



Peterson Institute Conference on Rethinking Inequality Policies: Policies that Affect the Rate and Direction of Technological Change

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Lessons from Past Waves of Automation: the Consensus of Economists

- Automation and intelligent tools increase productivity; productivity growth increases incomes which in turn increases demand for goods and services which in turn increases demand for labor.
- Productivity growth and employment growth go together—there is no historical evidence of a tradeoff.
 - Autor and Salomons (2017): productivity growth made modest positive contribution to employment growth over the last 35 years in developed countries.
- Automation and intelligent tools create new occupations and jobs, but many existing ones are destroyed and many are changed. The dislocation/transition costs associated with changes in the demand for labor resulting from automation fall unevenly on sectors, occupations, workers and communities.
- There is no evidence of long-term technological unemployment.

Continued: The Consensus of Economists

- During the last half century, automation has been skill-biased. It substitutes/reduces the demand for low and middle-skill labor in routine tasks while complementing/increasing the demand for high-skill labor in tasks requiring technical and problem-solving skills.
- Occupations that require a secondary degree or less will continue to decline as a share of total employment while occupations requiring a college degree or higher will continue to grow. Mid-skill and mid-wage (20-80th percentile) occupations have the highest risk of being automated.
- The resulting polarization of the labor market is reflected in both widening educational wage differentials and widening overall wage inequality.
- Intelligent tools that automate work reduce the labor share in industry

Automation and Income Inequality

- Skill-biased, labor-saving automation can be a significant driver of income inequality in a number of ways:
 - It drives down the labor share of national income.
 - It favors wages and employment of skilled workers over middle-skilled and unskilled workers.
 - It enables globalization by enabling companies to take advantage of labor arbitrage opportunities through complex global supply chains. Technology-enabled globalization has reduced employment and constrained wage growth for middle-skill workers in advanced economies.
 - It generates abnormal profits and rents in highly imperfect markets and in “superstar firms.” (Share of profits and capital returns in top management compensation.)
 - It produces winner-take-all income gains for superstars and the super lucky (Pareto power law distribution of income for innovators, creators and skilled labor complemented by automation.)

Policies to Affect the Rate, Direction and Diffusion of Technological Change

- **Tax Policy**—effect of tax policies on the cost of labor vs. the cost of capital; on the cost of investment in research and development; and on "stateless income" and technology-enabled globalization.
 - Throughout the OECD, the effective tax rates on workers greatly exceed the tax rates on physical and knowledge capital.
 - A relatively high cost of labor, including taxes on labor, increases business incentives to adopt labor-saving technologies.
- **R&D policy**—amount and composition of federal government support for R&D.
- **Labor market policies**
 - Training and skills policies
 - Policies to strengthen worker voice
 - Regulation and laws to provide employment and social protections for workers in different kinds of employment relations.

Tax Policy

- Reduce payroll taxes the ultimate burden of which falls on workers not employers.
- Tax capital gains at same (or higher) rate as personal income and eliminate carried interest loophole. (Saez and Zucman for additional proposals)
- Add a carbon tax, linked to the social cost of carbon, to promote R&D to address climate change and to generate revenues
- Coordinate with other advanced industrial countries to tax mobile “stateless” capital income. (OECD BEPS proposals; Saez and Zucman for additional proposals)
- Maintain R&D tax credit—effective relative to its goal and amounts to about 28% of US federal government support for R&D. Adjust to increase coverage of small businesses—qualified small businesses can use the credit to offset FICA portion of payroll taxes.

R&D Policy

- Increase federal R&D funding as a share of GDP, but reduce defense-related share (more than 50%) and increase share for economic development and energy (less than 10%).
 - Increase funding for R&D to combat, adapt to climate change, identified as a national security threat by the national security and defense agencies.
- Treat federal R&D funding as a capital investment not as an annual operational expense of the federal government. (Create a capital budget for the federal government.)
- Increase federal funding to expand the number of Manufacturing Extension Partnership centers and to extend coverage to the service sector to help small and medium sized businesses integrate new technologies with complementary innovations in work systems and organizational practices.
 - Integrating new technologies with such innovations and job training increases the productivity effects.

Training Policy

- Increase low-tuition and “tuition-free” community colleges and vocational programs
 - Community colleges are most important scale provider of skills in US, and there are substantial wage and employment benefits for those who complete AA degrees, with smaller but positive benefits for those who complete certificate programs. (Osterman)
 - 11 states (red and blue) have some form of “tuition-free” community college program with 9 more states working on legislation. California has just introduced a low-tuition online community college program targeted at adults and underemployed.
- Increase apprenticeship programs
 - 26 states (red and blue) are participating in the “Skillful” network and are introducing apprenticeship and other training programs. Federal funding should be made available to support these efforts. The DOL is currently providing information and technical support but no funding to businesses seeking to establish apprenticeship program.
 - The Department of Labor has introduced a small grant program of \$100 million

Organizations to Represent Worker Interests

- The number and the share of workers who are members of unions and/or are covered by collective bargaining agreements has declined significantly in the US and in other advanced economies. US has the lowest shares.
 - The absence of organizations to represent workers—the absence of worker “voice”—has contributed to the growing gap between wage and productivity growth and to growing wage inequality over the last forty years.
 - Workers face growing monopsony power of large, superstar firms in concentrated industries.
- Reform US labor law to ease restrictions on formation of unions and to allow experimentation with new forms of worker representation.
 - In Germany, works councils have co-determination rights in decisions about technology adoption and resulting changes in job structures and workplace organization.
 - In Germany, *IG Metall*, the largest trade union amended its statutes in 2015 to allow the self-employed to join.

Proposals to Safeguard Worker Interests in Different Kinds of Employment

- Largely driven by technology, non-standard work is growing as share of total employment in US and other advanced industrial economies.
 - Non-standard: temporary, part-time, on-call, multiparty employment relationships, gig employment through platforms, and self-employment—everything that deviates from standard full-time employment with a single employer. “Grey zone,”—forms of employment that fall between dependent employment (employment that depends on a client/organization/business) and self-employment. Gig economy workers are example of grey zone workers—are they employed or self-employed?
- Reform regulations and laws to stop abuses in classification of employment and to extend protections/benefits accorded to workers in standard employment relations to workers in non-standard employment relations:
 - New AB5 regulation in California—clarifies classification of employment and extends protections and benefits to workers in platform jobs and other grey zone employment relationships.
- Develop universal, pro-rated, portable systems for social protections and benefits for individual workers. “Security accounts” for individual workers. Some US states have such systems for paid leave and retirement.

Business Roundtable Stakeholder

Capitalism :

Statement on the Purpose of a Corporation

While each of our individual companies serves its own corporate purpose, we share a fundamental commitment to all of our stakeholders. We commit to:

1. Delivering value to our customers. We will further the tradition of American companies leading the way in meeting or exceeding customer expectations.
2. Investing in our employees. This starts with compensating them fairly and providing important benefits. It also includes supporting them through training and education that help develop new skills for a rapidly changing world. We foster diversity and inclusion, dignity and respect. (ATT reskilling program)
3. Dealing fairly and ethically with our suppliers. We are dedicated to serving as good partners to the other companies, large and small, that help us meet our missions.
4. Supporting the communities in which we work. We respect the people in our communities and protect the environment by embracing sustainable practices across our businesses.
5. Generating long-term value for shareholders, who provide the capital that allows companies to invest, grow and innovate. We are committed to transparency and effective engagement with shareholders