

THE ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGY ON SERVICE TRADE: CASE STUDY OF INDONESIA EXPORT TO ASEAN

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Abstract

This study aims to analyze the impact of Information and Communication Technology (ICT) on bilateral trade between Indonesia and its ASEAN trading partners. The sample is bilateral export on technology intensive products between Indonesia and 10 ASEAN countries such as Malaysia, Philippines, Singapore, Thailand, Brunei Darussalam, Vietnam, Myanmar, Laos and Cambodia. The total service trade is based on UN-Comtrade data, it consists of commodities are coded in Standard International Trade Classification (SITC). This study uses the gravity model framework of data panel from 2008 to 2017 with random effect model is analyzed using Generalized Least Square. Based on the regression analysis, results show that ICT Development Index (IDI) which represents technology development has a positive and significant impact on Indonesia's service export to ASEAN countries. Other variables such as GDP, distance and common language also have significant effect on Indonesia's service export. GDP reporter and GDP partners have positive and significant effect on Indonesia's service export. Furthermore, distance has a negative and significant effect on Indonesia's service export. These results are in line with Gravity model theory. In addition, these results are expected to be strong enough for the specifications of alternative models and estimation methods. Based on these results, some expected trade policy implications can be formulated.

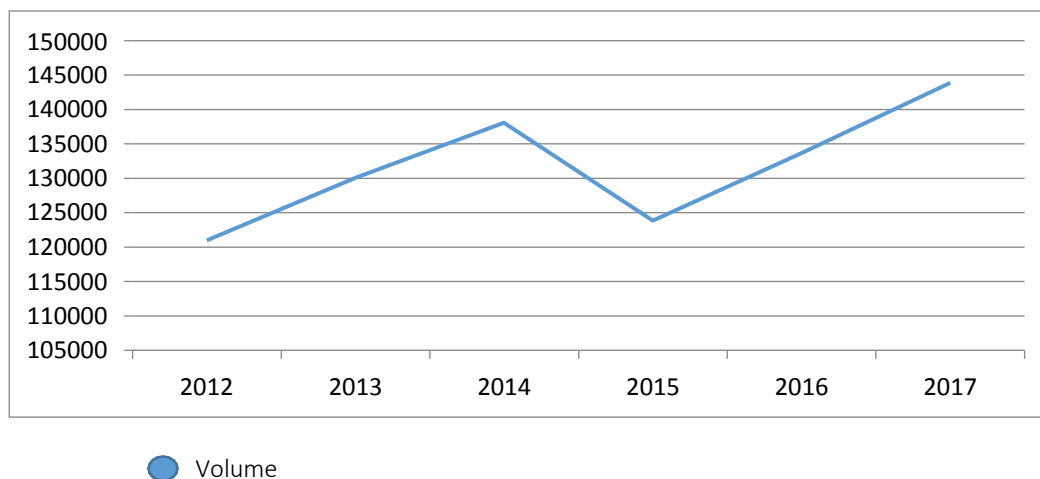
Keywords: Information and Communications Technology (ICT); Service trade; Gravity model

JEL Classifications: O33; F10; C29

INTRODUCTION

Nowadays, in the Industrial Revolution 4.0 era, the advancement of Information and Communication Technology (ICT) reaches all aspect of business and trade. Technological progress brings trade and commerce no longer hindered by territorial boundaries and has changed everything to become more efficient since the development of ICT has eliminated the barriers related to information and communication. Therefore, entrepreneurs and traders have better information to achieve the efficiency of the market such as reducing the cost of searching the market, boosting advertisement, and enlarging distribution linkage. Technology plays an important role in international trade and commerce since international trade is one of the sources of growth. Salvatore (2004) said that international trade is as one of the engines of growth.

In the concept of international trade, Ricardo (1817) describes that a country will export commodity that has relatively abundant input than other countries and will import commodity that have relatively scarce input than other countries. A country is expected to specialize in a product that has competitiveness than other product in a certain region. It has been recorded that, in 2017 the volume of world exports and imports rose by 3.6% which was the highest level during the last 10 years. The World Trade Organization (WTO) said it was caused by an increase in Asian inter-regional trade flows. In addition, demand for imports in North America also began to recover. Strong economic growth in China and the United States boosted import demand.



Source: World Trade Organization database 2018, Author Estimation.

Figure 1. Graph the World Export-Import Flow

From the graph above proves that more and more countries in the world welcome international trade and open international trade flows wider. With the increasing enthusiasm of a country opening trade flows indicating the creation of world trade competition. In the competition for international trade