

# Effects of Tax Reimbursement for the Goods Declared in the Origin and Shipped to Overseas from Gate Ports

Zhongzhen YANG<sup>1</sup> and Jianan CHENG<sup>1</sup>

<sup>1</sup> College of Transport Management, Dalian Maritime University, Dalian, China

**Abstract**—The policy of tax reimbursement for the export goods means to refund the taxes levied during production and circulation. To prevent cheat, China stimulated that the reimbursement could be applied after the goods have been loaded the ships voyaging to foreign countries regardless of where they are done the customs declaration. This method delayed the tax reimbursement of the goods declared at inland cities or medium/small ports and raised the. As the results, the utility of the reimbursement has not been functioned fully.

In order to make the goods quickly loaded onto the ships directly to foreign, some Chinese medium/small ports have to operate the liner lines to the nearby foreign ports. They solved the time and cost problem, but the transportation efficiency is low and the scale of economy of transportation could not be realized. The more bad issue is that Chinese gateway ports could not be well fed and are put in disadvantage status when competing with other gateway ports.

For this reason, Chinese government launched the policy of tax reimbursement for the goods declared in origin and transported to Yangshan bonded port in 2012. It is obviously that the measure can not only shorten the time and cost of the reimbursement but also change the port choice, carrier choice and path choice of the goods and further the port status as well as shipping network configuration. Thus, it is necessary to study its effects on the behaviors, benefits, utilities of the concerning bodies and the foreign trade transportation system.

This paper studies the impacts induced by the new policy. We analyze and list the potential effects and convert them to traffic impedances and give method to calculate the impedance changes. We find ways to represent the multi-modal network consisting of highway, railway, waterway and transfer, and nodes of cities and ports. With the user equilibrium assignment model we analyze the path selecting behaviors of export goods and obtain traffic flow data on links. Finally, based on the traffic flows, we analyze the choice of custom declaration sites, hinterland expansion of the bonded port, the demand of railway liners, the beneficiaries and the corresponding benefits.

**Key words**—tax reimbursement, gateway port, bonded port zone, user equilibrium, shipping network.

## AUTHORS

**Zhongzhen Yang** is professor at the College of Transport Management, Dalian Maritime University, Dalian, China (e-mail: yangzhongzhen@263.net).

**Jianan Cheng** is student at the College of Transport Management, Dalian Maritime University, Dalian, China (e-mail: cheng2856229@126.com).