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BASIC PREMISES AND TRENDS OF REFORMING RAILWAY SECTOR IN UKRAINE

Problem's definition. Technical parameters of rail transport' development in Ukraine such as: a share of passenger turnover, a cargo turnover, unique shipping unit exceeds the same in Germany, England, USA, Russia (fig. 1).

First of all this shows that the sector of railway transport plays a strategic role for the economy and safety of Ukraine. But the reserves of Ukraine were exhausted during the 20 years of independence. This sector is getting old rapidly. Ageing of rolling stock exceeds the critical deadline and equal to 85%, locomotives – 92%. Since 1992 the investment requirements were fulfilled only on 25 – 30% [2]. The amount of investments in railway development was equal to 3% from overall amount of public investments per year. At the same time this figure is five times as much in foreign countries. Therefore the issue of finding the ways of raising the effectiveness of railway enterprises, and strengthening the competitiveness of railway system are still of the most immediate interest [4, p. 7].

The goal of the article is to analyze the current situation in railway transport and to find out the ways and mechanisms of its further reforming for rising of its effectiveness and investment attractiveness.

Conceptual issues of research. The general offices with the help of international consulting company „AT Kearney” held the strategic diagnostics of the industry. It is worth to mentioning that „AT Kearney” was directly involved in the reforming of the company „Canadian National” and also was a partner and remains a consultant of „Russian Railways”. The results of analysis are demonstrated below. Saving positions of railway transport with the increasing of cargo turnover requires purchasing 111 thousands of new wagons in 2011 – 2020.

Another consideration is that underinvestment of 10 thousands wagons (about 5% of the fleet) leads to losses of 15 bln. t-km of cargo turnover or 1.6 bln. hrn of income (fig. 2,3).

Also there is a necessity of buying more than two thousands freight-hauling locomotives for providing an increasing cargo turnover. The amount of required investments is more than 68 bln. hrn. (fig. 4)

In passenger transportation a decrease of a share of railway transport' and increase of losses exponentially is observed.

Thus in 2010 the losses of passenger transportation were equal to 3,8 bln. hrn, and in 2011 even more than 4,5 bln. hrn. (fig. 6).

Therefore, there is an extremely critical question that concerns reorganization of passenger transportation, especially in commutation services.

As far as only 11,4% of all railway junctions provide 93% of passenger turnover, only 100 of them are between key cities of Ukraine (this equal to 0,4% from overall railway junctions (23,5 thousands) and provide almost half of total traffic flow – they should become a priority for high-speed operation' development. (fig. 7).

Base case involves 42 high-speed trains, as far as the amount of passengers of high-speed trains will increase more than four times (fig. 8).

There should be cumulative investments of more than \$37,5 bln in passenger rolling stock until 2020. The reconsideration of tariff setting system should be done for realization of the investments amount that is needed (fig. 9,10).

Passenger transportation in regional rail shows a decline of paid passenger's amount. This leads to increasing of losses.

Thus the losses equaled \$2,84 bln. in 2010, and 3,2 bln. in 2011.

In such situation, when there is no mechanism of loss compensation, any transport operator as of railways is uninterested in growth of traffic flow.

Nevertheless, in spite of expectable decrease of traffic flow, there is a necessity of 8,7 bln. hrn of investments during the following 10 years [3].

The infrastructure will require more than 56 bln. hrn of investments in its optimization until 2020. This includes:

- decrease of working capacity – 35,1 bln. hrn;
- optimization of „bottlenecks” – 21,1 bln. hrn.

As the result the due diligence was hold in main areas of activity, which create revenue: freight traffic, passenger transportation in regional rail, long-distance traffic, and other kinds, as well as in areas of activity, which create costs: connection road, infrastructure.

At that, freight traffic is a key source of company's revenues. Revenue receipts from it equaled 9,4 bln. hrn in 2010, and 12,5 bln. hrn in 2011. But the total financial result is practically less by half and equaled 6,88 bln. hrn in 2012.

