Danish flexicurity and occupational mobility: A comparison with the United States

Accepted for publication in Economics Letters

https://doi.org/10.1016/j.econlet.2025.112743

Danish Flexicurity and Occupational Mobility: A Comparison with the United States[a]

Carlos Carrillo-Tudela[b]
University of Essex,
CEPR, CESifo, IZA, and Stone Centre

Saman Darougheh[c]
Danmarks Nationalbank

Ludo Visschers[d]
Universidad Carlos III de Madrid,
CESifo, IZA, Stone Centre, Edinburgh Futures Institute

October 2025

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

[a]The views in this paper are solely those of the authors and should not be interpreted as reflecting the views of Danmarks Nationalbank.

[b]University of Essex, Wivenhoe Park, Colchester CO4 3SQ, United Kingdom. Email: cocarr@essex.ac.uk

[c]Danmarks Nationalbank, Langelinie Allé 47, 2100 Copenhagen, Denmark. Email: sdma@nationalbanken.dk

[d]Corresponding author: lvissche@eco.uc3m.es. Universidad Carlos III de Madrid, C. Madrid, 126, 28903 Getafe, Madrid, Spain. Ludo Visschers gratefully acknowledges grants CEX2021-001181-M and ATR2023-145734 funded by MICIU/AEI /10.13039/501100011033 (Unidades de Excelencia Maria de Maeztu, and Programa ATRAE, of the Spanish Government, Ministry of Science, Innovation and Universities)

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 stands apart. Denmark operates a system of 'flexicurity'—combining 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 (2025) and Engbom (2022) 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. 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 (2008) and Moscarini and Thomsson (2007)).

In part because of the aforementioned issues, few comparisons of occupational mobility exist between European countries and the US. Perhaps most closely related, Bachmann, Bechara, and Vonnahme (2020) compares the gross occupational mobility (also among job changers) *only among European countries*.[1] In this note, we compare the occupational mobility—both gross and net— specifically of *direct employer-to-employer switchers* ('EE movers') in Denmark and the US, addressing the above data issues.

[1] 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%.[2]

Employer-based tracking of occupations is deeply embedded into the Danish labor market, and accuracy is required for multiple reasons.[3] 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. We measure occupational mobility using the last recorded occupation in the previous spell, and the first recorded occupation in the subsequent spell. Hence, we measure the occupational mobility of EE movers—consistent with our US measure—and ignore occupational mobility within employer.[4]

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 employed in two consecutive months who 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.

[2] Bertheau and Vejlin (2022) find a monthly EE rate of 1.2% for a similar period and sample.

[3] 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'.

[4] In our analysis, we fill missing occupation data with the mode occupation of a given worker-firm spell. Excluding these imputations does not materially affect the results; the overall population occupation-switching propensity of EE movers falls from to 0.2942 to 0.2934.

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.

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.[5] To address this, we use the reverse crosswalk (SOC to ISCO) to identify ISCO codes linked with these orphaned SOC occupations, then combine this with the ISCO to SOC mapping from the first step, to merge each orphaned SOC code into a non-orphaned SOC code.

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, 2008), 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 $\mathbf{\Gamma}_{ij}$ 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 transforma-

[5] 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.

tion and recover an estimate of the true occupational flow matrix: $\hat{\mathbf{M}} = (\hat{\mathbf{\Gamma}}')^{-1}\hat{\mathbf{M}}^{\mathbf{I}}\hat{\mathbf{\Gamma}}^{-1}$. 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 i, gross mobility $m(i)$ is computed as the share of EE movers that occupation i; we also compute the net mobility rate $n_r(i)$ of occupation i as

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

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 $f^{in}(i)$ and $f^{out}(i)$, 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 gauge the role of occupation composition differences, we find it is only marginally affected. Correcting 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.

We observe an even more substantial net 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.[6] The baseline average net mobility measure $n_r(i)$ about equals the pro-

[6]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.

