

**To the New World and Back Again:
Return Migrants in the Age of Mass Migration***

Ran Abramitzky
Stanford and NBER

Leah Boustan
Princeton and NBER

Katherine Eriksson
UC-Davis and NBER

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Abstract: We compile large datasets from Norwegian and US historical censuses to study return migration during the Age of Mass Migration (1850-1913). Return migrants were negatively selected from the migrant pool, with Norwegian immigrants who returned to Norway holding lower-paid occupations than Norwegian immigrants who stayed in the US, both before and after migration. Upon returning to Norway, return migrants held higher-paid occupations than Norwegians who never moved, despite hailing from poorer backgrounds. These patterns suggest that despite being negatively selected, return migrants were able to accumulate savings and improve their economic circumstances once they returned home.

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Introduction

30 million migrants moved from Europe to the United States during the Age of Mass Migration (1850-1913). Yet one in three of these arrivals eventually returned to Europe, a rate of return migration that is even higher than today (Gould 1980; Bandiera, Rasul and Viarengo, 2013; Dustmann and Gorlach, 2016). In this paper, we ask: who chose to move back from the US to Europe, and how did these return migrants fare upon returning home? To the best of our knowledge, this paper provides the first analysis of individual data on return migrants to Europe in the late nineteenth and early twentieth century.

Our analysis is based on the case of Norway. We compile two large panel datasets of return migrants to Norway observed at three points in their migration process: before they moved to the US, observed as children or young adults in Norway; during their sojourn to the US; and after returning to Norway. For comparison, we also create a sample of more “permanent” Norwegian migrants to the US, and a sample of non-migrants who remained in Norway throughout the period.¹ We measure pre-migration characteristics by linking Norwegian-born men living either in Norway or in the US in 1910 to earlier Norwegian Censuses. For men living in Norway in 1910, we separate non-migrants from return migrants using a special supplement of the 1910 Norwegian Census that asked the full population if they had ever lived in the United States.

We find that migrants who eventually returned to Norway held lower-skilled occupations than Norwegian migrants who stayed in the US permanently. This occupational gap was present both while abroad and before moving to the US. That return migrants were negatively selected

¹ Some men that we classify here as permanent migrants may have eventually returned to the home country. We focus on men who had been in the US for at least five years to minimize this concern, given that more than half of temporary moves to the US lasted five years or less.

from the migrant pool even before moving to the US is contrary to the idea that return migration mostly resulted from bad shocks that prevented economic advancement in the destination.

Furthermore, the negative selection of return migrants is not consistent with a simple Roy model, given that the income distribution was more unequal in Norway than in the US in this period (Abramitzky, Boustan and Eriksson, 2012; Modalsli, 2017). When the home country is more unequal than the destination, the Roy model predicts that higher skilled immigrants would be more likely to engage in return migration (Borjas and Bratsberg, 1996; Dustman and Gorlach, 2016).² The pattern of negative selection is more consistent with the possibility that low-skilled men, some of whom faced borrowing constraints at home, used temporary migration as a means to accumulate savings in order to buy land or make other local investments at home.³ Indeed, we find that immigrants who hailed from rural areas in Norway were more likely to return, and that these return migrants often settled in their municipality of birth and worked as owner-occupier farmers.

After going back to Norway, return migrants held higher-paid occupations than non-immigrants, despite hailing from poorer backgrounds. Return migrants who stayed in the US for a short period (1-5 years) enjoyed the highest earnings premium in Norway. Historical evidence suggests that a three-year stay in the US was sufficiently long to accumulate enough savings to buy land in Norway. The fact that longer stays appear to be less valuable may be picking up the

² The Roy model predicts negative selection in the initial Norway-to-US migrant flow. Men who were just on the margin between staying in Norway and moving to the US should be most likely to return. These marginal immigrants would thus be positively selected from the immigrant pool, given that high-skilled men would have had the most to gain from moving back to Norway.

³ On the use of temporary migration to accumulate savings, see Mesnard (2004), Yang (2006) and Wyman (1993).

fact that the most successful migrants were able to accumulate savings and return home more quickly.⁴

Our paper contributes to a growing empirical literature exploring the economics of return migration. In the modern data, comparisons between return and permanent migrants are usually based on labor market outcomes in the destination country, with the act of return migration inferred indirectly from attrition from a panel sample (Aydemir and Robinson, 2008; Bijwaard, Schluter and Wahba, 2014).⁵ In earlier work, we used a similar approach to generate indirect evidence on the selection of return migrants in historical data (Abramitzky, Boustan and Eriksson, 2012, 2014).⁶ Using these methods, we found evidence of mild negative selection of return migrants to Europe.

Our new historical dataset offers three advancements relative to existing studies. First, our data contains a direct measure of return migration, which allows us to validate indirect evidence on the negative selection of return migrants to Europe. Second, the linked data allow us to observe pre-migration characteristics in the sending country. With information on pre-migration characteristics, we can separate explanations for negative selection into return migration based

⁴ Another interpretation, which seems less plausible, is that there were two different types of migrants: perhaps return migrants with short stints in the US were “target savers,” whereas those returning after longer stays were engaging in “unplanned” returns after bad shocks in the US.

⁵ Rooth and Saarela (2007) is one exception. Linked register data allow the authors to observe pre-migration characteristics of return migrants from Sweden to Finland.

⁶ Abramitzky, Boustan and Eriksson (2012, 2013) match Norwegian migrants living in the US in 1880 to either the US or Norwegian Census of 1900. Return migrants observed in Norway in 1900 were 3 percentage points more likely to have been in the lower quartile of the occupational distribution in the US in 1880. Abramitzky, Boustan and Eriksson (2014) creates a panel dataset of migrants from 16 sending countries in the 1900, 1910 and 1920 US Census; migrants in the US in the panel are known not to return to Europe during this period. We compare the panel data to a Census cross-section, which contains a weighted average of migrants who will eventually stay in the US and those that will return to Europe, and find indirect evidence that return migrants were mildly negatively selected from the migrant pool.

either on initial selection or on differential shocks in the destination country. Third, we estimate the economic return in the home country to having spent time abroad. Modern studies on the return to foreign experience rely on small surveys with retrospective migration histories (Wahba and Zenou, 2012; Reinhold and Thom, 2013); we instead take advantage of a set of Census questions asked of *all* residents of Norway in 1910.

