



Business reforms and total factor productivity in Vietnamese manufacturing



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ABSTRACT

Vietnam implemented reforms in the 2000s to ease start-up of new businesses with dramatic effect on firm entry and market competition. This study examines firm level data for the period 2000–2010 to analyze total factor productivity (TFP) in connection with the reforms, adopting a semi-parametric technique developed by Wooldridge (2009) and Petrin and Levinsohn (2012) to measure TFP. Intensified competition is hypothesized to have driven convergence of TFP within industrial sectors as technologies best suited to Vietnamese market conditions became more widely implemented. The evidence strongly supports this hypothesis with convergence found for 16 of the 17 sectors analyzed. Further, comparison of TFP growth rates between the first and second half of the decade shows mixed results by sector and region. More often than not, TFP growth is seen to have slowed over time. This suggests that competition acted not only to push low TFP firms to exit the market or raise productivity, it also discouraged use of technologies that may have been overly advanced and not cost efficient for Vietnam.

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1. Introduction

Total factor productivity (TFP) growth is a key driver of economic growth (Comin, 2010). TFP growth derives from technological advance, improvements in management and organization, and upgrading of the quality of inputs (Syverson, 2011; Van Beveren, 2012). Many scholars have investigated the connection between TFP and reforms, for example in international trade,¹ and governance² Interest has been paid in particular to the effect of reform on the catch-up of low productivity firms to those at the frontier, as reflected in the narrowing of TFP dispersion.³ Such catch-up is particularly important for developing countries where productivity deep inside the frontier is widespread. Onerous business regulation has been identified by Brunetti, Kisunko, and Beatrice (1999) as a major hindrance to improving productivity in South and Southeast Asia. Ease of doing business reforms can encourage both start-up of new firms and investment by existing firms in more advanced technologies, tending on both counts to promote convergence toward the productivity frontier. At the same time, however, inhibition of entry can protect favored firms, coddling them in the adoption of technologies that are overly

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¹ See Francois and Hoekman (2010), Ha and Kiyota (2014), Topalova and Khandelwal (2010), Francois and Hoekman (2010).

² See Acemoglu, Johnson, and Robinson (2005), Acemoglu and Robinson (2008), Alder, Shao, and Zilibotti (2012), Ghosh (2013), McCulloch and Malesky (2011), Acemoglu et al. (2005).

³ See Collard-Wexler (2011), Fox and Smeets (2011), Hsieh and Klenow (2009), Syverson (2011), Collard-Wexler (2011).

advanced and not cost effective in a developing country setting. Greater competition can ward against such overreach on the high end just as it does against under performance on the low end.

Yet the relationship between business regulatory reforms and TFP convergence has received little attention for the developing countries of Asia. This study advances our understanding of this issue by analyzing changes in TFP dispersion and growth that took place in connection with business reforms adopted in Vietnam during the period 2000–2010.

The decade of the 2000s witnessed two phases of major business reforms in Vietnam. Phase 1, from 2000 to 2005, involved cutting red tape for business start-ups. Phase 2, from 2006 to 2010, went further to decentralize business registration to local one-stop shops at the level of the 63 provinces. As a result, the time needed to establish a business dropped from 6 to 12 months in the 1990s to an average of 50 days during the first phase of reform, then to just five days during the second phase (UNIDO, 2011). This led to a boom in business formation during the 2000s, as shown in Fig. 1 which presents the number of firms by province. In 2000, only three provinces claimed firm numbers in the range 535–2043 whereas 16 provinces had fewer than 32 firms. By 2010, the number of provinces with more than 535 firms had climbed to 13 and not a single province failed to surpass the 32-firm mark.

