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DANISH FLEXICURITY: RIGHTS AND DUTIES

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Danish Flexicurity: Rights and Duties*

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Abstract

Denmark is one of the richest countries in the world and achieves this in combination with low inequality, low unemployment, and high income security. This performance is often attributed to the Danish labor market model characterized by what has become known as flexicurity. This essay describes and evaluates Danish flexicurity. The Danish experience shows that flexicurity in itself, i.e., flexible hiring and firing rules for firms combined with high income security for workers, is insufficient for successful outcomes. The flexicurity policy also needs to include comprehensive active labor market programs (ALMPs) with compulsory participation for recipients of unemployment compensation. Denmark spends more on active labor market programs than any other OECD country. We review theory showing how ALMPs can mitigate adverse selection and moral hazard problems associated with high income security and review empirical evidence on the effectiveness of ALMPs from the ongoing Danish policy evaluation, which includes a systematic use of randomized experiments. We also discuss the aptness of flexicurity to meet challenges from globalization, automation, and immigration and the trade-offs that the United States (or other countries) would face in adopting a flexicurity policy.

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Denmark is a small country with 5.8 million inhabitants that achieves a high income per capita in combination with low inequality and comprehensive social insurance. Table 1 provides statistics on happiness and key indicators on economic performance and public policy for Denmark and the United States, including how these countries rank among OECD countries from #1 ("best") to #36 ("worst"), based on these indicators.[1] Denmark ranks first in this comparison group in happiness (row 1 of Table 1). Labor market performance in Denmark as measured by employment (row 7), long-term unemployment (row 8), and labor market turnover (row 9) is comparable to the United States, but Denmark achieves this in combination with a generous unemployment compensation scheme with long duration of unemployment insurance benefits (row 17) and high compensation rates for people with low earnings (rows 18-19).

The Danish labor market model has come to be known as flexicurity. A stated strategy underlying this approach is the so-called "*right and duty*" principle (in Danish, "ret og pligt"). Unemployed individuals have a *right* to receive income support and to receive public assistance in getting back into work. But it is also their *duty* to search actively for jobs, to take on appropriate work, and to participate in active labor market policies. Correspondingly, society has a *right* to make demands of recipients of income support, but also a *duty* to help improve their job prospects.

In this essay, we begin with a description of flexicurity and compare Danish labor market policy and performance to the United States and other OECD countries. Some labor markets, in particular in the Nordic countries, share key similarities, but none of them have all the characteristics of the flexicurity model. We then look more closely at the history and formation of Danish flexicurity policy and labor market development, and in particular to extensive reforms that changed key elements of the program in the early 1990s. Key to the Danish flexicurity model is massive spending in "active labor market programs," with compulsory participation for recipients of unemployment compensation. We review the theoretical foundation for this policy as well as the microeconometric evidence on its effect on the employment prospects of the unemployed. We also discuss the aptness of flexicurity policy to meet challenges from globalization, automation and immigration. The last section concludes and discusses some issues that United States (or other countries) would face in to adopting a flexicurity policy.

[1] To the right of the row titles, a (+) indicates that countries with higher values in the statistics in columns 1-2 are ranked better in columns 3-4, while a (-) indicates that countries with higher values are ranked worse. Policy variables are ranked based on our subjective view on whether they potentially benefit a low-paid worker. E.g., taxes are costly while social spending is beneficial.

Table 1

Performance and policy parameters of Denmark and the United States

	Denmark	*United States*	*Denmark*	*United States*
	---------- *Value* ----------		-- *OECD rank* (1-36) --	
Performance				
1. Subjective happiness (0-10 scale) (+)	7,6	6,9	1	15
2. Economic freedom (index 0-100) (+)	76,7	76,8	10	8
3. Confidence in government (%) (+)	63	31	6	30
4. Income per capita (thousands of US$) (+)	62	66	7	5
5. Inequality: Gini (%) (-)	26	39	6	33
6. Low pay incidence (%) (-)	8	24	3	36
7. Employment rate (%) (+)	75	71	12	20
8. Share long-term unemployed (%) (-)	17	13	9	8
9. Labor market turnover (%) (+)	22	20	5	7
Policy				
10. Tax burden (% of GDP) (-)	46	24	36	5
11. Social spending (% of GDP) (+)	28	19	4	20
12. Spending, passive LMP (% of GDP) (+)	1,1	0,2	10	34
13. Spending, active LMP (% of GDP) (+)	2,0	0,1	1	33
14. Public share of education spending (%) (+)	98	68	1	32
15. Union density (% of workforce) (+)	66	10	3	31
16. Employment protection (index 0-6) (+)	1,8	1,3	29	36
17. UI benefit duration (months) (+)	24	6	5	28
18. Net replacement rate, 3 months (%) (+)	83	57	4	27
19. Net replacement rate, 3rd year (%) (+)	67	8	1	33

Sources: OECD.Stat, OECD (2018, 2020a, 2020b) and 2019 Index of Economic Freedom (Miller et al. 2019).
Notes: The table shows key indicators on economic performance and policy for Denmark and the United States in the first two columns. The first parenthesis to the right of the row title shows the unit of measurement of the indicator. In the second parenthesis, a (+) indicates that countries with higher values of the indicator in columns 1-2 are ranked better when computing the rankings in columns 3-4, while a (-) indicates that countries with higher values are ranked worse. Rankings are among the 36 OECD countries based on the indicators, where "1" is the best, and "36" is the worst. If Denmark or the United States have the exact same value as another country then, as a convention, we give Denmark/US the best rank number. Data is from 2019 or latest available year. Income per capita corresponds to GNI. Low paid workers denotes the percentage of full-time workers earning less than two-thirds of gross median earnings. Share long-term unemployed is the percentage of unemployed individuals who have been unemployed for longer than 12 months. Labor market turnover is the difference between the hiring rate and the net employment change. LMP denotes Labor Market Policies. Employment protection is an OECD average score of four broad indicators of worker protection. Net replacement rates are for a single person with no children, earning 67 percent of the average wage level prior to unemployment. Data and more details on the computation are available in the online appendix.

