economic and geopolitical perspective. The preferred solution was cheap, efficient and attainable, ideally using technologies available in the Eastern Bloc that did not require Western currency. Any imports of technology or individual machines had to be approved by the pertinent governmental commission (Interview with J. Pohl). "Social efficiency" also included a view of the transport's "fuel-energy balance", which measured the ratio of fuel consumption (or energy) per unit transported. Robust transport routes with a good capacity were preferred – for passenger transport as well – but the transport speeds they offered were not always adequate. At any rate, such theoretical thinking did not invariably deliver the anticipated results (Voráček 1975, pp. 16-17). The development of the long-distance bus network in Czechoslovakia starting in the 1970s may serve as a good example. Bus routes were devised so as to make up for the routing deficiencies in the rail network, making use of the newly-constructed highways and motorways. Constructions of new routes were completed only very slowly and bus tickets were expensive. From a transport policy standpoint, there was no advantage in encouraging bus transport over train transport: it consumed scarcer fossil fuel and was therefore not in the state's interest to support, let alone subsidize.

The national plan was also concerned with setting up links that would function well within the concept noted above and that would rationalize transport relations in the country. Although the concept itself was remarkable, its realization in accordance with the plan did not always entirely succeed. Rationalization measures therefore focused on monitoring and potentially reducing the distance between suppliers and purchasers of goods. They were not to be separated by large distances, because to do so would strain an already overloaded transport system even further (Voráček 1975, p. 9).

Planners sought to arrive at a solution in which a total economic growth did not call forth a proportional increase in the transport load. As Table 1 shows below, this was never entirely achieved; but growth in transport output, both rail and road, started to decline in the 1970s and during the 1980s practically fell to zero. The overall situation of the railways, however, did not improve. Freight transport overloaded the network to the point of collapsing and caused delays in passenger transport (Průcha 2009, 391 and Mitchell 2007, p. 754).

**Table 1. Comparison of aggregate average increases in national income, rail freight transport, road freight transport and combined transport during the 1970 – 1989 five-year plans (in percent).**

Period	National Income	Rail Freight Transport	Road Freight Transport	Rail + Road Freight Transport
1971–1975	5.7	9	36	13
1976–1980	3.7	2.9	31	8
1981–1985	1.8	1.9	-0.2	1
1986–1989	1.9	-0.3	6	-0.1

Source: Průcha 2009, p. 391; Federal Statistical Office 1985, p. 311; Mitchell 2007, p. 754.

In terms of meeting the plan and what the statistics on task fulfilment revealed, Czechoslovak Railways had no major failures. Table 2 provides an overview of the realization of the plans using data on yearly results taken from the Annual Transport Reports. It shows that rail transport consistently met the plan objectives in terms of transport volume (or number of persons transported) and performance in both passenger and freight traffic, even when its condition had objectively worsened, as evidenced by various internal evaluations (Ministry of Transport 1967; Bureau of the Central Committee 1976 and 1988). Not all data on plan fulfilment is available for each year in the Annual Reports – the treatment of strong and weak points in meeting the plan stylistically differs from year to year. The reports from some of the years only note that particular observed criteria were not fulfilled, without even providing actual figures in the tables (Federal Transport Ministry Annual Reports 1971, 1973, 1975, 1976, 1979–1980, 1981, 1982, 1983, 1984, 1985 and 1986).

**Table 2. Overview of the fulfilment of framework parameters of the Czechoslovak Railways plan for freight and passenger transport in selected years from 1971 – 86.**

	Freight Transport		Passenger Transport	
	Tons transported	Transport in tonne-kilometres (tkm)	Number of passengers transported	Transport in passenger-kilometres
1971	106.7%	106.9%	98.8%	102.5%
1973	100.1%	99.7%	100.8%	107.7%
1975	100.4%	N/A	97.1%	99.3%
1976	92.7%	100.1%	94.0%	101.0%
1979	99.4%	100.4%	N/A	N/A
1980	100.4%	100%	101.4%	N/A
1981	99.4%	97.63%	100.7%	99.7%
1982	99.7%	N/A	100.7%	106.4%
1983	101.2%	N/A	98.3%	102.1%
1984	101.1%	N/A	N/A	N/A
1985	98.2%	100.1%	99.9%	102.4%
1986	103.1%	101.4%	N/A	N/A

Source: Annual Reports of the Federal Ministry of Transport 1971; 1973; 1975; 1976; 1979–1980; 1981; 1982; 1983; 1984; 1985 and 1986.