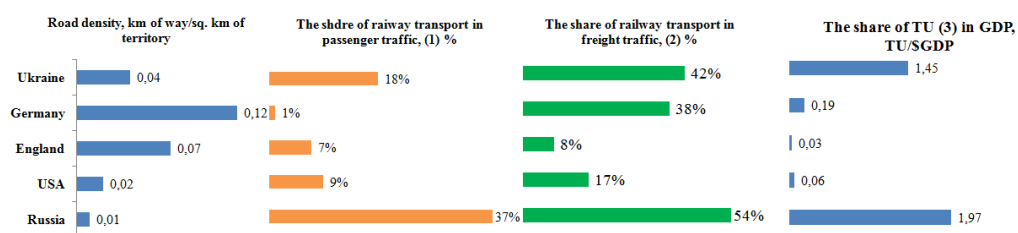


Fig. 1. Technical parameters of rail facilities' development in Ukraine, 2009 – 2010

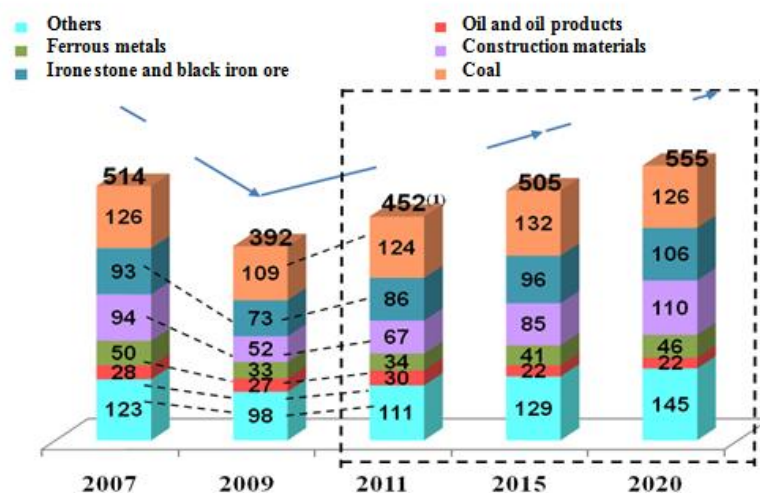


Fig. 2. The estimate of volume of carriage in the railway transport till 2020, mil. T

