Bibliography

Abebe, G., Caria, S., Fafchamps, M., Falco, P., Franklin, S. and Quinn, S. (2016), "Anonymity or Distance? Experimental Evidence on Obstacles to Youth Employment Opportunities", Working Paper No. 590, Stanford Center for International Development, Stanford, CA: Stanford University.

Acemoglu, D. (1998), "Why Do New Technologies Complement Skills? Directed Technical Change and Wage Inequality", Quarterly Journal of Economics 113(4): 1055-1090.

Acemoglu, D. (2001), "Good Jobs Versus Bad Jobs", *Journal of Labor Economics* 19(1): 1-21.

Acemoglu, D. (2002), "Technical Change, Inequality, and the Labor Market", *Journal of Economic Literature* 40(1): 7-72.

Acemoglu, D. and Autor, D. (2011), "Skills, Tasks and Technologies: Implications for Employment and Earnings", *Handbook of Labor Economics* 4: 1043-1171.

Acemoglu, D. and Autor, D. H. (2012), "What Does Human Capital Do? A Review of Goldin and Katz's The Race Between Education and Technology", *Journal of Economic Literature* 50(2): 426-463.

Acemoglu, D. and Restrepo, P. (2016), "The Race Between Machine and Man: Implications of Technology for Growth, Factor Shares and Employment", NBER Working Paper No. 22252, Cambridge, MA: National Bureau of Economic Research (NBER).

Acemoglu, D. and Restrepo, P. (2017), "Robots and Jobs: Evidence from US Labor Markets", NBER Working Paper No. 23285, Cambridge, MA: National Bureau of Economic Research (NBER).

Acemoglu, D., Autor, D. H., Dorn, D., Hanson, G. H. and Price, B. (2016), "Import Competition and the Great US Employment Sag of the 2000s", *Journal of Labor Economics* 34(S1): S141_S198

Adao, R., Arkolakis, C. and Esposito, F. (2017), "Trade Openness, Agglomeration Effects, and Endogenous Labor Supply: Theory and Evidence", New Haven, CT: Yale University, mimeo.

Addison, J. T., Teixeira, P., Evers, K. and Bellman, L. (2017), "Collective Bargaining and Innovation in Germany: A Case of Cooperative Industrial Relations?", *Industrial Relations: A Journal of Economy and Society* 56: 73-121.

Adhvaryu, A., Kala, N. and Nyshadham, A. (2016), "The Light and the Heat: Productivity Co-benefits of Energy-saving Technology", New Haven, CT: Yale University, mimeo.

Adserà, A. and Boix, C. (2002), "Trade, Democracy, and the Size of the Public Sector: The Political Underpinnings of Openness", *International Organization* 56(2): 229-262.

Aghion, P., Bloom, N., Blundell, R., Griffith, R. and Howitt, P. (2005), "Competition and Innovation: An Inverted-U Relationship", The Quarterly Journal of Economics 120(2): 701-728.

Aguirregabiria, V. and Alonso-Borrego, C. (2001), "Occupational Structure, Technological Innovation, and Reorganization of Production", *Labour Economics* 8(1): 43-73.

Aho, C. M. and Bayard, T. O. (1984), "Costs and Benefits of Trade Adjustment Assistance", in Baldwin, R. E. and Krueger, A. O. (eds), *The Structure and Evolution of Recent U.S. Trade Policy*, Chicago: University of Chicago Press: 151-193.

Akerlof, G. A. (1982), "Labor Contracts As Partial Gift Exchange", *The Quarterly Journal of Economics* 97(4): 543-569.

Akerlof, G. A. and Yellen, J. L. (1990), "The Fair Wage-Effort Hypothesis and Unemployment", *The Quarterly Journal of Economics* 105(2): 255-283.

Alden, E. (2017), Failure to Adjust: How Americans Got Left Behind in the Global Economy, Lanham: Rowman and Littlefield.

Amiti, M. and Cameron, L. (2012), "Trade Liberalization and the Wage Skill Premium: Evidence From Indonesia", *Journal of International Economics* 87(2): 277-287.

Amiti, M. and Davis, D. R. (2012), "Trade, Firms, and Wages: Theory and Evidence", *The Review of Economic Studies* 79(1): 1-36.

Amiti, M., Dai, M., Feenstra, R. C. and Romalis, J. C. (2017), "How Did China's WTO Entry Benefit U.S. Consumers?", NBER Working Paper No. 23487, Cambridge, MA: National Bureau of Economic Research (NBER).

Andersen, T. M., Holmström, B., Honkapohja, S., Korkman, S., Tson, S. H. and Vartiainen, J. (2007), *The Nordic Model: Embracing Globalization and Sharing Risks*. Helsinki, ETLA B 232: Taloustieto Oy.

Antràs, P., De Gortari, A. and Itskhoki, O. (2016), "Globalization, Inequality and Welfare", NBER Working Paper No. 22676, Cambridge, MA: National Bureau of Economic Research (NBER).

Antràs, P., Fort, T. C. and Tintelnot, F. (2017), "The Margins of Global Sourcing: Theory and Evidence From US Firms", *American Economic Review* (forthcoming).

Antràs, P., Garicano, L. and Rossi-Hansberg, E. (2006), "Offshoring in a Knowledge Economy", *The Quarterly Journal of Economics* 121(1): 31-77.

Arias, J., Artuc, E., Lederman, D. and Rojas, D. (2013), "Trade, Informal Employment and Labor Adjustment Costs", Policy Research Working Paper No. 6614, Washington, D.C.: World Bank.

Arnold, J. M. and Hussinger, K. (2005), "Export Behavior and Firm Productivity in German Manufacturing: A Firm-Level Analysis", *Review of World Economics* 141(2): 219-243.

Arntz, M., Gregory, T., Jansen, S. and Zierahn, U. (2016a), "Tätigkeitswandel und Weiterbildungsbedarf in der digitalen Transformation", Mannheim: ZEW-Gutachten und Forschungsberichte Deutsche Akademie der Technikwissenschaft.

Arntz, M., Gregory, T. and Zierahn, U. (2016b), "The Risk of Automation for Jobs in OECD Countries: A Comparative Analysis", OECD Social, Employment, and Migration Working Paper No. 189, Paris: Organisation for Economic Co-operation and Development (OECD).

Arntz, M., Gregory, T. and Zierahn, U. (2017), "Revisiting the Risk of Automation", *Economic Letters* (forthcoming).

Artuç, E., Chaudhuri, S. and McLaren, J. (2010), "Trade Shocks and Labor Adjustment: A Structural Empirical Approach", *The American Economic Review* 100(3): 1008-1045.

Artuç, E. and McLaren, J. (2015), "Trade Policy and Wage Inequality: A Structural Analysis With Occupational and Sectoral Mobility", *Journal of International Economics* 97(2): 278-294.

- Artuç, E., Lederman, D. and Porto, G. (2015), "A Mapping of Labor Mobility Costs in the Developing World", *Journal of International Economics* 95(1): 28-41.
- Asatryan, Z., Braun, S., Lechthaler, W., Mileva, M. and Montagna, C. (2014), "Compensating the Losers of Free Trade", Working Paper No. 63, Vienna: WWWforEurope.
- Asian Development Bank (ADB) (2012), Asian Development Outlook 2012: Confronting Rising Inequality, Manila: Asian Development Bank (ADB).
- Atkin, D., Chaudhry, A., Chaudry, S., Khandelwal, A. K. and Verhoogen, E. (2017), "Organizational barriers to technology adoption: Evidence from soccer-ball producers in Pakistan", *Quarterly Journal of Economics* (forthcoming).
- Atkinson, R. D. and Wu, J. (2017), False Alarmism: Technological Disruption and the U.S. Labor Market, 1850–2015, Washington, D.C.: Information Technology and Innovation Foundation (ITIF).
- Attanasio, O., Goldberg, P. K. and Pavcnik, N. (2004), "Trade Reforms and Wage Inequality in Colombia", *Journal of Development Economics* 74(2): 331-366.
- Autor, D. H. (2015), "Why Are There Still So Many Jobs? The History and Future of Workplace Automation", *Journal of Economic Perspectives* 29(3): 3-30.
- Autor, D. H. and Dorn, D. (2013), "The growth of low-skill service jobs and the polarization of the US labor market", *American Economic Review* 103(5): 1553-1597.
- Autor, D. H., Dorn, D. and Hanson, G. H. (2013), "The China Syndrome: Local Labor Market Effects of Import Competition in the United States", *American Economic Review* 103(6): 2121-2168.
- Autor, D. H., Dorn, D. and Hanson, G. H. (2014), "Trade Adjustment: Worker Level Evidence", *The Quarterly Journal of Economics* 129(4): 1553-1623.
- Autor, D. H., Dorn, D. and Hanson, G. H. (2015), "Untangling Trade and Technology: Evidence From Local Labour Markets", *Economic Journal* 125(584): 621-646.
- Autor, D. H., Dorn, D. and Hanson, G. H. (2016), "The China Shock: Learning From Labor Market Adjustment to Large Changes in Trade", *Annual Review of Economics* 8: 205-240.
- Autor, D. H. and Handel, M. J. (2013), "Putting tasks to the test: Human capital, job tasks and wages", *Journal of Labor Economics* 31: S59-S96.
- Autor, D. H., Dorn, D., Katz, L. F., Patterson, C. and Van Reenen, J. (2017), "The Fall of the Labor Share and the Rise of Superstar Firms", NBER Working Paper No. 23396, Cambridge, MA: National Bureau of Economic Research (NBER).
- Autor, D. H., Katz, L. F. and Kearney, M. S. (2006), "The Polarization of the U.S. Labor Market", *American Economic Review* 96: 189-194.
- Autor, D. H., Katz, L. F. and Kearney, M. S. (2008), "Trends in US wage inequality: Revising the revisionists", *Review of Economics and Statistics* 90(2): 300-323.
- Autor, D. H., Katz, L. F. and Krueger, A. B. (1998), "Computing Inequality: Have Computers Changed the Labor Market?", *Quarterly Journal of Economics* 113(4): 1169-1213.
- Autor, D. H., Levy, F. and Murnane, R. J. (2003), "The Skill Content of Recent Technological Change: An Empirical Exploration", Quarterly Journal of Economics 118(4): 1279-1333.
- Autor, D. H. and Salomons, A. (2017), "Does productivity growth threaten employment?", Presented at the ECB Forum on Central Banking, Sintra, Portugal, 26-28 June 2017.

- Avelino, G., Brown, D. S. and Hunter, W. (2005), "The Effects of Capital Mobility, Trade Openness and Democracy on Social Spending in Latin America, 1980-1999", *American Journal of Political Science* 49(3): 625-641.
- Avent, R. (2016) The Wealth of Humans: Work, Power, and Status in the Twenty-first Century, New York City: St. Martin's Press.
- Bacchetta, M. and Jansen, M. (2003), "Adjusting to Trade Liberalization: The Role of Policy, Institutions and WTO Disciplines", WTO Special Study No. 7, Geneva: World Trade Organization (WTO).
- Bacchetta, M., Ernst, E. and Bustamante, J. P. (2009) Globalization and Informal Jobs in Developing Countries, Geneva: International Labour Organization (ILO).
- Baert, A. and Ledent, P. (2015), "La Révolution Technologique en Belgique", ING Focus Emploi Economic Research, Brussels: ING Belgium.
- Baicker, K. and Rehavi, M. M. (2004), "Policy Watch: Trade Adjustment Assistance", *Journal of Economic Perspectives* 18(2): 239-255.
- Baier, S. L. and Bergstrand, J. H. (2001), "The Growth of World Trade: Tariffs, Transport Costs and Income Similarity", *Journal of International Economics* 53(1): 1-27.
- Baily, M. N. and Bosworth, B. P. (2014), "US Manufacturing: Understanding Its Past and Its Potential Future", *Journal of Economic Perspectives* 28(1): 3-26.
- Baldárrago, E. and Salinas, G. (2017), "Trade Liberalization in Peru: Adjustment Costs Amidst High Labor Mobility", IMF Working Paper No. 17/47, Washington, D.C.: International Monetary Fund (IMF).
- Balsvik, R., Jensen, S. and Salvanes, K. G. (2015), "Made in China, Sold in Norway: Local Labor Market Effects of an Import Shock", *Journal of Public Economics* 127: 137-144.
- Banister, J. and Cook, G. (2011), "China's Employment and Compensation Costs in Manufacturing Through 2008", Monthly Labour Review 134(3): 39-52.
- Barro, R. J. and Lee, J.-W. (2010), "A New Dataset of Educational Attainment in the World, 1950-2010", NBER Working Paper No. 15902, Cambridge, MA: National Bureau of Economic Research (NBER).
- Bartel, A., Ichniowski, C. and Shaw, K. (2007), "How Does Information Technology Affect Productivity? Plant-level Comparisons of Product Innovation, Process Improvement, and Worker Skills", *Quarterly Journal of Economics* 122(4): 1721-1758.
- Bassi, V. and Nansamba, A. (2017), "Information Frictions in the Labor Market: Evidence from a Field Experiment in Uganda", Working Paper, University College London and Institute for Fiscal Studies and BRAC Liberia.
- Baumol, W. J. (1967), "Macroeconomics of Unbalanced Growth: the Anatomy of Urban Crisis", *American Economic Review* 57(3): 415-426.
- Beaudry, P., Green, D. A. and Sand, B. M. (2016), "The Great Reversal in the Demand for Skill and Cognitive Tasks", *Journal of Labor Economics* 34(S1): S199-S247.
- Becker, G. S. (1957), *The Economics of Discrimination*, Economic Research Studies, Chicago: University of Chicago Press.
- Becker, S., Ekholm, K. and Muendler, M. A. (2013), "Offshoring and the Onshore Composition of Tasks and Skills", *Journal of International Economics* 90(1): 91-106.

Benus, J. M. (1994), "Self-Employment Programs: a New Reemployment Tool", *Entrepreneurship: Theory and Practice* 19(2): 73-86.

Benzell, S. G., Kotlikoff, L. J., LaGarda, G. and Sachs, J. D. (2015), "Robots Are Us: Some Economics of Human Replacement", NBER Working Paper No. 20941, Cambridge, MA: National Bureau of Economic Research (NBER).

Beramendi, P., Hausermann, S., Kitschelt, H. and Kriesi, H. (2015), *The Politics of Advanced Capitalism*, New York: Cambridge University Press.

Berger, T. and Frey, C. B. (2016), "Structural Transformation in the OECD: Digitalisation, Deindustrialisation and the Future of Work", Social, Employment and Migration Working Paper No. 193, Paris: Organisation for Economic Co-operation and Development (OECD).

Berger, T. and Frey, C. B. (2017), "Industrial Renewal in the 21st Century: Evidence From US Cities", *Regional Studies* 51(3): 404-413.

Berik, G. (2011), "Gender Aspects of Trade", in Jansen, M., Peters, R., and Salazar-Xirinachs, J.M. (eds), *Trade and employment: From myths to facts*, Geneva: International Labour Office (ILO).

Berman, E. and Machin, S. (2000), "Skill-biased Technology Transfer Around the World", *Oxford Review of Economic Policy* 16(3): 12-22.

Berman, E., Bound, J. and Griliches, Z. (1994), "Changes in the Demand for Skilled Labor Within U.S. Manufacturing: Evidence From the Annual Survey of Manufacturers", *Quarterly Journal of Economics* 109(2): 367-397.

Berman, E., Bound, J. and Machin, S. (1998), "Implications of Skill-Biased Technological Change: International Evidence", *Quarterly Journal of Economics* 113(4): 1245-1279.

Bernard, A. B. and Fort, T. C. (2017), "Factoryless Goods Producers in the USA", in Fontagné, L. and Harrison, A. (eds), *The factory-free economy: Outsourcing, Servitization, and the Future of Industry*, [5], Oxford: Oxford University Press: 136-168.

Bernard, A. B. and Jensen, J. B. (1995), "Exporters, Jobs and Wages in U.S. Manufacturing: 1976-1987", *Brookings Papers on Economic Activity* Microeconomics: 67-119.

Bernard, A. B. and Jensen, J. B. (1997), "Exporters, Skill Upgrading, and the Wage Gap", *Journal of International Economics* 42(1): 3-31.

Bernard, A. B., Jensen, J. B., Redding, S. J. and Schott, P. K. (2007), "Firms in International Trade", *The Journal of Economic Perspectives* 21(3): 105-130.

Bernard, A. B. and Wagner, J. (1997), "Exports and Success in German Manufacturing", *Review of World Economics* 133(1): 134-157.

Bessen, J. E. (2015) Learning by Doing: The Real Connection between Innovation, Wages, and Wealth, New Haven, CT: Yale University Press.

Bessen, J. E. (2016), "How Computer Automation Affects Occupations: Technology, Jobs, and Skills", Law and Economics Research Paper No. 15-49, Boston: Boston University School of Law.

Bessen, J. E. (2017), "Automation and Jobs: When Technology Boosts Employment", Law and Economics Research Paper No. 17-09, Boston: Boston University School of Law. Bewley, T. F. (1998), "Why Not Cut Pay?", European Economic Review 42(3): 459-490.

Bewley, T. F. (2002) Why Wages Don't Fall During a Recession, Cambridge, MA: Harvard University Press.

Bianco, A. (2017), "Determining Employment As a Development Strategy in a Changing World", in Stone, K., Dagnino, E., and Fernández Martínez, S. (eds), *Labour in the 21st Century: Insights into a Changing World of Work*, Cambridge: Cambridge Scholars Publishing.

Biscourp, P. and Kramarz, F. (2007), "Employment, Skill Structure, and International Trade: Firm-Level Evidence for France", *Journal of International Economics* 72(1): 22-51.

Black, D. (1948) "On the Rationale of Group Decision-Making", *Journal of Political Economy* 56(1), 23-34.

