IMPLICATIONS ON THE NUMBER AND CONCENTRATION OF SUPPLIERS ON ROMANIAN TRANSPORT SERVICES

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Abstract
This paper aims to capture the current situation characterizing the transport sector in Romania by degree of concentration of transport service providers. Market analysis covers road, rail and air transport. Knowing the concentration of these markets is useful when it realizes development strategy of these sectors with profound implications on the national economy. There is a decreasing degree of concentration in the road transport sector due to growing number of enterprises in this market. Air transport has similar trend the road transport, the concentration declining during the span of years analyzed. Regarding the Herfindahl-Hirschmann index in the railway sector, we find that it reveals for the year 2012 a very high degree of concentration.

Key Words: *Market concentration, road transport, rail transport, air transport.*

Classification JEL: *L92, L93, R42.*

1. Introduction and context of the study

The transport sector is essential for developing the national economy. So, that we can realize it is useful to look at several indicators such as gross added value of land transport, which in 2011 is 23678.3 million lei current prices, the employed population in the entire transport sector in 2012 is 433 thousand and net investments were 5561.9 mil. lei current prices in 2015.

Given the important role played in the local, national and regional economy analysis it is important to analyze the number of service providers in the transport markets. There are authors who believe that the economic outlook in the assessment of the concentration requires a high degree of professionalism for analyzing the complex ways in which the concentration take places [2].

Economic justifications for government intervention in the work of various organizations based upon the idea of market failure, one of the theories being represented by *a natural monopoly and contestable markets* [7], [5]. Natural monopoly occurs when the production of a good or a service is continuously increasing yields, as production increases. Thus, large enterprises have an advantage that allows them to eliminate competitors and gain a monopoly that can be called natural. In this situation, the company is tempted to increase their profits by raising prices, which calls for intervention to prevent this abuse. Contestable market theory says that the market is contestable relevant when firms can enter and exit freely from it. These markets must be free of barriers to market entry and exit. The situation where due to high entry and exit costs will be fewer companies willing to get in, leads to natural monopoly and hence the government intervention. Other authors [6] showed that the degree of concentration in Israel is caused and supported by government policies that favor large companies to the detriment of small and medium enterprises (SMEs).

Other theories justifying intervention are *destructive competition theory* - it occurs in sectors where fixed costs are high and the entry of new competitors accentuates competition leading to bankruptcies, or in sectors where the entrance is very easy, with a large number of enterprises and risk high price war. *The theory of externalities* positive or negative - spillovers may take the form of benefits that go beyond enterprise (health and education) or costs that are not borne entirely by the firm (pollution) [7], [8].

As can be seen, the transport sector can be public or private property and may be subject to varying degrees of regulation. In most states the transport sector is either publicly owned or subject to strict control of price and service level offered. So, we can distinguish two approaches to the management of transport sector, a planned approach, controlled by the state and a market-based approach (private) [1].

In the planned approach operators of transport infrastructure and direct suppliers are owned and controlled by the state, decisions on charges are subject to political controls and are governed by the social cost-benefit analysis, decisions about investments and services are also based on social cost-benefit analysis. Thus, the construction and operation of transport services may be ineffective due to lack strong incentives on obtaining quality services at minimal cost. In the market approach infrastructure and services are provided by private organizations, government control is minimized, the government aims to achieve pricing policies through the tax mechanism and subsidies duties to the detriment of direct control. This approach tends to emphasize economic efficiency, minimize costs and expanding opportunities for innovation.

2. Research methodology

Assessing the concentration of road and air transport and rail using the Herfindahl-Hirschman index (HHI) and average relative market share (ARMS). The data is from The National Institute of Statistics and the simplest method of measuring the concentration is the average relative market share. For its determination 100 is divided by the total number of firms in the market, and to express the coefficient is divided the total number of firms in the market by 1. The low level of this indicator indicates a low concentration [3].

HHI is used as a possible indicator of market power or competition between businesses. It measures market concentration by summing the squares of shares market of all companies in the sector. The European Commission consider that when this indicator is below 1000, the degree of concentration of the industry is low, when the value is between 1000-2000 the concentration is medium, and when the value exceeded 2000 the sector is characterized by a very high concentration.

Table 1. Concentration of road transport

Road transport		
Year	**Private enterprises (no.)**	**Average relative market share (%)**
1998	9,847	0.0102
1999	9,880	0.0101
2000	9,864	0.0101
2001	12,029	0.0083
2002	13,873	0.0072
2003	16,369	0.0061
2004	19,089	0.0052
2005	21,842	0.0046
2006	24,142	0.0041
2007	27,929	0.0036
2008	31,621	0.0032
2009	31,705	0.0032
2010	29,434	0.0034
2011	28,438	0.0035
2012	30,582	0.0033
2013	32,300	0.0031
2014	35,491	0.0028
2015	37,402	0.0027

Source: Land transport, pipe-line transport, Romania National Institute of Statistics, own calculations

It can be seen as the concentration of the road transport market in the period under review decreased as a result of increasing the number of companies operating here.

Table 2. Concentration of air transport

Airline		
Year	**Private enterprises (no.)**	**Average relative market share (%)**
1997	10	10.00
1998	17	5.88
1999	21	4.76
2000	30	3.33

2001	33	3.03
2002	35	2.86
2003	40	2.50
2004	44	2.27
2005	49	2.04
2006	54	1.85
2007	57	1.75
2008	57	1.75

Source: Romania National Institute of Statistics, own calculations

The air transport market has an opposite evolution to road market - the average relative market share decreasing across the entire period. This is caused by the increasing number of enterprises operating air carrier.

Table 3. Concentration of rail transport

Company	Market share (year 2012)	Square market share	HHI
CFR Marfă	49.9	2490.01	3220.46
Grup Feroviar Român	25.15	632.52	
Servtrans Invest	5.67	32.15	
Cargo Trans Vagon	5.05	25.50	
Unifertrans	4.08	16.65	
DB Schenker Rail Romania	3.65	13.32	
Transferoviar Grup	2.48	6.15	
Vest Trans Rail	1.73	2.99	
Rail Cargo România	1.08	1.17	

Source: Competition developments in key Sectors - 2012 - Romanian Competition Council, own calculations

Level of calculated Herfindahl-Hirschmann index for the year 2012 has a value of 3220.46 which means that in the rail transport market there is a very high degree of concentration. This is due to the fact that in the rail market there are only nine operators who compete nationally.

3. Conclusions

Following this analysis of the transport sector in Romania can identify the following trends - the evolution of the degree of concentration the road transport market is on downhill due to increased number of enterprises, air transport presents a decreasing degree of concentration due to market liberalization, which led to the elimination of barriers in this market, with implications on the number of air transport service providers. Although the concentration of rail transport in 2012 is very high, this should be viewed alongside other considerations such as barriers to entry, the number of competitors and the pressure exerted by them, but also potential competitor. Since 2001 and until 2012 the market share of CFR Marfă has been reduced from 100% to 49.9%. Thus, it can be inferred that new competitors entered this market since the liberalization exerted strong competitive pressure, which reduced up to half the market share of this railway operator.

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