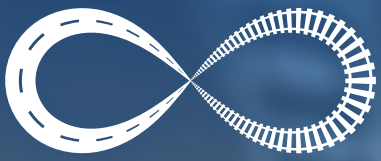

CETRA 2018

5th International Conference on Road and Rail Infrastructure
17–19 May 2018, Zadar, Croatia

Road and Rail Infrastructure V

Stjepan Lakušić – EDITOR

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CETRA 2018
5th International Conference on Road and Rail Infrastructure
17–19 May 2018, Zadar, Croatia

TITLE
Road and Rail Infrastructure V, Proceedings of the Conference CETRA 2018

EDITED BY
Stjepan Lakušić

ISSN
1848-9850

ISBN
978-953-8168-25-3

DOI
10.5592/CO/CETRA.2018

PUBLISHED BY
Department of Transportation
Faculty of Civil Engineering
University of Zagreb
Kačićeva 26, 10000 Zagreb, Croatia

DESIGN, LAYOUT & COVER PAGE
minimum d.o.o.
Marko Uremović · Matej Korlaet

PRINTED IN ZAGREB, CROATIA BY
"Tiskara Zelina", May 2018

COPIES
500

Zagreb, May 2018.

Proceedings of the
5th International Conference on Road and Rail Infrastructures – CETRA 2018
17–19 May 2018, Zadar, Croatia

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CETRA 2018 17–19 May 2018, Zadar, Croatia
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THE ANALYSIS OF THE ORGANISATION OF RAILWAY PASSENGER TRANSPORT ON THE LIBERALISED MARKET

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Abstract

The process of market liberalisation is an inevitable step towards a modern and competitive market. In this process, the railway sector sees its final chance to transform the railway transport into a modern, user-oriented, and economical system. The liberalisation of the European railway sector is a long-term process of implementing European regulations and directives into national laws with the aim of reorganising national railway undertakings. The market liberalisation began with the strongholds of the European economy, such as Germany and France, followed by the expansion into other EU member states, which have, depending on the degree of liberalisation and their application of EU directives and regulations. The analysis of the organisation of railway passenger transport is dependent on the degree of the liberalisation of a certain market, and has to be observed through political and market circumstances of the states in question. In the process of liberalisation, the railway sector was forced to fundamentally change its organisational and legal structures, which were largely linear, which in turn led to the separation of railway undertakings and infrastructure managers. The passenger undertakings in the railway sector have been facing fierce competition from private companies that have optimized their business, and which have been successful in adjusting to the legal and organisational demands of the market. The model that has shown to be successful on the railway market is the consortium model. The leaders of the newly reorganised societies that are dominating the liberal European markets through concessions, acquiring new strategically relevant undertakings, are consortium Deutsche Bahn and SNCF. This paper reflects critically on the organisation of the passenger railway transport company Arriva, which has been operating within the consortium Deutsche Bahn, and provide analysis of its financial operations during its attempts to take over the multi-modal traffic market.

Keywords: liberalisation, railway sector, passenger undertakings, organisation, consortium

1 Introduction

The transport sector has been going through the process of liberalisation amidst the onset of user-oriented markets. The process aims to remove rules and regulations with the aim of securing market equality, openness to the private sector, and elimination of monopolised markets. In a broader sense, it is safe to say that the goal is to remove all the hindrances for conducting economic activities. The adaptation to the liberalised market is a key for the success of modern business.

Railway sector is of utmost strategic and geopolitical importance for every country, controlled by their governing bodies. The issues related to the railway arise from rapid market changes that have not been met with appropriate reactions by the governing bodies in charge of railway management. The hindrances have often been political protectionism of certain countries that had conflicting legislation on railway transportation, which led to the establishment of