Historical background

Many European migrants who moved to the United States in the early twentieth century eventually returned to their home country. The US government collected official statistics on both in- and out-migration from 1908 to 1923. In those years, the US received 10 million immigrant arrivals and lost 3.5 million emigrants, a return migration rate of 35 percent (Gould, 1980; Wyman, 1993 p. 10-12; Hatton and Williamson, 1998, p. 9). Return migration rates may have been even higher than the aggregate statistics suggest. Bandiera, Rasul and Viarengo (2013) find that, in order to reconcile micro data on migrant inflows to the stock of migrants remaining in the US in Census years, the return migration rate may have been as high as 70 percent.⁷

Return migration rates rose as the shift from sail to steamships reduced the cost of the transatlantic voyage in the 1850s and 1860s. Travel times from Europe to the US declined from one month in 1800 to eight days by 1870 (Hugill, 1993; Cohn, 2005). Shorter trips also lowered the mortality risk of the journey (Cohn, 1984). The price of passage fell to around \$25 in 1900, which was 6 percent of mean annual earnings in the US at the time (Wyman, 1993, p. 24; Lebergott, 1964, p. 523-24). Keeling (2010) estimates that, following this transportation

⁷ A portion of this discrepancy could be due to repeat or circular migration.

revolution, eastward journeys (from the US to Europe) rose from 18 percent of total transatlantic travel in the 1870s to 30 percent by the 1900s.

Compared to the 1920 migrant stock, return migrants were more likely to be male (80 percent versus 54 percent); less likely to be married (48 percent versus 61 percent); and more likely to come from a “new” sending country in Southern or Eastern Europe (81 percent versus 44 percent) (Ward, 2016). Return migration rates varied substantially across sending countries, with 10 to 25 percent of Northern and Western Europeans journeying home, compared to 40 to 60 percent of Southern and Eastern Europeans (Wyman, 1993, p. 11; Gould, 1980).⁸

The share of migrants who returned to their country of origin in the past was, if anything, higher than the rates of return migration today. Dustmann and Gortlach (2016) show that around 20 percent of migrants to the US return home in the current period. Sociologists emphasize the “transnational” experience of contemporary migrants who “maintain various kinds of ties to their homelands,” fueled by advances in communication and transportation technology (Levitt and Jaworsky, 2007, p. 129). Yet, as Foner (1997, p. 355) argues, this “transnationalism is not new,” having been a characteristic of the high rates of return and repeat migration in the early twentieth century as well.

Some return migration was planned, while other returns were unanticipated. Between 1917 and 1924, 15 percent of immigrants reported an intention to return home upon arrival in the US but 40 percent eventually did go home (Ward, 2016). In some cases, return migration was part of a deliberate strategy to move to the US temporarily, accumulate savings, and then return home to get married or purchase land. Alternatively, return migration could follow a spell of

⁸ Jewish migrants were an outlier, with return rates as low as 5 percent, although Jewish return migration was more common before the pogroms of 1903 and 1906 (Sarna, 1981).

unemployment, a spate of bad health, or another idiosyncratic personal event. As one contemporary observer noted, return migrants tended to fall into two very different groups: “those who go home because they have succeeded and those who go home because they have failed” (Steiner, 1906; quoted in Wyman, 1993, p. 75).⁹ A small number of migrants returned home to participate in national politics, particularly in the newly independent states that emerged out of World War I (Wyman, 1993, p. 113-118).¹⁰

A substantial body of qualitative evidence supports the idea of return migration as a means to accumulate savings. Case studies of Italians, Poles and other Central Europeans document savings of \$15 to \$25 a month in the US, or between \$500 and \$900 upon return (Wyman, 1993, p. 60, 130). Accumulating this sum would require a stay of three to five years in the US, which is consistent with one Ukrainian immigrant’s report that she planned to stay “just two or three years. Everybody had the same idea – make a little money and go back home” (cited in Wyman, 1993, p. 50).

Upon return, the most common investment was buying a farm, expanding an existing farm, or building a farm house. “He who crosses the ocean can buy a house” was a popular expression in Italy reflecting the value of temporary migration to the US (Cinel, 1982, p. 71). An immigration inspector in the US who interviewed repeat migrants from Italy confirmed this view, testifying that “two-thirds told me they had bought a little place in Italy, a little house and a plot of ground; that they had paid a certain sum; that there was a mortgage on it; that they were returning to this country for the purpose of making enough money to pay that mortgage off” (cited in Wyman, 1993

⁹ Consistent with this grouping, a questionnaire administered to return migrants to Finland found that 40 percent of return migrants reported having good results in the US, 19 percent reported suffering bad results, and the remainder fell somewhere in between (Wyman, 1993, p. 77).

¹⁰ Johan Nygaardsvold, who served as the prime minister of Norway from 1935-1945, is one such example, having migrated to Canada and the US from 1902-07.

p. 131). A survey of 23 migrants returning to one parish in Sweden found that 16 purchased some farmland with their savings (Wyman, 1993, p. 132).

Although many successful migrants returned home in order to buy land or make other investments, others left the US after facing a period of unemployment or a debilitating illness. Wyman (1993, p. 79) notes that return migration rates were higher in years of economic downturn following the Panics of 1893 and 1907. Moreover, a notable share of return migrants had fallen ill in the US. 10 percent of Finnish returnees were sick or injured, and nearly 1 percent of Italians returning from the US had tuberculosis, a disease that the Irish took to calling “the American sickness” (Wyman, 1993, p. 85).

At the turn of the twentieth century, temporary migrants became a target of popular animosity, which contributed to the sentiment in favor of closing the border. Migrants who planned to return to their home country were faulted for focusing only on short-term financial gain, rather than “making serious efforts to become citizens and real Americans” (Foner, 1997, p. 367; see also Shumsky, 1992). The Dillingham Commission, which was convened by Congress in 1907 to study the effect of immigration on the US economy, adopted this view, complaining that, for temporary migrants, “acquisition of the English language will be of little consequence... The chief aim of a person with this intention is to put money in his purse” (Jenks and Lauck, 1911). In 1896, Rep. John Corliss (R-MI) proposed an amendment that “no one be admitted to the United States who still maintained a home in a foreign country” (Wyman, 1993, p. 104). Ultimately, the bill was defeated.¹¹

¹¹ Goldin (1994) provides a detailed discussion of the politics of immigration restriction in the early twentieth century, and Abramitzky and Boustan (2016) review the economics of immigration during this period more broadly.

