# The Impact of Trade and Technology on the U.S. Labor Market: Summary of USITC Roundtable Discussion

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#### Abstract

The U.S. International Trade Commission (Commission or USITC) hosted its second labor roundtable on March 29, 2017. The roundtable facilitated an exchange of ideas among 30 participants representing academic institutions, government agencies, industry associations, international organizations, think tanks, and nonprofit organizations. This year's event focused on the role that trade plays in U.S. labor markets and mechanisms, with the aim of assessing the connection between trade and labor. Within this framework, participants discussed three broad topics: the influence of trade and technology on the U.S. labor market; worker displacement and the efficacy of worker retraining programs (including the Trade Adjustment Assistance [TAA] program); and the impact of labor provisions in trade agreements on U.S. and global labor standards.

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<sup>&</sup>lt;sup>2</sup> The Commission held its first labor roundtable in 2012. For a summary of that roundtable, see Salem and Benedetto, "The USITC's Roundtable on the Labor Market Effects of Trade," *Journal of International Commerce and Economics*, Web version published in August 2013.

# The Influence of Trade and Technology on the U.S. Labor Market

#### The Effects of Trade and Technology on the Manufacturing Sector

The roundtable began with a discussion of the relative effects of trade and technology on job growth in the U.S. manufacturing sector. One participant stated that manufacturing jobs remained relatively stable until 2000, after which "explosive" growth in the U.S. trade deficit corresponded to a decline in manufacturing employment. This view was mirrored by another participant, who indicated that U.S. employment data from 1990 through 2015 suggest that manufacturing jobs were more negatively affected during that period by U.S. entry into new free trade agreements (FTAs) than by new technology.

According to another participant, however, U.S. employment data from the 1960s through the early 1980s suggest that technology had a discernible impact on worker productivity and led to a decline in manufacturing employment during the period. A third participant commented that conclusions about the effects of productivity gains on U.S. jobs can sometimes be misguided. The participant cited as an example a McKinsey study which found that productivity gains in certain U.S. manufacturing industries may not necessarily translate into higher U.S. wages as expected, depending on how such gains are achieved (Mandel and Houseman 2011).<sup>3</sup>

Taking a broader view, another participant noted that the number of U.S. manufacturing jobs is sensitive to changes in the macro economy, falling in times of recession and rising in times of economic recovery. The manufacturing share of the U.S. labor force has steadily declined from a high of 27 percent in the 1950s and, the participant argued, this decrease would likely have occurred even in the absence of increased trade with low-wage countries like China. Still another participant pointed to a Ball State University study (Hicks and Devaraj 2015). The study concluded that nearly 88 percent of manufacturing job loss has been due to technology, implying that a relatively small percentage has been due to trade. Finally, another participant asserted that high-end manufacturing is no longer the exclusive province of advanced countries like the United States. The participant noted that China, for example, is now using industrial robots to move into the manufacture of electronic goods, such as semiconductors.

#### The Benefits of Trade and Technology to U.S. Jobs

Several participants agreed that trade and technology are also changing the U.S. labor market in notable ways. For example, participants indicated that U.S. worker productivity has risen through

<sup>&</sup>lt;sup>3</sup> A list of academic and news articles referenced during the roundtable appears in the bibliography.

<sup>&</sup>lt;sup>4</sup> According to data from the U.S. Department of Labor's Bureau of Labor Statistics (BLS), in December 2016, employment in the manufacturing sector accounted for approximately 8 percent of total U.S. employment. U.S. Department of Labor, BLS, "Databases, Tables and Calculators by Subject" (accessed May 5, 2017).

<sup>&</sup>lt;sup>5</sup> One participant, however, questioned the methodology used in the Ball State University study, stating that its analysis was inconclusive.

the use of labor-enhancing technology, and that trade has encouraged innovation and the creation of higher-skilled, better-paying jobs in the energy, healthcare, and financial services sectors. One participant highlighted a study which found that 9 of the 10 highest-paying manufacturing industries also rank among the most export intensive, compared to 5 of the 10 lowest-paying manufacturing industries, which rank among least export intensive. This study suggests that relatively high-wage jobs are associated with a propensity to export. Another participant cited a study showing that countries that export to "richer, more sophisticated markets" are likely to employ better-educated workers, use higher-value inputs, and achieve greater economies of scale in their production than countries that export to poorer markets (Silva 2010).

