

Case Study

Polish Railways

1 Introduction

The Polish railway industry was devastated by the collapse of the planned economy in Eastern Europe and Central Asia. Traffic volumes plummeted as traditional rail customers vanished. At the same time, Government deregulated road transport, unleashing fierce competition for the remaining traffic. This led to severe financial, market, operational and asset challenges for the railway industry. Government responded with well-planned railway industry reforms, consistent with the European Union (EU) *acquis communautaire*²⁹⁵ as it relates to railways.

Although the reform put in place an appropriate industry structure, the PKP Group initially lacked the leadership needed to benefit from the reforms. It was not until 2012 with the introduction of a commercially-oriented management fully supported by government policymakers that the reform began to take hold and see adequate allocation of funds, financial stability among key subsidiaries, and improvement in customer services. This case study describes these reforms, and their impact on the structure and performance of the Polish railway sector.

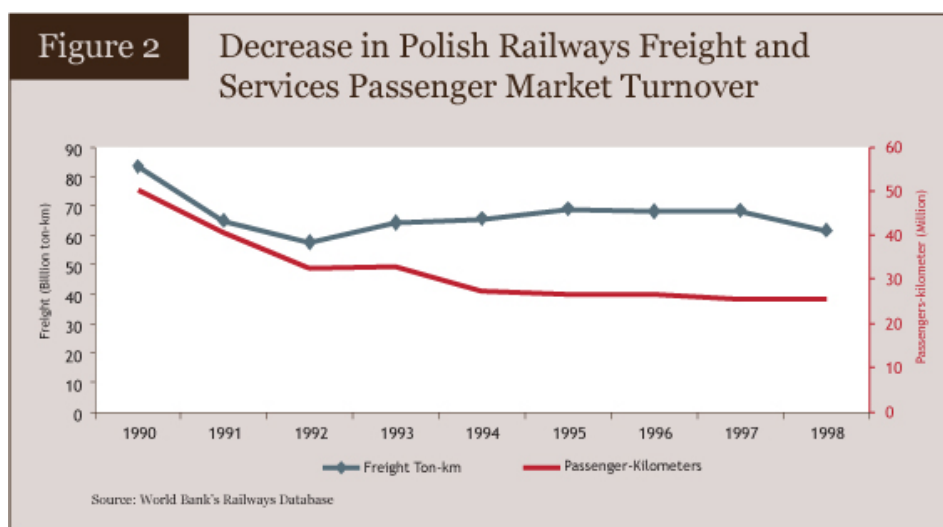
2 The Situation Prior to Reforms

In the early 1990s, the Soviet economic system collapsed, reducing steel and coal shipments, and driving down railway freight traffic in Poland. Polish State Railways, *Polskie Koleje Państwowe*'s (PKP), conducted all rail sector activities in the country, including freight and passenger rail operations. During the 1990s, PKP's freight revenues dropped by 67 percent in real dollars (Figure 1).

²⁹⁵ The *acquis communautaire* is the accumulated body of European Union (EU) law and obligations as it has evolved since 1958 to the present day. It comprises all the EU's treaties and laws (directives, regulations, and decisions), declarations and resolutions, international agreements, and the judgments of the Court of Justice.



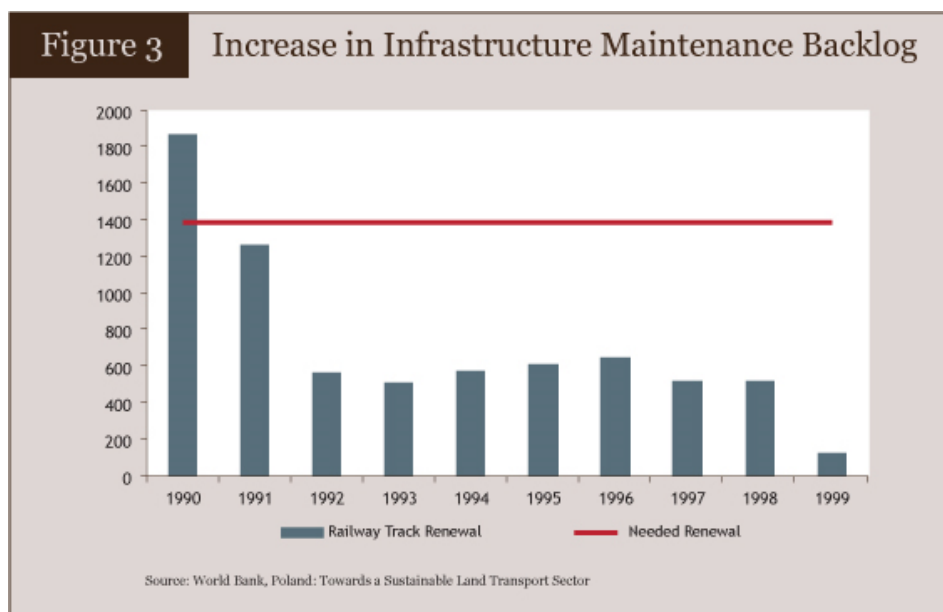
This drop was the result of a 34-percent slump in freight market turnover, and a 48-percent slump in passenger turnover (Figure 2). By end-1999, subsidies to sustain PKP were reaching 2.0 percent of GDP²⁹⁶, and PKP's freight modal share had tumbled to 35 percent from a high of 51 percent.²⁹⁷



As railway financial and market performance plummeted, PKP's track maintenance backlog kept mounting, thus increasing infrastructure costs, and requiring the railways to impose slower speed limits on many lines (Figure 3). Maintenance and renewal backlogs were mounting in other asset classes as well, for example, 60 percent of the PKP signaling system was more than 40 years old.

