

# Danish Flexicurity and Occupational Mobility: A Comparison with the United States<sup>a</sup>

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## Abstract

We provide a detailed international comparison of the occupational mobility of employer switchers using the US Current Population Survey and Danish administrative data (2011–2019). Comparability and measurement issues have stood in the way of good comparisons of occupational mobility rates between the US and European countries more generally. Making progress towards addressing these, we find that the proportion of employer changers that switches occupations is about 20% lower in Denmark, but at occupation-level quite correlated across both countries. Net mobility rates are also positively correlated, but overall lower in Denmark than in the United States.

**Keywords:** Occupational mobility, United States, Denmark, Flexicurity

**JEL Codes:** J21, J24, J62

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# 1 Introduction

Labor market adjustment to technological shock—such as automation and AI—depends critically on workers’ willingness and ability to change occupations. The United States provides the benchmark against which to measure fluidity in labor markets, while European countries typically are considered to have more rigid labor markets (Elsby, Hobijn, and Şahin, 2013).

Among European labor markets, the Danish one is often considered to stand apart. Denmark operates a system of ‘flexicurity’—a policy environment that combines flexibility regarding layoffs with a strong social safety net. As a result, it is viewed as fluid, with large worker flows (see e.g. Kreiner and Svarer (2022) and OECD (2016)). Nevertheless, Borowczyk-Martins (2023) and Engbom (2025) suggest that Danish employer-to-employer mobility is somewhat lower than the US, in the order of 80% of the US rate.

Much less clear is how workers’ *occupational* mobility compares between Denmark and the United States. At least two major issues appear to obstruct a direct comparison of occupational fluidity. First, occupations across both countries are reported in different classifications. Existing occupation crosswalks are not necessarily developed with occupational *mobility* comparisons in mind, in ways we discuss below. Second, representative information on the US workforce’s occupation mobility is collected almost exclusively in household surveys (rather than administrative data). These are known to suffer from significant mismeasurement of occupational mobility (see e.g. Kambourov and Manovskii (2004) and Moscarini and Thomsson (2007)).

In part because of the aforementioned issues, few comparisons of occupational mobility exist between European countries and the US. In this respect, perhaps the most related paper to ours is Bachmann, Bechara, and Vonnahme (2020), who compare the gross occupational mobility (also among job changers) *only among European countries*.<sup>1</sup> In this note, we contribute by comparing the occupational mobility—both gross and net—of, specifically, *direct employer-to-employer switchers* (‘EE movers’) in Denmark and the US, addressing the above data issues.

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<sup>1</sup>Groes (2010) looks at—in a sense—what happens when workers do not move occupations: she shows that returns to occupational tenure are similar across the two countries.

## 2 Data and Methodology

**Data - Denmark** We utilize the wage payment records in Danish administrative data, the “Beskæftigelse for lønmodtagere” (BFL) database. Due to a change in occupational classification in 2010, we focus on the years 2011–2019. We further exclude workers in military occupations.

We then construct employment spells from wage payment records, classifying as an employer switch without intervening nonemployment (“EE transition”) when a new job spell starts within two months of the end of a worker’s previous job spell. The resulting monthly EE transition rate is 1.1%.<sup>2</sup>

Employer-based tracking of occupations is deeply embedded into the Danish labor market, and accuracy is required for multiple reasons.<sup>3</sup> We take this to imply that employers are highly incentivized in terms of accuracy and that, given also their close knowledge of the tasks workers are doing, occupations will be reported with very little error.

**Data - United States** For the US, we use the monthly Current Population Survey (CPS) from 2011–2019 provided by IPUMS (Flood et al., 2023). EE movers are those who are employed in two consecutive months but report having changed employer. For comparability, we focus on EE transitions where both the origin and destination job are salaried, and exclude the military occupations. The CPS is a household survey in which workers describe their work activities, after which a professional coder assigns an occupation. Errors in this process are common and create spurious mobility.

