ABSTRACTS OF DOCTORAL THESES ON THE INDONESIAN ECONOMY

Thalyta E. Yuwono (tyuwono@gmail.com)
Accepted 2009, Georgia State University, Atlanta GA

This dissertation estimates the relationship between taxpayer behaviour and changes in marginal tax rates, relying on standard labour supply responses and reporting behaviour (compliance). There are few studies of elasticity estimates in this field for developing countries. As the basis of its elasticity estimation, this study develops a general labour/leisure choice model with a progressive income tax incorporated in the budget constraint; it also summarises a tax avoidance model.

The labour supply theoretical model suggests that there is ambiguity in the labour supply decision, and the tax avoidance model suggests that the responsiveness of taxpayer reporting decisions differs across income groups. For the empirical analysis, I estimate an income-reporting elasticity for micro-simulation purposes and use it to estimate a dynamic behaviour micro-simulation model. The elasticity results show that higher-income groups are more responsive than lower-income groups to changes in tax policy.

The study uses a modified difference-in-difference model to compare the behavioural responses of taxpayers who are highly affected by changes in marginal tax rates with those of taxpayers who are less affected. The results show that the treatment group, who experienced larger reductions in their marginal tax rate, reported more of their income than did the control group, whose members were less affected by changes in the marginal tax rate. The last part of the empirical analysis examines the distribution of the income tax burden across income groups. It analyses the government’s tax collection from withholding income under several proposed scenarios, and estimates the change in income tax burden from that under current income tax law. It also examines government revenue losses by calculating tax differences under current and proposed scenarios. The overall micro-simulation results suggest that there is a trade-off between government revenue loss and the distribution of the income tax burden.

The micro-simulation shows different results for static and dynamic behaviour. Results for the static micro-simulations in all scenarios show smaller government revenue losses than the dynamic micro-simulations. The results for both show that changing the marginal tax rate or the income tax bracket without making any changes to personal exemptions yields a lower government income tax collection loss at the cost of a greater income tax burden for lower-income groups.
In the near future, the Indonesian tax authorities will implement this study’s scenario IV as the fourth amendment to Law 7/1983 on income tax. There will be four income tax brackets; personal exemptions will increase by 20% over the current rate; and the marginal tax rate of the highest income group will be reduced from 35% to 30%. Under this scenario, the government will suffer a large income tax revenue loss, but all income groups will be better off in terms of sharing the income tax burden. Although all income groups bear a smaller burden under this scenario, members of the three lowest-income groups bear larger shares of income tax liability. Owing to the increase in personal exemptions and the reduction in the marginal tax rate of the highest-income group, it is expected that implementing this scenario will encourage taxpayer reporting decisions.

© 2010 Thalyta E. Yuwono

**Infrastructure Investment in Indonesia: Process and Impact**
Mohammad Mustajab (mustajab@bappenas.go.id; m.mustajab@rug.nl)
Accepted 2009, University of Groningen, Groningen

This study of infrastructure focuses on three sub-topics: (i) understanding the decision-making processes of infrastructure investment; (ii) investigating the economic impact of infrastructure on national output (gross domestic product); and (iii) examining the relative importance of infrastructure in determining the regional location of foreign direct investment (FDI) in Indonesia.

Infrastructure investment has been analysed from two points of view: first, from the micro perspective of the supplier and the economic actors, as seen in their behaviour in the process of infrastructure investment and in their responses to new infrastructure investment; and second, from the macro perspective of the impact of infrastructure investment on the economy. The two are linked because the impact of infrastructure on a firm’s location and productivity, and thus on economic growth, is related to the behaviour of economic actors in response to new infrastructure investment.

Descriptive data show that infrastructure in Indonesia needs to improve both qualitatively and quantitatively. Though the government has made several attempts to rectify the problems, two issues remain: (1) the complexity of the decision-making process in the new decentralised environment, with its multi-actor involvement; and (2) imbalanced infrastructure growth among regions.

The research employs both quantitative and qualitative methods. To determine how a decision about infrastructure investment is formulated, it uses a qualitative approach. Case studies in public–private partnership (PPP) infrastructure arrangements have been included to obtain a complete picture of the complexity of multi-actor decision making. To gain insight into the decision-making process, the research uses the so-called ‘rounds model’ to identify the rounds of decision making and the actors involved. In addition, it analyses actor involvement and the arena of decision making.