²⁹⁶ Technical Paper Number 533 - Expenditure Policies Toward EU Accession (World Bank)

²⁹⁷ World Bank Railway Database



Operational productivity declined less than traffic—and in some cases improved—because PKP employed multiple strategies to cope with the tough market and financial environments (Figure 4). Employee productivity improved as PKP transferred some non-core activities to other ministries, and offered severance packages to some staff. Asset productivity was mixed, as PKP responded to the market by moving excess capacity out of rotation as political and physical constraints allowed.

Figure 4 Summary of Subsidiary

	1991	1995	1999
Coach Productivity (000 of Pkm per Coach)	3,156	1,817	2,101
Locomotive Productivity (000 of TU per Loco)	15,241	14,632	18,379
Wagon Productivity (000 of ton-km per Wagon)	279	592	574
Employee Productivity (TU per employee)	337	371	374
Track Productivity (TU per standard track km)	4,488	4,062	3,571

Declining revenues, market performance, asset condition, and mixed operational productivity indicated that aggressive reforms were needed in the Polish railway industry.

3 Reform Goals

Polish State Railways reform objectives, as adopted by the Council of Ministers in 1999, included the following:

- Financial and debt restructuring;
- Organizational restructuring, to transform into a holding company and prepare for private sector participation through open access and in subsidiaries through commercialization;

- Employment restructuring, to right-size the workforce, while ensuring social protection; and
- Asset restructuring, to improve assets condition and restructure ownership.

4 Reform Process

1995-2011

In 1995, Poland passed the first law to reform the railway system. The law mandated PKP separate accounting for freight, passenger, and infrastructure services, in order to provide transparency in business lines operations within PKP. In 1997, the law was fully implemented when the Polish government passed the Railway Transport Law, which aligned Poland with the EU *acquis communautaire*, established infrastructure, freight operations, passenger services, and traction as separate directorates under PKP. The 1997 law also initiated private sector involvement in the railway supply industry, and opened the railway network to third-party Polish operators. Thus this stage of the reform process accomplished three major goals:

- Prepared PKP for joint stock company formation by creating separate lines of business;
- Initiated private sector participation in the railway supply industry; and
- Opened the network to third-party Polish operators.

These organizational changes set the stage for further reforms but were insufficient for the railway sector to withstand the second economic crisis in 1999, which forced Government to take more aggressive actions to restructure PKP. In 2000, Government passed the Railway Restructuring and Privatization Law²⁹⁸, based on EU Directive 91/440/EEC. The law established PKP SA as a fully state-owned joint stock holding company in January 2001. In October 2001, 24 subsidiaries were established, including PLK, which manages railway infrastructure; PKP Cargo, which operates freight services; PKP Intercity, which operates long-distance and international passenger transport; PKP Energetyka, which operates energy and traction services; PKP Przewozy Regionalne, which operates short-distance and regional passenger transport; and PKP Informatyka, which is in charge of telecommunications. Urząd Transportu Kolejowego (UTK) was established to regulate the railway market. PKP SA, the parent company, took over the total nominal debt of the transformed, post-governmental entity.

The new Law on Railway Transport was passed in 2003. It replaced railway concessions for operating on the network with more liberal licenses, with the aim of encouraging competition through private sector participation in the rail industry. In the two years following the enactment of the 2003 Law on Railway Transport

²⁹⁸ Reforms were adjusted as they progressed, responding to the realities of domestic politics, economics, and evolving *acquis communautaire* requirements. The 2000 law (the Railway Restructuring and Privatization Law), which established the joint stock company holding structure, was amended in 2001, 2002, 2003, and 2004.

(which was amended in 2004), the regulatory body issued 57 licenses to independent operators. In 2006, under EU regulations, the Polish railway network opened to international operators.

Despite the conducive legal environment and the successful structural reform, PKP financial stability failed to improve immediately after the joint stock company was established. The operational and financial results of the reform through 2012 can be characterized as limited, largely attributable to poor governance and management that failed to operate the railways on commercial principles. The reform efforts also failed to gain strong support from politicians and trade unions, and therefore private sector involvement in PKP Cargo was deferred, and for other subsidiaries, substantially delayed.

Between 1990 and 2009, PKP reduced its labor force by 60 percent, mitigating negative social impacts with early retirement and severance packages. These packages were negotiated among PKP, trade unions, and Government, and financed by PKP from loans, own funds, and bonds. The World Bank and EBRD helped fund the severance program. This was important because availability of funds created management commitment to proceed and confidence with organized labor that severance could be paid.

2012 Onward

In 2012, PKP began a second wave of internal restructuring. After 11 years of implementing the Railway Restructuring and Privatization Law, PKP still faced a number of structural problems, including drastically decreasing number of passengers (-33% between 2009 and 2014), decreasing quality of services (in Eurobarometer survey conducted by EC in 2011, PKP was given the lowest rate in seven out of the eight categories among the 25 surveyed countries), deteriorating railway infrastructure and rolling stock quality, falling safety indicators, high level of debt and thus high debt servicing charges.

New market-oriented management supported by government was appointed in April 2012, and was given a high level of independence in decision making. The new management prepared a corporate strategy, which took into account the market orientation of its services and state-ownership relation. The following four strategic areas were identified to address the most compelling problems at hand:

- Systemic issues;
- Client;
- Finance and debt; and
- Management and Corporate Governance.

The strategy set clear objectives to improve the commercial performance of the subsidiaries, reduce traffic losses, and improve passenger satisfaction indicators. Better asset management was expected to improve PKP SA's asset productivity and identify assets for privatization. With a performance-based management program, a transparent incentive and remuneration system for management was introduced.

