

# The Employment Situation in German Railway Companies and Their Financial Performance

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## Abstract

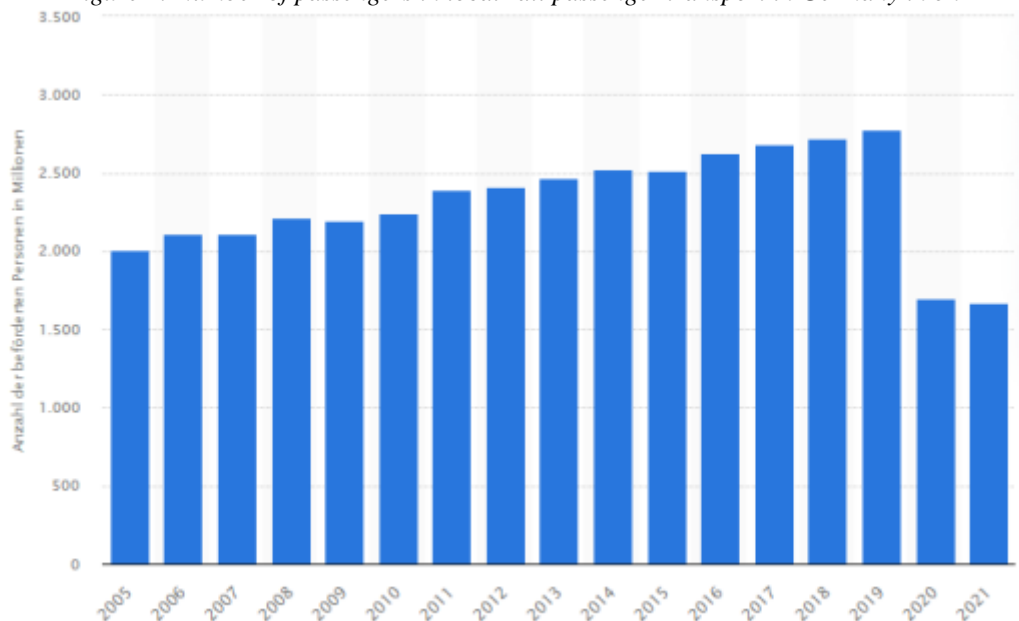
The article investigates how personnel costs and employment situation in the railway sector affect the financial performance of the main railway companies operating in the German railway sector, specifically in regional transport. It shows analyzing companies' annual reports and other publicly available data that most companies face a lack of qualified operating staff, that their personnel cost annually increased but labor productivity has been reduced. The shortage of available employees is the main obstacle to new transport contracts or even to continuing existing activities. The only solution is to train new train drivers, customer service representatives, operations planners, control center staff and other personnel which can lead to a much better availability of operational staff at the railway companies. The power of labor unions including the possibility to affect wage negotiations should be reduced. The German railway reform enabled many companies to enter the passenger railway market, leading to an increase in the number of passengers, better customer services and other improvements. However other positive development can be achieved only if personnel cost and employment structure do not threaten the profitability and positive financial performance of railway companies.

**Keywords:** German railway reform, German regional rail companies, labor staff, labor productivity

## 1 Introduction

The rail reform in Germany, which was implemented as of 1 January 1994, essentially implemented three basic principles: 1. merger of Deutsche Bundesbahn and Deutsche Reichsbahn to Deutsche Bahn; 2. Creating non-discriminatory access to the railway network for private railway companies and 3. Transfer of responsibility for local passenger transport to the federal states including the financial responsibility named regionalization. Due to the liberalization of rail passenger transport in Europe, some large foreign state railways and other subjects were able to enter the German market with subsidiaries and gain market shares. Passenger numbers have developed very positively over the years, also because additional train frequencies were introduced. The reduction in 2020 and 2021 based on the Corona pandemic.

