

Report

for the

Ministry of Transport and Infrastructure
Hauptstätter Straße 67

70178 Stuttgart

Germany

Economic Analysis of the „Großer Verkehrsvertrag“

This document is a convenience translation of the German original. In case of discrepancy between the English and German versions, the German version shall prevail.

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1 Executive Summary

This report is concerned with the estimation of costs and revenues in the *Großer Verkehrsvertrag (GVV)* operating contract, encompassing two thirds of regional rail services in the federal state of Baden-Württemberg (hereafter the Land). The Land awarded this contract to sole bidder DB Regio AG in 2003. An economic analysis of the GVV is fundamental in order to understand whether it represents value for money from the standpoint of the Land.

Since the GVV-specific profit and loss accounts of DB Regio are not disclosed on grounds of commercial sensitivity, third parties are dependent on external data for the accurate simulation of costs and revenues associated with the provision of services under the GVV. Information from the Land and elsewhere in the public domain corresponding to the year 2012, together with market knowledge gained through years of experience, serve as the basis of this analysis and the simulation of costs and revenues.

From this starting point two cost-revenue models and a sub-variant were developed, varying in their approach:

- The **KCW-model** uses a 'bottom-up' approach to join up individual cost elements by means of reasonable aggregation steps to deduce the total costs. Owing to the limited data available, revenues were calculated at a comparable flat rate.
- In contrast the complementary **top-down approach** scales down nationally aggregated data published by DB Regio for its overall operated train network in Germany to the level of the GVV in Baden-Württemberg.
- The sub-variant **KCW-Model with DB staff costs** (KCW+DBP) considers the significantly higher staff costs of the top-down approach. This leads to an amalgamation of the otherwise largely similar cost structures of the aforementioned models.

The most important results of the KCW-models can be seen in the following table, in particular the simulated result of ordinary business activities conducted as part of the GVV:

	KCW-Model		KCW+DBP	
	million €	€/train km	million €	€/train km
Turnover	687,1	17,55	687,1	17,55
– Total costs	510,1	13,03	552,0	14,10
= Operating profit	177,0	4,52	135,1	3,45

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–	Interest income	2,7	0,07	2,7	0,07
=	Result of ordinary business activities	174,3	4,45	132,4	3,38
%	Return on sales (RoS)	25,76%		19,67%	
%	return on sales without infrastructure & energy costs	43,61%		33,30%	

The standardised turnover of 687.1 million Euros was calculated from ticket revenues of 267.3 million Euros and subsidy of 419.8 million Euros provided by the Land.

Differing staff costs account for the differences in terms of total costs, which in turn feed through to the result of normal business activities. Total costs of 510.1 million Euros were calculated in the KCW-model, whereas these amount to 552 million Euros with additional weighting for average DB Regio staff costs.

To what extent the end result of 132.4 or 174.3 million Euros appears reasonable is not the subject of this report. However, if one takes the profit margin (RoS) as an indicator on a full cost basis, DB Regio achieved a profit margin of 19.7% or 25.8% in the GVV. These figures rise to 33.3% and 43.6% respectively when one excludes infrastructure and energy costs, which are largely risk-free for DB Regio due to contract clauses in the GVV.

In order to evaluate the return figures it is necessary to take into account the **risks and opportunities** of the GVV. The contract clearly allocates more risk to the Land: cost increases are predominantly covered by the Land, while increases in revenue are retained by the operator.

This imbalance particularly stands out with regard to infrastructure access charges. According to a specific clause, currently the subject of dispute, DB Regio profits significantly from increasing infrastructure fees. This clause enables DB Regio to bill the Land for the entire increase in charges for access to tracks and station, regardless of the fixed annual (upward) adjustment of the contractual compensation.

The Land has few effective contractual means at its disposal for controlling the quality of services or the deployment of rolling stock. In addition, the quality measurement system is based on the consensus principle, meaning that the penalty mechanism in public service contracts is of limited use in practice in the GVV.

In order to validate the results, the GVV train km price was compared with those of comparable, competitively-awarded regional rail concessions (*Wettbewerbsnetze*) in Baden-Württemberg. In contrast with the cost-revenue

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model, this **price-price-comparison** only takes into account the price, representing the result of the market. From this it becomes evident that the average price in competitively awarded concessions - that otherwise possess similar characteristics - is 3.37 Euro lower per train km than that of the GVV. The difference clearly illustrates the economic disadvantages of the GVV direct award for the Land. If one were also to take into account the greater demand and the cheaper rolling stock costs of tendered contracts, this would produce a difference of around 6.16 Euro per train km.

The result of the pure price-price-comparison (3.37 Euro per train km) is consistent with that of the cost-revenue modelling. If one assumes the GVV profit margin falls in the range 4.6% to 8.5%, this produces a result exceeding the market result by between 3.64 Euro and 2.96 Euro per train km.

Figure 1: Comparison of results from the KCW-Model (exceeding market result) and a price-price-comparison