The Danish Labor Market

Collective Bargaining

The Danish labor market model is a product of the long tradition of organized bargaining between workers and employers.[2] In Denmark, collective negotiations between unions and employer organizations dating back to the so-called September Agreement of 1899 have decided key labor market conditions, like hourly wages and hours worked. The original agreement followed a labor dispute of more than 100 days involving strikes and lockdowns (for discussion, see e.g. Høgedahl 2020). At one point during the dispute, more than half of the organized labor force was locked-out. The dispute ended with an agreement that employers accept the worker's right to organize, and the unions accept the employer's right to manage.

In its current form, the bargaining follows specified rules and a so-called "conciliation institution" helps in solving disagreements. The government is typically a passive partner in these negotiations, but if the parties cannot reach an agreement, the government can intervene and even dictate agreements. Lockouts and strikes can occur during the formal negotiation periods but are illegal between these periods.

Denmark has never had a statutory minimum wage. Basic wage levels are typically negotiated by trade unions and employer organizations at the sector level, and the final wage-setting is often determined in local negotiations at the firm level (for more details on the development of the wage negotiations in the Danish labor market, see Dahl, le Maire, and Munch 2013). In wage negotiations, unions are represented by larger trade union confederations. The largest is the Danish Trade Union Confederation (FH). It represents 64 different member organizations that each represents one or more occupations. FH bargains at the national level with the Confederation of Danish Employers (DA). The DA/FH area covers around half of the private labor market and has typically negotiated the first agreement, which then becomes a benchmark for the remaining agreements in the labor market, including for the public sector.

The unions play a large role in Danish society. Besides being a main part of the wage negotiations, they also take part in political processes on labor market policy. The so-called "triparty agreements" between government, the employer association, and the unions are the customary way to make decisions regarding labor market policies, educational policies, work safety, and other issues.

A precondition for such a system is a strong collective bargaining system. Denmark has a union density of around 66 percent—among the OECD countries with the highest union density (row 15). In contrast, the United States has a union density of only 10 percent. Similarly, the coverage of the collective bargaining systems (that is, the share of workers whose wages are

[2] More details on the Danish labor market can be found in Hansen and Tranæs (1999), Andersen and Svarer (2007) and Andersen (2019).

determined by collective bargaining even if they are not personally members of a union) is 84 percent in Denmark and 12 percent in the United States (OECD 2017).

Flexicurity

"Flexicurity" describes the Danish labor market policy that combines flexible hiring and firing rules for firms with high income security for workers. Making it easy to hire and fire workers allows each firm to adjust worker input in production and ensures high production efficiency and economic growth. Job security is low, but this is acceptable to workers and unions due to generous income compensation when unlucky workers are hit by temporary job losses, combined with an active labor market policy that helps such workers back into employment.

One measure of flexibility in hiring and firing decisions of firms is OECD's Employment Protection Index (row 16). This flexibility is similar in both the United States and Denmark: that is, both countries provide little job security and make it easy for employers to adjust their labor force. As a result, labor market turnover rates of the United States and Denmark are similar and at a high level compared to other countries (row 9). The high freedom of firms to adjust labor input aligns with the more general index of economic freedom (row 2), where Denmark and the United States are also aligned.

But while labor market flexibility is very similar in Denmark and the United States, the income security provided for unemployed workers is very different. Denmark is ranked near the top of high-income countries, both in terms of the maximum duration of unemployment benefits of two years and in terms of unemployment compensation, where the net replacement rate is 83 percent after three months of unemployment for people in the lower part of the wage distribution (rows 17-18). The United States is at the other end of the spectrum, with a maximum unemployment duration of six months under normal business cycle conditions, and with a net replacement rate (for a low-income single childless person) of 57 percent after three months of unemployment. In Denmark, unemployment insurance is partly paid from employer contributions to a fund, but also heavily subsidized by the government.[3]

The difference in income security becomes more striking in the third year of unemployment, at which point unemployment benefits are exhausted in both countries. For a low-income single person without children, it is possible to get means-tested benefits corresponding to a net replacement rate of up to 67 percent in Denmark, compared with 8 percent in the United States (row 19).[4]

[3] The unemployment benefit scheme in the United States includes the likelihood of extended unemployment insurance during recessions, which is not reflected in the table. Also, the net replacement rate varies with previous income and family characteristics. Table 1 is based on single individuals earning 67 percent of the average wage. The difference between Denmark and the United States is smaller when looking at families with children, but the replacement rate is in all cases larger in Denmark. Danish workers are better insured against job loss, but it is worth noting that for a given loss in disposable income, the drop in consumption is similar across Denmark and the United States (Andersen et al. 2021).

[4] In Denmark, this includes the guaranteed minimum income benefit and housing benefit programs, while for the United States it includes the Supplemental Nutrition Assistance Program. For more details on the mean-tested benefit programs and the computation of the replacement rates see OECD (2020c, 2020d, 2020e).

The more generous benefit system in Denmark is reflected in the total spending on "passive" labor market policies—that is, policies like unemployment insurance that just provide payments to individuals—which is above 1 percent of GDP compared to 0.15 percent in the United States (row 12). A standard worry of economists is that this high generosity might dampen incentives to work and reduce employment. However, this concern is not reflected in Denmark's labor market. The Danish employment rate is higher than in the United States, and the two countries are ranked similarly to each other when it comes to the incidence of long-term unemployment (rows 7-8).[5]

Active Labor Market Programs

Unemployed individuals in Denmark are required to participate in "active" labor market programs which is a central component of the Danish flexicurity model. These programs provide job-search assistance, work practice and retraining in exchange for receiving unemployment benefits. Unemployment benefits can be sanctioned if an unemployed fails to comply with the requirements. In 2021, around 12 percent of the unemployed were sanctioned at some point of their unemployment spell.[6] The total costs of active labor market programs are close to 2 percent of GDP per year and makes Denmark, by a wide margin, the OECD country that spends most on active labor market policy (row 13). The United States, at the other end of the spectrum, allocates 0.1 percent of GDP to active labor market measures.

The intensity and duration of active labor market policies increase during a period of unemployment. The unemployed are matched to a caseworker. In the early stages of an unemployment spell, they meet regularly and the caseworker monitors job search activities and guides the job search process. The first meeting occurs within one month of unemployment. If deemed necessary, an unemployed person can participate in short job search courses. If the caseworker assesses that an unemployed needs educational requalification or closer contact to the labor market to increase job chances, it is possible to engage in four-week work practice jobs at public or private firms or to participate in short employment-focused educational programs. If these short-term measures are insufficient to bring an unemployed back into employment, it is possible to have longer subsidized employment periods of up to four months duration in either private or public companies or to engage in long-term educational programs. These activities typically start after six months of unemployment.