The first priority was to address systemic issues, namely improving: 1) the Public Service Contract (PSC); 2) investment process; and 3) safety. The primary goal concerning the PSC in 2012 was to renegotiate the formula used in the contract to increase its efficiency. The model used for calculating the compensation and reasonable profit did not provide sufficient revenue for PKP Intercity to be sustainable, particularly concerning its capability to undertake long-term investments. PKP SA began renegotiating the PSC in 2012 and 2013. Consequently, an annex to the PSC was signed on 28 August 2013, increasing the subsidy allocated to PKP Intercity by 62 percent until 2021. This helped PKP Intercity achieve long-term financial stability and provided the company with a concrete foundation for future development.

Second, to address the deficiencies in EU funds absorption, PKP needed to reorganize its investment management process. Expediting the infrastructure modernization required establishing a professional project management office responsible for overseeing timelines and project risks, engaging subcontractors, and implementing quality control audits. Increasing organizational competencies enabled PKP to increase the absorption of the EU funds from 12 percent at the end of 2011 to 99 percent of what was planned for the end of the 2007-2013 perspective settlement period in 2015. The remaining part of the investment program undertaken by PKP was the modernization of railway stations to address the needs of both passengers and surrounding communities, thus redefining the central areas in nearly every sizable Polish city.

Railway transport safety was among the crucial priorities for the government, and its importance was stressed even further after the 2012 rail crash near Szczekociny. The Ministry of Transport developed a comprehensive Railway Traffic Safety Improvement Program, which included 103 actions. Over time, the program was expanded to include more than 200 initiatives in four areas: investment, technical, organizational, and staff. The primary operational task in the program was the large-scale requalification and revitalization of the railways, with a focus on the elements that have the greatest impact on safety of the railway traffic. Particular emphasis was placed on modernization and reconstruction of level crossings, where the risk of accidents is substantially higher. The Program carried out by PKP improved railway safety, as evidenced by the substantial reduction in the number of accidents, fatalities and injuries. In this respect, 2014 was the safest year in the history of Polish Railways since 2005.

In terms of customer satisfaction, an initial diagnosis was conducted as a part of an effort to optimize customer contact points. It included a comprehensive review of the passenger experience at every stage of the journey – from buying a ticket, waiting at the train station, to the actual journey itself. To broaden the understanding of customer experience, a quantitative study was conducted to measure the level of satisfaction with respective services. Subsequently, a series of surveys were carried out biannually to track performance. This comprehensive approach to assessing customer service highlighted numerous shortcomings and generally low quality of services, in particular related to journey planning and ticket purchase, commercial offers, and cleanliness of the trains and the stations. The annual timetable did not ensure regularity and interconnectivity, reducing the attractiveness of rail as a mode of transport. The implementation of all initiatives supported by

the modernization of infrastructure led to, in 2015, the first passenger traffic increase since 2011 and a significant improvement in customer satisfaction. What is more, PKP introduced dynamic pricing system, which allowed customers to buy tickets with significant discounts earlier before the journey. This solution proved to support increasing the customer base of PKP Intercity.

In financing, PKP successfully privatized four of its subsidiaries in the beginning of 2013. The transactions amounted to US\$ 1.2 billion in transaction revenue. The largest transaction was the sale of shares in PKP Cargo (50 percent minus one share) through an initial public offering (IPO) on October 30, 2013. PKP decided to list PKP Cargo (as opposed to selling to a strategic partner) to generate financing while retaining some control over the company. The transaction was a first of its kind in EU, and to date, is the only national freight carrier listed on a European stock market. On its debut, the company was valued at US\$ 1.16 billion, and its share price closed 19 percent higher than offer. The decision to list PKP Cargo through an IPO was both innovative and successful, and the process was selected as the Best IPO on the Warsaw Stock Exchange in 2013.

PKP continued to implement its ambitious privatization plan. In 2015, the management board conducted two privatization transactions: TK Telekom (telecommunication subsidiary) and PKP Energetyka (energy supplier). The privatization revenue made it possible for PKP to repay the historical debt. Consequently, Fitch increased the long-term rating of BBB foreign currency and BBB+ domestic currency, substantially reducing the cost of debt service and state guarantees issued to PKP. The funds gained from privatization were also partially utilized for recapitalization of the passenger carrier, PKP Intercity, for the amount of US\$ 300 million. These funds comprised the majority of the company's investment program for the period of 2016-2018 worth US\$ 500 million.

In addition, after conducting a strategic inventory of its real estate portfolio, PKP was able to increase sales of its redundant real estate assets from US\$ 180 million during 2008-11 to US\$ 370 million during 2012-15. PKP improved its asset management efficiency by selling redundant asset²⁹⁹ and increasing the occupancy rate of commercial space at its stations. In addition, PKP SA also recognized the potential of undeveloped land in city centers surrounding the central railway stations and initiated several development projects to maximize income from such properties. For this purpose a special company was established – Xcity Investment, which realizes development projects jointly with developer companies.

Since 2012, PKP has made significant headway in the repayment of its historical debt, which decreased to US\$ 130 million in 2015 from US\$ 1.01 billion in 2012. A combination of the privatization of its subsidiaries and the sale of redundant assets allowed PKP to both gain control of its debt repayment obligations and fund its ongoing rolling stock modernization program for 2016-2018.

Adjusting the organizational structure and improving the management of PKP Group companies was crucial to successful implementation of its strategic initiatives. Since 2012, PKP has undertaken a number of initiatives to improve corporate

²⁹⁹ For example, the PKP Group owns over 2,000 stations, but only about 600 of them are operating, and less than ten of the brought profit in the past.

governance standards. Better management at the operational level was achieved by reducing the number of board members at the Group companies. The largest companies introduced a system of management by objectives (MBO), whereby the level of remuneration depends on performance. To enhance the effectiveness of corporate governance, Audit Committees were set up by the supervisory boards of the subsidiary companies. The overall improvement in management effectiveness realized an increase in dividends paid by subsidiary companies to PKP SA. To optimize and integrate the support functions in PKP, PKP SA initiated group purchasing for all its subsidiary companies. This allowed for a stronger negotiating position in bulk purchase and yielded over US\$ 40 million in savings.

