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Chapter Authors: Arianto A. Patunru

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importance of control variables by explicitly recognizing the output-gap in the pass-through estimation from domestic price index to core CPI.

Second, on the Simulation Exercise

The study uses an econometric model estimated for the period 1987 to 2008 to estimate the impact of the price pass-through on major macroeconomic variables. Then it uses a combination of an almost ideal demand system (AIDS) estimated for 1987 to 2007 and input-output tables for 1997 and 2007 to distribute the impact to the various sectors.

One possible extension of the study would be to explicitly recognize the possibility of structural change during the period by either: (a) introducing appropriate dummy variables to capture changes in intercepts and/or slopes over the period, or (b) estimating separate macroeconometric and AIDS models for at least two separate subperiods. There seem to be enough observations to estimate these separate models (even allowing for some overlap in the middle part of the period). This could improve the precision and even provide more elaboration on the impact of the price pass-through on the industrial structure. For the input-output tables, I wonder if the study could have elicited more inferences if it explicitly recognized the changes in structure and incorporated these into the analysis along the lines of Chenery-Syrquin (1975).

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Comment

Arianto A. Patunru

This chapter by Kuo and Peng is very promising. It is one of the few that examines global commodity price pass-through into an individual country. It therefore lends itself to further elaboration and integration with other instruments to assess the country's response to global price fluctuation and its likely impacts on household and industrial behavior in the respective country. Thus far the literature on similar pass-through analysis approach has

Arianto A. Patunru is head of the Institute for Economic and Social Research, Department of Economics, University of Indonesia (LPEM-FEUI).

been dominated by cross-country examination (e.g., De Gregorio, Landerretche, and Neilson 2007; IMF 2008). Those studies are bound to maintain certain commonalities across countries to allow for direct comparison, with the downside being the inability to go deeper into any given country. Hooker (2002) does evaluate price pass-through to the U.S. economy. However, he does not extend the analysis into examining the response of domestic household and industries.

Other works in this line have actually attempted to examine global price pass-through to individual countries; however, most of them rely on standard VAR approaches that are rather theory-free and therefore are limited in lending themselves to more comprehensive economic analysis.[1] Kuo and Peng, on the other hand, use a Hooker-type of Phillips curve to examine the price pass-through, as do De Gregorio, Landerretche, and Neilson and IMF. Prior to the Phillips curve estimation, following IMF, the authors also apply direct regression of lagged domestic and world prices on the current domestic price (that is, without output deviations). They then use the predicted values of domestic prices in their Phillips curve estimation in order to keep out the factors other than changes in international prices and lagged effects of domestic price development (e.g., labor movements, transportation costs, etc.).

The novelty of this chapter lies in its attempt to integrate the pass-through estimation of food and energy world prices to domestic prices with a macroeconometric model and AIDS model to see the impacts on household expenditure and industrial structure. The authors then use input-output tables to do a series of simulation to see how the Taiwan economy would respond if the world price shocks like those of the 1970s occurred in the 1990s and 2000s.

The authors find that the global food and energy price pass-through to Taiwan lies between those of advanced and emerging economies (compared to the IMF study results). Furthermore, they find that food-related CPI and energy-related CPI have quite similar impacts on the core CPI—the former follows the global trend while the latter is higher; the global price pass-throughs to export and import prices are higher for food than for energy; the pass-through to import price is higher than that to export price; and that pass-through to WPI is higher in food but lower in energy than that to CPI. Finally, the authors also find that price impact is highest in house-

1. This is not to say that VAR is useless. On the contrary, VAR and its variants have been proved useful in the previous studies to examine *direct* effect of global price change. Blanchard and Gali (2007) combine VAR and a New Keynesian dynamic stochastic general equilibrium (DSGE) to examine oil price pass-through to the United States and other industrial countries. De Gregorio, Landerretche, and Neilson (2007) use VAR to check the robustness of their results from the Phillips curve estimation. Shioji and Uchino (chapter 5, this volume) combine VAR and time-varying parameter VAR (TVP-VAR) to assess the oil price through to Japan. In fact, checking their result robustness with VAR might strengthen Kuo and Peng's chapter.

hold's entertainment-related expenditures, followed by food-related and energy-related expenditures; and as for the production side, the higher the technology level, the smaller the global commodity price impact on manufacturing industries as price fluctuates and passes through.

