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# The Middle Class Time Squeeze

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## Executive summary

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- Worktime has declined since the end of the Industrial Revolution, and this combined with increasing lifespans has resulted in large increases in the amount of total leisure the average individual can expect to enjoy over their lifetime. In recent decades, however, declines in worktime for employed individuals have slowed or stopped in the U.S. even as work hours in many other high-income countries have declined. The average American worker went from working a few hundred hours less than the average French or German worker to a few hundred hours more in the span of a few decades.
- The working time gap between the U.S. and Europe is explained by both a higher number of vacation weeks in Europe and a longer workweek in the U.S. The U.S. is the only OECD country with no statutory minimum level of annual leave, and the vacation time offered by many U.S. employers falls below the minimum level of leave offered in many other countries. Many Scandinavian and Western European countries have obtained shorter standard workweeks through legislation or collective bargaining.
- The stability of average work hours combined with the increasing proportion of couples who are dual earners means that families are collectively putting in more work hours now than in the recent past. The fraction of couples who are dual earners has risen from about half to 70% over the last four decades. The largest increase within this category has been among couples in which both the mother and the father work full-time. The average middle-class married couple with children now works a combined 3,446 hours annually, an increase of more than 600 hours—or 15 additional weeks of full-time work—since 1975.
- The overwhelming majority of middle-class income growth over this period was due to increases in women's labor force attachment, work hours, and hourly earnings. In the process of addressing a perceived money squeeze, many middle-class families now face a time squeeze. But because there is an upper limit on hours worked,

further improvements in middle class incomes may be limited unless the adults in these families can earn more per hour.

- Work and family responsibilities tend to peak between the ages of 30 and 44, putting young and middle-aged adults under particular time pressure. Time in nonmarket (household) work has declined for women and increased for men since the 1960s, though women still perform much more work in the household. Both mothers and fathers have increased their time spent caring for children since the 1960s. Together, fulltime dual-earners spend a combined 139 hours per week in total work—defined as market work, home production, childcare, and adult care—compared to 125 hours per week among couples with a fulltime employed father and stay-at-home mother.
- Policies and practices surrounding work and family life have not kept pace with changes in women’s economic roles. Individuals are expected to work most intensively at the age when they have the greatest family responsibilities, with limited options to take time off for family care or retraining. The expense of childcare is high relative to middle-class incomes and school hours are not well aligned to typical work hours, making it challenging for many parents, particularly mothers, to work full-time. Paid family leave and flexible work arrangements, such as the ability to work from home, are still unavailable to many workers.
- In response to these developments, we suggest a number of new policies:
  - Reductions in the standard work week or work year
  - More paid leave
  - Mid-career breaks for family care or life-long learning
  - Later retirement
  - Subsidized childcare
  - Better alignment of school and work hours
  - More telecommuting and investments in transit infrastructure

## **Introduction**

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Time is the ultimate scarcity. It is also the great equalizer. We each have exactly 24 hours per day, 7 days per week, and 365 days per year. The last two centuries have seen considerable changes in the number of years available to us and the way we spend them. Life expectancy varies but has risen on average, providing greater leisure that is primarily enjoyed later in life. Additionally, increased productivity has allowed workers in high-income countries to reduce work hours, making more time available for themselves and their families. By these metrics, we are living in the most time-rich period in modern history.

More recently, progress toward greater time prosperity has stalled in the U.S. and has been unevenly distributed. Annual worktime for the average prime-age American has not fallen significantly over the last forty years, diverging from trends in Western Europe and Scandinavia. Not only do Americans work longer hours than those in other advanced nations, but the gap in longevity between those with higher and lower incomes has widened in the U.S. Finally, households are increasingly dependent upon the incomes of two earners, leaving them with limited time for other activities such as family care, sleep, and leisure.

This paper first traces the historical evolution of working time in the U.S. and how we compare to other high-income countries. We document that over the long term, hours of work have declined in most advanced countries, but in recent decades, the U.S. stands out as a country where that decline has ceased and where, as a result, Americans work far more than those in other rich countries.

We then turn to what we call “the middle-class time squeeze.” That squeeze has been wrought mainly by the failure of many policies and practices surrounding work and family life to adapt to the rising need for families to have a second earner.

In response to these developments, we suggest a number of new policies:

- Reductions in the standard work week or work year
- More paid leave
- Mid-career breaks for family care or life-long learning
- Later retirement
- Subsidized childcare

- Better alignment of school and work hours
- More telecommuting and investments in transit infrastructure

These policy adjustments would be responsive to the many changes that have occurred over the last half century: greater affluence making more leisure affordable, changes in women’s roles requiring new ways to balance market work and work in the home, deindustrialization requiring more midcareer retraining, rising longevity enabling later retirement, and greater lifetime inequality in income and time that can be addressed in part by a reformed social insurance system.

## **1 The Evolution of Worktime in the U.S. and Europe**

Reading the popular press and any number of recent books about how people feel about their time leaves one with the impression that most of us feel we are working too hard and have too much to do. Robinson (2013) finds that the proportion of working-age people who say they always feel rushed increased from 24 percent in 1965 to 35 percent in the 1990s, where it remained until dropping during the Great Recession.<sup>1</sup> Gallup survey data show that from 1991 to 2016, about half of Americans have consistently reported that they do not have enough time to do what they want with their days.<sup>2</sup>

In focus groups we conducted across the U.S. in Fall 2019, many middle-class adults—women in particular—told us that the tradeoff between time and money forced them to make difficult choices between providing for and spending time with their families. One mother from Wichita, Kansas said,

*“I drive myself crazy because I’m almost always multitasking or whatever. I feel like I’m away from my kids a lot more right now than I really want to be. But I’m doing it for a good reason because I’m trying to get ahead or make money, so I can spend more quality time with them more places and do more things. And it’s just a process trying to work through it all.”*

Another from Las Vegas asked,

*“How are you going to have time to devote to your children and teach them the right values if you're working so that they can have a roof over their heads and food to eat? Because, how are you going to put one over the other? I mean you love your child, you want them to do good in life, you want to be there. But you also want to be able to provide for them. So how do you put focus on which one?”*

To be sure, we have used some of our prosperity to reduce hours of work, at least over the long run. Historical estimates suggest that work hours for the average American worker peaked somewhere around 3,000 hours per year during the mid-19<sup>th</sup> century and have since declined to fewer than 2,000 hours per year.<sup>3</sup> At the same time, technological advancements, such as washing machines and commercially prepared food, have enabled some reductions in time spent in home production, and longer lifespans have contributed to an increase in total lifetime leisure.<sup>4</sup>

But while Americans work less today than at the beginning of the twentieth century, work hours have not declined in recent decades. Over the last fifty years, average annual hours per worker have remained quite stable in the U.S. even as work hours in many other high-income countries have declined. The average American worker currently works an estimated 1,860 hours per year, nearly 300 more than workers in France and 400 more than those in the Netherlands.<sup>5</sup> Researchers have attributed this divergence to differences in institutions (particularly labor unions and regulatory structures),<sup>6</sup> taxation,<sup>7</sup> social insurance systems,<sup>8</sup> and income inequality.<sup>9</sup>

### *A Brief History of Worktime*

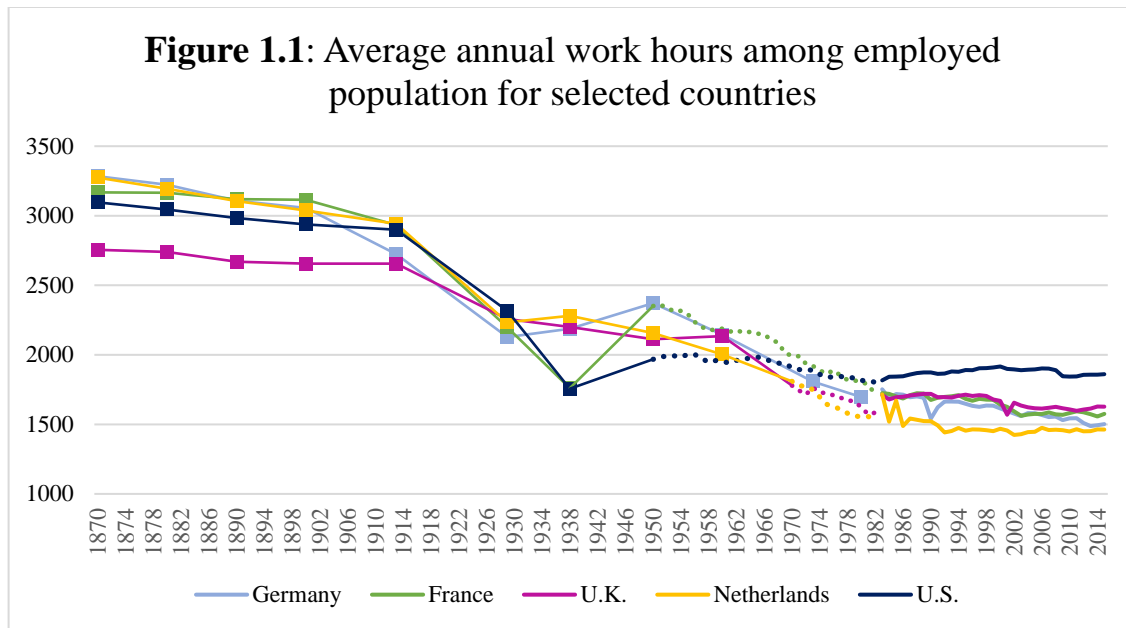
The onset of industrialization in the 18<sup>th</sup> century augured a dramatic rise in worktime for most workers. Schor (1991) roughly estimates that working hours in the U.K. increased by more than half between the medieval period and the mid-19<sup>th</sup> century, when hours for the average worker peaked somewhere around 3,500 hours per year. African Americans suffered extraordinarily long and inhumane work hours under American slavery, which declined somewhat after emancipation.<sup>10</sup>

The long hours required of factory employees in the early to mid-19<sup>th</sup> century led to a struggle on the part of unions and social reformers to secure not just better wages and working

conditions, but also more reasonable hours of work.<sup>11</sup> Labor movements in several industrializing countries obtained “protective legislation” for women and children, as in the case of the Ten Hours Movement in the U.K., which likely had beneficial spillover effects for men.<sup>12</sup> Technological advancements allowed employers to modestly reduce work hours without sacrificing output.<sup>13</sup> But demands for more dramatic worktime reductions met with limited success. Huberman and Minns (2007) estimate that in 1870, employed individuals in most of Western Europe still worked more than 3,000 hours per year, and nearly as much in the U.S., the U.K., Canada, and Australia.<sup>14</sup> By today’s standards, these work levels are staggering, representing 60- to 70-hour work weeks for 48 to 50 weeks per year. Labor groups adopted the eight-hour workday as a key demand in 1866,<sup>15</sup> but this was not achieved until about six decades later.

Widespread reductions in average worktime took place during the 1910s and 1920s (Figure 1).<sup>16</sup> One striking feature of the decline is that it occurred almost simultaneously across many industrialized nations.<sup>17</sup> By 1929, average work hours in the U.S., Canada, Western Europe, and Scandinavia had plummeted to around 2,300 hours per year,<sup>18</sup> reflecting a standard 48-hour work week (8 hours per day, 6 days per week, and 48 weeks per year). The International Labour Organization (ILO) had adopted the convention of the 48-hour workweek when it first convened in 1919, standardizing a shift that had already begun to take place under widespread collective bargaining and government regulation.

In the U.S., several heavily unionized industries obtained the 48-hour week between 1900 and 1920, and many states passed 8- or 10-hour laws as part of a wave of regulations aimed at improving working conditions and maintaining public safety. Hunnicutt (1988) suggests that employers may have been unusually willing to comply with labor demands for shorter work weeks in this period because the burgeoning literature on scientific management argued that reduced hours would increase efficiency.<sup>19</sup> Henry Ford famously introduced the five-day, 40-hour week in 1926, allegedly to raise labor productivity.<sup>20</sup>



*Notes: Estimates for the U.S. and France from 1870-1938, for the U.K. and the Netherlands from 1870-1960, and Germany from 1870-1980 are from Huberman and Minns (2007) (squares). Estimates for the U.S. and France from 1950-1982 and for the U.K. and the Netherlands from 1970-1982 are from the OECD (2019) (dots). Estimates for all countries from 1983-2015 are from Bick, Brüggemann, and Fuchs-Schündeln (2019) (solid).<sup>21</sup>*

Work hours fell again across the industrialized world as work-sharing emerged as a potential solution to the widespread unemployment of the Great Depression.<sup>22</sup> Germany became the first country to incorporate a work-sharing program into its unemployment insurance system in the 1920s; such programs are now quite common in Europe but rare in the United States.<sup>23</sup> In 1935, the ILO adopted the convention of the 40-hour workweek, citing the need to spread work more evenly across the population.<sup>24</sup> France legislated the 40-hour week the following year, and in the U.S., the Fair Labor Standards Act of 1938 entitled workers to overtime pay for hours in excess of 44 hours per week. This was further reduced to 40 hours in 1940, where it has remained ever since.

Work hours across Europe have continued to decline over the last sixty years, though much of this decline took place toward the end of the twentieth century. France legislated a 35-hour work week in the early 2000s, and workers in many other European nations have obtained reductions in the standard workweek through collective bargaining.<sup>25</sup> There is some disagreement about trends in annual worktime in the U.S. in recent decades. In the 1960s, much

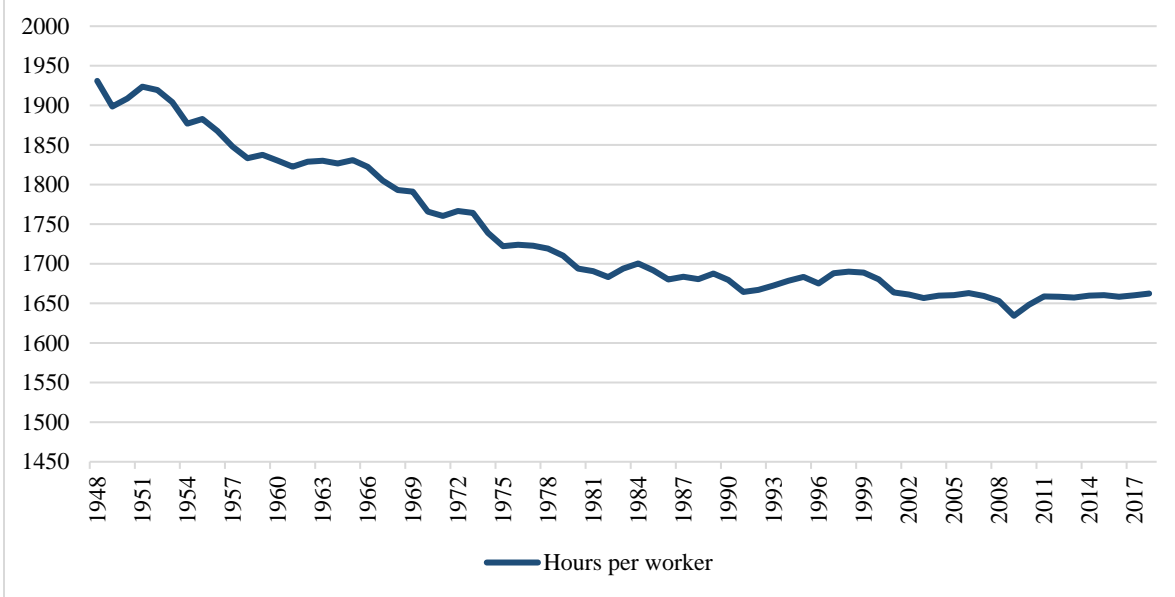


more detailed data on how people spend their time became available through time use and labor force surveys. A popular 1991 book by Juliet Schor argued that Americans were “overworked” and that they were spending more hours on the job than in the past, creating something of a stir in the popular media. Robinson and Godbey (1999) countered that, according to detailed data from time diaries beginning in 1965, work hours were actually declining. This, they said, suggested that Americans’ sense of overwork was largely “a perceptual problem.” We discuss these disagreements in more detail in the appendix.