Black, S. E. and Brainerd, E. (2004), "Importing Equality? The Impact of Globalization on Gender Discrimination", *Industrial and Labor Relations (ILR) Review* 57(4): 540-559.

Blanchard, E. and Willman, G. (2016), "Trade, Education, and the Shrinking Middle Class", *Journal of International Economics* 99(1): 263-278.

Blanchard, O. (2006), "European Unemployment: the Evolution of Facts and Ideas", *Economic policy* 21(45): 6-59.

Blanchard, O., Jaumotte, F. and Loungani, P. (2013), "Labor Market Policies and IMF Advice in Advanced Economies During the Great Recession", *IZA Journal of Labor Policy* 3(1): 2.

Blien, U. and Ludewig, O. (2016), "Technological Progress and (Un)employment Development", IAB-Discussion Paper No. 2016/22, Nürnberg: Institute for Employment Research (IAB) of the German Federal Employment Agency.

Blinder, A. S. and Choi, D. H. (1990), "A Shred of Evidence on Theories of Wage Stickiness", *The Quarterly Journal of Economics* 105(4): 1003-1015.

Blonigen, B. A. and Prusa, T. J. (2015), "Dumping and Antidumping Duties", *Handbook of Commercial Policy* 1: 107-159.

Bloom, H., Schwartz, S., Lui-Gurr, S., Lee, S.-W., Peng, J. and Bancroft, W. (1999), *Testing a Re-employment Incentive for Displaced Workers:* The Earnings Supplement Project, Ottawa: Social Research and Demonstration Corporation.

Bloom, N., Draka, M. and Van Reenen, J. (2016), "Trade Induced Technical Change? The Impact of Chinese Imports on Innovation, IT and Productivity", *The Review of Economic Studies* 83(1): 87-117.

Bloom, N., Liang, J., Roberts, J. and Ying, Z. J. (2015), "Does Working From Home Work? Evidence From a Chinese Experiment", *Quarterly Journal of Economics* 130(1): 165-218.

Boeri, T. and Van Ours, J. (2008), "Active Labour Market Policies", *The Economics of Imperfect Labour Markets*, [12], Princeton, NJ: Princeton University Press: 351-374.

Bogliacino, F., Piva, M. and Vivarelli, M. (2012), "R&D and Employment: An Application of the LSDVC Estimator Using European Microdata", *Economics Letters* 116(1): 56-59.

Boix, C. (2011), "Redistribution Policies in a Globalized World", in Bacchetta, M. and Jansen, M. (eds), *Making Globalization Socially Sustainable*, Geneva: International Labour Office (ILO) and World Trade Organization (WTO): 261-295.

Bøler, E. A., Smarzynska Javorcik, B. and Ulltveit-Moe, K. H. (2015), "Globalization: A Woman's Best Friend? Exporters and

the Gender Wage Gap", CEP Discussion Paper No. 1358, Centre for Economic Performance (CEP).

Bollé, P. (1997), "Part-Time Work: Solution or Trap?", International Labour Review 136(4): 557-579.

Bonhomme, S. and Hospido, L. (2012), "Earnings Inequality in Spain: Evidence From Social Security Data", Madrid: Center for Monetary and Financial Studies (CEMFI), mimeo.

Bonin, H., Gregory, T., and Zierahn, U. (2015), Übertragung der Studie von Frey/Osborne (2013) auf Deutschland, *Endbericht Kurzexpertise Nr. 57*, Mannheim: Zentrum für Europäische Wirtschaftsforschung/Center for European Economic Research (ZEW).

Borjas, G. J. (2013), *Labor Economics*, 6, Boston, MA: McGraw-Hill.

Boston Consulting Group (2017), *The Robotics Revolution:* The Next Great Leap in Manufacturing, Boston MA: Boston Consulting Group.

Bouée, C.-E. and El Karoui, H. (2014), "Les Classes Moyennes Face à la Transformation Digitale: Comment anticiper? Comment accompagner?", *Think Act*, Paris: Roland-Berger Strategy Consultants.

Bown, C. P. and McCulloch, R. (2005), "U.S. Trade Policy and the Adjustment Process", *IMF Staff Papers* 52: 107-128, Washington, D.C.: International Monetary Fund (IMF).

Boyenge, J.-P. S. (2007) *ILO Database on Export Processing Zones (Revised)*, Geneva: International Labour Organization (ILO).

Bradley, D., Huber, E., Moller, S., Nielsen, F. and Stephens, J. D. (2003), "Distribution and Redistribution in Postindustrial Democracies", *World Politics* 55(2)(193): 228.

Brady, D., Beckfield, J. and Seeleib-Kaiser, M. (2005), "Economic Globalization and the Welfare State in Affluent Democracies, 1975-2001", *American Sociological Review* 70(6): 921-948.

Brady, D., Beckfield, J. and Zhao, W. (2007), "The Consequences of Economic Globalization for Affluent Democracies", *Annual Review of Sociology* 33: 313-334.

Brambilla, I., Dix-Carneiro, R., Lederman, D. and Porto, G. (2011), "Skills, Exports, and the Wages of Seven Million Latin American Workers", *The World Bank Economic Review* 26(1): 34-60.

Brambilla, I., Lederman, D. and Porto, G. (2012), "Exports, Export Destinations, and Skills", *The American Economic Review* 102(7): 3406-3438.

Brander, J. A. and Spencer, B. J. (1994), "Trade Adjustment Assistance: Welfare and Incentive Effects of Payments to Displaced Workers", *Journal of International Economics* 36(3): 239-261.

Brekke, K. and Nyborg, K. (2004), "Moral Hazard and Moral Motivation: Corporate Social Responsibility as Labor Market Screening", Memorandum No. 24/2004, Oslo: University of Oslo Department of Economics.

Bresnahan, T. F., Brynjolfsson, E. and Hitt, L. M. (2002), "Information Technology, Workplace Organization, and the Demand for Skilled Labor: Firm-level Evidence", *Quarterly Journal of Economics* 117(1): 339-376.

Brookfield Institute for Innovation + Entrepreneurship (2016), The Talented Mr. Robot: The impact of automation on Canada's workforce, Toronto: Brookfield Institute for Innovation + Entrepreneurship. Brougham, D. and Haar, J. (2017), "Smart Technology, Artificial Intelligence, Robotics, and Algorithms (STARA): Employees' Perceptions of Our Future Workplace", *Journal of Management and Organization* First View.

Bruegel (2014), "The Computerization of European Jobs", Blog Post, Brussels: Bruegel.

Brynjolfsson, E. and McAfee, A. (2011), Race Against the Machine: How the Digital Revolution Is Accelerating Innovation, Driving Productivity, and Irreversibly Transforming Employment and the Economy, Lexington, MA: Digital Frontier Press.

Brynjolfsson, E. and McAfee, A. (2014), *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*, New York: WW Norton and Co.

Brzeski, C. and Burk, I. (2015), "Die Roboter kommen. Folgen der Automatisierung für den deutschen Arbeitsmarkt", ING-DiBa Economic Research, Frankfurt: ING-DiBa.

Burgoon, B. (2013), "Political Economy of Re-Embedding Liberalism", Inaugural Lecture 482, Amsterdam: University of Amsterdam.

Burstein, A., Cravino, J. and Vogel, J. (2013), "Importing Skill-Biased Technology", *American Economic Journal: Macroeconomics* 5(2): 32-71.

Burstein, A., Morales, E. and Vogel, J. (2015), "Accounting for Changes in Between-group Inequality", NBER Working Paper No. 20855, Cambridge, MA: National Bureau of Economic Research (NBER).

Busemayer, M. (2009), "From Myth to Reality: Globalization and Public Spending in OECD Countries Revisited", *European Journal of Political Research* 48(4): 455-482.

Bustos, P. (2011a), "The Impact of Trade Liberalization on Skill Upgrading: Evidence From Argentina", Universitat Pompeu Fabra Economics and Business Working Paper No.1189, Barcelona: Universitat Pompeu Fabra.

Bustos, P. (2011b), "Trade Liberalization, Exports, and Technology Upgrading: Evidence on the Impact of MERCOSUR on Argentinian Firms", *American Economic Review* 101(1): 304-340.

Caliendo, L., Dvorkin, M. and Parro, F. (2015), "The Impact of Trade on Labor Market Dynamics", NBER Working Paper No. 21149, Cambridge, MA: National Bureau of Economic Research (NBER).

Campbell III, C. M. and Kamlani, K. S. (1997), "The Reasons for Wage Rigidity: Evidence From a Survey of Firms", *The Quarterly Journal of Economics* 112(3): 759-789.

Campos, R., Esquivel, G. and Lustig, N. (2014), "The Rise and Fall of Income Inequality in Mexico, 1989-2010", in Cornia, G. A. (ed.), Falling Inequality in Latin America: Policy Changes and Lessons, WIDER Studies in Development Economics, [7], Oxford: Oxford University Press.

Card, D. (1990), "The Impact of the Mariel Boatlift on the Miami Labor Market", *Industrial and Labor Relations (ILR)Review* 43(2): 245-257.

Carling, K. and Richardson, K. (2004), "The Relative Efficiency of Labor Market Programs: Swedish Experience From the 1990's", *Labour Economics* 11(3): 335-354.

Caroli, E. and Van Reenen, J. (2001), "Skill-biased Organizational Change? Evidence From a Panel of British and French Establishments", *Quarterly Journal of Economics* 116(4): 1449-1492.

Carrère, C., Grujovic, A. and Robert-Nicoud, F. (2015), "Trade and Frictional Unemployment in the Global Economy", CEPR Discussion Paper No. DP10692, London: Center for Economic Policy Research (CEPR).

Carroll, A. B. (1979), "A Three-Dimensional Conceptual Model of Corporate Performance", *Academy of Management Review* 4(4): 497-505.

Caselli, F. and Wilson, D. J. (2004), "Importing Technology", Journal of monetary Economics 51(1): 1-32.

Castro, L., Olarreaga, M. and Saslavsky, D. (2007), "The Impact Of Trade With China And India On Argentina's Manufacturing Employment", Policy Research Working Paper; No. 4153, Washington, D.C.: World Bank.

Centre for Strategic Futures (2015), Foresight 2015, Singapore: Prime Minister's Office.

Cerina, F., Moro, A. and Petersen Rendall, M. (2017), "The Role of Gender in Employment Polarization", Department of Economics Working Paper No. 250, Zurich: University of Zurich.

Cernat, L. and Mustilli, F. (2017), "Trade and Labour Adjustment in Europe: What Role for the European Globalization Adjustment Fund?", Directorate-General for Trade Chief Economist Notes No. 2017-2, Brussels: European Commission.

Chang, J.-H. and Huynh, P. (2016), "ASEAN in Transformation: The Future of Jobs at Risk of Automation", Bureau for Employers' Activities Working Paper No.9, Geneva: International Labour Organization (ILO).

Charette, R. N. (2013), "The STEM Crisis Is a Myth", IEEE Spectrum, Piscataway, NJ: Institute of Electrical and Electronics Engineers (IEEE).

Charles, K. K., Hurst, E. and Notowidigdo, M. J. (2016), "The Masking of the Decline in Manufacturing Employment by the Housing Bubble", *Journal of Economic Perspectives* 30(2): 179-200.

Chartered Accountants Australia and New Zealand (2016), The Future of Work: How Can We Adapt to Survive and Thrive? Future[inc] A Plan for Australia + New Zealand's Prosperity, Sydney: Chartered Accounts Australia and New Zealand.

Cheong, I. and Cho, J. (2011), "Reforms of Korea's Trade Adjustment Assistance Program for Its Bilateral Free Trade Agreement with the European Union and the United States", *Asian Economic Papers* 10(1): 32-55.

Cho, Y., Kalomba, D. and Orozco, V. (2013), "Gender Differences in the Effects of Vocational Training: Constraints on Women and Drop-Out Behavior", IZA Discussion Paper No. 7408, Bonn: Institute of Labor Economics (IZA).

Cirera, X. and Sabetti, L. (2016), "The Effects of Innovation on Employment in Developing Countries: Evidence from Enterprise Surveys", Policy Research Working Paper No. 7775, Washington, D.C.: World Bank.

Citibank (2016) Technology at Work v2.0: The Future Is Not What It Used To Be, London: Citibank.

Clark, J. P. (2017), "Creative Destruction: Emerging Technology and the Changing Course of Job Creation", in LaGrandeur, K. and Hughes, J.J. (eds), Surviving the Machine Age: Intelligent Technology and the Transformation of Human Work, Basingstoke: Palgrave Macmillan.

Colantone, I. and Crinò, R. (2014), "New Imported Inputs, New Domestic Products", *Journal of International Economics* 92(1): 147-165.

Collard-Wexler, A. and De Loecker, J. (2015), "Reallocation and Technology: Evidence From the US Steel Industry", American Economic Review 105(1): 131-171.

Comin, D. A. and Hobijn, B. (2010), "An Exploration of Technology Diffusion", *American Economic Review* 100(5): 2031-2059.

Comin, D. A. and Mestieri, M. (2017), "If Technology Has Arrived Everywhere, Why has Income Diverged?", NBER Working Paper No. 19010, Cambridge, MA: National Bureau of Economic Research (NBER).

Conte, A. and Vivarelli, M. (2011), "Imported Skill-Biased Technological Change In Developing Countries", *The Developing Economies* 49(1): 36-65.

Cord, L. and Wodon, Q. (2001), "Do Agricultural Programs in Mexico Alleviate Poverty? Evidence from the Ejido Sector", *Cuadernos de economía* 38(114): 239-256.

Cortes, G. M. (2016), "Where Have the Middle-Wage Workers Gone? A Study of Polarization Using Panel Data", *Journal of Labor Economics* 34(1): 63-105.

Cortes, G. M., Jaimovich, N. and Siu, H. E. (2016), "Disappearing Routine Jobs: Who, How, and Why?", NBER Working Paper No. 22918, Cambridge, MA: National Bureau of Economic Research (NBER).

Cortes, G. M., Jaimovich, N., Nekarda, C. J. and Siu, H. E. (2014), "The Micro and Macro of Disappearing Routine Jobs: A Flows Approach", NBER Working Paper No. 20307, Cambridge, MA: National Bureau of Economic Research (NBER).

Coşar, A. K. (2010), "Adjusting to Trade Liberalization: Reallocation and Labor Market Policies", Chicago: University of Chicago Booth School of Business, mimeo.

Council of Economic Advisors (CEA) (2016), "Labor Market Monopsony: Trends, Consequences, and Policy Responses", Issue Brief, Washington, D.C.: CEA.

Council of Economic Advisors (CEA) (2015), Economic Report of the President, 2015. Washington, D.C.: CEA.

Council of Economic Advisors (CEA)-Department of Labor-Department of the Treasury Office of Economic Policy, United States (2015), Occupational Licensing: A Framework for Policymakers, Washington, D.C.: CEA.

Crafts, N. (2004), "Steam as a General Purpose Technology: a Growth Accounting Perspective", *Economic Journal* 114(495): 338-351.

Crépon, B. and van den Berg, G. J. (2016), "Active Labor Market Policies", *Annual Review of Economics* 8: 521-546.

Crépon, B., Duflo, E., Gurgand, M., Rathelot, R. and Zamora, P. (2013), "Do Labor Market Policies Have Displacement Effects? Evidence from a Clustered Randomized Experiment", *The Quarterly Journal of Economics* 128(2): 531-580.

Crespi, G. and Tacsir, E. (2013), "Effects of Innovation on Employment in Latin America", UNU-MERIT Working Paper No. 2013-001, Japan: United Nations University.

Crinò, R. (2010), "Service Offshoring and White-Collar Employment", Review of Economic Studies 77(2): 595-632.

Crinò, R. (2012), "Service Offshoring and the Skill Composition of Labor Demand", Oxford Bulletin of Economics and Statistics 74(1): 20-57.

Cruz, M. and Milet, E. (2017), "Skill Premium in Developing Countries", Geneva: University of Geneva, mimeo.

Cruz, M., Milet, E. and Olarreaga, M. (2017), "Labor Adjustment Costs Across Sectors and Regions", Geneva: University of Geneva, mimeo.

Currie, J. and Harrison, A. (1997), "Sharing the Costs: the Impact of Trade Reform on Capital and Labor in Morocco", *Journal of Labor Economics* 15(S3): S44-S71.

Dai, M. and Xu, J. (2017), "The Skill Structure of Export Wage Premium: Evidence From Chinese Matched Employer-Employee Data", *The World Economy* 2017: 883-905.

Damian, R. I., Spengler, M. and Roberts, B. W. (2017), "Whose Job Will Be Taken Over By a Computer? The Role of Personality in Predicting Job Computerizability Over the Lifespan", European Journal of Personality 31(3): 291-310.

D'Amico, R. and Schochet, P. Z. (2012), The Evaluation of the Trade Adjustment Assistance Program: A Synthesis of Major Findings, Washington, D.C.: Social Policy Research Associates and Mathematica Policy Research.

Dasgupta, S., Bhula-or, R. and Fakthong, T. (2015), "Earnings Differentials Between Formal and Informal Employment in Thailand", ILO Asia-Pacific working paper series, Geneva: International Labour Organization (ILO).

Dauth, W., Findeisen, S. and Suedekum, J. (2014), "The Rise of the East and the Far East: German Labor Markets and Trade Integration", *Journal of the European Economic Association* 12(6): 1643-1675.

Dauth, W., Findeisen, S. and Suedekum, J. (2016), "Adjusting to Globalization — Evidence From Worker-Establishment Matches in Germany", CEPR Discussion Paper No. 11045, London: Centre for Economic Policy Research (CEPR).

Davey, J. and Toney, A. (2016), "The Nomadic Investor Transport Shock: Autonomous Today, Virtual Tomorrow", Thematic Global HSBC Global Research, London: HSBC Bank plc.

David, B. (2017), "Computer Technology and Probable Job Destructions in Japan: An Evaluation", *Journal of the Japanese and International Economies* 43: 77-87.