Strong unions and generous unemployment benefits affect the wage distribution, in particular by ensuring a high effective minimum wage floor. In Denmark, only 8 percent of employees work in full-time jobs that pay less than two-thirds of the gross median earnings, whereas in the United States it is close to one-quarter (row 6). Again, Denmark and the United States are in the opposite end of the rank distribution among OECD countries.

A high minimum wage floor risks excluding low-productivity individuals from entering the job market. Some people who are eager to work might have productivity levels below the required

[5] The higher employment rate in Denmark does not imply that overall labor input in Denmark is higher than in the United States. Hours worked per person is considerably lower in Denmark and the other Nordic countries compared to the United States because of both fewer work weeks and lower weekly work hours (Bick et al. 2019).

[6] Reported by The Danish Agency for Labor Market and Recruitment of the Ministry of Employment at http://jobindsats.dk

threshold. One purpose of the active labor market policy—and, more generally, the education system—is to ensure that nobody falls below the minimum-productivity threshold. In Denmark, education at all levels is provided free-of-charge by the public sector with almost no role played by private institutions: overall, the government share of total education expenditures is 98 percent (row 14). This includes substantial resources devoted to adult vocational training of employed workers at off-the-job training sites. Denmark is the only OECD country where the public sector provides and finances this type of vocational training (Humlum and Munch 2019). In addition, adult students receive student allowances and access to cheap government loans.

The History and Evolution of the Flexicurity Model

Denmark has a long history of combining a high degree of flexibility in hiring and firing decisions of firms with a high level of income security. However, the flexicurity model underwent major changes in the early 1990s. Here, we discuss the shift that occurred.

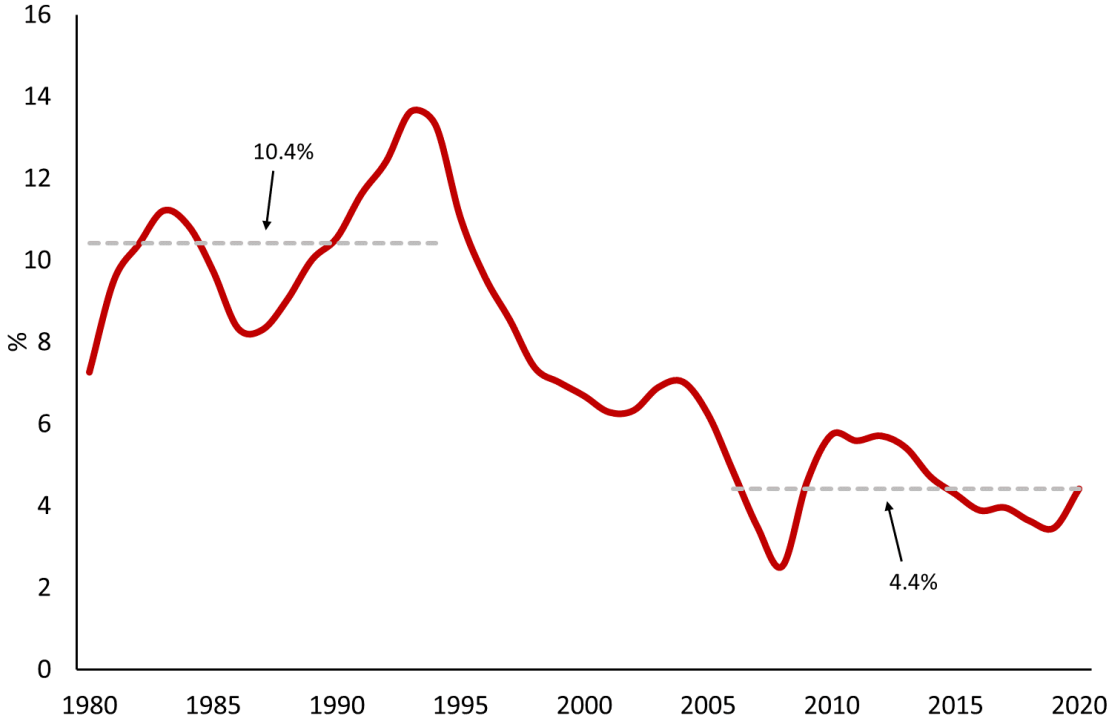
Failure of the Old Flexicurity Regime

The older flexicurity model had even longer maximum duration of unemployment insurance benefits than the two years today. In practice, the duration was close to infinity because participation in active labor market programs at the end of the statutory 2.5 year duration of unemployment insurance benefits was sufficient to qualify for a new 2.5 year period. Unemployed workers were offered job training and education in active labor market programs, but with a much lower intensity and with voluntary participation—which in practice started close to expiration of unemployment benefits.

The pre-1990 flexicurity model failed to combine high income security with low unemployment. Figure 1 plots the unemployment rate in Denmark over the last four decades, based on administrative records of people who are registered as unemployed and including people who participate in active labor market programs. After the oil price shocks and macroeconomic disruption of the 1970s, the share of unemployed people in the labor force reached 10 percent in the early 1980s. This was expected to be temporary. But while the favorable business cycles in the mid-1980s brought unemployment down to 8 percent in 1986-87, it also led to significant wage rises. The nominal hourly wage rate in the industry sector grew annually by 7 percent in 1986-87, corresponding to an annual real wage growth of 4 percent, and the total wage share out of gross factor income increased from 54 percent to 58 percent from 1984 to 1987 (for details, see online Appendix and Danish Economic Council 1995). Afterwards, unemployment climbed to 14 percent in 1993.

Figure 1

Unemployment in Denmark



Source: The ADAM Data Bank of Statistics Denmark, version 2021. See www.dst.dk/en/TilSalg/ADAM/Databank.
Notes: The graph plots the share of people in the labor force who are unemployed. It is based on administrative records of people who are registered as unemployed and includes people who participate in active labor market programs. The gray dashed lines are averages for 1980-1994 and 2006-2020.

Over the 15-year period of the old flexicurity regime from 1980 to 1994, unemployment fluctuates around an average, long-run rate of more than 10 percent, as illustrated by the horizontal, dashed line in the left part of Figure 1. In addition, survey evidence in Pedersen and Smith (1995) shows that 40 percent of the unemployed recipients of unemployment insurance in the early 1990s did not fulfill standard international criteria for being unemployed by being ready to take up relevant work and actively searching for a job (ILO 2019). Thus, a large share of the recipients of unemployment benefits did not seem to be involuntary unemployed.