These results are interesting. However, the authors spend little time explaining each of them in an integrated perspective. They assert that these results are due to the fact that Taiwan's economic development is indeed between those of advanced and emerging economies; that energy-related industries in Taiwan are either monopolies or oligopolies; that food-related industries are more domestic-oriented; that price impacts on household expenditures are consistent with the nature of the commodities (i.e., subsidy in energy-related expenditure, diversity in food selection, and entertainment being luxurious and hence highly elastic); and that export structure is more concentrated in industrial goods. These explanations are scattered and too limited to give a clear picture to readers of what the Taiwan economy is and why the results make sense. For example, the authors might want to explain further what the nature of market structure has to do with the price through coefficients. Or why export being more concentrated in industrial goods makes pass-through to import price higher than that to export price.

Furthermore, the authors might want to have more discussion on the nature of the labor market in Taiwan. It is true that their two-stage estimation might have cleared the pass-through coefficients from this factor, but considering that the broad literature (e.g., De Gregorio, Landerretche, and Neilson 2007; Blanchard and Gali 2007) put emphasis on real wage rigidity as a factor that might dampen the price effect, it calls for an address in this chapter as well. This will also be useful to give a sense of the second-round effect of global price changes. It is helpful that the authors have explained that the labor market in Taiwan is "stable" and that the rigidity in the labor market is "not so serious." However, it would be more useful if the authors gave more evidence to support these explanations. For example, the authors might have a small table of unemployment rate series corresponding to their selected sample.

The chapter is also rather silent on the role of taxes, tariffs, and monetary policies—other factors that appear quite extensively in the related literature. Especially on the issue of monetary policy, it is important to address whether the low pass-through coefficient can to some extent be attributed to more favorable inflation environment due to monetary policy, so as to confirm or disconfirm previous studies (e.g., Bernanke, Gertler, and Watson 1997; Hooker 2002; Leduc and Sill 2004; De Gregorio, Landerretche, and Neilson 2007). It will be informative if the authors explain further why they think the monetary policy's influence on the price pass-through "has been restricted." It is also unclear why the authors think that the relocation of Taiwan's business to China has speeded up the structural transformation (and that such transformation is more important than inflation to Taiwan's economy).

De Gregorio, Landerretche, and Neilson 2007 modify their Phillips curve estimation by also measuring world oil prices in domestic currencies. That way, they are able to address the role of exchange rate pass-through; they find that almost half of the inflationary effect of the 1970s oil shocks was caused by oil-induced devaluations, not the mere increase in world oil prices. It would be useful if the authors followed this approach to see whether a specific case like that of Taiwan survives this generalization.[2]

Finally, the authors might want to elaborate more on why, as they find it, price pass-through impacts more on primary industries (e.g., agriculture) and secondary industries (e.g., mineral). On the other hand, among manufacturing industries, heavy industries are "only slightly damaged." This is rather strange for, as the authors acknowledge, their energy intensities might be the highest. The authors do assert that this is because the industry's heavy use of energy is efficient relative to other industries (despite the volume) and because almost all heavy industries focus on export-oriented goods whose price pass-through are low. It would be more helpful if the authors supplied some information about energy intensity in related industries as well as the share of exports in their products.

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2. The authors did use exchange rates in some of their estimations (e.g., those of export and import prices equations). However, it seems that these are not for addressing the role of exchange rate pass-through, at least in the way shown by De Gregorio, Landerretche, and Neilson (2007). In fact, it is not very clear in what currency denomination they input their world prices in the food-CPI and energy-CPI estimating equations.