Davidson, C., Martin, L. and Matusz, S. (1999), "Trade and Search Generated Unemployment", *Journal of International Economics* 48(2): 271-299.

Davidson, C. and Matusz, S. J. (2006), "Trade Liberalization and Compensation", *International Economic Review* 47(3): 723-747.

Davidson, C. and Matusz, S. J. (2009), "Should Policy Makers Be Concerned About Adjustment Costs?", in *International Trade with Equilibrium Unemployment*, [9], 227-264, Princeton, NJ: Princeton University Press.

Davidson, C., Matusz, S. J. and Nelson, D. R. (2007), "Can Compensation Save Free Trade?", *Journal of International Economics* 71(1): 167-186.

Davis, D. R. and Harrigan, J. (2011), "Good Jobs, Bad Jobs, and Trade Liberalization", *Journal of International Economics* 84(1): 26-36.

Davis, F. R. (2014), Banned: A History of Pesticides and the Science of Toxicology, New Haven, CT: Yale University Press.

Davis, S. J. and von Wachter, T. M. (2011), "Recessions and the Costs of Job Loss", *Brookings papers on economic activity* 43(2): 1-72.

De Long, J. B. (2017), "NAFTA and Other Trade Deals Have Not Gutted American Manufacturing — Period", *Vox The Big Idea*. Available at https://www.vox.com/ De Stefano, V. (2016), "The Rise of the 'Just-in-Time Workforce': On-demand Work, Crowdwork and Labour Protection in the 'Gig-Economy'", Conditions of Work and Employment Series No. 71, Geneva: International Labour Organization (ILO).

de Vries, G. (2017), "WTO Trade Dialogues Lectures Series: Drivers of Job Polarization: A Global Supply Chain Perspective". Available at https://www.wto.org/english/res_e/reser_e/2-03-2017.pdf

DeGusta, M. (2012), "Are Smart Phones Spreading Faster Than Any Technology in Human History?", *MIT Technology Review*. Available at https://www.technologyreview.com/s/427787/are-smart-phones-spreading-faster-than-any-technology-in-human-history.

Dehaze, A. (2016), "The Skills Imperative: Shaping the Future of Work Through Talent and Technology", in Lanvin, B. and Evans, P. (eds), *The Global Talent Competitiveness Index 2017*, Fontainebleau: INSEAD, Adecco, and HCLI.

Dekker, F., Salomons, A. and van der Waal, J. (2017), "Fear of Robots at Work: the Role of Economic Self-interest", *Socio-Economic Review* 15(3).

Deloitte (2015a) Man and Machine: Robots on the rise? The impact of automation on the Swiss job market, London:

Deloitte (2015b) *Technology and people: The great job-creating machine*, London: Deloitte.

Di Caprio, A., Beck, S., Yao, Y. and Khan, F. (2016), "Trade Finance Gaps, Growth and Jobs Survey", Asian Development Bank Institute (ADB) Policy Briefs No. 64, Manila: ADB.

Diamond, P. A. (1982), "Wage Determination and Efficiency in Search Equilibrium", *Review of Economic Studies* 49(2): 217-227.

Dickert-Conlin, S. and Holtz-Eakin, D. (2000), "Employee-Based versus Employer-Based Subsidies to Low-Wage Workers: A Public Finance Perspective", in Card, D. and Blank, R.M. (eds), *Finding Jobs: Work and Welfare Reform*, [7], New York: Russell Sage Foundation: 262-295.

Dickinson, P. and Lloyd, R. (2010), "European Social Fund: Support for In-Work Training Research", Research Report No. 666, London: United Kingdom's Department for Works and Pension

Dix-Carneiro, R. (2014), "Trade Liberalization and Labor Market Dynamics", *Econometrica* 82(3): 825-885.

Dix-Carneiro, R. and Kovak, B. K. (2017), "Trade Liberalization and Regional Dynamics", *American Economic Review* (forthcoming).

Dixit, A. K. and Norman, V. (1980), *Theory of International Trade*, Cambridge: Cambridge University Press.

Dixit, A. K. and Norman, V. (1986), "Gains from Trade Without Lump-sum Compensation", *Journal of International Economics* 21(1-2): 111-122.

Downs, A. (1957), "An Economic Theory of Political Action in a Democracy", *Journal of Political Economy* 65(2): 135-150.

Dreher, A., Sturm, J.-E. and Ursprung, H. W. (2008), "The Impact of Globalization on the Composition of Government Expenditures: Evidence from Panel Data", *Public Choice* 134(3-4): 263-292.

Driskill, R. (2012), "Deconstructing the Argument for Free Trade: A Case Study of the Role of Economists in Policy Debates", *Economics and Philosophy* 28(1): 1-30.

Duflo, E. (2012), "Women Empowerment and Economic Development", *Journal of Economic Literature* 50(4): 1051-1079.

Durrant-Whyte, H., McCalman, L., O'Callaghan, S., Reid, A., and Steinberg, D. (2015), *Australia's Future Workforce*, Melbourne: Committee for Economic Development of Australia report.

Dustmann, C., Ludsteck, J. and Schönberg, U. (2009), "Revisiting the German wage structure", *Quarterly Journal of Economics* 124(2): 843-881.

Dutt, P., Mitra, D. and Ranjan, P. (2009), "International Trade and Unemployment: Theory and Cross-National Evidence", *Journal of International Economics* 78(1): 32-44.

Ebenstein, A., Harrison, A. and McMillan, M. (2015), "Why Are American Workers Getting Poorer? China, Trade and Offshoring", NBER Working Paper No. 21027, Cambridge, MA: National Bureau of Economic Research (NBER).

Ebenstein, A., Harrison, A., McMillan, M. and Phillips, S. (2014), "Estimating the Impact of Trade and Offshoring on American Workers Using the Current Population Surveys", *Review of Economics and Statistics* 96(4): 581-595.

Egger, H. and Kreickemeier, U. (2009), "Firm Heterogeneity and the Labor Market Effects of Trade Liberalization", International Economic Review 50(1): 187-216.

Ehrenberg, R. G. and Smith, R. S. (2012), *Modern Labor Economics: Theory and Public Policy*, 11, Abingdon: Routledge.

Ehrlich, S. D. and Hearn, E. (2014), "Does Compensating the Losers Increase Support for Trade? An Experimental Test of the Embedded Liberalism Thesis", *Foreign Policy Analysis* 10(2): 149-164.

Electrical Technology (2017), "What Is Industrial Automation, Their Types and Hierarchy of an Industrial Automation System", available at http://www.electricaltechnology.org/2015/09/what-is-industrial-automation.html (accessed on 22 May 2017).

Elliot, S. W. (2017), "Projecting the Impact of Information Technology on Work and Skills in the 2030s", in Buchanan, J., Finegold, D., Mayhew, K., and Warhurst, C. (eds), *The Oxford Handbook of Skills and Training*, Oxford: Oxford University Press.

Esping-Andersen, G. (1990), *The Three Worlds of Welfare Capitalism*, Princeton, NJ: Princeton University Press.

European Centre for the Development of Vocational Training (Cedefop) (2016), "Rise of the Machines Technological Skills Obsolescence in the EU", #ESJsurvey INSIGHTS No. 8, Thessaloniki: Cedefop.

European Commission (2011a), *Activities of the European Globalization Fund in 2010*, Brussels: European Commission.

European Commission (2011b), European Globalisation Adjustment Fund in Action: Stories on Opportunities Created by the EGF, Luxembourg: Publications Office of the European Union.

European Commission (2013), "Employment and Social Developments in Europe 2012", Luxembourg Commission Staff Working Document, Luxembourg: Publications Office of the European Union.

European Commission (2015), "The Impact of the Economic and Financial Crisis on the Reform of Cohesion Policy: 2008-2013", Regional Working Papers WP 03/2015, Brussels: European Commission.

Executive Office of the President of the United States (2016), *Artificial Intelligence, Automation, and the Economy*, Washington, D.C.: White House.

Fajgelbaum, P. D. and Khandelwal, A. K. (2016), "Measuring the Unequal Gains From Trade", *The Quarterly Journal of Economics*: 131 (3): 1113-1180.

Fajnzylber, P. and Fernandes, A. M. (2009), "International Economic Activities and the Demand for Skilled Labor: Evidence From Brazil and China", *Applied Economics* 41(5): 563-577.

Falk, M. (2001), "Diffusion of Information Technology, Internet Use and the Demand of Heterogeneous Labor", ZEW Discussion Papers, No. 01-48, Mannheim: Zentrum für Europäische Wirtschaftsforschung/Center for European Economic Research (ZEW).

Falk, M. and Seim, K. (1999), "Human Capital and Information Technology as Factors of Production: Evidence from German service firms", ZEW Discussion Paper 99 Vol. 14, Mannheim: Zentrum für Europäische Wirtschaftsforschung/Center for European Economic Research (ZEW).

Farber, H. S. (2004), "Job Loss in the United States, 1981-2001", in Polachek, S. W. (ed.), *Accounting for Worker Well-Being*, Research in Labor Economics, Bingley: Emerald Group Publishing Limited: 69-117.

Fariñas, J. C. and Martín-Marcos, A. (2007), "Exporting and Economic Performance: Firm-Level Evidence of Spanish Manufacturing", *The World Economy* 30(4): 618-646.

Federal Reserve of St. Louis (2015), "Churning in the Labor Market", Blog, 12 February 2015, St. Louis, MO: Federal Reserve of St. Louis.

Feenstra, R. C. and Hanson, G. H. (1995), "Foreign Investment, Outsourcing and Relative Wages", NBER Working Paper No. 5121, Cambridge, MA: National Bureau of Economic Research (NBER).

Feenstra, R. C. and Hanson, G. H. (1999), "The Impact of Outsourcing and High-Technology Capital on Wages: Estimates for the United States, 1979-1990", *The Quarterly Journal of Economics* 114(3): 907-940.

Feenstra, R. C., Inklaar, R. and Timmer, M. P. (2015), "The Next Generation of the Penn World Table", *American Economic Review* 105(10): 3150-3182.

Feenstra, R. C. and Lewis, T. R. (1994), "Trade Adjustment Assistance and Pareto Gains From Trade", *Journal of International Economics* 36(3): 201-222.

Fehr, E. and Falk, A. (1999), "Wage Rigidity in a Competitive Incomplete Contract Market", *Journal of Political Economy* 107(1): 106-134.

Fehr, E. and Schmidt, K. M. (1999), "A Theory of Fairness, Competition, and Cooperation", *The Quarterly Journal of Economics* 114(3): 817-868.

Felbermayr, G., Prat, J. and Schmerer, H.-J. (2011), "Trade and Unemployment: What Do the Data Say?", *European Economic Review* 55(6): 741-758.

Fontagné, L., Orefice, G. and Piermartini, R. (2016), "Making (Small) Firms Happy. The Heterogeneous Effect of Trade Facilitation Measures", WTO Working Paper ERSD-2016-03, Geneva: World Trade Organization (WTO).

Food and Agriculture Organization of the United Nations (FAO) (2015), FAO Statistical Pocketbook World Food and Agriculture 2015, Rome: Food and Agriculture Organization of the United Nations (FAO).

Ford, M. (2015), The Rise of the Robots: Technology and the Threat of a Jobless Future, New York: Basic Books.

Forslund, A. and Krueger, A. B. (2010), "Did Active Labour Market Policies Help Sweden Rebound from the Depression of the early 1990s?", in Freeman, R. B., Swedenborg, B., and Topel, R. (eds), Reforming the Welfare State: Recovery and Beyond in Sweden, Chicago: University of Chicago Press: 159-187.

Francois, J., Jansen, M. and Peters, R. (2011), "Trade, Adjustment Costs and Assistance: The Labor Market Dynamics", in Jansen, M. (ed.), *Trade and Employment: From Myths to Facts*, Geneva: International Labour Office (ILO) and European Commission (EC): 213-252.

Frey, C. B. and Osborne, M. A. (2017), "The Future of Employment: How Susceptible Are Jobs to Computerisation?", *Technological Forecasting and Social Change* 114: 254-280.

Fuentes, O. M. and Gilchrist, S. (2005), "Skill-biased Technology Adoption: Evidence for the Chilean Manufacturing Sector", Institute for Economic Development Working Paper No. dp-150, Boston: Boston University.

Fuji, H. and Managi, S. (2017), "Trends and Priority Shifts in Artificial Intelligence Technology Invention: A Global Patent Analysis", RIETI Discussion Paper Series 17-E-066, Tokyo: Research Institute of Economy, Trade and Industry (RIETI).

Fung, K. C. and Staiger, R. W. (1996), "Trade Liberalization and Trade Adjustment Assistance", in Canzoneri, M., Ethier, W., and Grilli, V. (eds), *The New Transatlantic Economy*, Cambridge: Cambridge University Press: 265-294.

Gemmel, N., Kneller, R. and Sanz, I. (2008), "Foreign Investment, International Trade and the Size and Structure of Public Expenditures", European Journal of Political Economy 24(1): 151-171.

Gera, S., Gu, W. and Lin, Z. (2001), "Technology and the Demand for Skills in Canada: an Industry-level Analysis", *The Canadian Journal of Economics/Revue canadienne d'Economique* 34(1): 132-148.

GHK (2011), "Mid-Term Evaluation of the Global Adjustment Fund: Final Report", Job No. J8607 submitted by GHK to European Commission's Directorate-General for Employment, Social Affairs & Inclusion, Birmingham: GHK Consulting Ltd.

Gimpelson, V. and Kapeliushnikov, R. (2016), "Polarization or Upgrading? Evolution of Employment in Transitional Russia", *Russian Journal of Economics* 2(2): 192-218.

Goel, M. (2017), "Inequality Between and Within Skill Groups: The Curious Case of India", World Development 93: 153-176.

Goldberg, P. K. (2015) Trade and Inequality. London: Edward Elgar.

Goldberg, P. K., Khandelwal, A. K., Pavcnik, N. and Topalova, P. (2010), "Imported Intermediate Inputs and Domestic Product Growth: Evidence From India", *The Quarterly Journal of Economics* 125(4): 1727-1767.

Goldberg, P. K. and Pavcnik, N. (2003), "The Response of the Informal Sector to Trade Liberalization", *Journal of Development Economics* 72(2): 463-496.

Goldberg, P. K. and Pavcnik, N. (2007), "Distributional Effects of Globalization in Developing Countries", *Journal of Economic Literature* 45(1): 39-82.

Goldin, C. D. and Katz, L. F. (1998), "The Origins of Technology-Skill Complementarity", *The Quarterly Journal of Economics* 113(3): 693-732.

Goos, M., Konings, J. and Vandeweyer, M. (2015), "Employment Growth in Europe: The Roles of Innovation, Local Job Multipliers and Institutions", TKI Discussion Paper No. 15-10, Utrecht: Utrecht University School of Economics.

Goos, M. and Manning, A. (2007), "Lousy and Lovely Jobs: The Rising Polarization of Work in Britain", *Review of Economics and Statistics* 89: 118-133.

Goos, M., Manning, A. and Salomons, A. (2009), "The Polarization of the European Labor Market", *American Economic Review Papers and Proceedings* 99: 58-63.

Goos, M., Manning, A. and Salomons, A. (2014), "Explaining Job Polarization: Routine-biased Technological Change and Offshoring", *American Economic Review* 104(8): 2509-2526.

Gordon, R. J. (2014), "The Demise of U.S. Economic Growth: Rebuttal, and Reflections", NBER Working Paper No. 19895, Cambridge, MA: National Bureau of Economic Research (NBER).

Görg, H. and Strobl, E. (2002), "Relative Wages, Openness and Skill-Biased Technological Chang", IZA Discussion Paper No. 596, Bonn: Institute of Labor Economics (IZA).

Graetz, G. and Michaels, G. (2015), "Robots at Work", CEP Discussion Paper No. 1335, London: Centre for Economic Performance (CEP).

Graetz, G. and Michaels, G. (2017), "Is Modern Technology Responsible for Jobless Recoveries?", CEP Discussion Paper No. 1461, London: Centre for Economic Performance.

Greenan, N., Mairesse, J. and Topiol-Bensaid, A. (2001), "Information Technology and Research and Development Impacts on Productivity and Skills: Looking for Correlations on French Firm Level Data", NBER Working Paper, No. 8075, Cambridge, MA: National Bureau of Economic Research (NBER).

Greenaway, D. and Yu, Z. (2004), "Firm-Level Interactions Between Exporting and Productivity: Industry-Specific Evidence", *Review of World Economics* 140(3): 376-392.

Greening, D. W. and Turban, D. B. (2000), "Corporate Social Performance As a Competitive Advantage in Attracting a Quality Workforce", *Business and Society* 39(3): 254-280.

Greenstein, J. and Anderson, B. (2017), "Premature Deindustrialization and the Defeminization of Labor", *Journal of Economic Issues* LI(2): 446-457.

Greenwald, B. C. (1986), "Adverse Selection in the Labour Market", *The Review of Economic Studies* 53(3): 325-347.

Gregory, M., Zissimos, B. and Greenhalgh, C. (2001), "Jobs for the Skilled: How Technology, Trade, and Domestic Demand Changed the Structure of UK Employment, 1979-90", Oxford Economic Papers 53(1): 20-46.

Gregory, T., Salomons, A. and Zierahn, U. (2016), "Racing with or against the machine? Evidence from Europe", ZEW Discussion Paper No. 16-053, Mannheim: Zentrum für Europäische Wirtschaftsforschung/Center for European Economic Research (ZEW).

Guasch, J. L. and Kogan, J. (2001), "Inventories in Developing Countries: Levels and Determinants — A Red Flag for Competitiveness and Growth", Policy Research Working Paper No. 2552, Washington, D.C.: World Bank.