5 Reform Progress Results

5.1 *Market Performance*

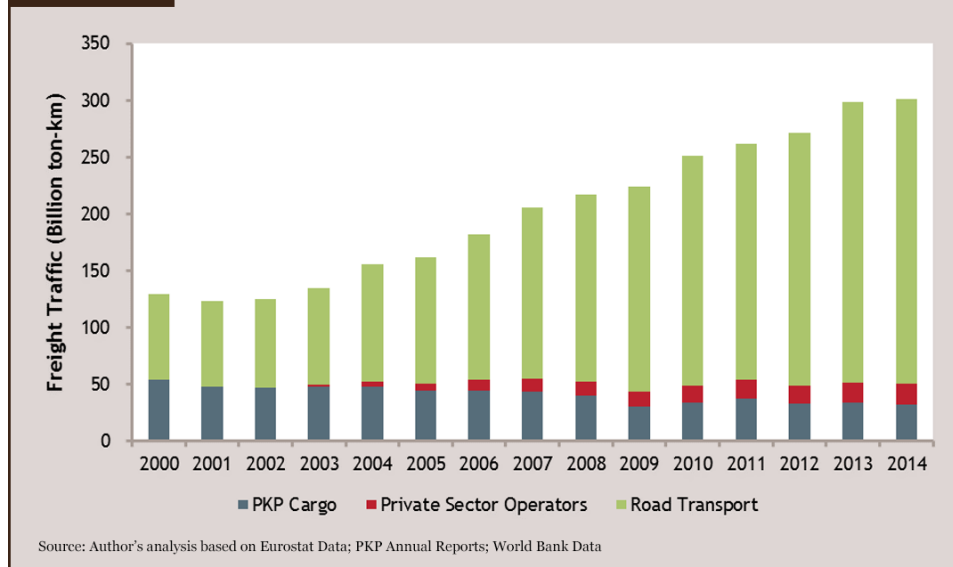
In Poland, rail freight companies faced increasingly stiff competition from road transport—a major reason why railway market performance failed to improve after the reform. Since early 2000s, passenger transport (by all public modes) has steadily decreased, while private auto traffic increased. Freight volumes in Poland have grown substantially, but the shift to trucks has been dramatic. The 2003 Railway Law and subsequent reforms opened the door for independent operators in the Polish rail industry, and thus PKP also faces direct competition from new rail operators, which has further reduced PKP's market share of what has become a shrinking market for overall passenger and freight rail services.

While PKP, which has become one of the rail operators in Poland, lost its rail market share due to the competition generated by the reform, the sector reform as a whole should be considered a success as the users of the services would ultimately benefit from the generated competition.

Freight Services

The PKP Group has two subsidiaries that provide freight transport services, PKP Cargo and PKP LHS. Despite a significant growth in freight transport in Poland, PKP has seen a decline in turnover because of the combination of: (i) a loss of freight transport market share to trucks; and (ii) increasing competition from private rail operators since the opening of the rail market to the private sector (Figure 5).

Figure 5 Road and Rail Freight Transport in Poland



Reforms have successfully engendered competition within rail cargo transport. By 2014, private operators' market share (Figure 5) in freight ton-kilometers had risen to over 40 percent. Significant private operators include CTL Logistics and DB Cargo Polska. Substantial international competition also entered the market as Poland joined the EU.

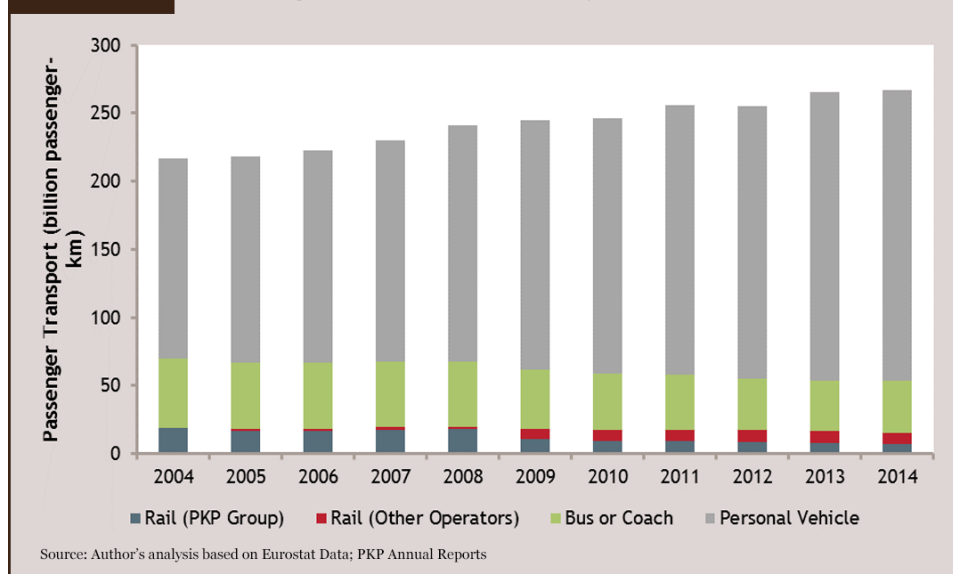
Passenger Services

As of 2008, passenger rail services were offered by two of the PKP subsidiaries, PKP Intercity and PKP SKM.

A broadly similar pattern holds for rail passenger transport³⁰⁰. While the overall passenger market grew, the volume of public passenger transport (rail and bus) declined, more than offset by an increase in the use of private cars. Passenger movement by rail decreased in absolute terms between 2004 and 2014, and as with freight traffic, PKP also saw a growing shift of rail passenger traffic to private rail operators (Figure 6).