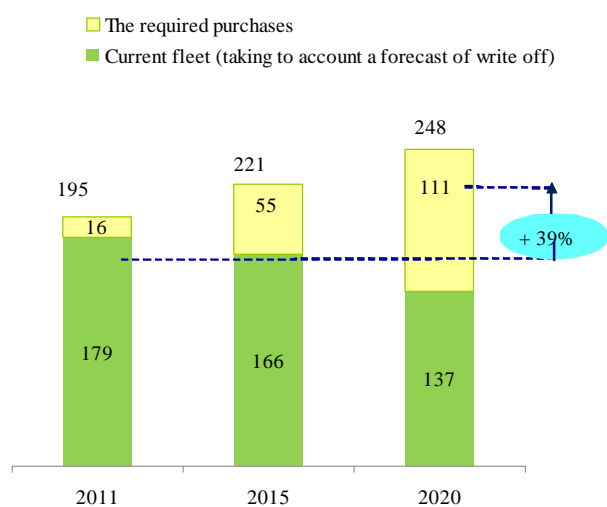


Fig. 3. The required fleet of cars to 2011 – 2020, KPs

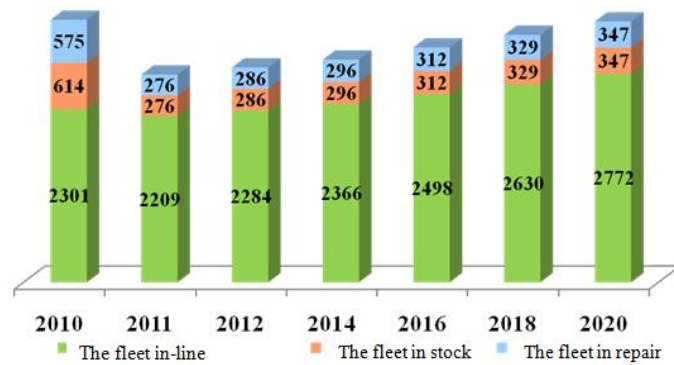


Fig. 4. The structure of inventory rolling stock of freight locomotives, units

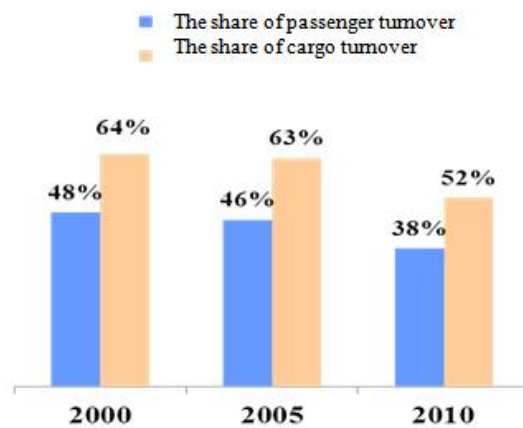


Fig. 5. The share of railway transport in passenger traffic in 2000 – 2011, %

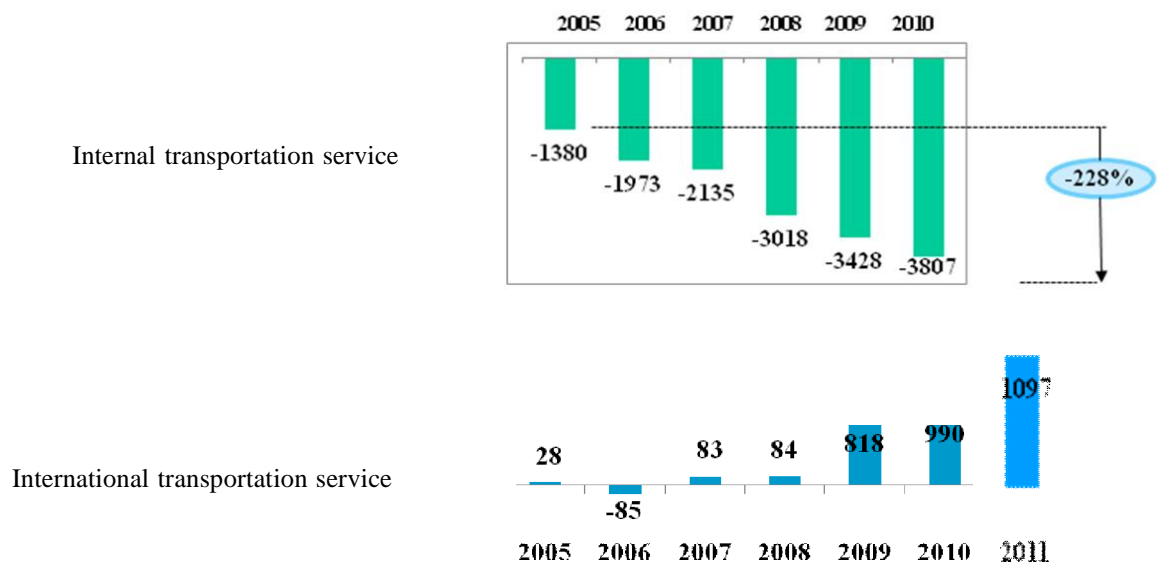


Fig. 6. Financial results in 2005 – 2011, mil. hrn.

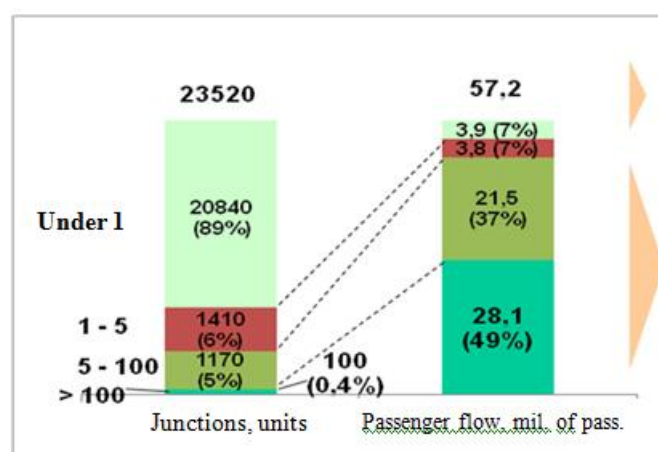


Fig. 7. The railway junctions between points of departure and calling (inland traffic), 2010

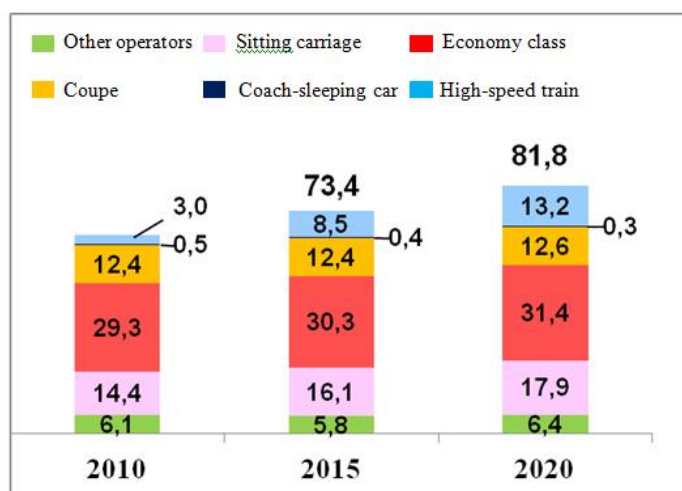


Fig. 8. The amount of railway transportation of „Ukrzaliznytsya” by segments, mil. of passengers