Haggard, S. and Kaufman, R. (2004), "Revising Social Contracts: Social Spending in Latin America, East Asia, and the Former Socialist Countries, 1980-2000", *Revista de Ciencia Política (Santiago)* 24(1): 3-37.

Hahn, C. H. (2005), "Exporting and Performance of Plants: Evidence on Korea", in Ito, T. and Rose, A. K. (eds),

International Trade in East Asia, NBER-East Asia Seminar on Economics, [4], Chicago: University of Chicago Press: 53-80.

Hakkala, K. N. and Huttunen, K. (2016), "Worker-Level Consequences of Import Shocks", Working Paper No. 74, Helsinki: VATT Institute for Economic Research.

Hakobyan, S. and McLaren, J. (2016), "Looking for Local Labor Market Effects of NAFTA", *Review of Economics and Statistics* 98(4): 728-741.

Hall, B. H. and Khan, B. (2003), "Adoption of New Technology", NBER Working Paper No. 9730, Cambridge, MA: National Bureau of Economic Research (NBER).

Hall, B. H., Lotti, F. and Mairesse, J. (2008), "Employment, Innovation, and Productivity: Evidence From Italian Microdata", *Industrial and Corporate Change* 17(4): 813-839.

Hall, R. E. (2012), "The 2010 Nobel Prize in Economics: How the DMP Model Explains Current High Unemployment", Cambridge, MA: National Bureau of Economic Research (NBER), mimeo.

Haltiwanger, J. and Singh, M. (1999), "Cross-Country Evidence on Public Sector Retrenchment", *The World Bank Economic Review* 13(1): 23-66.

Handley, K. and Limao, N. (2017), "Policy Uncertainty, Trade and Welfare: Theory and Evidence for China and the U.S.", *American Economic Review* (forthcoming).

Hanson, G. H. and Harrison, A. (1999), "Trade Liberalization and Wage Inequality in Mexico", *Industrial and Labor Relation (ILR) Review* 52(2): 271-288.

Hansson, P. and Lundin, N. N. (2004), "Exports As an Indicator on or Promoter of Successful Swedish Manufacturing Firms in the 1990s", *Review of World Economics/Weltwirtschaftliches Archiv* 140: 415-445.

Harrison, R., Jaumandreu, J., Mairesse, J. and Peters, B. (2014), "Does Innovation Stimulate Employment? A Firm-level Analysis Using Comparable Micro-data From Four European Countries", *International Journal of Industrial Organization* 35: 29-43.

Haucap, J. and Wei, C. (2004), "Unionisation Structures and Innovation Incentives", *The Economic Journal* 114(494): 149-165

Hays (2016), Hays Global Skills Index 2016 – The Global Skills Landscape: A Complex Puzzle, London: Hays plc.

Hays, J. C. (2009), Globalization and the New Politics of Embedded Liberalism, Oxford: Oxford University Press.

Hays, J. C., Ehrlich, S. D. and Peinhardt, C. (2005), "Government Spending and Public Support for Trade in the OECD: An Empirical Test of the Embedded Liberalism Thesis", International Organization 59(2): 473-494.

Helpman, E. (2016), "Globalization and Wage Inequality", NBER Working Paper No. 22944, Cambridge, MA: National Bureau of Economic Research (NBER).

Helpman, E. and Itskhoki, O. (2010), "Labour Market Rigidities, Trade and Unemployment", *The Review of Economic Studies* 77(3): 1100-1137.

Helpman, E., Itskhoki, O. and Redding, S. (2010), "Inequality and Unemployment in a Global Economy", *Econometrica* 78(4): 1239-1283.

Hemereijck, A. (2013), *Changing Welfare States*, Oxford: Oxford University Press.

Hicks, M. and Devaraj, S. (2015), "The Myth and the Reality of Manufacturing in America", Center for Business and Economic Research Report, Muncie, IN: Ball State University.

Hiscox, M. J., Schwatz, C. and Toffel, M. W. (2008), "Evaluating the Impact of SA 8000 Certification", Harvard Business School Technology and Operations Mgt. Unit Research Paper No. 08-097, Cambridge, MA: Harvard University.

Hlatshwayo, S. and M. Spence (2014), "Demand and Defective Growth Patterns: The Role of the Tradable and Non-tradable Sectors in an Open Economy", *American Economic Review: Papers & Proceedings* 104(5): 272-277.

Hollweg, C. H., Lederman, D., Rojas, D., and Ruppert Bulmer, E. (2014), *Sticky Feet: How Labor Market Frictions Shape the Impact of International Trade on Jobs and Wages*, Washington, D.C.: World Bank.

Hsieh, C. T. and Moretti, E. (2003), "Can Free Entry Be Inefficient? Fixed Commissions and Social Waste in the Real Estate Industry", *Journal of Political Economy* 111(5): 1076-1122.

Huber, E. and Stephens, J. D. (2014), "Income Inequality and Redistribution in Post-Industrial Democracies: Demographic, Economic and Political Determinants", *Socio-Economic Review* 12(2): 245-267.

Hufbauer, G. C. and Lowry, S. (2012), "US Tire Tariffs: Saving Few Jobs at High Cost", Policy Brief 12-9, Washington, D.C.: Peterson Institute for International Economics.

Hufbauer, G. C. and Lu, Z. L. (2017), "The Payoff to America From Globalization: A Fresh Look with a Focus on Workers", Policy Brief PB17-16, Washington, D.C.: Peterson Institute for International Economics.

Hufbauer, G. C., Berliner, D. T. and Elliott, K. A. (1986), *Trade Protection in the United States: 31 Case Studies*, Washington, D.C.: Institute for International Economics.

Hughes, J. J. (2017), "What Is the Job Creation Potential of New Technologies?", in LaGrandeur, K. and Hughes, J.J. (eds), Surviving the Machine Age: Intelligent Technology and the Transformation of Human Work, Basingstoke: Palgrave Macmillan.

Hulten, C. and Nakamura, L. (2017), "Accounting for Growth in the Age of the Internet: The Importance of Output-Saving Technical Change", NBER Working Paper No. 23315, Cambridge, MA: National Bureau of Economic Research (NBER).

Hummels, D. L. and Schaur, G. (2013), "Time As a Trade Barrier", *American Economic Review* 103(7): 2935-2959.

Hummels, D., Ishii, J. and Yi, K.-M. (2001), "The Nature and Growth of Vertical Specialization in World Trade", *Journal of International Economics* 54(1): 75-96.

Hummels, D., Jørgensen, R., Munch, J. R. and Xiang, C. (2014), "The Wage Effects of Offshoring: Evidence From Danish Matched Worker-Firm Data", *American Economic Review* 104(6): 1597-1629.

Hummels, D., Munch, J. R. and Xiang, C. (2016), "Offshoring and Labor Markets", NBER Working Paper No. 22041, Cambridge, MA: National Bureau of Economic Research (NBER).

Insoo, P., Wood, J. and Kim, J. (2016), "An Evaluation of the Korean Trade Adjustment Assistance (TAA) Program", *Journal of International Logistics and Trade* 14(3): 219-229.

Institute for Spatial Economic Analysis (ISEA) (2017), "Future job automation to hit hardest in low wage metropolitan areas

like Las Vegas, Orlando and Riverside-San Bernardino", ISEA Publish, Redlands, CA: University of Redlands.

International Labour Organization (ILO) (2002) Women and Men in the Informal Economy: A Statistical Picture, Geneva: ILO.

International Labour Organization (ILO) (2006), "Occupations in Information and Communications Technology", Discussion Paper TEG/ISCO-06-7-4, Geneva: ILO.

International Labour Organization (ILO) (2011a), A Skilled Workforce for Strong, Sustainable and Balanced Growth, Geneva: ILO.

International Labour Organization (ILO) (2011b), World of Work Report 2011: Making Markets Work for Jobs, Geneva: ILO.

International Labour Organization (ILO) (2013a), *The Social Dimensions of Free Trade Agreements*, Geneva: ILO.

International Labour Organization (ILO) (2013b), Measuring Informality: A Statistical Manual on the Informal Sector and Informal Employment, Geneva: ILO.

International Labour Organization (ILO) (2014a), Global Employment Trends 2014 – Risk of a Jobless Recovery?, Geneva: ILO.

International Labour Organization (ILO) (2014b), Global Wage Report 2014/15: Wages and Income Inequality, Geneva: ILO.

International Labour Organization (ILO) (2015a), Global Employment Trends for Youth 2015: Scaling Up Investments in Decent Jobs for Youth, Geneva: ILO.

International Labour Organization (ILO) (2015b), "Non-Standard Forms of Employment", Report for discussion at the Meeting of Experts on Non-Standard Forms of Employment MENSFE/2015, Geneva: ILO.

International Labour Organization (ILO) (2015c), World Employment Social Outlook - Trends 2015, Geneva: ILO.

International Labour Organization (ILO) (2015d), World Employment Social Outlook 2015: The Changing Nature of Jobs. Geneva: ILO.

International Labour Organization (ILO) (2016a), Assessment of Labour Provisions in Trade and Investment Arrangements, Geneva: ILO.

International Labour Organization (ILO) (2016b), Global Wage Report 2016/17: Wage Inequality in the Workplace, Geneva: ILO.

International Labour Organization (ILO) (2016c), Non-Standard Employment Around the World: Understanding Challenges, Shaping Prospects, Geneva: ILO.

International Labour Organization (ILO) (2016d), Women at Work Trends 2016, Geneva: ILO.

International Labour Organization (ILO) (2016e), World Employment and Social Outlook 2016: Transforming Jobs to End Poverty, Geneva: ILO.

International Labour Organization (ILO) (2016f), World Employment Social Outlook - Trends 2017, Geneva: ILO.

International Labour Organization (ILO) (2016g), World Employment Social Outlook 2016: Trends for Youth, Geneva: ILO.

International Labour Organization (ILO) (2017), World Employment and Social Outlook: Trends for Women 2017, Geneva: ILO.

International Labour Organization (ILO) and Organisation for Economic Co-operation and Development (OECD) (2015),

"The Labour Share in G20 Economies", Report prepared for the G20 Employment Working Group Antalya, Turkey, 26-27 February 2015, Geneva and Paris: ILO and OECD.

International Labour Organization (ILO) and World Trade Organization (WTO) (2017), *Investing in Skills for Inclusive Trade*, Geneva: ILO and WTO.

International Monetary Fund (IMF) (2014), Fiscal Monitor, April 2014: Public Expenditure Reform: Making Difficult Choices, Washington, D.C.: IMF.

International Monetary Fund (IMF) (2017), World Economic Outlook, April 2017: Gaining Momentum?, Washington, D.C.: IMF.

International Monetary Fund (IMF) and International Labour Organization (ILO) (2010), "The Challenges of Growth, Employment and Social Cohesion", Background Paper for High-Level Conference on 13 September 2010 in Oslo, Washington, D.C. and Geneva: IMF and ILO.

International Monetary Fund (IMF), World Bank, and World Trade Organization (WTO) (2017), "Making Trade An Engine of Growth for All: The Case for Trade and for Policies to Facilitate Adjustment", Policy Papers Prepared by Staff of the IMF, the World Bank Group and the WTO, Washington, D.C.: World Bank

International Trade Centre (ITC) (2016), *Unlocking Markets for Women to Trade*, Geneva: ITC.

Irarrazabal, A., Moxnes, A. and Ulltveit-Moe, K. H. (2013), "Heterogeneous Firms or Heterogeneous Workers? Implications for Exporter Premiums and the Gains From Trade", Review of Economics and Statistics 95(3): 839-843.

Iversen, T. and Cusack, T. R. (2000), "The Causes of Welfare State Expansion: Deindustrialization or Globalisation?", *World Politics* 52(3): 313-349.

Iversen, T. and Soskice, D. (2006), "Electoral Institutions and the Politics of Coalitions: Why Some Democracies Redistribute More Than Others", *American Political Science Review* 100(2): 165-181.

Iversen, T. and Soskice, D. (2009), "Distribution and Redistribution. The Shadow of the Nineteenth Century", *World Politics* 61(3): 438-486.

Iversen, T. and Soskice, D. (2015), "Democratic Limits to Redistribution. Inclusionary Versus Exclusionary Coalitions in the Knowledge Economy", *World Politics* 67(2): 185-225.

Jacobsen, J. and Skillman, G. (2004), *Labor Markets and Employment Relationships: A Comprehensive Approach*, Hoboken, NJ: Blackwell Publishing Ltd.

Jacobson, L. (1998), "Compensation Programs", in Collins, S. M. (ed.), *Imports, Exports, and the American Worker*, Washington, D.C.: Brookings Institution Press.

Jaimovich, N. and Siu, H. E. (2014), "The Trend Is the Cycle: Job Polarization and Jobless Recoveries", Durham, NC: Duke University, mimeo.

Jakubik, A. and Kummritz, V. (2017), "The China Syndrome Revisited: Insights From Value Added Trade Flows", Geneva: World Trade Organization, mimeo.

James, A. (2012), Fairness in Practice. A Social Contract for the Global Economy, Oxford: Oxford University Press.

Jenkins, G., Kuo, C.-Y. and Harberger, A. C. (2011), "Economic Prices for Non-Tradable Goods and Services", in *Cost-Benefit Analysis for Investment Decisions*, [11], Kingston: Queen's University.

Johansson, P. and Palme, M. (2005), "Moral Hazard and Sickness Insurance", *Journal of Public Economics* 89(9): 1879-1890.

Jovanovic, B. and Rousseau, P. L. (2005), "General Purpose Technologies", in Aghion, P. and Durlauf, S.N. (eds), *Handbook of economic growth Volume 1, part B*, Amsterdam: Elsevier: 1181-1224.

Juhn, C., Ujhelyi, G. and Villegas-Sanchez, C. (2013), "Trade Liberalization and Gender Inequality", *The American Economic Review* 103(3): 269-273.

Juhn, C., Ujhelyi, G. and Villegas-Sanchez, C. (2014), "Men, Women, and Machines: How Trade Impacts Gender Inequality", *Journal of Development Economics* 106: 179-193.

Jung, J. and Mercenier, J. (2014), "Routinization-Biased Technical Change and Globalization: Understanding Labor Market Polarization", *Economic Enquiry* 52(4): 1446-1465.

Kahneman, D., Knetsch, J. L. and Thaler, R. (1986), "Fairness As a Constraint on Profit Seeking: Entitlements in the Market", *The American Economic Review:* 728-741.

Kambourov, G. (2009), "Labour Market Regulations and the Sectoral Reallocation of Workers: The Case of Trade Reforms", *The Review of Economic Studies* 76(4): 1321-1358.

Kapstein, E. (1998), "Trade Liberalization and the Politics of Trade Adjustment Assistance", *International Labour Review* 137(4): 501-516.

Kapstein, E. (2000), "Winners and Losers in the Global Economy", *International Organization* 54(2): 359-384.

Kasahara, H. and Rodrigue, J. (2008), "Does the Use of Imported Intermediates Increase Productivity? Plant-Level Evidence", *Journal of Development Economics* 87(1): 106-118.

Kaufman, R. R. and Segura-Ubiergo, A. (2001), "Globalization, Domestic Politics, and Social Spending in Latin America: A Time-Series Cross-Section Analysis, 1973-97", World Politics 53(4): 553-587.

Keller, W. and Utar, H. (2016), "International Trade and Job Polarization: Evidence at the Worker Level", CESifo Working Paper No. 5978, Munich: Center for Economic Studies and ifo Institute.

Kenworthy, L. and Pontusson, J. (2005), "Rising Inequality and the Politics of Redistribution in Affluent Countries", *Perspectives on Politics* 3(3): 449-471.

Kittel, B. and Winner, H. (2002), "How Reliable Is Pooled Analysis in Political Economy? The Globalization Welfare State Nexus Revisited", *European Journal of Political Research* 44(2): 269-293.

Kitzmueller, M. and Shimshack, J. (2012), "Economic Perspectives on Corporate Social Responsibility", *Journal of Economic Literature* 50(1): 51-84.

Kizu, T., Kühn, S. and Viegelahn, C. (2016), "Linking Jobs in Global Supply Chains to Demand", ILO Research paper No. 16, Geneva: International Labour Organization (ILO).

Klein, M. W., Moser, C. and Urban, D. M. (2010), "The Contribution of Trade to Wage Inequality: The Role of Skill, Gender, and Nationality", NBER Working Paper No. 15985, Cambridge, MA: National Bureau of Economic Research (NBER).

Kleiner, M. M. (1990), "Are There Economic Rents for More Restrictive Occupational Licensing Practices?", Proceedings of the Forty-Second Annual Meeting, Industrial Relations Research Association: 177-185. Kletzer, L. G. (2001) Job Loss From Imports: Measuring the Costs, Washington, D.C.: Institute for International Economics.

Kletzer, L. G. (2004), "Trade-Related Job Loss and Wage Insurance: a Synthetic Review", *Review of International Economics* 12(5): 724-748.

Kongar, E. (2007), "Importing Equality or Exporting Jobs? Competition and Gender Wage and Employment Differentials in US Manufacturing", in Van Staveren, I., Elson, D., Grown, C., and Cagatay, N. (eds), *The Feminist Economics of Trade*, Abingdon: Routledge: 215-236.

Kovak, B. K. (2013), "Regional Effects of Trade Reform: What Is the Correct Measure of Liberalization?", *American Economic Review* 103(5): 1960-1976.

Krashinsky, H. (2002), "Evidence on Adverse Selection and Establishment Size in the Labor Market", *Industrial and Labor Relations (ILR) Review* 56(1): 84-96.

Krueger, A. B. (1993), "How Computers Have Changed the Wage Structure: Evidence From Microdata, 1984-1989", *Quarterly Journal of Economics* 108(1): 33-61.

Krugman, P. (1994) "Competitiveness: A Dangerous Obsession", *Foreign Affairs* 73(2), 28-44.

Krugman, P. (2016), "Analytics of Trade Deficits and Manufacturing Employment (Very Wonkish)", *The New York Times*, The Opinion Pages 26-12-2016.

