

ABSTRACTS OF DOCTORAL THESES ON THE INDONESIAN ECONOMY

Patterns of Provincial Economic Growth in Indonesia

Yogi Vidyattama (yogi.vidyattama@natsem.canberra.edu.au)

Accepted 2008, Australian National University, Canberra

Differing levels of development among countries and regions have long been a subject of concern in the field of development economics. More recently, identifying the determinants of income growth has become an increasing focus of research. An aspect of these efforts is analysis of the convergence process, which looks at changes in the distribution of income and economic growth across countries or regions and at the impact of the growth process on inequality.

Analytical and empirical frameworks taken from the theories of growth employed in international cross-country studies have been adapted in this thesis to a sub-national case. One factor that would differentiate the application of growth analysis in national and sub-national contexts is the impact of national macro-economic conditions on the convergence process. Another is differences between interaction among regions within a country and interaction among nations, the former presumably being closer. There have been some recent attempts to examine this issue, first, in regard to spatial auto-correlation in the growth process, and second, by estimating the impact of migration on the regional growth process.

Indonesia is a particularly interesting subject for regional study, as the world's largest archipelagic state and one of its most spatially diverse. Moreover, Indonesia's economy has experienced much turbulence in the last few decades, both from external shocks and from major national policy changes. This thesis applies the analytical framework of regional growth to a consistently defined set of 26 provincial economies in Indonesia for the period 1975–2005.

The analysis finds that regional income convergence in Indonesia has been driven largely by structural change arising from the fall in oil prices and rapid industrialisation in the early 1980s. Provincial GDP per capita convergence in Indonesia has generally slowed since the economy adjusted to the fall in oil prices. A decomposition analysis confirms that the pattern of Indonesian provincial income convergence can be explained by the transition from mining to manufacturing as the country shifted from a resource-based to an export-manufacturing economy.

In the search for Indonesia's provincial growth determinants, the study finds that, if province-specific effects are included in the analysis, investment and population growth are shown to have had an insignificant impact on the growth of income per capita, while human capital and openness had a positive significant impact. On the other hand, the impact of transport infrastructure is significantly positive with or without inclusion of province-specific effects. The impact

on provincial income growth of national macroeconomic conditions, including national economic policies, is found to be highly significant.

The thesis also reveals that spatial correlation among provincial economies in Indonesia is only weakly significant. Moreover, this weakly significant spatial correlation has made little difference to the performance of growth determinants, the results for which are similar in the spatial estimations and in the original non-spatial estimation. Migration has had a more significant impact on the economic growth and convergence process. Human capital flows slowed the convergence process between 1975 and 1985, but significantly increased the speed of convergence between 1985 and 1990, owing to the flow of migration to high-income provinces with high unemployment rates. The effects are unclear in the 1990s, while the estimation for 2000–05 confirms increased convergence as an effect of migration. These diverse effects were all achieved despite the fact that migration generally has a positive impact on growth.

© 2009 Yogi Vidyattama

FDI and Productivity Spillovers in Indonesian Manufacturing

Della Temenggung (della_temenggung@yahoo.com)

Accepted 2008, Australian National University, Canberra

This thesis examines the role of foreign direct investment (FDI) in the industrialisation process in Indonesia, focusing on productivity spillovers from FDI to local firms in the manufacturing sector. It uses a rich annual data set on medium and large plants in the manufacturing industry from 1975 to 2000, covering the pre-liberalisation, liberalisation and crisis periods. The key hypothesis is that gains from FDI are not automatic but are conditioned by the economic and policy environment. A combination of quantitative and qualitative analyses is employed in the study.

The economy-wide analysis examines the relationship between FDI inflows and Indonesia's economic growth, applying the co-integration technique to time-series data for a longer period, from 1970 to 2005. The results show that FDI contributes to economic growth. Moreover, the findings support the hypotheses that both export-oriented policy and absorptive capacity in the host country will enhance the economic benefits of FDI.

The analytical core of the thesis uses plant-level panel data on the manufacturing industry from 1975 to 2000. The plant-level studies show that, although there are some indications of positive and significant technology spillovers from FDI in Indonesian manufacturing industry for the whole period, the results are not robust. When the productivity spillover model is estimated for different economic episodes, robust results are found that support the hypothesis that local firm absorptive capacity and the host country economic and policy environment influence the level of economic benefits gained from FDI. Negative and significant spillovers are found during the pre-liberalisation period (1975–87), while positive and significant spillovers are found in the liberalisation phase (1987–96). The study also considered regional dimensions, and found insignificant regional productivity spillovers at both province and district levels in manufacturing industry for the

whole period. However, positive and significant regional productivity spillovers were found during the liberalisation period (1987–96). Regional spillover effects were found to be higher in regions with extensive manufacturing activities and higher levels of economic development, suggesting that industry agglomeration and regional development do affect local firms' ability to adopt new technology introduced by FDI. The study also investigated the effects of sectoral and firm characteristics on productivity spillovers from FDI.