Note: Years in which the economic plan was fulfilled or exceeded are highlighted.

When it comes to how the plans for Czechoslovak Railways and other actors in the economy were evaluated, the criteria chosen were crucial. They were generally of a purely quantitative nature: volume, transport performance, and the number of passengers to be transported. Speed of transport, accuracy, efficient fleet management, and other qualitative factors were put aside. They were included in various evaluation reports, but they lacked the significance attributed to “hard” statistics on the overall fulfilment of the plan.

The goal of all the actors in the hierarchical state planning structure was to meet the plan, i.e. to fulfil the quantitative criteria, because these were what showed up on the report. The quality of the service provided by the railway sector – concerns such as speed of travel, minimizing delays, or greater comfort standards – was increasingly overlooked. It turned out that setting long-term criteria distorted the functioning of the enterprise, which switched its emphasis from improving its services to transporting large volumes of freight and great numbers of people. Czechoslovak Railways were still able to meet the targets of the plan on paper. The quality of performance might have been sliding but the statistics, nonetheless, could be interpreted as the company meeting the plan and, therefore, functioning well. Together with the economic slowdown in the economy as a whole, the result was the start of the stagnation of Czechoslovak Railways. The plan’s target values were revised and monitored, particularly passenger numbers which experienced a long-term decline. Certain years this allowed the railways to slow the decline. As for performance evaluation and monitoring of the sector and the enterprise to make sure the plan was fulfilled, the railways came out fine, and the “objectivized” plan targets for the company and the entire transport sector were (almost) always met.

## **2. Internal Mechanisms in the Sector in Reality**

The system of central planning prompted actors to create their own functional and communications regime in an effort to cushion their shortfalls and outright failures. This affected all areas of the economy, including those designated as political priorities. From the end of the 1940s on, the economic system in Czechoslovakia had gradually began to create internal functional mechanisms that reacted to external conditions and the evaluation criteria that had been imposed as part of the economic plan. But the reality still had to grapple with the fact that inside the system conditions had been created that stood normal, while expected economic mechanisms and relationships were turned on their ear. A specific economic environment began to develop within central planning as individual components began to fail. Hypertrophy of basic economic relations and the creation of nonparametric (irregular) conditions, in which personal relationships and power ties involving management strata and companies that were “gaming the plan” played an increasingly important role, were characteristic of that system (Mlčoch 1990, pp. 152 – 154). According to Mlčoch, this gradually resulted in the creation of an inverted management pyramid within the economy in which the centre – the top of the pyramid – lost its management role in the creation of the plan at the same time it took an interest in seeing the plan fulfilled by the individual firms (or sectors) at the pyramid’s bottom. As a consequence of this interdependence and the management vacuum, planned objectives were not met and shortages of goods arose at

all levels. Demand was satisfied haltingly or hardly at all and badly outstripped supply (Mlčoch 1990, pp. 152 – 154).

Due to the lack of availability of many goods across the economy, supply firms were in the position of deciding whom to supply and under what conditions, although they were not at liberty to raise prices in response to a higher demand. Apart from strengthening patronage relationships between employees of companies seeking to buy goods, this did nothing to help product quality – firms that complained about quality or demanded refunds could expect problems from the supplier, or no delivery at all, next time around. The situation differed from sector to sector, depending on the sector's importance to the state economy and links to monitored political objectives (Interview with J. Pohl).

While exploring the implications of this for the railways, two levels of specificity can be distinguished for “real” mechanisms that can be generalized. On the one hand, there was the lack of goods and services, which negatively impacted all aspects of the railway sector. On the other, there also were the personal actions taken by the management of companies involved in a supplier-buyer relationship.