³⁰⁰ It should be noted that, in 2008, the shares of PKP Przewozy Regionalne, which offers local and regional domestic passenger rail services and whose revenues amounted to 2.8 billion PLN, were transferred to Poland's regional governments. In turn, PKP Intercity took over regional domestic transport in December 2008. This accounts for the significant jump in the market share attributed to other operators between 2008 and 2009 (Figure 6), but does not detract from the observed trends.

Figure 6 Passenger Market Turnover by Mode



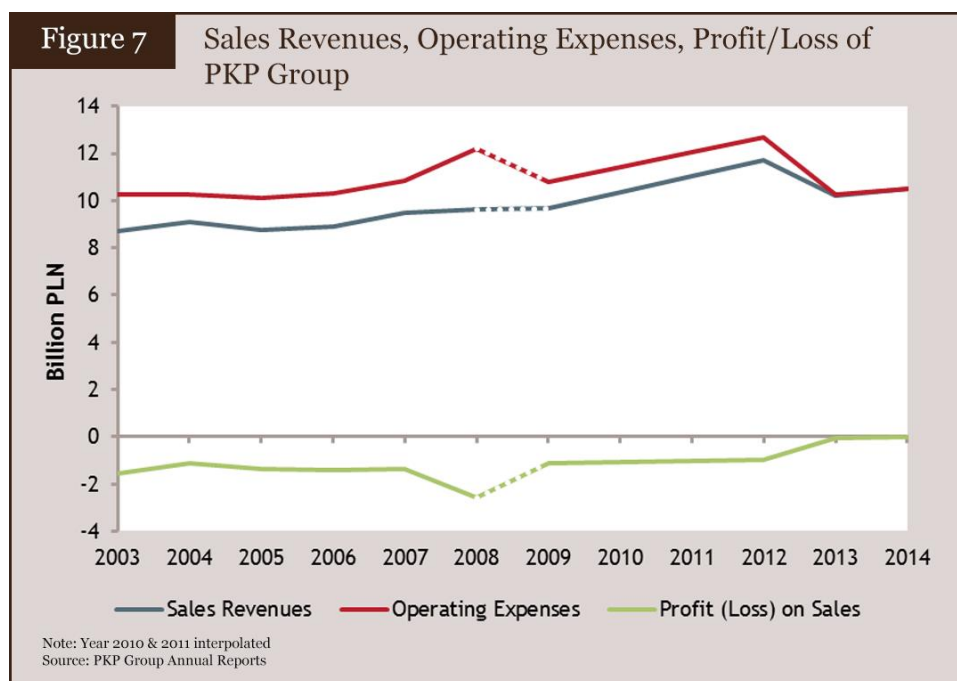
Prior to 2012, passenger services were seen as having poor quality of service, non-competitive travel times, lacking cleanliness, and poor communication with customers left travelers seeking alternative means of transport. However, under the new PKP Group management of 2012, there was a significant shift toward improving client satisfaction, with PKP Intercity customer surveys showing an increase of 21 percentage points in satisfaction, from 42 percent in 2013 to 63 percent in 2015. The PKP Group also reported its first increase in passengers during Q1 of 2015 since Q1 of 2011. This trend followed in 2016 (+20 percent of the number of passengers year/year) and continues in 2017.

5.2 Financial Performance

PKP Group Sales Revenues

After the formation of PKP as a joint stock holding company, the consolidated revenues of the group initially increased by 10 percent between 2002 and 2008 (Figure 7). The 2009 economic crisis had a shock effect on the company and its subsidiaries, most notably its freight business, where PKP Cargo saw a 28.3% fall in revenue (Figure 7) and recording a decrease in transport volume of 22.8%. Since that time there has been a modest but steady improvement in net income (profit) on sales of PKP Group.

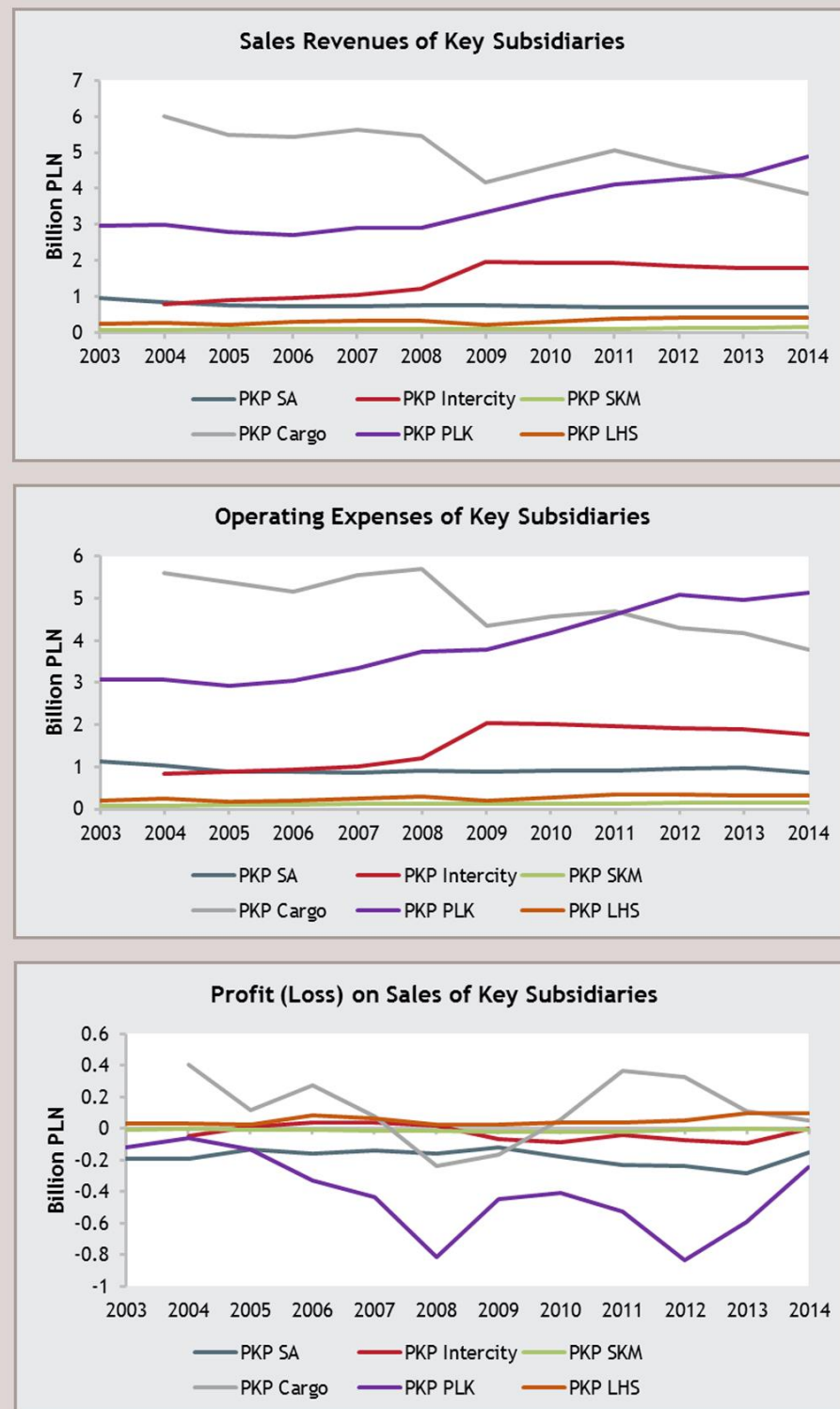
Passenger revenues from 2008 and 2009 cannot be interpreted without a mention of the previously noted transfer of shares of PKP Przewozy Regionalne to regional governments and of regional domestic railway services to PKP Intercity.



