International Freight demand forecast of Tajikistan Railway Feasibility Study Project*

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Abstract

International freight demand forecast and finding the potential of a new infrastructure in attrackting the traffic from opponent routes are two of the main responsibilities of transport planners, in international transportation projects. These are important for justifying the huge investment required for building a new transport infrastructure as a link in a global transit corridor. On the other hand, for designing the network and its technical requirements also, such data are essential. These forecasts require upstream regional transportation studies and detailed information on foreign trade between countries in zone of influence of such projects, in terms of both tonnage and value, which are not easy to achieve in most cases. Before this study, such forecasts were mostly done based on scenario planning and scattered data which gathered from some rare sources available in this respect. Of course, the accordance of these data with real operation is always a big question. In this paper, for the first time, base on reliable international sources, besides preparation of commodity flow matrix between countries in zone of influence of Tajikistan's New Railway line, using two different models of elasticity and time series, the international freight demand for this transit route was forecasted in form of an international contract for the next 20 years. For this purpose, we used ArcGIS software's capabilities besides our calibrated EMME2 transport model.

Key words: *International freight transport demand forecast, Transit routes, foreign trade, Zone of influence, Elasticity model, Tajikistan railway project, ArcGIS, EMME2*