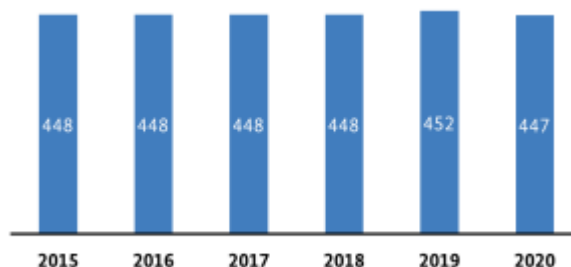
Figure 1: Number of passengers in local rail passenger transport in Germany in bn



Source: (Statista, 2022)

Only railway undertakings that are licensed as railway companies within the meaning of the General Railway Act (AEG) can participate in the German railway market. For foreign market providers, this means that they must establish companies in Germany. The annual market survey by the Federal Network Agency shows that over 332 railway undertakings actively participated in rail transport in Germany. In an international comparison, the German railway market is thus one of the national railway markets with the highest number of competitors. Compared to the other EU countries, competition in Germany is the most advanced. In the years 2015 to 2020, the number of railway undertakings has remained constant - except small increase in 2019 (**Bundesnetzagentur**, 2020).

Figure 2: Number of railway companies



Source: (Bundesnetzagentur, 2020)

One of the biggest problems for the successful operation of transport contracts of railway companies is the lack of qualified operating staff. The reason for this is the age structure in the railway undertakings (details are mentioned in section 4.2). Even in existing transport operations, railway companies are forced to constantly acquire and train new staff due to fluctuation. This is an enormous obstacle in new tenders, as the companies sometimes do not have enough railway staff at the beginning of new tenders (**Bundesnetzagentur**, 2020). For example, under pressure from the VRR transport association, the company Keolis had to return the transport contract it had received prior to the start of operations, as the transport association was under the impression that the railway company did not have enough staff to start operations (**VRR**, 2019, **eurobahn**, 2022).

The aim of the article is to investigate whether rail transport companies can run their operations profitably under the current framework conditions. The article answers the following research questions:

1. Does the lack of staff impact the operation of railway companies?
2. Does the development of collective agreements influence the results of the rail companies?

The paper further set two hypotheses:

1. The training of train drivers, customer service representatives, operations planners, control center staff and other personnel would lead to a much better availability of operational staff at the railway companies.
2. Fewer reductions in working hours and choice models regarding annual leave would lead to an optimization of productivity among operating staff.

## 2 Literature review

According to the best knowledge, there is only little number of studies devoted to the financial performance of German railway companies providing passenger transport. The author of this text published two studies concentrating on the analysis of financial results of the largest German railway companies in regional transport (so-called SPNV companies) – see **Kloppenborg & Wawrosz** (2022a, 2022b) for details, however another investigation is necessary. The main reason for it is the fact that despite the positive development in passenger numbers, some railway companies operating in Germany are making high losses. For other companies, their financial results have been extremely reduced. The obstacles in the market, for example: aggressive competition, lack of operational staff, pressure on wages through railway unions GDL and EVG, many construction sites due to the DB Netz infrastructure or oligopoly among vehicle manufacturers belong to the causes of this development (**Kloppenborg & Wawrosz**, 2022a).

The texts of other authors concentrate, for instance, on the issue of whether the company with the main market share (and the former monopoly before the liberalization of passenger railway transport) DB Regio (DB AG) abuses its market share (**Nigrín**, 2014) when the study found that anti-competitive behavior by DB AG has occurred over the years and that legal action has taken against DB in this regard. For example, an EU antitrust case against Deutsche Bahn was updated in June 2011. The EU Commission suspects Deutsche Bahn of charging unwelcome competitors too high prices for traction current. Europe's top competition watchdog has therefore started formal antitrust proceedings against Deutsche Bahn AG and several of its subsidiaries. In the years from 1997 to 2005, the traction current charge was part of the payments included in the train path charge. Subsequently, the traction current was determined based on bilateral agreements between transport companies and DB Energie. After a change in the law, based on competition law, a transparent tariff system had been introduced. Therefore, a new price list for traction current was introduced in 2003 (**Deutsche Bahn**, 2003), in which different prices for energy were set depending on the time of day of consumption. Another example was the sharp increase in station prices by DB Station & Service on 1.1.2005. Many railway undertakings acted against this and only paid the prices conditionally (**Heuking & Lüer**, 2014). Current (2023) development includes the statement of the German Federal Cartel Office (Bundeskartellamt) has urged at the end of June 2023 Deutsche Bahn to stop abusing its monopoly status. The German Federal Cartel Office concluded that Deutsche Bahn AG is abusing its dominating position following a multi-year inquiry. By refusing to give ticket vendors up-to-date information on its itineraries, the firm broke the law. It drastically reduced market opportunities of its competitors and refused to pay commissions under commercially unfavorable arrangements. Omio, a search, comparison, and booking site, was one of the retailers impacted. Because mobility platforms' business models cannot compete with Deutsche Bahn without effective antitrust enforcement, the ruling is a significant victory for passengers and will enhance rail

