

## General Comments of the Referee

We thank the referee for carefully reading our manuscript and for the positive overall evaluation. The referee notes that our main conclusion has important policy implications, that the paper is clearly written and well executed and that the paper deserves a wide readership both for its substantive results and its methodological approach.

Regarding Appendix F (which is the algebraic version of the model), I downloaded the pdf file from the journal's website and found Appendix F. So future readers should be able to see a formal depiction of the algebraic structure.

I answer the queries relating to the specific comments with the numbers provided by the referee:

1. There were multiple aspects to this point. One question was: **Why use Australian Productivity Commission (APC) data, when updated data for Kenya is available in the STRI indices of the World Bank?**

There are two reasons that the STRI data alone of the World Bank are insufficient for studies such as ours. First, and fundamentally, the World Bank STRI data do not produce ad valorem equivalents (AVEs). The STRIs are scored on an index from zero to one that are comparable only to other STRI indices. To use the STRIs for studies such as ours, it is necessary to convert the measures of restrictiveness in the STRI data into AVEs. The APC cross country regressions allow the conversion of the data on the regulatory framework into ad valorem equivalents. We were locked in to the APC approach since, to date, the APC studies are the only estimates of the ad valorem equivalents of the regulatory barriers. That is, the APC approach takes their STRI indices as one of the independent variables in a cross country regression where the price of the service is the dependent variable. To be consistent with the variable in the APC regressions, we had to score the STRI indices based on their methodology.

A second reason is that for studies focusing on specific countries, such as the present one on Kenya, the measurement of the services barriers is typically improved by supplemental information beyond the World Bank data. The World Bank survey instrument is typically completed by a single law firm for all eleven sectors. In the case of Kenya, I collaborated with the World Bank team developing the STRI dataset and we did in fact use the underlying survey instrument of the World Bank as one of our information sources. Our experience in conducting such assessments in seven countries is that interviews and in-country research typically result in modifications and improvements of the World Bank STRI assessment of the regulatory barriers. I also attended a conference in Nairobi on the services sectors in Kenya, where a set of papers on the services sectors were presented. The information in those papers and the discussions with the authors at the conference and later informed the scoring. The most important of these papers, and a few others that were available outside of the conference, are listed below. As requested by the referee, we will elaborate on these issues in the revision.

We would also like to clarify that we do NOT use APC data on the *regulatory barriers*. As discussed above, for information on the regulatory barriers, we start with the questionnaire of the World Bank, filled out by a law firm in Nairobi that we commissioned to do the work (and with whom we held face to face discussions following the completion of the questionnaire) and supplement that information in various ways. We then score our STRI indices according to the methodology (or matrices) of the APC, which as the referee indicates, includes measures of cross border trade and the temporary movement of natural persons.

Since we are primarily interested in a measure of investment barriers, **the referee raises the question about using APC methodology which contains questions on Modes 1 and 4 in the scoring the STRIs.** Regarding Mode 4, the APC questions are limited to those that pertain to issues relevant for multinational investment. Specifically, the Mode 4 questions relate to the movement of executives, senior managers and specialists. Regarding cross border restrictions, many of the sectors do not have any questions relating to cross border services. This includes air transportation, maritime transportation, fixed line and mobile telecommunications. In the cases of banking and insurance, there are questions on cross border services that constitute 20 percent of the weight of the STRI indices. We agree with the referee that it would be cleaner for our purposes if these questions were not part of the indices, but, in principle, those questions do not introduce a bias in the index, i.e., the index could be higher or lower as a result of those questions, and we (and the APC studies) only use the overall index score for the purpose of calculating the AVE. As the referee indicates, we believe this is the best that can be done. We will acknowledge in the revision that the AVE estimates, especially in banking and insurance, are subject to a considerable margin of error.