Data

We develop a series of new data sets to compare Norwegian-born men who spent some time in the US (“return migrants”) to Norwegian migrants still living in the US in 1910 (“permanent migrants”) and to Norwegians who stayed in Norway throughout this period (“non-movers”). When possible, we link men to earlier Norwegian Censuses taken in 1865 or 1900 to generate observations on pre-migration characteristics.¹²

To compare return migrants with non-movers, we start with men between the ages of 28 and 60 in the 1910 Norwegian Census; this age range allows men some time to have moved to the US temporarily and returned. The 1910 Census asked all respondents whether they had spent some time in the US and, if so, what was their date of arrival and departure, last state of residence and last occupation held. This cross section, which contains nearly 300,000 men, allows us to compare return migrants who had spent some time in the US with non-movers.

To compare return migrants with permanent migrants, we combine information on return migrants from the 1910 Norwegian Census with observations on Norwegian-born men still living in the US in 1910 from the 1% US Census sample (Ruggles, et al., 2015). Some men coded here as permanent migrants may have subsequently returned to Norway after 1910, which we are unable to observe using the available historical data.¹³ The majority of temporary spells in the US are quite short, with more than half of return migrants spending five or fewer years in the US.¹⁴ Thus,

¹² We are unable to link women across Censuses because women often change their last name at marriage.

¹³ The completed Norwegian Census is only released 100 years after the Census was taken, so the 1910 Census is the latest available to us.

¹⁴ 13 percent of men who moved to the US in 1908 or 1909 had returned to Norway by 1910. The return migration rate jumps up to 23 percent for men who moved in 1907 and remains at this level for the ten prior arrival years. Men who moved to the US before 1898 have a slightly lower return rate (around 18 percent) reflecting differences in the composition of early and late migrants.

to improve the accuracy of our division between permanent and return migrants, we focus on men observed in 1910 who arrived in the US before 1905, a sample of around 17,000 men.

To gather information on pre-migration characteristics, we link Norwegian-born men observed in 1910 to two earlier Norwegian Censuses (1865 and 1900). In particular, we link men between the ages of 28 and 45 in 1910 to the 1900 Norwegian Census (when they are between the ages of 18 and 35), creating an “early adulthood sample.” We instead link men between the ages of 45 and 60 in 1910 to the 1865 Norwegian Census (when they are between the ages of 0 and 15), creating a “childhood sample.” These linked samples differ in two important ways. First, our early adulthood samples allow us to measure a migrant’s own economic outcomes before migration, while our childhood samples capture the characteristics of the household head (usually, father). Second, men in the 1900-10 linked samples moved to the US, on average, in 1903, whereas men in the 1865-1910 linked samples moved to the US on average in 1888. Links are conducted by first name, last name, age and country of birth (Norway).¹⁵ Our match rates are relatively low (10.7 percent for the 1865 to 1910 match and 23.4 percent for the 1900 to 1910 match), which is standard for this literature (Abramitzky, Boustan and Eriksson, 2012, 2014, 2016; Ferrie and Long, 2007, 2013). We consider the robustness of results that depend on linked samples in an appendix table, which we discuss below.

Appendix Tables 1 and 2 compare men in the linked samples to the full population. As is common in historical linked datasets, men with higher socio-economic status – measured here as living in an urban area, having a father who owns land (1865) or having higher occupation-based

¹⁵ In our main linked samples, we adjust names for potential differences in spelling using the NYSIIS algorithm before we establish matches. We follow the linking algorithm described in Abramitzky, Boustan and Eriksson (2010), which first establishes exact matches by first name, last name and age and, for unmatched cases, then allows for matches that are off by one and then two years in age.

income (1900) – are more likely to be successfully linked across Census waves. These somewhat higher match rates for men with better occupational status may be due to the fact that, in an era without birth certificates, men with some basic education were more likely to remember their age and report their name with consistent spelling. We are unfortunately unable to separately observe selection into the linked sample by migration status.¹⁶ It is encouraging that results do not change when we re-weight the sample to match the socio-economic status of the population on observed characteristics, but we cannot rule out the possibility that the conclusions are specific to our linked subset of the population.

The main economic outcome available in our historical sources is occupation. Neither the US nor the Norwegian census contains individual information on wages or income in 1910. To calculate an occupation-based earnings measure, we assign the mean (PPP-adjusted) income earned by members of their occupation based either on the US 1901 Cost of Living survey or on tabulations published by Statistics Norway for 1900 (Preston and Haines 1991; Statistik Centralbureau 1905). The online appendices for Abramitzky, Boustan and Eriksson (2012) describe these sources in more detail and explain how we calculate earnings estimates for farmers and fishermen, two occupations that are not included in the primary sources. In our analysis of economic outcomes in the US, we supplement our standard earning measure with information on the earnings of farmers and farm laborers by state from the US Census of Agriculture. Marital status and geographic location are additional outcomes of interest.

¹⁶ We measure selection into the sample using initial characteristics (either in 1865 or 1900), when the full universe of possible matches can be observed. However, migration status is only revealed by observing residential location in 1910, thus making it impossible for us to separate the sample by migration status in earlier years.

Our pre-migration characteristics are also based on occupation, either an individual’s own pre-migration occupation or that of his household head (likely his father). We divide own occupation observed in 1900 into deciles of occupation-based earnings. For household heads, we create six categories given the highly-concentrated occupational distribution: the first category contains all urban residents and the remaining categories subdivide rural residents into farmers with land, cottars with land (tenant farmers), farm laborers, fisherman, and an “other” category that includes white collar and skilled blue collar workers. We acknowledge that these occupation-based characteristics are coarser than one might expect from the modern data. For example, Moraga (2011) uses Mexico’s Quarterly National Labor Survey, a short panel, to observe the actual market wages of migrants and non-migrants before any moves to the US, a level of detail that we cannot achieve with the historical data.

