

Earnings Inequality: Stylized Facts, Underlying Causes, and Policy

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Overview:

- 1. Types of inequality – how and why they matter**
- 2. Descriptive evidence on US earnings inequality**
- 3. Underlying causes of rising earnings inequality – demand, supply, and institutional forces**
- 4. Policy implications**

In **competitive** (and non-competitive) labor markets, **wage differences** (i.e., inequality) arise due to **worker and job differences** and the interaction of labor **supply** and **demand**.

Institutions and laws (unions, minimum wages, etc.) also matter.

Inequality inevitable and necessary, but large inequalities undermine societies to the extent that they: result from unequal opportunities, are perceived as not fully deserved, and distort political outcomes.

Distinction between **(in)equality of opportunity** vs. **(in)equality of outcomes**.

Good societies try to make opportunities more equal, but that is often difficult. Inability to equalize opportunities makes it more attractive to adopt policies that reduce unequal outcomes.

In short, **fairness matters** and **outcomes matter**.

What types of inequality are relevant?

I will focus on **wage or earnings inequality** – these are tied to **labor market outcomes**

Depending on the question/issue being addressed, we also care about:

Consumption inequality

Household income inequality

Wealth inequality (asset wealth vs. human capital wealth)

Other issues:

Cross-sectional vs **Lifetime** inequality (inequality age-related) (total vs. residual inequality)

Earnings and income **Mobility** within and across generations

Measurement

Multiple measures of inequality

No single measure can summarize an entire earnings (or income) **distribution**

Inequality can increase due to more persons at **bottom**, more at **top**, fewer in **middle**

“Pictures “ (figures) of distributions are informative

Figure 5a: Trends in Full-Time, Full-Year Weekly Wages

Cumulative Log Change in Real Weekly Earnings at the 90th, 50th and 10th Wage Percentiles
1963-2008: Full-Time Full-Year Males