**Making the Danish and US Occupational Classification Comparable for Occupational Mobility Measurement** To measure occupations in the US, we use the OCC1990 variable provided by IPUMS, which is based on the 1990 Census Occupation Classification. The Danish occupational data is encoded in the DISCO08 standard, which is very similar to the ISCO08 standard. We make use of the crosswalk between ISCO08 and the US 2010 standard occupation classification (SOC), provided by the Bureau of Labor Statistics, and then map the latter into IPUMS’ 1990 Census classification.

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<sup>2</sup>Bertheau and Vejlin (2022) find a monthly EE rate of 1.2% for a similar period and sample.

<sup>3</sup>Such reasons include, among others: (i) legal requirements of all non-small firms to report annual earnings by occupation, (ii) requirements of large firms to report wages by gender and six-digit occupation to monitor the gender pay gap, and (iii) access to labor market interventions as the migration-focused ‘Positive List’.

Like most occupation crosswalks, the ISCO–SOC mapping is many-to-many. Selecting a unique Census occupation for each ISCO code results in 78 fewer Census occupations—leaving some US occupations “orphaned” with no Danish counterpart.<sup>4</sup> To address this, we use the reverse crosswalk (SOC to ISCO) to identify ISCO codes linked to these orphaned SOC occupations, then merge each orphaned SOC with its corresponding already-mapped SOC occupation.

This yields 209 occupations where *every worker (in both countries) is assigned an occupation, and every occupation is present in both countries*. This property is essential for cross-country occupational mobility measurement. Indeed, skipping the reverse crosswalk step meaningfully affects results, making Danish mobility (falsely) appear comparatively lower. We refer to these 209 occupations as “three digit” occupations.

**Correcting Survey Data for Occupational Miscoding** The second data issue arises because the CPS collects occupation information of employer movers using ‘independent interviewing’, where information on occupations is collected anew and coded in isolation across interviews. Mistakes in assigning origin or destination occupation arise independently and create spurious flows that significantly bias raw mobility measures upwards (Moscarini and Thomsson, 2007; Kambourov and Manovskii, 2004), which we address using the correction methodology developed in our companion paper (Carrillo-Tudela, Darougheh, and Visschers, 2025).

Let  $\mathbf{M}$  denote the matrix of true occupational flows and  $\mathbf{\Gamma}$  represent the matrix of miscoding probabilities, where element  $\Gamma_{ij}$  is the probability that a worker truly in occupation  $i$  is recorded as being in occupation  $j$ . Using the estimate of the miscoding probabilities  $\hat{\mathbf{\Gamma}}$  from our companion paper, we can apply the inverse of this transformation and recover an estimate of the true occupational flow matrix:  $\hat{\mathbf{M}} = (\hat{\mathbf{\Gamma}}')^{-1} \hat{\mathbf{M}} \hat{\mathbf{\Gamma}}^{-1}$ . We use the  $\hat{\mathbf{\Gamma}}$  matrix to correct the US data at the three-digit aggregation. We then aggregate the corrected flows to the two- and one-digit classification for the statistics discussed now.

**Gross and net mobility rates** For each occupation, gross mobility  $m(i)$  is computed as the share of EE movers that leave their occupation; we also compute the net mobility

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<sup>4</sup>Intuitively, many of these “orphaned” occupations will be present in Denmark, consider e.g. medical scientists and aerospace engineers, but are not picked up as a separate category in the Danish classification.

rate  $n_r(i)$  of occupation  $i$  as

$$m(i) = \frac{f^{\text{out}}(i)}{ee(i)}, \quad n_r(i) = \frac{1}{2} \frac{f^{\text{in}}(i) - f^{\text{out}}(i)}{f^{\text{in}}(i) + f^{\text{out}}(i)}, \quad (1)$$

where  $ee(i)$  denotes the total EE flows originating from occupation  $i$ , and  $f^{\text{in}}(i)$  and  $f^{\text{out}}(i)$  denote the total flows in and out of occupation  $i$  (with, to be precise, occupational stays included in both  $f^{\text{in}}(i)$  and  $f^{\text{out}}(i)$ , unless explicitly mentioned as ‘excluding self-flows’).