#### **Additional studies of the trade in services in Kenya used as a basis of scoring our STRIs:**

- Helu, Samuel (2007), "Maritime Services in Kenya," paper presented at the Trade in Services Workshop in Nairobi, Kenya, sponsored by the Ministry of Industry and Trade of Kenya and International Lawyers and Economists against Poverty, Nairobi, March 26, 27.
- Ikiara, Gerrishon K., Moses I. Muriira and Wilfred Nyangena (2000), "Kenya's Trade in Services: Should the Country Fully Liberalize," in *Services in the International Economy*, Robert Stern (ed.), Ann Arbor: University of Michigan Press.
- Kiptui, Moses (2007), "Financial Services in Kenya," paper presented at the Trade in Services Workshop in Nairobi, Kenya, sponsored by the Ministry of Industry and Trade of Kenya and International Lawyers and Economists against Poverty, Nairobi, March 26, 27.
- Matano, M. Ndaro and James Njeru (2007), "Communication Services in Kenya," paper presented at the Trade in Services Workshop in Nairobi, Kenya, sponsored by the Ministry of Industry and Trade of Kenya and International Lawyers and Economists against Poverty, Nairobi, March 26, 27.
- Ochieng, David (2007), "Transport Services in Kenya," paper presented at the Trade in Services Workshop in Nairobi, Kenya, sponsored by the Ministry of Industry and Trade of Kenya and International Lawyers and Economists against Poverty, Nairobi, March 26, 27.

Oresi, Samuel (2007), "Railway Services in Kenya," paper presented at the Trade in Services Workshop in Nairobi, Kenya, sponsored by the Ministry of Industry and Trade of Kenya and International Lawyers and Economists against Poverty, Nairobi, March 26, 27.

Telecommunications Management Group, Inc.(2007), "Trade in Information and Communication Services: Opportunities for East and Southern Africa," Chapter on Kenya, Draft report to the World Bank, January 31, pp.15-39.

**2. Is it possible to preferentially liberalize for foreign investors and exclude the preferences for third country investors? Please provide examples of the kinds of policies you are considering.**

Regarding some examples of restrictions we evaluate in the scoring of our STRIs, we have the following. There are local equity restrictions, cabotage or fifth freedom restrictions against foreigners in maritime or air transportation services. Local equity restrictions have been a major issue in telecoms in Kenya, and there are restrictions on the type of telephone and internet services that are permitted. There are licensing restrictions, for example, in professional services that are quite significant in Kenya, with discussions of liberalization with the East African Community and possibly wider. In banking there are restrictions on the rights of banks to sell insurance or facilitate security trading; restrictions on banking outlets; restrictions on the type of ownership structure and ease of licensing. In insurance, there is the question of the rights of insurance companies to participate in the reinsurance market and what insurance or banking services they can provide.

We believe most restrictions can be liberalized preferentially, in principle. The issue is do rules of origin in services make it more difficult to discriminate against excluded countries in services than in goods. We will elaborate on these issues in the revision. That is, if the preferential agreement grants equivalent rights to third country firms located in the partner region, the preferential arrangement becomes somewhat multilateral. The rules of origin would impact how multilateral the preferential liberalization becomes. What rules of origin apply in practice is an unsettled question both in the literature and in practice. Fink and Jansen (2009) note that typically FTAs require that enterprises eligible for the agreement's preference are incorporated under the laws of one of the partner countries. Further, to qualify for preferences, the enterprise must have "substantial business activities" within the region. This indicates that preferences do not extend to enterprises located in third countries if they are not incorporated with substantial business interests in the region. As an example of these principles, Fink and Molinuevo (2007) note that, in East Asia, non-parties can benefit from the preferences provided in the FTA, as long as they establish a juridical person in one of the FTA member countries and are commercially active in that country. But again, the preferences for non-parties are enterprise specific and do not extend to enterprises without a commercial preference with a substantial business interest.