In-depth firm-level case studies of the textiles and garments, electronics and auto-parts industries were conducted to provide insights into the mechanisms of FDI involvement and the channels for technological spillover from FDI. Various types of FDI involvement in the industry were observed from the firm-level case studies. The results confirmed the findings from the empirical chapters: increasing benefits from FDI were observed after the liberalisation period, when Indonesia engaged in export-oriented industrialisation. The demonstration effect was found to be a channel for FDI spillovers in the case of several firms. Local enterprises used the labour mobility channel, which is complementary to the demonstration effect from FDI, in implementing new technology. The role of linkage effects was highlighted in interviews with firms, especially in the electronics and auto-parts industries. Lack of education and specific skills on the part of local labour, limited access to finance and lack of marketing skills and information on export markets were found to constrain local firms in absorbing and implementing new technologies introduced by FDI.

© 2009 Della Temenggung

Determinants of Inflation in Indonesia: An Econometric Analysis

T.M. Arief S. Machmud (tm_arief@bi.go.id; arief.machmud@gmail.com)

Accepted 2008, Australian National University, Canberra

This thesis examines the determinants of inflation in Indonesia. It estimates an economy-wide model within a unified theoretical framework, and conducts simulation experiments to investigate the inflationary effects of certain policy changes and an external shock.

The macroeconomic model is designed to capture the key insights from both monetarist and structuralist theories of inflation, while taking into account the salient features of the Indonesian economy. The eight key blocks in the model deal with price level; wages; employment; the balance of payments; money demand; the exchange rate; the term structure of interest rates; and aggregate demand. A bound testing procedure is employed to estimate each behavioural equation in the model, using quarterly data from the first quarter of 1983 (Q1 1983) to the third quarter of 2005 (Q3 2005).

The results of the estimated model reflect two key features of the Indonesian economy. First, in the long run, non-tradable prices are determined predominantly by domestic factors, namely unit labour costs and domestic excess demand (represented by the ratio of broad money to GDP). In contrast, tradable prices are most affected by external factors, namely world tradable prices and the exchange rate. The long-run effect of a change in the exchange rate is greater for tradable

prices than for non-tradable prices. Secondly, during the 'fixed but adjustable' (heavily managed floating) regime (Q1 1983 – Q2 1997), Bank Indonesia intervention was apparently intended to achieve a greater degree of depreciation, or to prevent further appreciation, than was warranted by the foreign-exchange market fundamentals. In the subsequent period of flexible exchange rates (Q3 1997 – Q3 2005), the Bank Indonesia intervention was seemingly aimed at preventing a further depreciation of the rupiah.

Three simulation experiments WERE conducted to investigate the effects of two policy changes and an external shock on the price level, its determinants and other key economic variables: (1) a rise in the Bank Indonesia policy rate; (2) a rise in world interest rates; and (3) a rise in the price of administered goods.

The results of the first policy simulation support the hypothesis that significantly raising the Bank Indonesia policy rate early in the 1997–98 financial crisis could significantly have lessened inflationary pressure arising from the massive rupiah depreciation. The results of the second simulation show that a rise in the world interest rate unaccompanied by a rise in domestic interest rates would have been followed by a rupiah depreciation, which in turn would have increased domestic prices. The results of the third simulation suggest that a government policy to increase the price of administered goods would have had a significant contemporaneous impact on domestic prices, while a slower rate of increase in the following quarters would have been due to the continuous depreciation resulting from the widening differential between domestic and international prices and between domestic and international real interest rates.

© 2009 T.M. Arief S. Machmud

**Accounting for Services: The Economic Development
of the Indonesian Service Sector, ca. 1900–2000**

Daan Marks (dma@iisg.nl)

Accepted 2009, University of Utrecht

The role of the service sector in the process of economic development has been a neglected field of research. The emphasis in development economics has for a long time been on the agricultural sector and industrialisation. However, this study shows that the service sector has played a crucial role in Indonesia's economic development. It first presents new estimates for the long-run growth of the Indonesian service sector within the System of National Accounts. Based on this reconstruction, the role of the two most important service sub-sectors, transport and trade, is analysed in depth.