Estimating equations

We begin our analysis by assessing the selection of return migrants from the migrant pool. Our first outcome of interest is occupation-based earnings in the US. In the cross-section, we estimate:

$$\ln(\text{OccEarnUS})_i^t = \alpha + \beta \cdot D_{\text{return}} + \gamma_1 \cdot \text{age}_i^{1910} + \gamma_2 \cdot (\text{age}_i^{1910})^2 + \epsilon_i \quad (1)$$

where OccEarnUS_i^t measures occupation-based earnings based on the last job held in the US for person i observed in year t . For permanent migrants, occupation is measured in the 1910 US Census. For return migrants, occupation is reported in a retrospective question in the 1910 Norwegian Census about last occupation held in the US in the year before return (year = t). age_i^{1910} controls for trends in occupational attainment by birth cohort. The indicator D_{return} is equal to one

for migrants who returned to Norway by 1910. The coefficient of interest, β , indicates whether return migrants held lower or higher paid occupations in the US, relative to migrants who stayed in the US long term.

A major concern in interpreting β is that occupation is observed in different calendar years t for permanent and return migrants. All permanent migrants are observed in the 1910 US Census, while return migrants report their occupation in the year of their return to Norway (mean year = 1902). As a result, we observe the occupations of return migrants in an earlier calendar year when the economy was less developed *and*, on average, earlier in the migrants' own career, both of which would tend to bias β downward. We address this measurement issue by adding a progressive set of controls to equation 1, including: (1) age at which occupation is measured; (2) year of arrival in the US (before 1890, 1891-1900, 1901-05); (3) year in which occupation is measured (before/after 1900); and (4) age at arrival in the US.¹⁷ Controlling for the age at which occupation is measured allows us to compare men at the same career stage with the same likely years of experience. The year of arrival indicators address the fact that, in a single cross section, men observed at younger ages are also more likely to have been recent migrants to the US, and controls for the well-known decline in skill level across arrival cohorts. The year in which occupation is measured controls for structural changes in the economy over time, and age at arrival allows men who migrated during childhood to have a different occupational trajectory.

Return migrants may have had lower occupation-based earnings in the US because they arrived with less valuable skills or because they faced poor conditions in the US that prevented their ascension up the occupational ladder. To distinguish between these possibilities, we turn to

¹⁷ Age at arrival is collinear with year of arrival and age/year in which occupation is measured. We address this multicollinearity by including two of these variables as intervals rather than exact years.

measures of pre-migration occupation (or, alternatively, fathers' characteristics) in our linked samples. For example, in our early adulthood sample, which is linked between 1900 and 1910, we estimate:

$$\ln(\text{OccEarnNorway})_i^{1900} = \alpha + \beta' \cdot D_{\text{return}} + \gamma_1 \cdot \text{age}_i + \gamma_2 \cdot (\text{age}_i)^2 + \epsilon_i \quad (2)$$

where $\text{OccEarnNorway}_i^{1900}$ measures occupation-based earnings in Norway in 1900, before any move to the US takes place. β' indicates whether return migrants had higher or lower occupation-based earnings in Norway, before moving to the US. Comparing β to β' reveals the extent to which any disadvantage faced by return migrants was present before moving to the US.

The second part of our analysis assess the labor market value of having spent some time in the US after return to Norway. We estimate the following equation for men living in Norway in 1910:

$$\ln(\text{OccEarnNorway})_i^{1910} = \alpha + \delta \cdot D_{\text{return}} + \gamma_1 \cdot \text{age}_i + \gamma_2 \cdot (\text{age}_i)^2 + \epsilon_i \quad (3)$$

The coefficient of interest, δ , estimates the earnings gap between return migrants who spent some time in the US and non-movers. In some versions of equation 3, we estimate separate earnings premia (δ_1 , δ_2 and δ_3) for return migrants according to time spent in the US (6-10 years, 11-20 years, and 21+ years, with 0-5 years as the omitted category).

Time spent in the US may be valuable if migrants were able to accumulate savings to make productive investments back home or if they acquired skills at a more rapid pace than their counterparts who remained in Norway. Because migrants were negatively selected from the population, and return migrants especially so, we would expect δ to be negative due to initial selection. Finding a coefficient $\delta > 0$ is thus suggestive that spending time in the US conferred

some positive return back in the home country. Within the set of return migrants, selection on length of stay may be negative, with the most successful migrants able to accumulate savings more quickly than their less successful counterparts. We thus caution that estimates on the return to years spent in the US could be influenced by this form of selection, with the coefficients δ_2 and δ_3 then being smaller than δ_1 .

Results

The selection of return migrants from the migrant pool

Return migrants held lower skilled occupations than permanent migrants both before and after moving to the US. Table 1 compares the earnings of return migrants and permanent migrants in the US. The first column shows that, in the raw data, return migrants earned 20 percent less than permanent migrants by our occupation-based earnings measure. However, as mentioned, all permanent migrants were observed in 1910, while the occupation of return migrants was measured in an earlier calendar year and at younger ages. Columns 2-5 progressively control for the age and year in which an individual's occupation is measured, as well as an individual's arrival year and age at arrival in the US. After controlling for these mechanical differences between permanent and return migrants, our estimate suggests that return migrants earned 10 percent less than permanent migrants while in the US. Results are unchanged when we control for state of residence fixed effects, suggesting that permanent and return migrants settled in states with similar economic opportunities. In the last column, we replace our national income estimates for farmers and farm laborers with state-specific estimates while maintaining all other controls. Accounting for differential geography increases the occupation-based earnings gap between return migrants and

permanent migrants slightly to 13 percent. Permanent migrants appear more likely to have settled in states with lucrative agriculture.

The lower occupation-based earnings of return migrants in the US labor market is consistent with negative selection into return migration. But, alternatively, migrants who eventually decided to return to Norway may have started out in a similar position to migrants who stayed in the US, but then faced a bad shock in the US, such as illness or unemployment, that encouraged them to return home. In this case, we would not expect to find differences in the *pre-migration* characteristics of permanent and return migrants. Table 2 examines a series of pre-migration characteristics of men in the 1900-10 linked sample; men in this sample were observed in early adulthood in Norway in 1900. Migrants who would eventually return to Norway were 25 percentage points more likely to live in a rural area before migration. Overall, return migrants earned 9 percent less than permanent migrants even before moving to the US. The earnings disadvantage for return migrants was driven by their rural location; return migrants did not earn significantly less than permanent migrants within rural or urban areas (rows 3 and 4).

