

Note to Reviewer

Our thanks go to the reviewer for the useful comments and suggestions that helped to improve the scientific quality of this paper. In order to allow the reviewer to follow up the corrections made, we give answers and explanations successively to the comments and suggestions of the reviewer.

MAJOR COMMENTS

1. I am concerned about the short time period of only one decade underlying the empirical analysis (2007-16). In comparison, Darvas et al. (2005) look at four decades and use decade-averages variables in their regressions. The authors justify the chosen starting year of 2007 with the effect respectively the structural break potentially caused by the Global Financial Crisis (GFC). However, if the authors really want to start after the GFC disruption they should start in 2008 or even in 2009, which would reduce the sample period even further. To avoid this problem, I suggest to choose a starting year as early as possible (driven by data availability) and also to extend the sample period up to 2018 (the 2017 data seems already been used in Figure 3). If sufficient data before the GFC is available, the authors might even split up the sample in before and after the GFC and test explicitly for the existence of the structural break they claim.

Reply: We have chosen first the period 2008-2018, because of data availability issues. Indeed, studies on developing countries and on fiscal data suffer from some problems. Data are not available and their quality remains poor. We obtained data from the IMF database on fiscal data (IMF, SSA Regional Economic Outlook). The data starts in 2004, but for all ECOWAS countries, the data is more complete from 2007. To take into account the reviewer's remarks, we have modified the period. The current analysis is carried out over the period 2008-2018. Unfortunately, we do not have enough data to carry out the analysis before and after the financial crisis of 2007.

2. Use of another filter (Baxter-King Band-Pass filter) for additional robustness. It is well known that the HP filter suffers from the problem of start and end point sensitivity. Therefore, the authors should extend the data sample (as proposed in the previous point) at least for the purpose business of cycle extraction in order to reduce the problem start and end point sensitivity.

Reply: We agree with the comment of the reviewer and we've taken the comment into account. We extracted the business cycle over a long period of time (1970-2018), and then we used according to our time period, the data for our analysis. We also used the Baster-King band-pass filter to extract the business cycle and for performing the robustness analysis. We explained it in the methodology section. We have done the estimations over the new time period, using the instrumental variable method using the double least squares estimator. The results are presented in Table 1.

3. The authors use the government fiscal balance relative to GDP for measuring fiscal divergence. They should additionally use the primary deficit (cyclically adjusted, if available) for robustness (as reasoned by Darvas et al. (2005)).

Reply: We agree with the reviewer. Originally, it was our idea to use several fiscal indicators (such as the primary deficit, the deficit including donations, the deficit excluding donations, the structural deficit) and several measures of business cycles; for performing a robustness analysis. Unfortunately, we faced the problem of availability of fiscal data. The fiscal data (different measures of fiscal position) that are available, and which can be used for performing a robustness analysis, covers seven (07) countries, out of a total of 15 countries in the region. For this reason, we have preferred to use the government fiscal balance (data available for all countries) to carry out the analysis.

4. The authors refer to “the theory of Darvas et al. (2005)” (see -among others- page 6/7). However, in their seminal paper Darvas et al. (2005) do not provide a “theory” on the link between fiscal divergence and business cycle synchronization. It is a pure empirical paper. In contrast, Darvas et al. even state that they do not want to provide an explicit theory because theoretically, the link between fiscal convergence and business cycle coherence is ambiguous. They provide causal arguments of why the relationship could be in two different directions and conclude (quote, p.4): “... From a theoretical viewpoint then, the matter is ambiguous. ... The question is thus ultimately empirical”. The authors should also frame their analysis like that.

Reply: We have taken your comment into account and we have corrected this error in the paper. We have based our analysis on the results obtained by Darvas et al (2007), Furceri (2009) and Lan and Sylvester (2017), which we find interesting, especially when looking at developing countries with balance-of-payment difficulties.

5. I recommend a modification of the title. It is quite uncommon to explicitly include a referenced paper in the title unless it is a direct comment or a discussion of the respective paper. Since the authors explicitly provide Darvas et al. (2005) as their main reference they should also carefully check and complete this reference. The number of the Darvas et al. (2005) NBER working paper is missing in the reference (it is no.11580), and it is not a technical paper as indicated by the authors. It also has been published in: NBER International Seminar on Macroeconomics (2007), edited by Frankel and Pissarides. This might be a better reference than the NBER working paper.

Reply: We have taken the reviewer's comment into account by changing the title of the paper. The new title of the paper is "Monetary Integration, Fiscal Divergence and Business Cycle Synchronization in West Africa". We have also added a section on a literature review.

MINOR COMMENTS

1. I recommend to avoid labelling the approach as “gravity model” because this might be misleading to the readers since one immediately thinks of bilateral trade flows being involved.

Reply: We agree with the reviewer. This can attract huge criticism. We've corrected that in this revised version of the paper.

2. Avoid the Arabic numerals in parenthesis when the numeral is already expressed in verbal terms (e.g. “... five (05) steps ...”)

Reply: Corrections made.

3. Page 1: “... dropping the steps of common market and economic union ...”: Will these steps really be completely dropped (i.e., the characteristics will not be realized explicitly by intention), or is it that a currency union (ECOWAS) is supposed to potentially lead to a common market and an economic union later on, so that the order of integration steps is changed?

Reply: ECOWAS countries had decided to go step by step and follow all the steps proposed by Balassa (1961). Thus, the introduction of a single currency would come to complete the already successful economic integration.

4. Although Darvas et al. (2005) is a very influential contribution, I would not consider it as a “famous paper” as done by the authors (see page 2). I rather suggest referring to it as the “seminal paper” instead.

Reply: We agree with the reviewer. We made the corrections.

5. Page 3: Please correct "...if this assumption is validated, the paper cans ...". Also write "hypothesis" instead of "assumption" (also change this on page 9 in the conclusions).

Reply: corrections made.

6. Figure 1 (right column): indicate that these figures are annual averages of the sample period 2007-16.

Reply: We've changed the graph. We have an updated graph from 2018, 2008-2018.

7. Figure 2: indicate that tax rates are expressed in percentage.

Reply: Figure 2 has been deleted from the revised version paper.

We hope that we have taken your suggestions into account and therefore have met all your expectations.

Respectfully