

Referee report on “Are Current Account Deficits Sustainable? New Evidence from Iran Using Bounds Test Approach to Level Relationship”

May 25, 2012

1 Content of the paper

The authors wish to analyze whether there exists a (long-run) equilibrium connection between Iranian imports and exports such that the current account balance would be “sustainable”. Their answer is yes, which apparently confirms an earlier finding in the literature.

2 General assessment

In principle, the issue of a sustainable current account is relevant; whether this holds for an isolated analysis of the Iranian case may be a different issue.

The paper contains significant mistakes and is incoherent. It appears that the co-authors have contributed different parts of the paper and may not understand the meanings of the respective other parts. Ultimately, the results do not allow to answer the research question that was asked.

3 More detailed comments

I find puzzling that no exchange rate appears in the theoretical framework, given that there is a foreign-borrowing term. Do the authors implicitly want to work under a fixed (and perpetually credible) exchange-rate regime assumption?

The current account balance in this paper is the trade balance plus the interest rate payments on foreign debt.

Quite crucial for the hypothesis are eq. (5) and the unnumbered one that precedes it. First we have $EX = \alpha + MM_t + \varepsilon_t$, where a t-index to EX seems to be missing.¹ I am not familiar with the mentioned Husted (1993) assumption, but it seems strange to have a possibly non-zero constant term α in the relationship – or does it serve to capture a potential non-sustainability? We do not know, since the authors do not explain it.

Next we have eq (5) where suddenly MM is replaced by (its component) IM, even though the constant term still retains the same symbol, as well as the error term, so something is not quite right here, either. Even though the second MM component $r_t B_{t-1}$ is missing in (5), the authors note that the coefficient in the import-export relationship “should be equal to one” (p.8).

But on p.4 the authors reported Arize’s (2002) results in a way (“positive coefficient”) that it actually seemed that they do not focus on a 1:1 relationship. The abstract and the conclusions also sounded like that, and they also interpret their test results on p.14 –which do not offer a coefficient estimate or restriction– accordingly. This is a major problem of the paper, because I agree that a 1:1 relationship is needed for a sustainability interpretation, and thus the mere existence of *any* long-run relation is not sufficient. The final levels relationship tests do not seem to be complemented by *estimation* results, and so we do not learn what the coefficient of the long-run relationship is. Also, the structural breaks that were found would need to be taken into account when analyzing whether the current account balance is sustainable. Also in that sense the results (or their interpretation) are misleading.

¹This is just one example that the paper is written in a sloppy way, I have to say.

Econometric problems In the end the authors find breaks with different dates in the series: 1979 for exports, and 1976 for imports. They do not seem to discuss what the implications of these differing break dates for the interpretation of their results are. Using the Perron (1990) test is not the correct procedure here, since it presupposes (as the authors mention) an exogenously known break date, whereas the authors have just *estimated* the date on the previous page. They actually take this into account by applying different tests, but therefore this test could just be omitted. Apart from the fact that the structural breaks that were found are still part of the data. Thus the ARDL equation (6) is mis-specified in this sense.

My reading of the results in table 5 (unit root test with endogenous breaks) is different from the authors': The test statistic for imports is significant at the 5% level, and thus both variables are actually tested as I(0) with breaks. No need for cointegration analysis!

In any case, the authors interpret the results such that imports would be I(1) and exports would be I(0). How those series could be related in the long run is beyond me – and having re-checked the bounds-testing theory for this report, it seems to me that the authors may suffer from a misunderstanding that unfortunately seems quite common in the applied literature: The Pesaran et al. (PSS, 2001) bounds testing approach to long-run relationships is often interpreted as “always” being applicable, no matter whether the involved series are I(0) or I(1). But I think that here the uncertainty of the unit-root test results (type I and II errors) are confused with the assumptions about the data-generating process. If we **knew** that one series is I(1) and the other is I(0), there could not be a long-run relationship. In contrast, if we do not know the true integration orders of the variables, the PSS approach has the advantage of still being valid. But that does not mean that the series can be “anything”. In PSS only the regressors can be anything –I(0) or I(1)– but for a meaningful long-run relation to exist, the dependent variable is automatically assumed to have the corresponding integration order (see for example p.294/295 of PSS).

A suggestion: To analyze the issue of whether imports and exports balance each other in the long run, the authors just should have taken the current account balance series as such and simply test that for a unit root and/or structural breaks. Everything else is a distraction.

4 Miscellanea

- p.9: “Deterministic trend dummies from this year were also added to the estimations in the present study.” It is unclear (at least at this point) but very important how the deterministic were specified, because they can easily invalidate the unit-root and cointegration tests. Also related on p.5: “Since the existence of structural breaks may cause the series to be integrated of different orders...” – this is wrong; perhaps the authors mean that the series could **appear** to be integrated of different orders, but in this paper they actually apply the relevant tests (in principle and some problems notwithstanding), and thus this is not really an adequate motivation for the bounds-testing approach.
- With respect to the Bai&Perron tests, if I remember correctly the series need to be stationary for this test (apart from the tested breaks, of course), but the authors appear to have applied them to the potentially integrated series. The authors do not mention which kind of breaks they are assuming, which is important, however: a mean shift for example can always come simply from a large innovation if the series has a unit root.
- (At least) the limit term in eq (2) is wrong (index i does not appear).
- The presentation in table 1 is unsatisfactory, as no hint is provided which statistics are significant. Is the reader supposed to know all the critical values of the different non-standard tests by heart?
- Finally, many readers really would like to see the data that are analyzed.