It is shown that during the 20th century transport costs declined significantly. This means that important social savings were made; consumer and producer surpluses increased; and lower producer costs and higher producer prices, combined with economies of scale, led to higher productivity. Nevertheless, there is still potential for further growth in the transport sector and consequently in the Indonesian economy as a whole. Most developments have been biased towards Java and, to a lesser extent, towards Bali and Sumatra. Especially in the Outer Islands, but also in Java and Madura, transport networks are still considerably

less efficient than in western countries. Moreover, other problems have intensified, such as severe congestion in Java. These problems need to be overcome for the transport sector to remain a catalyst of economic growth.

Trade has been the largest service sub-sector throughout the 20th century. The main conclusion is that the Indonesian trade sector has fulfilled an ambiguous function. On the one hand, external trade did indeed function as an engine of growth, as is reflected by a strong positive association between openness to trade and GDP growth. Both during the colonial period and after independence, careful trade policies resulted in periods of strong growth, fuelled by economies of scale and technological change.

The domestic dynamics in the trade sector have been rather different, however. The study shows that domestically the trade sector became the sector of last resort for those unable to find (enough) work in agriculture or manufacturing. In the 1930s, the trade sector was dominated by the large Dutch trading houses, in collaboration with Chinese middlemen. Clearly, retail trade already existed at this time, perhaps even on a larger scale than the official statistics suggest, because of by-employment. But it was not yet the sector of last resort. Most people were still working in agriculture, with an increasing number finding employment in the rising manufacturing sector. This has changed in the last few decades. Since the late 1960s in particular, both the absolute and the relative number of people working in the trade sector has increased rapidly, whereas labour productivity in the sector is still below levels reached in the 1930s. A transformation has taken place – from a sector dominated by the highly profitable wholesale trade in the colonial period to one in which an almost endless chain of traders is involved in the distribution process, creating an ‘internally complicated organisation’. It is argued that this process might be captured by the term ‘involution’.

In sum, the main conclusion of the thesis is that services need to be accounted for in any attempt fully to understand Indonesia’s economic development path.

© 2009 Daan Marks

Impact of Privatisation on Organisational Change and Managerial Practices in Indonesia

Efa Yonnedi (yonnedi@gmail.com)

Accepted 2007, University of Manchester

While the theoretical and empirical evidence on the efficacy of Indonesia’s privatisation program is still inconclusive, privatisation has been at the forefront of development policy in Indonesia since the 1990s, and continues to be a pressing issue in developing countries and transitional economies. The theoretical and empirical inputs in the decision to privatise have been based predominantly on economic and political considerations, with less attention given to the organisational and managerial implications of privatisation. It has been less clear how ownership change (the privatisation process) affects organisational change and corporate performance. This study attempts to redress this imbalance by examining the relationship between privatisation of state-owned enterprises (SOEs), organisational change and performance. It explores in a developing country context the

processes by which privatisation affects corporate performance through internal organisational changes.

The study provides a conceptual framework for analysing the effects of privatisation on organisational change and corporate performance. The research framework draws on the theoretical and empirical literature on privatisation and organisational change in order to explain the implications of privatisation for organisation and performance. It is proposed that privatised firms need to undertake major change in their business practices and organisation to achieve an improvement in performance. The research framework predicts that the privatisation process will alter organisational goals, corporate governance, structures, performance orientation, market orientation, marketing capability, learning and technological opportunities, and innovation processes.

The empirical analysis was carried out in Indonesia, a country that has experienced a major social, political and economic transformation since the Asian economic crisis of 1997–98. The field study for the research comprised two strategies. First, the study used survey questionnaire responses from 86 managers in 86 organisations, including public firms, privatised firms and private enterprises, and employed an analysis of variance test to analyse the results. The evidence suggested that privatisation brought about important alignments among the organisation's strategies, design elements and resources and between the organisation and its competitive environment. Privatisation triggered a series of first-order and second-order changes that transformed the former SOEs.

Second, an in-depth case study was carried out in a privatised telecommunications organisation in Indonesia, using data collected mainly from extensive interviews conducted between May and August 2004 with 26 top- and middle-level managers. In addition, 10 annual reports (three from before and seven from after privatisation), a prospectus and numerous internal company documents, particularly from the corporate transformation division, were obtained and analysed to address the research questions under study. The results of the case study reinforced the survey results, confirming that the privatisation process altered the behaviour, incentives and performance of formerly state-owned enterprises.

The thesis contributes to our understanding of the organisational consequences of privatisation in an emerging economy. It also sheds light on the telecommunications privatisation process and the associated organisational and corporate performance changes. The results are expected to contribute to policy reforms by placing greater emphasis on the need to consider the importance of 'organisational capital' in the privatisation process.