Recent attempts to measure annual work hours in ways that are comparable both over time and across countries suggest that average worktime is now much higher in the U.S. than in Europe, a reversal of previous relationships. Using household survey data, Blundell, Bozio, and Laroque (2011) find that average worktime per worker plummeted by more than 400 hours per year in the U.K. and France between 1968 and 2007 but did not change in the United States. Similarly, Bick, Brüggemann, and Fuchs-Schündeln (2019) estimate that annual hours per worker are now 14% lower in Europe than in the U.S., where worktime has remained comparatively stable between 1,800 and 1,900 hours per year since 1983.

U.S.-specific establishment data from the Bureau of Economic Analysis suggest that annual hours per worker have declined by about 14% since 1948; however, the majority of this decline took place prior to 1980 (hours declined by only 2% between 1980 and 2018), and decade-over-decade percent changes since the 1980s have been moving toward zero.<sup>26</sup> That is, annual hours in 1980 were 4% lower than in 1970, but annual hours in 1990 were only 1% lower than in 1980. Over the last forty years, then, it seems fair to conclude that the previous downward trend in average annual work hours in the U.S. has begun to flatten, with at most modest declines in recent decades. This apparent stability is perhaps surprising given that female labor force participation was increasing up to around 2000, while men’s labor force participation has declined. Since women tend to work fewer hours than men, this would tend to bring down the average; however, women have also shifted toward full-time work over this period, as we report in Section 2.

**Figure 1.2: Annual work hours and decade-over-decade percent change in hours for American workers**



Source: U.S. Bureau of Economic Analysis, *Full-time and part-time employees, Hours worked by full-time and part-time employees* [A4201C0A173NBEA, B4701C0A222NBEA], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/A4201C0A173NBEA>, April 21, 2020.

These estimates apply to average hours *per worker* rather than *per capita* and are therefore not influenced by changes in labor force participation, except to the extent that those entering or exiting the labor force are more or less likely to work full-time than other workers. But one of the most important changes in work over the last half-century has been the increase in women’s labor force participation. Boppart and Krusell (2020) note that the U.S. and Canada are exceptions to most other high-income countries in that any declines in average per-worker work hours since 1950 have been offset in the broader population by increasing labor force participation among women.<sup>27</sup> Focusing on prime-age individuals, Blundell et al. (2011) find that increases in women’s work hours after 1977 resulted in an increase in average per-capita work hours in the U.S. even as hours in the U.K. and France declined.

Ramey and Francis (2009) find that market work hours per capita for prime-age Americans have not changed at all since 1900 due to the rise in women’s work hours. By contrast, younger Americans (under age 25) have largely replaced work with school. Older Americans are living

longer on average and, until the 1990s, had declining labor force participation rates, though that trend has reversed in the U.S. and many other OECD nations.<sup>28</sup> Cumulative lifetime leisure has nevertheless increased for the average American over the last century, with gains concentrated in old age.<sup>29</sup>

### *Why Has Worktime Diverged in the U.S. and Europe?*

To summarize the evidence presented so far, worktime has declined markedly since the end of the Industrial Revolution, and this combined with increasing lifespans has resulted in large increases in the amount of total leisure most individuals can expect to enjoy over their lifetimes.<sup>30</sup> In recent decades, however, declines in worktime appear to have slowed in the U.S. The best estimates from labor force surveys suggest that the average American worker has seen at most modest changes in annual hours of work over the last forty years. What clearly emerges from the data is that trends in worktime have diverged between the U.S. and Europe. Figure 1 above shows that, based on estimates from a few different sources, the average American worker went from working a few hundred hours less than the average French or German worker to a few hundred hours more in the span of a few decades.

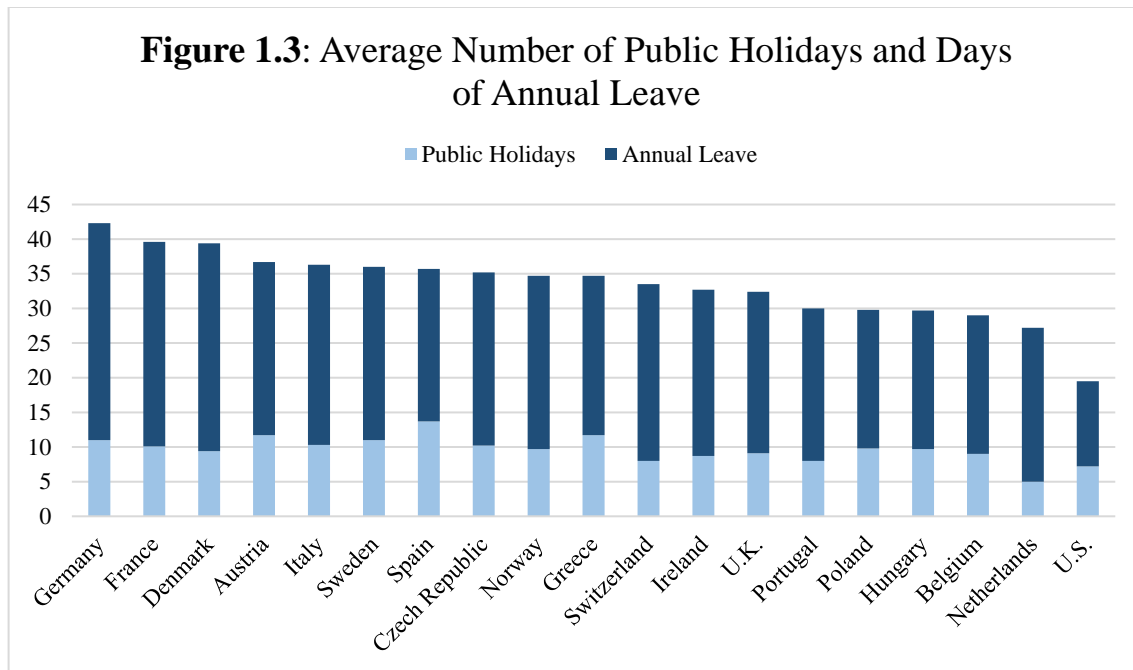
The causes of this divergence have been the focus of much recent scholarship. Average work hours in an economy typically decline as productivity rises,<sup>31</sup> but Europe has not seen faster productivity growth than the U.S. in recent decades. Blundell et al. (2011) note that “given that overall growth has been somewhat similar across [the U.S., U.K., and France], it would have to be that Europeans take more leisure in response to rises in income.” That is, Europeans appear to have chosen to use their increased prosperity to work less while Americans have chosen to earn (and spend) more. It is true that Americans place an especially high value on work.<sup>32</sup> But a simple cultural explanation for this apparent European preference for leisure is not very compelling: As Alesina, Glaeser, and Sacerdote (2006) ask, “[W]hy did culture start diverging in the early 1970s across the Atlantic so dramatically?”

Several researchers contend that the answer lies in differences in labor income taxation.<sup>33</sup> For instance, Prescott finds that differences in marginal tax rates suppress the labor supply of France relative to the U.S.<sup>34</sup> Others point to differences in social security systems that primarily affect the labor supply of older adults.<sup>35</sup> Bell and Freeman (1994) assert that the difference in

work hours between the U.S. and Germany can be explained by greater earnings inequality in the U.S. which induces Americans to work more in the hopes of advancing in the labor market.<sup>36</sup>

A potentially more convincing explanation, in our view, involves institutional differences surrounding collective bargaining and the regulation of work hours. Using country-level panel data from 1960 to 1995, Alesina, Glaeser, and Sacerdote (2006) find that high levels of union density and employment protections are strongly associated with lower work hours. The slower pace of worktime reductions in Europe in recent years may be explained by movement away from collective bargaining around worktime and toward “individual” worktime reductions, such as in the case of voluntary part-time work.<sup>37</sup> Alesina et al. estimate that differences in legally mandated vacations (which account for 80% of the variation in weeks worked) can explain fully 30% of the difference in total labor supply between the U.S. and Europe. Notably, the U.S. is the only advanced economy with no statutory minimum level of annual leave. The European Union’s Working Time Directive guarantees 20 paid vacation days per year, and some member states go beyond this requirement, in addition to providing paid holidays.<sup>38</sup> Even Japan, known for a culture of overwork, requires employers to provide at least 10 days of annual leave (though it is estimated that Japanese workers take less than half of their available leave, the lowest fraction of any other surveyed country).<sup>39</sup>

Of course, many American employers offer paid annual leave and holidays even if they are not required to do so. An estimated 78% and 76% of American workers have access to some paid holidays and annual leave, respectively.<sup>40</sup> Figure 2 below shows the average annual number of public holidays and vacation days available to workers in the U.S. and various European countries in 2013-15, as reported in Bick et al. (2019).<sup>41</sup> The average American worker has just under four weeks of combined holidays and vacation days per year (assuming a standard five-day workweek), considerably fewer than the 5 to 8 weeks available to workers across Europe. Consistent with Alesina et al. (2006), Bick et al. (2019) find that the higher number of vacation weeks in Europe accounts for one-fourth to one-half of the labor supply gap between the U.S. and Europe.



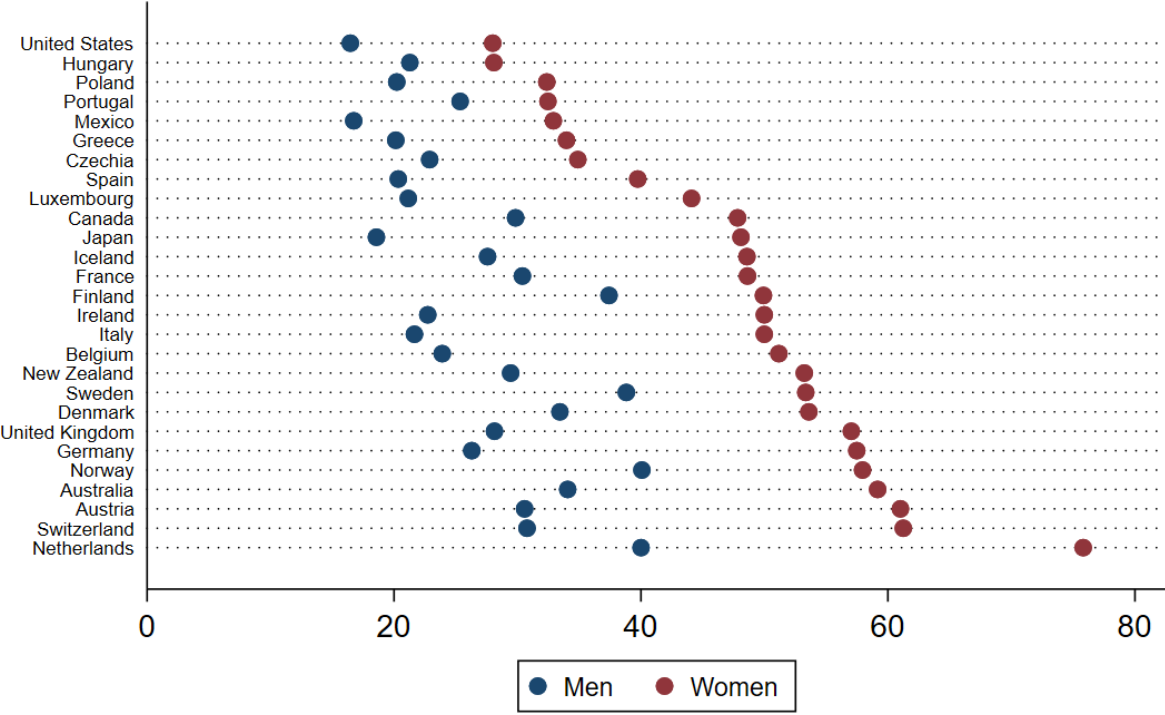
Source: Bick et al. (2019), [Online Appendix](#)

Many European countries also have a shorter standard full-time workweek than the U.S. According to Bick et al. (2019), higher weekly hours in the U.S. account for nearly 90% of the gap with Scandinavia and 60% of the gap with Western Europe. Fleck (2009) notes that countries with low working time tend to have either a legal or collectively bargained workweek of under 40 hours and limitations on total overtime hours that can be worked in a given week. France famously legislated a 35-hour normal workweek in the early 2000s, and many German workers have secured a shorter workweek through collective bargaining agreements.<sup>42</sup> Actual working time, even for nonunion or non-covered workers, tends to reflect these agreements. The average prime-age worker in France and Germany worked 36 and 35 hours per workweek in 2015, respectively, compared to almost 40 hours in the United States.<sup>43</sup> European workers can still work a 40-plus-hour workweek, but they are supposed to be compensated for their time.

Low weekly hours in Scandinavia and Western Europe are additionally driven by the high proportion of workers—especially women—who are employed part-time. Figure 1.3 below shows the fraction of the male and female workforce who typically work fewer than 35 hours per week according to labor force survey data analyzed by the ILO. The Netherlands has a fairly high female labor force participation rate (8 percentage points greater than the U.S.’s in 2018)<sup>44</sup>

but a particularly wide gender gap in part-time work. Part-time work is more institutionalized in the Netherlands than in many other countries and provides access to many of the same benefits as full-time work, making it an attractive option for workers with heavy nonmarket demands on their time.<sup>45</sup> With very few exceptions, the U.S. stands out as a country where the gender gap in part-time work is relatively small. But women’s labor force participation is lower in the U.S. than in much of Western Europe and Scandinavia, perhaps because of fewer opportunities to work part-time.<sup>46</sup>

**Figure 1.4:** Fraction of workforce employed part-time (<35 hours) by gender, 2018



Source: International Labour Organization. Employment by sex and age — ILO modelled estimates. ILOSTAT. Accessed 14-02-2020. <https://ilostat.ilo.org/data>  
 Note: For some countries, data are from 2017.

