

Dissertation Review

This is a review for the PhD dissertation entitled Essays in Development Economics by Ella Sargsyan at CERGE. It is a very original dissertation with topics related to the effects of various economic shocks on health and gender preferences in developing countries. All three chapters have very original ideas and good execution. Unfortunately, all have some problems (some chapters less than other). Nevertheless, this is a great dissertation that meets the standards of the PhD thesis in economics, but I hope the author will address some comments before submitting the chapters as separate papers to the journals --- it would be a shame if these nice chapters are not published well.

The first one is studying the effects of growing potatoes in subsistence farming post-Soviet Russia on height of the children. Using interaction of whether household was growing potatoes from RLMS (Russian longitudinal survey data) and county-level potato suitability the authors show that adults born at the transition period that they define as 1992. This is a very good idea but there are few issues and I discuss below the most important ones:

Institutional context: In my personal experience, growing up in one of the most potatoes friendly regions of Russia, one harvest of potatoes from our patch of land was enough to survive through whole winter. It was a lot but not enough for whole year. However, the importance of those potatoes was tremendous in the late 1980s, early 1990s when there were absolutely no food in the groceries. By the 1994, when the authors start to measure potatoes growing --- the importance of subsistence farming decreased tremendously. This leads to three issues, first definition of the transition year at 1992 may be not very good because by that time food started to become available for people in groceries and markets. It is also not clear how nutritious potatoes is for kids of different age and whether mothers malnutrition during the pregnancy is also an important factor. All this make me think that there should be a serious discussion of how potatoes (that don't have any vitamins or fibers in them and are mostly fast carons) can affect height (I can understand child mortality due to mothers' malnutrition but not the effect on height). The results should be shown for different threshold years and for different types of exposure to malnutrition. My expectation and experiences make me think that cohorts born in 1988-1990 should be the shortest.

The second issue is that because by the 1994 food became more readily available, some household may already stopped growing potatoes and work --- as it is known that subsistence farming is the least productive type of economic activity. And growing potatoes take time (especially for urban people) and a lot of labor, including child labor. Hence there may be some selection into who was still doing potatoes farming post 1994 in RLMS. Authors talk on related topic in footnote 5 saying that ``on average, 2.8 cm shorter in the short run, which we attribute to a negative selection into growing potatoes by households who were most affected by the economic shock” --- this is partially true because before 1994 almost everyone grew potatoes and there would be no variation. But the statement is incorrect because these people may be more productive, and that’s why they continued farming and the shorter height may be explained by other factors, e.g., endogeneity issues of crop suitability.

Third, is about heterogeneity, from my memory rural population was benefiting much more from subsistence farming as they could grow food for sale or even grow chickens and pigs and sell them on the market. Rural population may also be more productive than urban in farming. Hence, showing some results by rural/urban status is essential.

Identification and empirical specification: Identification is based on the assumption that potatoes suitability is uncorrelated to other economic factors (such as population, industry composition, etc) that may positively affect nutrition. Currently the paper does not do enough to discuss identification, and looking at the map in Figure 1.3, I fear that potatoes suitability is very clustered in the European part of Russia and may be correlated to other economic factors.

I would like to see results without triple DD, e.g., show in Table 1.2 results for just grew potatoes or ET x grew potatoes. Some controls are also questionable, e.g., there is mother’s height but not father’s, controls are always included (even endogenous, such as number of family members and income), and linear trends (that are very dangerous) are always included. Also no specification with province fixed effects. Basically, the specification choice is very arbitrary and not addressing the identification concerns.

Interpretation of the results and external validity. Overall, I find results very small and economically insignificant --- 0.3 cm. In my opinion, conditional on fixing specification and identification issues, it is because the paper looks at effect on the wrong population cohort.

As for external validity, because subsistence farming is the least productive way of labor allocation and the developing economics literature is unanimous about

structural transformation benefits, I think the paper either needs to be very careful about its contribution to the literature.

It is also very important to discuss the mechanisms of the effect on heights in more details. It is not clear what is the age when nutrition matters and what kind of nutrition matters for kids to grow and be tall.

The second paper, studies the effect on conflict on son preferences in context of Nigeria during the Boko Haram insurgency. The paper uses DHS data (but does not use MICS data) and some UCDP data on conflicts (author does use more accepted ACLED but does not use global terrorist database (GTD)). Then she shows that areas that suffered from conflict start to have more son preference.

I think it is very important finding for the development economics, but the mechanisms behind this effect are mostly missing in this paper. That is especially important as the identification is not the cleanest here --- conflict is endogenous and Nigerian conflict is especially difficult to sell as exogenous. I had a paper on the effect of conflict on national identity in Nigeria and Mali and eventually had to drop all Nigeria results because it was impossible to argue any exogenous variation there.

I would suggest to discuss whether the effect is coming from the dowry/bride price costs re-evaluation, via having sons as future protection force, or due to some national/ethnic identity rise as a response to conflict. It is important to understand whether the effects is coming from rebellious or non-rebellious groups, or whether it is the same for ethnic groups with different cultural norms (matriarchal/patriarchal, polygamy/monogamy, pride price/dowry, etc. Current discussion of mechanisms is very poorly done and does not test any hypothesis in the context of the paper. Discussing of the postnatal outcomes is good but out of the context without a proper mechanism in mind.

The third chapter is also incredibly interesting and novel. The paper studies the effect of collective memory on the gender preferences in Armenia in context of the Armenian earthquake. The identification is very clear and standard, using the day of the interview overlapping the memorial day.

There is one concern with the identification here that can be addressed. The author should show geographic variation by wave time of the surveyed villages. If always the same location is interviewed on December 7, then one would compare that location A to all other locations and it would be about location difference rather than day. I understand that there are several waves but since there are wave fixed effects it can still be that they just interview only one (few) locations per day.

Main concern here is the mechanism --- it is not clear why the effect is happening and paper needs to pinpoint the mechanism. And finally, it is important to understand whether the effect is a short run effect or long run. If it is just that the respondents want more boys on December 7th and then forget about it the conclusion would be very different if they continue to have more boys. From figure 3.5. it seems that the effect only exists for December 7. Then if the effect only lasts for just one day --- what is the economic importance of these results?

Overall, I really liked all three chapters and I believe they can be great papers when properly polished. I believe that the thesis satisfies all content requirements for a PhD thesis in economics. For the format, I think, some tables are too large and their size needs to fit page properly. And I am happy to recommend the dissertation for the defense. My comments should be regarded as suggestions to improve when already submitting separate chapters to the journals. Congrats!

Michael Poyker
UT Austin and IZA
June 2024