Referee Report on the Discussion Paper 2012-9

"Wage Subsidies and International Trade: When Does Policy Coordination Pay?"
http://www.economics-ejournal.org/economics/discussionpapers/2012-9

The paper provides a positive and normative analysis of labor market policy in model with two large countries and imperfect goods and labor markets. Goods markets are imperfect as firms have market power (oligopoly) and labor markets are imperfect because trade unions force firms to pay wages above marginal costs. The labor market policy under consideration is a wage subsidy.

Interestingly, a part of the costs of the labor market policy in one country is paid by the other partner, which results in a prisoners' dilemma. The authors then analyze two different coordination policies. The first is "harmonization" of labor market policy, which results in the first best solution if countries are symmetric. When countries are asymmetric, the second coordination policy, which is jointly choosing labor market policies for both countries, is optimal from a world planner perspective.

Given that with asymmetries one country would gain more from "harmonization" at the expensive of the other, it is not clear how to design coordination of labor market policies. The authors argue that this fact may explain the empirical observation that labor market policies have not been harmonized yet within the European Union.

The structure of the paper is very clear, and most of the paper the analysis is presented in an elegant way. In the introduction, the authors motivate the exercise, briefly describe the theoretical setting, provide a discussion of the mechanisms at work, and relate their wok to the existing literature. The model is described in Section 2, followed by two sections that solve the production stage and the wage bargaining stage of the game. Section 5 shows how the labor market policy affects domestic and foreign welfare and derives the optimal policy for symmetric and asymmetric countries. It also discusses the "harmonization" scenario. Section 6 turns to the policy of two asymmetric countries optimal which are from a world planner's perspective. It also shows under which conditions one country would gain more from "harmonization". The final section concludes. The propositions are proved in an Appendix.

Below, I raise some major points which should be addressed in a revision of the paper.

1. In line with Saint-Paul (2000), the authors argue that labor market institutions "can usually be changed only gradually and without considerable delay". I like the way how labor market imperfections are modeled (unionized labor markets) and I am perfectly fine with assuming that government takes labor market imperfections as given. I am not convinced, however, that wage subsidies are empirically relevant than unemployment benefits. In footnote 11, the authors argue that "welfare in the model depends on the difference between subsidy level and unemployment benefit". Moreover, according to this footnote, the wage subsidy and the unemployment benefit address the same distortion. So, what is the advantage of introducing a new variable into the model, i.e., the wage subsidy (except for introducing a source of country asymmetries; see my point below)? In order to motivate their theoretical exercise, the authors should convince the reader that unemployment benefits are empirically less flexible than wage subsidies. Is this a well-documented stylized fact?

2. In the present paper, countries potentially differ in unemployment benefits. On the one hand, the authors read "the level of unemployment benefits as an expression of preferences

that change only slowly over time"; see their footnote 11. In footnote 12, on the other hand, they argue that "[c]ross-country differences in unemployment benefits are ... widespread". So, do preferences for unemployment benefits differ tremendously across countries? The authors could relate country asymmetries to more fundamental differences, namely differences in the degree of unionization of the labor market (which is then taken as exogenous) and then consider optimal unemployment benefits. A polar case of this scenario (one country completely unionized, the other country with a perfectly competitive labor market) is mentioned in footnote 12 as an interesting extension, but the case is not analyzed. At least, the authors should explain why they consider exogenous differences in unemployment benefits rather than differences in more fundamental institutional features.

3. In section 5.1, the authors describe the spill-overs of wage subsidies on the foreign country. Given these spill-overs, it is not clear to me how s *has disappeared from the optimal subsidy in equation (41). As far as I can see from equation (29) to (32), the derivatives required in the first-order condition presented in equation (40) include the consumption levels x, x*, y, and y*, which depend on s and s* according to equations (16) to (19) in combination with equations (25) and (26). I suspect that the authors display the closed-form solution of the optimal subsidy, where they have already substituted out s* by the corresponding first-order condition, but the authors should be explicit about this. Moreover, I would like to see a discussion of the best response functions.

4. The authors model the degree of product differentiation by the exogenous parameter e (between 0 and 1), with e=0 representing complete differentiation. In Proposition 1, the authors show that a foreign wage subsidy entails a positive effect on consumer surplus in Home for all e, but that a negative effect on profit and labor income in Home requires e>0. The degree of product differentiation also conditions the welfare differential between non-cooperation and cooperation (harmonization) in the case symmetric countries; see Proposition 2. Hence, product differentiation seems to be important. For the main result of the paper (harmonization of policies vs. optimal cooperation for asymmetric countries), however, the authors only consider the special case where product differentiation is completely shut off. While this procedure obviously simplifies the analysis, I would expect an interesting interaction between asymmetries in unemployment benefits and the degree of product differentiation which should be exploited. Otherwise, the authors should be very clear from the beginning that the “slow speed result” mentioned in the abstract is derived in the absence of strategic interaction between firms.

Moreover, I have some minor points

1. The readability of the paper could be improved by introducing a subscript to indicate Home and Foreign rather than an asterisk. This would allow for substantially reducing the number of equations displayed in the text without losing any information.

2. I find the headings of sections 3 to 5 confusing because both the number of the section and the number of the stage considered show up. They could be replaced by "Production stage", "Wage bargaining stage", and "Wage subsidy stage". Moreover, the very short sections 3 and 4 could be merged in order to sharpen the focus of the paper (sections 5 and 6 contain the main results).

3. The derivations provided in footnotes 16, 17, and 18 are very helpful, but should be relegated to the Appendix in order to increase the readability of the body of the paper.