Krugman, P., Obstfeld, M. and Melitz, M. (2014) *International Economics: Theory and Policy*, Harlow: Pearson Education Limited

Kucera, D. and Milberg, W. (2000), "Gender Segregation and Gender Bias in Manufacturing Trade Expansion: Revisiting the 'Wood Asymmetry'", World Development 28(7): 1191-1210.

Kugler, A. D. and Saint-Paul, G. (2004), "How Do Firing Costs Affect Worker Flows in a World With Adverse Selection?", *Journal of Labor Economics* 22(3): 553-584.

Lakner, C. and Milanovic, B. (2016), "Global Income Distribution: From the Fall of the Berlin Wall to the Great Recession", World Bank Economic Review 30(2): 203-232.

Lamo, A., Messina, J. and Wasmer, E. (2011), "Are Specific Skills an Obstacle to Labor Market Adjustment?", *Labour Economics* 18(2): 240-256.

Lardy, N. R. (2015), "Manufacturing Employment in China", Realtime Economic Issues Watch, Washington, D.C.: Peterson Institute For International Economics.

Lawrence, R. Z. (2014), "Adjustment Challenges for U.S. Workers", in Bergsten, C. F., Hufbauer, G.C., and Miner, S. (eds), *Briding the Pacific: Toward Free Trade and Investment Between China and the United States*, [3], Washington, D.C.: Peterson Institute for International Economics: 85-107.

Lawrence, R. Z. and Litan, R. E. (1986), *Saving Free Trade: A Pragmatic Approach*, Washington, D.C.: Brookings Institution Press.

Lechthaler, W. and Mileva, M. (2014), "Smoothing the Adjustment to Trade Liberalization", Kiel Working Paper No. 1948, Kiel: Kiel Institute for the World Economy.

Lee, J.-W. and Wie, D. (2015), "Technological Change, Skill Demand, and Wage Inequality: Evidence From Indonesia", World Development 67: 238-250.

Lee, S., McCann, D. and Messenger, J. C. (2007), Working Time Around the World: Trends in Working Hours, Laws and Policies in a Global Comparative Perspective, Abingdon and Geneva: Routledge and International Labour Organization (ILO).

Leibrecht, M., Klien, M. and Onaran, O. (2011), "Globalization, Welfare Regimes and Social Protection Expenditures in Western and Eastern European Countries", *Public Choice* 148(3): 569-594.

Leuven, E. and Oosterbeek, H. (2011), "Overeducation and Mismatch in the Labor Market", *Handbook of the Economics of Education* 4: 283-326.

Lewis, E. (2004), "How Did the Miami Labor Market Absorb the Mariel Immigrants?", Working Paper No. 04-3, Philadelphia, PA: Federal Reserve Bank of Philadelphia.

Li, H., Liang, J. and Wu, B. (2017), "Labor Market Experience and Returns to Education in Fast Growing Economies", Beijing: Tsinghua University, mimeo.

Lim, S. and Burgoon, B. (2016), "Globalization and Support for Unemployment Spending in Asia: A Micro-Level Analysis", Paper prepared for presentation at the 2016 American Political Science Association Conference.

Lippoldt, D. and House, G. A. (2017), "Trade in the Internet Era", HSBC Global Research, London: HSBC Bank plc.

Lise, J. and Robin, J. M. (2017), "The Macrodynamics of Sorting Between Workers and Firms", *The American Economic Review* 107(4): 1104-1135.

Lommerud, K. E., Meland, F. and Straume, O. R. (2006), "Globalisation and Union Opposition to Technological Change", *Journal of International Economics* 68(1): 1-23.

MacCrory, F., Westerman, G., Alhammadi, Y. and Brynjolfsson, E. (2014), "Racing With and Against the Machine: Changes in Occupational Skill Composition in an Era of Rapid Technological Advance", Thirty-Fifth International Conference on Information Systems, Auckland: ICIS.

Machin, S. (1995), "Changes in the Relative Demand for Skills in the UK Labour Market", CEP Discussion Papers No. 221; London: Centre for Economic Performance (CEP) – London School of Economics (LSE).

Machin, S. and Van Reenen, J. (1998), "Technology and Changes in Skill Structure: Evidence from Seven OECD Countries", *The Quarterly Journal of Economics* 113(4): 1215-1244

MacLeod, W. B. and Malcomson, J. M. (1989), "Implicit Contracts, Incentive Compatibility, and Involuntary Unemployment", *Econometrica: Journal of the Econometric Society*: 447-480.

Magee, C. (2001), "Administered Protection for Workers: An Analysis of the Trade Adjustment Assistance Program", *Journal of International Economics* 53(1): 105-125.

Magyari, I. (2017), "Firm Reorganization, Chinese Imports, and U.S. Manufacturing Employment", New York: Columbia University, mimeo.

Malgouyres, C. (2017), "The Impact of Chinese Import Competition on the Local Structure of Employment and Wages: Evidence From France", *Journal of Regional Science* 57(3): 411-441.

Maloney, W. F. and Molina, C. (2016), "Are Automation and Trade Polarizing Developing Country Labor Markets, Too?", Policy Research Working Paper No. 7922, Washington, D.C.: World Bank. Manzini, P. and Snower, D. J. (2002), "Wage Determination and the Sources of Bargaining Power", IZA Discussion Paper, No. 535, Bonn: Institute of Labor Economics (IZA).

Marchand, B. U. (2012), "Tariff Pass-Through and the Distributional Effects of Trade Liberalization", *Journal of Development Economics* 99(2): 265-281.

Mares, I. (2005), "Social Protection Around the World: External Insecurity, State Capacity and Domestic Political Cleavages", Comparative Political Studies 38(6): 623-651.

Margalit, Y. (2012), "Lost in Globalization: International Economic Integration and the Sources of Popular Discontent", *International Studies Quarterly* 56(3): 484-500.

Marinescu, I. and Triyana, M. (2016), "The Sources of Wage Growth in a Developing Country", *IZA Journal of Labor and Development*,5(2): 1-43.

Matsuyama, K. (2007), "Beyond Icebergs: Towards a Theory of Biased Globalization", *The Review of Economic Studies* 74(1): 237-253.

Maurin, E., Thoenig, M. and Thesmar, D. (2002), "Globalization and the Demand for Skill: an Export Based Channel", CEPR Discussion Paper No. 3406, London: Centre for Economic Policy Research (CEPR).

Mazzolari, F. and Ragusa, G. (2013), "Spillovers from high-skill consumption to low-skill labor markets", *Review of Economics and Statistics* 95(1): 74-86.

McCaig, B. (2011), "Exporting Out of Poverty: Provincial Poverty in Vietnam and US Market Access", *Journal of International Economics* 85(1): 102-113.

McCaig, B. and Pavcnik, N. (2014), "Export Markets and Labor Allocation in a Low-Income Country", NBER Working Paper No. 20455, Cambridge, MA: National Bureau of Economic Research (NBER).

McCaig, B. and Pavcnik, N. (2017), "Moving Out of Agriculture: Structural Change in Vietnam", in McMillan, M., Rodrik, D., and Sepulveda, C.P. (eds), *Structural change, fundamentals, and growth: A framework and case studies*, Washington, D.C.: International Food Policy Research Institute (IFPRI).

McClure, P. K. (2017), "'You're Fired,' Says the Robot: The Rise of Automation in the Workplace, Technophobes, and Fears of Unemployment", *Social Science Computer Review.*

McGowan, M. A. and Andrews, D. (2015), "Skill Mismatch and Public Policy in OECD Countries", OECD Economic Department Working Papers, No. 1209, Paris: Organisation for Economic Co-operation and Development (OECD).

McGrath, J. E. (1984), *Groups: Interaction and Performance*, [14], Englewood Cliffs, NJ: Prentice Hall.

McKenzie, D. J. (2017), "How Effective Are Active Labor Market Policies in Developing Countries? A Critical Review of Recent Evidence", Policy Research Working Paper No. 8011, Washington, D.C.: World Bank.

McKinsey Global Institute (2016), *Technology, Jobs and the Future of Work*, San Francisco, CA: McKinsey & Company.

McKinsey Global Institute (2017) A Future that Works: Automation, Employment and Productivity, San Francisco, CA: McKinsey & Company.

Medina, C. A. and Posso, C. M. (2010), "Technical Change and Polarization of the Labor Market: Evidence for Brazil, Colombia and Mexico", Working Paper No. 614, Bogota: Banco de la Republica de Colombia.

Mehra, R. and Gammage, S. (1999), "Trends, Countertrends, and Gaps in Women's Employment", *World Development* 27(3): 533-550.

Meinhard, S. and Potrafke, N. (2012), "The Globalization-Welfare State Nexus Reconsidered", *Review of International Economics* 20(2): 271-287.

Mendoza, A., Nayyar, G. and Piermartini, R. (2017), "Are the Poor Getting Globalized?", WTO Staff Working Paper (forthcoming).

Menendez, I. (2016), "Globalization and Welfare Spending: How Geography and Electoral Institutions Condition Compensation", *International Studies Quarterly* 60(4): 665-676.

Menezes-Filho, N. A. and Muendler, M. A. (2011), "Labor Reallocation in Response to Trade Reform", NBER Working Paper No. 17372, Cambridge, MA: National Bureau of Economic Research (NBER).

Meschi, E., Taymaz, E. and Vivarelli, M. (2016), "Globalization, Technological Change and Labor Demand: a Firm-level Analysis for Turkey", *Review of World Economics* 4(152): 655-680.

Meyer, J. (2011), "Workforce Age and Technology Adoption in Small and Medium-sized Service Firms", *Small Business Economics* 37(3): 305-324.

Meza, L. G. (1999), "Cambios en la Estructura Salarial de México en el Período 1988-1993 y el Aumento en el Rendimiento de la Educación Superior", *El Trimestre Económico* 66(262 (2)): 189-226.

Michaelides, M. and Benus, J. (2012), "Are Self-Employment Training Programs Effective? Evidence From Project GATE", *Labour Economics* 19(5): 695-705.

Michaels, G., Natraj, A. and Van Reenen, J. (2014), "Has ICT Polarized Skill Demand? Evidence From Eleven Countries Over 25 Years", *Review of Economics and Statistics* 96(1): 60-77.

Mileva, M., Braun, S. and Lechthaler, W. (2013), "The Effects of Globalisation on Wage Inequality: New Insights From a Dynamic Trade Model With Heterogeneous Firms", Working Paper No. 49, Vienna: WWWforEurope.

Mincer, J. (1991), "Education and Unemployment", NBER Working Paper No. 3838, Cambridge, MA: National Bureau of Economic Research (NBER).

Mion, G. and Zhu, L. (2013), "Import Competition From and Offshoring to China: A Curse or Blessing for Firms?", *Journal of International Economics* 89(1): 202-215.

Mitra, D. and Ranjan, P. (2011), "Social Protection in Labour Markets Exposed to External Shocks", in Bacchetta, M. and Jansen, M. (eds), *Making Globalization Socially Sustainable*, Geneva: International Labour Office (ILO) and World Trade Organization (WTO): 199-231.

Mnif, S. (2016), "Skill Biased Technological Changes: Case of the MENA Region", *Theoretical and Applied Economics* XXIII(3(608)): 339-350.

Mokyr, J., Vickers, C. and Ziebarth, N. L. (2015), "The History of Technological Anxiety and the Future of Economic Growth: Is this Time Different?", *Journal of Economic Perspectives* 29(3): 31-50.

Moore, M. P. and Ranjan, P. (2005), "Globalisation Vs Skill-Biased Technological Change: Implications for Unemployment and Wage Inequality", *The Economic Journal* 115(503): 391-422.

Moretti, E. (2010), "Local Multipliers", *American Economic Review* 100(2): 373-377.

Moretti, E. and Thulin, P. (2013), "Local Multipliers and Human Capital in the United States and Sweden", *Industrial and Corporate Change* 22(1): 339-362.

Morgan, R. F., Sun, L., Cebrián, M., Youn, H. and Rahwan, I. (2017), "Small Cities Face Greater Impact From Automation", eprint arXiv:1705.05875, Media Laboratory, Cambridge, MA: Massachusetts Institute of Technology (MIT).

Morikawa, M. (2017a), "Firms' Expectations About the Impact of AI and Robotics: Evidence From a Survey", *Economic Inquiry* 55(2): 1054-1063.

Morikawa, M. (2017b), "Who Are Afraid of Losing Their Jobs to Artificial Intelligence and Robots? Evidence From a Survey", RIETI Discussion Paper Series 17-E-069, Tokyo: Research Institute of Economy, Trade and Industry (RIETI).

Mortensen, D. (1978), "Specific Capital and Labor Turnover", *Bell Journal of Economics* 9, 572-586.

Mortensen, D. T. and Pissarides, C. A. (1994), "Job Creation and Job Destruction in the Theory of Unemployment", *The Review of Economic Studies* 61(3): 397-415.

Muendler, M. A. (2017), "Trade, Technology, and Prosperity: An Account of Evidence From a Labor-Market Perspective", San Diego: University of California San Diego, mimeo.

Munch, J. R. and Skaksen, J. R. (2008), "Human Capital and Wages in Exporting Firms", *Journal of International Economics* 75(2): 363-372.

Naudé, W. (2017), "Entrepreneurship, Education and the Fourth Industrial Revolution in Africa", IZA Discussion Paper No. 10855, Bonn: Institute of Labor Economics (IZA).

Nicita, A. (2009), "The Price Effect of Tariff Liberalization: Measuring the Impact on Household Welfare", *Journal of Development Economics* 89(1): 19-27.

Nickell, S. (1979), "Estimating the Probability of Leaving Unemployment", *Econometrica* 47(5): 1249-1266.

Nie, J. and Struby, E. (2011), "World Active Labour Market Policies Help Combat High US Unemployment", Economic Review-Third Quarter, Kansas City: Federal Reserve Bank of Kansas City.

Nooruddin, I. and Rudra, N. (2014), "Are Developing Countries Really Defying the Embedded Liberalism Compact?", *World Politics* 66(4): 603-640.

Nopo, H., Daza, N. and Ramos, J. (2011), "Gender Earnings Gaps in the World", IZA Discussion Paper 5736, 2011-05, Bonn: Institute of Labor Economics (IZA).

Nordhaus, W. D. (2015), "Are We Approaching an Economic Singularity? Information Technology and the Future of Economic Growth", NBER Working Paper No. 21547, Cambridge, MA: National Bureau of Economic Research (NBER).

Normand, C. J., Rakotomanana, F. and Roubaud, F. (2016), "Informal Formal: A Panel Data Analysis of Earnings Gaps in Madagascar", *World Development* 86: 1-17.

Ohanian, L. E. and Raffo, A. (2012), "Aggregate Hours Worked in OECD Countries: New Measurement and Implications for Business Cycles", *Journal of Monetary Economics* 59(1): 40-56.

O'Leary, C. J., Decker, P. T. and Wandner, S. A. (2005), "Cost Effectiveness of Targeted Reemployment Bonuses", *Journal of Human Resources* 40(1): 270-279.

O'Leary, C. J., Eberts, R. W. and Pittelko, B. M. (2012), "Effects of NAFTA on US Employment and Policy Responses", OECD

Trade Policy Working Papers No.131, Paris: Organisation for Economic Co-operation and Development (OECD).

Olson, M. (1965), The Logic of Collective Action: Public Goods and the Theory of Groups, Cambridge, MA: Harvard University Press.

Organisation for Economic Co-operation and Development (OECD) (2002), *Measuring the information economy*, Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) (2005a), Employment Outlook 2005, Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) (2005b), "Trade-adjustment Costs in OECD Labour Markets: Three Annexes", Background material for Chapter 1 of the OECD Employment Outlook 2005, Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) (2008), *International Migration Outlook*, [1], Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) (2011a), *Measuring Productivity. OECD Manual*, Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) (2011b), "Report on the Gender Initiative: Gender Equality in Education, Employment and Entrepreneurship", Prepared for the Meeting of the OECD Council at Ministerial Level, Paris 25-26 May 2011, Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) (2015a), Back to Work: Canada: Improving the Re-Employment Prospects of Displaced Wokers, Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) (2015b), *Employment Outlook 2015*, [1], Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) (2015c), *In It Together: Why Less Inequality Benefits All.* Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) (2016a), Education at a Glance 2016, Paris: OECD.

Organisation for Economic Co-operation and Development (OECD). (2016b), *Employment Outlook 2016*, [1], Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) (2016c), *Skills for a Digital World*, Paris: OECD.

Organisation for Economic Co-operation and Development (OECD). (2016d), "Stimulating Digital linnovation for Growth and Inclusiveness: The Role of Policies for the Successful Diffusion of ICT", OECD Digital Economy Papers 256, Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) (2017), Employment Outlook 2017, Paris: OECD.

Ossa, R. (2015), "Why Trade Matters After All", *Journal of International Economics* 97(2): 266-277.

Özler, S. (2007), "Export-Led Industrialization and Gender Differences in Job Creation and Destruction: Micro Evidence From the Turkish Manufacturing Sector", in Van Staveren, I., Elson, D., Grown, C., and Cagatay, N. (eds), *The Feminist Economics of Trade*, Abingdon: Routledge: 164-184.

Pajarinen, M. and Rouvinen, P. (2014), "Computerization Threatens One Third of Finnish Employment", *ETLA Brief* 22, Helsinki: The Research Institute of the Finnish Economy (ETLA).

Pajarinen, M., Rouvinen, P. and Ekeland, A. (2015), "Computerization Threatens One Third of Finnish and

Norwegian Employment", ETLA Brief 34, Helsinki: The Research Institute of the Finnish Economy (ETLA).

Parro, F. (2013), "Capital-Skill Complementarity and the Skill Premium in a Quantitative Model of Trade", *American Economic Journal: Macroeconomics* 5(2): 72-117.