transportation by ensuring fair competition. The Düsseldorf Higher Regional Court will hear an appeal from Deutsche Bahn AG within one month after the Bundeskartellamt's ruling (**Bundeskartellamt**, 2023). Deutsche Bahn's urgent application to suspend enforcement of the Federal Cartel Office's decision was rejected in July 2023 (**Eurailpress**, 2023).

**Fitzová** (2017) in her study compares German railway reform with the reforms in other European states and their efficiency. She concludes that the comparison is quite difficult as the ways how the reforms were realized and their impact depend on institutional environments in each country, its traditions and market mechanisms, as well as the various characteristics and potential opportunities of the various modes of transportation and some specifics of the railway transportation market. The relevant legislators should thus do more than just allow entry into the market to boost rail service efficiency. **Rotter et. al.** (2016) analyze how climate change can affect the German railway system. The authors try to explain how and why actors in the German railway system make adaptation decisions and why adaptations may not be made. The study found that although privatized, the German railway system is still operated under a regulated monopoly which has negative consequences. After the structural reform, the German railway system lacks a well-resourced public body that supports public welfare aspects of rail transport, strategic research, and knowledge generation. The Federal Railway Authority (EBA) has narrower tasks, less power, and significantly fewer resources than authorities of other transport modes in Germany. The public sector reform in the 1990's is hence a crucial yet remote and underlying cause for the limited and reactive adaptation approach in the German railway sector. The lack of research resources affects the sector's adaptation capacity negatively as systematic knowledge for strategic adaptation is not generated. Second, the reform fundamentally changed the underlying principle of the infrastructure operator DB and to a certain extent the dominant framing of the Federal Ministry of Transport: changing fundamentally the emphasis from a service of general interest to the economic bottom line. Such a strong orientation on cost-efficiency supports a narrow focus on commercial return on investment and is not conducive to long-term resilience considerations.

It can be concluded that the literature review revealed that almost no attention in scientific literature is paid to the financial performance of the German railway companies carrying passenger transport. However, these results can have serious consequences. If a company suffers a loss for a long period, there is a threat of possible insolvency, or they will not be able to continue the contract that they made with the public transport authorities. Germany has experience with such a situation – company Abellio went bankrupt in the federal state North Rhine-Westphalia which forced government authorities to urgently award new transportation contracts for a period of two years. It makes, thus, sense, to analyze factors affecting the financial results of the companies including personnel costs and factors causing the value of these costs such as the shortage of qualified personnel. The article tries to contribute to this investigation.

### 3 Data and Methods

#### Data

Based on a representative sample for the financial years 2014 to 2021, railway undertakings active in local passenger rail transport were examined with regard to their market shares, results before income taxes, the development of employee numbers and average personnel costs. The figures of the respective company were used, which are published in the Electronic Federal Gazette. In addition, the respective market shares of the companies from various market surveys of the Federal Network Agency were evaluated and other company publications were included in the evaluation of the work. Furthermore, the presentations of various railway journals were consulted, in particular the development of the railway companies in local passenger rail transport. Statistical data and industry comparisons from various other sources of information, such as those of the public transport authorities and Competition Reports were also included.