### Manufacturing Job Loss and Its Impact on U.S. Workers

Participants then discussed the implications of manufacturing job loss for individual workers and the U.S. labor market as whole, focusing on the quantity and quality of manufacturing jobs as well as workers' access to them. One participant commented that the decline in manufacturing jobs affects some groups of workers more than others, with low-skilled and older workers being especially vulnerable. A second participant noted that while trade reallocates jobs and resources to more competitive industries, a lack of geographic mobility on the part of some workers prevents them from taking advantage of potentially new and better jobs in sectors such as high-value-added manufacturing and services. A third participant questioned the quality of employment opportunities for displaced manufacturing workers, citing studies showing that certain blue-collar workers are often forced to transition to low-paying services jobs, partly because of import competition (Ebenstein et al. 2014; Autor, Dorn, and Hanson 2016).

Two participants emphasized that the composition of the U.S. labor market continues to change. One illustrated this point by noting that the roughly 200,000 auto manufacturing jobs that have been lost since the 1970s have been replaced with retail and other services-related employment at car dealerships. This shift reflects not only the relocation of some U.S. auto manufacturing operations overseas, but the increasing number of foreign car brands being sold in the domestic market. Another participant agreed that fundamental changes have occurred in the U.S. labor market, quoting an ILO study suggesting that jobs with higher pay, higher benefits, and regular hours are being supplanted by Uber-like jobs (ILO 2014). It was suggested that the rise of this "informal sector" of temporary, part-time, and contingent employment has led to the weakening of workers' bargaining power.

#### The Important Role of the Services Sector

Participants next explored the importance of the services sector in the U.S. job market and the pervasive role of services in the global economy. One participant noted a study estimating the

<sup>&</sup>lt;sup>6</sup> For more on this topic see, for example, Riker, "Export-Intensive Industries Pay More on Average: An Update," November 2015.

share of services' value added to the U.S. manufacturing sector at between 25 and 50 percent, some of which is accounted for by digitally enabled services (USITC 2013). The participant also noted that 40 percent of services are tradable (Jensen et al. 2005), and these services largely include high-skilled, high-wage jobs in business services. In fact, the average wage in business services industries is higher than the average wage in the manufacturing sector. The participant commented that according to another study, trade through foreign direct investment (FDI) is an important generator of services jobs (Alejandro et al. 2011), and that roughly three million U.S. services jobs are supported by inbound FDI. At the same time, another participant pointed out that services remain among the most highly restricted sectors in terms of international trade. The participant noted that current trade agreements aim to lessen services trade barriers, including those pertaining to foreign investment.

## TAA and Other Employment Assistance<sup>7</sup>

Several participants commented that U.S. workers whose jobs are displaced by trade, technology, or other means should have access to social safety nets and worker retraining programs. Although participants broadly agreed on the need for successful retraining programs (and that the TAA largely fails to meet the criteria for success), participants disagreed on what defines an effective program. For example, should such a program be narrowly focused on specific industries or skills, or should it be more broadly focused on increasing education and employment opportunities for workers? One participant noted the importance of worker training and placement programs for high school graduates, while another emphasized the need to educate college graduates on employment opportunities in typically blue-collar industries, such as agriculture. This participant stated that jobs in these industries span a range of fields—from science and technology to finance, marketing, and management.

Another participant emphasized that, in general, workers desire employment security rather than job security, while indicating that the former is addressed under social policies in places like Denmark and Germany. Several participants maintained that, in an era of globalization, large-scale adjustment programs for displaced workers are needed; an influential post by Dani Rodrik (2008) was cited in this regard. They argued that these programs should have a clear policy focus and should target workers at the bottom end of the pay scale, ensuring that they retain their wages while unemployed. At the same time, one participant, pointing to another ILO study (2016), contended that U.S. workers should have ready access to education and training and be covered by better health and safety standards which, in turn, would help them remain competitive globally (ILO 2016).