### 3 Results

Table 1, panel A tells us that Danish gross occupational mobility (after correcting for miscoding) is only around 80% of US mobility, at all levels of aggregation. When we weigh US occupation-level mobility by the Danish occupation distribution of EE movers, to see how much this mobility gap may be driven by occupation composition differences, we find it is only marginally affected. Correction for miscoding, on the other hand, is important. Without it, the gap appears vast, with US mobility nearly 50% to 100% larger; but the enormity of this difference is in part a reflection of the presence of spurious flows in US household survey data.

In terms of net mobility, we observe a gap that is more substantial than the gross mobility gap, with Danish average net mobility rates only around 55% (for three-digit occupations) to 65% (one- and two-digit) of US rates. Note that the miscoding correction raises observed net mobility rates somewhat in the US.<sup>5</sup> The baseline average net mobility measure  $n_r(i)$  about equals the proportion of the EE flows that are needed, at minimum, to cover all net flows of employer movers. This number is rather low at only 2–5% of EE moves. We also see that in both countries gross occupational flows are an order of a magnitude larger than the net flows. When we exclude occupation stays (or ‘self-flows’) from  $f^{\text{in}}(i)$ ,  $f^{\text{out}}(i)$  in the second net flow measure, the resulting measure closely approximates the proportion of all occupation *changes* that are needed to cover all net flows. Therefore, it is a measure of how much occupational direction occupa-

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<sup>5</sup>For example, if an actual flow from occupation  $a$  to occupation  $b$  that contributes to net flows is subjected to miscoding, there is a positive probability this flow may instead be observed as an occupation stay (in  $a$  or  $b$ ), no longer contributing to net flows, or as a different flow that may appear to offset some other net flow.