Toward a New Flexicurity Regime

The poor labor market performance in the old flexicurity regime triggered major adjustments starting in the early 1990s. The flexibility in hiring and firing of firms was unchanged, but income security decreased. The maximum duration of unemployment insurance was reduced to four years at the turn of the century and was then reduced further to its current length of two years. However, even after exhaustion of unemployment insurance benefits, unemployed workers are still eligible for means-tested social assistance at a relatively high level. As noted earlier, a low-paid person without children can still receive up to two-thirds of previous income (row 19 in Table 1). The replacement rate is reduced significantly for a few targeted groups, most notably young workers under age 25. These targeted reductions in income security did appear to increase employment to some extent (for example, Jonassen 2013, Danish Economic Council 2014, Hermansen 2015).

However, by far the biggest change was in the area of active labor market policy. A major labor market reform in 1994 introduced the key principle of "rights and duties" into the active labor market policy. Recipients of unemployment insurance, as well as people receiving social assistance, are now required to apply for jobs, to participate in active labor market policies, and to accept job offers fitting their profiles. Failure to comply is met with benefit sanctions (Svarer 2011). In addition, the active labor market policy intensified by offering and requiring participation frequently in active labor market policies. In 1993-94, before the reforms, one out of six unemployed individuals participated in a program during the year; in comparison, during the last decade more than half of the unemployed participate annually in some type of activation program (Ministry of Employment 1993-2019, for more details, see Online Appendix).

This "workfare" element can increase the willingness to work of unemployed individuals and moderate wage claims of workers and unions because of a worsening of their threat point/outside option in the wage negotiations. At the same time, the programs can increase productivity of workers and reduce information frictions—and thereby increase employment. In Figure 1, note that the revised flexicurity regime was followed by a descent of the unemployment rate over the next 15 years to a much lower long-run level. During the last 15 years, the unemployment rate fluctuates around a long-run level of 4.4 percent. We attribute this major improvement in labor market performance mainly to the intensified Danish active labor market policy, alongside the changes in the unemployment insurance scheme. In the next section, we discuss the theoretical foundation for introducing workfare in the active labor market policy and review microeconometric studies on the employment effects of the Danish active labor market policy.[7]

Impact of the Collective Bargaining System?

A theoretical hypothesis is that a collective bargaining system can achieve both high wages and high employment, with lower-skilled workers being paid more than their productivities. Can this explain the successful Danish labor market performance? In the efficient bargaining model of McDonald and Solow (1981), such an outcome is possible because both wages and employment are subject of negotiation between unions and employer organizations. However, in the main agreement between Danish unions and employer organizations from 1899, it is stated explicitly that firms have the right-to-manage—that is, the right to decide on hiring and firing of workers. In this case, where bargaining is only over wages and firms decide employment, theory suggests that firms do not keep workers with productivities below the going wage.

It could still be the case that workers and firms agree explicitly or implicitly on wage compression, where firms combine more-skilled people paid below their productivity level and less-skilled people paid above their productivity level. In this case, employment of less-skilled people is not on the labor demand curve, as firms pay this group more than their productivity

[7] One may ask about the role of earned income tax credits (EITCs) to boost employment in this case. An EITC was implemented in Denmark much later (2004) than in the United States and, therefore, cannot explain the big drop in unemployment, which took place earlier. Moreover, participation tax rates continue to be high in Denmark because of the high out-of-work benefits (Kleven and Kreiner 2005, Immervoll et al. 2007).

level. Empirical evidence for young people, who are low-skilled and earn low wages, indicates that this does not take place in practice. Kreiner, Reck, and Skov (2020) use population records on wages and employment at the monthly frequency to study what happens when young workers turn 18 years old and become eligible for the significantly higher negotiated minimum wages that apply for adults. In the agreements, the basic minimum hourly wage rate of a young adult who is 18 years or older was around $15 in 2016. It is considerably lower when younger. On average, the observed wage rate jumps up by 40 percent at age 18 (computed using the midpoint method), and this jump is of a similar size as the jump in the agreed minimum wage levels. Thus, minimum wages are binding.

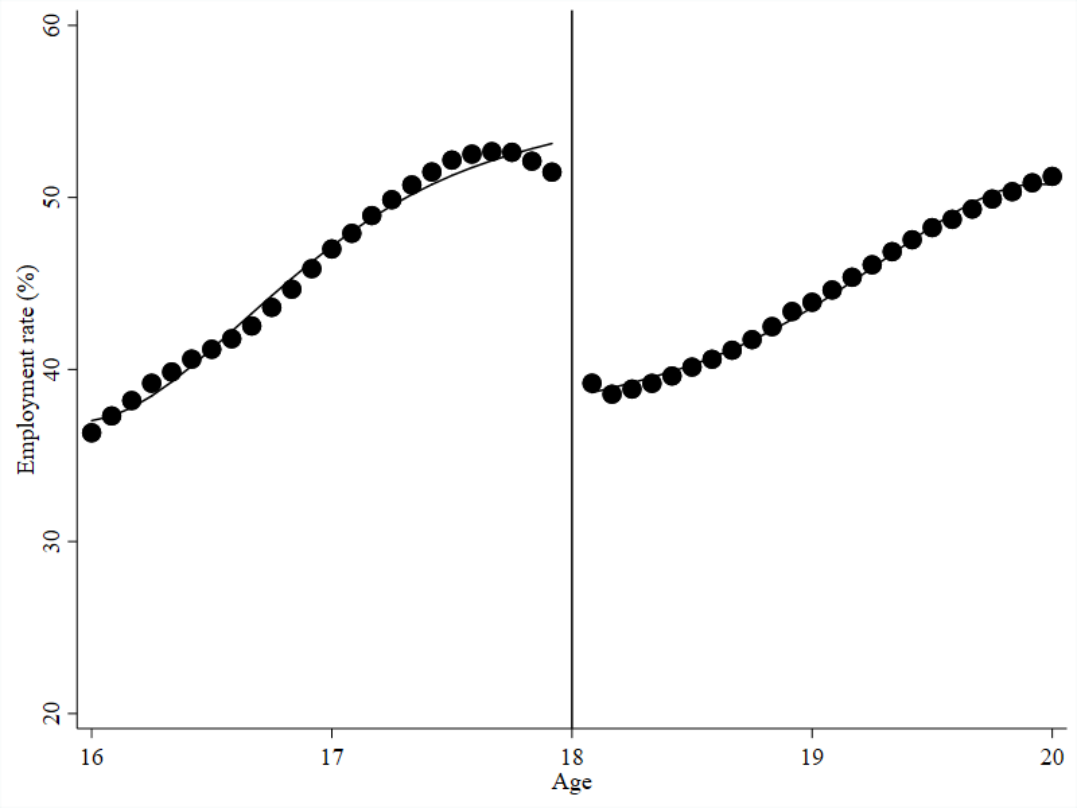
Figure 2 shows how the minimum wage hike at age 18 affects employment. The figure shows monthly employment rates for people at age 16-20. At the age discontinuity of the minimum wage, employment of young workers drops by 15 percentage points. This implies that one-third of the employed lose their job when they turn 18 years old. The graph also shows that it takes two additional years (age 20) before employment is back to the level before the wage hike. The quick employment adjustment of firms at the wage hike strongly suggests that employment is on the labor demand curve and, importantly, that firms in Denmark do not keep low-skilled workers if wage costs are above their productivity levels.