A similar pattern emerges in Table 3, which compares the characteristics of fathers whose sons in the linked childhood sample would stay in Norway, move to the US permanently or move to the US on a temporary basis. Again, the fathers of return migrants were 17 percentage points more likely to live in a rural area. Within rural areas, the fathers of return migrants were more likely to be owner-occupier farmers, a relatively highly paid profession (11 percentage points). Yet this gap was partially offset by a lower probability of being in the “other” category as a white collar or blue collar worker (6 percentage points). Note also that, within this broad “other” category, the fathers of return migrants earned 15 percent less than the fathers of permanent migrants.

We then assess the extent to which these pre-migration differences can account for the earnings gap between return and permanent migrants in the US. If an earnings gap remains even after controlling for pre-migration differences, this residual may point to a role of negative shocks as an impetus for return migration. Table 4 starts by re-estimating the earnings gap between return and permanent migrants in our linked samples, first as a raw difference (column 1) and then adding the full set of year and age controls (column 2). After controlling for mechanical differences in column 2, the earnings gap between permanent and return migrants ranges from 8 to 14 percent in the adult and childhood samples, respectively. Column 3 then adds pre-migration characteristics, including a dummy for living in a rural area, and indicators for decile in the occupation-based earnings distribution (in 1900 for the adult sample) or indicators for fathers' status (in 1865 for the childhood sample). Controlling for own occupation in 1900 eliminates around 25 percent of the earnings gap between return and permanent migrants. However, despite the differences in fathers' background by migration status, controlling for fathers' occupation does not change the estimated earnings gap.¹⁸ In this era of rural-to-urban transition within Norway, fathers' background does not appear to be a good predictor of sons' potential occupation. In this context, own occupation offers a better measure of initial selection.

Controlling for pre-migration occupation reveals that some differences by migration status were apparent even before moving to the US, and thus are not entirely due to barriers or shocks faced in the US. Rather, men with lower skills seem to have had the strongest economic incentive to return to Norway. At the time, Norway was more unequal than the US and so a Roy model

¹⁸ One difference between the own occupation and father controls is the degree of available detail. We tried coarsening the own occupation controls, using the same set of categories available for fathers' background; yet, these coarse controls still reduce the earnings gap in the 1900-10 matched sample.

would predict that the migrant just on the margin between staying the US and returning to Norway would be relatively high skilled. Return migration of the low skilled is instead more consistent with the idea of temporary migration to alleviate borrowing constraints at home. Norway was not very financially developed at the beginning of the mass migration; in this setting, the lower skilled were likely to face borrowing constraints.¹⁹ By moving to the US, migrants could expect a 70 percent increase in earnings, or an additional \$120 a year relative to the annual pay of \$175 for a farm laborer in Norway in 1900 dollars (Abramitzky, Boustan and Eriksson, 2012). According to the qualitative evidence described in section II, the typical return migrant to Europe arrived with \$500-\$900 in savings, which would have been sufficient to buy a plot of land after just a three to five year stay in the US.

Appendix Table 3 documents that the results in Table 4 are robust to alternative matching approaches. For brevity, we focus on the specification in column 2 but the patterns presented here are similar for all of the results in the paper that are based on linked samples. We consider four alternative matching algorithms: one that requires matched observations to be unique by name and age within a five year age band; one that, in addition, uses reported names, rather than adjusted names, for linking; one that, in addition, requires linked observations to match exactly on age; and one that instead requires matched observations to be the unique link with a Jaro Winkler distance in first and last names below 0.1 within a five year age band . Results for the young adult sample, which is matched over a short window (1900-10), are robust to all modifications. Results for the

¹⁹ The Norwegian banking sector was small in 1860, with only 47 kroner of assets in commercial and savings banks per capita (Nordvik, 1993). At the time, GDP per capita was around 250 kroner, implying a ratio of financial assets to GDP of 0.2 (Grytten, 2008). For comparison, the mean ratio of assets of financial institutions to GDP was nearly 0.9 for industrialized countries in 1900 (Rousseau and Wachtel, 1998). Bank capital grew quickly in Norway over the next forty years, expanding five times faster than GDP.

childhood sample, which is instead matched over nearly fifty years (1865-1910), are robust to some alternative approaches but disappear when matching by exact, rather than standardized, names.

The value of time spent in the US

Spending some time in the US offered migrants the opportunity to save up to make productive investments back in Norway. These savings may have allowed return migrants to ascend the occupational ladder and out-earn men who never moved to the US, even given the initial negative selection of this migrant group. Table 5 begins by analyzing the full cross-section of men between the ages of 28 and 60 who lived in Norway in 1910. Men who spent some time in the US earned 4 percent more by our occupation-based earnings measure than did men who never moved (column 1). Column 2 shows that the value of time spent in the US was higher for men who worked in a non-agricultural occupation while abroad, likely in an urban area (5 percent), relative to men who worked in farming (1 percent, and not significant). In the late nineteenth century, the urban wage premium was 30-40 percent in the US (Boustan, Bunten and Hearey, 2013); higher pay in urban areas would have allowed return migrants to accumulate savings more quickly. Given that many return migrants worked in agriculture upon return (as we describe below), this pattern is not consistent with the idea of acquiring transferrable skills in the destination country, but more so with acquiring savings to invest at home.

The third column of Table 5 allows the value of time spent in the US to vary by migration year. We find that migrants who moved to the US before 1890 earned 8 percent more than non-migrants of the same age; the earnings premium fell to 5 percent for men who moved in the 1890s and to zero for men who moved in the 1900s. This pattern could arise because of changes in the

economic environment or in the selection of migrants over time. The wage gap between the US and Norway was highest before 1890, before the two countries began to converge, and so earlier migrants would have been able to accumulate savings most quickly.

Men who moved to the US and returned within five years earned the largest migration premium, with additional time in the US diminishing the migrant earnings advantage. Column 4 adds indicators for time spent in the US, with 1-5 years as the omitted category. Men who moved to the US before 1900 and stayed for less than five years earned a premium of 7-11 percent relative to non-migrants. Men who instead stayed for 6-10 years had a 2 percentage point reduction in their earnings premium; men who stayed for 11-20 years had a 4 percentage point reduction, and so on.