The premise of this study is that ease of entry spurs competition and thus pushes under-performing firms to either become more productive or shut down while at the same time guarding against technology overreach. Over the course of the two phases of Vietnam's business reforms, then, we expect the dispersion in firm productivity to have narrowed as firms that survived the increasing competitive pressure coalesce around technologies suited to Vietnam's level of development. We test this hypothesis by estimating the gap in TFP between least productive and most advanced firms for 17 different industries, and comparing across the two phases of reform. We then examine TFP growth rates by sector further distinguishing among four key economic regions and the rest of the country.

This study makes use of a unique firm-level panel dataset for the period 2000–2010 compiled from the Vietnam Enterprise Survey of the Vietnam General Statistics Office. Sectoral classification follows the two-digit VSIC-1993 system. Relative to previous studies of Vietnamese productivity,⁴ this study broadens the sectoral coverage and lengthens the period of analysis while also distinguishing between earlier and later phases of reform. Methodologically, the study represents an advance over previous work with its adoption of a semi-parametric estimation approach introduced by Wooldridge (2009) and Petrin and Levinsohn (2012) that is modified by controlling for year shocks and adding cluster standard errors for robust inference.

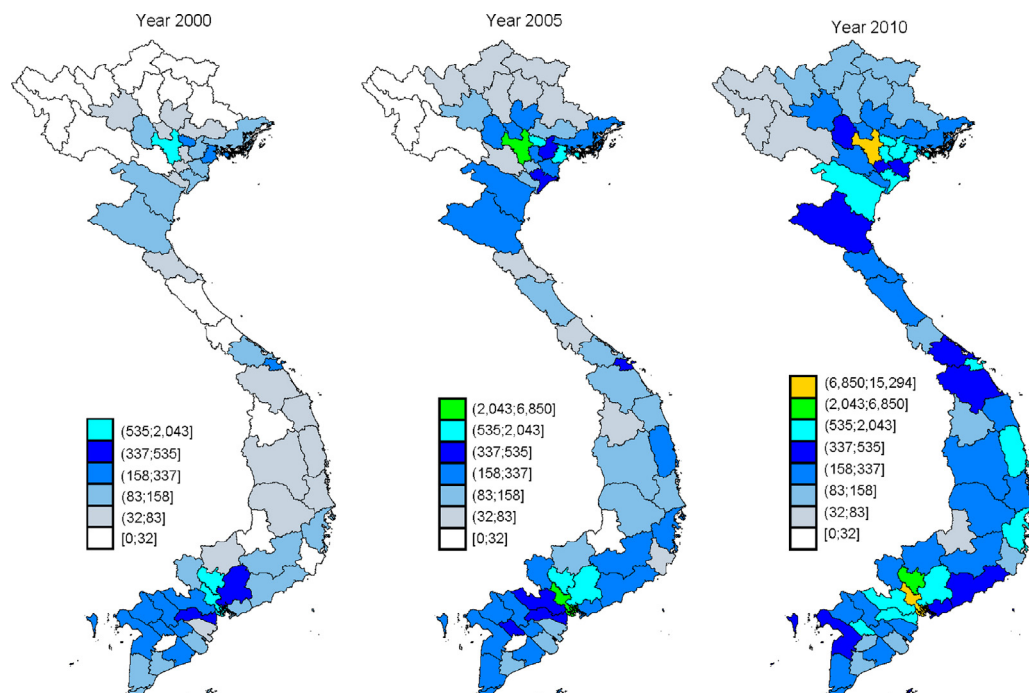


Fig. 1. Number of firms by province, 2000, 2005 and 2010.

Source: Firm-level data are from the Vietnam Enterprise Survey (Vietnam General Statistic Office, 2000, 2005, and 2010). Administrative boundaries are based on Global Administrative Areas data (www.gadm.org). Several Vietnamese islands (e.g. Hoang Sa and Truong Sa) are not displayed due to data limitations.

⁴ Ha and Kiyota (2014) analyze a time frame of 2000–2009 and Newman, Rand, Talbot, and Tarp (2015) one of 2009–2012. Nguyen, Phan, and Simioni (2016) cover the period 2000–2012 but only for six sectors.

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