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Modeling TPP: A response to Robert Z. Lawrence

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In a recent blog post Robert Z. Lawrence of the Peterson Institute compares our projections of TPP's economic effects with those by his colleagues Peter Petri and Michael Plummer. Since the two sets of projections point to opposite GDP and employment outcomes in the United States, understanding the differences between them is important. We are thankful to Lawrence for bringing up, perhaps unintentionally, a few frequent misconceptions.

Lawrence's comparison is organized around three questions he asks about each model: Is the model appropriate to explain trade policy? Does it sensibly depict TPP? Are the results credible? These are reasonable questions. Unfortunately, Lawrence's answers contain several incorrect statements about our model while turning a blind eye to the problematic aspects of his colleagues' work. If compare we must, we should be fair.

We offer different answers to Lawrence's three questions and suggest considering a fourth, critical one.

Is the Model Appropriate to Explore Trade Policy?

Lawrence's view is that the model used by his colleagues, the Global Trade Analysis Project or GTAP, has been explicitly designed to analyze the intricacies of trade policy while ours has not. We agree and we make it clear in our paper. However, we do not analyze TPP from the point of view of trade policy and we focus, instead, on its macroeconomic impact. Furthermore, conscious of this limitation of our model, we opted for not calculating our own trade projections and used, instead, Petri and Plummer's. Therefore, any factor considered by Lawrence's colleagues in calculating those figures, including the effects of tariffs and non-tariff barriers, is present in our analysis too. Where we depart from Petri and Plummer is in the way we calculate the implications of their trade projections on growth, employment and income distribution, under the conditions of freer trade and greater financial liberalization that the TPP promotes. Since Petri and Plummer assume that the economy operates constantly under full employment and fixed income distribution, we found their projections of employment, distribution and growth meaningless. Rather, we prefer to use the United Nations Global Policy model (or GPM) in which we do not make either of those assumptions.

The GPM also has another feature that we find particularly desirable in ten-year projections. It does not assume that a "Panglossian" natural force, perhaps an invisible hand operating over time, will drive the economy toward a virtuous state. In our reading of available data and literature, nothing justifies such assumption, let alone under freer trade and investment rules between unequal partners. Perhaps, the absence of such force is what makes Lawrence say that the GPM is a model for the short term. Given his claim that assuming full employment is appropriate in a ten-year horizon, he seems to believe in that

force. If one doesn't believe in it, much of the difference between short term and long-term macroeconomics disappears, the long term being a sequence of short-term outcomes.

As any policy proposal, TPP has multiple implications and no model can take them all into account. While Petri and Plummer's model contains a lot of details on trade effects, it is not appropriate as a tool to analyze TPP's macroeconomic implications. By assuming that all economies operate constantly under full employment and a fixed distribution of income, the model excludes by assumptions two of the major macroeconomic risks of trade liberalization. Contrary to Lawrence, we believe that these assumptions are not acceptable even in ten-year projections. Unemployment and inequality can increase for even longer periods.

Aside from any differences in purpose, Lawrence also suggests that our model is less transparent than the one used by his colleagues, a full-employment version of a Computable General Equilibrium model. However, Lawrence's statement that the GPM's equations are not publicly available is false: they are described in the background paper that he himself cites (Cripps and Izurieta, 2014). But there is more to the issue of transparency than equations. Curiously, Lawrence turns a blind eye to the fact that, in his colleagues' projections, GDP growth largely depends on FDI soaring to unprecedented levels while benefiting the economy in unprecedented ways. Rodrik, who prefers CGE models over the GPM, calls similar tactics "introduc[ing] growth effects through the back door". So much for transparency.

Does the Model Sensibly Depict TPP?

Answering this question requires repeating some of the points just made. It may be worth it.

We agree with Lawrence about the fact that Petri and Plummer go to great lengths to estimate the impact of tariffs and non-tariff barriers, while we don't. However, the question is: why should we? Again, our purpose is to analyze the macroeconomic impact of TPP and for that that we need a macroeconomic model, such as the GPM. Our approach is to accept Petri and Plummer's estimates of the impact that TPP will have on trade volumes and derive their implications for growth, employment and income distribution. Any trade effects of TPP, including the impact of barrier removal, is accounted for in those trade estimates and, therefore, considered in our analysis.