*The Potential to Reduce Worktime in the U.S.*

Should the U.S. follow the European model and take steps to reduce working time? Some will argue that the American model produces a higher GDP and is consistent with existing preferences. Workers typically choose to work fulltime at about 40 hours per week even when

they have the option to work an alternative schedule, according to an experiment by Mas and Pallais (2019). In surveys, Americans express limited interest in sacrificing income in exchange for reduced worktime, despite working more on average than people in most European countries.

However, these preferences are likely shaped by institutions and norms around what constitutes fulltime work in the U.S., as well as by pressure to work more in order to afford the lifestyle to which many Americans in the middle class aspire. Additionally, a higher GDP does not necessarily translate into enhanced individual welfare. For example, French GDP per capita is less than two-thirds U.S. GDP. But the French are better off on a number of fronts: they worked nearly 300 fewer hours per year than the typical American in 2015.<sup>47</sup> They also have less income inequality and are healthier than Americans. After adjusting for these differences, Jones and Klenow (2016) find that the average person in France is about 92 percent as well off as the average American, despite France's much lower GDP per capita.<sup>48</sup>

Robert Frank and a number of behavioral economists argue that optimizing individual preferences is not always a good guide to what makes people happy.<sup>49</sup> Individuals often believe that if they only had more money with which to buy more material goods they would be better off. It turns out that's true in cases where the individual becomes better relative to other workers in the process; but that it's not true if everyone else has more money and more material goods as well and one's relative status doesn't change. Taken to its logical conclusion, this means that reducing leisure in order to produce more income, when everyone else is also working harder for the same reason, is close to a zero-sum game. Two important caveats: the first is that this is not true until one has reached a certain standard of living, though the American middle class has arguably achieved that standard. Second, it depends on how any extra income is allocated. Money spent on valued experiences, for example, produces more happiness than money spent on material goods.<sup>50</sup> But investing in experiences requires time and not just money.

Finally, since time is a "network good"—generally worth more when we are able to spend it with others<sup>51</sup>—individuals may have a stronger preference for time off when their friends and family also have this option. For all of these reasons, it is unlikely that extensive worktime reductions will come about solely as a result of individual decision-making. Collective changes are needed if as a society we want to work a little less.

## **2 The Middle-Class Time Squeeze**

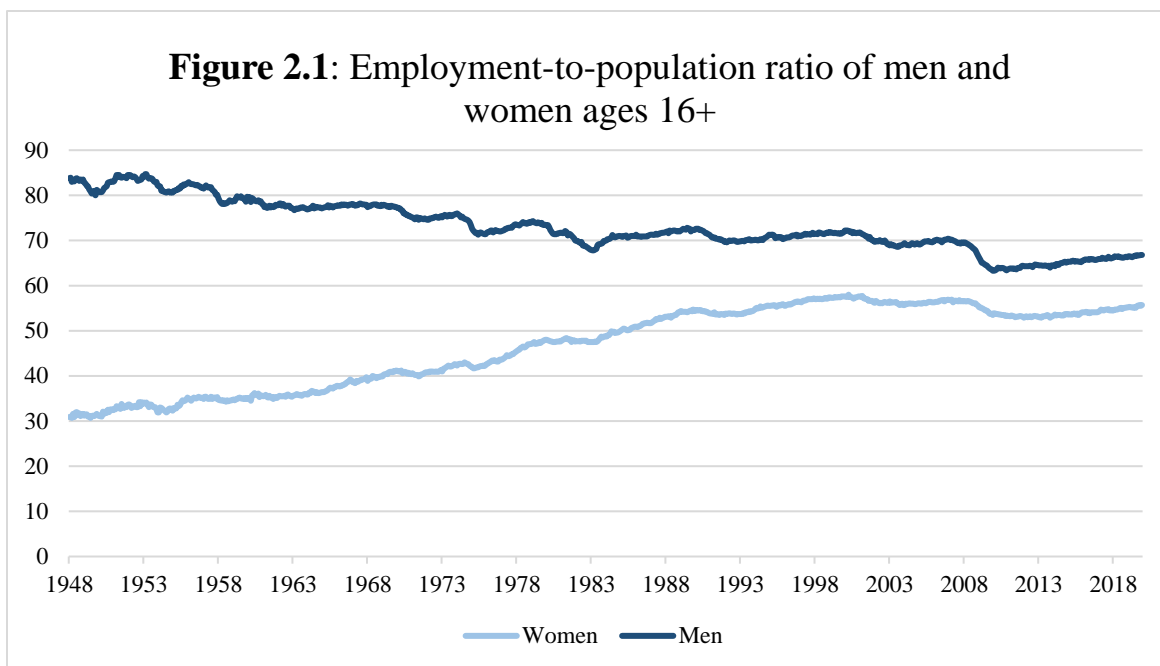
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The last section showed that individual-level work hours have changed little over the last forty years for the average American worker, particularly compared to changes in Europe and to historical trends in the U.S. However, the increasing proportion of couples who are dual earners means that families are collectively putting in more work hours now than in the past. The median middle-class family now has two full-time workers, and many families are striving to join the middle class with only a single parent. Today, 61% percent of people with children report that they “do not have enough time to do what [they] want to do these days”; 61% of working adults say the same.<sup>52</sup> The shift toward greater work among women has been necessary for middle-class prosperity: women are responsible for most of the middle class’s income gains since 1979. But the loss of America’s “silent partner” (the “American Wife”), as Heather Boushey puts it in her book *Finding Time*, has squeezed working families for time.

### ***Market Work***

The rise in labor force participation among women constitutes one of the greatest transformations of the American labor force over the last century. In 1950, only one-third of women over the age of 15 worked outside the home; by the end of 2019, more than half of women over age 15 and three-quarters of those ages 25-54 were employed.<sup>53</sup> At the same time, men’s employment rates have declined, with the result that the gap between the male and female employment rates had narrowed to just 11 percentage points by 2019, down from 50 points in 1950 (Figure 2.1). The entirety of the gains in women’s employment occurred in the 20<sup>th</sup> century. Women’s labor force participation stagnated and even declined slightly after 2000 and had only recently begun to rise in the years before the COVID-19 outbreak.



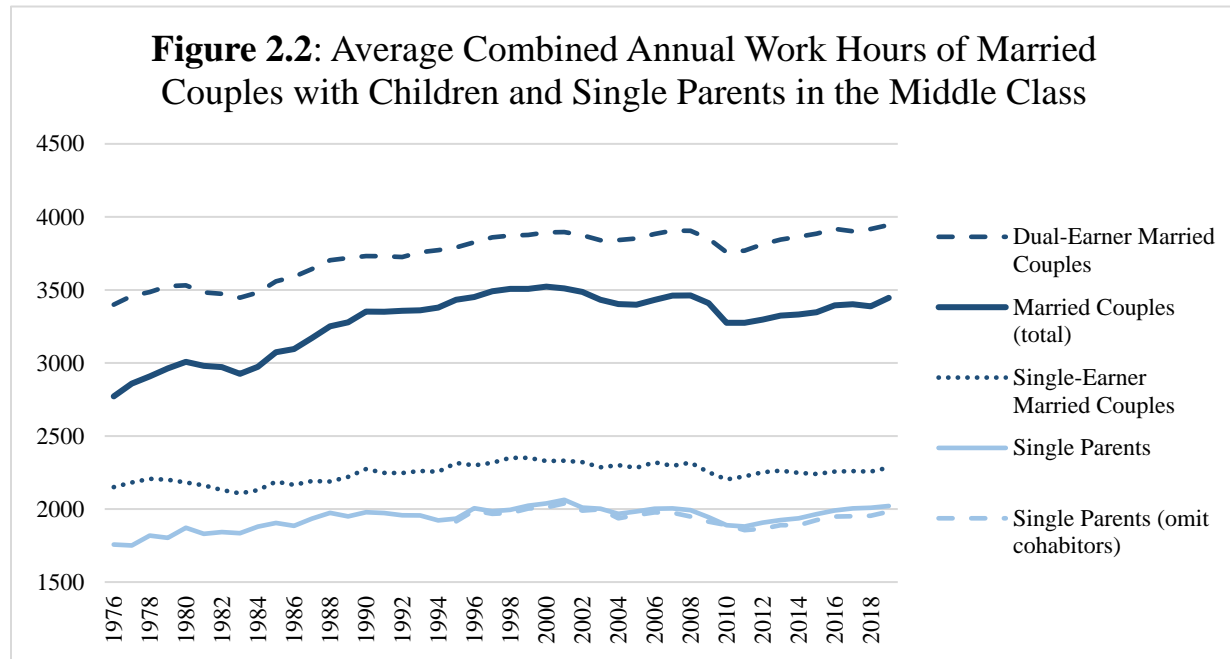


Source: U.S. Bureau of Labor Statistics, *Employment-Population Ratio for Men and Women* [LNS12300001, LNS12300002], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/LNS12300001>, January 28, 2020.

The addition of a second earner to many households means that these households are now working more *total* hours than in the past. Figure 2.2 shows the trend in the combined work hours of middle-class married couples with children (that is, the sum of each spouse’s work hours) and in the work hours of middle-class single parents.<sup>54</sup> We focus primarily on families with children because they face a particularly tight time squeeze when nonmarket work and childcare are taken into account, and because many middle-class families will have children at some point.<sup>55</sup> However, work hours for the entire population of middle-class couples and single individuals have followed a similar path (see Appendix Figure A.2).

The average middle-class married couple with children worked a combined 3,446 hours annually in 2018, an increase of more than 600 hours—or 2.5 additional months—since 1975. This average combines dual- and single-earner couples, and thus is driven by increases in both the *incidence of* and *hours worked by* dual-earner couples. Looking at dual-earner couples alone, the average couple worked nearly 4,000 hours per year in 2018, or 2,000 hours per person. We also show total worktime for single-earner married couples and single parents, who by definition

have at most one earner. Married single earners are likely able to work slightly more than other working parents because their spouses are shouldering home and family responsibilities. Yet, single parents in the middle class work almost as much on average as each spouse in a dual-earner couple (about 2,000 hours per year)—despite having no second parent to assist with home and family responsibilities.

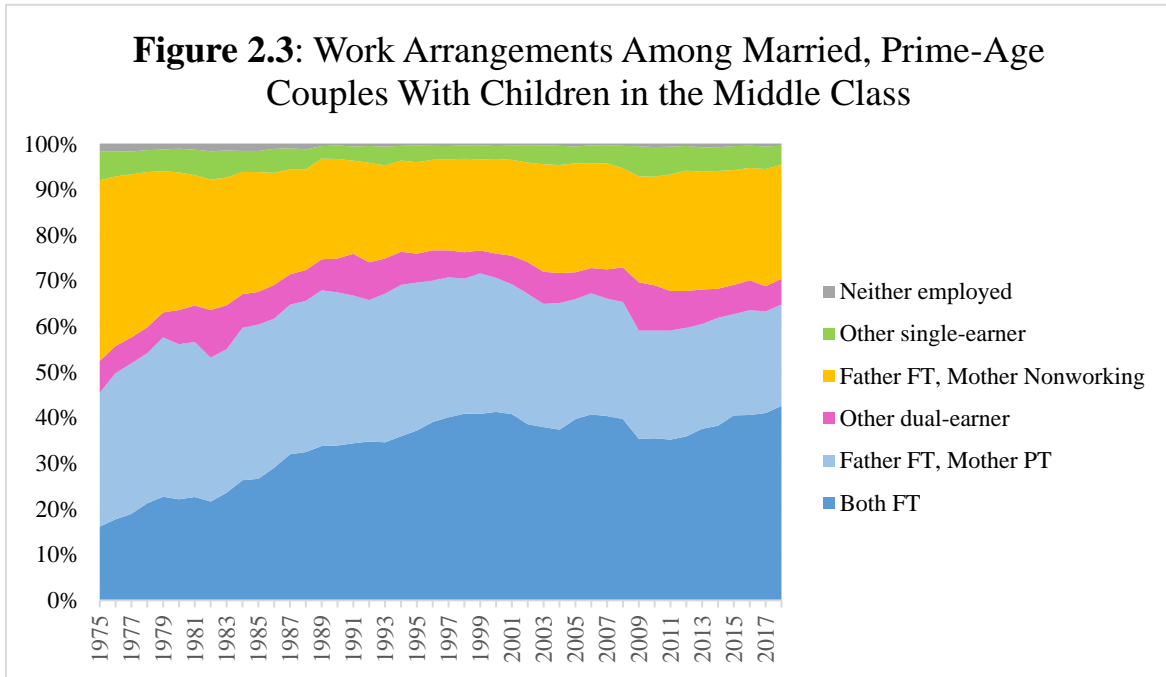


Source: Authors' analysis using the Current Population Survey.

Figure 2.3 divides the population of married middle-class couples with children into single- and dual-earners, and additionally notes whether mother or father works full- or part-time.<sup>56</sup> Full-time work is here defined as working at least 1750 hours per year (e.g. at least 35 hours per week over 50 weeks of employment). The fraction of couples who are dual earners rose from about half to 70% over four decades. The largest increase within this category was among couples in which both the mother and the father work full-time, reflecting a decline in the fraction with a part-time female earner. In 1975, more than half of dual-earner couples had a fulltime father and part-time mother; now, fewer than a third do.<sup>57</sup>

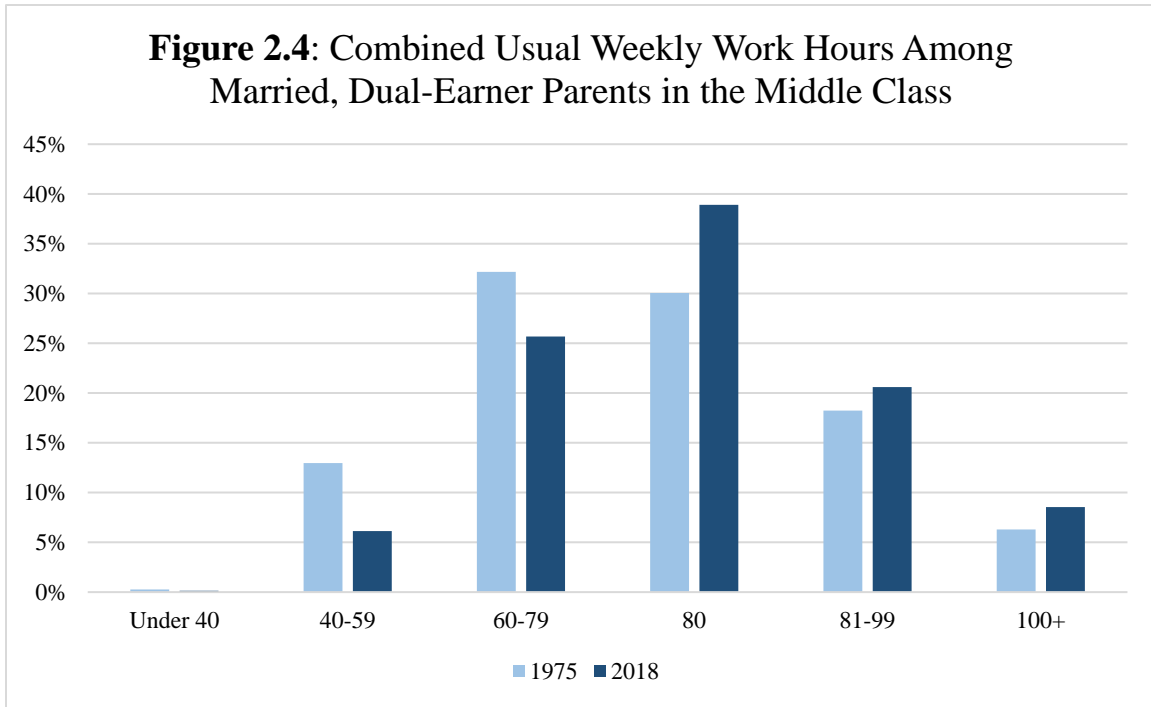
The proportion of couples who are dual earners has largely traced the path of women's employment-to-population ratio (Figure 2.1), peaking around 2000. If women's employment

continues to trend upward, dual-earner couples—and especially dual-fulltime couples—will likely become even more prevalent. Conversely, if women’s labor force participation flattens or declines, one important source of rising middle-class incomes will disappear.