(1) Despite its strategic importance for the economy, Czechoslovak railways suffered from inadequate supplies of products and spare parts. One example is the supply of locomotives, as noted above. Although there were a number of companies manufacturing locomotives in Czechoslovakia, chief among them the ČKD locomotive factory, the supply of new locomotives and spare parts for ČSD was sluggish. The first priority for locomotive makers was the Soviet Union, and deliveries to the domestic market constituted only a small portion of production. A positive for the manufacturers was a stronger position in the supply chain due to this importance of export to Soviets.. Manufacture delays always meant supply problems for Czechoslovak Railways because of the preference given to the USSR. Product quality was also strictly reflective of the quantitative criteria established for the central plan. It was the number of locomotives delivered that was important, not their quality. Poorly made machines were often taken off the line soon after they had been delivered, and the wait for spare parts – which were similarly problematic – was long (Interview with J. Pohl).

Delayed deliveries of both diesel and electric locomotives in the 1970s forced the railroad to prolong its use of inefficient steam locomotives. The resulting failure to achieve savings and improve functioning of the railways caused damage to the entire national economy.

(2) The second level was based on the presence of irregularities in supplier-customer relationships in the economy and the scarcity of a wide range of products, giving rise to the need for irregular dealings between customers and suppliers that often were monopolies. This could be visible in the rail sector at and below the level of individual railways and in the de facto autonomous economic production units (EPUs – in Czech: výrobně-hospodářské jednotky – VHJ) that existed inside state-run enterprises. During the period of constant supply shortages involving monopolist suppliers, enterprises (customers) were under pressure from the need to protect their own interests and resolve supply shortfalls that threatened their production. Because of the complexity of the technological processes they employed, the railways were particularly vulnerable to failures in components essential for safety and ensuring the flow of traffic. It is at this point that the personal initiative of individual firm managers and heads of operational

units begins to play an important role. Getting products from alternative suppliers, such as those abroad or outside the ECCP bloc, was not normally possible.

The management of customer firms therefore sought to secure supplies via two routes. (I) The first led through the party secretariats of the Communist Party of Czechoslovakia, the so-called “party path”. It took advantage of the political priority accorded to certain deliveries. It was the responsibility of party cadres in the supply firm to ensure preferential treatment for these deliveries.. However, even here the success of the intervention depended upon personal ties and the position of the buyer’s representative. Interviews with people working at the time confirmed that enough “political cover” from an adequately strong group affiliated with the Communist Party greatly increased a task’s chances of success and accelerated the delivery (Interview with I. Laniček). Even the construction of the Prague Metro, which was directly overseen by government commissioner Otakar Ferfecký, depended upon specific customer relationships and on being given the highest political priority.

(II) The second path, which, according to the interviewees, was taken more frequently, involved a direct engagement of buyers’ representatives with the supply firm. The top management of customer firms “went on missions” often equipped with “tokens of appreciation” for the management of supply firms (hard-to-get items, foods, alcoholic beverages, etc.) (Interview with F. Polák). Sometimes barter was even employed between firms. For example, one interviewee recounted a case where a construction company was able to secure delivery of a hard-to-find shunter, to which it was not officially entitled, by agreeing to build a company kindergarten for the locomotive supplier in return (Interview with J. Pohl). Examples given during interviews are difficult to verify or document via a confirming source, but they are, nevertheless, indicative of a systemic necessity to resolve supply shortages of all kinds by any means possible (Interview with I. Laniček).

The sector's internal mechanisms continued to evolve throughout the period of central planning for about forty years. They began to play an increasingly important role as the sector’s problems increased and the Czechoslovak economy stagnated. Political relationships, relations of friendship and nepotism, and ties of corruption made it possible to circumvent the rules to remedy shortcomings. Actors usually did not act solely in their own interest, but in the interest of the firm or organization with direct benefits for themselves by playing a secondary role. The sector's informal internal mechanisms gradually became a natural part of the central planning system after some time, and in the 1970s and 1980s the management cadres began to accept them as the norm. The motto was, “you take care of me this time, comrade, and next time I’ll take care of you”. Although these internal mechanisms originally emerged as supplements to an inefficient system, over time they began to replace some of its functions to the detriment of the system as a whole, with an increasing level of irregularity in relationships and personal agreements that caused supply failures to other consumers.