That the peak migration premium occurred after just five years in the US stands in contrast to contemporary data from Mexico, in which each year spent in the US confers a return of 2.2 percent in monthly earnings (Reinhold and Thom, 2013). In the modern period, migrants may be acquiring valuable work experience in more advanced destination economies that is then transferrable to the home country. In our historical period, we suspect that migrants were accumulating savings rather than skills, and that the more successful were able to amass the necessary sums more quickly. Qualitative evidence suggests that a 3-5 year stay in the US would have been sufficient to acquire a substantial amount of savings, and one half of all sojourns fell in this band. Thus, what appears to be a falling return to additional time spent in the US may be picking up negative selection on length of stay.

Our estimates for the value of time spent in the US are likely biased downward by the fact that migrants were negatively selected from the sending population, and return migrants especially so. Table 6 partially corrects for this selection by controlling for own pre-migration occupation in the sample linked between 1900 and 1910. Note that all migrants in this sample left for the US

after 1900. According to Table 5, migrants in this arrival cohort on average earned 2 percent *less* than non-movers. Column 1 documents that the 2 percent earnings penalty in the cross section is a weighted average of no occupation-based earnings loss for return migrants with short stays in the US (1-3 years) and a 4 percent occupation-based earnings penalty for return migrants with longer stays (4-9 years). Column 2 reproduces this pattern for the linked sample; the earnings penalty is slightly larger for matched cases but the difference by time spent in the US is preserved. Column 3 then adds controls for pre-migration occupation in Norway in 1900. The earnings premium for return migrants is shifted up by 3-5 percentage points for both migrant types. That is, after controlling for pre-migration characteristics, short-term return migrants appear to have earned the same amount as non-movers, while return migrants with longer stays earned 6 percent less.

Comparing estimates with and without pre-migration controls reveals that the negative selection of return migrants biases downward our initial estimates of the value of time spent in the US. Indeed, if the observed shift in the coefficients in the 1900-10 linked sample applied to the full population estimate, spending time in the US might have increased earnings in Norway by as much as 7 percent (rather than 4 percent). In our linked sample, migrants with longer stays in the US do not appear to have been differentially selected, at least not on the set of pre-migration characteristics that we are able to observe. Rather, adding pre-migration controls shifts up the estimated value of time spent in the US for short- and long-term stays to the same degree. However, we note that all return migrants in the linked sample stayed in the US for fewer than 10 years, and thus we cannot rule out selection into longer stays.

Spending some time in the US helped return migrants climb the occupational ladder in Norway, although there does not appear to be a premium on longer stays. To better understand this pattern, we turn to a descriptive analysis of the occupations and residential locations of return

migrants. Table 7 documents that return migrants were substantially more likely than the rest of the population to live in a rural area (10-20 percentage points) and to work as owner-occupier farmers (around 10 percentage points), often in the migrant's own municipality of birth. These differences remain sizeable even after controlling for initial location (rural/urban) and own or father's farm status before migration. The occupational and geographic choices of return migrants are consistent with the qualitative evidence, which suggests that temporary moves to the US were used as a means of accumulating saving in order to buy land at home.

Men who were working as farm laborers in early adulthood may have been particularly likely to face borrowing constraints and keen to acquire land. Table 8 focuses on men in the 1900-10 linked sample who were farm laborers in 1900, reporting the ten most common occupations in Norway in 1910 by migration status. Men who spent some time in the US were 6 percentage points more likely to be owner-occupier farmers, with the difference primarily made up by non-movers holding a broader array of occupations outside of the top ten. Indeed, half of men who did not move to the US left their municipality of birth, often moving to an urban area within Norway, in which the set of potential occupations was much wider. We also report the top occupations of men who were farm laborers in 1900 and remained in their birth municipality by 1910, given that many return migrants settle back in their home town (column 3). Compared to this group, return migrants were equally likely to be an owner-occupier farmer (40 percent) but were somewhat less likely to be further down the agricultural ladder as a farm laborer or cottar (tenant farmer). This difference is made up by a greater likelihood for return migrants of being a carpenter or railroad worker, two sets of urban skills that may have been acquired in the US.

Beyond acquiring land, another motivation for temporary migration may have been saving up money to afford a marriage. In Norway, as in much of Northern and Western Europe, age at

marriage was determined in part by the ability to set up a separate household, which often required accumulating some savings, sometimes by spending time as a servant in another family's household (Hajnal, 1965; Kussmaul, 1981; Guinnane, 1991). An alternative to saving at home would have been engaging in a temporary move to the US. In this case, we expect return migrants to have lower marriage rates before their move (in 1900) but higher marriage rates after return (in 1910). Table 9 is not consistent with this pattern: men who spent some time in the US were 5 percentage points less likely to be married before moving and 9 percentage points less likely to be married after return. Time spent in the US during prime ages may prevent return migrants from finding a spouse at home.

Information on age at marriage suggest that most migrants married before moving to the US. Conditional on being married, 77 percent of Norwegian-born men in the US between the ages of 28 and 60 were married to a Norwegian-born spouse in 1910. Using the age at first marriage variable available in the 1910 Census, it appears that the vast majority of these men (74 percent) married before moving to the US.

Conclusions

This paper studies return migration from US to Norway during the Age of Mass Migration. We construct large cross-sectional and panel datasets that allow us to compare return migrants to permanent migrants still living in the US and non-migrants who never left Norway. We identify return migrants by using a question in the 1910 Norwegian Census that asked all residents whether they had spent time in the US and when they returned.

Return migrants were negatively selected relative to immigrants who stayed in the US. Not only did men who returned to Norway hold lower-paid occupations while in the US, but they also

held lower-paid occupations even before their move. This finding suggests that negative selection was unlikely due to barriers or bad shocks faced in the US. Rather, men with lower skills seem to have had the strongest economic incentive to return to Norway.

Upon returning to Norway, return migrants held higher-paid occupations than Norwegians who never moved, despite hailing from poorer backgrounds. Return migrants were able to accumulate savings to improve their economic circumstances once they returned home. These savings were used to acquire land in order to work as an owner-occupier farmer.

