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Comments on Edin, LaLonde and Åslund: Emigration of immigrants and measures of immigrant assimilation: evidence from Sweden

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1. Who stays and who leaves?

The key hypothesis in the paper is that emigration of immigrants is related to their earnings in the host country. This hypothesis is borrowed from the US studies. The idea is that the least successful (defined as low earnings) immigrants leave and the most successful (defined as high earnings) immigrants stay. This is not surprising for the US. Since the earnings in the upper part of the US earnings distribution is higher than in many other countries, high earnings immigrants in the US do not have economic incentives to leave the US. The earnings in the upper part of the earnings distribution in Sweden is not as high as, for example, in the US. This implies that in principle, high earnings immigrants in Sweden have economic incentives to leave, for example, to the US. On the other hand, a low skilled and low-earnings immigrant in Sweden has strong incentives to stay in Sweden due to a relatively high level of living standard in the lower tail of the earnings distribution as compared to many other countries. We would then expect that the low-skilled and low-earnings immigrants rather stay than leave, if re-emigration of immigrants in Sweden is mainly governed by their earnings in Sweden.

The paper tells us the contrary. The message in the paper is that movers from Sweden have systematically low or no earnings and this is taken as evidence that the least successful leave. This result is contrary to intuition and what we know about skill migration from Sweden. Emigrants from Sweden have high earnings and the native population is highly educated (Pedersen, 1996). The selection of emigrants from Sweden is in total contrast to that of immigrants and requires explanation. If economic variables are the main determinants of emigration from Sweden, why would the natives react differently to im-

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migrants with respect to these economic variables? The paper offers no discussion of this issue. Another issue is the inclusion of the non-OECD group in the analysis which I find very artificial knowing that only a very tiny fraction of these immigrants emigrate.[1] Any existing difference is driven by the high emigration rate of Nordic and other OECD immigrants. These are important issues, but in my comments I stick to the basic problems in the paper.

Dealing with the problem that measures of the degree of earnings assimilation of immigrants might be disturbed by the emigration of immigrants, the authors neglect other sources of biases sometimes much more important. These are: i) measurement error, ii) neglected heterogeneity and iii) endogeneity. These are discussed in Section 2. In Section 3, I present evidence that results are unstable and contradictory according to my sensitivity analysis based on the same data.[2]

2. Overestimated earnings gaps and underestimated rate of earnings-assimilation (EA)

Mobility across Nordic and OECD countries has been higher than mobility between non-OECD countries and Sweden. This means that Nordic and OECD immigrants might have moved into and out of Sweden several times. The date of immigration as the date of (last) entrance in the registers underestimates the time spent in Sweden, especially for immigrants from the Nordic and OECD countries. Underestimating the time in Sweden for these groups might overestimate the initial earnings and underestimate the rate of EA for these groups.

Immigrants from non-OECD countries, once registered in Sweden, might remain registered even though they live part of the year outside Sweden. These immigrants have incentives to remain registered since registered emigration might imply difficulties to re-immigrate to Sweden.

The immigrants from the Nordic and other OECD countries do not have these incentives. Moreover, the Nordic immigrants cannot formally be registered in two Nordic countries. These problems lead to an overestimation of the earnings gaps between groups and also disturbs estimates of the rate of EA when the data do not only in-

[1] The rate of emigration within 5 years is 5.9, 23 and 30 per cent for immigrants from non-OECD, OECD and Nordic countries according to the data.

[2] My comments are those presented at the conference. The sensitivity analysis is added after receiving the revised version of the paper.

clude full-year stayers but also *full-year registered part-year stayers* who are most likely young and have low earnings. The paper underlines that the advantage of the data is that it is longitudinal. However, the fact that individuals can be followed over time based on these registers does not mean that the linked information has high quality. My impression is that key variables in the data (immigration and emigration dates) are not high-quality information, particularly in relation to the earliest cohorts and individuals who have no or very low earnings. Possible sources of error in the data is an important issue which deserves more attention than is the case in the paper.

There are several reasons why the estimated gap between stayers and leavers might be upwardly biased due to unobserved heterogeneity and endogeneity of income. An example is planned temporary immigration. It is not unusual that immigrants stay in Sweden during part of the year for several years. These individuals have lower or no earnings in Sweden (do not work or work only a part of the year) and higher propensity to emigrate. Students with student allowances from their home country and/or part-time work to finance their studies are another low-earnings group who are young and thus have higher propensity to move. The students eligible for Swedish student allowances analysed in the paper constitute a part of this group. There are also groups within immigrants who have a higher propensity to stay and higher chances of high earnings. These are immigrants born outside Sweden with strong links to Sweden (married to a Swede, with one Swedish parent, grown up in Sweden and/or Swedish-speaking).

The fact that an individual is registered several years in a row does not imply a full-year stay in Sweden for all years between the first and the last year. Individuals might for example cut labour supply in Sweden prior to emigration, working part of the time in the destination country and a minor part of the time in Sweden. When they formally emigrate and leave the register, low registered earnings are observed. Low or no registered earnings is due to the decision to move and not as the paper claims a reflection of a lack of success of movers. This also causes problems for interpreting the EA rates based on the stayers sample. The earnings during the full registered year before the year of emigration is used in the calculations underlying the results reported in Table 9. The labour supply and thus earnings at time t-1 can be influenced by the anticipated emigration at time t. If an individual has decided to move and this influences labour supply prior to emigration, the difference at time t-2 and t-1 earnings does not say

much about EA. The growth of earnings might be influenced by the anticipated emigration. An analogous mechanism is discussed by Bartel and Borjas (1981) who report results for the US showing that the intention to separate from a job affects the rate of growth of earnings on the current job.