*Source: Authors’ analysis using the Current Population Survey.*

We see, then, that dual-earner parents are not only more common than in the past, but are also relatively more likely to work double full-time schedules. By far the majority (68%) of dual-earner parents now work a combined 80 or more hours per week (Figure 2.4).

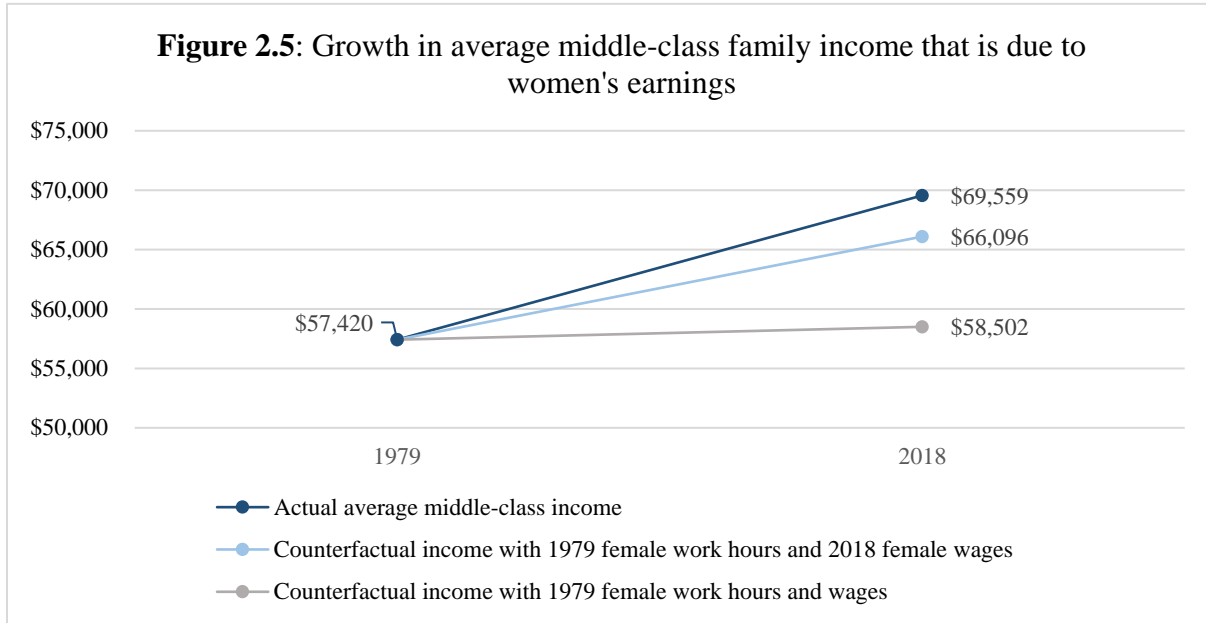


*Source: Authors' analysis using the Current Population Survey.*

None of this is to suggest that the rise in female labor force participation has been a negative development. Increased paid work among women is widely recognized as a key driver of gender equity and economic prosperity.<sup>58</sup> Research on household bargaining has documented that when household earnings are split more equally between spouses, husbands and wives share more equally (though not completely equally) in housework and household resources.<sup>59</sup> Additionally, nearly all of the increase in middle-class incomes since 1979 can be attributed to the rise in women's earnings.<sup>60</sup> This is the conclusion of an analysis by Boushey and Vaghul (2016), who use a shift-share analysis to decompose average household income growth (for all households, not just those with children) into growth due to women's work hours, wages, and other sources.<sup>61</sup>

Using a similar strategy, we estimate that if women's average earnings dropped back to their 1979 levels, average middle-class family incomes would have grown by only 2% between 1979 and 2018 (Figure 2.5). Average family income actually grew by 21% over this period. This analysis counts single adults as their own families and includes those without children. Due to declines in male work hours per family, the contribution of total male earnings to middle-class income growth was a net negative at -4%. Non-labor income sources were responsible for 13%

of income growth. This leaves by far the majority of middle-class income gains to women. We estimate that 29% of average income growth is attributable to higher female work hours and 63% to higher female pay per hour.



*Source: Authors' analysis using the Current Population Survey.*

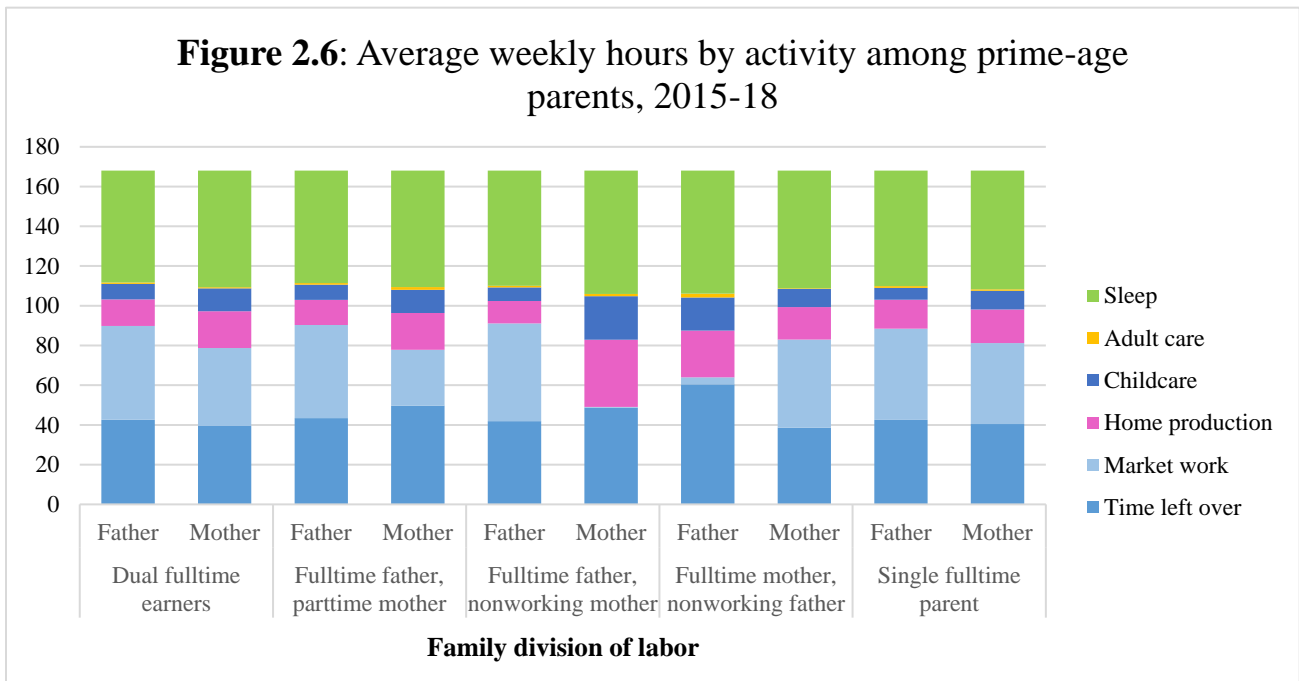
To summarize, about 90 percent of middle-class families' income growth over this period was due to women's contributions. Details about our analysis and alternative estimates can be found in the appendix. The figure below shows our main estimates of the actual and counterfactual change in average middle-class incomes if women's work hours and pay had not increased since 1979.

### *Nonmarket Work and Childcare*

The middle class is thus increasingly dependent upon paid work by women. This leaves less time for unpaid work in the household. It is estimated that women reduced their time spent on household work (not counting childcare) from 28 to 15 hours per week between 1965 and 2011, while men's time in household work rose from 4 to 9 hours per week.<sup>62</sup> These trends suggest that time spent in childcare should have declined as well. In fact, both mothers and fathers have substantially increased their time spent caring for children since the 1960s, perhaps because the returns to parental time investments in children are now perceived to be greater.<sup>63</sup> Guryan, Hurst,

and Kearney (2008) show that time spent in childcare is greater among higher-income and higher-educated parents, despite the fact that these parents also spend more time in market work. With the decline of the stay-at-home parent model combined with changing perceptions about what level of childcare time is sufficient, it is hardly surprising that 40% of fulltime-employed mothers say they “always feel rushed,” and 39% feel that they spend too little time with their children.<sup>64</sup>

The new balance of paid and unpaid work varies significantly by household type. Among couples in which both parents work fulltime, mothers and fathers perform the same amount of total work on average, with mothers performing more nonmarket work and childcare and fathers performing more market work. (Market work here includes a broad range of work-related activities such as commuting and job search.) Together, fulltime dual-earners spend a combined 139 hours per week in total work—defined as market work, home production, childcare, and adult care—compared to 125 hours per week among couples with a fulltime employed father and stay-at-home mother. Subtracting sleep, this leaves full-time dual-earner couples with just 83 total hours per week (41.5 hours per person) for everything else—eating, socializing, exercise, leisure, and all else.



Source: Authors' analysis using the American Time Use Survey.

The responsibility for aligning work with family life has generally fallen to women, to the detriment of their wages and employment opportunities. A significant portion of the gender earnings gap is driven by motherhood.<sup>65</sup> Women pay a wage penalty for workforce interruptions and shorter hours, forms of temporal flexibility that allow them to care for family members and perform other household work.<sup>66</sup> Later in life, women also become disproportionately responsible for eldercare; those with substantial caregiving commitments work fewer hours than non-caregivers and are more likely to withdraw from the labor force.<sup>67</sup> In a discrete choice experiment involving staffing at a call center, researchers found that women are willing to take a larger wage cut than men on average in exchange for flexible scheduling and the ability to work from home, though this effect was not large enough to explain a substantial portion of the wage gap.<sup>68</sup> A recent study of train and bus operators with a standardized wage schedule found that the gender earnings gap in this setting can be explained by the fact that men take fewer unpaid hours off and work more overtime hours than women.<sup>69</sup>

Many Americans continue to believe that men should be the primary breadwinners. For example, among high school seniors, 23 percent believe that the model of men as breadwinners and women as homemakers is desirable.<sup>70</sup> These beliefs affect both women's aspirations and employers' assumptions and thus women's opportunities to get ahead—which in turn constrain income growth. As we showed above, women's paid work is responsible for most of the gains in middle-class incomes over the last several decades, and yet female labor force participation in the U.S. still lags behind that in many other high-income countries. Blau and Kahn (2013) estimate that the United States' lack of family-friendly policies explains one-third of the decline in women's labor force participation relative to other OECD countries over the last two decades. Barriers to women's success in the labor force are also barriers to middle-class prosperity.

### **3. Possible Policy Responses**

In this section, we review a number of possible responses to the fact that Americans work much harder than those in other rich countries and to the time squeeze faced by so many Americans. We recognize that were people to spend less time at work, there would be less GDP and less income. That trade-off must be squarely faced. But we reject the idea that GDP is a

reliable measure of national health or that individual well-being depends only on income. Finally, some of the adjustments we suggest would not reduce the amount of time spent working but simply redistribute the burden (across individuals or across the life cycle) or reduce current inefficiencies due to such things as commuting time or the misalignment of school and work hours. And, although we do not think one should count on it, less working time might actually increase hourly productivity, partially compensating for the fall in hours.

### *Reducing Worktime*

#### 1. A shorter workweek

One clear approach to reducing overwork for the middle class is to simply extend current overtime protections to more middle-income workers. Current federal regulations exempt employees who meet certain duties tests and earn more than \$35,648 per year; the threshold was raised from \$23,660 at the beginning of 2020.<sup>71</sup> While the 2020 increase extended overtime protection to an estimated 1.3 million workers,<sup>72</sup> it falls short of restoring nearly half a century of decline. If the 1975 threshold had been adjusted for inflation, it would now be over \$50,000.<sup>73</sup> Additionally, better enforcement is needed to ensure that nonexempt workers are compensated for their time as required by current law.<sup>74</sup>

Beyond updating and enforcing current overtime regulations, it may be time to consider a shorter standard workweek by reducing the federal standard from 40 hours per week to 35. Such a move would certainly be controversial and would need to be phased in slowly, with flexibility for both employers and employees to negotiate adjustments around the standard. Yet if phased in gradually, the transition could be accomplished with no reduction in wages, but with smaller raises as a bigger share of any productivity improvement was invested in more free time.

The obvious objection would be that this will lower GDP growth, but as we have emphasized, we are not convinced that GDP is a good measure of individual welfare. On the plus side, in addition to lessening the time squeeze, this policy might appeal to those concerned about job loss due to trade or technological change as a way to spread work more evenly across the population in an automated future.<sup>75</sup> Reducing the federal standard is not a mandate; it would not prevent individuals from working more than 35 hours per week. It would simply nudge employers in that direction by making it more expensive to keep people on the job for over 35 hours a week, and would compensate nonexempt employees for overtime worked above 35



hours. It may in the process lead to a new social norm for both exempt and nonexempt employees.

There have been a variety of small- to large-scale experiments with a shorter workweek, with mixed results.<sup>76</sup> France famously legislated the 35-hour workweek in 1998, though the law was soon handicapped by measures that made it more affordable for businesses to pay overtime, and it was never fully implemented in all sectors.<sup>77</sup> Despite these limitations, work hours did drop after the law was passed. Whether this was good or bad for workers is still being debated. Earnings declined for some affected workers as firms negotiated slower wage growth or wage freezes while transitioning to shorter hours.<sup>78</sup> There is some evidence that lower-skilled French workers have had trouble obtaining desired overtime hours and have been subjected to more precarious scheduling in the wake of the legislation.<sup>79</sup> But attempts to dismantle the law have met with backlash from workers, at least partly out of concern that a longer workweek would lead to layoffs.<sup>80</sup>

Elsewhere in Europe, shorter hours have generally been negotiated through collective bargaining rather than legislation. By the time France's 35-hour workweek was implemented, one-fifth of German workers had obtained a 35-hour workweek through collective bargaining.<sup>81</sup> Germany's strong support for sectoral bargaining has enabled workers to obtain worktime reductions in combination with wage increases and has arguably given employers and employees greater flexibility to allocate worktime than would likely be the case under across-the-board rules. There is some demand among U.S. unions for a shorter workweek as well. The AFL-CIO (the largest U.S. federation of labor unions) proposed a 32-hour workweek in 2019, framed primarily as a work-sharing initiative.<sup>82</sup> However, the U.S. does not have the level of union density nor the state support for collective bargaining that has been associated with successful worktime reductions and work-sharing elsewhere.