Pavonik, N. (2003), "What Explains Skill Upgrading in Less Developed Countries?", *Journal of Development Economics* 71(2): 311-328.

Pavcnik, N. (2011), "Globalization and within-country income inequality", in Bacchetta, M. and Jansen, M. (eds), *Making Globalization Socially Sustainable*, Geneva: International Labour Office (ILO) and World Trade Organization (WTO).

Pellandra, A. (2013), "Firms' Exporting, Employment and Wages: Evidence From Chile", Pittsburgh, PA: Carnegie Mellon University, mimeo.

Pierce, J. R. and Schott, P. K. (2016a), "The Surprisingly Swift Decline of US Manufacturing Employment", *The American Economic Review* 106(7): 1632-1662.

Pierce, J. R. and Schott, P. K. (2016b), "Trade Liberalization and Mortality: Evidence From U.S. Counties", NBER Working Paper No. 22849, Cambridge, MA: National Bureau of Economic Research (NBER).

Pissarides, C. A. (1979), "Job Matchings With State Employment Agencies and Random Search", *Economic Journal* 89(356): 818-833.

Pissarides, C. A. (1984), "Search Intensity, Job Advertising, and Efficiency", *Journal of Labor Economics* 2(1): 128-143.

Pissarides, C. A. (2000), *Equilibrium Unemployment Theory*, Second Edition, Cambridge, MA: The MIT Press.

Piva, M., Santarelli, E. and Vivarelli, M. (2005), "The Skill Bias Effect of Technological and Organisational Change: Evidence and Policy Implications", *Research Policy* 34(2): 141-157.

Porto, G. G. (2006), "Using Survey Data to Assess the Distributional Effects of Trade Policy", *Journal of International Economics* 70(1): 140-160.

PricewaterhouseCoopers LLP (2017), *UK Economic Outlook*, PricewaterhouseCoopers LLP, London: PricewaterhouseCoopers LLP.

Rajan, M. and Takeda, E. (2006), "HRM Strategies in Structurally Depressed Industries: The Japanese Approach", Asia Pacific Management Review 11(1): 390-394.

Raveh, O. and Reshef, A. (2016), "Capital Imports Composition, Complementarities, and the Skill Premium in Developing Countries", *Journal of Development Economics* 118: 183-206.

Rawls, J. (1999), A Theory of Justice, Oxford: Oxford University Press.

Rebitzer, J. B. (1995), "Is There a Trade-Off Between Supervision and Wages? An Empirical Test of Efficiency Wage Theory", Journal of Economic Behavior and Organization 28(1): 107-129.

Rebitzer, J. B. and Taylor, L. J. (1995), "The Consequences of Minimum Wage Laws: Some New Theoretical Ideas", *Journal of Public Economics* 56(2): 245-255.

Reijnders, L. S. and de Vries, G. (2017), "Job Polarization in Advanced and Emerging Countries: The Role of Task Relocation and Technological Change Within Global Supply Chains", GGDC Research memoranda No.167, Groningen: Groningen Growth and Development Centre (GGDC).

Revenga, A. (1992), "Exporting Jobs? The Impact of Import Competition on Employment and Wages in U.S. Manufacturing", *Quarterly Journal of Economics* 107(1): 255-284.

Revenga, A. (1997), "Employment and Wage Effects of Trade Liberalization: the Case of Mexican Manufacturing", *Journal of Labor Economics* 15(S3): S20-S43.

Revenga, A., Riboud, M. and Tan, H. (1994), "The Impact of Mexico's Retraining Program on Employment and Wages", *The World Bank Economic Review* 8(2): 247-277.

Rickard, S. J. (2014), "Compensating the Losers: An Examination of Congressional Votes on Trade Adjustment Assistance", *International Interactions* 41(1): 46-60.

Riddell, W. C. (1995), "Human Capital Formation in Canada: Recent Developments and Policy Responses", in Banting, K. G. and Beach, C.M. (eds), *Labour Market Polarization and Social Policy Reform*, Kingston: Queen's University School of Policy Studies.

Riddell, W. C. and Song, X. (2011), "The Impact of Education on Unemployment Incidence and Re-Employment Success: Evidence From the US Labour Market", IZA Discussion Paper No. 5572, Bonn: Institute of Labor Economics (IZA).

Rifkin, J. (2015), The Zero Marginal Cost Society: The Internet of Things, the Collaborative Commons, and the Eclipse of Capitalism, New York: Palgrave Macmillan.

Robbins, D. and Gindling, T. H. (1999), "Trade Liberalization and the Relative Wages for More-Skilled Workers in Costa Rica". *Review of Development Economics* 3(2): 140-154.

Rodrik, D. (1998), "Why Do Open Economies Have Bigger Governments?", *Journal of Political Economy* 106(5): 997-1032.

Rodrik, D. (2011), *The Globalization Paradox. Democracy and the Future of the World Economy*, New York and London: W. W. Norton and Company.

Rodrik, D. (2016), "Premature Deindustrialization", *Journal of Economic Growth* 21: 1-33.

Rosen, H. (2006), "Trade Adjustment Assistance: The More We Change the More It Stays the Same", in Mussa, M. (ed.), *C. Fred Bergsten*, Washington, D.C.: Peterson Institute for International Economics: 79-113.

Rudra, N. (2002), "Globalization and the Decline of the Welfare State in Less-Developed Countries", *International Organization* 56(2): 411-445.

Rueda, D. (2015), "The State of the Welfare State: Unemployment, Labor Market Policy, and Inequality in the Age of Workfare", *Comparative Politics* 47(3): 296-314.

Ruggie, J. G. (1982), "International Regimes, Transactions, and Change: Embedded Liberalism in the Postwar Economic Order", *International Organization* 36(2): 379-415.

Sachs, J. D., Benzell, S. G. and LaGarda, G. (2015), "Robots: Curse or blessing? A basic framework", NBER Working Paper No. 21091, Cambridge, MA: National Bureau of Economic Research (NBER).

Sakamoto, A. (2017), "Matching Skills for the Future of Work and Regional Integration in Asia and the Pacific", Presentation at the Inter-regional Technical Forum on Skills for Trade, Employability and Inclusive Growth, Cambodia 30-31 May 2017, Geneva: International Labour Organization (ILO).

Sampson, T. (2014), "Selection into Trade and Wage Inequality", *American Economic Journal: Microeconomics* 6(3): 157-202.

Satchi, M. and Temple, J. (2006), "Growth and Labour Markets in Developing Countries", Bristol Economics Discussion Papers 06/581, Bristol: University of Bristol.

Schank, T., Schnabel, C. and Wagner, J. (2007), "Do Exporters Really Pay Higher Wages? First Evidence From German Linked Employer-Employee Data", *Journal of International Economics* 72(1): 52-74.

Schank, T., Schnabel, C. and Wagner, J. (2010), "Higher Wages in Exporting Firms: Self-Selection, Export Effect, or Both? First Evidence From Linked Employer-Employee Data", Review of World Economics 146(2): 303-322.

Scharpf, F. W. (2000), "Economic Changes, Vulnerabilities and Institutional Capabilities", in Scharpf, F. W. and Schmidt, V.A. (eds), Welfare and Work in the Open Economy. Volume I: From Vulnerability to Competitiveness in Comparative Perspective, Oxford: Oxford University Press: 21-124.

Scheve, K. F. and Slaughter, M. (2007), "A New Deal for Globalization", *Foreign Affairs* 84(4): 34-47.

Schochet, P. Z., D'Amico, R., Berk, J., Dolfin, S. and Wozny, N. (2012), Estimated Impacts for Participants in the Trade Adjustment Assistance (TAA) Program Under the 2002 Amendments, Princeton, NJ: Mathematica Policy Research.

Schultz, T. (1975), "The Value of the Ability to Deal With Disquilibria", *Journal of Economic Literature* 13(3): 827-846.

Schwab, K. (2016), *The Fourth Industrial Revolution,* Geneva: World Economic Forum (WEF).

Schwellnus, C., Kappeler, A. and Pionnier, P.-A. P. (2017), "Decoupling of Wages From Productivity: Macro-Level Facts", OECD Economics Department Working Paper No. 1373, Paris: Organisation for Economic Co-operation and Development (OECD).

Scott, R. E. (2015), "Manufacturing Job Loss", Issue Brief 402, Washington, D.C.: Economic Policy Institute (EPI).

Seguino, S. (2000), "Gender Inequality and Economic Growth: A Cross-Country Analysis", World Development 28(7): 1211-1230.

Segura-Ubiergo, A. (2007), The Political Economy of the Welfare State in Latin America: Globalization, Democracy, and Development, Cambridge: Cambridge University Press.

Semuels, A. (2017), "Getting High-School Grads Into the Closed-Off World of Tech", *The Atlantic Magazine* [13 April edition].

Sengenberger, W. (2011), Beyond the Measurement of Unemployment and Underemployment: The Case for Extending and Amending Labour Market Statistics, Geneva: International Labour Organization (ILO).

Sepahsalari, A. (2016), "Financial Market Imperfections and Labour Market Outcomes", Working Paper No. 1624, London: Centre for Macroeconomics.

Shapiro, C. and Stiglitz, J. E. (1984), "Equilibrium Unemployment As a Worker Discipline Device", *The American Economic Review* 74(3): 433-444.

Shimer, R. (2005), "The Cyclical Behavior of Equilibrium Unemployment and Vacancies", *American Economic Review* 95(1): 24-49.

Sianesi, B. (2008), "Differential Effects of Active Labour Market Programs for the Unemployed", *Labour Economics* 15(8): 370-399.

Snyder, C. and Nicholson, W. (2010), *Microeconomic Theory*, 11th edition: South-Western, Cengage Learning.

Spence, M. and S. Hlatshwayo (2012), "The Evolving Structure of the American Economy and the Employment Challenge", *Comparative Economic Studies*, 54(4): 703–738.

Spitz-Oener, A. (2006), "Technical Change, Job Tasks, and Rising Educational Demands: Looking Outside the Wage Structure", *Journal of Labor Economics* 24(2): 235-270.

Sproul, D., Knowles-Cutler, A., and Lewis, H. (2015), From Brawn to Brains: The Impact of Technology on Jobs in the UK, London: Deloitte.

Srour, I., Taymaz, E. and Vivarelli, M. (2013), "Skill-Biased Technological Change and Skill-Enhancing Trade in Turkey: Evidence from Longitudinal Microdata", IZA Discussion Paper No. 7320, Bonn: Institute of Labor Economics (IZA).

Sullivan P (2010), "Empirical Evidence on Occupation and Industry Specific Human Capital", *Labour Economics*, 17(3): 567–580.

Stiftelsen för Strategisk Forskning (SSF) (2014) *Vartannat Job Automatiseras on 20 År – utmaningar för Sverige*, Stockholm: SSF

Stein, A. (2016), "The Great Trilemma: Are Globalization, Democracy and Sovereignty Compatible?", *International Theory* 8(2): 297-340.

Stigler, G. J. (1962), "Information in the Labour Market", *Journal of Political Economy* 70(5): 94-105.

Stole, L. A. and Zwiebel, J. (1996a), "Intra-Firm Bargaining Under Non-Binding Contracts", *Review of Economic Studies* 63: 375-410.

Stole, L. A. and Zwiebel, J. (1996b), "Organizational Design and Technology Choice Under Intrafirm Bargaining", *American Economic Review* 86: 195-222.

Suedekum, J. (2017), "Technology, Trade and Structural Change: Lessons From Germany", WTO Trade Dialogue Lecture Series, Geneva: WTO. Retrieved at https://www.wto.org/english/res_e/reser_e/jens_suedekum.pdf.

Susskind, R. and Susskind, D. (2016), The Future of the Professions: How Technology Will Transform the Work of Human Experts, Oxford: Oxford University Press.

Swank, D. (2002), Global Capital, Political Institutions and Policy Change in Developed Welfare States, Cambridge: Cambridge University Press.

Swank, D. (2005), "Globalisation, Domestic Politics, and Welfare State Retrenchment in Capitalist Democracies", *Social Policy and Society* 4(2): 183-195.

Swank, D. (2010), "Globalization", *The Oxford Handbook of the Welfare State*, Oxford: Oxford University Press: 318-322.

Syverson, C. (2013), "Will History Repeat Itself? Comments on 'Is the Information Technology Revolution Over?'", *International Productivity Monitor* 25 (Spring): 37-40.

The Asian Age (2017), "First Chinese 'Unmanned Factory' Replaces 600 Employees", retrieved at http://www.asianage.com/technology/in-other-news/200217/first-chinese-unmanned-factory-replaces-600-employees.html

Timmer, M. P., de Vries, G. and de Vries, K. (2015), "Patterns of Structural Change in Developing Countries", in Weiss, J. and Tribe, M. (eds), *Routledge Handbook of Industry and Development*, Abingdon: Routledge: 65-83.

Topalova, P. (2010), "Factor Immobility and Regional Impacts of Trade Liberalization: Evidence on Poverty From India", *American Economic Journal: Applied Economics* 2(4): 1-41.

Trebilcock, M. J. (2014), *Dealing With the Losers*, New York: Oxford University Press.

Ugur, M. and Mitra, A. (2017), "Technology Adoption and Employment in Less Developed Countries: a Mixed-method Systematic Review", *World Development* (forthcoming).

Unionen (2014) Digitalisering – Hot Eller Möjlighet för Jobben, Almedalen: Unionen.

United Nations Educational Scientific and Cultural Organization (UNESCO) (2015) 2015 Global Monitoring Report – Education for All 2000-2015: Achievements and Challenges, Paris: UNESCO.

United Nations Industrial Development Organization (UNIDO) (2015) Industrial Development Report 2016. The Role of Technology and Innovation in Inclusive and Sustainable Industrial Development, Vienna: UNIDO.

Utar, H. (2016), "Workers Beneath the Floodgates: Impact of Low-Wage Import Competition and Workers' Adjustment", CESifo Working Paper Series 6224, Munich: CESifo Group.

Van Der Klaauw, B. and Van Ours, J. C. (2013), "Carrot and Stick: How Re-Employment Bonuses and Benefit Sanctions Affect Exit Rates From Welfare", *Journal of Applied Econometrics* 28(2): 275-296.

Velenchik, A. D. (1997), "Government Intervention, Efficiency Wages, and the Employer Size Wage Effect in Zimbabwe", *Journal of Development Economics* 53(2): 305-338.

Verdugo, G. and Allègre, G. (2017), "Labour Force Participation and Job Polarization: Evidence From Europe During the Great Recession", Sciences Po Observatoire français des conjonctures économiques (OFCE), Working Paper n°16, 2017-05-10, Paris: Observatoire français des conjonctures économiques (OFCE).

Verhoogen, E. A. (2008), "Trade, Quality Upgrading, and Wage Inequality in the Mexican Manufacturing Sector", *The Quarterly Journal of Economics* 123(2): 489-530.

Verick, S. (2014), "Female Labor Force Participation in Developing Countries", *IZA World of Labor* 2014: 87.

Violante, G. L. (2008), "Skill-biased Technical Change", in Durlauf, S. and Blume, L.E. (eds), *New Palgrave Dictionary of Economics*, London: Palgrave Macmillan.

Vivarelli, M. (2014), "Innovation, Employment and Skills in Advanced and Developing Countries: A Survey of Economic Literature", *Journal of Economic Issues* 48(1): 123-154.

Vivarelli, M. (2015), "Innovation and Employment", IZA World of Labour 154.

Waldrop, M. (2016), "The Chips Are Down for Moore's law", *Nature*, London: Nature News Publisher.

Walsh, T. (2017), "Expert and Non-Expert Opinion about Technological Unemployment", eprint arXiv:1706.06906, Sydney: University of New South Wales.

Walter, S. (2010), "Globalization and the Welfare State: Testing the Microfoundations of the Compensation Hypothesis", *International Studies Quarterly* 54(2): 403-426.

Walter, S. (2017), "Globalization and the Demand-Side of Politics: How Globalization Shapes Labor Market Risk Perceptions and Policy Preferences", *Political Science Research and Methods* 5(1): 55-80.

Walther, R. (2011), "Building Skills in the Informal Sector", Background paper prepared for the Education for All Global Monitoring Report 2012, Paris: UNESCO. Wang, Z., Wei, S. J., Yu, X. and Zhu, K. (2017), "Rethinking the Impact of the China Trade Shock on the US Labor Market: A Production-Chain Perspective", Beijing: Research Institute on Global Value Chains, University of International Business and Economics, mimeo.

Watson, M. W. (1992), "Business Cycle Durations and Postwar Stabilization of the US Economy", Cambridge, NBER Working Paper No. 4005, Cambridge, MA: National Bureau of Economic Research (NBER).

Wibbels, E. and Ahlquist, J. S. (2011), "Development, Trade, and Social Insurance", *International Studies Quarterly* 55(1): 125-149.

Willcocks, L. P. and Lacity, M. (2016), Service Automation: Robots and the Future of Work, Service Automation: Robots and the Future of Work, Warwickshire: Steve Brookes Publishing.

Winickoff, D. E. (2017), "Public Acceptance and Emerging Production Technologies", *The Next Production Revolution – Implications for Governments and Businesses*, Paris: OECD.

Woodbury, S. A. and Spiegelman, R. G. (1987), "Bonuses to Workers and Employers to Reduce Unemployment: Randomized Trials in Illinois", *The American Economic Review* 77(4): 513-530.

World Bank (2012), World Development Report 2012: Gender Equality and Development, Washington, D.C.: World Bank.

World Bank (2013), World Development Report 2013: Jobs, Washington, D.C.: World Bank.

World Bank (2016), World Development Report 2016: Digital Dividends, Washington, D.C.: World Bank.

World Economic Forum (WEF) (2016), *The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution*, Geneva: WEF.

World Trade Organization (WTO) (2013), World Trade Report 2013: Factors Shaping the Future of World Trade, Geneva: WTO.

