Reviewer's report
"Job placement agencies in an agent-based model of the local labor market with the long-term unemployed and on-the-job flows"
by Marcin Wozniak

This paper develops an agent-based search model of the labor market with heterogeneous agents, focusing on the role that active labor market programmes might have and on long-term unemployed workers' in their quest for a job.

The research question addressed and the simulation exercise run in this paper are interesting. However, the paper suffers a general lack of precision in linking to the related literature and in explaining the ratio behind the imposed relation between key variables.

In what follows I report, first, the major problems. Then I briefly list a set of minor points.

Major problems

1. *1st paragraph, page 1: "Although there has been a heated debate regarding unemployment and an active labor market policy, the LTU problem has been much less emphasized"*. I strongly disagree. The empirical labor economics literature has extensively studied for decades the issue of negative unemployment duration dependence. See, among many others, Machin and Manning (1999), Cockx and Dejemeppe (2005) and Kroft et al. (2013) and references within.

2. *2nd paragraph, page 1*. The author could do a better work in explaining why there could be negative duration dependence and in mentioning the many empirical studies that tried to explain it in terms of bad signaling, human capital depreciation, and financial constraints. With regards to the latter, financial constraints might play a big role in determining job search intensity and, thereby, the job finding rate: when financial constraints become binding, the unemployed could increase search effort. This issue is related to institutions and to the expiration of unemployment benefits. It is often found that at the expiration of the unemployment benefits, the unemployment exit rate shows a spike and that a reduction in the generosity and in the extension of unemployment benefits increases the job finding rate (see. e.g. van Ours and Vodopivec, 2006).

3. *2nd paragraph, page 2.* When introducing the issue of ALPMs and unemployment persistence, the author should include a couple of sentences on the main findings in the empirical literature, for instance by referring to Card et al. (2010) and Kluve (2010).

4. *2nd paragraph, page 2: "The paper presented here tries [...] was developed based on Agent-Based Modeling (ABM)."* The authors should do a better job in clarifying the contribution of his approach to the understanding of the effectiveness of ALPMs on job finding rates. He should briefly discuss what the advantages, and eventually disadvantages, are of this study compared to the existing literature. In particular, he should establish a comparison to the empirical program evaluation literature that so far has tried to identify the causal impact of different programmes on the performance in the labour market of the unemployed. Then, in Section 2, the author should discuss this issue more in detail, clarifying why and when an approach based on an ABM could be useful and more reliable than empirical evaluation studies.

5. *4th paragraph, page 3: "It is easy to notice [...] in the field of labor economics.* I cannot see it so easily. The author should explain in detail the advantages of an ABM evaluation of the policy over other methods. For instance, why your evaluation approach should provide advantages over reduced form estimates exploiting natural or quasi-natural experiments?

6. *2nd paragraph, page 5.* Author's job placement agencies seem share some features with those of temporary help agencies. As a matter of fact, the business of temporary help agencies consists in matching workers with vacancies and, in order to do it, they provide the unemployed with counselling and human capital, sometimes also general human capital by paying college tuition fees (Autor, 2001). A difference is that temporary help agencies are paid for their services partly by the worker and partly by the firm. I wonder to what extent this study and its findings can be also discussed in light of the role played by temporary help agencies.

7. *3rd paragraph, page 7.* I cannot understand the reason of imposing a sudden worsening of the job finding rate for workers who turn LTU. This is arbitrary and going to generate a sudden decrease in the job finding rate at 12 months of unemployment duration that might not exist in reality. Actually, in many countries at the end of the 12th month of unemployment, unemployment benefits expire, generating an increase in the job finding rate.

8. *Last paragraph of page 7.* Why is the number of randomly vacant jobs always strictly positive (1, 2, or 3) and never 0. In reality, firms could decide not to open any vacancy. Can your model be modified to incorporate also 0 vacancies?

9. *Middle of page 8: "I assume, conventionally, that the matching [...] degree 1."* If it is conventionally assumed, then supporting citations are needed here.

10. *Beginning of page 9, second item of the bullet point.* This is the main problem of mine with this paper. This paper is aimed at evaluating the effect of ALPMs on job finding rates. However, the author imposes that ALPMs are effective ("he or she receives a few extra search units"). Why should I expect a negative or null effect of ALPMs on outcome variables if the author imposes a positive effect. Moreover, in real life, it is not so obvious that all the ALMPs generate an increase in "search units".

11. *Equations (2) and (3).* The author is implicitly assuming that the agents do not discount the future. See Equation (2) in Rogerson, Shimer and Wright (2005) and the presence of the discount factor β. Why does the author impose this assumption that is never present in the job search and matching literature. Is it supported by empirical evidence?

12. The author should be much more careful in spelling correctly the authors of the cited references (e.g. it is Shimer and not Shimmer), in reporting all the references in alphabetical order, and in reporting **all** the cited references in the References section (many cited papers are not reported in the References section).

Minor points

13. *Last paragraph of page 5.* It is unclear how Zhang and Lie (2014) is related with this paper. Cannot this reference be removed without any loss? If not, the author should explain better the relation with this paper.

14. For the sake of readability, the author should rewrite $beta$ and $lambda$ as β and λ.

References

[1] Autor, D.H. (2002). Why do temporary help firm provide free general skills training. *Quarterly Journal of Economics* 116: 1409-1448.

[2] Card, D., J. Kluve and A. Weber (2010). Active labour market policy evaluations: A meta-analysis. *Economic Journal* 120: F452-F477.

[3] Cockx, B. and M. Dejemeppe (2005). Duration dependence in the exit rate out of unemployment in Belgium. Is it true or spurious? *Journal of Applied Econometrics* 20: 1-23.

[4] Kluve J. (2010). The effectiveness of European active labor market programs. *Labour Economics* 17: 904-918.

[5] Kroft, K., F. Lange and M.J. Notowidigdo (2013). Duration dependence and labor market conditions: Evidence from a field experiment. *Quarterly Journal of Economics* 128: 1123-1167.

[6] Machin, S. and A. Manning (1999). The causes and consequences of longterm unemployment in Europe. In *Handbook of Labor Economics* vol. 3C:, chpater 47: 3085-3139.

[7] van Ours J.C. and M. Vodopivec (2006).How shortening the potential duration of unemployment benefits affects the duration of unemployment: Evidence from a natural experiment. *Journal of Labor Economics* 24: 351-378.