Selective Migration, Wages, and Occupational Mobility in Nineteenth Century America.
Extended Abstract
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This paper analyzes the connection between occupational and geographic mobility in the United States between 1850 and 1880. During this period, internal migration was more common than it was at the turn of the 20th century (Rosenbloom and Sundstrom 2003). Between 20 and 25 percent of white native-born Americans were residing outside their state of birth (Hall and Ruggles 2004), a figure that masks considerable within-state migration. Internal migration in the nineteenth century was also fundamentally different from such migration in the United States today. In particular, many migrants moved from settled to unsettled parts of the county. For this reason, the opportunities available to them in their destinations would have looked different from those at home.

The concept of opportunity on the frontier has informed much of the work on internal migration during this period. Ferrie (1997) finds negative selection of frontier migrants between 1850 and 1870, providing some empirical support for the hypothesis that many migrants to the American West were unskilled laborers seeking to escape less attractive working conditions in the more urban East. An implication of this hypothesis is that migration was associated with career mobility. The iconic example is the urban wage worker who became a farmer; however, differences in the industrial composition of regions, or in the availability of skilled workers, may have affected opportunities in the non-agricultural sector as well. Kim (1998) shows that overall economic activity in the United States was more specialized by region in 1870 and 1880 than it was by the late 1980s, which implies that job prospects varied geographically. This idea adds a level of complexity to a simple migration model, which predicts a positive relationship between average wages and in-migration. Migrants may have maximized income in a way that we cannot observe through data on average wages if the possibility of upward occupational mobility factored into their decisions.

This invites three questions: what was the relationship between migration and occupational mobility during this period? How did opportunities for occupational upgrading affect the characteristics of migrants to and from different parts of the country? And how did geographic differences in average wages affect migrants’ decisions? At first

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1See for example Galenson and Pope (1991) and Ferrie (1997).
glance, a sample of individuals linked between consecutive census years shows no significant relationship between occupational and geographic mobility. However, this may mask systematic differences in the characteristics of migrants.

Modern work on migration predicts that skilled individuals should be selected out of places with low levels of wage dispersion into places with greater wage dispersion (See Borjas 1987; Borjas, Bronars and Treo 1992; and Grogger and Hanson 2008). In a modern context, “skill” is usually measured by income or some function of wages. But this kind of measure may have been less relevant in America during the period in question. The settlement of the United States may have called for a particular type of skill: the ability to evolve, to learn new trades and adapt them to new surroundings. We might expect people with such an ability to migrate to places that complement this type of skill.

I argue that, if there was selection and sorting of migrants on the basis of upgrading potential, there should be a systematic relationship between wage profiles in home and destination counties and migrants’ propensity for occupational mobility. Workers with a greater aptitude for occupational upgrading may have selected themselves out of counties with small skill premiums and into counties with large skill premiums. This may have happened for two reasons. First, the return to occupational upgrading was higher in counties with large skill premiums. Second, large skill premiums might indicate that opportunities for upgrading existed; a large skill premium may reflect a relative shortage of skilled workers. By and large, counties with large skill premiums tended to be less densely populated and less urban. Opportunities for upward occupational mobility may have been greater in such places, making these places attractive to the people most able to take advantage of them.

I analyze the relationship between migration, wages, and occupational mobility using data from three major sources: a sample of men linked between the 1870 and 1880 censuses from IPUMS; a sample of men linked between the 1850 and 1860 censuses from Ferrie (1996); and a sample of county-level wages from 1850, 1860, and 1870 from Margo (2000). The wage data come from the census of social statistics from these years, which includes information on wages to carpenters, common laborers, farm laborers, and domestics, as well as the cost of board. I define the county skill premium as the log ratio of the carpenter’s wage to the common laborer’s wage. When I look at these wage measures independently, I deflate by the cost of board to approximate real wages. I define occupational status using the 1900 occupational wage distribution, compiled by Preston and Haines (1991), with an imputed wage for farmers. My core sample is white males between the ages of 15 and 60 in the first year I observe them. I focus on people who start as unskilled blue collar workers, as these are the individuals for whom occupational mobility is likely to be the most important. I restrict the sample to men who report occupations and for whom I have wage data in both years.

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I estimate the following equation:

$$\Delta \log Y_{occ} = \beta_0 + \beta_1 MIG + \beta_2 \log W_{home} + \beta_3 MIG \times \log W_{home} + \beta_4 MIG \times \log W_{dest} + \gamma X + u$$

where $Y_{occ}$ is occupational income, $W$ is the county-level skill premium, and $X$ is a matrix of individual and county-level variables, including region fixed effects. If migrants from counties with low skill premiums to counties with high skill premiums were positively selected, in the sense of occupational upgrading, it should be that $\beta_2 > 0$, $\beta_3 < 0$, and $\beta_4 > 0$.

Restricting the sample to individuals with wage data in their homes and destinations biases the sample against inter-state migrants. To address this, I use a sample of migrants alone, and I only require that wage data be available in their destination counties. Grogger and Hanson (2008) argue that, among migrants, sorting should be independent of wage profiles at home. With this in mind, I estimate

$$\Delta \log Y_{occ} = \alpha_0 + \alpha_1 \log W_{dest} + \gamma X + u$$

Here, I expect to find $\alpha_1 > 0$.

I show that there was a significant return to migration, in the sense of occupational upgrading, for migrants who moved from counties with small skill premiums to counties with large skill premiums. However, there was no significant return to migration for migrants who moved between counties with large skill premiums. This suggests that migrants from counties with large skill premiums may have been more negatively selected in terms of upgrading potential than their counterparts from counties with small skill premiums. Conditioning on migrant status, I find that migrants who moved to places with large skill premiums were more likely to upgrade than migrants who moved to places with small skill premiums. Again, this suggests that migrants may have sorted themselves based on upgrading potential. This result is robust to altering the definition of skill premium and occupational status, and it is robust to excluding farmers. It is also much stronger for the 1870-80 sample alone.

A concern is that if we do not observe upgrading potential, we cannot be sure how much, if any, of the observed relationship is due to migrant selection and sorting and how much is caused by local differences in opportunity. Moreover, migrants who end up in counties with high skill premiums might be induced to exert effort towards upgrading, even if occupational mobility was not a part of their relocation decision. I use an older male relative’s occupation as a proxy for an individual’s expectation about the type of occupation he will have in the future to argue that there was some selection and sorting on these lines, and that reverse causality cannot account for my findings.

This selection and sorting of migrants might shed light on puzzles identified in previous work. Legergott (1964) finds a surprisingly weak relationship between population growth and average wages at the state level, arguing that migrants failed to take full advantage of potential wage gains. Others have found frontier migration puzzling because of the “Easterlin paradox” that Midwestern per capita incomes were lower than those in...
the Northeast\textsuperscript{3}, although this can be explained in part by regional price differences.\textsuperscript{4} In fact, these observations seem to mask a tendency for some workers to seek upward occupational mobility instead of higher average wages; workers who migrated from counties with low skill premiums to counties with high skill premiums tended also to end up in counties with lower real laborers’ wages. Conversely, those who opted for counties with lower skill premiums tended to end up in counties with higher real laborers’ wages.

References


\textsuperscript{3}Easterlin estimates that per capita incomes in the Midwest were roughly half what they were in the northeast in 1840 (Margo 1999 p. 130).

\textsuperscript{4}See Coelho and Shephard (1976); Margo (1999).


Olivetti, Claudia and Daniele Paserman (2011). In the Name of the Father: Marriage and Intergenerational Mobility in the United States, 1850-1930.” Boston University.