Danish wage setting became more decentralized during the 1990s, with a large part of wages being determined in bargaining at the firm level (Boeri, Brugiavini, and Calmfors 2001). This greater flexibility in the wage determination also led to more wage dispersion (Dahl le Maire, and Munch 2013). This shift may have contributed to the rise in employment by making wages in the lower part of the wage distribution more aligned with productivity levels. On the other hand, minimum wages and many key labor market conditions continue to be negotiated at the sector level. The organizational changes seem too small to fully explain the big decline in unemployment. Again, we see the major change in the flexicurity policy as the likely most important driver of the long-run development in unemployment.

To sum up: The highly organized labor market ensures that low-skilled and vulnerable workers are not exploited and receive decent wages. Together with a generous unemployment compensation scheme, this creates high income security, while the flexibility in hiring and firing decisions of firms supports a high labor demand. However, to keep employment at high levels, it is important to also spend large resources on active labor market policy and to include both carrots and sticks.

Figure 2

Employment rate around workers' 18th birthday



Source: Kreiner et al. (2020).

Notes: The figure depicts employment rates by age, in months, for two years before and after individuals turn 18 years old. It is based on monthly payroll records for the Danish population. The figure replicates Figure 1.B in Kreiner et al. (2020), which describes the data and the estimation of the fitted line and the percentage drop in employment at age 18. The graph shows that employment drops by 15 percentage points, or 33 percent, when people turn 18 where the wage rate jumps up by 40 percent. The percentage changes are computed using the midpoint method.

Active Labor Market Programs in Theory and Practice

What are the potential benefits of a "workfare" policy in which recipients of unemployment benefits must spend time in certain government-organized active labor market policies? In empirical terms, does Denmark's high spending on active labor market policy significantly enhance labor market prospects of the participants?

Workfare Can Mitigate Adverse Selection

To isolate the role of a workfare component in active labor market policy we may ask: Can it be socially optimal to require workfare activities in exchange for unemployment benefits if the activities themselves are unproductive, like the equivialent of digging holes and re-filling them? The answer is yes (Hansen and Tranæs 1999; Kreiner and Tranæs 2005).[8]

[8] Here, we study the use of workfare in the context of active labor market policy and involuntary unemployment, and show it can be Pareto-optimal to use workfare. Another strand of literature asks whether it is socially optimal to require unproductive

To see why, recall that under the old flexicurity regime in Denmark without workfare, 40 percent of unemployment insurance recipients did not fulfill standard criteria for being involuntarily unemployed. In this case (of adverse selection), workfare can be used as a screening device to prevent people with more taste for leisure from claiming high unemployment insurance benefits intended for involuntary unemployed individuals. This is illustrated in Figure 3. It shows two examples of labor supply decisions for two individuals X and Y. In both diagrams, the budget line illustrates how extra hours of work h increases disposable income y, with the slope given by the net-of-tax wage rate. Utility is increasing when moving north-west in the diagrams corresponding to getting more income and more leisure. Indifference curves I_2^X and I_1^X illustrate preferences of type X, while the indifference curve I^Y illustrates an indifference curve of type Y, which is less eager to work than type X. Type X always prefers point A and working h^* hours.

Consider the case where it is possible for those who are not working to receive social assistance $\underline{b}$ but no unemployment benefits b. In the top panel, type Y prefers to receive social assistance $\underline{b}$ instead of working. The policymaker would like to offer unemployment benefits b to type X individuals who cannot find a job and are involuntary unemployed. However, the policymaker cannot distinguish between an involuntary unemployed type-X person and a type-Y person who currently does not wish to work at the going wage. Offering unemployment insurance benefits to involuntary unemployed individuals of b is costly because type Y individuals can also claim these benefits - and will do so if b is higher than $\underline{b}$.

But if receiving b is made conditional on spending h'' hours on workfare activities (point B in the figure), then it is not attractive for type Y who in this case prefers to receive $\underline{b}$, which is not conditioned on workfare (notice that point B is on the indifference curve for type Y, while $\underline{b}$ is just above this indifference curve).

Unemployed type-X individuals will claim the combination of benefits and workfare offered in point B, and only if they cannot find a job. This gives them a strictly higher utility level than I_1^X, corresponding to social assistance $\underline{b}$. Therefore, the policymaker can make a Pareto improvement by offering point B compared to a situation with only the social assistance level $\underline{b}$ (for a formal proof, see Kreiner and Tranæs 2005).

The bottom panel illustrates another type of case where it can also be socially optimal to use workfare. In this case, the indifference curve I^Y is such that type Y prefers to work at point B compared to receiving social assistance $\underline{b}$ (note that the indifference curve is tangent to the budget line and that the indifference curve is above $\underline{b}$). Introducing unemployment benefits b without workfare to involuntary unemployed is again costly, this time because type Y will stop working and claim benefits. However, if such benefits is combined with h'' hours of workfare (point B) then this is not more attractive than working for type Y. Type X strictly prefers unemployment benefits combined with workfare at point B compared to receiving social assistance $\underline{b}$. Therefore, the policymaker can make a Pareto improvement by offering point B compared to a situation with only the social assistance level $\underline{b}$. Thus, also in this case, workfare can be an attractive tool for policymakers who wish to offer high unemployment compensation for the involuntary unemployed.

