

ICT and Trade Performances of Central and Eastern European Countries: Evidence from the Micro and Macro Data

(Abstract General)

In the recent century, information technology revolution and the Internet together with the fast pace of globalization gave birth to digital economy that created new opportunities to produce, deliver, trade and consume goods and services all over the world. Consequently, global economy as well as international trade is broadly affected by the recent waves of digitization. In this context, deployment of Information Communications Technology (ICT) gets the vital sense, since it is ICT that enables using recent technological advancements and reaping benefits of digitization.

While US and other large economies as well as western European countries are broadly covered in scientific analysis, the literature related to ICT effects on trade performance of Central and Eastern European Countries (CEEC) is quite scarce. The goal of my research is to analyze the effects of ICT on trade performances of CEEC at the micro as well as at the macro level.

In both type of analysis, I will examine impact of ICT infrastructure, ICT use and human capital that enables usage of ICT. In the micro-level analysis, my study will additionally test ICT as a general purpose technology (GPT). The latter implies that ICT generates positive effects if its utilization is augmented with complementary organizational changes in the management of firms. This approach will allow to draw more precise conclusions about ICT effects – my estimations may find that ICT infrastructure and ICT use do not generate sufficient positive effects due to the absence of changes in management processes that are necessary to fully utilize ICT.

In the macro-level analysis, I will furthermore test the results obtained at the micro level. However, as it is not possible to analyse ICT as GPT at the macro level, I will introduce knowledge economy in the analysis as indicator of the general technological environment in CEEC. Additionally, since data on the macro-level allows identifying destinations of trade flows, I will check whether ICT increases trade of CEEC with high-income countries. Moreover, macro-level data will allow examination of ICT network effects (implying that ICT benefits to its users increases when ICT is intensively used in both trading countries). To derive precise results, I will examine exports and imports of CEEC separately.

The proposed research is innovative by studying impact of ICT on trade performances of CEEC based on micro as well as macro data. It has both empirical and theoretical values. As for theoretical contribution, my research suggests extension of trade models from the micro and macro studies by including human capital ICT variables. As for empirical values, this study will outline the impact of ICT on trade performances of CEEC at the firm level and furthermore will test findings at the country level. Results of this study will lead to policy recommendations on how to uptake all the advantages of ICT in a more efficient way.