**Table 1: Mobility Patterns by Aggregation Level**

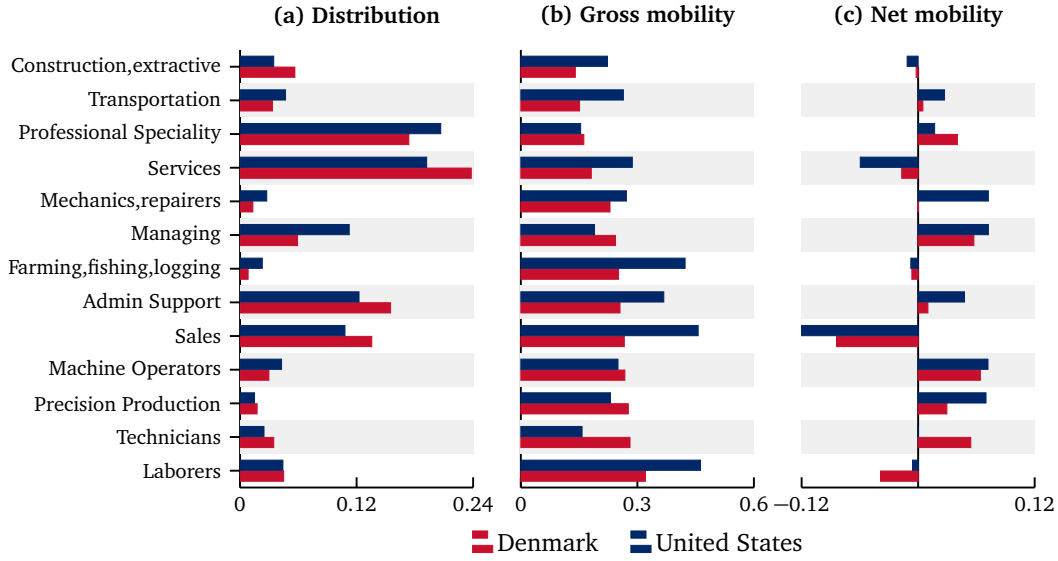
|                                                                                                        | Aggregation Level |            |              |
|--------------------------------------------------------------------------------------------------------|-------------------|------------|--------------|
|                                                                                                        | One digit         | Two digits | Three digits |
| <b>Panel A: Aggregate statistics</b>                                                                   |                   |            |              |
| <i>Average gross mobility rate, <math>m(i)</math></i>                                                  |                   |            |              |
| Denmark                                                                                                | 0.22              | 0.26       | 0.29         |
| United States (corrected)                                                                              | 0.28              | 0.33       | 0.36         |
| United States (corrected, DK origin occ. dist.)                                                        | 0.29              | 0.34       | 0.36         |
| United States (uncorrected)                                                                            | 0.40              | 0.48       | 0.55         |
| <i>Average of absolute net mobility rate <math>n_r(i)</math></i>                                       |                   |            |              |
| Denmark                                                                                                | 0.017             | 0.022      | 0.029        |
| United States (corrected)                                                                              | 0.026             | 0.032      | 0.053        |
| United States (corrected, DK origin occ. dist.)                                                        | 0.027             | 0.033      | 0.068        |
| United States (uncorrected)                                                                            | 0.023             | 0.027      | 0.045        |
| <i>Average of absolute net mobility rate <math>n_r(i)</math> (excl self)</i>                           |                   |            |              |
| Denmark                                                                                                | 0.076             | 0.085      | 0.096        |
| United States (corrected)                                                                              | 0.092             | 0.099      | 0.106        |
| <b>Panel B: Occupation-level regression</b>                                                            |                   |            |              |
| <i>Gross mobility (levels): <math>m^{US}(i) = \alpha + \beta m^{DK}(i) + \epsilon(i)</math></i>        |                   |            |              |
| $\beta$ (corrected)                                                                                    | 1.31              | 0.98       | 1.07         |
| $\beta$ (uncorrected)                                                                                  | 1.80              | 1.34       | 1.19         |
| <i>Gross mobility (log): <math>\log m^{US}(i) = \alpha + \beta \log m^{DK}(i) + \epsilon(i)</math></i> |                   |            |              |
| $\beta$ (corrected)                                                                                    | 0.94              | 0.91       | 0.78         |
| $\beta$ (uncorrected)                                                                                  | 0.93              | 0.77       | 0.69         |
| <i>Net mobility rate: <math>n_r^{US}(i) = \alpha + \beta n_r^{DK}(i) + \epsilon_i</math></i>           |                   |            |              |
| $\beta$ (corrected)                                                                                    | 1.30              | 1.10       | 0.66         |
| $\beta$ (uncorrected)                                                                                  | 1.13              | 0.95       | 0.57         |

Sample: 2011–2019. Gross mobility  $m_i$  and net mobility  $n(i)$  as defined in equation (1). “excl self” excludes self flows from both in- and outflows when computing net mobility. **Panel A:** Population-weighted statistics are computed using all occupations (we do not remove the few occupations that have with negative weights or negative gross mobility after miscoding correction in panel A). “DK origin occ. dist” indicates that occupation-specific US mobility rates have been weighted by their relative presence in the Danish occupational distribution. **Panel B:** Regression coefficients from weighted least squares regressions of Danish on US occupational mobility, on occupations that have at least 100 (unweighted) observations in each country. Each occupation is weighted by its relative size in both countries:  $\sqrt{N^{DK}(i) / \sum_i N^{DK}(i) \cdot N^{US}(i) / \sum_i N^{US}(i)}$ .

tion flows have. We observe that Danish occupation flows are a bit less directed, in the aforementioned sense, towards (and from) particular occupations.