#### Methods

The financial data and other information for the companies covering 75 % of the market share in German regional passenger transport were collected and analyzed to answer the above-mentioned research questions and to prove or refused hypotheses. The author calculates indicators, describes the development of personnel and other costs of the analyzed companies, creates figures of this development, summarizes and compares their results, analyzes other factors affecting the business of the companies and makes a conclusion based on the used methods. The focus of this work is on the development of personnel costs.

### 4 Results

#### 4.1 Role of the GDL and the EVG

Regional rail passenger service is subject to collective bargaining between the locomotive drivers' union (GDL) and the railway transport union (EVG). These two unions represent almost all of the workers in the railway enterprises, notwithstanding recent membership declines in the EVG, which has the highest level of organization in the railway businesses. This development can be attributed to the GDL's skilled personnel acquisition. The grand coalition in the Bundestag passed the Collective Bargaining Unity Act in July 2015 because of the conflicting situation with two unions at the railroad corporations (**Deutscher Bundestag**, 2015). Only a few weeks have passed since the last train driver's strike. The aim

of the law was to curb the power of small sectoral unions like the GDL. It stipulates that in companies with competing trade unions, only the collective agreement of the larger one applies. "One company - one collective agreement" is the basic rule. The GDL took legal action against this before the Federal Constitutional Court - and lost. At first, however, the law was not applied at all at Deutsche Bahn. In 2015, management and the train drivers' union agreed on a basic contract that guaranteed the GDL that its collective agreements would remain valid. The agreement was concluded for five years and expired at the end of 2020. Since then, the GDL has had to fear that its influence will be severely curtailed, which would ultimately threaten the union's existence. The competition between the companies has led to high collective agreements for the train drivers as well as in the other operational groups in recent years through the power of the trade unions. Productivity hours (after deduction of health quota, further training etc.) have decreased in the SPNV companies in recent years due to a reduction in working hours or the employees' right to choose either a collective agreement increase or an increase in annual leave.

**Table 1: Productivity per employee in TEUR in selected SPNV companies**

<i>Productivity per employee in TEUR</i>	2014	2015	2016	2017	2018	2019	2020	2021
metronom	375	355	408	410	396	348	347	367
HLB	167	175	179	182	178	200	191	199
Erfurter Bahn	247	247	264	274	270	259	238	242
ODEG	433	420	435	415	404	388	388	376

Source: own work based on companies' data

**Table 2: Proportion of personnel costs/revenues in % in selected SPNV companies**

<b>Staff costs/revenues in %</b>	2014	2015	2016	2017	2018	2019	2020	2021
metronom	10,5%	11,6%	10,2%	9,8%	11,0%	12,8%	13,1%	13,0%
HLB	24,0%	23,5%	23,0%	24,4%	24,4%	24,1%	25,3%	25,4%
Erfurter Bahn	17,3%	18,6%	17,9%	17,8%	18,8%	19,9%	22,1%	23,0%
ODEG	9,2%	9,7%	9,5%	10,4%	11,2%	12,4%	13,1%	14,3%

Source: own work based on companies' data

The profitability per employee as well as the ratio of personnel expenses to sales differ greatly among the rail companies examined. The reason for this is that both HLB and Erfurter Bahn are quasi-municipal companies with a much higher average salary per employee. ODEG and metronom are more comparable, however, as both companies operate SPNV lines and do not have infrastructure employees, for example, as HLB or Erfurt Bahn do. The high productivity of all companies is because revenue includes reimbursements from the public

authorities for the infrastructure costs of DB Netz and DB Station&Service. The expenses for the two DB companies can be estimated at an average of 30% to 40% of the total costs of the rail companies.