## 2. A guarantee of minimum paid time off

The U.S. is the only OECD country in which workers are not entitled to paid vacation days,<sup>83</sup> and one of two OECD countries (along with South Korea) that does not guarantee paid leave for personal illness.<sup>84</sup> The dangers of failing to provide sick leave have become especially visible under the coronavirus pandemic. While many American workers have access to some form of leave through their employers, employer-provided leave benefits are neither universal nor as

generous as those in other high-income nations. Currently, 24% of civilian workers in the U.S. (and 14% of middle-wage workers) do not receive any paid vacation time; a similar fraction receive no sick leave benefits.<sup>85</sup> Those who do have access to paid leave benefits receive an average of 15 days of vacation and 8 days of sick leave per year after five years of job tenure. Most OECD countries guarantee 20 to 25 days of paid vacation,<sup>86</sup> in addition to paid holidays and separate entitlements for family and medical leave.<sup>87</sup>

There is much to admire in what these other countries have done, and most of them rank higher than the U.S. on a variety of measures of health or well-being. In light of the time squeeze and the example of other countries, one option would be to require U.S. employers to offer a minimum of four weeks (20 days) per year of Paid Time Off (PTO) to all full-time employees, with a prorated amount for part-time employees. PTO could be used for vacation, short-term illness, family care, or other reasons at workers' discretion. Such a policy would universalize access to paid annual leave. It would also explicitly allow workers to use leave for purposes that are unlikely to be covered by a specific leave benefit, such as childcare or necessary home repairs. At present, paid leave is overly fragmented and complicated, favoring some purposes over others, and possibly creating a reason for employers to favor men over women as employees if they think that women are more likely to take family-related leave. Only one in five U.S. workers has access to a dedicated paid family leave plan; many workers already use a patchwork of other leave benefits to care for family members. Why not recognize that individual employee circumstances differ enormously and that almost everyone needs some time off at one point or another? A general right to paid leave as opposed to a categorical one would also reduce administrative expenses and enforcement. Like wages, the benefit could be used for whatever purposes an employee deems most important.

While some employers may balk at the expense of PTO, our proposed 20 days is still less generous than the combined vacation and sick leave offered in other high-income countries. Employers who already offer more than 20 days of paid leave through other plans could continue to do so, and may even increase the amount of leave they offer in order to compete for employees. Most companies with a formal paid family and medical leave policy suggest that the policy has positive effects on employee morale, turnover, profitability, and productivity.<sup>88</sup> Part of the cost of increased annual leave may be passed on to employees in the form of slower wage

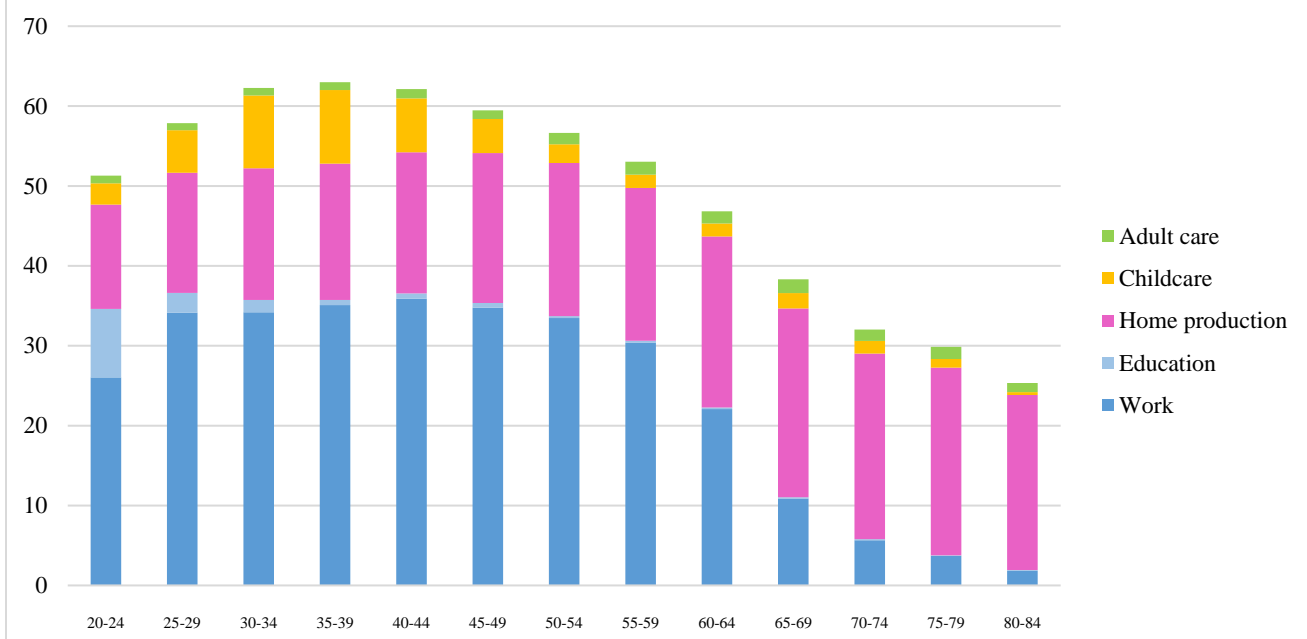
growth, though it appears that many employees are open to such a tradeoff. Four in five workers say that they would consider taking a lower-paying job if it offered more vacation time.<sup>89</sup>

One limitation of this approach is that employees may not use the additional leave benefits that are available to them, especially if they worry that they will face negative employment consequences. Fewer than half of American workers used all of their PTO days in 2018, leaving a total of 768 million days unused, according to the U.S. Travel Association.<sup>90</sup> (Individuals in consolidated leave plans may have reserved some PTO days for sick leave, which does not tend to be exhausted in a given year.) This problem could be addressed by requiring employers to compensate employees for unused leave, as is already the case in some states, such as Nebraska and Massachusetts. Such a requirement would allow workers to choose between working less and earning more (through a payout for unused time) in addition to incentivizing employers to promote vacation-taking.

### 3. Mid-life career breaks as part of social insurance.

The two proposals above target worktime over the short term, either the week or the year. We may also want to reallocate work over the lifecycle, as proposed by Isabel Sawhill in her book, *The Forgotten Americans: An Economic Agenda for A Divided Nation*. The current assumption is that most people will spend virtually their entire lives on the job, from the time they leave school to the time when they retire around age 65. Because people are living longer than in the past, they are, for this reason alone, consuming more leisure over a lifetime.<sup>91</sup> Today, the average 65-year-old can expect to live almost 20 more years, compared to just 12 more years in 1930.<sup>92</sup> But working-age families are now spending more total time in market work due primarily to the rise of dual earners. Further, work and family responsibilities tend to peak at the same life stage, with the result that adults between the ages of 30 and 44 spend about twice as much time in combined market and nonmarket work (including family care) as those between 70 and 84. In short, the elderly, especially the “young elderly” who are still healthy, are the new leisured class (see Figure 3.1).

Figure 3.1: Average weekly hours in "productive" activities by age group



Source: Authors' analysis using the American Time Use Survey.

These developments suggest the need to reinvent social insurance for the modern era by freeing up some time in midlife to raise children, enable people to retrain, or make a fresh start with a new business or a new career, instead of saving all of our nonworking years for retirement. For these reasons Sawhill proposes to expand social insurance to cover new benefits for these kinds of midlife career breaks. In exchange, and to help cover the costs, she proposes to raise retirement ages, consistent with people's longer and healthier lives.

Social Security has been remarkably successful both at providing an income to vulnerable groups, the aged and disabled in particular, and at maintaining its political popularity as a contributory system. However, it does not cover short-term (as opposed to long-term or permanent) disability or the need to care for a family member (family and medical leave). It also does not cover long-term joblessness caused by changes in trade or technology. Sawhill recommends two new purposes for social insurance and two new trust fund accounts: first, a lifelong learning account for those pursuing education or training; and second, a paid leave account for family and medical leave.

This system would, like the current system, be contributory and linked to work experience. Eligibility for funds in the “lifelong learning account” might require considerable years of prior work experience (for example, ten years) and a proposed education or retraining plan with an approved provider. The funds could be used for living expenses during the period of training and potentially be supplemented by Pell grants or student loans for tuition.<sup>93</sup> Such a program will be increasingly important under automation-induced job disruptions. Most experts believe that automation is unlikely to create mass unemployment, at least in the near future, but that workers exposed to automation are more likely to need to switch industries, enter self-employment, or retire early, suggesting that the best policy response to increasing automation is to prepare workers for these transitions.<sup>94</sup>

Eligibility for the “paid leave account” would also require some prior labor market experience, perhaps a year or two. This leave could be used to care for a new or adopted baby, to recover from one’s own extended illness, or to provide care to another family member. In addition to simply making life easier for working adults, paid parental leave can improve attachment to the labor force, especially among mothers.<sup>95,96</sup> Fathers are more likely to be involved in child care throughout the child’s life when they have access to paid paternity leave.<sup>97</sup> Paid parental leave is also widely supported by the American public. A Pew study in 2017 found that 82% support paid maternity leave, 69% support paid paternity leave, and 85% say that workers should be able to take paid leave to recover from their own serious health conditions.<sup>98</sup>

Like Social Security itself, these new benefits would be “earned” in a universal contributory system in which the most generous benefits were provided to those with limited earnings. Some flexibility to reallocate one’s benefits across these different purposes could be allowed (as long as this didn’t risk leaving people impoverished in old age). Sawhill covers the key issues with this proposal in *Forgotten Americans*. She proposes to cover the current shortfall in Social Security revenues and the costs of the new benefits from a combination of reduced benefits for more affluent retirees and higher payroll taxes along with a few other modest reforms as described below.

#### 4. Later retirement

Social Security is currently underfunded. There are any number of ways to pay for the reforms and simultaneously put the system on a more solid fiscal footing, from slowing the

growth of benefits for those with a lifetime of high earnings to raising payroll taxes. Many of these proposals have merit and, in combination, could both restore solvency and finance some new benefits. Here, we focus on encouraging later retirement among those who can work beyond their normal retirement age, though increased payroll taxes would also be needed to make Social Security solvent. Later retirement would allow us to exchange leisure time later in life for the opportunity to upskill or take family and medical leave during one's prime working years.

For workers born in 1960 or later, the full retirement age is 67, and the earliest age at which workers can start to receive reduced retirement benefits is 62.<sup>99</sup> Gradually increasing the full retirement age to 70 would eliminate about one-quarter of the program's long-range actuarial shortfall.<sup>100</sup> Other proposals would index benefits for longevity. Indexing in this context means that as life expectancy lengthens, Social Security retirement age would rise in tandem, thereby keeping lifetime benefits roughly constant in relation to workers' lifetime earnings over time and helping to balance the books. The currently retired, or those about to retire, would be grandfathered into the current system; it would not be fair or politically wise to change the rules at such a late stage. In fact, any changes should be phased in gradually so that people would have time to adjust.

An important problem arises because gains in life expectancy have not been evenly distributed. The better educated and those with higher incomes have secured the largest gains, while the less educated or lower-income individuals have made little progress. For example, average life expectancy at age fifty for women born in 1920 was about 3.5 years higher for those in the top tenth of the income distribution than for those in the bottom tenth; 20 years later, the gap was closer to 10 years.<sup>101</sup> This means raising the retirement age across the board would cut lifetime benefits of low-wage workers by a larger percentage than those of high-wage workers.<sup>102</sup> There are several ways to deal with this problem. One is to offer a minimum benefit that does not depend on lifetime earnings or the timing of retirement (after the age of sixty-two). Another is to encourage much later retirement among high earners while reducing the penalty for early retirement among low earners.

Encouraging people to work longer is part of a package of solutions that will be needed to restore solvency of Social Security and finance the new benefits outlined above. A later retirement age would encourage individuals to earn and save for more years, ideally increasing

their private savings for retirement. It would also reduce the number of years for which some combination of private savings, employer-based retirement benefits, and social security is needed.

#### 5. Increase public childcare spending for families with young children

High-quality childcare services can represent a substantial portion of families' income. The Economic Policy Institute estimates that center-based childcare for a family with an infant and a four-year-old would take up 20% to 30% of median income depending on the metropolitan area.<sup>103</sup> A lack of affordable childcare services is one reason that female labor force participation in the U.S. has failed to keep up with international trends.<sup>104</sup> Greater public support for childcare would boost the discretionary incomes of families who are already paying for childcare and would enable more parents to work.

As of 2010, public childcare spending as a percentage of GDP was about four times higher in other OECD countries than in the U.S.<sup>105</sup> However, there appears to be some appetite for greater childcare funding among U.S. policymakers. Congress approved more than \$2 billion in new funding for the Child Care and Development Block Grant (CCDBG) as part of a bipartisan budget agreement in 2018. States have used, or plan to use, these funds to increase provider payment rates, expand access to child care programs, enhance health and safety practices, and otherwise meet new program requirements.<sup>106</sup>

There are many existing plans for making childcare more affordable or expanding pre-K. Many of them focus on subsidies for families below 200% of the federal poverty level. For instance, Elizabeth Warren has proposed subsidies for childcare centers that would make childcare free for families earning below 200% FPL and be capped at 7% of income for others. Another option is to expand the Child and Dependent Care Tax Credit and make it fully refundable so that households with small income tax liabilities can benefit, as in recent legislation from House Ways and Means Committee Chairman Richard Neal.<sup>107</sup> These proposals are worth policymakers' consideration, particularly for families with young children.

#### 6. Extended school days

For families with school-age children, we suggest addressing the current misalignment of school and work hours and using existing school facilities to provide more afterschool care. The typical American work schedule still runs from around 9 a.m. to 5 p.m. on weekdays, though

longer or nonstandard schedules are common in many industries.<sup>108</sup> The median school day, however, ends at 2:50 p.m., according to an analysis by the Center for American Progress (CAP).<sup>109</sup> The report also finds that the average school district closes for 29 weekdays per year in addition to summer vacation. Misaligned school schedules are estimated to cost the U.S. \$55 billion per year in lost output, due in large part to parents reducing their work hours or not participating in the labor force.