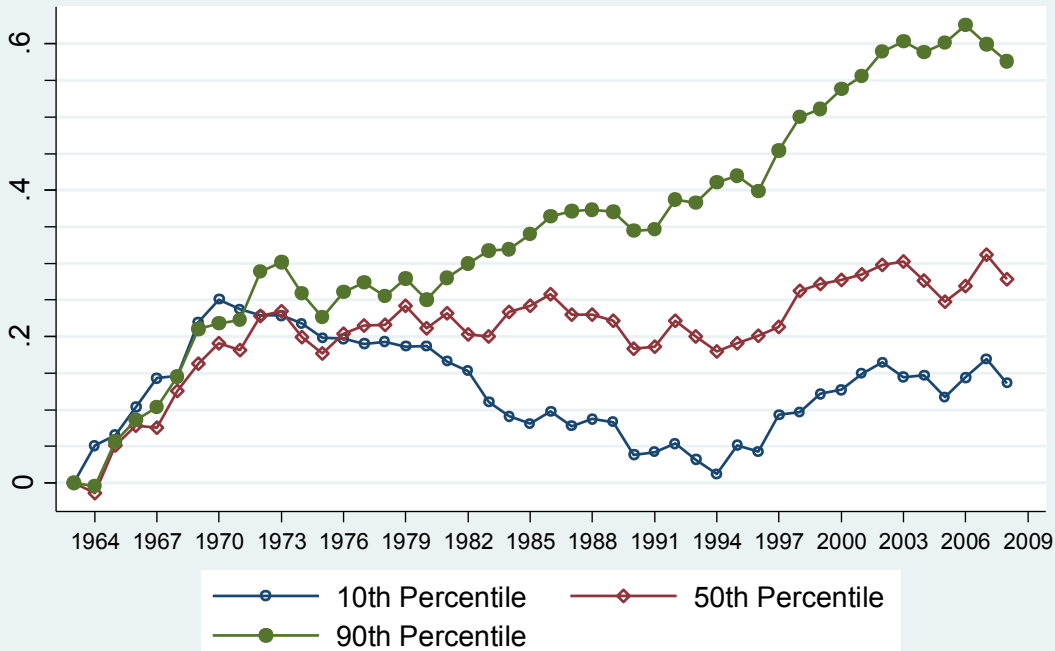
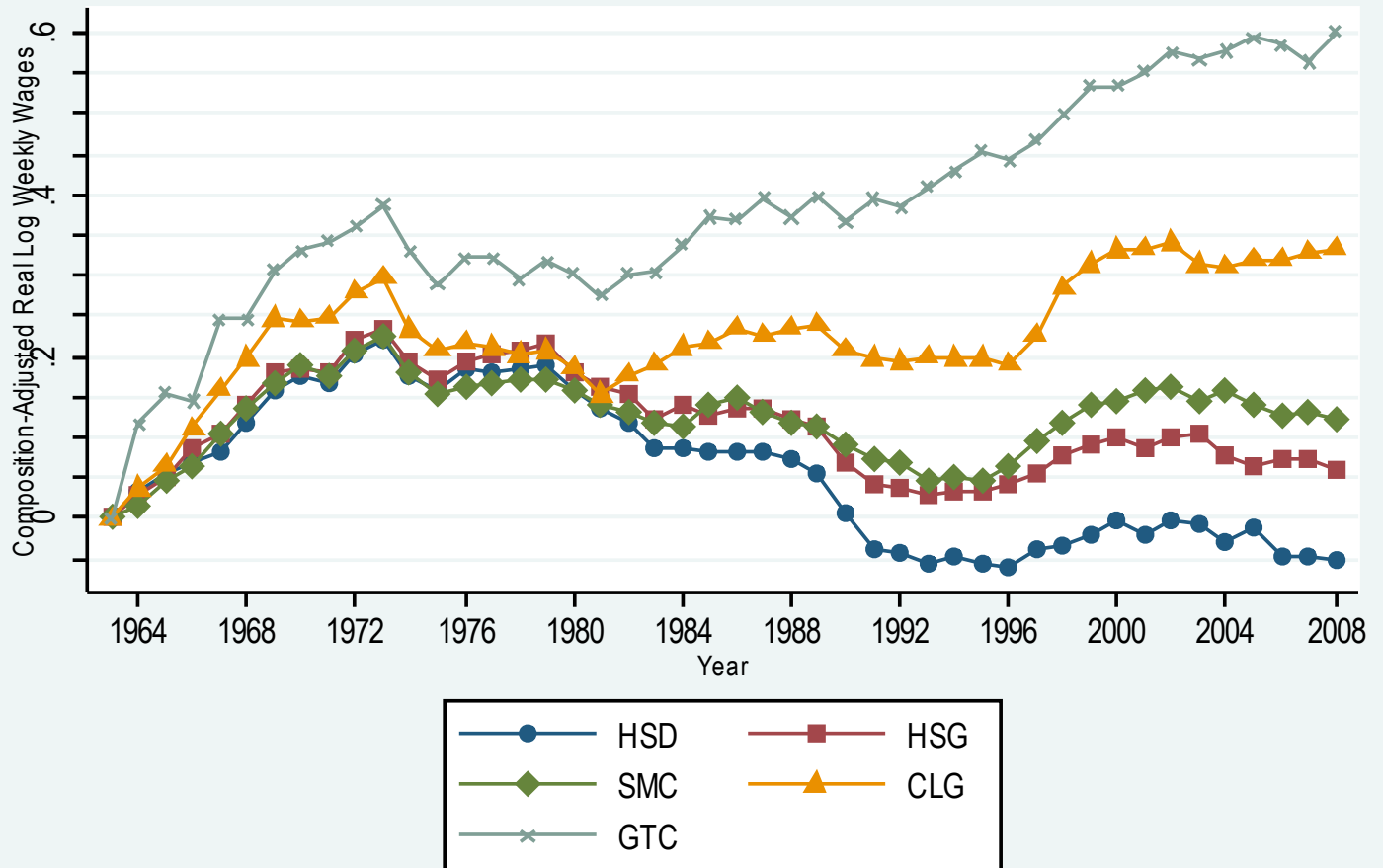