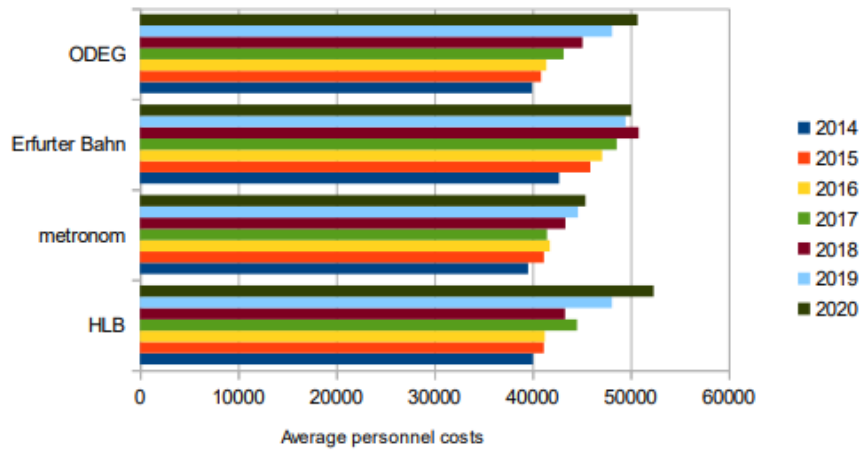
#### **4.2 The impact of personnel cost on companies` results**

A severe economic problem might arise from unemployment. To reduce unemployment, numerous economic policy actions are required, which have a variety of causes (**Dorman**, 2014). However, when considering the transportation sector, and in this case specifically the rail transport businesses, unemployment is essentially not a major issue in the sector. What causes this? One reason is that the number of services that need to be transported has been steadily rising in recent years. This has been made possible by increased competition, more frequent transportation options, infrastructural improvements, and the revival of abandoned railway lines. The need for train drivers and conductors thus rose (**GDL**, 2020). The result is an increase in SPNV firms' individual costs. The railway firms under investigation had a rise in average employee costs from 2014 to 2021. The lack of qualified employees and the influence of labor unions are the main causes of this (**GDL**, 2021; **EVG**, 2021). Train drivers, for instance, have the option of converting a wage raise into more vacation days or vice versa. The result is a decrease in employee productivity (annual hours worked). Despite cost-cutting measures taken by the enterprises in the organization, exceptional increases in human costs were inevitable due to increases covered by collective bargaining agreements and shorter operating staff hours. As a result, businesses are forced to hire additional employees even though operating performance is generally consistent. This is due to a competitive labor market and a lack of train drivers and customer care representatives.

The development of personnel cost for the railway companies HLB, metronom, Erfurter Bahn and ODEG is presented as an example (**Bundesanzeiger**, 2023a, 2023b, 2023c, 2023d).



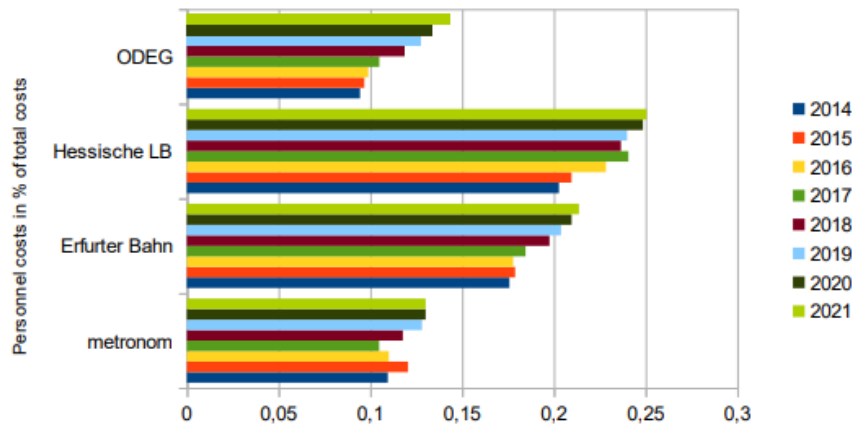
Figure 3: Development average personnel costs for the railway companies HLB, metronom, Erfurter Bahn and ODEG



