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COMPARATIVE ANALYSIS OF OPERATING INDICATORS FOR RAILWAY SYSTEMS OF UKRAINE AND SWITZERLAND

To study the problems of the railway system, it is important to analyze its operational and economic performance. At present, Ukrainian Railway provides 80.1% of transport work in the general structure of cargo transportation with all types of transport (excluding pipeline transport) and 32.1% of passenger transportation. Swiss Federal Railways - SBB-CFF-FFS has a 37.3% share of the freight market in the country, and 17% of passenger traffic. Completely different financial results of railway holdings. The income of Ukrainian Railway for 2018 amounted to UAH 76 billion, while the net profit amounted to UAH 203.9 million. SBB-CFF-FFS for 2018 had revenue of CHF 8.451 billion Swiss francs and a net profit of CHF 568 million. Considering that for Ukrainian Railway, the main revenues are freight transportation, it is important to look for efficient technologies of cargo transportation to reduce company expenses and higher profits.

In order to be able to formulate effective proposals to improve the operational efficiency of Ukrainian Railway, it is proposed to study in detail the quantitative and qualitative indicators of the operational performance of the railway systems of Ukraine and Switzerland. A comparative analysis of SBB-CFF-FFS's operating performance will reveal the causes of Ukrainian Railway inefficiency. The total length of the Swiss railway network is 4035.5 km, while the operational length of the main tracks in Ukraine is 19000.0 km. It is interesting to have a comparative analysis of the volume of goods carried on the railways of Ukraine and Switzerland. The analysis of indicators shows that the volumes of freight traffic in railway systems are comparable. The railways of Switzerland have a trend of falling freight traffic by 9.5% compared to 2017, a similar situation is observed in Ukraine, over the last 5 years the volume of transport decreased by 10%. The following factors influenced the decrease in the volume of traffic on the Ukrainian Railway:

- lack of a locomotive park;
- lack of compensation from the state for passenger transportation;
- depletion of the company's main production assets;
- reduction of the share of transit cargo transportation;
- the degree of use of technical means;
- excessive number of sorting systems;
- high costs for carriage of wagon and group shipments.

Analyzing the development of single wagon load in

Ukraine, it can be found that as of 2018, this share accounts for 65% of all freight traffic, and the route 35%, while on the Swiss single wagon load reaches up 16% and route 84%, which indicates improved railway performance systems. In 2017, the management of SBB Cargo, which is a subsidiary of SBB-CFF-FFS, confirmed that the model of single wagon load is a strategic business of the company. The new approach is based on the formation of single wagon load and group train departures and their movement on the network, reducing the impact on the peak phases of passenger train traffic. For freight traffic a new schedule is created with daily three phases (early phase, peak time, freight traffic). These phases are arranged so that they do not affect the movement of passenger trains in the morning and evening rush hours. This improves the accuracy of cargo delivery and reduces the uncertainty of the shipping process. In terms of transport time, rail transport is becoming more competitive in comparison with automotive. The application of the above-described technology for the carriage of single wagon load and group shipments by the carrier company SBB Cargo on the Swiss railway allows to reduce the costs of operating activities and as a consequence to increase profits.

The introduction of the above described approach will improve the competitiveness of single wagon load and group shipments and reduce the risks in the shipping process for the consignor.

References

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НАУКОВО – ТЕХНІЧНИЙ СУПРОВІД ПРОГРАМИ ВПРОВАДЖЕННЯ ЦИФРОВИХ РАДІОЗАСОБІВ СТАНДАРТУ DMR НА МЕРЕЖАХ ЗАЛІЗНИЧНОГО ТЕХНОЛОГІЧНОГО РАДІОЗВ'ЯЗКУ

Системи технологічного радіозв'язку широко використовують для управління рухом поїздів, керівництвом станційною роботою та при ремонті та технічному обслуговуванні інфраструктури. Існуючі мережі технологічного радіозв'язку побудовані з