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State-owned enterprise reform in Vietnam: A dynamic CGE analysis

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ABSTRACT

In this paper, we consider the potential impact of State-Owned Enterprise (SOE) reform in Vietnam. We model a baseline for the Vietnamese economy to the year 2035, and then consider how a limited reform of SOEs might affect the structure of output, trade and employment. The SOE reform modeled assumes a gradual and partial approach: SOEs that are considered strategic are excluded from reform, while SOEs that are profitable and perform better than their non-SOE counterparts are assumed to stay in state hands. Of the remaining SOEs, we assume only 50 percent are reformed over a five-year period from 2016. Our results suggest that even this limited SOE reform could increase cumulative baseline real GDP by nearly nine percent for Vietnam in 2035. Wages for all occupation groups are found to increase and investment in Vietnam is projected to rise by up to 16 percent, relative to the baseline.

1. Introduction[1]

Vietnam has implemented a range of ambitious reforms since 1986; however, reform of SOEs has been patchy. The total number of SOEs halved during the early years of the *Doi Moi* reforms that began in 1986, leading to a dramatic reduction in SOE employment (Cai & Liu, 2015; O'Connor,1998). However, subsequent efforts to reduce dependence on SOEs proved challenging (Phan & Ramstetter, 2004) and SOE reform came to a standstill in the early 2000s (Vu-Thanh, 2017). In the latter part of the 2000s, eager to create analogs of Korean and Japanese conglomerates, the Vietnamese government embarked on a plan to consolidate many of the remaining SOEs into state owned General Corporations and State Economic Groups (SEGs). Initially the General Corporations and SEGs did well, but weaknesses in the system soon became apparent, with the failure of several high profile businesses. During the 2006–2009 period, state agencies were estimated to comprise 36.1 percent of Vietnam's GDP (Dinh et al., 2010), a modest decline from the 1996–2000 (39.5 percent) and the 2001–2005 periods (38.7 percent) (VDR, 2012). SOEs remain a significant part of the economy, contributing an estimated 32.2 percent to Vietnam's

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GDP at the end of 2013 (OECD & KIPF, 2016).[2] However, there has been recognition in Vietnam that further reform of the SOE system is required, with reform of SOEs 'a crucial pillar' of the Government's structural reform and productivity agenda (ADB, 2015).[3]

SOEs in Vietnam claim a disproportionate share of national investment in land, property and physical assets, with a less than proportionate increase in enterprise performance. SOEs are generally not subject to hard budget constraints and are entitled to credit, investment and other privileges that are not available to private enterprises (Vu-Thanh, 2017). SOEs are frequently expected to be inefficient relative to other firms, with many economists believing "that SOE managers have weaker motives to pursue profit and efficiency than those in privately owned firms" (Ramstetter & Phan, 2013). While there is evidence that some SOEs in Vietnam may be relatively efficient and productive (Yang et al., 2015)[4] and there are potential benefits of SOEs that can be acknowledged, Taussig et al. (2015) argue that none of these outweighs the benefits to Vietnam of a revitalized reform process. Dinh et al. (2010) calculate the growth of value added in the state sector as a proportion of GDP at 4.1 percent, well below the average GDP growth rate of approximately seven percent for that period. The World Bank echoed this conclusion in the VDR (2012), highlighting that SOEs have comprised a disproportionate level of investment in recent years and have not performed well in their estimation. The VDR (2012) notes that in 2009, the average ratio of turnover (sales) to assets for SOEs was 1.1, compared to 21.0 for the entire economy, concluding that restructuring the SOEs will be important for Vietnam's future growth. The ADB adds that while a large share of aggregate investment tended to be absorbed by SOEs, contributions made to real GDP and overall employment were relatively low, compared to private enterprise (ADB, 2015). Thus, SOE reform continues to be an important part of the Vietnamese restructuring agenda.

In this paper, we model some potential impacts of further reform of SOEs in Vietnam. We begin by outlining the modelling approach, including an overview of the model used and baseline developed. We then discuss our approach to modelling SOE reform and the scenario considered for Vietnam. We then present an analysis of results for the SOE reform scenario modeled, including impacts on the overall economy, output, trade, employment and investment. Finally, we offer some concluding comments.

2. Modeling approach

2.1. Overview of model

Our analysis uses a modified version of the Dynamic GTAP model (GDyn), developed by Ianchovichina and McDougall (2012). This model is based on the well-known Global Trade Analysis Project (GTAP) global computable general equilibrium (CGE) model (Hertel & Tsigas, 1997). It includes many features of the standard GTAP model, including perfectly competitive markets, sophisticated consumer demand specifications and inter-sectoral factor mobility. In addition, the dynamic model incorporates investment behavior that allows for the gradual equalization of global rates of return over time, along with additional accounting relations to keep track of foreign ownership of capital.

The database used as a starting point for our modelling is GTAP v8.1L, with the choice of sectors and regions in the aggregation reflecting our focus on the Vietnamese economy. We aggregate the full global database to 26 countries and regions.[5] Our sectoral aggregation is designed to capture important sectors for Vietnam, with Appendix A Table A1 detailing the sectors modeled, including how they are further aggregated for reporting purposes.

The GTAP database used includes five labor categories, in contrast to earlier versions of the database, which included only skilled and unskilled labor (Narayanan et al., 2012); this provides us with a more nuanced labor market, reflecting the matching of the work force to the newly evolving economy. We extend the GDyn model to link labor demand by occupation to labor supply by education, allowing some mobility of workers by education across occupations. This is particularly important for developing economies, like Vietnam, that are seeking to raise the education level of their populations, and hence increase the productivity of their labor forces. Initially the supply of labor by education (tertiary, secondary and primary/none) is allocated across occupations based on data obtained on the education levels of workers in each occupational category in the base year, however, over time as the average level of education of the Vietnam worker increases, all occupations become more educated and productivity increases. This mechanism is described in more detail in Minor, Walmsley and Strutt (2015).

[2] Though Ramstetter and Nguyen (2017) note that there are often large discrepancies between estimates of the share in economic activity of SOEs from alternative sources.

[3] For example, the Government of Vietnam requested technical assistance from the Asian Development Bank to support implementation of the State-Owned Enterprise Reform and Corporate Governance Facilitation Program (SRCGFP) (UNICON, 2014).

[4] For example due to the Baron-Myerson effect, where SOEs in Vietnam may be much more capital intensive and have higher labor productivity than private firms (Yan et al., 2015).

[5] Vietnam, Australia, New Zealand, China, Hong Kong, Japan, Korea, Taiwan, Indonesia, Malaysia, Philippines, Singapore, Thailand, India, Canada, USA, Mexico, Chile, Peru, Russia, Europe, Rest of ASEAN, Rest high income economies, Rest low-middle income economies, Rest upper-middle incomes economies, and Rest lower income economies.

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