Since October 2013, PKP Cargo has been listed on the Warsaw Stock Exchange, and as of December 2014, PKP S.A. owns 33 percent of shares in PKP Cargo. Since 2012, PKP Cargo has seen year-on-year decreases in net profit of sales, due primarily to a decrease in freight revenues (Figures 8).

Since 2009, PKP LHS has grown its sales profit year-on-year, increasing from 21.0 million PLN in 2009 to 92.8 million PLN in 2014 (Figures 8). The growth in transport services revenues are largely attributed to an increase in the volumes of goods transported and additional fees.

PKP SKM and PKP PLK have reported losses since 2002 (Figures 8). In recent years, PKP Intercity has faced increased competition in a stagnant market and has suffered losses on its sales since 2008.

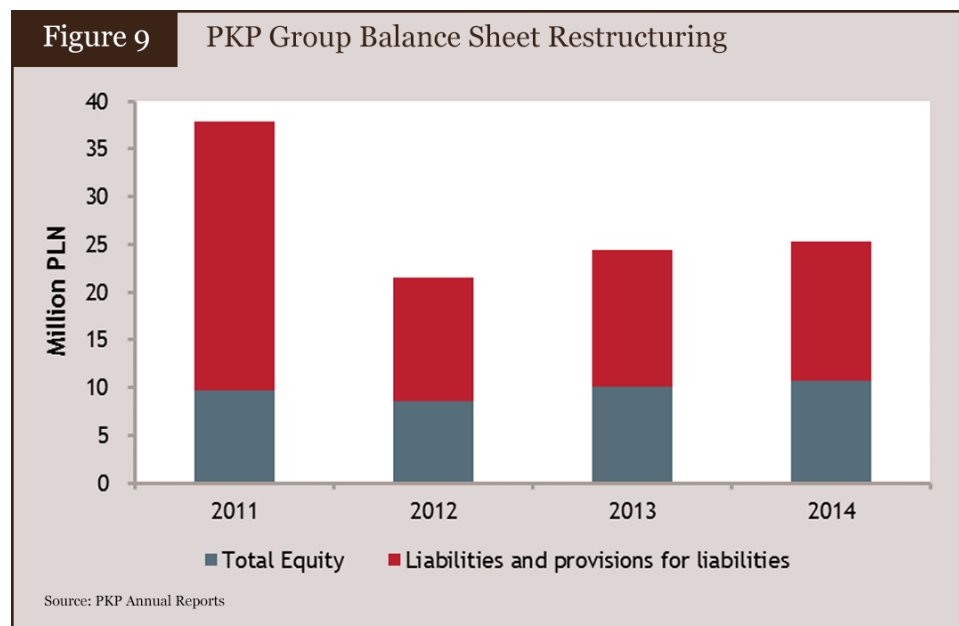
Figure 8 Financial Performance of Key Subsidiaries


Source: PKP Group Annual Reports

PKP Group Balance Sheet Restructuring

In 2001, PKP Group began restructuring its balance sheet to convert its short-term liabilities into long-term ones. The objective was to improve the financial liquidity and change the debt structure, inherited from the SOE.