We now investigate these statistics at the level of individual occupations. Figure 1 depicts the gross and net mobility rates arising from each occupation, using the one-digit classification, for both countries. Panel (a) first shows that the share of EE movers by origin occupation is very similar in both countries for most occupations. The exception

**Figure 1:** Distribution and occupational mobility across 13 major occupations



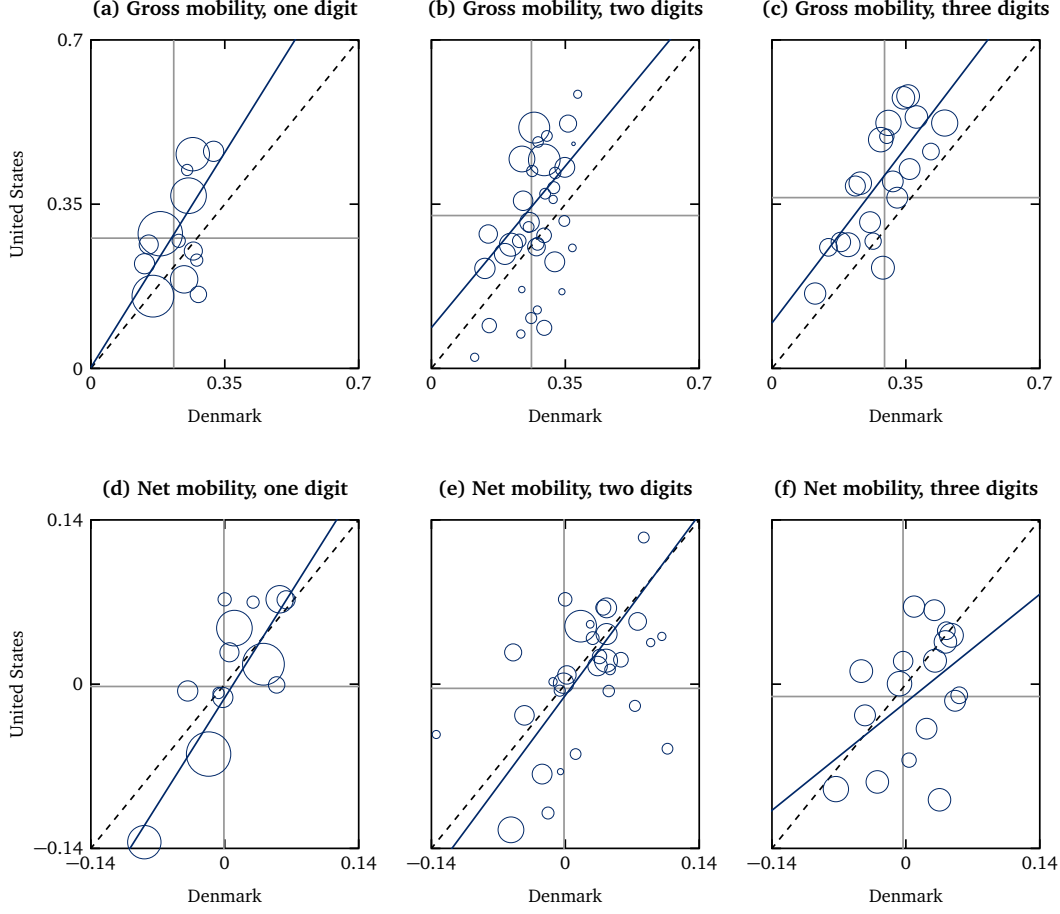
Panel (a): share of employment-to-employment transitions by origin occupation. Panels (b) and (c): gross and net occupational mobility rates  $m(i)$ ,  $n_r(i)$  for workers making employment-to-employment transitions. Of the paired horizontal bars: US: top, blue; Denmark: bottom, red. Net mobility rates in graph add up to zero after weighting by occupation sizes.

is managers, who are a smaller part of occupations involved in EE in Denmark. (This appears mostly driven by lower overall employment share of managers in Denmark).