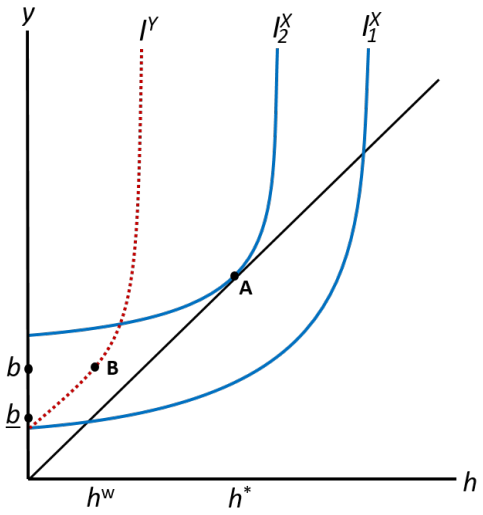
workfare activities of low-skilled people as part of redistribution policy (Besley and Coate 1992, 1995). In this context, the "screening problem" is different and it is typically not Pareto-optimal to use workfare.

To conclude, requiring participation in active labor market programs may work as a "screening device" that prevents some people from becoming voluntary unemployed and receiving unemployment insurance benefits.

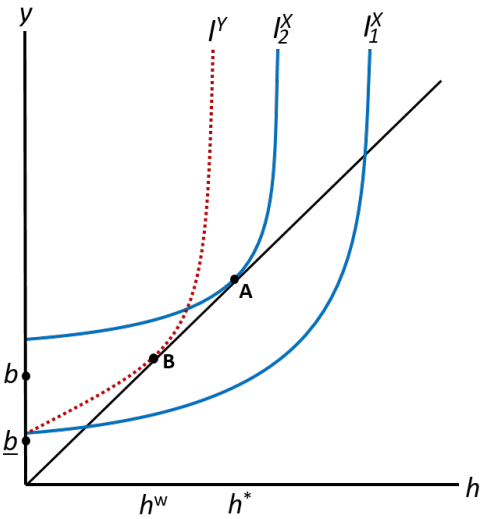
Figure 3

Optimal use of workfare in unemployment compensation schemes

Mimicking persons (type Y) do not work



Mimicking persons (type Y) work



Source: Author's own illustrations

Notes: The graphs plot income *y* by hours worked *h* of two individuals (X and Y). They have the same budget line, but different preferences for work illustrated by their indifference curves. Type X is most eager to work and chooses point A in both panels if working. However, type X may be temporary jobless. In this case, in the top panel, offering the UI benefit level *b* to involuntary unemployed type X persons is too costly because individuals outside the labor market (type Y) who normally receive the SA benefit level $\underline{b}$ will also claim the high benefit level *b*. Requiring recipients of *b* to spend h^w hours in workfare activities avoids this mimicking and targets the high benefit level *b* to unemployed type X persons. This increases their utility while keeping the benefit and utility level of type Y persons unchanged. The bottom panel illustrates a similar situation where a mimicking type Y person will stop working at point B if it is possible to claim the high benefit level *b*. By requiring that benefit recipients spend h^w hours in workfare activities, it is possible to target the high benefit level *b* to unemployed type X persons and increase their utility.

Workfare Can Mitigate Moral Hazard and Enhance Competencies

In addition to these results on adverse selection, complementary research shows in an equilibrium search-setting that workfare can mitigate moral hazard effects in job search and wage formation (Andersen and Svarer 2014). It can work as a "threat/motivation" that makes unemployed individuals search harder and lower their reservation wages in order to get a job and thereby avoid program participation.

Workers that complete a program may also get better competencies that raise job finding rates and future earnings through a "program effect." On the other hand, job finding rates may decrease when participants are in the program because they have less time for job search or wish to complete the program– that is, a "lock-in effect."[9]

With all these hard-to-observe potential effects in play, it is difficult to estimate the benefits and costs of active labor market programs and how to make specific design decisions for these programs.

Lessons from the Ongoing Danish Policy Evaluation

For a country that uses as many resources on active labor market policy as Denmark, it is especially important to go beyond theory and build confidence in how different active labor market policies work and how to best allocate resources across different types of programs.

There has been a strong focus in the recent decades on evidence-based policymaking in Denmark's active labor market policy[10]. The goal is that decisions on how to design the policy and on the amount of resources to use rely as far as possible on cost-benefit analyses based on high-quality empirical evidence. This evidence is based partly on lessons from the international empirical literature (for example surveyed in Card, Kluve, and Weber 2018), on Danish register data-based evaluations using modern identification strategies to identify causal effects, and on a long sequence of large-scale randomized control trial experiments organized by the Ministry of Labor. The systematic use of randomized control trials to evaluate the impact of the active labor market policies is a rather unique feature of the Danish labor market policy. The randomized control trials have the additional advantage that they provide a natural setting for evaluating the cost-effectiveness of the programs.

[9] On the macroeconomic level, the presence of activation may affect wages negatively or positively depending on its effect on the outside option of employed (wage effect), and it can induce more vacancy creation if aggregate search effort is increased, which also increases the benefit for firms of posting vacancies (vacancy effect). In addition, there may be spill-over effects to other unemployed individuals if, for example, participating in an active measure increases job chances of treated unemployed individuals on behalf of job chances of untreated unemployed individuals competing for the same jobs (congestion effects) (Crépon et al. 2013, Ferracci et al. 2014 and Gautier et al. 2018).