different organisational systems, technical specifications, permits, bans, and railway positioning, all with the aim of protecting the national railway undertaking, and the national railway market. The uncontrolled growth of automobile transport and the accelerated development of air transport, poor investments into railway development, a low degree of implementation of new technology, and enormous deficits have all resulted in the degradation of the market share of railway in traffic. The increase in the number of automobiles and lorries has consequently brought on congestions on the European roads and owing to the significant increases in external expenses in the European Union, the sustainability of traffic is being reconsidered. The future of Europe, its economic development and regional connectivity depend on the transport development strategy [1].
The consensus of the European Union has decided that Europe would turn to a sustainable, integrated and economical transport with the emphasis on ecological friendliness and sustainability [2]. The railway was placed in focus as a pillar of the development of medium distance mass passenger transport, which along with inland waterway transport makes the backbone of European freight transport. The tendency is to eliminate the issues arising from national undertakings, as they begin to implement European regulations and directives in order to liberalise the railway sector.
The foundation of railway sector liberalisation is the separation of the railway infrastructure from the railway operator, so as to ensure the access to the infrastructure and impartialness while assigning infrastructural capacities. Opening the railway transport market to private companies willing to compete for their share of passenger and freight transport ensures long-term cost planning of railway companies, which makes railway a more competitive and modern sector of the EU [3]. Apart from that, liberalisation also means: (1) Unification of norms, (2) Introduction of common rules, (3) Setting up a unified system of signaling and train management, (4) Integration of railway areas into the Single European Railway Area with a high degree of digitisation and automation.

2 Regulations, directives and laws

The turning point of poor transport development stretegic planning occurred in Europe in 1985, when incomplete transport legislation was discovered on the level of the EU. The previous occurrence had been proof of the serious intent by the EU to shift the focus on the traffic as the catalyst for economic growth. Not long after, White Paper of the European Union was published, which laid out foundations of strategic and organised transport development.
The legislative measures of implementing liberalisation in the EU were put forward in 4 railway infrastructure packages which together with the regulations and directives set the framework for the liberalisation of the European railway sector.
The first railway package was adopted in 2001 enabling all rail operators to have access to the trans-European network on a non-discriminatory basis. With the aim of improving and simplifying freight railway transport, a creation of a single entry point for all operators within the EU was proposed. Encouraging steps for future development of legislation were the positive effects of the first railway package, which were seen in the modal division of the transported cargo. The states that had opened their railway markets earlier yielded significantly better results and greater shares of railway transported cargo than the states that were late in opening up to the market or the ones that stayed in the old monopolistic railway system.
The second railway package of 2004 was aimed at the construction of an integrated European railway area. The aims of the integration of national railway areas into a single integrated area included improved safety, interoperability, and opening of the rail freight market. The European Railway Agency (ERA) was founded and headquartered in France, whose main responsibility was to provide common technical specifications and increase securing in railway transport. The rail freight market was entirely open for competition as of 1st January 2007, which was a turning point for Europe.

After the liberalisation of the freight rail transport, the time came for the passenger rail transport. The third railway package was adopted in 2007 and focused on the liberalisation of the rail sector in passenger transport. The aim of the package was to liberalise passenger transport including cabotage by 2010. The rights of the passengers were strengthened in order to meet the needs of the user-oriented market and increase the standard in order to satisfy passengers' needs. A process of licencing was introduced for train drivers who are able to provide driving services on the entire European network, which was subsequently regulated in legislation.
The fourth railway package entered into force in 2016 focusing on completing the Single European Railway Area (SERA). The objective of the package was to revitalise the rail sector, and it comprises two basic pillars: (1) technical, and (2) market pillar.
It is expected that the competition between rail passenger transport companies will have a positive impact on the sector through the improvement of quality and services, reduction of cost, higher capacity utilisation, and adaptation to user needs [4].