Several school districts and, most recently, the state of California have shifted to later school schedules, primarily in response to concerns that early start times interfere with teenagers' sleep needs.<sup>110</sup> The average start time at public schools is currently around 8 a.m.<sup>111</sup> CAP recommends that the school day should be extended rather than merely shifted in order to accommodate parents' work schedules and provide students with additional educational or extracurricular time. Kamala Harris has proposed a pilot program to provide funding to 500 schools to remain open from 8 a.m. to 6 p.m. with limited closures over the year.<sup>112</sup>

Both parents and children would benefit from shifting school start and end times to better align with both sleep needs and work schedules. Additionally, after-school care should be universally available to students at public elementary and middle schools, enabling most parents to pick their children up from school or meet them at the bus stop, around 5:30 or 6 in the evening.

Federal or state governments could provide grants to local education agencies to provide an extended school day. Participation in the program would be optional for students and their families. To lower the cost, participating families who earn more than 200% FPL could be expected to pay on a sliding fee scale. School districts would have flexibility to determine how to use the additional hours, whether as additional instructional time, study hall, or recreation. Depending on how districts chose to spend the additional time, extended time could have additional benefits for students' learning.<sup>113</sup>

### *Reducing Commuting Stress*

#### 6. Invest in transit infrastructure

Investing in high-quality public transit is important both for reducing commuting stress and for lessening the environmental impact of commutes. The average two-way commute takes



nearly an hour out of a worker's day, an increase of about 10 minutes since 1980.<sup>114</sup> Commuting to work is one of the most disliked activities that many people perform on a daily basis,<sup>115</sup> and longer work commutes are associated with higher levels of stress and fatigue during other parts of the day as well as with higher absenteeism.<sup>116, 117</sup>

Three in four Americans currently commute individually to work by car (not including carpooling).<sup>118</sup> And yet when other options are available, commuters tend to prefer transit options that allow them to feel productive or physically active, particularly walking and biking.<sup>119</sup> The U.S. has limited alternatives to transportation by car compared to European countries, and so public transit is not always an attractive or available option to American commuters.<sup>120</sup> Seattle has increased bus ridership and reduced traffic congestion by creating bus-only lanes and expanding bus services, paid for with a higher sales tax and vehicle license fees.<sup>121</sup> Salt Lake City has reduced congestion by adding bike lanes and investing in light rail and buses.<sup>122</sup>

To be sure, longer commutes can give individuals and their families access to living arrangements that are more affordable or otherwise more desirable than those closer to their workplaces.<sup>123</sup> Households in more expensive metropolitan areas experience longer commute times on average.<sup>124</sup> Policies to increase the supply of affordable housing for middle-income households closer to centers of work and transit would likely have a large impact on commuting time. Reducing the time costs as well as the financial and psychological costs of commuting requires investments in housing, transportation, and remote work.

### 7. Encourage telecommuting

Another option for some workers is to eliminate commuting altogether, at least for part of the week. Telecommuting has been the fastest-growing commuting method over the last several years (compared to more traditional methods, like driving or taking the bus), and yet it is still relatively rare.<sup>125</sup> Only about 8% of wage and salary workers (excluding the self-employed) worked from home at least once per week in 2018.<sup>126</sup> Remote work is much more common among high-wage workers and those in certain industries, such as financial services.

While some jobs cannot be done remotely, some of the persistence of in-person work probably reflects the slow adoption of remote work technology and employer concerns about managing a tele-workforce. The COVID-19 experience has highlighted the necessity of enabling

as many workers as possible to work from home during a crisis and may produce a long-term shift toward telecommuting. The government could accelerate the adoption of telecommuting by ensuring universal access to broadband. Pew estimates that three-quarters of American adults now have high-speed broadband internet service at home, up dramatically from 1% in 2000 but still far behind access to other necessary utilities.<sup>127</sup> Rural areas in particular have been left out of the broadband revolution;<sup>128</sup> many households in urban areas are also digitally disconnected.<sup>129</sup> More work needs to be done to bring all Americans into the digital economy.

One employer practice that would help is to formalize work-from-home arrangements and give employees the right to request to work remotely without facing negative employment consequences. In some contexts, this could be good for employers and employees: a growing body of research indicates that telecommuting can improve job satisfaction and raise productivity, in addition to reducing emissions and spreading work to more remote regions. An experiment at a large Chinese travel agency found that call center employees who were randomly assigned to work from home saw a 13% performance increase, partly because they took more calls per minute, but primarily because they took fewer breaks and days off.<sup>130</sup> The agency also saved on office costs. Similarly, when a sample of workers at a large Italian multi-utility company were randomly assigned to set their own workplace and schedule one day per week for nine months, they were more productive and took fewer leave days than their office-bound coworkers.<sup>131</sup>

Some research has also found that switching to remote work improves retention,<sup>132</sup> consistent with other evidence that people who work from home have higher job satisfaction on average.<sup>133</sup> For employees, working from home can reduce work-family conflict, especially for women. An analysis of the German Socio-Economic Panel found that working from home reduces the gender gap in working hours and monthly earnings because teleworking mothers are able to increase their work hours.<sup>134</sup>

Productivity benefits may not scale up outside of a trial, or at least not in all workplaces. Successful telework experiments have generally taken place in workplaces that have had time to prepare for a switch to remote work and where performance is based on clear, measurable outputs, such as calls per minute. The standard approach of monitoring the amount of time employees spend in the office is not suitable to a remote workforce. Using the staggered rollout

of the U.S. Patent Office's telework program as a natural experiment, one study found a spike in procrastination among patent examiners who were assigned to telework, resulting in more rushed reviews that required greater revisions later on.<sup>135</sup> Many federal agencies have rolled back their telework policies since 2018, and a few high-profile companies, such as Yahoo and Reddit, have recently put an end to remote work. Another concern is that employees differ greatly in how well they adapt to working from home, so this will not be the best option for all employees. Providing a mix of home- and office-based work options could lead to better outcomes. After the telework experiment at the Chinese travel agency, the company allowed employees to sort themselves into either home or office work. The measured performance gains for the work-from-home group nearly doubled under self-sorting. This was primarily because employees who had not worked well at home self-sorted back into the office, while the most productive teleworkers stayed home.

Additionally, many of the downsides of remote work apply to extensive rather than occasional telecommuting; telework appears to be most successful when alternated with face-to-face contact. For instance, face-to-face groups perform better than virtual groups in creative teamwork tasks, but working away from the office can improve focus on individualized tasks.<sup>136</sup> Additionally, professional isolation from telecommuting can have a negative impact on well-being.<sup>137</sup> Some evidence also suggests that extensive telecommuting has negative spillover effects on teams and can result in fewer promotions and lower salary growth.<sup>138</sup> In the experiment at the Chinese travel agency, teleworkers were less likely to be promoted than equally productive employees who worked in the office. This may be because managers have better perceptions of employees who are present in the office.

Widespread telecommuting will require new approaches to communication, coordination, and performance evaluation.<sup>139</sup> But given the possible benefits of telecommuting, it may be worth the investment to enable more Americans to work from home.

## **Conclusion**

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The time-money tradeoff requires the middle class to make difficult sacrifices in order to support themselves and their families. While time spent working has declined markedly since the end of the Industrial Revolution, for the average worker in the U.S., this trend has stalled in recent decades even as we have become more affluent. Further, a majority of middle-class

families now depends on two incomes, and most of the middle class's income gains over the last forty years can be attributed to increases in women's earnings. The failure of public policy to keep pace with women's changing roles has exacerbated the time squeeze. Individuals and their families are caught between long and inflexible work hours on one end and family care needs on the other. We have suggested several policies and workplace practices that could alleviate pressures on both sides of the time squeeze, from providing everyone with a minimum level of annual leave to shifting school hours to better align with work hours. Some of these changes would reduce overall worktime, while others would reallocate work across the life cycle or make it easier for individuals to balance existing work and family responsibilities.

## Appendix 1: Data and methodology

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Estimates presented in Section 2 are based primarily on our analysis of the Annual Social and Economic Supplement (ASEC) of the Current Population Survey (CPS) for the years 1980–2019. The ASEC is fielded every March to a nationally representative sample of U.S. households. The survey provides detailed information about household members’ income and employment characteristics in the previous year, as well as about their current family structures. Some additional estimates come from the American Time Use Survey (ATUS), which provides nationally representative time diary data on an annual basis starting in 2003. Data were downloaded from IPUMS.<sup>140</sup>

### *Defining the middle class.*

For this analysis, we define the middle class according to family rather than household income. We use the Census definition of a family group, which includes any group of individuals related by birth, marriage, or adoption living together in a household. A household may contain more than one family, including the householder’s family (the primary family) as well as related or unrelated subfamilies. A subfamily is either a married couple or a single parent living in someone else’s household. We also count single individuals living alone or with unrelated housemates as their own families. IPUMS provides a less restrictive definition of the family that includes related subfamilies as part of the householder’s family; however, since this definition is not consistent across years due to changes in the information available about family interrelationships, we choose to use the Census-defined family plus single individuals. We limit the sample to families that contain at least one prime-age adult (ages 25-54) in order to focus on the population of families that are likely to rely on paid work for income. The middle class is defined as the middle 60% of the family income distribution. We weight each family unit in the distribution by family size so that the middle class contains approximately 60% of people rather than 60% of families.

### *Income concept.*

Total family income is the sum of all family members’ total personal incomes reported for the previous year. Personal income includes the respondent’s pre-tax personal income or losses (Census money income), including wage and salary earnings, business and farm income, public assistance, Social Security benefits, retirement income, Supplemental

Security Income, unemployment benefits, and income from interest, rent, dividends, and various other sources. In-kind benefits and tax credits such as the EITC are not included. A full list of income components included in total personal income is available [here](#). This variable is essentially comparable over time, though there is concern that income is increasingly misreported in household surveys.<sup>141</sup> We use family income only to rank households by income within years. We adjust income for family size by dividing total family income by the square root of the number of people in the family. This accounts for the fact that families of different sizes who have the same total income do not have the same level of material well-being. We divide by the square root of family size rather than by actual family size to allow for economies of scale.

#### *Individual work hours.*

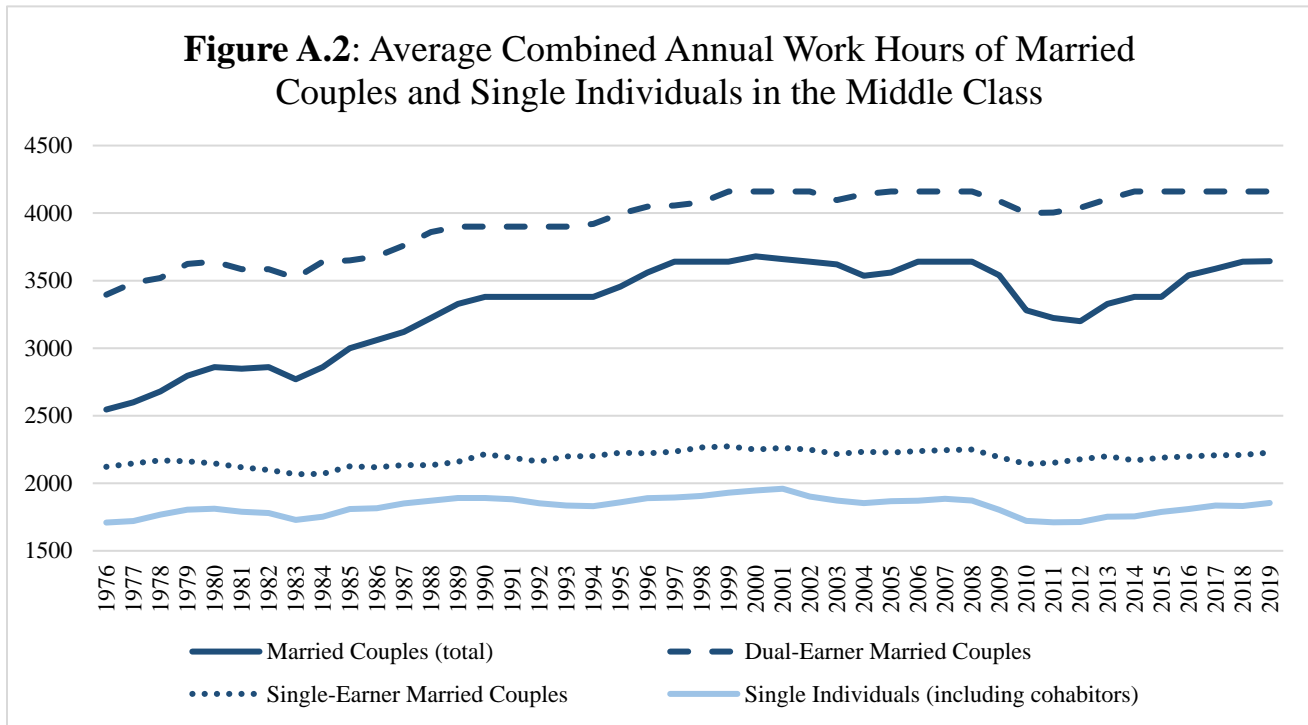
Annual work hours for an individual in the previous year are calculated by multiplying the respondent's usual weekly work hours in weeks worked by reported weeks worked. The primary problem with this approach is that the measure of weeks worked includes weeks of paid time off, such as sick leave or vacation. Many people report that they worked for 52 weeks of the year. This measure is thus better understood as hours for which the respondent was paid by an employer in the previous year. In alternative estimates, we have used estimates of average annual days of paid holiday and vacation from the Bureau of Labor Statistics summary tables of the National Compensation Survey and Employee Benefits Survey to subtract average weeks of paid leave from the measure of weeks worked in the ASEC. Since our estimated average number of vacation days and holidays available to workers in the U.S. has changed very little over the period, at around 17 days per year, this affects the level but not the trend in annual work hours. We are not able to measure days off for individual respondents or for particular subgroups. Additionally, this measure captures vacation days and holidays offered by employers rather than days actually taken.

#### *Married couple work hours.*

We also measure combined work hours for opposite-sex married couples who live in the same household. The ASEC did not begin to identify same-sex married couples until 2019, so we are unable to include same-sex couples in this analysis. We count unmarried cohabiting couples as single individuals due to inconsistency in the identification of

cohabiting couples over time. Combined work hours for married couples are simply the sum of each spouse’s work hours. We define dual-earner couples as those in which each spouse reported any paid work in the previous year. Couples are classified as fulltime dual-earners if each spouse worked at least 1750 hours the previous year. Part-time work is defined as any positive number of annual work hours below 1750.

Section 2 generally presents estimates for families with children. Figure A.2 below presents an alternative version of Figure 2.2 that includes the total population of middle-class married couples and single individuals, regardless of whether they have children. The levels and trends are very similar to those presented in Figure 2.2.