World Trade Organization (WTO) (2015), World Trade Report 2015 — Speeding Up Trade: Benefits and Challenges of Implementing the WTO Trade Facilitation Agreement, Geneva: WTO.

World Trade Organization (WTO) (2016), World Trade Report 2016: Levelling the Field for SMEs, Geneva: WTO.

World Trade Organization and World Bank Group (WTO-WBG) (2015), *The Role of Trade in Ending Poverty*, Geneva and Washington, D.C.: WTO and WBG.

Wright, G. (2014), "Revisiting the Employment Impact of Offshoring", *European Economic Review* 66: 63-83.

Yeaple, S. R. (2005), "A Simple Model of Firm Heterogeneity, International Trade, and Wages", *Journal of International Economics* 65(1): 1-20.

Yi, M., Müller, S. and Stegmaier, J. (2017), "Industry Mix, Local Labor Markets, and the Incidence of Trade Shocks", Suitland, MD: US Census Bureau, mimeo.

Zi, Y. (2016), "Trade Liberalization and the Great Labor Reallocation", IHEID Working Paper No. 18-2016, Geneva: Institut de hautes études internationales et du développement (IHEID).

Technical notes

Composition of reg Regions	ions and other econ	omic groupings		
North America				
Bermuda	Canada*	Mexico*	United States of America*	
Other territories in the region	on not elsewhere specified			,
South and Central Amer	ica and the Caribbean			
Antigua and Barbuda*	Chile*	El Salvador*	Panama*	Trinidad and Tobago*
Argentina*	Colombia*	Grenada*	Paraguay*	Uruguay*
Aruba (the Netherlands with respect to)	Costa Rica*	Guatemala*	Peru*	Venezuela, Bolivarian Republic of*
Bahamas**	Cuba*	Guyana*	Saint Kitts and Nevis*	
Barbados*	Curaçao	Haiti*	Saint Lucia*	
Belize*	Dominica*	Honduras*	Saint Vincent and the Grenadines*	
Bolivia, Plurinational State of*	Dominican Republic*	Jamaica*	Sint Maarten	
Brazil*	Ecuador*	Nicaragua*	Suriname*	
Other territories in the region	on not elsewhere specified			
Europe				
Albania*	Czech Republic*	Iceland*	Montenegro*	Slovenia*
Andorra**	Denmark*	Ireland*	Netherlands*	Spain*
Austria*	Estonia*	Italy*	Norway*	Sweden*
Belgium*	Finland*	Latvia*	Poland*	Switzerland*
Bosnia and Herzegovina**	France*	Liechtenstein*	Portugal*	The former Yugoslav Republic of Macedonia*
Bulgaria*	Germany*	Lithuania*	Romania*	Turkey*
Croatia*	Greece*	Luxembourg*	Serbia**	United Kingdom*
Cyprus*	Hungary*	Malta*	Slovak Republic*	
Other territories in the region	on not elsewhere specified			
Commonwealth of Indep	endent States (CIS), inclu	ding associate and forme	r member States	
Armenia*	Georgia*	Moldova, Republic of*	Turkmenistan	
Azerbaijan**	Kazakhstan*	Russian Federation*	Ukraine*	
Belarus**	Kyrgyz Republic*	Tajikistan*	Uzbekistan**	
Other territories in the region	on not elsewhere specified			
Africa				
Algeria**	Congo*	Guinea*	Morocco*	South Africa*
Angola*	Côte d'Ivoire*	Guinea-Bissau*	Mozambique*	South Sudan
Benin*	Democratic Republic of the Congo*	Kenya*	Namibia*	Sudan**
Botswana*	Djibouti*	Lesotho*	Niger*	Swaziland*
Burkina Faso*	Egypt*	Liberia*	Nigeria*	Tanzania*
Burundi*	Equatorial Guinea**	Libya**	Rwanda*	Togo*
Cabo Verde*	Eritrea	Madagascar*	São Tomé and Príncipe**	Tunisia*
Cameroon*	Ethiopia**	Malawi*	Senegal*	Uganda*
Central African Republic*	Gabon*	Mali*	Seychelles*	Zambia*
Chad*	The Gambia*	Mauritania*	Sierra Leone*	Zimbabwe*
Comoros**	Ghana*	Mauritius*	Somalia**	
Other territories in the region	on not elsewhere specified			

Middle East				
	Israel*	Labanasa Banublia**	Coudi Arabia Kinadom of*	Yemen*
Bahrain, Kingdom of* Iran**	Jordan*	Lebanese Republic** Oman*	Saudi Arabia, Kingdom of*	remen
			Syrian Arab Republic**	
Iraq**	Kuwait, the State of*	Qatar*	United Arab Emirates*	
Other territories in the region	on not elsewhere specified			
Asia				
Afghanistan*	Hong Kong, China*	Malaysia*	Papua New Guinea*	Timor Leste**
Australia*	India*	Maldives*	Philippines*	Tonga*
Bangladesh*	Indonesia*	Mongolia*	Samoa*	Tuvalu
Bhutan**	Japan*	Myanmar*	Singapore*	Vanuatu*
Brunei Darussalam*	Kiribati	Nepal*	Solomon Islands*	Viet Nam*
Cambodia*	Korea, Republic of*	New Zealand*	Sri Lanka*	
China*	Lao People's Democratic Republic*	Pakistan*	Chinese Taipei*	
Fiji*	Macao, China*	Palau	Thailand*	
Other territories in the region	on not elsewhere specified			
Regional integration agr	eements			
Andean Community (CAI	N)			
Bolivia, Plurinational State of	Colombia	Ecuador	Peru	
ASEAN (Association of	South East Asian Nations)	/ AFTA (ASEAN Free Trac	de Area)	
Brunei Darussalam	Indonesia	Malaysia	Philippines	Thailand
Cambodia	Lao People's Democratic Republic	Myanmar	Singapore	Viet Nam
CACM (Central American	n Common Market)			
Costa Rica	El Salvador	Guatemala	Honduras	Nicaragua
CARICOM (Caribbean Co	ommunity and Common M	arket)		
Antigua and Barbuda	Belize	Guyana	Montserrat	Saint Vincent and the Grenadines
Bahamas	Dominica	Haiti	Saint Kitts and Nevis	Suriname
Barbados	Grenada	Jamaica	Saint Lucia	Trinidad and Tobago
CEMAC (Economic and I	Monetary Community of C	entral Africa)		
Cameroon	Chad	Congo	Equatorial Guinea	Gabon
Central African Republic		-		
	ket for Eastern and South	ern Africa)		
Burundi	Egypt	Libya	Rwanda	Swaziland
Comoros	Eritrea	Madagascar	Seychelles	Uganda
Democratic Republic of the Congo	Ethiopia	Malawi	South Sudan	Zambia
Djibouti	Kenya	Mauritius	Sudan	Zimbabwe
•	nunity of Central African S		Cadan	
	Central African Republic	Democratic Republic of	Gabon	São Tomé and Príncipe
Angola		the Congo		Sao Tome and Emilicipe
Burundi	Chad	Equatorial Guinea	Rwanda	
Cameroon	Congo			
	mmunity of West African S	l		
Benin	Côte d'Ivoire	Guinea	Mali	Senegal
Burkina Faso	The Gambia	Guinea-Bissau	Niger	Sierra Leone
Cabo Verde	Ghana	Liberia	Nigeria	Togo
EFTA (European Free Tra	ade Association)			
Iceland	Liechtenstein	Norway	Switzerland	

Austria Belgium	Denmark			
	2011114111	Hungary	Malta	Slovenia
	Estonia	Ireland	Netherlands	Spain
Bulgaria	Finland	Italy	Poland	Sweden
Croatia	France	Latvia	Portugal	United Kingdom
Cyprus	Germany	Lithuania	Romania	
Czech Republic	Greece	Luxembourg	Slovak Republic	
GCC (Gulf Cooperation C				
Bahrain, Kingdom of	Oman	Qatar	Saudi Arabia, Kingdom of	United Arab Emirates
Kuwait, the State of			Janes and a gradual and a grad	
MERCOSUR (Southern C	Common Market)			
Argentina	Brazil	Paraguay	Uruguay	Venezuela, Bolivarian Republic of
NAFTA (North American	Free Trade Agreement)			
Canada	Mexico	United States		
	Development Community			
Angola	Lesotho	Mauritius	Seychelles	Tanzania
Botswana	Madagascar	Mozambique	South Africa	Zambia
Democratic Republic	Malawi	Namibia	Swaziland	Zimbabwe
of the Congo	irialawi	Hamilia	Swaznanu	LIIIDADWG
SAFTA (South Asia Free	Trade Agreement)			
Afghanistan	Bhutan	Maldives	Pakistan	Sri Lanka
Bangladesh	India	Nepal		
WAEMU (West African E	conomic and Monetary U	nion)		
Benin	Côte d'Ivoire	Mali	Senegal	Togo
Burkina Faso	Guinea-Bissau	Niger		
Other groups				
ACP (African, Caribbean	and Pacific countries)			
Angola	Côte d'Ivoire	Guyana	Nauru	Somalia
Antigua and Barbuda	Cuba	Haiti	Niger	South Africa
Bahamas	Democratic Republic of the Congo	Jamaica	Nigeria	Sudan
Barbados	Djibouti	Kenya	Niue	Suriname
Belize	Dominica	Kiribati	Palau	Swaziland
Benin	Dominican Republic	Lesotho	Papua New Guinea	Tanzania
Botswana	Equatorial Guinea	Liberia	Rwanda	Timor-Leste
Burkina Faso	Eritrea	Madagascar	Saint Kitts and Nevis	Togo
Burundi	Ethiopia	Malawi	Saint Lucia	Tonga
Cabo Verde	Fiji	Mali	Saint Vincent and the Grenadines	Trinidad and Tobago
Cameroon	Gabon	Marshall Islands	Samoa	Tuvalu
Central African Republic	The Gambia	Mauritania	São Tomé and Príncipe	Uganda
Chad	Ghana	Mauritius	Senegal	Vanuatu
	Grenada	Micronesia	Seychelles	Zambia
Comoros		Mozambique	Sierra Leone	Zimbabwe
	Guinea		The state of the s	I and the second
Comoros Congo Cook Islands	Guinea Guinea-Bissau	Namibia	Solomon Islands	
Congo		Namibia	Solomon Islands	
Congo Cook Islands		Namibia	Solomon Islands	

Sub-Saharan Africa				
Western Africa				
Benin	The Gambia	Guinea-Bissau	Mauritania	Senegal
Burkina Faso	Ghana	Liberia	Niger	Sierra Leone
Cabo Verde	Guinea	Mali	Nigeria	Togo
Côte d'Ivoire			-	
Central Africa				
Burundi	Central African Republic	Congo	Equatorial Guinea	Rwanda
Cameroon	Chad	Democratic Republic of the Congo	Gabon	São Tomé and Príncipe
Eastern Africa	'	'		
Comoros	Ethiopia	Mauritius	South Sudan	Tanzania
Djibouti	Kenya	Seychelles	Sudan	Uganda
Eritrea	Madagascar	Somalia		
Southern Africa		'		
Angola	Lesotho	Mozambique	South Africa	Zambia
Botswana	Malawi	Namibia	Swaziland	Zimbabwe
Territories in Africa not e	Isewhere specified	1	1	1
Asia				
East Asia (including Oce	eania)			
Australia	Indonesia	Malaysia	Samoa	Tuvalu
Brunei Darussalam	Japan	Mongolia	Singapore	Vanuatu
Cambodia	Kiribati	Myanmar	Solomon Islands	Viet Nam
China	Korea, Republic of	New Zealand	Chinese Taipei	
Fiji	Lao People's Democratic Republic	Papua New Guinea	Thailand	
Hong Kong, China	Macao, China	Philippines	Tonga	
West Asia				
Afghanistan	Bhutan	Maldives	Pakistan	Sri Lanka
Bangladesh	India	Nepal		
APEC (Asia-Pacific Ed	conomic Cooperation)	<u>'</u>		
Australia	Hong Kong, China	Mexico	Russian Federation	Thailand
Brunei Darussalam	Indonesia	New Zealand	Singapore	United States
Canada	Japan	Papua New Guinea	Chinese Taipei	Viet Nam
Chile	Korea, Republic of	Peru		
China	Malaysia	Philippines		
BRIC			·	
Brazil	Russian Federation	India	China	
Developed economies	<u> </u>			
North America (except Mexico)	European Union (28)	EFTA (Iceland, Liechtenstein, Norway, Switzerland)	Australia, Japan and New Zealand	
Developing economie	S			
Africa	South and Central America and the Caribbean, Mexico	Europe except the European Union (28) and EFTA; Middle East	Asia except Australia, Japan and New Zealand	

LDCs (least-developed o	countries)			
Afghanistan	Comoros	Kiribati	Nepal	Tanzania
Angola	Democratic Republic of the Congo	Lao People's Democratic Republic	Niger	Timor-Leste
Bangladesh	Djibouti	Lesotho	Rwanda	Togo
Benin	Equatorial Guinea	Liberia	São Tomé and Príncipe	Tuvalu
Bhutan	Eritrea	Madagascar	Senegal	Uganda
Burkina Faso	Ethiopia	Malawi	Sierra Leone	Vanuatu
Burundi	The Gambia	Mali	Solomon Islands	Yemen
Cambodia	Guinea	Mauritania	Somalia	Zambia
Central African Republic	Guinea-Bissau	Mozambique	South Sudan	
Chad	Haiti	Myanmar	Sudan	
Six East Asian traders				
Hong Kong, China	Malaysia	Singapore	Chinese Taipei	Thailand
Korea, Republic of				
Pacific Alliance				
Chile	Colombia	Mexico	Peru	

^{*}WTO members

WTO members are frequently referred to as "countries", although some members are not countries in the usual sense of the word but are officially "customs territories". The definition of geographical and other groupings in this report does not imply an expression of opinion by the Secretariat concerning the status of any country or territory, the delimitation of its frontiers, nor the rights and obligations of any WTO member in respect of WTO agreements. The colours, boundaries, denominations and classifications in the maps of the publication do not imply, on the part of the WTO, any judgement on the legal or other status of any territory, or any endorsement or acceptance of any boundary.

Throughout this report, South and Central America and the Caribbean is referred to as South and Central America. Aruba; the Bolivarian Republic of Venezuela; Hong Kong Special Administrative Region of China; the Republic of Korea; and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu are referenced as: Aruba, the Netherlands with respect to; Bolivarian Rep. of Venezuela; Hong Kong, China; Korea, Republic of; and Chinese Taipei respectively.

The data supplied in the World Trade Report 2017 are valid as of 31 July 2017.

^{**}Observer governments

Abbreviations and symbols

ADB Asian Development Bank

CARIFORUM Caribbean Forum

CEA Council of Economic Advisors

COMESA Common Market for Eastern and Southern Africa

CSR corporate social responsibility

DD difference-in-difference
EAC East African Community
EC European Commission

EGF European Globalisation Adjustment Fund

EPL employment protection legislation

EGF European Globalisation Adjustment Fund

ESF European Social Fund

EU European Union

FAO Food and Agriculture Organization of the United Nations

FDI foreign direct investment

G20 Group of Twenty

GATS General Agreement on Trade in Services
GATT General Agreement on Tariffs and Trade

GDP gross domestic product
GE general equilibrium

GPT general purpose technology

GVC global value chain

ICT information and communication technology

IFR International Federation of Robotics
ILO International Labour Organization

IMF International Monetary Fund

ISCO International Standard Classification of Occupation

ISEA Institute for Spatial Economic Analysis

IT information technology
ITC International Trade Center
LDCs least-developed countries
MENA Middle East and North Africa

MERCOSUR Southern Common Market (Mercado Común del Sur)

NAFTA North American Free Trade Agreement

OECD Organisation for Economic Co-operation and Development

PE partial equilibrium

PPF production possibility frontier

PPP purchasing power parity

R&D research and development

RBTC routine biased technical change

RTA regional trade agreement

SBTC skill-biased technical change

SME small and medium-sized enterprise

SOE state-owned enterprise

TAA Trade Adjustment Assistance

TFA WTO Trade Facilitation Agreement

UNESCO United Nations Educational, Scientific and Cultural Organization

UNIDO United Nations Industrial Development Organization

US United States

WBG World Bank Group

WEF World Economic Forum
WTO World Trade Organization

The following symbols are used in this publication:

... not available

0 figure is zero or became zero due to rounding

not applicable

US\$ United States dollars

UK£ UK pound

List of figures, tables and boxes

A Introduction

Figures	
---------	--

Figure A.1:	Evolution of employment share by sector (1970 to 2012)	15
Figure A.2:	Trade openness versus inequality (2000 to 2010)	17

B Labour market outcomes: trends and analytical framework

•		
Figure B.1:	Evolution of the total number of work hours (1993 to 2014)	22
Figure B.2:	Evolution of labour force participation rate by income group and region (1990 to 2016)	25
Figure B.3:	Evolution of employment-to-population ratio by income group and region (1991 to 2016)	27
Figure B.4:	Changes in labour force participation and employment-to-population ratio (1991 to 2016)	28
Figure B.5:	Evolution of unemployment rates by income group and region (1991 to 2016)	29
Figure B.6:	Unemployment rate by age group and gender (1991 to 2016)	31
Figure B.7:	Average unemployment duration in selected countries (2003 to 2015)	32
Figure B.8:	Evolution of average hours worked (1993 to 2014)	33
Figure B.9:	Annual average real wage growth (2006 to 2015)	35
Figure B.10:	Employment share by sector (1970 to 2011)	39
Figure B.11:	Employment share by level of economic development (2015)	40
Figure B.12:	Employment share by skill levels (2015)	42
Figure B.13:	Evolution of the skill composition in employment (circa 1995 to circa 2012)	44
Figure B.14:	Relative earnings of adults working full-time by level of educational attainment (2014)	45
Figure B.15:	Evolution of the skill premium in selected countries (1995 to 2012)	46
Figure B.16:	Effect of an increase in the demand for assembled products on the market for assemblers	48
Figure B.17:	Labour mobility costs by level of economic development	54
Figure B.18:	Sectoral and geographical labour mobility costs by level of economic development	55
Figure B.19:	Structural unemployment due to skills mismatches	56
Tables		
Table B.1:	Shares of four-year transitions of workers across sectors (1977 to 2013)	37
Table B.2:	Shares of four-year worker continuations and transitions of workers across sectors from manufacturing (1989 to 2013)	38
Table B.3:	Annual real wage differences of four-year continuations and transitions of workers across sectors from manufacturing (1989 to 2013)	38