1 Law 36/2008 concerning the Fourth Amendment to Law 7/1983 on Income Tax came into force on 1 January 2009 (Ed.).
From an analysis of four case studies of Indonesian PPP projects, the study finds evidence that decision making can be seen as a series of rounds, in which decisions are taken in various arenas as the outcome of interactions among multiple actors, and in line with recent social and environmental changes.

For the second question – whether infrastructure matters for economic growth – the study adopts an econometric approach, modelling infrastructure in modified production function models. To overcome the problem of reverse causality, the study employs a co-integrated vector auto-regressive model to investigate the effect of public infrastructure on economic growth in Indonesia at the national level.

The analysis reveals a positive and significant long-run relationship between infrastructure investment and output. The results from the long-run weak exogeneity test suggest that the level of infrastructure capital can help forecast the level of output.

Finally, to examine the factors affecting the location of FDI at the provincial level in Indonesia, the model specification begins with a partial adjustment model of FDI. To consider the spatial spillover effect, a spatio-temporal partial adjustment model has been estimated along with a spatial Durbin model.

The analysis using the partial adjustment model and the spatio-temporal adjustment model reveals that lagged FDI as an indication of agglomeration is positive and significant. In the spatial Durbin model, there is a positive spatial lag, which can also be attributed to agglomeration. Road infrastructure is found to be positive and significant as a contributor to FDI location, and also has an effect on FDI in neighbouring areas. The long-term effects of infrastructure, market factors, education and government policy (for example, through integrated economic development zones) are found to be positive for local effect, neighbour effect and total effect.

The Dynamics of Cocoa Smallholders in Indonesia: An Application of Path Analysis for Poverty Reduction
Muhammad Arsyad (arsyad_uh@yahoo.com; arsyad@unhas.ac.id)
Accepted 2010, Ryukoku University, Kyoto

The poverty of cocoa smallholders in Indonesia is a serious problem. Although they have been the main contributors to the rapid expansion of Indonesian cocoa production (93% in 2005), the proportion whose incomes are below the poverty line has a cyclical trend. Smallholders were originally poor; they moved out of poverty, but then fell back into poverty, losing purchasing power. Improving the incomes of smallholders through agricultural and non-agricultural economic activities remains a major challenge.

The specific objectives of the research were: (1) to construct a poverty causal model; (2) to decompose the effects of the model specified; and (3) to identify important causes of poverty through the model constructed. The analytical procedure has four consecutive steps: (1) descriptive statistics; (2) a correlation matrix; (3) factor analysis; and (4) multiple regression as path analysis. Some principal findings of the research include the following.
The poverty causal model and the decomposition of effects revealed several factors that could play important roles in reducing poverty among smallholders. The first is cocoa production, which plays a major part in agricultural activity ($\beta = 0.557$) and is directly associated with poverty reduction; increasing cocoa production can thus make a direct contribution to improving the household incomes of smallholders, and hence to poverty alleviation. Second, expanding the area planted to cloves and improving farm equipment ($\beta = 0.469$) could make a direct contribution to reducing poverty. Third, developing orange and coffee production ($\beta = 0.377$) and increasing family remittance income ($\beta = 0.258$) are the next most important potential means that could be used to address poverty directly. Fourth, expanding paddy fields and estate crop area, and stepping up agricultural and non-agricultural extension services, could also significantly reduce poverty, though indirectly. Fifth, in terms of social services, providing public health centres closer to smallholder residences could indirectly help in poverty reduction efforts.

The agricultural economic activity variable that has the strongest positive direct effect on poverty reduction is cocoa production. A careful examination of the results above could reveal that the orientation of agricultural production (using ‘agricultural sector’ in a broad sense) is strongly and directly associated with the rural poverty phenomenon. A major implication of this finding is that, even if the agricultural sector is not the only area for attention in reducing rural poverty, it is still very important in pro-poor policy interventions, and the Indonesian government should prioritise the revitalisation of agriculture development.

Finally, with regard to marketing networks, the study found that even though tengkulak (brokers) purchase smallholder agricultural products at below prevailing market prices, they fulfil important functions in smallholder communities in terms of capital input, production, post-production and marketing, and socio-religious activities. Two policy options would assist: (i) boosting free market competition by placing more brokers in rural areas to reduce their ‘monopoly’ position in offering capital inputs and purchasing smallholder agricultural produce; and (ii) linking smallholders directly to district markets, to avoid the strong influence brokers exert in terms of price discrimination.

© 2010 Muhammad Arsyad