***Estimating women’s contributions to income growth.***

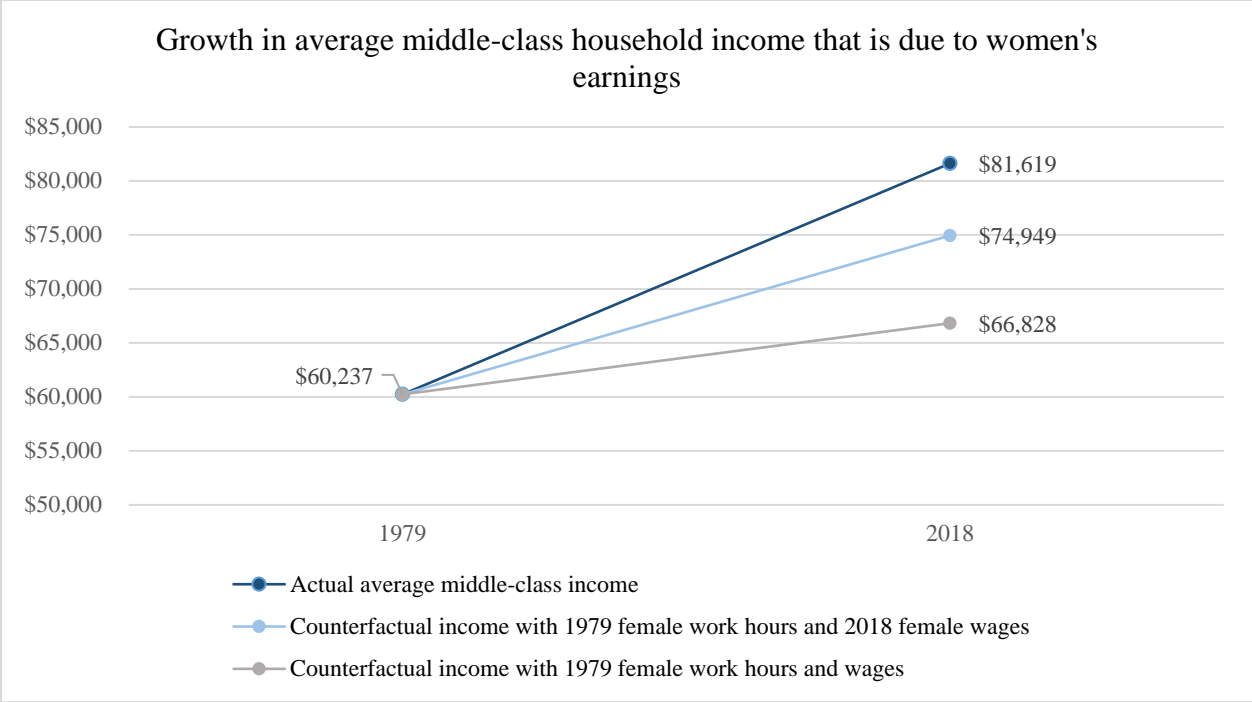
We draw from the methodology of Boushey and Vaghul (2016) to estimate the fraction of middle-class income growth that is due to women’s wages and work hours. We first calculate average family-level male and female earnings and work hours. This means that we sum hours worked and labor income earned by all men (women) in a given family, then take the average across all middle-class families to calculate the average level of work hours and earnings attributed to men (women). We calculate family-level male and female

earnings rather than individual-level earnings to account for differences in family structure (i.e. not all families contain one man and one woman). Male and female earnings per hour are calculated as total family-level male or female earnings divided by total male or female work hours.

To calculate the counterfactual earnings of women, we multiply the 2013 (or 2018) earnings per hour of women by the 1979 total work hours of women. This is an estimate of what earnings in 2013 “would have been” if women worked the same number of hours as in 1979. The change in income that is attributed to additional women’s work hours is the difference between actual female earnings in 2013 (or 2018) and this counterfactual level of earnings. Counterfactual income is the combination of counterfactual female earnings, actual male earnings, actual other household income. This is simply a descriptive result. The shift-share analysis does not make any adjustment for the fact that women’s wages have likely increased in part as a result of women’s increased labor force attachment, nor for the possibility that men’s hours would not have decreased in the absence of higher hours among women.

The definition of a family unit has a significant impact on these results. As discussed above, we use the fairly narrowly defined Census family throughout this report. A much broader definition of a family would capture the entire household. The chart below shows alternative estimates for the contribution of women’s earnings to household income.





***Time use.***

We use the American Time Use Survey to estimate the average amount of time adults in different family configurations spend in market work, nonmarket work, childcare, and adult care. Market work is a broad measure that includes time spent working for pay as well as job search, commuting to work, work breaks, and other income-generating activities.

Nonmarket work includes housework (indoor and outdoor) and household management, such as managing finances or communicating with providers of household services.

Childcare includes primary childcare, when respondents’ main activity involved taking care of, playing with, or otherwise spending time with children, but does not include secondary childcare, when respondents may have been responsible for children but were primarily engaged in another activity, such as cooking or watching television. Adult care similarly measures time spent directly caring for an adult in need of assistance.

Since ATUS interviews are obtained from only one person per household, estimates for husbands and wives are not averages for each couple, but the combination of individual averages for married men and married women who fall into each category. For instance, to estimate time use for couples with children in which the husband works fulltime and the

wife does not work for pay, we calculate average time use for married men with children who work fulltime and whose wives do not work for pay, then average time use for married women who do not work for pay and whose husbands work fulltime. For the purposes of this analysis, work status is based on current employment status and usual weekly work hours. Additionally, this analysis is not limited to the middle class. This is primarily because the ATUS does not provide the income information that we use to identify the middle class in other portions of this report. Since ATUS respondents are drawn from the CPS sample, some ATUS respondents can be linked to ASEC interviews. However, using only ATUS-ASEC linked respondents limits the sample to a smaller sample of respondents who were primarily interviewed in the summer rather than year-round. We use the full sample of high-quality time diaries for prime-age individuals and pool data from the years 2015-2018 to ensure a sufficiently large sample size.

## Appendix 2. Additional literature on trends in work hours in the U.S.

The measurement of long-term trends in annual work hours is a subject of some debate that we have described only briefly above. Estimates from labor force surveys have generally shown that average work hours either stabilized or began to rise sometime after 1980 in the U.S., while studies of time use surveys suggest that work hours have declined. As discussed above, early work by Schor (1991) and Leete and Schor (1994) argued that average annual worktime in the U.S. began increasing after 1969. Since then, however, several studies of labor force surveys have found that average weekly hours per worker declined into the 1980s but then either stabilized or rose modestly over the next two decades.<sup>142</sup> Ramey and Francis (2009) find that while weekly hours per worker declined by about 16 hours per week between 1900 and 2005, the entirety of the decline took place before 1980, with relative stability thereafter.

These estimates apply to the entire workforce, not just prime-age individuals (generally defined as those between the ages of 25 and 54). Using the Current Population Survey (CPS) and the Panel Study on Income Dynamics (PSID), Bluestone and Rose (2001) find that the downward trend in prime-age workers' average annual hours reversed sharply in the early 1980s and that work hours had returned to their 1967 levels by 1995. More recently, Wilson and Jones (2018) estimate that average annual hours among prime-age workers increased by about 8 percent between 1979 and 2016, with much of the increase occurring before 2000.

Disagreements about trends in average worktime frequently hinge on the measurement of weeks worked per year. Recent evidence suggests that differences in weeks worked per year account for  $\frac{1}{4}$  to  $\frac{1}{2}$  of the variation in annual work hours between the U.S. and Europe as well as much of the variation within countries over time,<sup>143</sup> and yet data on weeks worked per year are not readily available. Leete and Schor (1994) attempt to measure weeks worked per year using a CPS variable that counts weeks of paid absences as weeks of work, which will overestimate any worktime changes if, say, workers gain greater access to paid vacations. Note that we also use this measure for some estimates in Section 2 (see Appendix 1 for more discussion of these issues).

Other researchers using labor force surveys generally aggregate up from the number of hours the average respondent reports working in the previous week. If workers are interviewed throughout the year, average weekly hours should reflect both workweeks and non-workweeks. Using this annualized weekly measure, Blundell, Bozio, and Laroque (2011) find that average worktime per worker plummeted by more than 400 hours per year in the U.K. and France between 1968 and 2007 but did not change in the United States. The problem is that labor force surveys such as the Current Population Survey deliberately sample weeks that are unlikely to contain holidays, resulting in an accurate representation of the typical workweek but not of non-workweeks. Bick, Brüggemann, and Fuchs-Schündeln (2019) incorporate data on country-level average vacation days and holidays from external sources to improve estimates of annual hours in labor force surveys. They find that annual hours per worker are now 14% lower in Europe than in the U.S., where worktime has remained fairly stable around 1,900 hours per year since 1983.

Since Bick et al. have produced some of the most up-to-date and careful estimates drawn from labor force surveys of annual work hours that are comparable both across countries and over time, we use their data for trends post-1983 for Figure 1.1. Between 1950 and 1983, we use work hours estimates from the OECD when available, though this series is not necessarily comparable across countries. We are reassured by the fact that while Bick et al. and the OECD estimate different *levels* of work hours post-1983, estimated trends in work hours are similar across data sources. Prior to 1950, we use estimates from Huberman and Minns (2007).

Time use surveys provide an alternative source of data on work hours since 1965. These surveys ask respondents to provide a detailed accounting of their activities over the course of the previous day (a time diary) and were conducted roughly once per decade between the 1960s and 1990s, then on an annual basis since 2003. One of the primary advantages of using a time use survey to measure work hours is that respondents can likely report the events of the previous day with greater accuracy than the events of the previous week, though comparisons of time diaries and labor force surveys suggest that CPS respondents accurately report hours worked in the previous week.<sup>144</sup> Time use surveys should also implicitly capture days off from work because, unlike labor force surveys, they are conducted nearly every day of the year. Additionally, time diaries measure time spent in nonmarket work (e.g. housework), leisure, and other activities in addition to market work.

In a particularly well-known study of time use data from 2007, Aguiar and Hurst estimate that average weekly worktime *per capita* (as opposed to per worker) for non-retired adults between the ages of 21 and 65 declined by 1 hour per week between 1965 and 2003. Like many of the authors cited above, they find that work hours declined between 1965 and 1985 but rose back to their 1965 levels by 1993. Over the entire period, however, they find that declines in men's weekly work hours (-6.6) exceeded increases in women's work hours (+3.8). Further, due to dramatic declines in women's weekly hours nonmarket work, which were only partially offset by men taking on more household duties, they find that average time spent in leisure has increased by 4 to 8 hours per week since 1965.

It is worth mentioning that a key step of Aguiar and Hurst's analysis involves holding the demographic composition of the sample constant. All else equal, increasing educational attainment and the aging of the Baby Boomers into their prime working years should have increased average work hours over this period, so controlling for these factors will likely understate the change in per-capita work hours. In fact, in an earlier version of the paper that allows demographic characteristics to change, Aguiar and Hurst (2006) estimate an *increase* in average per-capita work hours of 1.6 hours per week between 1965 and 2003.<sup>145</sup> This is reasonably consistent with though still more modest than estimates in Ramey and Francis (2009), who find that work hours per capita have not changed at all for prime-age Americans since 1900 due to the rise in women's work hours, and have increased by about 4 hours per week since

1960. Similarly, Blundell et al. (2011) find that prime-age American women increased their work hours by an average of 90 hours per year between 1977 and 2007, more than four times the decline in American men's hours. According to their estimates, increases in women's work hours resulted in an increase in average per-capita work hours in the U.S. even as hours in the U.K. and France declined.

Some of the confusion around average trends in work hours, whether per worker or per capita, stems from the fact that work hours have increased for some workers and decreased for others, a phenomenon known as work hours polarization.<sup>146</sup> Golden (2009) identifies polarization as the defining feature of worktime in the modern era. The primary aim of Aguiar and Hurst (2007) was to document the increasing dispersion of work and leisure across high- and low-educated individuals. Men with a high school diploma or GED equivalent spent about 8 more hours in leisure per week in 2003 than those with a bachelor's degree or more.<sup>147</sup> Similar dispersion has been observed between high- and low-wage workers and between those in professional or managerial occupations and others.<sup>148</sup> Recent work by Bick, Fuchs-Schündeln, and Lagakos (2018) suggests that a unique feature of today's high-income economies is that work hours are flat or increasing with wages.

As Schor (2001) notes, there is some danger here of conflating voluntary with involuntary leisure. That is, given the polarization of work hours between the over- and underemployed,<sup>149</sup> some of the increase in "leisure" enjoyed by the less educated may in fact be the unwanted result of poor job prospects. After all, the Great Recession produced an increase in apparent "leisure;"<sup>150</sup> the leisure bump from the COVID-19 crisis will likely be enormous but should not be considered beneficial.

## Endnotes

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<sup>1</sup> John P. Robinson, “Americans Less Rushed But No Happier: 1965–2010 Trends in Subjective Time and Happiness,” *Social Indicators Research* 113, no. 3 (September 1, 2013): 1091–1104, <https://doi.org/10.1007/s11205-012-0133-6>.

<sup>2</sup> “Americans’ Perceived Time Crunch No Worse Than in Past” (Gallup, December 31, 2015), <https://news.gallup.com/poll/187982/americans-perceived-time-crunch-no-worse-past.aspx>.

<sup>3</sup> Michael Huberman and Chris Minns, “The Times They Are Not Changin’: Days and Hours of Work in Old and New Worlds, 1870–2000,” *Explorations in Economic History* 44, no. 4 (October 1, 2007): 538–67, <https://doi.org/10.1016/j.eeh.2007.03.002>.

<sup>4</sup> Valerie A. Ramey and Neville Francis, “A Century of Work and Leisure,” *American Economic Journal: Macroeconomics* 1, no. 2 (July 2009): 189–224, <https://doi.org/10.1257/mac.1.2.189>.

<sup>5</sup> Alexander Bick, Bettina Brüggemann, and Nicola Fuchs-Schündeln, “Hours Worked in Europe and the United States: New Data, New Answers,” *The Scandinavian Journal of Economics* 121, no. 4 (2019): 1381–1416, <https://doi.org/10.1111/sjoe.12344>.

<sup>6</sup> Alberto Alesina, Edward Glaeser, and Bruce Sacerdote, “Work and Leisure in the United States and Europe: Why So Different?,” in *NBER Macroeconomics Annual 2005*, ed. Mark Gertler and Kenneth Rogoff, vol. 20 (Cambridge, MA: MIT Press, 2006); Giulia Faggio and Stephen Nickell, “Patterns of Work Across the OECD\*,” *The Economic Journal* 117, no. 521 (2007): F416–40, <https://doi.org/10.1111/j.1468-0297.2007.02062.x>; Susan Fleck, “International Comparisons of Hours Worked: An Assessment of the Statistics,” *Monthly Labor Review / U.S. Department of Labor, Bureau of Labor Statistics* 132 (May 1, 2009): 3–31.