<sup>8</sup> Participants noted that employment security can be fostered by ensuring that, among other things, workers have access to education and training, enabling them to successfully transition between multiple jobs in a lifetime.

<sup>&</sup>lt;sup>7</sup> The TAA provides financial support, employment training, and other assistance to workers whose jobs have been dislocated due to trade. For more information on TAA see, for example, USDOL, ETA, "What Is Trade Adjustment Assistance?" updated June 22, 2012, and Guth and Lee, "Evaluations of the Trade Adjustment Assistance Program for Workers: A Literature Review," May 2017.

#### The Impact of Labor Provisions in Trade Agreements on Labor Standards

While the labor provisions of U.S. trade agreements are designed to protect U.S. workers from unfair labor practices carried out by U.S. trade partners, some participants said that these labor provisions have sometimes been violated by partner countries, partially offsetting the benefits of liberalized trade. One participant stated that the potential for judicial impunity is a problem in some countries that violate labor standards, such as Colombia, despite their participation in U.S. FTAs. Another participant stated that although the U.S. labor movement has been committed to raising labor standards, the effective right to free association or collective bargaining has not been guaranteed by U.S. trade agreements, and this has had an adverse effect on U.S. workers.

A third participant suggested that, from the perspective of trade, one should focus not only on labor itself but also on the composition of global supply chains, noting that where products are sourced has broad implications for labor standards, employment, and worker rights. The participant also commented that labor cases filed under the provisions of trade agreements are more difficult to adjudicate than goods cases, and that FTA labor provisions would be more effective if labor violations were subject to the same penalties as violations of trade in goods. By contrast, the participant noted that a recent case in which Swaziland lost its status under the Generalized System of Preferences (GSP) because of labor standards violations has had an impact on other countries in Africa. As a result of this case, African countries are now reforming their labor standards, including granting the right of free association to workers, in order to acquire or maintain GSP status.

#### **Conclusion**

In general, participants agreed that trade and the use of technology in the workplace are important, but their views regarding the effects of these trends on the labor market were mixed. While some participants expressed the view that trade has led to the loss of U.S. manufacturing jobs, others cited research suggesting that the decline in U.S. manufacturing employment is more closely related to technology and automation. Several participants discussed ways in which both trade and technology have led to increased innovation and to growth in higher-skilled, higher-wage jobs in the U.S. and foreign labor markets. As one participant emphasized, the benefits of trade are diffuse, but its adverse effects may be localized, affecting some industries and communities more severely than others. One way to remedy this imbalance is to establish better mechanisms to ensure that the benefits of trade are received by all workers. This could include

<sup>&</sup>lt;sup>9</sup> The GSP was established under the Trade Act of 1974. It provides duty-free status to certain imports from 122 countries. For more information, see USTR, "Generalized System of Preferences," n.d. (accessed April 17, 2017).

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broader social programs that provide support to the most vulnerable workers in the short term while encouraging their re-employment in the long term.

On the subject of labor standards, many participants agreed that labor standard enforcement through U.S. trade agreements remains challenging from a legal perspective or is insufficient in its execution. Nonetheless, they maintained that to the extent that U.S. firms continue to establish manufacturing operations overseas, it is important that U.S. policy makers work to ensure that high labor standards are upheld by U.S. trade partners.

#### **Bibliography**

- Alejandro, Lisa, Richard Brown, Erick Oh, Joann Peterson, Samantha Brady Pham, Matthew Reisman, and Isaac Wohl. "U.S. Multinational Services Companies: Effects of Foreign Affiliate Activity on U.S. Employment." U.S. International Trade Commission, Office of Industries Working Paper, August 2011.