Figure 6

Real, Composition-Adjusted Log Weekly Wages for Full-Time Full-Year Workers
1963-2008 Males



Source: March CPS data for earnings years 1963-2008. See note to Figure 1. The real log weekly wage for each education group is the weighted average of the relevant composition adjusted cells using a fixed set of weights equal to the average employment share of each group.

Why has earnings inequality increased? Demand, supply, and institutional forces

[Demand] Skill biased technological change (SBTC), increased demand for skills

[Supply] Slow growth in educated workers relative to demand (losing the “race” between technology and education)

[Demand and Supply]: Globalization: flows of goods (trade), capital (investment/plants), and people (immigration).

[Institutional] Low minimum wages (MW)

[Institutional] Decline in private sector unionism

“Simple” skill biased technological change (Simple SBTC)

Think of information technology/computers and other technologies

Technology **substitutes** (decreases demand) for **lower skill** workers

Technology **complements** (increases demand and productivity) for **higher skill** workers

Inequality is a “race” between SBTC demand changes and supply of educated workers

This is an **over-simplification**, but provides a rough approximation of why earnings inequality increased sharply in the 1980s. Growth in college-educated workers slowed (smaller cohorts) while demand for skilled workers increased. Returns to college (at its lowest point in 1980) began a long steady rise. Simple SBTC cannot explain well what has occurred since the 1990s (“hollowing” of the middle).

“Job task” SBTC (David Autor and others) from Information Technology (IT)

IT is labor saving (decreases labor demand) for “routinizable” or “programmable” tasks

Production workers in plants (robotics)

Information based workers: bookkeepers, reservation agents, phone operators,

IT complements (increases productivity) for non-routinizable abstract or analytical tasks