Fig. 9. Required purchases* in 2011 – 2020, cars

* In base case

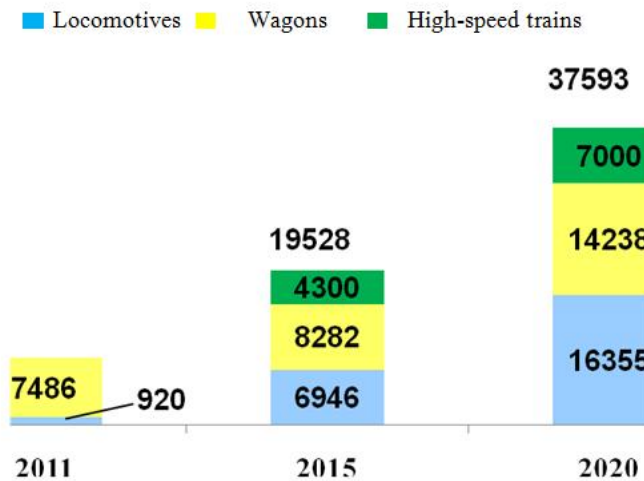


Fig. 10. Investments in renewal and maintaining of the fleet^{}, mil. hrn.**

*Cumulative data, since 2011

** The amount of passenger cars taking into account write off in 2011 and required purchases for the service of traffic flows

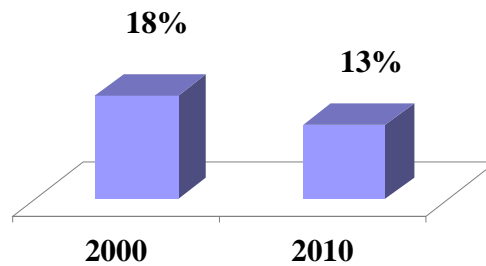


Fig. 11. The share of rail transport in 2000 – 2010, %

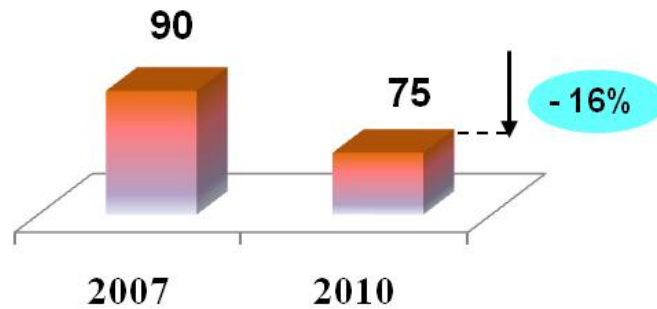


Fig. 12. The amount of „paid passengers” of the rail road in 2007 – 2010, mil. passengers



Fig. 13. The economic losses from commutation services in 2007 – 2011, bln. hrn

Therefore, the Ukrainian railways will not be able to realize the needed volume of investments at the current level of their proprietary resources, because the gap between operational profit from transportation services and required amount of investments is growing up annually (profit in 2011 – 5,9 bln. hrn, required investments – 26,9 bln. hrn).

There is four-time gap and every year of delay of implementation of investments leads to sizeable cumulative increase in future.

To use possible sources of financing, the reforming of the railway industry should be made.

In this article the following model of reforming will be represented.

Conclusions. As a summaries and recommendations for railway industry reforming should be mentioned the following:

1. The freight traffic as a segment, that creates

profit, should be the key area for investments of „Ukrzaliznytsya”. To support the share of railway transport while the cargo turnover is increasing on 3% per year until 2020, there is a necessity of 65 bln. hrn for buying 111 thousands of wagons. Underinvestment in 10 thousands wagons leads to losses of 1,6 bln. hrn annually. The level of wagon's component should be changed for attraction of private operators of rolling stock – today it allows paying back the wagon only by the end of the operating life.

2. The current locomotive fleet that is on the balance exceeds the required level, in spite of this in fact there is no profit because of high share of unexploited locomotives in stock and under repair. There is a recommendation to write off such assets for the purposes of accounting and effective management of the fleet. The current plans of buying of 500 locomotives are essentially lower than there is a requirement in them.