3. Emigration, age and earnings

Results reported in Table 5 in the paper are the basis for the statement that earnings in the first year after immigration and the probability of emigration are negatively correlated. A question surrounds first-year earnings. Moving to a new country means substantial fixed costs. What is the pattern for those who are registered in Sweden for 4 years and emigrate within five or six years? One could use the first two years' earnings and not only the first full-year earnings to study the selection of emigrants conditional on two full years' stay in Sweden.

A correlation between the measures of earnings and probability of moving seems to exist but the question is whether this simply reflects the pattern that the young have a higher propensity to move and also have no or low earnings. The age variable measures age at the immigration date. The results in column 1 and 2 regards emigration within 5 years and the age at emigration is close to the age at immigration.

Due to the correlation of age and earnings, the specification including both earnings and age is misleading unless an interaction variable is included. Convincing evidence that low-earnings individuals leave, is a stable, significant and negative estimate for earnings when age and age interacted with earnings is present in the specification. A specification investigating these question which I find natural to address, is not presented in the paper.

Based on the stylised fact that age and earnings are positively correlated, one would expect that introducing an interaction variable for age and earnings as well as an interaction term for zero earnings and age would lead to an insignificant estimate for earnings, opposed to what is claimed in the paper. Moreover, an important part of the analysis is to exclude individuals with yearly earnings below reasonable full year earnings to examine the relative importance of wages, labour supply and unemployment. It is also interesting to examine the relation of income and emigration separately for different immigrant group. If no or low earnings is correlated to emigration, it is essential

to know whether this holds for all groups or not. These questions led me to ask for the data underlying the results in Table 5 in the paper.[3]

The purpose of the estimations reported below is to check whether there are stable patterns linking income and emigration. The models are chosen to illustrate this point and nothing else, since as I discussed above, measurement problems, unobserved individual heterogeneity and endogeneity of income makes these estimations doubtful anyhow. My estimations regarding the above mentioned issues are presented in Table 5-A. I started by running a simple regression on the entire sample including only variables for age, gender and immigration year. Results in the first column imply that the young and the men have higher probability of emigration as expected – cf. column (1). Separate regressions by region indicate that this is driven by the Nordic immigrants.

Removing individuals younger than 26 (age limit taken from the paper) and introducing interaction terms between age and the earnings measures leads to tiny and insignificant estimates for both measures of earnings—cf. column (2). Removing individuals with earnings less than 36,000 SEK (earnings limit taken from the paper) as well yields a positive coefficient for log earnings—column (3). Running separate regressions for various regions—column (4), (5) and (6)—disclose that the probability of emigration of OECD immigrants within five years is positively correlated with earnings. For the Nordic and non-OECD immigrants, there are no significant effects at all. I experimented with many specifications but the results change with respect to a reduced number of observations at the lower tail of the age and earnings distribution. Full-year registered but part-year stayers are most likely among these observations. The same type of contradictory and unstable pattern is obtained when studying emigration within 10 years. The claim that unsuccessful immigrants leave relies on results from particular specifications and are so fragile that they do not survive standard sensitivity analysis as illustrated by the results in Table 5-A. The correlation between income and emigration is even reversed—positive and significant—for the case of OECD immigrants.

[3] Olof Åslund has been most helpful and replicated my estimations.

Table 5-A. Probability of emigrating within five years, linear probability model

	(1) All	(2) All	(3) All	(4) Nordic	(5) OECD 85	(6) Non-OECD
	All earn.	**Earn.>0**	**Annual earn. > 36.000 SEK**			
Log earn.	-	-	**.023****	**-.002**	**.093*****	**-.004**
		-	.009	.019	.022	.009
Age	-.007***	.010*	.003	-.012	.038*	.002
	.003	.006	.007	.013	.020	.007
Age^2*10^{-3}	.085***	-.136*	-.050	.119	-.518*	-.0159
	.038	.071	.093	.175	.267	.095
Male	.046***	.042***	.065***	.117***	.032	.034***
	.006	-.008	.011	.021	.034	.010
Earn.>0	-	**-.023**				
		.049				
Earn.	-	**-.000**				
		.000				
Age*earn.>0	-	-.003**				
		.001				
Age*earn.* 10^{-3}	-	.000**				
		.000				
Region	-	YES	YES			
Region* Imm. year dummies	-	YES	YES			
Adj.R^2	.01	.10	.08	.03	.03	.01
N	13838	7801	4732	1886	794	2052

Notes: *, ** and *** indicate significance levels 10, 5 and 1 per cent. Other variables included are immigration year dummies. All columns except column (1) refer to estimations on data for individuals not older than 25 at year of immigration. Age and earnings limits are borrowed from the paper (for age see footnote 2 and on earnings page 21). These estimations are presented only as sensitivity analysis of the results in Table 5 in Edin et al. (2000).

4. Final remarks

To sum up, the hypothesis that movers are not different from stayers with respect to earnings is not rejected due to the fact that there is no evidence for an age-independent and unambiguous relation between earnings and emigration. Results are selective and the interpretations are speculative based on the measures of earnings that are correlated with age. My estimations reported here indicate that movers from the OECD, countries including the Nordic countries, are younger and have lower earnings (or some times higher as for the OECD group). Given the poor and contradictory evidence for systematic earnings differences of leavers and stayers, it remains to justify why the rate of

EA should be adjusted for emigration in the way performed in the paper.

Estimated rates of EA are also contaminated by a number of problems leading to upward bias in the earnings gaps between groups and the underestimated rate of EA. I am afraid the authors have made too much effort to find similarities concerning the determinants of emigration of immigrants in the US and Sweden, rather than openly examining the actual data at hand and taking into account the differences between Sweden and the US.

References

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