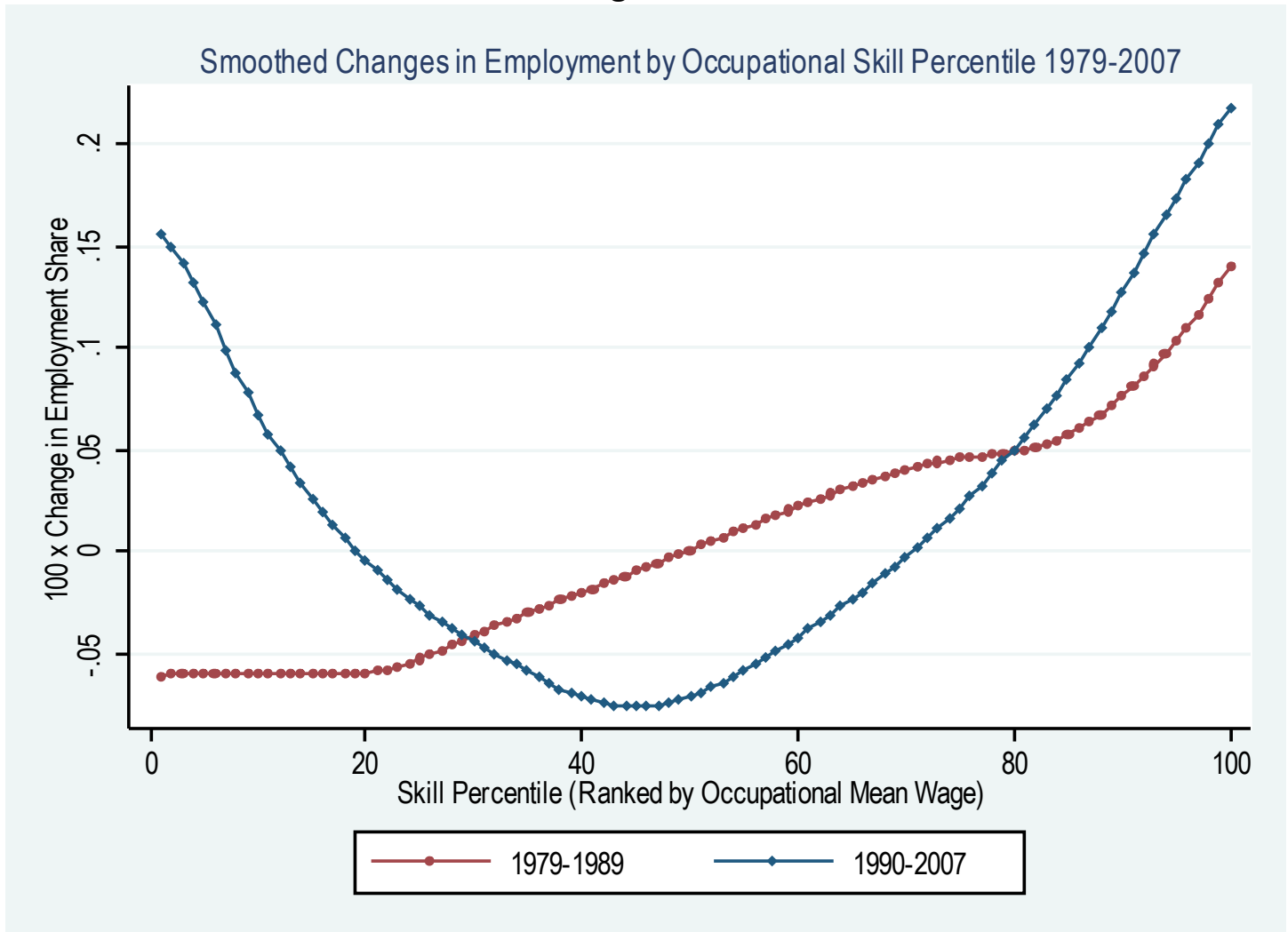
Examples: lawyers, accountants, administrative assistants, architects, economists

Note: IT and the Internet may allow analytic tasks to be provided from a distance through outsourcing or telecommuting; e.g., call centers, business accounting

IT has little effect on manual, non-programmable tasks delivered in person

Examples: hair stylists, child-care workers, landscaping & groundskeepers, physical therapists