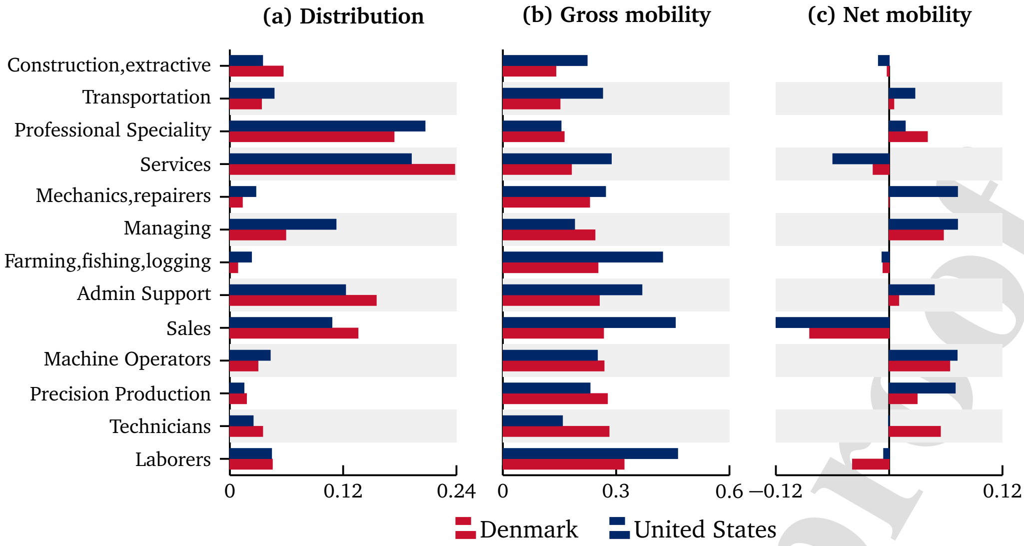
Table 1: Mobility Patterns by Aggregation Level

	Aggregation Level		
	One digit	Two digits	Three digits
Panel A: Aggregate statistics			
Average gross mobility rate, $m(i)$			
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
Average of absolute net mobility rate $n_r(i)$			
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
Average of absolute net mobility rate $n_r(i)$ (excl self)			
Denmark	0.076	0.085	0.096
United States (corrected)	0.092	0.099	0.106
Panel B: Occupation-level regression			
Gross mobility (levels): $m^{\text{US}}(i) = \alpha + \beta m^{\text{DK}}(i) + \epsilon(i)$			
β (corrected)	1.31	0.98	1.07
β (uncorrected)	1.80	1.34	1.19
Gross mobility (log): $\log m^{\text{US}}(i) = \alpha + \beta \log m^{\text{DK}}(i) + \epsilon(i)$			
β (corrected)	0.94	0.91	0.78
β (uncorrected)	0.93	0.77	0.69
Net mobility rate: $n_r^{\text{US}}(i) = \alpha + \beta n_r^{\text{DK}}(i) + \epsilon_i$			
β (corrected)	1.30	1.10	0.66
β (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:* $\sqrt{N^{DK}(i)/\sum_i N^{DK}(i) \cdot N^{US}(i)/\sum_i N^{US}(i)}$.

portion of the EE flows that are needed, at minimum, to cover all net flows of employer movers. This number is 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 $f^{in}(i), f^{out}(i)$ 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

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 employer-to-employer 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.

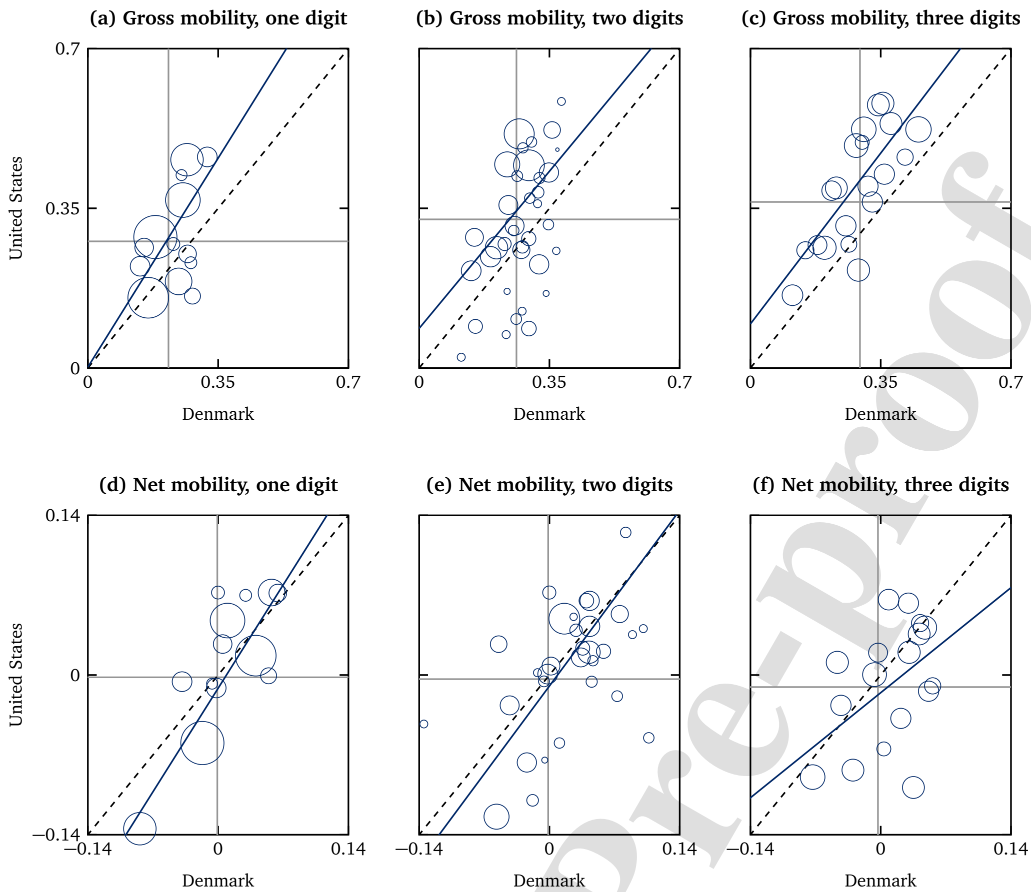
direction these occupation flows have. Danish occupation flows thus appear a bit less directed.