Source: own work based on companies' data

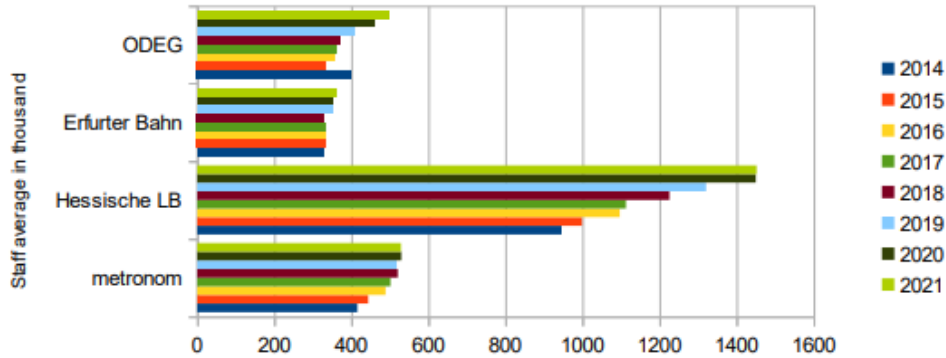
The following graphs represent the evolution of the average employee count, the proportion of personnel costs in comparison to overall costs, and the average personnel costs. It is clear that personnel costs have risen steadily for the selected companies.

Figure 4: Personnel costs in percentage of total costs for the companies HLB, metronom, Erfurter Bahn and ODEG



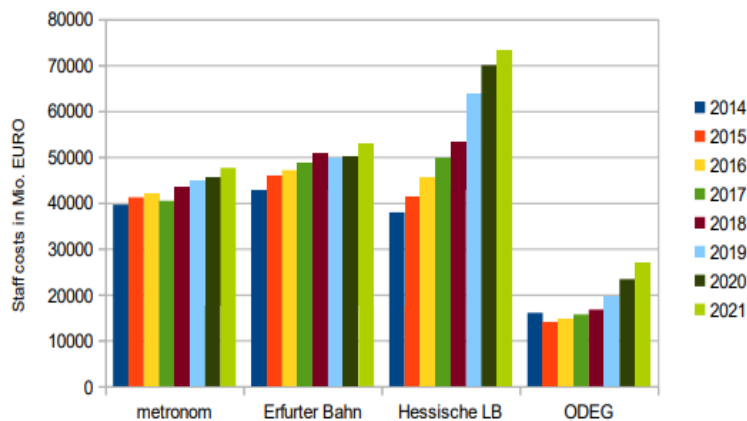
Source: own work based on companies' data

Figure 5: Staff average for the companies HLB, metronom, Erfurter Bahn and ODEG



Source: own work based on companies' data

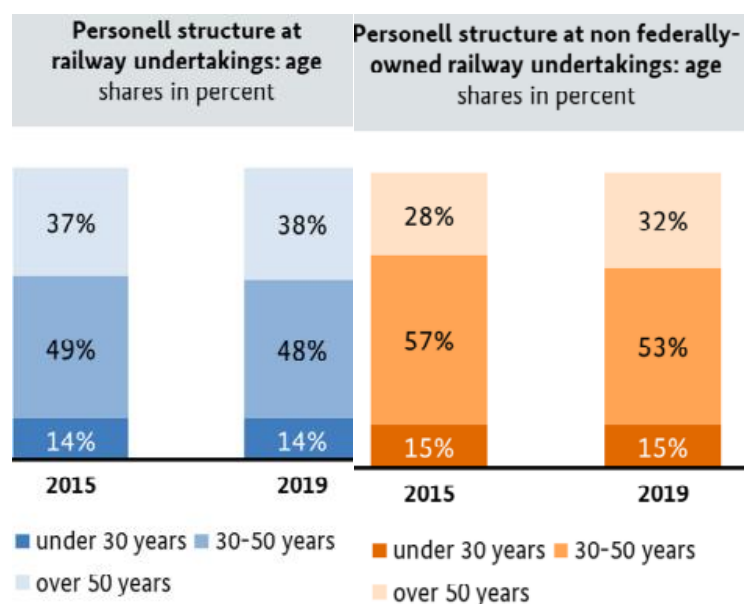
Figure 6: Staff costs in million Euro for the companies HLB, metronom, Erfurter Bahn and ODEG



Source: own work based on companies' data

The employment situation for workers in the railway industry is favorable; they have a choice of jobs because there are numerous openings. The supply of labor is insufficient to meet the demand. Since many workers, particularly train drivers, will quit the labor market in the coming years due to the railway firms' age structure, even a further salary increase would not be able to close the labor supply-demand gap.