  <a href="https://www.usitc.gov/publications/332/ServicesEmploymentWorkingPaperNEWFINAL8.23.11.pdf">https://www.usitc.gov/publications/332/ServicesEmploymentWorkingPaperNEWFINAL8.23.11.pdf</a>.
- Arnade, Chris. "White Flight Followed Factory Jobs out of Gary, Indiana." *The Guardian*, March 28, 2017. <a href="https://www.theguardian.com/society/2017/mar/28/poverty-racism-gary-indiana-factory-jobs">https://www.theguardian.com/society/2017/mar/28/poverty-racism-gary-indiana-factory-jobs</a>.
- Autor, David H., David Dorn, and Gordon H. Hanson. "The China Shock: Learning from Labor Market Adjustment to Large Changes in Trade." National Bureau of Economic Research (NBER) Working Paper No. 21906, January 2016. <a href="http://www.nber.org/papers/w21906">http://www.nber.org/papers/w21906</a>.
- Ebenstein, Avraham, Ann Harrison, Margaret McMillan, and Shannon Phillips. "Estimating the Impact of Trade and Offshoring on American Workers Using the Current Population Surveys." *Review of Economics and Statistics* 96, no. 4 (2014): 581–95. <a href="http://www.mitpressjournals.org/doi/abs/10.1162/REST\_a\_00400">http://www.mitpressjournals.org/doi/abs/10.1162/REST\_a\_00400</a>.
- Guth, Joanne and Jean Lee. "Evaluations of the Trade Adjustment Assistance Program for Workers: A Literature Review," *Executive Briefings on Trade* (U.S. International Trade Commission: Washington, DC), May 17, 2017.

  <a href="https://www.usitc.gov/publications/332/executive\_briefings/ebot\_taaevaluationsguthlee.pdf">https://www.usitc.gov/publications/332/executive\_briefings/ebot\_taaevaluationsguthlee.pdf</a>.
- Hicks, Michael J. and Srikant Devaraj. "The Myth and Reality of Manufacturing in America." Ball State University, June 2015. http://conexus.cberdata.org/files/MfgReality.pdf.
- International Labour Organization (ILO). "World of Work 2014: Developing with Jobs," May 27, 2014. <a href="http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms\_243961.pdf">http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms\_243961.pdf</a>.
- International Labour Organization (ILO). *Progress and Potential: How Better Work Is Improving Garment Workers' Lives and Boosting Factory Competitiveness*. Geneva: ILO, 2016. <a href="http://betterwork.org/dev/wp-content/uploads/2016/09/BW-Progress-and-Potential\_Web-final.pdf">http://betterwork.org/dev/wp-content/uploads/2016/09/BW-Progress-and-Potential\_Web-final.pdf</a>.
- Jensen, J. Bradford, Lori G. Kletzer, Jared Bernstein, and Robert C. Feenstra. "Tradable Services: Understanding the Scope and Impact of Services Offshoring." *Brookings Trade Forum 2005: Offshoring White Collar Work.* Washington, DC: Brookings Institution, 2005, 75–133. <a href="https://www.jstor.org/stable/25058763?seq=1#page\_scan\_tab\_contents">https://www.jstor.org/stable/25058763?seq=1#page\_scan\_tab\_contents</a> (subscription only).

- Mandel, Michael, and Susan Houseman. "Not All Productivity Gains Are the Same. Here's Why." What Matters/McKinsey&Company, June 1, 2011. <a href="http://research.upjohn.org/externalpapers/56/">http://research.upjohn.org/externalpapers/56/</a>.
- McLaren, John, and Shushanik Hakobyan. "Looking for Local Labor Market Effects of NAFTA." NBER Working Paper 16535, November 2010. <a href="http://www.nber.org/papers/w16535.pdf">http://www.nber.org/papers/w16535.pdf</a>.
- Petri, Peter A., and Michael G. Plummer. "The Economic Effects of the Trans-Pacific Partnership: New Estimates." Peterson Institute for International Economics (PIIE) Working Paper 16-2, January 2016. <a href="https://piie.com/system/files/documents/wp16-2\_0.pdf">https://piie.com/system/files/documents/wp16-2\_0.pdf</a>.
- Piketty, Thomas, Emmanuel Saez, and Gabriel Zucman. "Distributional National Accounts: Methods and Estimates for the United States." NBER Working Paper 22945, December 2016. <a href="https://eml.berkeley.edu/~saez/Piketty-Saez-ZucmanNBER16.pdf">https://eml.berkeley.edu/~saez/Piketty-Saez-ZucmanNBER16.pdf</a>.
- Quintini, Glenda, and Danielle Venn. *Back to Work: Re-employment, Earnings, and Skill Use After Job Displacement.*" OECD, October 2013. http://www.oecd.org/employment/emp/Backtowork-report.pdf.
- Riker, David. "Export-Intensive Industries Pay More on Average: An Update." *Journal of International Commerce and Economics* (U.S. International Trade Commission: Washington, DC), Web version published November 2015.