3 Railway market liberalization

Following the implementation of railway regulations and directive into national legislation, fundamental changes take place in the business of railway and undertakings that had previously had the monopoly on national markets. The various different examples of interpretation and implementation into European legislation have yielded different results, depending on the approach to understanding of the law and the pressure of governing bodies to conduct liberalisation. The market liberalisation is observed from two different standpoints: (1) Reorganisation of national railway operators, and (2) Allocation of infrastructural capacities.
Following the changes in the rail sector, national railway operators have been conducting the division and reorganisation into several smaller, specialised companies. The final objective is to separate the operators from infrastructure managers in order to establish market equality for all market participants and ensure a fair allocation of infrastructural capacities. A different approach to the same legislation was created in all EU member states.
One of the better examples are Deutsche Bahn and SNCF who transformed a single national undetertaking into several concerns. In the case of the concern, the operators were divided, yet still under the authority of a single management board which retained the control over the activities of certain separated companies. Such a business model meets the requirements of the European legislation since both the infrastructure manager and railway undertaking have seemingly been separated.
After the division, the national undertakings began conducting their business in a subordinate position since they assumed the debts of their previous company and continued to employ a large number of people who over time became redundant due to digitisation and automation. Many national operators have to tackle these and such issues.
The division of national companies into several smaller specialised ones meant that one of the companies would manage the infrastructure and it would need to control and allocate infrastructural capacities depending on need and demand. The infrastructure manager is a state-owned company which must ensure minimum safety requirements laid out by the railway packages. The European Union strives towards opening public tenders and reaching agreements with operators for rail passenger transport in order for it to be fully open to private operators. A similar trend is expected when the freight transport is liberalised, which would lead to an increase in the number of passengers on European railways. EU state members still, for the greater part, do not wish to leave rail passenger transport up to the free market. So far, the implementation of liberalisation of the passenger transport has been very slow.
Commercial railway lines are those with a large number of users and high profit. Their high revenue makes the very profitable to run. These usually include urban and suburban lines with everyday commuters using them for work, school, and leisure. Such railway lines should

be tendered. These lines are most appealing to private operators, so there is a tendency to opening up such lines to them, as competition would lead to the highest level of quality.
Non-commercial lines are generally the ones in rural areas, which are not that profitable due to the low number of residents. Despite being financially unprofitable, these lines are of great economic significance for each state. The regional development of the state and its decentralisation must be achieved by maintaining unprofitable rail lines since they ensure rural mobility, which correlates with regional development and education of residents, which is why each member state needs to keep maintaining them. Reaching agreements for these lines aims at minimal financial costs albeit providing a satisfactory level of mobility [5].

4 Case study: DB Arriva

Arriva was established in 1938 in Sunderland. From its foundation, all the way to 1980, its main business was second-hand motorcycle dealer trading. By buying the Grey-Green Coaches of London in 1980 it entered the passenger transport market. By acquiring contracts and concessions in the 1990s, Arriva assumed the second position on the British market, expanding into foreign markets.
After the liberalisation of the Scandinavian market, Arriva spreads its business into Sweden, winning public tenders in Danemark, and later acquiring their largest operator Combus. One of the turning points was in 1999, when they assumed a part of the railway market in Danemark as well, thus creating a multimodal passenger transport company which acts as a great model for future development of passenger transport on the whole.
The railway market in Great Britain soon followed suit, as did the acquisition of two coach companies in Portugal, and the entrance to the Italian market by purchasing SAB Autoservizi. Arriva acquired a company in the Netherlands so as to ensure a growing potential on the Dutch railway market, which was in the process of liberalisation. Later on, the company would become the first private railway operator to acquire a concession in Danemark and sign a 15-year multimodal agreement in Wales.
Another turning point for Arriva was 2004, as they entered the German market, purchasing the majority share in Regentalbahn AG and acquiring Pritzinger Eisenbahn Gruppe. Soon after, they entered the coach market by purchasing the Sippel Gruppe. Arriva signed an agreement in Bavaria for rail passenger transport which alerted Deutsche Bahn of a rising competition aiming at rapid multimodal growth. Not long after that, Arriva won the tender for railway passenger transport between Munich, Obrestdorf, and Lindau.
Because of the positive results, Arriva continued to expand into the Danish, Dutch, Italian, Spanish and Swedish market, and began to turn its attention to Eastern and South East Europe. The company purchased Interbust Invest as they prepared for a further expansion into the Hungarian and Slovakian market, in the meantime becoming the first private operator on the railway market of Poland.
The unstoppable growth trend of Arriva and their successful business forced Deutsche Bahn to acquire them in 2010. Thereby, Deutsche Bahn managed to confirm its status as one of the world's leading logistics and transportation companies. Structurally speaking, Arriva has acquired all the coach and railway transport on the markets outside of Germany. It is estimated that the acquisition of Arriva by Deutsche Bahn cost around 1,58 billion British pounds.
By entering the Croatian, Slovenian, and Serbian market, Arriva continued the ever-growing trend of expansion by ensuring itself the marketing potential of South East Europe. Further expansions in Poland and signing of the largest multimodal agreement in Sweden are all proof of the market flexibility and quality of Arriva's business. The business model of DB ARIVA is illustrated in Figure 1.