Moving permanently to the New World was one strategy that poor European immigrants used to achieve economic success. This paper suggests that temporary movement to the US in order to accumulate savings and invest in the home country was another option available to the poor. These findings help to explain why one in three European migrants returned home during this period.

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**Table 1: Occupation-based earnings in the US,
Return vs. permanent migrants in cross-section**

Dependent variable = ln(occupation-based income in US)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
=1 if return	-0.196 (0.011)	-0.152 (0.018)	-0.156 (0.018)	-0.098 (0.017)	-0.096 (0.017)	-0.099 (0.017)	-0.127 (0.020)
Age at occup	N	Y	Y	Y	Y	Y	Y
Arrive cohort	N	N	Y	Y	Y	Y	Y
Year at occup	N	N	N	Y	Y	Y	Y
Arrive age	N	N	N	N	Y	Y	Y
State farm income	N	N	N	N	N	N	Y
State of res FE	N	N	N	N	N	Y	N

Notes: $N = 9,718$. Sample = Norwegian-born men between the ages of 28 and 60 in 1910 who migrated to the US before 1905. Return = 1 if observed in Norwegian Census of 1910 and report having spent some time in US. Return = 0 if observed in US Census of 1910 (1% IPUMS sample). Column 2 controls for quadratic in age at time of occupation measurement. Column 3 adds indicators for three arrival cohorts (before 1890, 1891-1900, 1901-10). Column 4 adds indicator for occupation observed before 1900. Column 5 adds indicator for arriving the US before the age of 16. Column 6 replaces the national income estimate for farmers and farm laborers with state-specific measures.

**Table 2: Pre-migration characteristics in Norway in 1900:
Return vs. permanent migrants in linked sample**

Coefficient on =1 if return to US	
Dependent variables	
=1 if urban <i>N</i> = 1856	-0.247 (0.026)
ln(earnings), all <i>N</i> = 1678	-0.092 (0.025)
ln(earnings), if rural <i>N</i> = 1035	-0.023 (0.030)
ln(earnings), if urban <i>N</i> = 643	-0.030 (0.036)

Notes: Sample includes men between the ages of 18 and 35 living in Norway in 1900 who can be linked to the 1910 US or Norwegian Census. Analysis limited to men who migrated to the US before 1905. All regressions control for a quadratic for age in 1900. See Appendix Table 2 for means of the dependent variables.

**Table 3: Fathers' characteristics in Norway in 1865:
Return vs. permanent migrants in linked sample**

<i>Category:</i>	Permanent Migrants	Return Migrants	Non migrants
Share rural	69.8%	86.7%	79.6%
<i>Mean income</i>	(\$397)	(\$419)	(\$388)
<u>For rural fathers:</u>			
Farmers with Land	41.7%	53.4%	44.2%
<i>Mean income = \$390</i>			
Farm laborers	12.8%	9.7%	13.6%
<i>Mean income = \$338</i>			
Fishermen	3.1%	5.0%	4.4%
<i>Mean income = \$263</i>			
Cottars with Land	20.7%	15.8%	13.6%
<i>Mean income = \$125</i>			
Other	21.6%	16.1%	18.1%
<i>Mean income</i>	(\$427)	(\$365)	(\$353)
Total rural:	100%	100%	100%
N	1,876	279	11,813

Notes: Sample includes men between the ages of 3 and 15 living in Norway in 1865 who can be linked to the 1910 US or Norwegian Census. Columns 1 and 2 are limited to men who migrated to the US before 1905. Father characteristics combine information on occupation and landholdings from the “hierarchy” variable in the 1865 Norwegian Census.

**Table 4: Occupation-based earnings in US,
Permanent vs. return migrants, controlling for pre-migration occupations**

Dependent variable = ln(occupation-based income in US)

	(1) No controls	(2) Control age and year of occup. measure	(3) Add pre-mig characteristics
		1900-10 sample	
=1 if return	-0.101 (0.021)	-0.083 (0.025)	-0.063 (0.025)
		1865-1910 sample	
=1 if return	-0.175 (0.029)	-0.137 (0.036)	-0.126 (0.035)

Notes: $N = 1,788$ (row 1) and $N = 2,756$ (row 2). Samples include men between the ages of 18 and 35 (row 1) or 3 and 15 (row 2) living in Norway in 1900 (row 1) or 1865 (row 2) who can be linked to the 1910 US or Norwegian Census. The analysis is further restricted to migrants who arrived in US before 1905. Column 2 controls for a quadratic in age at which occupation is measured and an indicator for whether occupation is measured before 1906 (row 1) or before 1900 (row 2). Because the 1865-1910 linked sample contains a large set of arrival cohorts, we also control for three indicators for arrival cohort in row 2 (before 1890, 1891-1900, 1901-1910). Column 3 includes measures of pre-migration characteristics, including deciles in the occupation-based earnings distribution in 1900 (row 1) or indicators of father's urban and occupational status (row 2).

**Table 5: Value of time spent in US,
Return migrants vs. non-movers in Norway in 1910**

Dependent variable = ln(occupation-based income in Norway, 1910)

	(1)	(2)	(3)	(4)
=1 if ever in US	0.036 (0.004)			
=1 if in US, farm		0.009 (0.007)		
=1 if in US, non-farm		0.048 (0.005)		
Moved before 1890			0.079 (0.007)	0.106 (0.009)
Moved 1891-1900			0.049 (0.006)	0.068 (0.008)
Moved 1901-1910			-0.016 (0.007)	-0.011 (0.007)
In US, 6-10 yrs				-0.022 (0.010)
In US, 11-20 yrs				-0.043 (0.012)
In US, 21+ yrs				-0.065 (0.019)

Notes: $N = 296,914$. Sample includes men between the ages of 28 and 60 in the 1910 Norwegian Census. Ever in the US =1 if men report having spent some time in the US and have since returned to Norway. Farm status in the US measured from reported occupation. Years spent in the US measured from reported year of arrival and departure. All regressions control for a quadratic in age in 1910.