  <a href="https://www.usitc.gov/publications/332/journals/vol\_vi\_export-intensive\_industries\_update.pdf">https://www.usitc.gov/publications/332/journals/vol\_vi\_export-intensive\_industries\_update.pdf</a>.
- Rodrik, Dani. "Does Globalization Erode Social Safety Nets?" *Dani Rodrik's Weblog*, December 3, 2008. <a href="http://rodrik.typepad.com/dani\_rodriks\_weblog/2008/12/does-globalization-erode-social-safety-nets.html">http://rodrik.typepad.com/dani\_rodriks\_weblog/2008/12/does-globalization-erode-social-safety-nets.html</a>.
- Salem, Samira, and John Benedetto. "The USITC's Roundtable on the Labor Market Effects of Trade." *Journal of International Commerce and Economics* (U.S. International Trade Commission: Washington, DC), Web version published in August 2013. <a href="https://www.usitc.gov/publications/332/journals/vol\_v\_article4\_labor\_roundtable.pdf">https://www.usitc.gov/publications/332/journals/vol\_v\_article4\_labor\_roundtable.pdf</a>.
- Silva, Joana. "The Quality of a Firm's Exports: Where You Export to Matters." *Journal of International Economics* 82, no. 2 (November 2010): 99–111. <a href="http://www.sciencedirect.com/science/article/pii/S0022199610000632">http://www.sciencedirect.com/science/article/pii/S0022199610000632</a> (subscription only).
- U.S. Trade Representative (USTR). "Generalized System of Preferences," n.d. <a href="https://ustr.gov/issue-areas/trade-development/preference-programs/generalized-system-preference-gsp">https://ustr.gov/issue-areas/trade-development/preference-programs/generalized-system-preference-gsp</a> (accessed April 17, 2017).

- U.S. Department of Labor (USDOL). Bureau of Labor Statistics (BLS). "Databases, Tables and Calculators by Subject." <a href="https://data.bls.gov/timeseries/LNS12000000">https://data.bls.gov/timeseries/LNS12000000</a> and <a href="https://data.bls.gov/timeseries/CES3000000001?amp%253bdata\_tool=XGtable&output\_view=data&include\_graphs=true">https://data.bls.gov/timeseries/CES3000000001?amp%253bdata\_tool=XGtable&output\_view=data&include\_graphs=true</a> (accessed May 5, 2017).
- ——. Employment and Training Administration. "What Is Trade Adjustment Assistance?" Fact sheet, updated June 22, 2012. https://www.doleta.gov/tradeact/factsheet.cfm.
- U.S. International Trade Commission (USITC). "The Role of Services in Manufacturing." Chapter 3 in *Economic Effects of U.S. Import Restraints: Eighth Update*. USITC Publication No. 4440. Washington, DC: USITC, December 2013. <a href="https://www.usitc.gov/publications/332/pub4440c.pdf">https://www.usitc.gov/publications/332/pub4440c.pdf</a>.
- Villarreal, Angeles M. "Industry Trade Effects Related to NAFTA." Cornell University, School of Industrial and Labor Relations, February 2003.

  <a href="http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1037&context=key\_workplace">http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1037&context=key\_workplace</a>.
- Waldman, Peter. "Inside Alabama's Auto Jobs Boom: Cheap Wages, Little Training, Crushed Limbs." *BloombergBusinessweek*, March 23, 2017. <a href="https://www.bloomberg.com/news/features/2017-03-23/inside-alabama-s-auto-jobs-boom-cheap-wages-little-training-crushed-limbs">https://www.bloomberg.com/news/features/2017-03-23/inside-alabama-s-auto-jobs-boom-cheap-wages-little-training-crushed-limbs</a>.