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Dynamic estimation of the relationship between trade openness and output growth in Asia☆

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ABSTRACT

This paper studies the relationship between trade openness and output growth for a sample of twenty-three Asian countries using both a static OLS and a dynamic ECM estimation models. At the country specific level, the findings of this study provide robust empirical evidence indicating that higher revealed trade openness is not the main engine explaining the Asian economic-growth miracle. In particular, the authors find that physical capital accumulation is at the core of the observed long-run output per worker growth. At the regional level, the authors observe a marked difference between the pre and post 1997–1998 financial crisis, whereas, in the post period, trade openness has a positive and significant effect on output growth. In general, the results from the dynamic estimations prove that the conventional OLS static estimates underestimate the effect of investment on output growth. In addition, the dynamic model allows for a separation of gains from trade between short term and long term. The paper results also provide evidence in support of the idea that, countries with a growing degree of trade openness may experience faster per-capita output growth through gains in productivity associated to capital accumulation, rather than the assumed technological spillover effects from the trading sector. Again, at the regional level in the post financial crisis period both short term and long term gains from trade are relevant to growth. Why more trade does not necessarily imply faster growth at all levels of revealed trade openness growth, remains a conundrum.

1. Introduction

Asia is an economic region composed of fifty countries with a market size of over 3 billion people. The region experienced an impressive per capita income growth performance – even after accounting for the negative effects of the 1997–1998 financial crisis – characterized in the literature as an economic miracle. For instance, Hong Kong, South Korea, Singapore, India and China have grown on average at 6.74[1] percent since the 1960s. In particular, the remarkable and sustained economic growth observed in countries such as India (5.18%) and China (8.25%) from the 60s through 2012, has marked the potential of the region and its overall impact on the world economy. Similar and sustained economic growth has also been

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[1] For the period from the 60s through 2012, these countries grew on average as follows: Hong Kong a 5.83%, Korea a 6.77%, and Singapore a 7.65%.

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observed in other economies such as Singapore, South Korea, and Malaysia to name a few. Despite the impressive economic performance in the region, Krugman (1994) and Young (1995) argue that there is nothing miraculous about this economic growth. They argue that strong and almost unprecedented accumulation of capital (with little to no gains in productive efficiency) are reasons for this growth.

According to De La Dehesa (2007), Asia's outstanding economic performance accounts for the largest reduction in both poverty and income inequality, across the globe. In particular, Kuroda (2006) notes that Asia has been a showcase of economic performance where an active and outward-looking trade policy takes a central role. On this regard, Wu and Chen (2004) acknowledge that while China's main economic collaboration is with the Asia Pacific Region, – besides collaborations with ASEAN – it has also developed trade and investment links over the five Central Asian countries.[2]

Singapore is another Asian country with an outstanding economic performance record. Daquila and Huy (2003) argue that its successful economic transformation rests on the government's role in promoting free trade and encouraging foreign direct investment in line with its outward-oriented industrialization policy (p. 908). As noted earlier, Krugman (1994) contests this line of thought and argues that Singapore's impressive economic growth is the result of massive resource reallocation, but not of efficiency gains in productivity deriving from trade openness. That is, trade openness did not result in the development of positive spillover effects leading to efficiency gains in the period before the Asian financial crisis. By the same token, the Asian financial crisis of 1997–1998 casted severe doubts on the economic performance of the region and its capacity to continue performing at the fast pace it had up to that point. Furthermore, the 1997–1998 financial crisis brought trade integration efforts to a halt, at least in the short term. According to Peng (2002), the financial crisis made evident that East Asian economies were highly regionalized.

Despite the negative effects the financial crisis had on the overall economic structure of the region, others argue that the economic success of the region is due in part to the presence of alternative mechanisms beyond the conventionally-understood economic integration apparatus. Most notably, Peng (2002) provides a systematic study of what he calls the informal integration in East Asia. He indicates that the presence of "invisible linkages" quietly shapes the Asian integration (p. 443). He states that the strong presence of three main informal mechanisms, namely regional production networks, ethnic Chinese business networks and sub regional economic zones are the main drivers of the observed economic success. Because of these invisible links, Peng (2002, p. 425) argues that unusual heterogeneity of the East Asian region acts as a barrier to economic integration. Other studies point toward earlier efforts to promote further economic integration. Stubbs (2002), remarks how the ASEAN Plus Three (APT = ASEAN + China, Japan and South Korea) process was at its time one of the most comprehensive proposal towards East Asian regional cooperation. By the same token, Northeast Asia (Japan, the Korean Peninsula, Russia's far East, Mongolia, China, Taiwan, and Hong Kong), promoted the development of a free trade zone to counterbalance growing protectionism and regionalism elsewhere (Cai, 2001, p. 22). More recent integration efforts point toward a larger Regional Comprehensive Partnership (RCEP), which is a free trade agreement including the 10 ASEAN member states and also its FTA members (Australia, China, India, Japan, South Korea and New Zealand). While still in progress the RCEP is scheduled to conclude its negotiations by the end of 2015. This new effort is expected to replace the East Asia Free Trade Agreement (EAFTA) and the Comprehensive Economic Partnership in East Asia (CEPEA). Particularly, the RCEP aims at achieving a modern comprehensive high quality and mutually beneficial economic partnership agreement; establishing an open trade and investment environment; boost economic growth and equitable economic development; advance economic cooperation and broaden and deepen integration in the region; which will build upon existing economic linkages (see www.asean.org for more details). If successful, the RCEP would be touted as the largest free trade area in the world, and would serve as a balancing mechanism against the Trans-Pacific Partnership (TPP). Incidentally, on the flip side, Tang (2000, p. 375) argues, that non-member countries in the region will be adversely affected by these integration efforts. It is also relevant to note that in Asia, trade reform primarily includes – but is not limited to – the formation of invisible linkages (Peng, 2002), the pursuit of foreign trade agreements, and the attraction of foreign direct investment and promotion of business development.

Because of the predominant role that academics, policy makers, and practitioners place on trade reform and trade liberalization as drivers of the process of economic growth in Asia (the so called Asian Miracle), a thorough understanding of their linking mechanisms requires inquiring about both the short run (resource mobilization and reallocation) and long run (spillover effects and productivity gains) effects of trade policy on output growth. In this regard, Krammer (2010, p. 592) emphasizes on the relevance of understanding the mechanisms and channels of technology diffusion across countries, as the world becomes ever more integrated. Particularly, if the strong period of economic growth in the Asian region was driven by the expansion of trade – larger and faster trade openness – then several relevant questions need to be addressed to better understand if trade growth is the force behind economic growth. In this regard, this paper aims at shedding some light on the following set of questions: *What have the effects of trade openness been on factor accumulation, productivity and output growth? Are there significant differences between the short run and long run effects of trade expansion on output growth and factors' productivity that have been largely overlooked in the literature? Do more open economies outperform the lesser open ones? Have all Asian countries move in the same direction and at the same speed? What lessons can be drawn from The Asian experience?*

[2] These countries are Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan and Turkmenistan.