### **3. The Real Situation in the Railway Sector in Czechoslovakia in the 1970s and 1980s: A Case Study of the Operation and Supply of New Vehicles**

This case study of the operation and supply of new vehicles focuses on the key area of functioning of Czechoslovak Railways: their main line of business and the renovation

and modernization of their most operationally important production assets. As noted earlier, at the end of the Second World War Czechoslovak Railways were among the key industries in the national economy. A renewed, well-functioning railroad aided the post-war renewal of the state and the functioning of the economy, and it supported the massive infusion of investment that occurred in the 1950s under the auspices of the Communist Party, as well as the centralization of manufacturing capacity under the state economic plan, including the ever-greater use of raw materials imported from the Soviet Union. A significant modernization of the railroads took place during this time, including the electrification of railway tracks, renewal of the fleet, the establishment of new routes, and making greater use of the capacity of existing routes. The heyday of railroad transport in Communist Czechoslovakia came to an end at the turn of the 1960s. From the start of the new decade a decline in railway investment became visible; during the 1970s and into the 1980s, it came to a virtual standstill. This was linked to the overall changing position of the railways and to the increased development of automobile transport, including the highway and motorway networks.

The stagnation of the railway sector can also be seen in the statistics presented in the table 3 below. Passenger transport began to be impacted in the 1960s by individual and mass road transport. Freight transport by rail maintained its importance until the 1980s, primarily due to long-distance shipping. Road transport rose to dominance starting in the 1970s on the back of short-distance shipments and the total volume of goods shipped. There were two peaks in passenger transport (mil. passengerkm): in 1965 and 1985. The first one occurred at a time of railway dominance in general passenger traffic, the second one during dominance of railway in long-distance passenger traffic.

**Table 3. Basic developmental statistics, Czechoslovak Railways 1950-1990.**

	1950	1955	1960	1965	1970	1975	1980	1985	1989
Length of network (in km)	13124	13168	13139	13301	13308	13215	13131	13130	13106
Freight transport (mil. ton)	96	140	196	219	236.8	271.4	287.0	293.2	283.6
Freight transport (mil. tkm)	18634	31702	47407	56904	60995	69271	72640	73598	71985
Passenger transport (mil. of persons)	441.5	524.0	580.6	569.1	548.9	486.4	415.6	419.5	410.9
Passenger transport (mil. pass. km)	15.6	18.7	19.3	19.7	18.8	18.4	18.0	19.8	19.7

Source: Mitchell 2007, pp. 737–781; *Statistická ročenka ČSSR 1980*, pp. 428–432; *Statistická ročenka České a Slovenské Federativní Republiky 1990*, pp. 428–432.

The sector's real status was solely a function of the assumptions contained in the economic plan and the state of the economy. In addition to tasks, the plan also set out the extent of investment and other economic outputs to be directed to the railway for purposes of development. The informal internal mechanisms noted above served to save the plan in case of a danger of collapsing, but in no sense could they substitute for extensive development or investment. The state of the sector reflected the difference between the demands made upon the railroad and the resources it received for doing the job. If the operational status of the sector deteriorated, the volume of freed resources did

not correspond to the scope of tasks or the ability of the economy to provide for and realize the required investment.

Because it was responsible for anything to do with the operation of the railroad and the maintenance of its infrastructure, running the state enterprise Czechoslovak Railways was a highly complex task. It was something that ČSD could not fulfil within the confines of its business structure, including specialized economic production units (EPUs) that functioned as independent concerns integrated into higher-level structures which gave preference to the needs of the rail and other transport sectors. To support their activities, they needed products and services supplied by a wide range of other businesses and entities that were outside the organizational structure of the Ministry of Transport. The same held true when it came to development. Once the investment had been approved and the funds released, Czechoslovak Railways were reliant on external firms and suppliers.

