Int. J. Production Economics ∎ (∎∎∎∎) ∎∎∎–∎∎∎

Contents lists available at ScienceDirect

Int. J. Production Economics

journal homepage: www.elsevier.com/locate/ijpe

Uneven effects of financial liberalization on productivity growth in the EU: Evidence from a dynamic panel investigation

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ARTICLE INFO

Article history:
Received 11 November 2013
Received in revised form
8 May 2014
Accepted 10 May 2014

Keywords:
Manufacturing sectors
Service sectors
Financial liberalization
Productivity growth
Dynamic panel investigation

ABSTRACT

This paper investigates the impact of the financial integration process on economic growth. Specifically, in analysing such growth effects, the distinction is made between two growth channels—investment and productivity. Crucially, the analysis tests whether the effects of financial openness on services differ from its effects on manufacturing. Based on a panel of sector-level data (manufacturing and services) from the EU KLEMS database (1980–2009), such effects are estimated in a dynamic panel setting. The main findings suggest that the productivity effects of financial integration, although positive overall, are uneven and they differ between the manufacturing and service sectors. More precisely, the results confirm that the manufacturing sector could profit from the process of global financial integration to a greater extent than services. But the impact of financial globalization on service sectors productivity remains overall positive. On the contrary, capital accumulation was broadly unaffected. Such results remain robust to different sensitivity checks regarding, most importantly, the measurement of financial integration. The findings of the lower productivity impact in services can be understood considering their more intensive skill-biased direction of technological change. At the same time, the strong capital-skills complementarity in services sustained the generation of positive expectations over future productivity growth and attracted financial resources from abroad. As an implication of this research and given the increasing importance of service sectors to modern economic systems, the focus should be placed on searching for more precise channels of long-lasting growth in services. (JEL: F02, F21, F36, F4)

1. Introduction

There has been a rapid and intense financial integration process over the last few decades. This can be observed in both worldwide evidence and that pertaining to the EU specifically (Fig. 1). MEP_L_fig1[1]

At the same time, the effects of financial integration, although intensively investigated in the past literature, are still unclear, especially regarding service sectors. Generally, depending on the theoretical perspective, financial liberalization is deemed to have positive or negative effects on the growth process. In particular, the literature on liberalization and growth shows that financial liberalization on average stimulates growth.[2] This is confirmed both when treating the growth process directly (Bekaert et al., 2005) and when assessing the impact on its main sources, productivity and capital accumulation. A rather stable finding so far is that the influence on productivity (growth) is significantly stronger than on capital accumulation (Bonfiglioli, 2008; Gehringer, 2013; Kose et al., 2009b). More precisely, regarding productivity, intensifying inflows of financial capital permit the economy to overcome financial constraints and thus to engage in more productive investments (Acemoglu and Zilibotti, 1997). In contrast, the literature concerned more specifically with the economics of financial crises provides sound reasons to believe that financial globalization might be the main cause of the increased frequency of crises and of induced volatility in industrial production (Demirguc-Kunt and Detragiache, 1998; Glick and Hutchinson, 2001; Kaminsky and Reinhart, 1999; Stiglitz, 2000).[3]

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[1] Fig. 1 shows the development of *de facto* and *de jure* indicators of financial integration. Although measuring quite different aspects of the underlying process, both indicators confirm that financial liberalization has proceeded very rapidly.

[2] Such positive growth effects stemming from financial liberalization might be generated through different channels (for reviews of the literature on the link between finance and productivity, see, for instance Bekaert et al., 2011; Gehringer, 2014; Kose et al., 2009a). There is also an extensive body of theoretical and empirical literature investigating the welfare implications of intensifying financial transactions, most of which suggests positive welfare effects (Antunes and Cavalcanti, 2013; Gourinchas and Jeanne, 2006).

[3] The overall impact of financial globalization continues to be the subject of intense dispute (see Edison et al., 2002 for a survey).

http://dx.doi.org/10.1016/j.ijpe.2014.05.003
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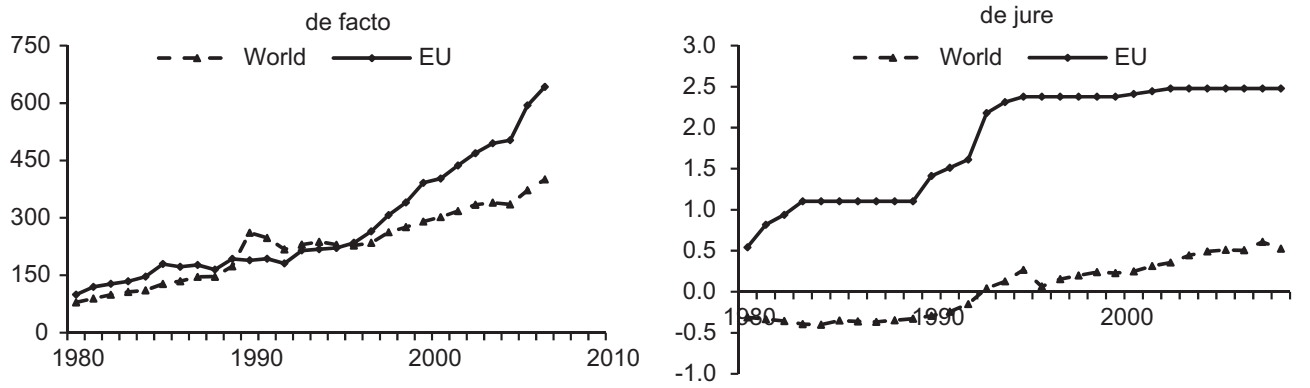