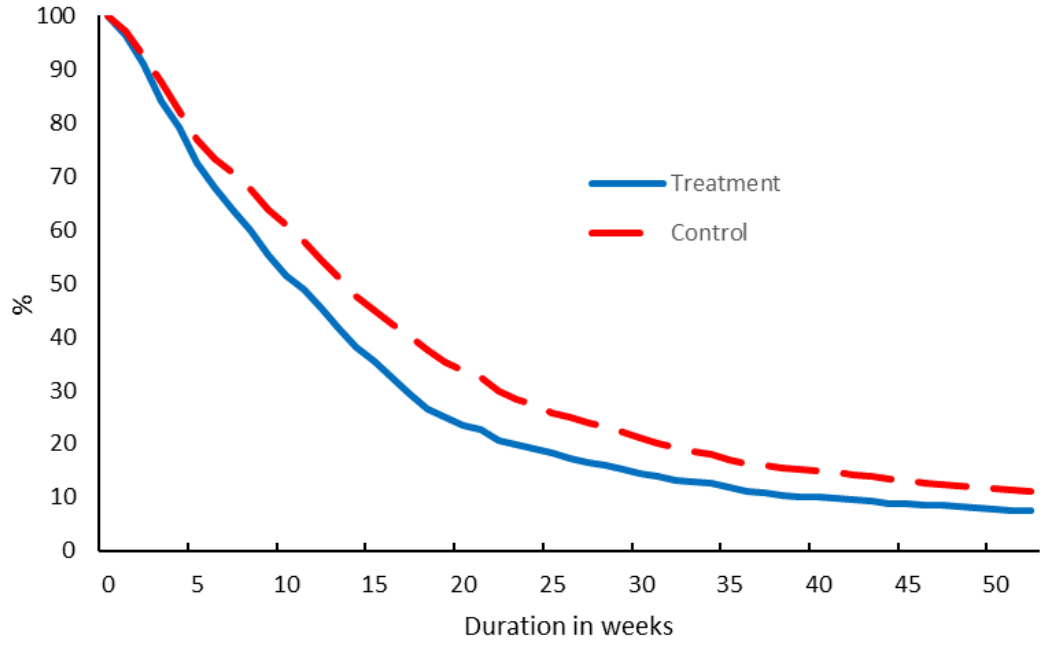
[10] For more details see: https://www.star.dk/en/evidence-based-policy-making/, where the evidence strategy is formulated. It consists of three strands: collect existing evidence about what works, innovate new evidence in relation to this, and communicate the results. The process of involving research in the actual policy-making has been a relatively long tradition in Danish labor market policy, and is presumably attributed to the early access to high quality micro data on individual labor market spells since the 1990s.

The Danish Ministry of Labor has organized eleven randomized experiments since 2005. The first experiment, called Quickly Back to Work, was conducted in two counties in Denmark during the winter of 2005-2006 and was targeted at newly unemployed recipients of unemployment insurance. All individuals in the two counties who became unemployed, and who were entitled to unemployment insurance benefits during this period, were allocated to either a treatment group or a control group. In practice, those born on the 1st to the 15th were given the treatment, and those born on the 16th to the 31st were not. The treatment consisted of intensified labor market measures, involving information, early mandatory participation in job search assistance programs, frequent meetings with case workers, and full-time program participation in an active labor market program for at least three months for those still unemployed after 18 weeks.

Figure 4 from an analysis by Gautier et al. (2018) shows the unconditional effects on the employment status of individuals due to the experiment. The survival curves in the diagram show the duration of unemployment of the newly unemployed individuals in the treatment and control groups. After ten weeks, about half of the people in the treatment group have left unemployment, and half are still unemployed. The share still unemployed in the control group is around 60 percent. The 10 percentage-points lower unemployment rate in the treatment group corresponds to a reduction of 15 percent. The difference between the two groups widens up to around 20 weeks of elapsed duration. At this point, the number of people who are still unemployed is 30 percent lower in the treatment group compared to the counterfactual unemployment in the control group.

Figure 4

Exit from unemployment for treatment and control groups in the Danish Quickly Back to Work experiment



Source: Gautier et al. (2018, Figure 4).
Notes: The figure shows the fraction of individuals that are still unemployed at different elapsed durations of unemployment. The figure distinguishes between unemployed individuals that participated in a randomized controlled experiment (Quickly Back to Work) that offered more frequent participation in active labor market programs than the control group which was subject to the

traditional labor market policy. The graphs are based on weekly unemployment data for the two groups of unemployed.

Several authors have evaluated this experiment in more detail. Graversen and Van Ours (2008) apply duration models and find that the re-employment rate increases about 30 percent in the early phase of the unemployment period. Both Graversen and Van Ours (2008) and Vikström, Rosholm, and Svarer (2013) investigate which elements of the activation program are most effective and find that the threat effect of activation and job search assistance are most effective. That is, unemployed respond to the requirement of participating in activation by leaving unemployment at an increasing rate as the time of activation is approaching. Rosholm (2008) finds that the estimated propensity to participate in meetings or being activated drives the difference in the job finding rates between treated and non-treated individuals. The Danish Economic Council (2007) have computed the impact on the government budget, including saved unemployment insurance benefits, of Quickly Back to Work to be a surplus of around 15,000 Danish kroner (approximately $2,500) per unemployed in the experiment.

The success in terms of positive effects on employment and public finances of Quickly Back to Work paved the way for further experiments that sought to disentangle the effects of the individual measures. A subsequent experiment implemented in 2008 separately studied the effects of three types of interventions: more frequent individual meetings with case workers; start of activation in job training/education after 13 weeks instead of after 26 weeks; and use of individual meetings versus cheaper group meetings with caseworkers. Maibom, Rosholm, and Svarer (2017) find that the treatment group accumulates more weeks in employment across all three interventions. In addition, all three interventions had a positive impact on public finances. The effect on public finances is best for individual meetings, then group meetings, and finally early activation.

The findings from the two experiments combined with supporting evidence from the economic literature have had a strong influence on Danish labor market policy, with early and frequent individual meeting activity of unemployed individuals with their caseworkers now being the norm.

In addition to the experimental evidence, microeconometric evidence on Danish population register data in Rosholm and Svarer (2008) shows a strong effect on the exit rate from unemployment even before the unemployed enter active labor market policies. This evidence of a "threat effect" from active labor market policies aligns with evidence from other countries (Black et al. 2003, Hall et al. 2018) and suggests that the active labor market policies mitigate the adverse selection and moral hazard effects of high unemployment insurance benefits in line with the workfare theory of labor market policy.

Subsequent experiments have focused on unemployed individuals with a more marginal attachment to the labor market: for example, long-term social assistance recipients, people on sickness benefits (for example, Rehwald, Rosholm, and Rouland 2018), and young unemployed individuals with mental or cognitive challenges (for example, Rosholm, Mikkelsen, and Svarer 2019). The results from these experiments are less positive in terms of improving employment

status and cost-effectiveness, and often they do not provide solid evidence for using active labor market measures for unemployed individuals with weak attachment to the labor market.