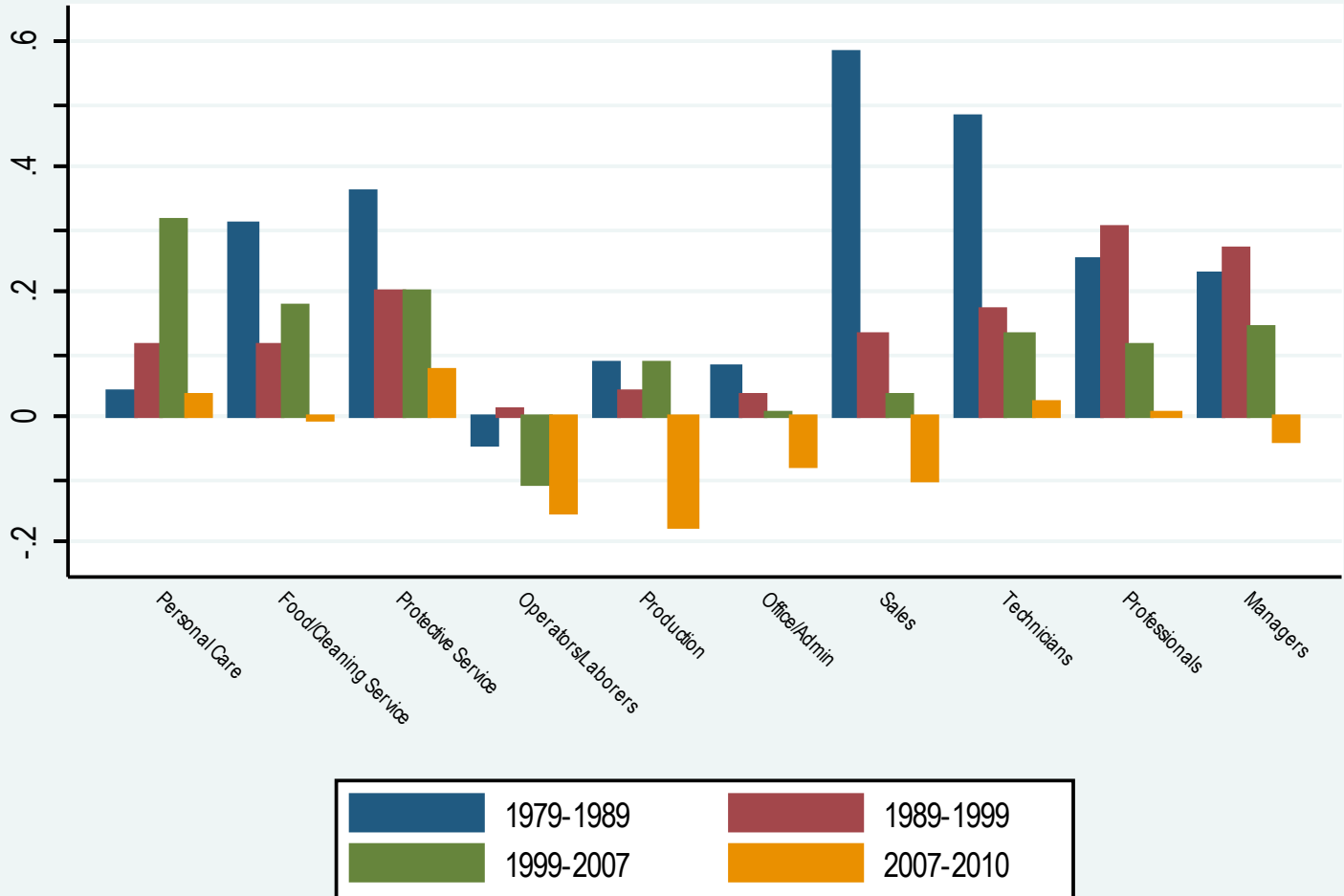
Figure 8



Source: Census IPUMS 5 percent samples for years 1980, 1990, and 2000, and Census American Community Survey for 2008. All occupation and earnings measures in these samples refer to prior year's employment. The figure plots log changes in employment shares by 1980 occupational skill percentile rank using a locally weighted smoothing regression (bandwidth 0.8 with 100 observations), where skill percentiles are measured as the employment-weighted percentile rank of an occupation's mean log wage in the Census IPUMS 1980 5 percent extract. Mean education in each occupation is calculated using workers' hours of annual labor supply times the Census sampling weights. Consistent occupation codes for Census years 1980, 1990, and 2000, and 2008 are from Autor and Dorn (2009a).

