OVERALL ASSESSMENT

Ondřej Broneč’s bachelor thesis represents an ambitious attempt to compare pension systems in 28 EU countries plus Norway. To achieve this, Ondřej shows some impressive quantitative skills, but he sometimes neglects to complement his impressive results and tables with clear intuition and more focused discussion of results. It is most striking in his gallant treatment of really striking results of simulations for several countries, including Poland. Here, where his results differ significantly from authoritative sources, he should be more comprehensive in his discussion.

The thesis is written in reasonable English, even though a native speaker revision would certainly benefit the language and the grammar. It is, however, always comprehensible and gives the reviewer confidence that it is the author’s own work. Overall, I recommend that the thesis is accepted for the final exam and I suggest grade B (“velmi dobře”).

The first part of the thesis deals with basics of pension systems and discusses their main taxonomy. The discussion is straightforward, but sometimes perhaps too simple. On page 6, Ondřej ignores that the FF interest rate may be endogenous and that even in a FF system, the government may construct transfers among participants. The “zero” and “fourth” pillars are only briefly mentioned (page 7).

Chapter 2 reviews the current landscape of pension systems in Europe. After a brief discussion of the demographic trends, Ondřej discusses recent reforms in the EU. The discussion is rather insufficient perfunctory, with no discussion of basic national pension reform or reforms in Poland and with no quantification of these reforms. A comparison of Aging Reports from 2010 and 2015 could have been very informative here.

The third section builds a model for long-term projections of pension expenditures in the EU28+Norway. The model itself is OK and Ondřej explains his thinking quite clearly. I appreciate his ingenious use of the effective market exit (page 19) as a proxy for the effective retirement age. At the same time, the model is exclusively based on demographic data and does not capture pension systems’ architecture, which may distort results, as we will see shortly. The data on aging and migration are taken from the Eurostat and presented clearly.

Table 3 (page 25) presents main simulation results. Simulations yields most dramatic results for Cyprus, Poland and Portugal where pension expenditures, according to Ondřej’s model, should increase by more than 12% of GDP. Discussion of these results on page 26 is too short to give a reasonable explanation – see also table 4 on page 27 where Ondřej discusses his results and results of similar simulations by Eurostat. In several cases, the gap is too big to be left without explanation. I understand that Ondřej did not have time or capacity to model specific reforms that are gradually implemented in 29 countries, but somewhat more granular approach to projections would be highly welcome.

While the third section was a bit letdown, the fourth saves the thesis. Here Ondřej presents careful sensitivity analysis that demonstrates his technical skills and his grasp of pension economics concepts. Models of different mortality or migration rates show how persistent aging problem is in Europe. Some results – for example Poland in Table 6 on page 34 –
would again require a more detailed discussion and intuition for rather high estimates. I liked
Ondřej’s attempt to model differences in “west” and “east” European sensitivities to external
shocks (Table 7 on page 35) but would prefer percent of GDP as a unit on chart 7 (page 36).

In section 5, Ondřej suggests some possible solutions to moderate impact of aging on
pension systems. The discussion is interesting, although some “solutions”, as higher taxation
are dealt with too quickly (page 38). Table 8, showing an increase in retirement age
stabilizing pension expenditure is very illustrative, even though numbers for Poland and
several other countries are implausibly high. On the other hand, cuts in pensions needed to
achieve the same (table 9) are discussed fairly.

As a conclusion, I would like to stress that my comments attempt to show how the thesis
could be improved, the existing paper satisfies conditions for a bachelor thesis and I
recommend grade B.

**SUMMARY OF POINTS AWARDED** (for details, see below):

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature</td>
<td>18</td>
</tr>
<tr>
<td>Methods</td>
<td>24</td>
</tr>
<tr>
<td>Contribution</td>
<td>23</td>
</tr>
<tr>
<td>Manuscript Form</td>
<td>15</td>
</tr>
<tr>
<td><strong>TOTAL POINTS</strong></td>
<td>80</td>
</tr>
</tbody>
</table>

**GRADE**

B

**NAME OF THE REFEREE:** Ondřej Schneider

**DATE OF EVALUATION:** August 28, 2018

Referee Signature