The qualitative condition of the rail sector began to worsen after the wave of post-war renewal in concert with the stagnation of the Czechoslovak economy. There were some key areas in the 1970s and 1980s where their constantly worsening quality levels significantly influenced the operation of the railroad. These primarily had to do with the state of the infrastructure and – consequently – the speed of shipment and adherence to the timetable. Another issue was the lag in the modernization of locomotives and the fleet as a whole. This paper will first discuss the condition of the infrastructure, followed by the modernization of the fleet.

A pronounced deterioration in the state of rail infrastructure first became visible in the late 1960s. Growing transport needs were concentrated around two main routes, stretching across Czechoslovakia from west to east, labelled Lines I and II. The two lines accounted for only 14.1 % of the total length of the railway network but 60 percent of the total traffic volume in 1970 (Report on the Concept for Development of Rail Transport Routes 1972). With maintenance no longer able to keep pace, the state of these key routes continually deteriorated. The highest political bodies eventually forgave the problem and came up with a propaganda slogan that reduced the constraints felt by the railroad to a “fight for coal”, even tolerating the restrictions on passenger travel in favour of freight transport (Práce 1981).

All in all, the overloaded infrastructure, which was becoming outmoded, was responsible for the worsening of passenger service, reduced average speeds, and declining reliability in the 1970s. Between 1971 and 1980, the average delay for passenger trains rose from 1.91 to 3.07 minutes per 100 kilometres travelled (Development, Coordination and Rationalization of Passenger Transport in the Seventh Five-Year Plan and in the Outlook for 1982). In the 1980s, things deteriorated even further: trains over the whole network commonly ran 10 to 30 minutes behind. Just in the first quarter of 1987, 40.1 percent of international express trains and fast trains failed to adhere to the timetable, as did 15.9 percent of domestic expresses and fast trains, and 3.4 percent of regular passenger trains. For fast and express trains, these figures were twice as high as than they had been in 1984 (1988 Audit Results). The state of passenger transport and its reliability issues reflected the overall condition of the railroad infrastructure. Travel times were stated on paper only, and during the era of deteriorating track surfaces, additional time added up to the usual times.

Track repairs presented another significant problem. In addition to the problems noted above with suppliers and a shortage of workers trained in manual trades, some locations could not be taken out of service long enough to carry out repairs because of their high traffic load. Due to the need to maintain operations and meet the volumes dictated by the plan, track management on the most heavily utilized routes was subject to “substantial maintenance limitations during the closure of high-traffic routes, despite the knowledge that this would lead to worsened track quality and maintenance” (1988 Audit Results). In 1987, there were a total of 376 critical locations in the ČSD network, with a total length of 757 km, at which the infrastructure was in need of urgent repairs. This unsatisfactory state of affairs was not resolved by making repairs but rather by administratively reducing track speed and adding "supplements" to the travel times listed in the timetable to make up for any unforeseen conditions and deteriorating tracks. As a result, the average travel time for both passenger and freight trains kept on rising along with the inefficiency of rail operations (CST 1986).

Another example of an issue pertinent to this case study which negatively impacted ČSD operations and hampered its efficiency is the state of the locomotive and wagon fleet. Although its renovation was constantly planned, carrying out the plan proved to be beyond the reach of the 1980s Czechoslovak economy. Projections were that in 1990, 52 percent of locomotives would be more than 20 years old and 33 percent would be beyond their economic and technical lifetimes. In the meantime, roughly one third of the 9623 passenger wagons became outmoded. The situation was made worse by a collapsing repair base and a chronic shortage of spare parts. Thus, a high percentage of locomotives and wagons actually were not in service.