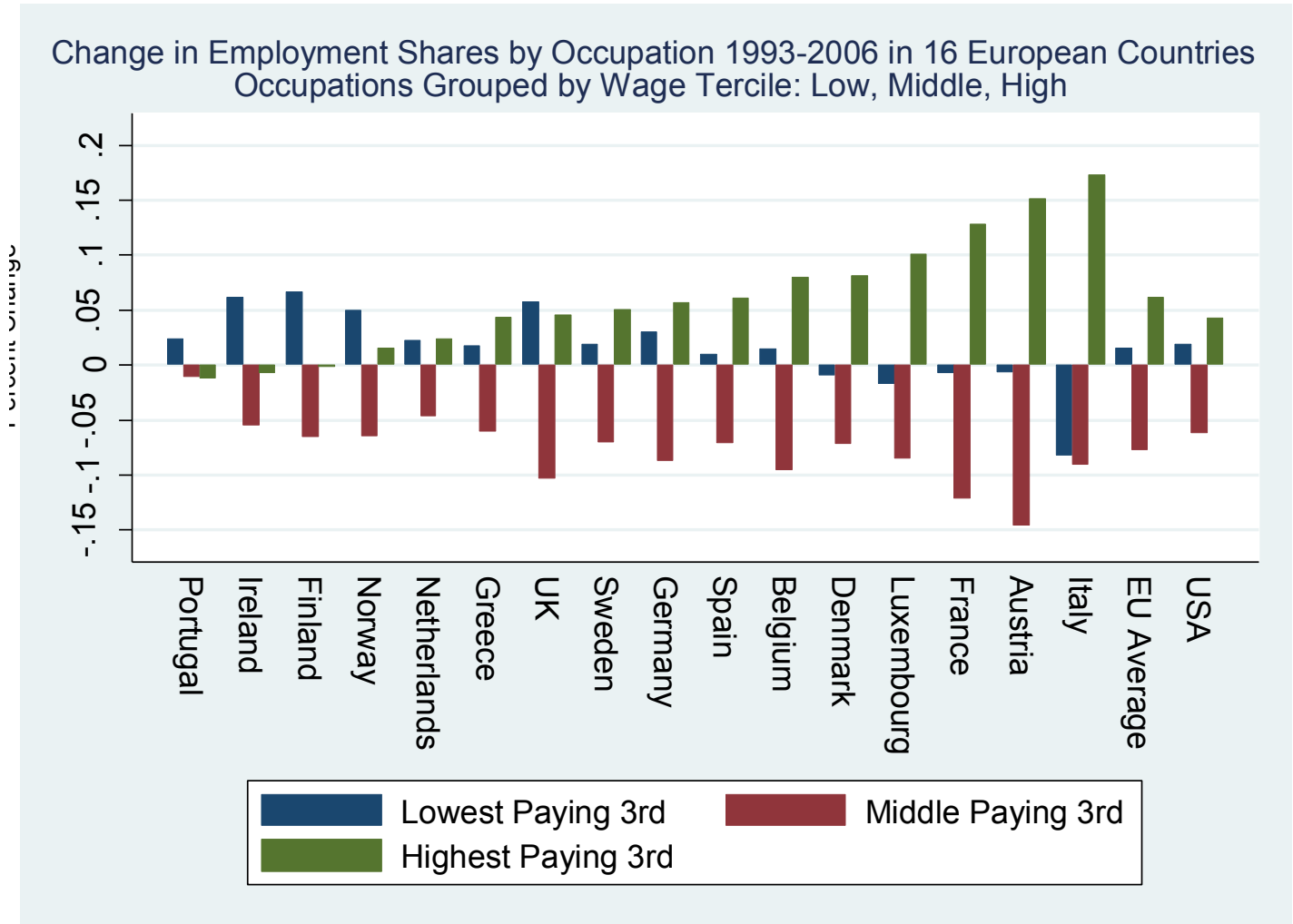
Figure 9

Percent Change in Employment by Occupation, 1979-2010



Source: May/ORG CPS files for earnings years 1979-2010. The data include all persons ages 16-64 who reported having worked last year, excluding those employed by the military and in agricultural occupations. Occupations are first converted from their respective scheme into 326 occupation groups consistent over the given time period. All non-military, non-agriculture occupations are assigned to one of ten broad occupations presented in the figure.

Figure 10



Source: Data on EU employment are from from Goos, Manning and Salomons, 2009a. US data are from the May/ORG CPS files for earnings years 1993-2006. The data include all persons ages 16-64 who reported having worked last year, excluding those employed by the military and in agricultural occupations. Occupations are first converted from their respective scheme into 326 occupation groups consistent over the given time period. These occupations are then grouped into three broad categories by wage level.