<sup>7</sup> Edward C. Prescott, “Why Do Americans Work so Much More than Europeans?,” *Quarterly Review*, no. Jul (2004): 2–13; Richard Rogerson, “Understanding Differences in Hours Worked,” *Review of Economic Dynamics* 9, no. 3 (July 1, 2006): 365–409, <https://doi.org/10.1016/j.red.2006.05.002>; Lee Ohanian, Andrea Raffo, and Richard Rogerson, “Long-Term Changes in Labor Supply and Taxes: Evidence from OECD Countries, 1956–2004,” *Journal of Monetary Economics* 55, no. 8 (November 1, 2008): 1353–62, <https://doi.org/10.1016/j.jmoneco.2008.09.012>; Cara McDaniel, “Forces Shaping Hours Worked in the OECD, 1960–2004,” *American Economic Journal: Macroeconomics* 3, no. 4 (October 2011): 27–52, <https://doi.org/10.1257/mac.3.4.27>; Alexander Bick and Nicola Fuchs-Schündeln, “Taxation and Labour Supply of Married Couples across Countries: A Macroeconomic Analysis,” *The Review of Economic Studies* 85, no. 3 (July 1, 2018): 1543–76, <https://doi.org/10.1093/restud/rdx057>.

<sup>8</sup> Johanna Wallenius, “Social Security and Cross-Country Differences in Hours: A General Equilibrium Analysis,” *Journal of Economic Dynamics and Control* 37, no. 12 (December 1, 2013): 2466–82, <https://doi.org/10.1016/j.jedc.2013.06.002>; Andrés Erosa, Luisa Fuster, and Gueorgui Kambourov, “Labor Supply and Government Programs: A Cross-Country Analysis,” *Journal of Monetary Economics*, Carnegie-NYU-Rochester Conference Series on Public Policy at New York University on April 15-16, 2011, 59, no. 1 (January 1, 2012): 84–107, <https://doi.org/10.1016/j.jmoneco.2011.10.006>.

<sup>9</sup> Linda Bell and Richard Freeman, “Why Do Americans and Germans Work Different Hours?,” Working Paper (National Bureau of Economic Research, July 1994), <https://doi.org/10.3386/w4808>; Samuel Bowles and Yongjin Park, “Emulation, Inequality, and Work Hours: Was Thorsten Veblen Right?,” *The Economic Journal* 115, no. 507 (2005): F397–412, <https://doi.org/10.1111/j.1468-0297.2005.01042.x>.

<sup>10</sup> Roger L. Ransom and Richard Sutch, *One Kind of Freedom: The Economic Consequences of Emancipation*, 2 edition (Cambridge England ; New York: Cambridge University Press, 2001).

<sup>11</sup> Benjamin Kline Hunnicutt, “The Century of Shorter Hours and Work Reduction,” in *Work Without End, Abandoning Shorter Hours for the Right to Work* (Temple University Press, 1988), 9–36, [www.jstor.org/stable/j.ctt14bt5th.5](http://www.jstor.org/stable/j.ctt14bt5th.5).

<sup>12</sup> Deborah Figart and Lonnie Golden, “Introduction and Overview: Understanding Working Time around the World,” in *Working Time: International Trends, Theory and Policy Perspectives* (Routledge, 2001).

<sup>13</sup> Lonnie Golden, “A Brief History of Long Work Time and the Contemporary Sources of Overwork,” *Journal of Business Ethics* 84 (2009): 217, <https://doi.org/10.1007/s10551-008-9698-z>.

<sup>14</sup> Huberman and Minns, “The Times They Are Not Changin’.”

<sup>15</sup> “Today in History - August 20,” web page, Library of Congress, Washington, D.C. 20540 USA, accessed January 9, 2020, <https://www.loc.gov/item/today-in-history/august-20/>.

<sup>16</sup> Huberman and Minns, “The Times They Are Not Changin’”; Lord Skidelsky, “How to Achieve Shorter Working Hours” (Progressive Economy Forum, 2019).

<sup>17</sup> Huberman and Minns, “The Times They Are Not Changin’.”

<sup>18</sup> Huberman and Minns.

<sup>19</sup> Hunnicutt, “The Century of Shorter Hours and Work Reduction.”

<sup>20</sup> Daniel M.G. Raff and Lawrence H Summers, “Did Henry Ford Pay Efficiency Wages?,” Working Paper, Working Paper Series (National Bureau of Economic Research, December 1986), <https://doi.org/10.3386/w2101>; History.com Editors, “Ford Factory Workers Get 40-Hour Week,” HISTORY, accessed March 11, 2020, <https://www.history.com/this-day-in-history/ford-factory-workers-get-40-hour-week>.

<sup>21</sup> Apparent changes in levels or trends between data sources, such as the increase in estimated French work hours between 1938 and 1950, should be interpreted with caution and largely attributed to differences in the source data and methodology. Estimates from Huberman and Minns (2007) are themselves based on a range of data sources and methodologies. Additionally, the OECD cautions against using its estimates for cross-country comparisons. Estimates from Bick, Brüggemann, and Fuchs-Schündeln (2019) are the most comparable across countries.

<sup>22</sup> Hunnicutt, “The Century of Shorter Hours and Work Reduction.”

<sup>23</sup> “Encouraging Work Sharing to Reduce Unemployment | The Hamilton Project,” accessed December 9, 2019, [https://www.hamiltonproject.org/papers/encourage\\_work\\_sharing\\_to\\_reduce\\_unemployment](https://www.hamiltonproject.org/papers/encourage_work_sharing_to_reduce_unemployment).

<sup>24</sup> “Convention C047 - Forty-Hour Week Convention, 1935 (No. 47),” accessed December 28, 2019, [https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100\\_ILO\\_CODE:C047](https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C047).

<sup>25</sup> Lord Skidelsky, “How to Achieve Shorter Working Hours.”

<sup>26</sup> We produce these estimates by dividing the total annual hours worked by full- and part-time employees (FRED series B4701C0A222NBEA) by the number of full- and part-time employees (FRED series A4201C0A173NBEA) from the Bureau of Economic Analysis. The number of employees comes from the Quarterly Census of Employment and Wages, which counts positions rather than individuals and

so will double-count anyone who holds two jobs, inflating the denominator. Average hours may thus be slightly underestimated.

<sup>27</sup> Timo Boppart and Per Krusell, “Labor Supply in the Past, Present, and Future: A Balanced-Growth Perspective,” *Journal of Political Economy* 128, no. 1 (January 1, 2020): 118–57, <https://doi.org/10.1086/704071>.

<sup>28</sup> Mitra Toossi and Elka Torpey, “Older Workers: Labor Force Trends and Career Options” (Bureau of Labor Statistics, May 2017), <https://www.bls.gov/careeroutlook/2017/article/older-workers.htm>; Mona Larsen and Peder J. Pedersen, “Labour Force Activity after 65: What Explain Recent Trends in Denmark, Germany and Sweden?,” *Journal for Labour Market Research* 50, no. 1 (2017): 15–27, <https://doi.org/10.1007/s12651-017-0223-7>.

<sup>29</sup> Ramey and Francis, “A Century of Work and Leisure.”

<sup>30</sup> Ramey and Francis.

<sup>31</sup> Alexander Bick, Nicola Fuchs-Schündeln, and David Lagakos, “How Do Hours Worked Vary with Income? Cross-Country Evidence and Implications,” *American Economic Review* 108, no. 1 (January 2018): 170–99, <https://doi.org/10.1257/aer.20151720>.

<sup>32</sup> Isabel V. Sawhill and Christopher Pulliam, “Money Alone Doesn’t Buy Happiness, Work Does,” *Brookings* (blog), November 5, 2018, <https://www.brookings.edu/blog/up-front/2018/11/05/money-alone-doesnt-buy-happiness-work-does/>.

<sup>33</sup> Prescott, “Why Do Americans Work so Much More than Europeans?”; Rogerson, “Understanding Differences in Hours Worked”; McDaniel, “Forces Shaping Hours Worked in the OECD, 1960–2004”; Ohanian, Raffo, and Rogerson, “Long-Term Changes in Labor Supply and Taxes”; Bick and Fuchs-Schündeln, “Taxation and Labour Supply of Married Couples across Countries.”

<sup>34</sup> Bick and Fuchs-Schündeln (2018) also show that the tax treatment of married couples is an important determinant of the labor supply of married women in particular, contributing to relatively high hours among employed married American women.

<sup>35</sup> Wallenius, “Social Security and Cross-Country Differences in Hours”; Erosa, Fuster, and Kambourov, “Labor Supply and Government Programs.”

<sup>36</sup> Bowles and Park, “Emulation, Inequality, and Work Hours.”

<sup>37</sup> Steffen Lehndorff, “Flexibility and Control: New Challenges for Working-Time Policy in the European Union,” *Labour & Industry: A Journal of the Social and Economic Relations of Work* 17, no. 3 (April 1, 2007): 9–28, <https://doi.org/10.1080/10301763.2007.10669349>; Philippe Askenazy, “Working Time Regulation in France from 1996 to 2012,” *Cambridge Journal of Economics* 37, no. 2 (March 1, 2013): 323–47, <https://doi.org/10.1093/cje/bes084>.

<sup>38</sup> Adewale Maye, “No-Vacation Nation” (CEPR, May 22, 2019).

<sup>39</sup> “Survey Shows Japanese Workers Least Likely to Take Vacation Time,” *Japan Today*, accessed January 13, 2020, <https://japantoday.com/category/national/survey-shows-japanese-workers-least-likely-to-take-vacation-time>.

<sup>40</sup> “Employee Benefits in the United States, March 2019” (Bureau of Labor Statistics, September 2019).

<sup>41</sup> We use estimates from Bick et al. (2019), which are based on data from national statistical offices, the European Industrial Relations Observatory, and the International Labor Organization.



<sup>42</sup> Lord Skidelsky, “How to Achieve Shorter Working Hours.”

<sup>43</sup> Bick, Brüggemann, and Fuchs-Schündeln, “Hours Worked in Europe and the United States.”

<sup>44</sup> “LFS by Sex and Age - Indicators,” accessed March 11, 2020, [https://stats.oecd.org/Index.aspx?DataSetCode=LFS\\_SEXAGE\\_I\\_R#](https://stats.oecd.org/Index.aspx?DataSetCode=LFS_SEXAGE_I_R#).

<sup>45</sup> Nicole Bosch, Jan van Ours, and Bas van der Klaauw, “Female Part-Time Work in the Netherlands,” *VoxEU.Org* (blog), September 5, 2009, <https://voxeu.org/article/why-dutch-women-work-part-time>; “Why so Many Dutch People Work Part Time,” *The Economist*, accessed January 14, 2020, <https://www.economist.com/the-economist-explains/2015/05/11/why-so-many-dutch-people-work-part-time>.

<sup>46</sup> While 35 hours is a standard full-time workweek in many countries, using a consistent definition of part-time work allows us to more clearly see cross-country differences in the gender gap in worktime.

<sup>47</sup> Bick, Fuchs-Schündeln, and Lagakos, “How Do Hours Worked Vary with Income?”

<sup>48</sup> Charles I. Jones and Peter J. Klenow, “Beyond GDP? Welfare across Countries and Time,” *American Economic Review* 106, no. 9 (September 2016): 2426–57, <https://doi.org/10.1257/aer.20110236>.

<sup>49</sup> Robert Frank, *Luxury Fever: Why Money Fails to Satisfy in an Era of Excess*, New York, Free Press, 1999.

<sup>50</sup> Jonathan Haidt, *The Happiness Hypothesis*, Basic Books, 2006, p. 100.

<sup>51</sup> Cristobal Young and Chaeyoon Lim, “Time as a Network Good: Evidence from Unemployment and the Standard Workweek,” *Sociological Science* 1 (February 18, 2014): 10–27, <https://doi.org/10.15195/v1.a2>; Alesina, Glaeser, and Sacerdote, “Work and Leisure in the United States and Europe: Why So Different?”

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<sup>53</sup> U.S. Bureau of Labor Statistics, “Employment-Population Ratio: Women,” FRED, Federal Reserve Bank of St. Louis, January 1, 1948, <https://fred.stlouisfed.org/series/LNS12300002>; U.S. Bureau of Labor Statistics, “Employment Population Ratio: 25 - 54 Years,” FRED, Federal Reserve Bank of St. Louis, January 1, 1948, <https://fred.stlouisfed.org/series/LNS12300060>.

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<sup>55</sup> In 2019, 40% of prime-age middle-class families had children under age 18 living with them, though others may have children in the future or may already have adult children. The fraction of middle-class families with children declined by fully 20 percentage points between 1976 and 2019, which may mean that the average middle class family does not face as tight a time squeeze as in the past solely because they take on fewer childcare responsibilities.

<sup>56</sup> The sample is limited to opposite-sex married couples with children. Same-sex married couples can only be identified in the Annual Social and Economic Supplement of the Current Population Survey starting in 2019.

<sup>57</sup> These estimates closely resemble a similar analysis by researchers at Pew Research Center from 2015. See “Raising Kids and Running a Household: How Working Parents Share the Load, November 4, 2015.

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<sup>68</sup> Alexandre Mas and Amanda Pallais, “Valuing Alternative Work Arrangements,” *American Economic Review* 107, no. 12 (December 2017): 3722–59, <https://doi.org/10.1257/aer.20161500>.

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<sup>72</sup> “U.S. Department of Labor Issues Final Overtime Rule | U.S. Department of Labor,” accessed February 28, 2020, <https://www.dol.gov/newsroom/releases/whd/whd20190924>.

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<sup>74</sup> “Overworked America,” *Equitable Growth* (blog), accessed February 28, 2020, <https://equitablegrowth.org/research-paper/overworked-america/>.

<sup>75</sup> Many economists believe that jobs lost to automation will simply be replaced by more technical or interpersonal jobs, but the long-term future of work is uncertain. Further, work-sharing through a shorter workweek would be an appropriate response to short-term job disruptions even if automation does not lead to mass unemployment. Germany and other European countries, along with a few U.S. states, used this strategy during the Great Recession.

<sup>76</sup> Smaller-scale trials suggest that a shorter workweek is feasible and even profitable in some contexts but would require careful implementation on sector-by-sector basis. When the city of Gothenburg, Sweden transitioned staff at a publicly funded eldercare facility from an 8-hour workday to a 6-hour workday without cutting pay, the cost of hiring additional workers to cover shifts proved to be prohibitively expensive (Savage 2017). By contrast, the New Zealand trust fund Perpetual Guardian reduced its workweek by a full day and found that employees were just as productive in four days as in five, possibly due to higher self-reported commitment and stimulation on the job (Graham-McLay 2017). Microsoft found that implementing a four-day workweek in Japan boosted productivity by 40% (Eadicicco 2019). While some companies have abandoned the four-day workweek, the trend is in the opposite direction: 15% of U.S. employers surveyed by the Society for Human Resource Management reported that they had implemented a four-day workweek for at least part of the year in 2019, up slightly from 13% in 2017, when this question was first asked (“2017 Employee Benefits,” “2019 Employee Benefits”). Shorter workweeks may be more successful in the so-called “knowledge industry” where productivity is not so clearly tied to work hours.

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<sup>84</sup> Amy Raub et al., “Paid Leave for Personal Illness: A Detailed Look at Approaches Across OECD Countries” (WORLD Policy Analysis Center, UCLA Fielding School of Public Health, 2018).

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