The failure of the economy in the 1980s was also evident in deliveries of new locomotives intended to both replace soon-to-be-retired steam locomotives and modernize the fleet. Supply outages and the need for additional repairs had always been a factor for locomotives and rolling stock as a whole. But the most significant outages took place in the 1980s. The testimony to this comes from statistics that were part of the evaluation of the eighth five-year plan (1986-1990). The evaluation report on fulfilment of the eighth five-year plan from 1987 compared planned locomotive deliveries to ČSD with the number actually supplied and with a realistic estimate of deliveries. The planned targets were not met on any criterion, and for some criteria, the failure was almost total. Although the figures given to the anticipated supply gap were preliminary, they speak of severe problems in the supply of crucial products to ČSD. The statistics also reveal that the monitoring of task fulfilment continued and included unsecured deliveries: deliveries that were subject to delays and supply failures that could not be remedied (*Comprehensive Document on Reconstruction of the Economic Mechanism of the Transport Sector of the CSSR 1987*).

**Table 4. Comparison of planned and anticipated deliveries of traction vehicles for ČSD during the 8th five-year plan (status as of 1987).**

Traction vehicle	Deliveries under 8th 5-yr plan	Total anticipated deliveries as of 31/12/1987	Remaining deliveries 1988-90	Deliveries realized 1988-90	Difference (unsecured)	Anticipated fulfilment of the 8th 5-yr plan
Electric locomotives	282	87	195	136	59	79%
Diesel locomotives	206	58	148	79	69	66%
Diesel wagons	163	-	163	2 (prototype)	161	1 %
Electric diesel units	12	-	12	2 (prototype)	10	16 %

*Source: Comprehensive Document on Reconstruction of the Economic Mechanism of the Transport Sector of the CSSR 1987.*

The table 4 above shows specific shortfalls in fulfilling the plan, along with the situation that actually prevailed in the sector. Despite political declarations and the target values set in the plan, there were serious delays in crucial deliveries of traction vehicles for the railway sector. Despite the recognized political priority, significant delivery failures occurred both with the products and with other deliveries. Czechoslovak Railways thus constantly suffered delivery delays but was nevertheless expected to keep up its own operations, even if it meant increased operating costs for the company. This, however, deepened the railroad's operational inefficiency and increased costs, further burdening the national economy. It led to spiralling deficiencies across the economy and an inability to boost efficiency.

## Conclusion

Throughout the course of the communist regime in Czechoslovakia, Czechoslovak Railways was considered a key industry in the national economy and was capable of actually meeting the economic plan right up to the Velvet Revolution of 1989. But its condition continually worsened and, as a result, the railroad lagged behind on virtually every criterion of quality compared to Western European railways (speed, comfort, punctuality etc.). The very dense (in comparison with West Europe) Czechoslovak network was burdened: its tracks were under-maintained and trains moved slowly, with outmoded locomotives and wagons. This suggest a question how it was possible for the Czechoslovak economy to be incapable of regularly modernizing such a key strategic industry.

The reason for its stagnation lay in the increasing difficulties of the Czechoslovak economy and the repeated failure of the five-year economic plans. The economy began to suffer systemic problems, particularly in the area of the production of advanced technology and in finalizing investments. In the 1980s, these two systemic deficits began to strongly impact the railroad negatively. Deliveries of locomotives were defective, tracks were purposely left with only limited maintenance, and investment into modernization nearly dried up. Internal relations within the industry based upon

personal and political ties helped resolve individual failures to meet the plan, but they could not substitute for the lack of renovation and development in the railroad sector.

The criteria in the central economic plan, which were strictly quantitative in nature, also contributed to the railroad's long-term qualitative decline. Because of the emphasis on quantity, the railway was evaluated on the basis of particular volumes of goods shipped and passengers transported, with no stress on the quality of service. Although this approach gave the appearance of successfully meeting the plan, Czechoslovak Railways nevertheless slid into a state of internal exhaustion and qualitative ruin. In some sense, the decline was planned. The deteriorating trend in the rail sector was common knowledge, but since the objectives of the plan were being met, no attempt was made to activate the resources that would be necessary to improve and modernize the sector. As a result, the trend was irreversible, and in many places the deficiencies indeed persist to this day.

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Vladimír Polák, Many production companies, higher manager.

Karel Staněk, Czechoslovak government, Czechoslovak Ministry of Transport, higher officer.

*Many respondents wished to remain anonymous. The interviews were part of a bigger project which collected more than 80 interviews with former managers and Communist party officials active in late socialism.*