

Report on the dissertation „Essays on Public Finance“ by Tomáš Lichard

Summary

The thesis deals with two relevant topics: the relationship between the shadow economy and tax policy, and the effect of financial transaction taxes on the functioning of financial markets. In particular, the thesis consists of four chapters. The first chapter presents an overview of recent estimators of the size of the shadow economy and illustrates the main weaknesses of the estimators based on microeconomic data. By applying the common methodological approach on data from four transition economies the author shows that the assumption that self-employed mainly evade while employees do not is unrealistic, especially in the selected countries. This chapter represents a starting point for research presented in the second chapter, where the authors (as the chapter was co-authored by Hanousek and Filer) develop their own estimator of the size of the shadow economy based on less strict assumptions about under-reporting of income by employees and self-employed. Using data from Czech and Slovak household budget surveys, the authors present robust results of the size of the shadow economy that are substantially larger than those estimated by other techniques, especially those based on microdata. This chapter represents a very valuable contribution to the current economic research on the topic, as the available data on informality are very limited and macroeconomic models suffer from many problematic assumptions. Also, it offers a novel application of methodology that has been employed in other research areas so far to the shadow economy. The third chapter analyses the effect of the flat tax reform introduced in several transition countries on tax evasion and shadow economy (co-authored by Filer, Hanousek and Torosyan). Utilising the estimator developed in the previous chapter and the difference-in-difference estimations, the authors conclude that there was no significant effect of the flat tax on tax evasion and the size of the shadow economy. The last chapter (co-authored by Lavička and Novotný) studies the relationship between financial transaction taxes and price jumps using an agent-based model of financial markets. The main results point to an intricate relationship, as the growth in the tax rate may increase the volatility measured by the standard deviation of prices and at the same time the measure of price jumps may go down.

Overall evaluation

This is an interesting thesis dealing with relevant topics and I have had a great pleasure of reading it. The thesis satisfies all formal and content requirements for a PhD thesis in economics. The motivation of each chapter is clearly stated, the topics are all highly relevant, research questions are well posed and the methodology to address them is adequate. The author has mastered the relevant literature on the topics of the essays. Effective use is made of the main findings in the literature in constructing the models used in the empirical work. References are up to date and selective to give emphasis to the better known or more important works.

I recommend dissertation for a defence after the author deals with my comments. I believe that Tomáš Lichard deserves a doctoral degree and I would like to congratulate him to a great work on the dissertation.

Comments

My crucial concerns are the following.

Chapter 2 (and partly also Chapter 3)

- I see the greatest weakness of the research in the data from Household Budget Survey (HBS). The study assumes tax evasion as the only source of underreported income while income collected in household surveys, generally, is underreported compared to company surveys, national accounts, or other sources. Respondents in household surveys typically underreport even their “official” income, intentionally or unintentionally, for various reasons (though depending on the survey design and income reference period, respondents might, e.g., forget about irregular bonuses, or try to conceal the true “official” income intentionally to protect their privacy). For whatever reasons, there is evidence that income in household surveys is underreported. For instance, in the Czech Republic, the average wage in the data from EU-SILC (Statistics on Income and Living Conditions) is much lower (about 90%) than the average wage obtained from the company survey ISPV (Informační systém o průměrném výdělku). Moreover, the higher the income, the larger underreporting (see Večerník and Mysíková, 2016. “Poverty in the Czech Republic: A Critical Look at EU Indicators.”, Table 1.1). This is connected with the fact that households of the Czech HBS are selected by purposive quota sampling where the quota frames (including income) were the results of the EU-SILC survey (while there is a random sampling in Slovak HBS). As a result, the income distribution in HBS is further biased as the upper deciles are not properly represented in the HBS in the Czech Republic. If households do underreport the official income (declared to tax authorities) in the household surveys, part of the shadow economy estimated by authors may be attributed to underreporting of official income in the survey and, therefore, the size of the shadow economy would be overestimated. The main issue is that the factors of underreporting official income and tax evasion might be substantially different.
- Restricting the dataset to households with working heads might bias the results as unemployed persons might evade, too. The particular setting of the unemployment benefit system might have an effect.
- P. 45 – gender effect on underreporting. The authors should be aware of the definition of the head of a household in the two analysed countries. While income is basically the decisive factor in Slovakia, a man is always a head of a household in a nuclear family or in a couple in the Czech HBS. Given the structure of the Czech HBS, the female dummy might in fact represent a dummy for a possibility of an incomplete family. I would be very cautious when interpreting the results on households headed by women in a gender perspective as more factors related to incompleteness of the family may have an effect in the Czech Republic. The similar results for each country are thus incomparable due to the different definition of the household head.

Chapter 3

- I have a problem with accepting the most important assumption of difference-in-difference estimation about the similarity of trends in the two countries being compared. I am not an expert on other countries, but I am quite familiar with Czech and Slovak environment and I would be very cautious in accepting that assumption here. The federate state split in 1993 while the authors study the effect of events that took place in 2004 and 2008 (the data cover period 2000-2010). In between, much has changed. One of the most important changes in my opinion is the Slovak accession to the euro zone which undoubtedly affected the macroeconomic environment and also economic development after the financial crisis. In such a setting, tax reform effect is hard to estimate in a natural experiment framework. (Other factors affecting the shadow economy might have different trends as well.)

- Moreover, controlling for the shift in attitudes of people by comparing the state of attitudes in 1999 and 2008 does not seem to me as having much explanatory power, particularly when the author deduces the effect of the shift in attitudes between 1999 and 2008 on tax reform that happened in 2004 or, even, 2008. The interval is too wide. Wouldn't be the World Bank Governance Indicator a better choice?

Partial comments or recommendations for future research:

- Missing number of page in citation of Hommes (2013) on p. 4 *Chapter 2*.
- It would be interesting to apply the same methodology to data on some Western European country as the two countries analysed are often considered to be specific in their character of informality. According to the European Commission, "envelope" wages, i.e. underreporting of wages by employees, are a much more frequent phenomenon here compared to the West.
- The assumption about unitary income elasticity of non-durables seems a bit unrealistic to me.
- The text often refers to wrong number of equations (probably typos).
- Table 2.3 vs. Table 2.4, estimates for consumption of food only, the last set of exclusion restrictions. How does the author explain that in the Czech Republic the estimates of the size of the shadow economy in this particular case are substantially higher when compared to other set of exclusion restrictions and specifications of consumption, while the contrary is true for Slovakia?
- Shifting some of the Figures into Appendix would make the text clearer.

If you have any questions please do not hesitate to contact me.

With kind regards,

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