Boxes		
Box B.1:	Labour market definitions	23
Box B.2:	Workers transition between economic activities	37
Box B.3:	Wage-setting when labour markets are not competitive	49
Box B.4:	Mobility frictions	52
Box B.5:	Skill mismatches	53
Box B.6:	Labour mobility costs	54
Box B.7:	Structural unemployment due to skills mismatches	56
Appendix Figures		
Appendix Figure B.1:	Labour force participation rate and output growth (1990 to 2015)	64
Appendix Figure B.2:	Labour force participation rate and population growth (1990 to 2015)	65
Appendix Figure B.3:	Labour force participation rates for populations aged 15-24 and 55-64 years old (1990 to 2015)	65
Appendix Figure B.4:	Labour force participation rate and tertiary school enrolment (1990 to 2015)	66
Appendix Figure B.5:	Evolution of the ratio of female to male labour force participation rate (1990-2016)	66
Appendix Figure B.6:	Labour supply and demand for assemblers	68
Appendix Figure B.7:	Cyclical unemployment	69
	echnology on labour market outcomes	
C Impact of to		77
C Impact of te	echnology on labour market outcomes	77
C Impact of to	Echnology on labour market outcomes Technological change in a production possibility frontier framework Evolution of employment and output per worker in manufacturing of selected	
C Impact of to	Technological change in a production possibility frontier framework Evolution of employment and output per worker in manufacturing of selected industrial countries (1970 to 2011)	79
C Impact of to Figures Figure C.1: Figure C.2:	Technology on labour market outcomes Technological change in a production possibility frontier framework Evolution of employment and output per worker in manufacturing of selected industrial countries (1970 to 2011) ATMs and full-time equivalent bank tellers in the United States (1970 to 2010) Evolution of employment shares of routine occupations in the United States	79 81
C Impact of to Figures Figure C.1: Figure C.2: Figure C.3: Figure C.4:	Technology on labour market outcomes Technological change in a production possibility frontier framework Evolution of employment and output per worker in manufacturing of selected industrial countries (1970 to 2011) ATMs and full-time equivalent bank tellers in the United States (1970 to 2010) Evolution of employment shares of routine occupations in the United States (1979 to 2014)	79 81 88
C Impact of to Figures Figure C.1: Figure C.2: Figure C.3: Figure C.4: Figure C.5:	Technology on labour market outcomes Technological change in a production possibility frontier framework Evolution of employment and output per worker in manufacturing of selected industrial countries (1970 to 2011) ATMs and full-time equivalent bank tellers in the United States (1970 to 2010) Evolution of employment shares of routine occupations in the United States (1979 to 2014) Proportion of jobs at risk of automation by economic development	79 81 88 93
C Impact of to Figures Figure C.1: Figure C.2: Figure C.3: Figure C.4: Figure C.5: Figure C.6:	Technological change in a production possibility frontier framework Evolution of employment and output per worker in manufacturing of selected industrial countries (1970 to 2011) ATMs and full-time equivalent bank tellers in the United States (1970 to 2010) Evolution of employment shares of routine occupations in the United States (1979 to 2014) Proportion of jobs at risk of automation by economic development Comparison of approaches to estimate the share of jobs at risk of automation	79 81 88 93 95
C Impact of to Figures Figure C.1: Figure C.2: Figure C.3: Figure C.4: Figure C.5: Figure C.6: Figure C.7:	Technological change in a production possibility frontier framework Evolution of employment and output per worker in manufacturing of selected industrial countries (1970 to 2011) ATMs and full-time equivalent bank tellers in the United States (1970 to 2010) Evolution of employment shares of routine occupations in the United States (1979 to 2014) Proportion of jobs at risk of automation by economic development Comparison of approaches to estimate the share of jobs at risk of automation Evolution of patents on artificial intelligence granted (2000 to 2016) Average difference in adoption lags and penetration of significant technological	79 81 88 93 95 96
C Impact of to Figures Figure C.1: Figure C.2: Figure C.3: Figure C.4: Figure C.5: Figure C.6: Figure C.7: Figure C.8:	Technological change in a production possibility frontier framework Evolution of employment and output per worker in manufacturing of selected industrial countries (1970 to 2011) ATMs and full-time equivalent bank tellers in the United States (1970 to 2010) Evolution of employment shares of routine occupations in the United States (1979 to 2014) Proportion of jobs at risk of automation by economic development Comparison of approaches to estimate the share of jobs at risk of automation Evolution of patents on artificial intelligence granted (2000 to 2016) Average difference in adoption lags and penetration of significant technological	79 81 88 93 95 96
C Impact of te	Technological change in a production possibility frontier framework Evolution of employment and output per worker in manufacturing of selected industrial countries (1970 to 2011) ATMs and full-time equivalent bank tellers in the United States (1970 to 2010) Evolution of employment shares of routine occupations in the United States (1979 to 2014) Proportion of jobs at risk of automation by economic development Comparison of approaches to estimate the share of jobs at risk of automation Evolution of patents on artificial intelligence granted (2000 to 2016) Average difference in adoption lags and penetration of significant technological innovations between Western and non-Western countries (1779 to 2008)	79 81 88 93 95 96
Figures Figure C.1: Figure C.2: Figure C.3: Figure C.4: Figure C.5: Figure C.6: Figure C.7: Figure C.8: Tables Table C.1:	Technological change in a production possibility frontier framework Evolution of employment and output per worker in manufacturing of selected industrial countries (1970 to 2011) ATMs and full-time equivalent bank tellers in the United States (1970 to 2010) Evolution of employment shares of routine occupations in the United States (1979 to 2014) Proportion of jobs at risk of automation by economic development Comparison of approaches to estimate the share of jobs at risk of automation Evolution of patents on artificial intelligence granted (2000 to 2016) Average difference in adoption lags and penetration of significant technological innovations between Western and non-Western countries (1779 to 2008) How technology and skills at work interact Expected effects of technology on employment and earnings by types	79 81 88 93 95 96 97
Figures Figure C.1: Figure C.2: Figure C.3: Figure C.4: Figure C.5: Figure C.6: Figure C.7: Figure C.8: Tables Table C.1: Table C.2:	Technological change in a production possibility frontier framework Evolution of employment and output per worker in manufacturing of selected industrial countries (1970 to 2011) ATMs and full-time equivalent bank tellers in the United States (1970 to 2010) Evolution of employment shares of routine occupations in the United States (1979 to 2014) Proportion of jobs at risk of automation by economic development Comparison of approaches to estimate the share of jobs at risk of automation Evolution of patents on artificial intelligence granted (2000 to 2016) Average difference in adoption lags and penetration of significant technological innovations between Western and non-Western countries (1779 to 2008) How technology and skills at work interact Expected effects of technology on employment and earnings by types	79 81 88 93 95 96 97

D Impact of trade on labour market outcomes

Figures		
Figure D.1:	Trade openness and technological change in a production possibility frontier	107
Figure D.2:	Share of total employment supported by exports (2011)	108
Figure D.3:	Trade openness and unemployment (1995 to 2008)	111
Figure D.4:	Change in trade openness and real income growth of the bottom 10 per cent of the income distribution (1993 to 2008)	121
Figure D.5:	GDP growth and growth of the services' share of employment (1995 to 2011)	123
Figure D.6:	Change in the share of employment in industry and services (1995 to 2011)	125
Tables		
Table D.1:	Weekly wage and tariff faced on exports by men and women by decile, India	127
Boxes		
Box D.1:	Welfare equivalence between technological change and international trade	107
Box D.2:	The benefits of trade outweigh the costs 110	
Box D.3:	Pros and cons of partial versus general equilibrium analysis of trade and employment links	111
Box D.4:	How does trade affect workers? Insights from economic theory	114
Box D.5:	The role of trade in the recent decline in US manufacturing employment	124
E Policy re	esponses to labour market adjustment and distributional cha	nges
Figure E.1:	Adjustment costs path following an economic shock	134
Г Г. О.	Comment in principle and the laboration and the DTA	100

Figure E.1:	Adjustment costs path following an economic shock	134
Figure E.2:	Cooperation provisions related to labour market adjustment in RTAs	139
Figure E.3:	Informal sector employment as share of total employment (2009 to 2015)	145
Figure E.4:	Evolution of agricultural employment as a share of total employment (2000 to 2014)	146
Boxes		
Box E.1:	Labour markets with search costs	135
Box E.2:	European Social Fund and European Globalisation Adjustment Fund	137
Box E.3:	The Danish Flexicurity model	138
Box E.4:	Year Up training programme	147

WTO members

(As of 1 August 2017)

Cyprus

AfghanistanGreeceOmanAlbaniaGrenadaPakistanAngolaGuatemalaPanama

Antigua and Barbuda Guinea Papua New Guinea

Argentina Guinea-Bissau Paraguay Armenia Guyana Peru Australia Haiti Philippines Austria Honduras Poland Portugal Bahrain, Kingdom of Hong Kong, China Qatar Bangladesh Hungary Barbados Iceland Romania

Belgium India Russian Federation

Belize Indonesia Rwanda

Benin Ireland Saint Kitts and Nevis

Bolivia, Plurinational State of Israel Saint Lucia

Botswana Italy Saint Vincent and the Grenadines

Brazil Jamaica Samoa

Brunei Darussalam Japan Saudi Arabia, Kingdom of

Bulgaria Jordan Senegal Burkina Faso Kazakhstan Seychelles Burundi Sierra Leone Kenya Cabo Verde Korea, Republic of Singapore Cambodia Kuwait, the State of Slovak Republic Cameroon Kyrgyz Republic Slovenia

Canada Lao People's Democratic Solomon Islands Central African Republic Republic South Africa Latvia Chad Spain Chile Lesotho Sri Lanka China Liberia Suriname Colombia Liechtenstein Swaziland Congo Lithuania Sweden Costa Rica Luxembourg Switzerland Côte d'Ivoire Macao, China Chinese Taipei Croatia Madagascar Tajikistan Cuba Malawi Tanzania

Czech Republic Maldives The former Yugoslav Republic

Thailand

Democratic Republic of the Mali of Macedonia

CongoMaltaTogoDenmarkMauritaniaTonga

Malaysia

Djibouti Mauritius Trinidad and Tobago

DominicaMexicoTunisiaDominican RepublicMoldova, Republic ofTurkeyEcuadorMongoliaUgandaEgyptMontenegroUkraine

El Salvador Morocco United Arab Emirates
Estonia Mozambique United Kingdom

European Union Myanmar United States of America
Fiji Namibia Uruguay
Finland Nepal Vanuatu

France Netherlands Venezuela, Bolivarian Republic of

Gabon New Zealand Viet Nam
The Gambia Nicaragua Yemen
Georgia Niger Zambia
Germany Nigeria Zimbabwe

Ghana Norway

Previous World Trade Reports

Levelling the trading field for SMEs

2016



The World Trade Report 2016 examines the participation of small and mediumsized enterprises (SMEs) in international trade. It looks at how the international trade landscape is changing for SMEs and what the multilateral trading system does and can do to encourage SME participation in global markets.

Speeding up trade: benefits and challenges of the WTO Trade Facilitation Agreement

2015



The WTO Trade Facilitation Agreement (TFA), agreed by WTO members at the Ministerial Conference in December 2013, is the first multilateral trade agreement concluded since the establishment of the WTO in 1995. The 2015 *World Trade Report* is the first detailed study of the potential impacts of the TFA, based on a full analysis of the final agreement text.

Trade and development: recent trends and the role of the WTO

2014



The World Trade Report 2014 looks at four major trends that have changed the relationship between trade and development since the start of the millennium: the economic rise of developing economies, the growing integration of global production through supply chains, the higher prices for agricultural goods and natural resources, and the increasing interdependence of the world economy.

Factors shaping the future of world trade

2013



The World Trade Report 2013 looks at what has shaped global trade in the past and reviews how demographic change, investment, technological progress, developments in the transport and energy/natural resource sectors, as well as trade-related policies and institutions, will affect international trade.

Trade and public policies: A closer look at non-tariff measures in the 21st century

2012



Regulatory measures for trade in goods and services raise challenges for international cooperation in the 21st century. The *World Trade Report 2012* examines why governments use non-tariff measures and services measures and the extent to which these measures may distort international trade.

The WTO and preferential trade agreements: From co-existence to coherence

2011



The ever-growing number of preferential trade agreements (PTAs) is a prominent feature of international trade. The Report describes the historical development of PTAs and the current landscape of agreements. It examines why PTAs are established, their economic effects, the contents of the agreements themselves, and the interaction between PTAs and the multilateral trading system.

Trade in natural resources

2010



The World Trade Report 2010 focuses on trade in natural resources, such as fuels, forestry, mining and fisheries. The Report examines the characteristics of trade in natural resources, the policy choices available to governments and the role of international cooperation, particularly of the WTO, in the proper management of trade in this sector.

Trade Policy Commitments and Contingency Measures

2009



The 2009 Report examines the range and role of contingency measures available in trade agreements. One of the Report's main objectives is to analyse whether WTO provisions provide a balance between supplying governments with the necessary flexibility to face difficult economic situations and adequately defining these in a way that limits their use for protectionist purposes.

Trade in a Globalizing World

2008



The 2008 Report provides a reminder of what we know about the gains from international trade and highlights the challenges arising from higher levels of integration. It addresses the question of what constitutes globalization, what drives it, what benefits it brings, what challenges it poses and what role trade plays in this world of ever-growing inter-dependency.

Sixty Years of the Multilateral Trading System: Achievements and Challenges

2007



On 1 January 2008 the multilateral trading system celebrated its 60th anniversary. The World Trade Report 2007 celebrates this landmark anniversary with an in-depth look at the General Agreement on Tariffs and Trade (GATT) and its successor the World Trade Organization — their origins, achievements, the challenges they have faced and what the future holds.

Exploring the Links between Subsidies, Trade and the WTO

2006



The World Trade Report 2006 focuses on how subsidies are defined, what economic theory can tell us about subsidies, why governments use subsidies, the most prominent sectors in which subsidies are applied and the role of the WTO Agreement in regulating subsidies in international trade. The Report also provides brief analytical commentaries on certain topical trade issues.

Trade, Standards and the WTO

2005



The World Trade Report 2005 seeks to shed light on the various functions and consequences of standards, focusing on the economics of standards in international trade, the institutional setting for standard-setting and conformity assessment, and the role of WTO agreements in reconciling the legitimate policy uses of standards with an open, non-discriminatory trading system.

Coherence

2004



The World Trade Report 2004 focuses on the notion of coherence in the analysis of interdependent policies: the interaction between trade and macroeconomic policy, the role of infrastructure in trade and economic development, domestic market structures, governance and institutions, and the role of international cooperation in promoting policy coherence.

Trade and Development

2003



The World Trade Report 2003 focuses on development. It explains the origin of this issue and offers a framework within which to address the question of the relationship between trade and development, thereby contributing to more informed discussion.

World Trade Organization 154, rue de Lausanne CH-1211 Geneva 2 Switzerland Tel: +41 (0)22 739 51 11 www.wto.org

WTO Publications Email: publications@wto.org

WTO Online Bookshop http://onlinebookshop.wto.org

Report designed by Services Concept. Printed by the World Trade Organization.

Image credits:
Cover: © Alfredo Caliz/Panos Pictures.
Pages 12-13: © zoranm/iStock.
Pages 20-1: © Sven Torfinn/Panos Pictures.
Pages 74-5: © Monty Rakusen/Getty Images.
Pages 104-5: © Qilai Shen/Bloomberg via Getty Images.
Pages 132-3: © monkeybusinessimages/iStock.

© World Trade Organization 2017
Print ISBN 978-92-870-4358-0
Web ISBN 978-92-870-4361-0
Published by the World Trade Organization.

World Trade Report 2017

While the world continues to change at an increasingly rapid pace, questions about the effects on jobs and wages of technological advances and trade – two of the most powerful drivers of global economic progress – have gained prominence in the debate about the impact of globalization. What are the effects of technology and trade on labour markets? Are all benefitting or are some being left behind by globalization and advances in technology? What are governments already doing and what else could they do to ensure that trade and technology are as inclusive as possible?

The World Trade Report 2017 examines how technology and trade affect employment and wages. It looks in particular into the part played by technology and trade in the shift of employment from manufacturing to services, in the decreasing proportion of middle-skilled jobs, in the growing value placed on skills within the jobs market and in the increasing participation of women in the workforce. It analyses the challenges for workers and firms in adjusting to changes in labour markets and how governments can facilitate such adjustment to ensure that trade and technology are inclusive.

The Report finds that labour markets have evolved in many different ways across countries, suggesting that country-specific factors play a pivotal role. It also finds that although technological advances and trade have yielded important benefits for economies overall, certain types of workers and/or regions may sometimes be adversely affected. It also finds that, although interrelated, technology more than trade appears to be responsible for the decreasing share of manufacturing jobs and for the declining number of middle-skill jobs relative to low- and high-skill jobs. The Report concludes that helping workers adjust to changes in the labour market and ensuring that benefits are spread more widely can increase the positive impact of open trade and technological progress.



Cover image: A robotic production line in a factory in Barcelona, Spain. Copyright: © Alfredo Caliz / Panos Pictures.