Fig. 14. Expenses coverage ratio (income/expenses) in 2007 – 2010, %

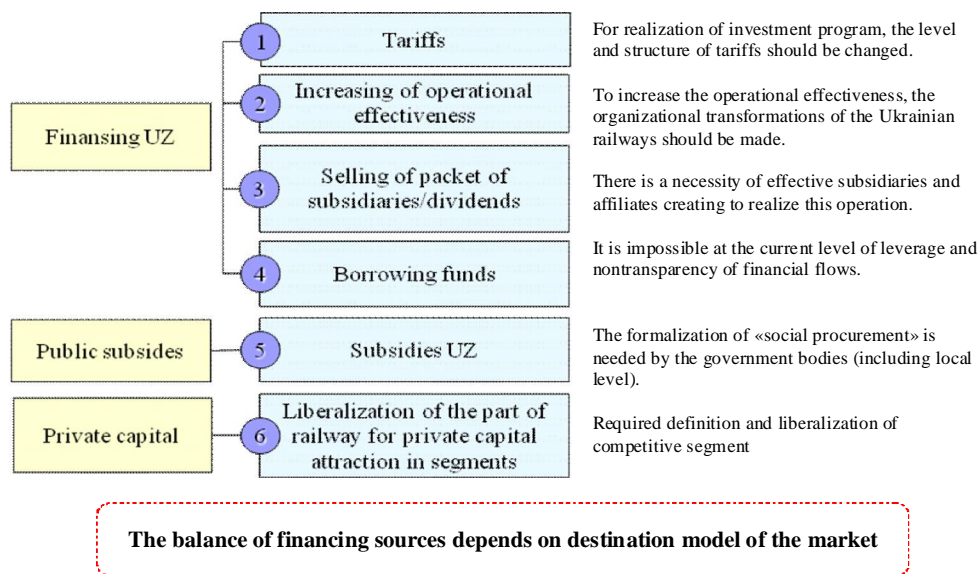


Fig. 15. The model of railway transport reforming

3. Also there is a necessity of reconsideration the train movements for rising an attractiveness of railway transport and decreasing of costs:

- cancellation of train movements in long-distance on an under-populated districts/directions;
- focus on the development of about 100 connections, that provide 50% of passenger traffic, including the high-speed operation, that will be implemented.

The implementation of 42 high-speed trains will allow transporting about 90% of the passenger traffic of those directions, which provides the practicability of high-speed traffic development (the average occupancy is 70% – 350 passengers and more).

The renewing of rolling stock is critically for holding „paid passengers”, because their share is decreasing the most. It's recommended to specificate a current procedure of diversification of costs according to kinds of activity, providing transparency of financial result for specification of the compensatory amount.

The transition to accounting of passengers according to actual fact, but not using the procedure of 1994 will allow:

- maintaining the accounting within the company for factual analysis of routes, directions and estimating the effectiveness of using of assets;
- strengthening the negotiation capacities of „Ukrzaliznytsya” while specificating the size of costs' compensation.

4. The priority of „Ukrzaliznytsya” should become the liquidation of 2300 km of bottlenecks on the most heavy traffic lines. In „Ukrzaliznytsya” there is a potential of optimization of costs by reduction of low functioning lines, which handle less than 2 trains per day (about 1000 km) and generate negative financial result.

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Буковский А. В., Квартальна Н. О. Основні положення і тенденції реформування залізничного сектора в Україні

Статтю присвячено важливим аспектам розвитку залізничного транспорту України та напрямкам його реформування для покращення результатів діяльності. Автор наводить ряд аналітичних та статистичних даних, що підтверджують необхідність реалізації заходів по реформуванню галузі. У статті наведено рекомендації щодо напрямків підвищення ефективності роботи залізничного транспорту України.

Ключові слова: залізничний транспорт, ефективність, пасажиро-, вантажообіг, модель реформування.

Буковский А. В., Квартальная Н. А. Основные положения и тенденции реформирования железнодорожного сектора в Украине

Статья посвящена важным аспектам развития железнодорожного транспорта Украины и направлениям его реформирования для улучшения результатов деятельности. Автор приводит ряд аналитических и статистических данных, подтверждающих необходимость реализации мероприятий по реформированию отрасли. В статье приведены некоторые рекомендации касательно направлений повышения эффективности работы железнодорожного транспорта Украины.

Ключевые слова: железнодорожный транспорт, эффективность, пассажиро- и грузооборот, модель реформирования.

Bukovskiy A. V., Kvartal'na N. A. Basic Premises and Trends of Reforming Railway Sector in Ukraine

This article is devoted to vital aspects of Ukrainian railways development and ways of its reforming for better performing. The author present a lot of analytical and statistical data that confirm the necessity of realization of a range of reforming measures. Some of recommendations are actually represented in the article.

Key words: railway transport, effectiveness, passenger and cargo turnover, reforming model

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