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 is managers, who are a smaller part of occupations involved in EE in Denmark. This appears mostly driven by a 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

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.

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 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 there are also around 20% less likely to change occupations. Taking these two observations together, we can disaggregate EE moves into "career changes" (changes of occupation) and "career stays" (keeping the same occupation). An interesting picture emerges: he monthly probability that a Danish worker switches employer while keeping his occupation, is reasonably high, approximately 90% of the US level. In contrast, 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 by moving employers (directly), the apparent lack of labor market fluidity along this dimension may be concerning.[7]

While these levels of occupational mobility differ importantly, 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.[8] Instead, this points to 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.

[7]The lower propensity of Danish EE movers to switch careers might to some extent be compensated or offset by a higher occupation-switching propensity of unemployed workers or workers who change occupations while remaining with the same employer. We leave this for future research.

[8]Only 14% of Danish occupations are subject to these Koumenta and Pagliero (2019), vs around 45% for the US (Trudeau and Timmons, 2023)).

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 structural labor market disruption is rather to increase career mobility.

References

Bachmann, Ronald, Peggy Bechara, and Christina Vonnahme (Mar. 2020). “Occupational Mobility in Europe: Extent, Determinants and Consequences.” en. In: *De Economist* 168.1, pp. 79–108. ISSN: 0013-063X, 1572-9982.

Bertheau, Antoine and Rune Vejlin (2022). “Employer-to-Employer Transitions and Time Aggregation Bias.” In: *Labour Economics* 75, p. 102130. ISSN: 0927-5371.

Borowczyk-Martins, Daniel (2025). *Employer-to-Employer Mobility and Wages in Europe and the United States*. IZA Discussion Paper 17719. Institute for the Study of Labor.

Carrillo-Tudela, Carlos, Saman Darougheh, and Ludo Visschers (Mar. 2025). “Confused about Careers? Untangling Occupational Mobility, Miscoding, and Distance.” Working Paper.

Economist(Magazine) (Sept. 2025). *Why European workers need to switch jobs*.

Elsby, Michael W. L., Bart Hobijn, and Ayşegül Şahin (2013). “Unemployment Dynamics in the OECD.” In: *Review of Economics and Statistics* 95.2, pp. 530–548. ISSN: 0034-6535.

Engbom, Niklas (Jan. 2022). *Labor Market Fluidity and Human Capital Accumulation*. w29698. Cambridge, MA: National Bureau of Economic Research, w29698.

Flood, Sarah et al. (2023). *IPUMS, Current Population Survey: Version 11.0*. en.

Groes, Fane (2010). *Occupational experience, mobility, and wages: Patterns in the Danish data*. Working Paper. Department of Economics, Copenhagen Business School.

Kambourov, Gueorgui and Iourii Manovskii (2008). “Rising Occupational and Industry Mobility in the United States: 1968-97.” In: *International Economic Review* 49.1, pp. 41–79. ISSN: 00206598, 14682354.

Koumenta, Maria and Mario Pagliero (2019). "Occupational Regulation in the European Union: Coverage and Wage Effects." In: *British Journal of Industrial Relations* 57.4, pp. 818–849.

Kreiner, Claus Thustrup and Michael Svarer (Nov. 2022). "Danish Flexicurity: Rights and Duties." In: *Journal of Economic Perspectives* 36.4, pp. 81–102. ISSN: 0895-3309.

Moscarini, Giuseppe and Kaj Thomsson (2007). "Occupational and Job Mobility in the US." In: *The Scandinavian Journal of Economics* 109.4, pp. 807–836. ISSN: 03470520, 14679442.

OECD (2016). *Back to Work: Denmark: Improving the Re-employment Prospects of Displaced Workers*. OECD Publishing, Paris.

Trudeau, Noah and Edward Timmons (Mar. 2023). *State Occupational Licensing Index 2023*. Report. Archbridge Institute.

1. Danish workers who change employers, switch occupations less than US workers

2. Occupation-change rates are highly correlated across individual occupations

3. Danes switch employers—within occupation—at similar rates as US workers

4. Danes switch employers—across occupation—less frequently than US workers
5. Potential worry: Denmark's labor market may adapt more slowly to structural changes (e.g. AI and automation).