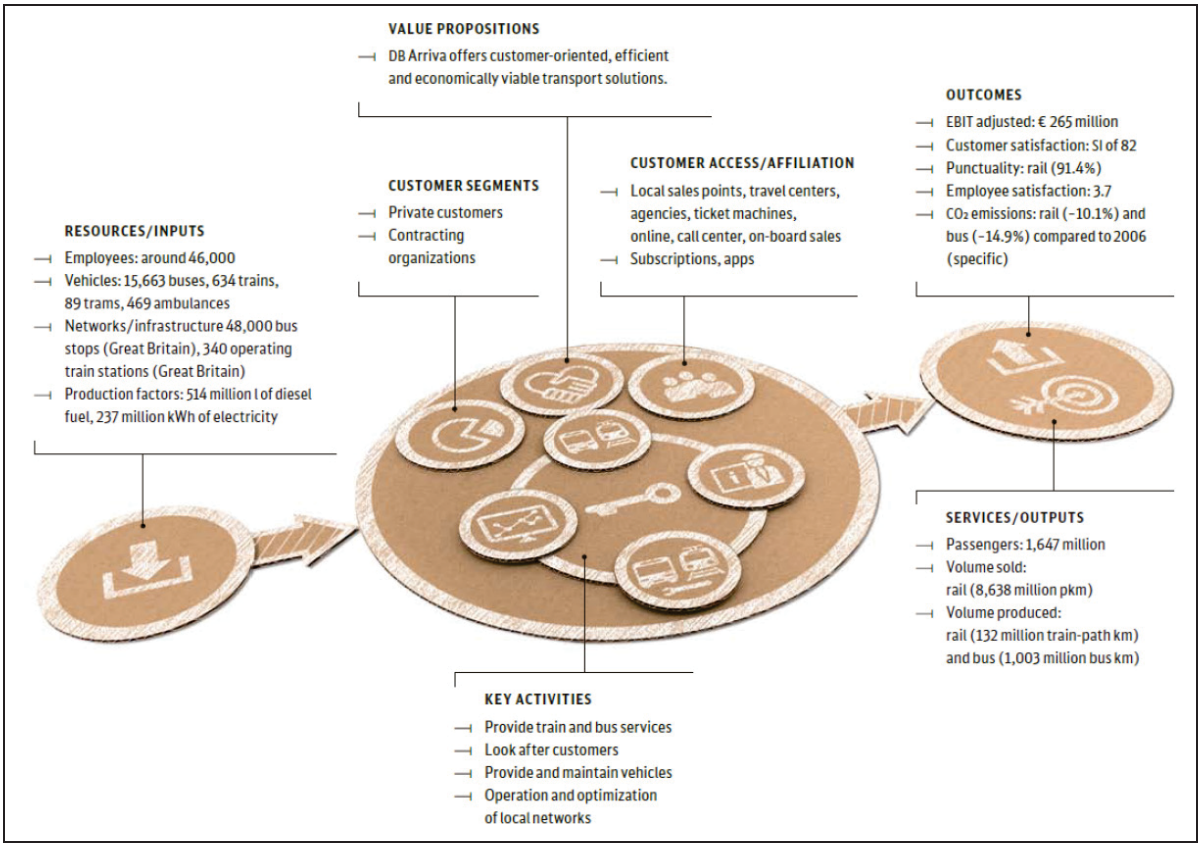

Figure 1 Business Model DB Arriva [6]