Fig. 1. Dynamics of the financial integration process. *Note*: *De facto* measures of financial integration are expressed as the sum of total assets and liabilities in percentage of GDP, based on updated data from Lane and Milesi-Ferretti (2007); the *de jure* index of financial integration from an updated version of Chinn and Ito (2008) is a composite indicator based on official information from the IMF. It ranges between −2.49 for the least financially open economies to 2.49 for the most open economies. 'World' refers to an average value for countries included in the database of the respective indexes. 'EU' comprises the eight EU member states for which data in the revised version of EU KLEMS are available (Austria, Belgium, France, Germany, Italy, the Netherlands, Spain, and the UK).

The analyses in the aforementioned literature took quite exclusively a global perspective, putting together a wide range of industrialized and developing economies. These studies grasp a broad, cross-country effect of the phenomenon.[4] At a more disaggregated level, there are studies that use industry-level (Aizenman and Sushko, 2011; Bekaert et al., 2011; Gupta and Yuan, 2009; Levchenko et al., 2009) and firm-level data (Abiad et al., 2008; Fons-Rosen et al., 2013) to address the question of whether progressive financial openness contributes to improved economic performance. Yet all these analyses exploit manufacturing sector data, almost disregarding services. This comes as a surprise, given the evidence of the growing relative importance of services in modern economic systems (Peneder et al., 2003). Starting in the late 1990s, a profound structural change associated with radical technological restructuring has been taking place, especially in advanced countries. A deep re-organization of economic systems to encompass the increasing importance of service sectors has taken place worldwide. Both the structure and the technology of advanced economic systems have been changing, with the emergence of a new core of knowledge-intensive business services in the organization of the economic activity of advanced economies. Since the emergence of the services-dominated economic structures coincided with the intensifying financial flows, it is crucial to investigate the impact of financial opening on services.

At the same time, given the intrinsic differences characterizing manufacturing on the one hand and service sectors on the other, it is reasonable to expect that their responsiveness to financial integration varies. This is better understood in the light of the nature of the current technological change that has significantly affected the traditional balance of factor intensities throughout economic systems. New knowledge-intensive production activities based upon ICT are characterized by production processes that are at the same time capital-saving and blue-collar labour-saving. Such effects are stronger for services than for manufacturing. In consequence, the demand for tangible capital in services is much lower and the expected benefits of greater financial capital are also likely to be lower (Antonelli, 2014; Antonelli and Fassio, 2014).

The choice in the aforementioned empirical investigations to examine the effects of financial globalization on manufacturing industries and not on services was in some cases implicit or at best motivated by the lack of available data for services. The only study giving an explicit reason for investigating manufacturing industries is by Neusser and Kugler (1998): they argue that it is the progress in accumulating technological knowledge in machinery and equipment that spurs overall productivity growth. Against this conjecture, at least over the last 40 years, the speed of investment – particularly in capital equipment, such as electronics, information and telecommunication equipment – was faster in services than in manufacturing sectors.[5] Services became thus more and more technologically advanced and experienced an improvement in the risk-return outline. At the same time, efficient implementation of new vintages of capital goods required highly skilled labour. Induced by the capital-skills complementarity, the general level of skills in services was positively affected. Consequently, improvements in the human capital were the dominating source of technological change in services, which was thus skill-biased.

Among the most dynamic services the literature identified ICT services, in particular, telecommunication (Correa, 2006; Hardy, 1980; Roller and Waverman, 2001) and broadband (Grimes and Ren, 2009). Finally, apart from ICT, other less knowledge-intensive services (such as transport, storage and business services) have strong linkages and interactions with the rest of the economy. Consequently, as well-functioning service sectors can boost productivity and investment in other sectors (Gunasekaran et al., 1994), the influence of financial integration on the economic performance of services will be not neutral to the system. Depending on the sign and the strength of such an influence, further indirect effects on the economic performance of other sectors would follow.

The lack of the investigations regarding services (and comparing their performance with manufacturing) provides sufficient motivation for the forthcoming analysis. This also constitutes the novel contribution of the paper to the literature on the link between financial integration and growth. To the best of my knowledge, this is the first attempt to include services in the investigation of the impact of financial liberalization on economic performance.

In the empirical investigation, instrumental variable (IV) techniques are applied to assess the influence of financial globalization on the main aspects of sectoral performance. In particular, the

[4] An exception here is the investigation by Gehringer (2013) who uses macro-level data, but concentrates on the productivity growth effects of financial integration in the more specific context of European integration.

[5] On average for the investigated EU-8 countries and over the period 1980–2009, the EU-KLEMS index of investment (2005=100) was growing by 10% and by 2% in services and manufacturing, respectively. Similar evidence regarding the period 1960–1980 was confirmed for the UK in a study by Barras (1986).

Please cite this article as: Gehringer, A., Uneven effects of financial liberalization on productivity growth in the EU: Evidence from a dynamic panel investigation. International Journal of Production Economics (2014), http://dx.doi.org/10.1016/j.ijpe.2014.05.003