Figure 7: Staff structure at railway companies (age in %)

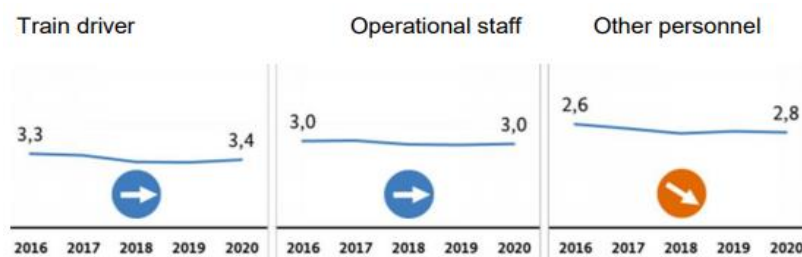


Source: Bundesnetzagentur (2020)

In recent years, there has been an increase in the percentage of elderly workers, particularly among train drivers. Among railroad businesses that are not owned by the federal government, the share is a little smaller. The Federal Network Agency's market analysis reveals that there is still a shortage of workers for railway firms. Due to a lack of train drivers and other operating employees, there is a staffing deficit that can only be partially filled by hiring temporary workers and working overtime.

The railway undertakings rate the availability of train drivers, specialized operational staff, and other workers using the scale of 1 ("relaxed") to 5 ("existence threatened") in the market survey. Compared to 2019, the situation for train drivers improved slightly. However, with an average score of 3.4, the situation remains tense. Less than a quarter of the railway undertakings rate the availability of drivers as good or better. Instead, more than half of the companies give a score of 4 or worse. Every tenth railway undertaking gives a grade of 5. The situation is assessed more positively with regard to specialist staff and other staff. The grade 5 is hardly ever awarded, while the availability of operational staff is assessed as good or better by almost one-third of the companies and the availability of other staff by 40 percent of the railway undertakings. According to the study, critical occupational fields are in particular shunter, wagon master and technical occupations (**Bundesnetzagentur**, 2020).

Figure 9: Development of the staff availability



Source: Bundesnetzagentur (2020)

Many railway undertakings are increasingly reporting departures due to the age structure and at the same time a weak applicant situation. The good economic situation in many regions and the professional framework conditions in the railway market, such as shift work, hinder many railway undertakings in recruiting new staff. Therefore, more investments are being made in training measures and lateral entry programs, but the staff is also being poached from other rail transport companies (Bundesnetzagentur, 2020). The companies have problems with training acquisition for new locomotive training courses, as the willingness to complete locomotive driver training is not particularly pronounced. There is a high effort in search acquisition, for example for a training course with 15 participants it is not uncommon to have 30 to 40 applicant interviews, assuming there are so many applicant inquiries. The acquisition of train conductors is particularly difficult due to the additional challenges posed by the pandemic (compulsory wearing of masks) and the 9-Euro ticket. As the mask obligation will be ended in some federal states at the beginning of 2023, there should be an easing here. There are further resource problems with the operations planners and the control center staff. As a result, the EVUs must shell out more money for the operating staff's training, which adds to their financial constraints. Consistent training is the only choice because recruiting personnel from temporary employment agencies as an alternative is highly expensive.

#### 4.3 Shortage of SPNV staff and its possible solution

Since there is virtually full employment in the railway sector, job seekers are usually frictional unemployed. There is a desperate need for personnel on the market and due to the excellent future prospects of the railway as a mode of transport, railway employees will always find a job. Voluntary unemployment is also conceivable for some jobseekers, for example if the workplace is not in close proximity to their place of residence. The analysis of data from the Federal Employment Agency by the Allianz pro Schiene shows that train drivers are the most sought-after professionals. The lack of qualified candidates in this profession has gotten worse for train drivers in 2019. Only 25 (2018: 28) of the 100 open positions from the previous year were filled (Allianz pro Schiene, 2020). At least 1,000 train drivers are needed to fill open positions (GDL, 2020).