Arrive currently employs around 60.0000 people and operates around 2,2 billion passenger journeys annually across 14 European countries. Arriva's multimodality and transport flexibility are evident from their activities on the local, regional and national level, operating coach, rail and tram passenger journeys [7]. Arriva has been successful in adapting to local and national requirements reaching different types of agreements depending on the situation and the scope of their activity. The two types are marked by (1) gross cost, and (2) net cost.
At assigning gross cost agreements, the governing bodies that issue the agreement pay Arriva for their transport services, whereby the bodies retains the right to profit and often determine the line routes as well as modes of transport. Such agreements are favourable for less densely populated rural areas which need public transport for regional connectivity and mobility even at the cost of an acceptable deficit. As a general rule, these agreements are not profitable and are opened to tender because the aim is to decrease the loss of national operators.
Net cost agreements are given to operators ready to assume the risk of profit and loss, thus retaining all the income from the passengers. Such agreements mean that the operator has to be the one that determines the organisational and technological scope in order to maximise profit while adhering to the minimal user standards. When reaching such agreements it is essential to closely examine all the features of the transport area and available resources in order to establish a successful business.
The income from the passengers depends on the number of them, as well as on their service satisfaction, which are the two sources of income. Arriva aims to win the trust of the passengers through orderly, transparent and affordable service. By providing feedback, users participate in the improvement and creating of services. When fighting for market share, the most important feature is the flexible approach which ensures meeting the various transport needs of certain markets [8].

5 Conclusion

Passenger transport service should reflect the current needs and desires of the passengers in the targeted area, with a continuous monitoring of trends that shape space and migrations. Based on the variable circumstances, the service should be constantly upgraded and expanded in order to encompass and satisfy even the most demanding users with the aim of retaining existing passengers and gradually attracting the ones who use the public transport hardly ever or never, so as to ensure a continuous passenger growth.
When establishing and organising transport, there should be a tendency to use different modes of transport services in order to encompass the largest possible number of people and, depending on aspirations, identify the appropriate service for which people would be willing to pay. Such practices include offers for students, families, weekend getaways, businesspeople, pensioners, pupils, and many others. From the standpoint of users, it should appear as if the service has been adjusted to their wants so as to create an apparent individual contact with a user.
Arriva accepts in great measure these user-oriented business models, simplifying their services to a great extent so that their users would have virtually no difficulties in their daily migrations.
A high degree of passenger satisfaction is achieved through the implementation of new technologies that help to better shape today's society. Such services include free Internet, mobile apps that track the location of a certain coach, a higher level of comfort in coaches, and a system of evaluation the novelties. One of the pillars of the development of operators is also the online ticket purchasing system.
Further service development is headed in the direction of providing transport to the people who would otherwise have been left out of the public transport system. First and foremost these are people with disabilities, but also other users who were unable to use coaches, trams or trains due to the impracticability. The design of the means of transport that adjusts to the various different needs ensures a potentially greater passenger transport market.
The organisational structures and business models are the main factors that affect a company's business. When establishing a company, it is crucial to adjust its organisational structure to targets and market favorability. The aims of a good organisation are the simplicity of business, the reduction of unnecessary work tasks and activities, consistency of reactions to market changes, and a change of business elements.
Setting up business models requires adhering to legislative elements, which refers mostly to rail passenger transport. Through the liberalisation of the railway sector, the European Union has set high standards that must meet the legislation in terms of separating infrastructure from the operators, despite the ownership connections of certain companies. The Arriva case exemplifies a business model of a modern transport operator within Deutsche Bahn. The division of business, connectivity of services and means of financing make Arriva's business very much connected to the rest of Detusche Bahn, while at the same time retaining the right to make their business decisions freely.

Acknowledgements

This research was financially supported by the project KEGA 010ŽU-4/2017 "New methods of teaching quality management in the study program Railway transport with a focus on optimization of extraordinary events in terms of customer orientation" that is solved at the Faculty of Operation and Economics of Transport and Communications University of Zilina.

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