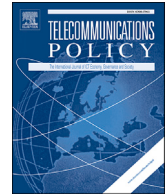


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Does bridging the Internet Access Divide contribute to enhancing countries' integration into the global trade in services markets?

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ABSTRACT

This paper examines the impact of countries' distance between their Internet usage and the world average of the Internet usage intensity on their integration into the world market of trade in commercial services. Using an unbalanced panel dataset of 175 countries over the annual period 2000–2013, the empirical analysis indicates that the narrowing of the Internet-related distance would improve countries' integration into the world trade in commercial services market. Furthermore, it helps those countries that are geographically far from the world market to compensate for the adverse effect of this geographical distance on their integration into the world market of trade in commercial services.

1. Introduction

In spite of the lacklustre performance of both merchandise and commercial services trade in the recent three years (see for e.g., the World Trade Statistical Review¹ 2016), the world has witnessed a sizeable expansion of global trade in services during last fifteen years. In the meantime, access to the Internet usage has considerably increased across countries in the world during the last fifteen years: the average of the percentage of individuals using the Internet in the world (for which data is provided by International Telecommunication Union) rose from 9.4% in 2000 to 49.1% in 2015. This rapid increase in the Internet usage in the world clearly reflects the daily impact of the Internet on all aspects of economic life, including international trade.

Using 175 countries in the world - that have been the subject of the empirical analysis in this study-, Fig. 1 compares, over the period 2000–2015, the evolution of the average of their Internet usage intensity, that is, the number of the Internet users per 100 people who can access the worldwide network for each country in the world (this ratio is henceforth denoted “INTERNET”) and the average of the ratio (in percent) of the sum of exports and imports in commercial services to the world's sum of exports and imports in commercial services (this ratio is henceforth denoted “TRADESERV”) for these 175 countries in the world. It shows that while the world's average of the Internet usage intensity has been on a rising trend, from 8% in 2000 to 42% in 2013, the average of “TRADESERV” remained stagnant around 0.6% until 2012, before increasing to 0.7% in 2013.

The effect of the Internet development on international trade has been well recognized in the international trade literature: for example, Belderbos and Sleuwaegen (1998) and Rauch and Casella (2003) have provided evidence that information costs constitute an important informal barrier to international trade. Head, Mayer, and Ries (2009) and Christen and Francois (2010) noted that both trade

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¹ See online on https://www.wto.org/english/res_e/statis_e/wts2016_e/wts2016_e.pdf.

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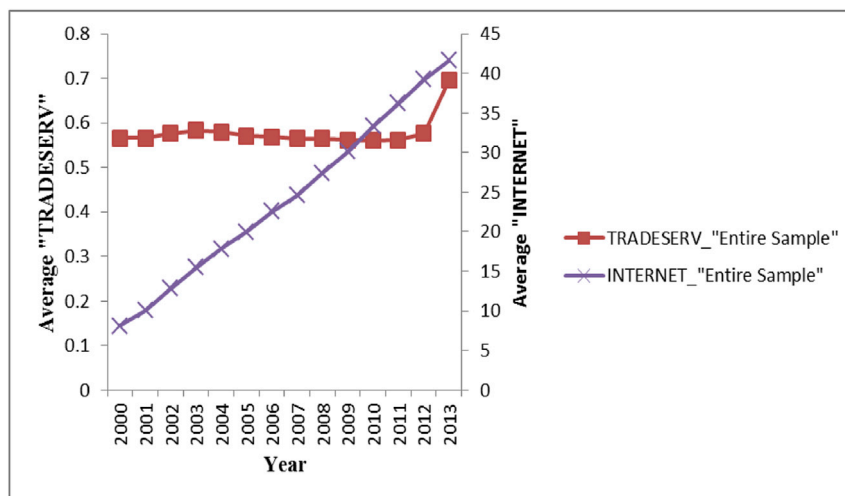


Fig. 1. Evolution of "TRADESERV" and "INTERNET"_Entire sample.

in goods and trade in services are affected by the transactional distance between countries, in terms of transportation and coordination costs. To explain the difference between the effects of the Internet on trade in goods and trade in services, Freund and Weinhold (2004: p 173) argue that while trade in goods will be affected because Internet technology improves information about foreign markets, thereby reducing entry costs, trade in services will be impacted because new services, which are transmittable via the Internet, can now be traded almost costlessly, irrespective of location. As a result, the Internet should have a relatively greater effect on the volume of trade in services and on the way in which distance influences services.

Among the growing number of studies that have been examining the macroeconomic impact of the Internet usage (see the literature review below), including its impact on the international trade² (see for e.g., Freund & Weinhold, 2002, 2004; Clarke, 2008; Choi, 2010), few have focused on international trade in commercial services (Freund & Weinhold, 2002 - who have performed their analysis in a bilateral trade framework by using gravity models-, and Choi, 2010 - who uses aggregate services trade in his analysis).

The current paper aims to contribute to this strand of the literature not by examining simply how the Internet usage intensity affects international trade in services, but by shedding light on the impact of countries' Internet distance (i.e, for a given country, the distance between its Internet usage intensity and the world's average of the Internet usage intensity) on their integration into the world market of trade in commercial services. In addition, the paper investigates whether the reduction in this Internet-related distance helps countries compensate for the negative effect induced by geographical distance from the world market on their integration into the world market of trade in commercial services.

To the best of our knowledge, this is the first paper that examines the services trade effect of the Internet with this angle of analysis. The value addition of this study is in indeed threefold: first, the analysis does not use gravity models but relies on aggregate commercial services data as well as on the concept of countries' integration into the world's market of trade in commercial services, rather than using countries' trade in commercial services values or their share of countries' GDP. Second, in contrast with previous studies that use data until 2006 (see Choi, 2010 for the most recent one), the current analysis covers the period 2000–2013, which captures the substantial development in the Internet access that has taken place in recent years, in particular since 2006. Third, in the same spirit as Freund and Weinhold (2004), it introduces the geographical distance into the analysis by considering "Netherlands" as the centre of the world market (see Melitz, 2007) in order to investigate whether the impact of closing the gap between a country's Internet usage intensity and the world's average Internet usage intensity is higher for countries that are far from the (centre of the) world market as compared to those countries that are closer to this market. To measure the countries' integration into the market of trade in commercial services, we use the three ratios already described, namely "TRADESERV", "EXPSERV" and "IMPSERV".

We postulate that the lower the gap between a country's Internet usage intensity and the world's average Internet usage intensity, the higher the integration of this country into the world trade market of commercial services. Furthermore, for countries that are geographically far from the world market, reducing this gap would induce a greater integration into the market of trade in commercial services than countries that are more closed to the world market.

The results of the empirical analysis confirm our hypotheses: reducing the gap in the Internet usage intensity with respect to world's average Internet usage intensity significantly improves countries' integration into the world market of trade (exports plus imports) in commercial services. The magnitude of this impact is lower the higher the countries' level of development. These outcomes apply for countries' integration into the world market of exports in commercial services, but not for countries' integration into the world market of imports in commercial services. More interestingly, the analysis shows that the reduction of the (Internet-related) distance could help

² It is important to underline that the many of these studies performed the analysis in a bilateral framework, using gravity models.

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