So let's return to other possible explanations (suspects) for rising inequality

Globalization: Movement of goods (trade), capital (investment/plants), people (immigration), knowledge

Wage differences have **narrowed** across countries

International trade increasingly important, particularly Chinese trade since 2001 and its effects on manufacturing industries.

Also important are **increased mobility of capital** and “**off-shoring**” of production.

Note: Inequality **within** almost all countries has **increased** over time, but **worldwide inequality** in incomes across all persons/households has **decreased** quite a bit.

Explanation: Relative earnings and incomes in many developing countries (China and India) have sharply increased lowering worldwide poverty and inequality. Yet within countries more skilled workers have fared well relatively to less skilled.

Immigration

Immigration in U.S. has increased steadily until Great Recession. 16% of US wage and salary workers are foreign-born.

Concentrated in the tails of the skill distribution

Many college and graduate degree immigrants who are educated in U.S. and stay

Concentration of young, low-skill immigrants, many from Mexico/Central America

So one might expect to see immigration putting downward pressure on wages for those in the left tail and the right tail. This is **opposite** of hollowing out.

Evidence clearly shows that the wage effects from immigration are small.

Immigration cannot be a principal cause of rising inequality. The timing is not right

Sharp deterioration in left tail during the 1980s, when immigration was low.

Large immigration increases in 1990s and 2000s, but left tail held up well. Middle-class jobs deteriorated by were little affected by immigration

Bottom line: Immigration plays a relatively small role in increasing inequality

Minimum Wages

MW (in constant dollars) fell during 1980s and has remained low by historical standards

MW affects inequality through changes in the **lower tail** of the distribution

MW helps explain **sharply rising inequality in 1980s**, but explains little since then

MW much more important for wage inequality for **women** than for men

A high minimum wage does little to prevent middle class wage and job erosion

Decline in Private Sector Unionism

Private sector union density currently 6.4% (see figure). Public union density much higher. Roughly half of all union members now work for federal, state, local government

Unionization **decreases** wage dispersion/inequality through:

Compressing wages **top to bottom**

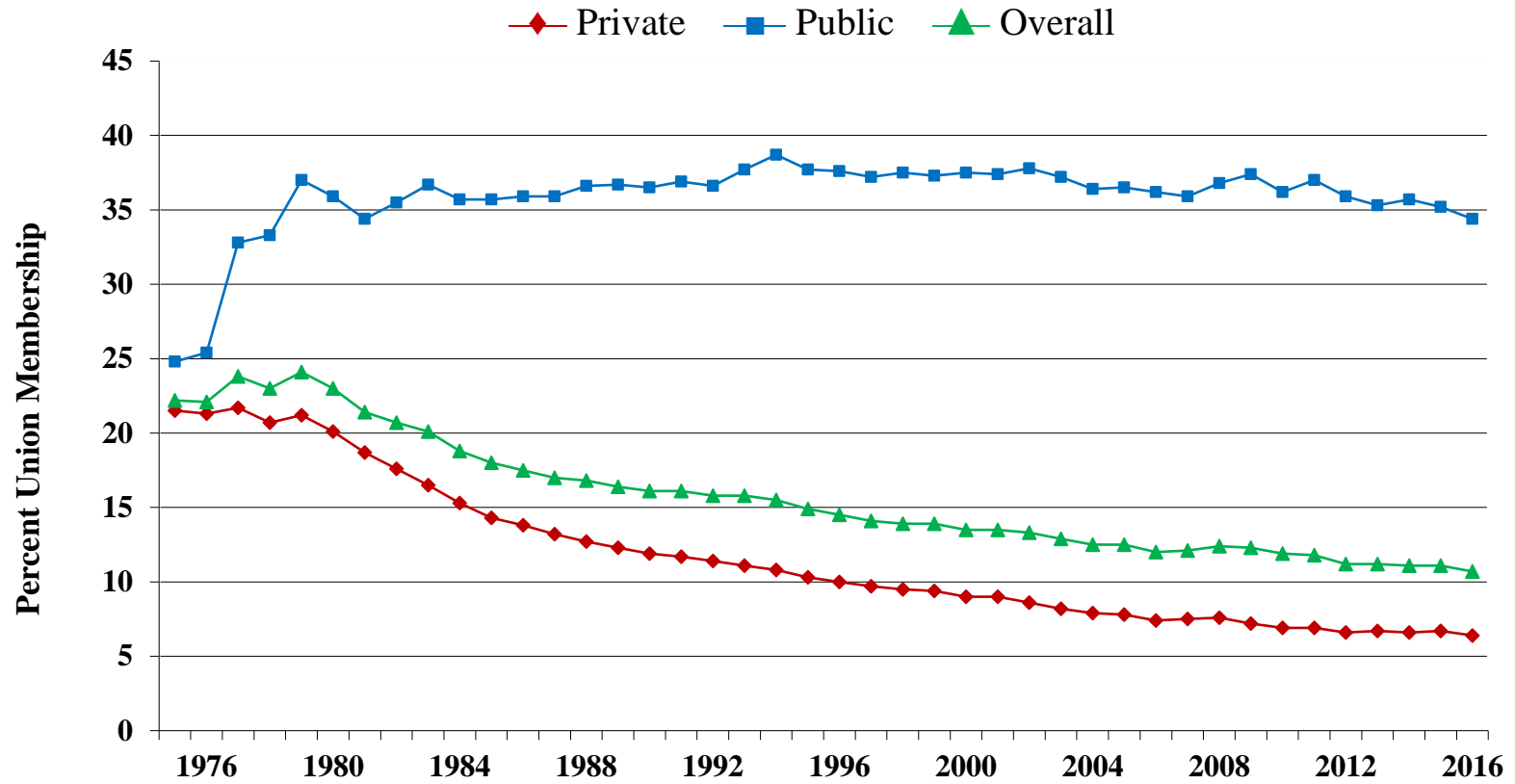
Standardizing wages (less individualized wage dispersion) through contractual terms tying wages to designated job positions and seniority

Limits executive compensation

Bottom line:

Decline in union density during the 1980s help accounts for increases in male wage inequality. But unions have not been able to prevent loss of middle-class jobs due to technological change. We cannot return to the 1960s or 70s.

Union Membership Density among U.S. Wage & Salary Workers, 1973-2016



2016 %U: Private 6.4%; Public 34.4%; Overall 10.7%

Data source: 1973-81 – May Current Population Surveys (CPS); 1983-2016 – CPS Outgoing Rotation

Policy implications – difficult to decrease inequality through desirable policies

Discourage **technological change**? No. Changes in technology provide the principal engine for economic and income growth.

Increase supply of **educated/skilled workers**? Difficult to do. We heavily subsidize college & graduate education, yet schooling growth is slow. Large numbers of high school grads start college but complete less than a year. Greater gains might come from investing in pre-school children, families, and early education.

Enact **trade** and **investment** (capital flow) barriers. Would weaken growth, competitiveness, and real incomes (partly through higher prices) for the U.S. and world.

Slow **immigration**. Would have a minimal effect on inequality and would retard economic growth given the low birth rate in the U.S. (and other developed countries).

Raise **minimum wages**. Moderate MW increases can be an attractive policy to help low wage workers. It does little to expand middle class. And it does not increase employment.

Encourage **unionism** in private sector. Unionization can decrease inequality and raise wages for members. At present, this is neither politically nor economically feasible.

Absent good alternatives, a more progressive **tax/transfer** system may be appropriate.

And to state the obvious – the need for **Travelers Aid International** will not go away