Carsten Fink and Martin Molinuevo (2007), Liberalization of Trade in Services: East Asian Free Trade Agreements in Services, Roaring Tigers or Timid Pandas," The World Bank. Available at:

[http://siteresources.worldbank.org/INTEAPSUMEASPR/Resources/2576847-1163691185244/East\\_Asian\\_FTAs\\_in\\_Services.pdf](http://siteresources.worldbank.org/INTEAPSUMEASPR/Resources/2576847-1163691185244/East_Asian_FTAs_in_Services.pdf)

Carsten Fink and Marion Jansen (2009), “Services Provisions in Regional Trading Agreements: stumbling or building blocks for multilateral liberalization?” Paper presented at the WTO-CEPR conference. Available at:  
[https://www.wto.org/english/tratop\\_e/region\\_e/con\\_sep07\\_e/fink\\_jansen\\_e.pdf](https://www.wto.org/english/tratop_e/region_e/con_sep07_e/fink_jansen_e.pdf)

- 3. Where do the data on investment in services come from?** We agree with the referee that investment data is patchy and difficult to obtain. As a result, we had to generate the dataset on investment ourselves (the work was carried out by an excellent research assistant, Chris Worley). Details are provided in appendix B. Briefly, we start from the national data on the total amount of value added of each services sector from the data in the national accounts of Kenya. It is then important for the model to obtain the *shares* of each service sector that is captured by each of the four regions of our model. The regions are: (i) Kenya; (ii) the European Union; (iii) the union of the East African Customs Union and COMESA, which we call our Africa region; and (iv) the Rest of the World. The quality of the data varied by sector. In the cases of banking and insurance, we had private commercial databases available: Axco for insurance and Bankscope for banking. These databases provide a virtually full list of all companies in these fields operating in Kenya, with information about the companies that we use to estimate the share of the market captured by the firm. We then had to research company websites to determine the region of ownership. In telecommunications, the companies and the number of subscribers in of each are listed on the website of the Communication Commission of Kenya. In professional services, a separate study by Nora Dihel and Josaphat Kweka of the World Bank was used, where we used engineering services as a proxy. In railroad and pipeline transportation services, the papers for the transport sector cited above and various websites and articles were employed as cited in appendix B. We agree that the referee’s suggestion on using WITS tariff data is a good one and would have allowed a more precise calculation with respect to the tariff changes. But it would not impact the scenarios on preferential services liberalization that the referee has noted in the most important conclusion of the paper.
- 4. Please elaborate on the political economy of the rent capture versus rectangle of rent losses tradeoff.** We agree to discuss this further in the revision, that the gains are smaller in the rent capture case and there may be some underestimate of the gains in this case if rent capture leads to an increase in rent seeking in the future
- 5. Please expand the section that elaborates on how to maximize the gains from preferential agreements, when productivity issues are at stake.** A key result is that agreements with Southern countries should be combined with agreements with Northern partners or, still better, reforms should be multilateral. We will expand on this point in the revised version.
- 6. Please elaborate on the result that (geographically) non-discriminatory liberalization produces much larger gains.** We, of course, agree with this point and will elaborate on it in the revision.

7. **Please elaborate on the result liberalization of services policies that impact all services providers, both domestic and foreign, produces much larger gains.** We will elaborate on this and relate it to the earlier literature as requested.
8. **How informative is the Systematic Sensitivity Analysis (SSA) given that it is based on uniform distributions?** We agree that better informed priors for the systematic sensitivity analysis would be ideal. We are concerned that the qualitative results are robust, given the considerable uncertainty surrounding many parameters of the model. SSA simultaneously highlights the uncertainties of the analysis and shows the robustness of the qualitative results (as acknowledged by the referee in general comment #2). For a given range, the uniform distribution implies lower probabilities close to the mean and higher probabilities close to the bounds when compared with the normal distribution (which underlies the APC statistical work for the errors). Our design thus tends to overestimate the probability of extreme values and underestimate central values. By allocating more probability to values further from our central point estimates, we believe our design adds to the robustness of the qualitative results.
9. **Please either insert figures 1 and 2 into the text or add a paragraph on each page to explain them.** Since the referee assesses that the text adequately explains the figures, we will insert these figures in the text.