What steps should be made to address the skilled labor shortage? By retraining jobless persons to work as train drivers, train conductors, and other operational staff, railway businesses may primarily help to lower unemployment. Due to the shortage of personnel, companies have no choice but to increase their training capacities and continuously train staff. DB AG, for example, has set up a program to give the long-term unemployed a new chance in the labor market. These retraining courses also have the advantage that they are subsidized (for instance, pilot programs DB together with the Federal Employment Agency). Furthermore, 11 railway companies and 3 public transport authorities in NRW have joined forces in an alliance called “Fokus Railway NRW” to fill the shortage of skilled workers by providing additional training in the operational areas. More than 22.000 more employees would be hired, according to the DB group (FAZ, 2022).

#### **4.4 Legal consequences of recruitment of skilled workers for driving operates**

The awarding of public contracts for transportation services in local passenger rail transport (SPNV), which not only offers procedural conveniences but also pursues distinct political aims, is governed by the special requirements of Section 131 of the Act against Restraints of Competition (GWB). According to Section 131 (1) GWB, contracting authorities are able to choose any approach they like, including an open, restricted, negotiated procedure with a competitive tendering process, a competitive dialogue, or an innovation partnership (Kirch, 2020).

The new operator is responsible for making sure there is enough operating staff on hand to fulfill the requirements of the new transport contracts. Transport authorities may or may not specifically demand that the new operator continue to employ the former operator's workforce. However, mixed forms have developed, meaning that existing workers may occasionally choose to move to the new operator or that there may be a forced staff transfer (Mobifair, 2020). Finding enough new employees is one of the new operator's biggest challenges in addition to the operator change. The railway companies have already established training divisions in the past in order to constantly train new employees. In addition, numerous external training companies are active on the market.

The expansion of railway projects depends on the hiring of enough operating personnel. As previously indicated, authorities have the right to cancel a transport contract if they believe the new operator would not be able to supply the required personnel resources (as in the case of eurobahn, which had to hand back the S-Bahn Rhein-Ruhr transport contract to the public authority in 2019). Lack of personnel, particularly train drivers, can result in operational failures, which require the railway companies to pay contractual fines to the public transportation authorities, negatively affecting their performance (Haase, 2019).

## 5 Conclusion

The results presented in the previous chapters:

1. answer positively the first research question (“Does the lack of staff have an impact on the operation of the railway companies?”) and confirm the first hypothesis (“The training of train drivers, customer service representatives, operations planners, control center staff and other personnel would lead to a much better availability of operational staff at the railway companies”). The lack of operating staff has a significant impact on operations and can result in high financial burdens due to penalties. Continuous staff availability can only be guaranteed through constant training of operational staff. These measures help to achieve an optimization of productivity among operating staff and could also lead to the stability of the operation and the passengers would benefit from this most of all.
2. answers positively the second research question (“Does the development of collective agreements influence the results of the rail companies?”) and confirm the second hypothesis (“Fewer reductions in working hours and choice models regarding annual leave can lead to an optimization of productivity among operating staff”). The reductions in working hours in accordance with the collective agreements have increased the problems of the railway operators to have sufficient operating staff and have an influence on the results of the railway companies. In the last 10 years, productivity has been reduced from about yearly 1,700 hours to about 1,450 hours. Particularly due to the employees' right to choose to take more holidays instead of a higher collectively agreed wage, further problems have arisen for the EVUs. Only if the collective bargaining parties are willing to make an adjustment here, i.e., to restrict this right of choice, could labor productivity increase.

The railway firms were unable to make up for ongoing tariff rises and working-hour reductions that accrued over the review period because of the bargaining power of the trade unions GDL and EVG. The railway businesses must implement their wage demands in collective bargaining due to the lack of sufficient driving employees (train drivers and passenger attendants) as well as in the downstream areas like the traffic planning and control center. Sometimes operational services must be canceled due to a staffing shortfall, which entails contractual penalties being paid to the contract's partners, the public transportation authority. To change this situation improvement in the structure of staff in railways companies should be quickly realized.

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