**Table 6: Occupation-based earnings in Norway 1910,
Return migrants vs. non-movers, controlling for pre-migration occupations**

Dependent variable = $\ln(\text{occupation-based income in Norway, 1910})$

	(1) Cross-section	(2) 1900-10 match	(3) Match + controls
In US 3 years or less	0.009 (0.010)	-0.041 (0.018)	0.007 (0.018)
In US more than 3 years	-0.034 (0.010)	-0.086 (0.022)	-0.058 (0.022)
<i>N</i>	178,684	50,413	50,413

Note: Samples include men between the ages of 28 and 45 living in Norway in 1910. Column 1 contains all men in the cross section of the Norwegian Census. Columns 2 and 3 include only those men that can be linked between 1900 and 1910. Column 3 controls for pre-migration characteristics by decile in the occupation-based earnings distribution in 1900. All regressions control for a quadratic in age in 1910.

**Table 7: Occupation and geographic location in Norway 1910,
Return migrants vs. non-movers**

	=1 if urban		=1 if farmer		=1 if birth municipality
	1900-1910 sample				
=1 if ever in US	-0.202 (0.020)	-0.105 (0.015)	0.111 (0.016)	0.100 (0.014)	0.096 (0.021)
	1865-1910 sample				
=1 if ever in US	-0.209 (0.026)	-0.176 (0.023)	0.260 (0.026)	0.236 (0.025)	0.015 (0.028)
Pre-mig control?	N	Y	N	Y	N

Note: $N = 69,350$ (row 1) and $N = 15,017$ (row 2). Samples include men between the ages of 18 and 35 (row 1) or 3 and 15 (row 2) living in Norway in 1900 (row 1) or 1865 (row 2) who can be linked to the 1910 US or Norwegian Census. All regressions control for a quadratic in age in 1910. Columns 2 and 4 also control for a lagged version of the dependent variable (urban or farmer status in 1865 or 1900).

Table 8: Top ten occupations held in 1910 by men who were farm laborers in 1900, Return migrants vs. non-movers

	=1 if ever US	=0 if ever US	=0 if US, in birth munic.
Farmer	40.3	Farmer 34.3	Farmer 39.7
Farm worker	20.8	Farm worker 18.0	Farm worker 21.3
No occup.	6.3	Farm & fish 3.8	Farm & fish 4.6
Lumbermen	5.6	Fishermen 3.3	No occup. 3.5
Fishermen	4.9	No occup. 3.3	Lumbermen 3.4
Carpenter	3.5	Lumbermen 2.6	Cottar 2.5
Farm & fish	2.1	Carpenter 2.4	Fishermen 2.5
Railway	2.1	Cottar 2.3	Carpenter 2.0
Day laborer	2.1	Day laborer 1.9	Day laborer 1.7
Farm manage	1.4	Paper mill 1.5	Servant 1.2
Total	89.4	Total 71.9	Total 81.0
<i>N</i>	144	<i>N</i> 5785	<i>N</i> 4112

Notes: Sample include men between the ages of 18 and 35 living in Norway in 1900 who can be linked to the 1910 Norwegian Census. The analysis is limited to men who report being farm laborers in 1900.

**Table 9: Marital status in 1900 and 1910,
Return migrants vs. non-movers**

	Married, 1900	Married, 1910
=1 if ever in US	-0.053 (0.016)	-0.089 (0.016)

Notes: $N = 54,189$. Sample include men between the ages of 18 and 35 living in Norway in 1900 who can be linked to the 1910 Norwegian Census. Regressions control for a quadratic in age.

Appendix Table 1: Comparing the linked sample to the population, 1865

	Population	Difference: Linked - Population
Age	8.682 (3.708)	0.181*** (0.031)
=1 if urban	0.144 (0.351)	0.084*** (0.003)
<u>For rural fathers:</u>		
Farmers with Land	0.413 (0.492)	0.024*** (0.005)
Farm laborers	0.138 (0.345)	0.004* (0.002)
Fishermen	0.036 (0.186)	-0.004 (0.003)
Cottars with Land	0.238 (0.425)	-0.039*** (0.004)
Other	0.173 (0.379)	0.015*** (0.004)

Notes: N=266,787, N=226,983 for rural sample. Sample includes men between the ages of 3 and 15 in the 1865 Norwegian Census. First column presents means and standard deviations of the population. The last column presents the coefficient and standard error on an indicator for being in the linked sample from a regression of the outcome of interest on linked status.

Appendix Table 2: Comparing the linked sample to the population, 1900

	Population	Difference: Linked - Population
Age	25.45 (5.137)	0.602*** (0.023)
=1 if urban	0.321 (0.466)	0.056*** (0.002)
=1 if head of household	0.306 (0.461)	0.068*** (0.002)
ln(occupation-based income)	5.638 (0.437)	0.053*** (0.002)

Notes: N=376,507. Sample includes men between the ages of 18 and 35 in the 1900 Norwegian Census. First column presents means and standard deviations of the population. The last column presents the coefficient and standard error on an indicator for being in the linked sample from a regression of the outcome of interest on linked status.

Appendix Table 3: Robustness to alternative matching approaches

Dependent variable = $\ln(\text{occupation-based earnings in US})$; coefficient on =1 if return

	5 year band	+ exact name	+ exact age	Jaro-winkler
1900-10 sample	-0.096*** (0.023)	-0.151*** (0.029)	-0.158*** (0.043)	-0.089** (0.039)
<i>N</i>	1123	805	437	775
1865-1910 sample	-0.111* (0.056)	-0.027 (0.089)	-0.032 (0.164)	-0.179*** (0.059)
<i>N</i>	1149	650	292	1111

Notes: Sample includes men who migrated from Norway to the US, some of whom returned to Norway. Cells contain the coefficient on =1 if return from estimates of equation (1) using different linked samples in each column. The specification follows Table 4, column 2 (coeff. = -0.083), which includes controls for a quadratic in age at which occupation is measured; an indicator for whether occupation is measured before 1906 (row 1) or before 1900 (row 2); and a set of arrival cohort controls (row 2). The first column restricts the sample to observations that are unique by first name, last name and age within a five year age band. The second column maintains uniqueness within five years and replaces standardized names based on NYSIIS algorithm with exact names. The third column maintains these two adjustments and requires that successful links have exact age matches. The fourth column instead requires that (1) first and last names of matched observations are within a Jaro-Winkler string distance of 0.1 and (2) there are no other observations that are both within a five-year age band and a first and last names Jaro-Winkler string distance of 0.1.