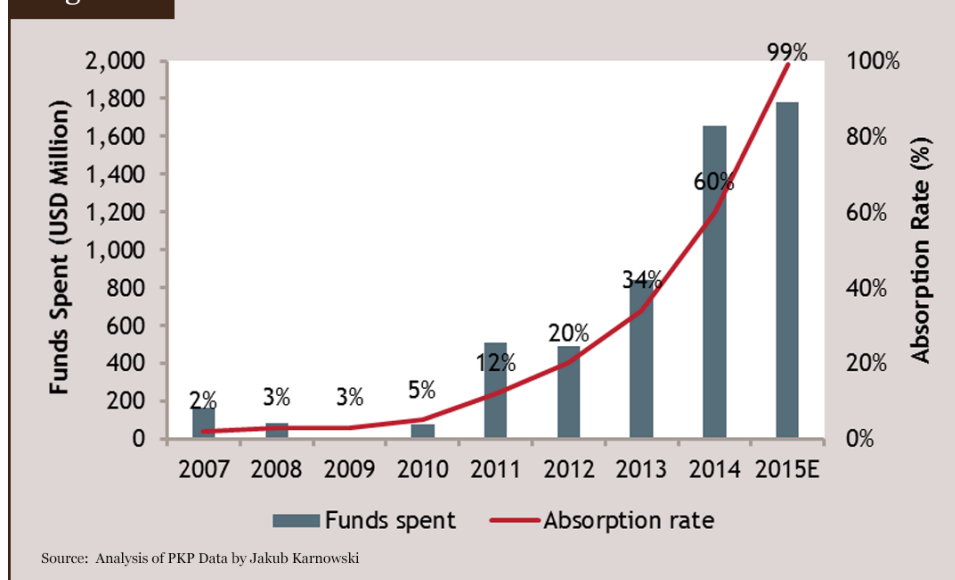
As previously described, in 2012, PKP subsequently began divesting its ownership of certain subsidiaries and redundant assets and using the proceeds to reduce debt. In 2012, the consolidated balance sheet showed a decrease in total assets of 43 percent from 2013. Through this process, PKP was able to reduce their leverage from 2.9 to 1.5. (Figure 9)



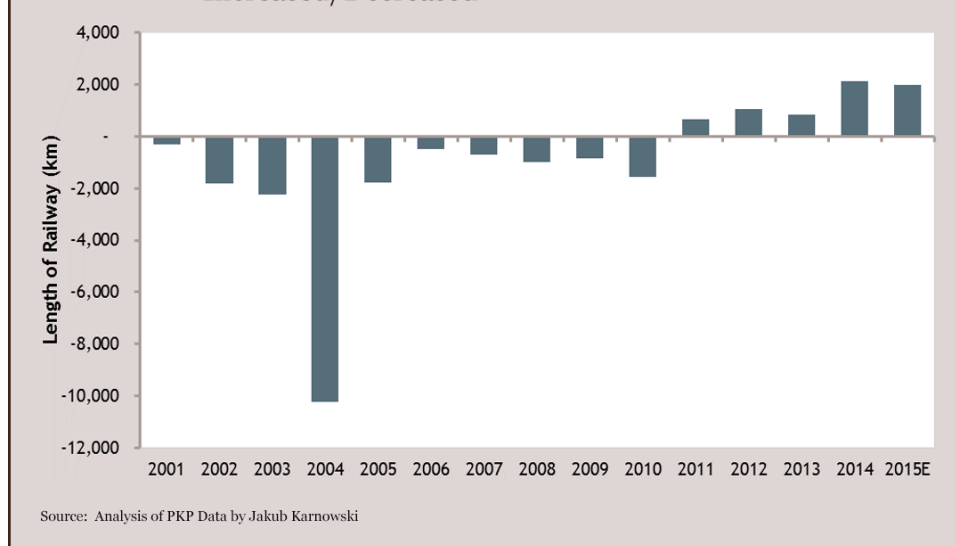
5.3 Asset Condition

The reforms initially yielded mixed results in improving PKP's asset condition. Despite initial increased spending on infrastructure in the years following the reform, the investments were insufficient. Earmarked infrastructure and rolling stock projects suffered delays, leaving the railway network in an unsatisfactory condition. However, large-scale investments were made possible by the EU 2007-2013 Cohesion Fund, and since a 2012 restructuring of the PKP, the situation has improved markedly as infrastructure upgrading took place.

As discussed earlier, the utilization of available EU funds increased from 12 percent in 2011 to 99 percent by 2015 (Figure 10). The program saw US\$ 1.3 billion allocated to the modernization of rolling stock (US\$ 0.6 billion from the EU fund) and US\$ 0.25 billion to an overhaul of the network's railway stations.

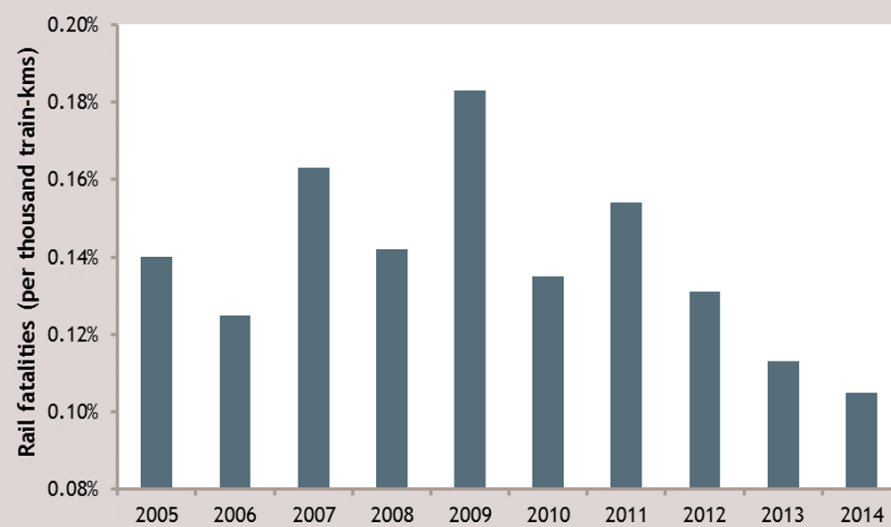
Figure 10 Use of EU Funds


In the same timeframe, PKP secured financing for the modernization of nearly 4,500 km of track, resulting in a net increase in maximum speed on 6,000 km of the network, compared to a net decrease on over 11,000 km seen during 2001-2011 (Figure 11).