In summary, the benefits of workfare in active labor market policy is well founded in theory and evidence, although the effects do vary considerably across program characteristics and targeted groups. Indeed, a subset of the evaluated programs did not meet cost-effectiveness requirements, thereby pointing to the need for continuous evaluation and redesigning of active labor market policies.

The Challenges of Globalization, Automation and Immigration

In recent decades, labor markets in many developed economies have been challenged by globalization, automation, and immigration. Although these developments are likely beneficial for aggregate income, they can also pose a disruptive threat for employment and especially for the income of low-skilled workers. Outsourcing of production to low-wage countries moves domestic low-skilled jobs away. Automation and the adoption of industrial robots reduce the demand for low-skilled labor. An inflow of foreign labor seeking employment opportunities may push down wages or employment prospects of native low-skilled individuals.

However, as is clear from Table 1, Denmark is doing quite well on measures of low unemployment, many workers in low-paying jobs, and a relatively equal distribution of incomes. One possibility is that the Danish economy is more isolated from these forces. The alternative is that the Danish labor market and flexicurity are doing well in accommodating the challenges.

Many facts suggest that the Danish economy is affected like other developed countries by globalization, automation, and immigration. Denmark is a small-open economy inside the European Union where agreements ensure free mobility of labor and capital. Denmark has a high degree of international collaboration and exchange of goods and services. For example, the foreign value added as a share of Danish exports is 33 percent compared to an OECD average of 24 percent (OECD 2016).

Hummels et al. (2014) investigate the effects of offshoring by Danish manufacturing firms and find that offshoring leads to a reduction in employment, primarily through a reduction in low-skill workers. In addition, offshoring increases wages of high-skilled workers, but decreases wages of low-skilled workers. Related, Utar (2018) investigates the effects of Chinese import penetration on workers in Danish firms and finds that workers exposed to competition face a higher risk of unemployment.

Acemoglu and Restropo (2020) show that Denmark, in an international comparison, has a high adaption of industrial robots. For the United States, they find that the increased use of industrial robots reduces employment and wages in local labor markets. In a Danish context, Humlum (2019) finds that industrial robots have increased average real wages but lowered real wages of production workers employed in manufacturing. This can account for one-quarter of the fall in the employment share of production workers in Denmark since 1990.

In short, the Danish labor market seems strongly affected by globalization and automation as are many other countries. However, the good Danish labor market performance indicates that the flexicurity model, with its massive spending in active labor market policy and education, appears to be accommodating the shocks and facilitating the necessary reallocation of labor.

Inflow of low-skilled immigrant labor may also pose a threat to native low-skilled workers, but this conclusion is not obvious. Foged and Peri (2016) find that an increase in the supply of refugee-country immigrants in Denmark pushed less-educated native workers, especially young and low-tenured workers, to pursue less manual-intensive occupations. As a result, and somewhat unexpectedly, immigration affected native unskilled wages and employment positively.

On the other hand, the Danish model does seems to have difficulties in integrating low-skilled immigrants into the labor market. The employment gap between natives and non-natives in Denmark is close to 30 percentage-points, which is higher than the OECD average and significantly higher than the US gap, which is below 20 percentage-points (OECD 2017). One reason might be that the Danish minimum wages become an entry barrier for these individuals who do not have the same basic education background as the natives and do not share the language, thereby making integration policy more challenging.

Some Open Questions

The Danish flexicurity policy combines flexible hiring and firing rules of firms with high income security of low-skilled workers ensured by a long duration of unemployment insurance benefits and high income replacement rates. However, the key to the success of the Danish flexicurity policy since the early 1990s is its extensive use of active labor market policies, with participation in the programs being both a right and a duty of the unemployed. The workfare requirement to spend time in these programs tests the willingness to work of unemployed individuals and reduces the adverse selection and moral hazard problems of a high unemployment compensation. Denmark does not give up on getting an unemployed individual back into work. The Danish active labor market programs are subject to ongoing microeconometric evaluation, building to a large extent on regular randomized control trial experiments. Reassuringly, the evidence shows that the policy has the intended effects, although effects vary a lot across program characteristics and targeted groups.

For American readers, an obvious question is whether it is feasible and desirable for the United States to adopt its own version of Danish Flexicurity. There are several difficult issues here.

First, the population of Denmark is similar to that of a single mid-sized US state like Colorado or Wisconsin. The Danish population is very homogenous and everyone receives, more or less, the same basic education in public schools. The problems with integration of immigrants into the Danish labor market suggest that it might be more difficult and expensive, or even infeasible, to implement nationwide flexicurity in a country with a more heterogeneous population such as the United States.

Second, a necessary condition for the successful combination of high income security and high employment is massive public spending on active labor market policy and, maybe, also education in general. As noted earlier, Danish spending on active labor market policy alone corresponds to 2 percent of aggregate income, the highest level in the OECD, compared to 0.1 percent in the United States. The US GDP will probably exceed $22 trillion in 2022, and so spending 2 percent of that amount would be $440 billion per year. This amount does not include Denmark's high direct spending on unemployment compensation and income support. For a discussion of how it is possible to tax so much in countries like Denmark, a useful starting point is Kleven (2014) in this journal.

Third, practical implementation of Danish-style active labor market policies requires a substantial number of caseworkers who need to have a high level of government information about individuals, given that that unemployed individuals are allocated to different active labor market policies based on discretionary assessments of caseworkers.

Finally, prevailing social attitudes about fairness of outcomes are important for how people view inequality and the need for policy action (Hvidberg, Kreiner, and Stantcheva 2021). A flexicurity policy is expensive for taxpayers and disproportionally helps people with weak labor market attachments. Scandinavians are more likely to perceive these individuals as being unlucky, rather than lazy, and as having small chances of upward mobility compared to Americans (Alesina, Glaeser, and Sacerdote 2001, Alesina, Stantcheva, and Teso 2018). Danes also seem to have a higher trust in government and stronger civic virtues (row 3 in Table 1). For example, Algan and Cahuc (2009) measure civic-mindedness based on survey responses to this question: "Do you think it can always be justified, never be justified, or something in between to claim government/state benefits to which you have no rights." By this measure, Denmark leads the countries in this sample on civic-mindedness, while the US responses are in the middle of the pack. A high degree of civic-mindedness in this sense can both make unemployed workers more responsive to active labor market programs, and also help to create broad-based political support for flexicurity policy.

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