In light of past experiences of trade and financial liberalization, we have serious reservations about Petri and Plummer's optimistic projections of trade growth and unchanging trade balances. However, we accept them in order for our results to be more easily comparable with theirs. Obviously, different trade projections would lead us to different macroeconomic outcomes.

According to Lawrence, projecting the effects of TPP over a decade justifies assuming full employment. On this we completely disagree. As mentioned above, undesirable levels of unemployment can persist for a decade or longer, particularly when trade partners with different power, and workers and profit-earners are pressured to compete more. While in Petri and Plummer's analysis the economy adjusts to TPP based on full employment, we base our projections on a different mechanism. We believe that under stronger competition and financial liberalization TPP will increase pressure on firms in every participating country to cut labor costs. As a result, we believe that the share of total income accruing to labor will decrease, with far-reaching implications for aggregate demand, economic growth and employment. These implications are the focus of our analysis. Although stylized and estimated at a fairly aggregate level, we find such adjustment mechanism to be more reasonable than one based on assuming away unemployment and other major economic problems.

Are the Model's Results Credible?

While Lawrence's colleagues project a moderate increase in GDP (0.5 percent) for the United States, we project a moderate decrease of both GDP (-0.5 percent) and employment (0.03 percent of today's labor force). We have no pretense of accuracy but we point to a potential adverse effect that TPP might have on the US and on the global economy – initiating a race to the bottom in which countries compete against each other by cutting labor costs. According to our projections, such a race would slow down growth, undermine employment creation and drive up inequality. Indeed, one could argue that such a trend has already started.

Our projections also point to negative impacts on growth and employment in non-TPP countries. This is because we see those countries facing two options: they can join the race to the bottom and undergo a slow economic downturn or they can choose not to react. To keep our analysis as simple as possible, we assume the latter. Consequently, we project that non-TPP countries such as China and India will lose part of their shares of world markets to TPP countries, with negative impacts especially on export-related employment. Although we agree that these effects must be better analyzed, we find Lawrence's view that a full-employment model offers a better alternative perplexing.

Lawrence's three questions are important but assume that TPP is mostly relevant for its impact on world trade. In fact, to the average citizen as much as to the successors of President Harry Truman, whom Lawrence cites, the more important questions are whether TPP will contribute to national welfare and how any benefits will be distributed. In order to answer this question a variety of modeling approaches are possible but assuming full employment is not one of them.

The concerns about TPP's effects on welfare and its distribution lead us to a very important question we should ask about our models, missing in Lawrence's comparison. It is about the way in which models account for the effects that TPP has on global economic trends.

How Does the Model Account for the Effects that TPP Might Have on Industrial Relations, Finance, Policy Space and Other Institutional Features of the Global Economy?

In models such as Petri and Plummer's, international trade is seen as the result of perfect competition among equally strong countries, with exchange rates equilibrating trade balances; corporate profits representing the cost of capital supposedly corrected for risk; saved profits only fueling productive investment that creates jobs; workers' salaries increasing steadily reflecting productivity growth, thus keeping the labor share of total income constant (Petri and Plummer's assumption of fixed income distribution). In this vision, economic change is seen as never threatening employment since, given enough time, the economy is assumed to absorb the entire labor force. Furthermore, labor incomes are mostly seen as a cost, their significance of drivers of demand completely lost. Finally, in this model global financial flows are ignored.

These assumptions, strongly limit the analysis of TPP's effects on economic welfare and its distribution. For example, spending financed by asset appreciation (a typical manifestation of financial liberalization), or any changes in financial regulation are irrelevant in Petri and Plummer's model because global finance is absent from the picture. Yet, such changes may affect the way in which income is generated and distributed to profits and wages, as well as the way in which over indebtedness and financial vulnerabilities tend to affect spending and saving behavior of private and public sector institutions.

By contrast, the GPM attempts to take these factors into account, albeit in imperfect ways. For example, in the GPM the distribution of income is also a function of corporations' oligopolistic power while high savings in a context of weak demand can give way to financial investment rather than job creation. This affects not only the labor share, but also exchange rates, asset prices, debt accumulation and external vulnerability. Although the ways in which all these factors interact in the model could be improved, nonetheless the GPM reflects important stylized facts observed along the proliferation of trade and investment treaties that other models, such as Petri and Plummer's, do not.

Much remains to be done in order to improve our models' ability to sensibly project economic trends into the future. But assuming away real problems to preserve existing models is not going to serve anyone well.

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