Panel (b) shows that gross mobility varies substantially across occupations, with the highest rates being almost twice as large as the lowest. In Panel (c), we observe that the *direction* of net mobility are well-aligned in the two countries, while quantitatively, US net flows tend to be larger. The main occupations in terms of number of workers lost (net) through EE transitions are sales and services, in both countries.

To visualize the co-movement in gross and net mobility rates across occupations more clearly, Figure 2 plots (miscoding-corrected) gross mobility rates of the US on the y-axis, versus those of Denmark on the x-axis, for all three aggregation levels, in panels (a)–(c). To summarize more than 200 three-digit occupations in panel (c), we collect these in 20 bins, according to their rank by Danish mobility rates. It is clear that even at the two-digit and three-digit levels, gross mobility rates are quite correlated across the two countries, while the US mobility rate is, with few exceptions, higher than in Denmark. Panels (d)–(f) show the corresponding patterns for net mobility. These patterns are somewhat noisier. We observe however a relative dominance of the first and third quadrant even at the two- and three-digit levels (i.e. the direction of net mobility coincides across both

**Figure 2:** Occupational gross and net mobility rates of EE movers



Occupational mobility rates for employment-to-employment transitions, 2011–2019. US data corrected for measurement error. We exclude occupations with less than 100 observations in either country. Panels (c, f) show 20 bins of three-digit occupations weighted by geometric mean of relative population shares in both countries. Circle sizes reflect this geometric weight. Dashed lines show equality across both countries. Gray lines show country averages. Note, our definition of  $n_r(i)$  implies that net mobility's average is close to zero but not necessarily identical to it. Solid lines show the regression fit using the same geometric weights.

countries) and is clearly positively correlated.

Finally, in Panel B of Table 1 we present the relationship of US occupational mobility with its Danish counterpart in regression format. We observe that, after miscoding correction, the *relative* co-movement in terms of gross (and net) mobility becomes stronger; this occurs for the absolute co-movement of net mobility as well. In other words, miscoding in the US data may work to obscure some of the alignment of occupational mobility patterns between the US and Denmark: it seems important to take this into account when interpreting the raw data.

## 4 Discussion and Conclusion

Employer-to-employer (EE) mobility in Denmark is roughly 20% lower than in the US. At the same time, EE movers in Denmark also are around 20% less likely to change occupations. We can take these two observations together to disaggregate EE moves into “career changes” (changes of occupation) and “career stays” (keeping the same occupation). An interesting picture emerges: on one hand, the monthly probability that a Danish worker switches employer while keeping his occupation, is reasonably high, approximately 90% of the US level. On the other hand, the Danish monthly rate of EE moves with a change of career is considerably lower: around 60-65% of the US level.

This suggests an important nuance. The Danish labor market appears rather fluid in terms of within-career (within occupation) employer mobility, but less so when it comes to switching employers *to switch careers*. Considering *net* mobility of EE movers, this gap is even stronger. When structural changes or shocks call for reallocation of workers to new careers, this apparent lack of labor market fluidity along the career dimension may be concerning.

While the levels of occupational mobility differ importantly among employer switchers, the mobility rates by occupations are perhaps remarkably correlated, even though Denmark and the US differ markedly in occupational regulation, such as occupational licensing requirements (only 14% of Danish occupations are subject to these Koumenta and Pagliero (2019), vs around 45% for the US (Trudeau and Timmons, 2023)). Instead, this leaves a role for shared occupation-specific characteristics, e.g. task content of individual occupations, to shape the cross-country occupation-level correlations, while country-wide policy and institutional differences affect the *overall* levels of occupational mobility.

Consequently, we see this piece as a call for a deeper investigation of policies that could increase the overall fluidity of the Danish labor market along the occupational dimension. The Economist magazine (2025) recently headlined “Why European workers need to switch jobs”, followed by “the continent’s labour market is ill-suited to an age of disruption.” Policies to simply increase EE mobility may not yield the best results when the key to addressing this is rather to increase career mobility.

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