Referee Report on "Treatment Effect Identification without Parallel Paths"

This paper examines the effect of a EU-funded transfer policy in a region of Belgium – Hainaut. For this purpose, it uses a difference-in-differences identifcation methodology using Liege, rest of Wallonia and the rest of Belgium as control groups. The key contribution, the paper claims, is the way it handles the common-trend assumption. The finding is that the policy made a positive impact on the economy of Hainaut.

Figure 4 illustrates the failure of the common-trend assumption –except for Liege -- nicely. I also buy the findings of the paper. However, I find the paper out of ordinary in terms of its disccussion of the common-trend assumption and the way it handles it. The details are given below.

- The common trend assumption in DID studies and the problems due to its failure is well-known in the literature. The methodological point that the author makes, therefore, is not novel but well-known – albeit important. Hence, the author should focus on the findings of this study and not try to make this a methodological paper. In this sense, for instance, the abstract should focus on the findings of this study. How would the results be different with and without the common trends assumption?
- In the same sense, I also do not understand why the author discusses the common trend in the context of a relatively unknown working paper (Mora and Reggion, 2012). It is discussed in all econometrics textbooks and chapters on empirical methodology.
- The author develops some methods on pages 7 to 10, which I find difficult to follow. These do no make very much sense to me. It is clearly set in the literature how to handle the failure of the common trend assumption. One should allow the time trend of the control and treatment groups to be different. In other words, in the empirical specification in equation (7), one puts a D*t interaction – a linear time trend that is different for Hainaut. Actually, as far as I understand, DD[2] does this. But, this should be explained in the way that people use it in the literature – a time trend that is interacted with treatment.
- Another approach could be to find a good control group that satisfies the common trend assumption. One could use "synthetic control group" techniques.
- Actually, in this study, Liege seems to form a good control group, and the results with Liege as the control group shows positive effects of the program.
- Section 2 must substantiate why Liege is a good control group – by potentially showing some pretreatment characteristics and the common trend assumption in this section.
- What is a "income-level handicap"? I guess this is kind of direct translation of French to English. It doesn't make sense at first. "Income-level difference between Hainaut and other regions" would make more sense to most readers.
- There must be a section which explains the policy. How was the policy between 1994 and 1999 implmented? What were its tools? What about th ephasing out programme afterwards?

- In equation (7), it is not clear to me why the post-treatment period is after 2000. Obviously, the policy was in effect in the 1994-99 period. Are the data for 1994-99 dropped? This is not clear from the exposition.
- Footnotes should come after punctuation marks.
- There must be an error term in equations (1) and (7).