Figure 11 Length of Railway Lines (Km) with Maximum Speed Increased/Decreased


Under the same investment program, PKP Group prioritized railway passenger traffic safety, and in 2012, invested in modernizing its platforms, crossings, and grade crossings, installing the European Train Control System (ETCS) and European Railway Traffic Management System (ERTMS) on main routes, and investing in railway traffic safety training for its employees. The result was an overall decrease in the relative incidence of accidents, fatalities, and injuries since 2011 (Figure 12).

Figure 12 Fatalities from Rail Accidents in Poland per Thousand Train-kms

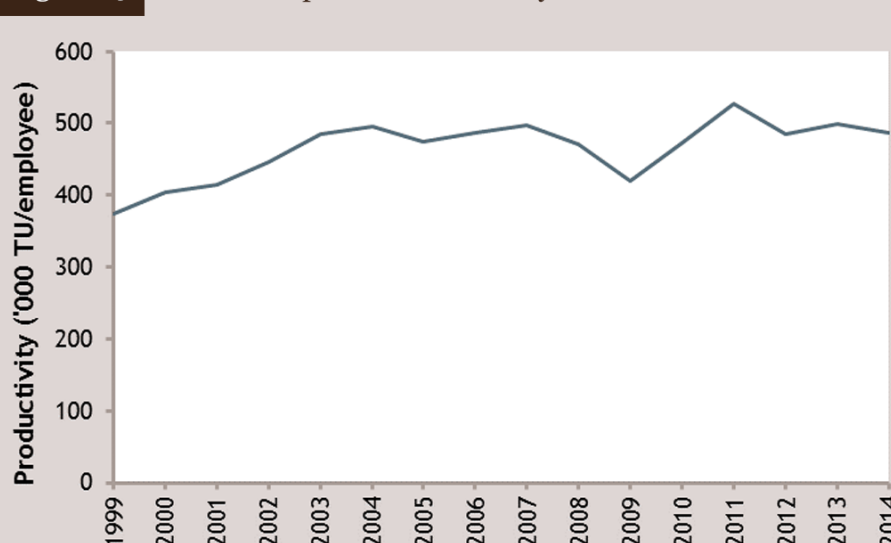


Source: OECD Data

5.4 Operational Productivity

PKP Group is one of the largest employers in Poland, and PKP PLK and PKP Cargo are independently among the top ten employers in the country. At the end of 2014, PKP Group employed 78,900 people across its subsidiaries. Employment volume has seen consistent downward adjustments since the beginning of the reform, which has allowed to maintain relatively constant staff productivity despite falling traffic. Staff productivity (Figure 13) in the PKP group is comparable to EU-27 averages. This is expected to further improve in the future with PKP Cargo and PKP SA putting more efforts in increasing employee efficiency.

Figure 13 PKP Group Staff Productivity



Source: Calculated based on PKP Annual Reports

Asset productivity (Figure 14), on the other hand, has been more mixed, with relatively stable results for locomotive and wagon productivity, as fleet size was reduced during the modernization program described above. Coach productivity is similar, as PKP's passenger companies right-sized their fleets. Track productivity has decreased substantially, owing to lower passenger numbers using a relatively fixed asset.

Figure 14 Asset Productivity

	1999	2005	2010	2014
Coach Productivity (000 Pass-km per coach)	2,101	2,167	2,903	2,661
Locomotive Productivity (000 TU per locomotive)	18,379	16,412	15,670	15,629
Wagon Productivity (000 ton-km per wagon)	574	583	486	518
Staff Productivity (000 of TU per staff)	403	473	473	486
Track Productivity (000 of TU per km)	3,571	3,104	1,702	1,569

Source: Calculated based on PKP Annual Reports

6 Conclusion

Polish railways reforms have broadly succeeded, in terms of the four goals initially defined:

- Financial and debt restructuring;
- Organizational restructuring;
- Employment restructuring to right-size the workforce; and
- Asset restructuring.

Revenues have recovered from the 2009 financial crisis, and the freight business is on a stable financial footing. Asset sales have significantly reduced debt. Both freight and passenger rail market competition has increased, with private operators moving 43 percent of rail freight and 54 percent of rail passengers in 2014. Running speeds have been increased on major sections of the network, permitting higher equipment utilization for freight and higher service levels for passengers. A new market-oriented management has been appointed, and the work force has been continuously reduced in response to market conditions.

The market for rail services – freight and passenger, publicly or privately provided – continues to decline. As the private rail freight sector grows, PKP finds itself carrying a declining share of a market that is itself shrinking. The continuing challenges for PKP, particularly for freight traffic, will thus be to compete effectively with both other rail operators and the road sector. This will involve keeping PKP staffing, PKP rolling stock, and the fixed rail assets shared by PKP and private operators aligned with the business volume of PKP and the overall rail sector.

Analysis of PKP experience offers valuable insight into the strategic development factors for railway companies:

- Effective governance and organization structures were a prerequisite for PKP management to carry out the restructuring program.

- Focusing on customer satisfaction was of utmost importance. Increasing service delivery standards required simultaneous changes in a range of areas, including: rehabilitating rolling-stock, modernizing railway and station infrastructure, increasing travel speed, improving passenger services and passenger information system, assuring service punctuality and reliability, and improving safety on the trains and at the stations. These strategic factors are complementary, thus these improvements had to be done at the same time.
- Since railways require heavy long-term capital investment, securing funding for infrastructure projects is vital. For that, it was critical that the country had a sound long-term transport strategies and effective sector regulations. It was also important for PKP to build implementation capacity, developing capable staff with strong project management skills who were given clear performance targets to improve its infrastructure project management.
- Bringing in better IT system enhanced management and control of the railways and should be prioritized in other restructuring programs in the future. Investments in the workflow and resource planning systems are among key tools for efficient decision-making processes and to improve staff productivity.
- Implementation of sound corporate governance and effective internal audit led to improved risk management and prevention of frauds or irregularities.
- As customer satisfaction is a key issue, well-designed services should be combined with reliable service delivery.