In-Progress Annotated Bibliography*

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References

[1] ABS. 5209.0.55.001 - Australian National Accounts: Input-Output Tables, 2008-09, 2012.

I/O tables can be used to derive investment expenditure from one industry to another: i.e. from every industry to the IT consulting industry, which can be assumed responsible for 'routinizing' capital formation.

[2] ABS. 5204.0 - Australian System of National Accounts, 2011-12, 2013.

Dependent variables for ALM-style regression: Table 66. Machinery and Equipment Net Capital Stock, by Industry Table 67. Machinery and Equipment Gross Fixed Capital Formation, by Industry Table 68. Machinery and Equipment Consumption of Fixed Capital, by Industry Table 69. Information Technology Net Capital Stock, Selected items by Industry Table 70. Information Technology Gross Fixed Capital Formation, Selected items by Industry Table 71. Information Technology Consumption of Fixed Capital, Selected items by Industry

[3] ABS. 5206.0 - Australian National Accounts: National Income, Expenditure and Product, Dec 2012, 2013.

[4] ABS. 6202.0 Labour Force Survey - April 2013, 2013.

Biannual series; latest is May 2012. Shows average earnings by occupation and wage-setting method over ~340 three-digit job categories.

[5] ABS. 6306.0 - Employee Earnings and Hours, Australia, May 2012, 2013.

[6] Daron Acemoglu. A Microfoundation for Social Increasing Returns in Human Capital Accumulation. *The Quarterly Journal of Economics*, 111(3):779–804, August 1996.

10.2307/2946672

[7] Daron Acemoglu. LABOR- AND CAPITAL-AUGMENTING TECHNICAL CHANGE. *Journal of the European Economic Association*, 1(1):1–37, March 2003.

Alternative to the usual labour-autmenting assumption of capital investment. Analyzes a model where labour and capital enhancing investment is possible. Can't accumulate labour, so with neoclassical production function, then so long as K & L are gross complements, then production quickly becomes limited by available labour, rather than capital. General equilibrium effects make the model isomorphic to the usual labour-augmenting model in the long run, where labour-capital factor shares are equal in the long run. Y=F(MK,NL). Assume technical change affects N, not M.

*This file is auto-generated from the bibliographic database `Polarization.bib`, which contains only rough notes and potentially irrelevant sources. Please ignore formatting irregularities.

[8] Daron Acemoglu, Philippe Aghion, and Giovanni L Violante. Deunionization, technical change and inequality. *Carnegie-Rochester Conference Series on Public Policy*, 55(1):229–264, December 2001.

[9] Daron Acemoglu and David H. Autor. Skills, Tasks and Technologies: Implications for Employment and Earnings. In David Card and Orley Ashenfelter, editors, *Handbook of labor economics, Volume 4, Part B*, volume Volume 4,, chapter 12, pages 1043–1171. Elsevier, 2011.

"Canonical" model of SBTC, and its problems

[10] Daron Acemoglu and Fabrizio Zilbotti. Productivity Differences. *National Bureau of Economic Research Working Paper Series*, No. 6879, 1999.

Another theory arguing for highest productivity in "medium-tech" sectors in non-tech-developing nations.

[11] Adrian Adermon and Magnus Gustavsson. Job Polarization and Task-Biased Technological Change: Sweden, 19752005. 2011.

Sweden: different institutional setup to US or UK. Australia middle ground between US/UK and Sweden. Finds job polarisation in period 1990-2005, but little evidence for 1975-1990.

[12] Kenneth Joseph Arrow and Frank Horace Hahn. *General competitive analysis*. Holden-Day San Francisco, 1971.

[13] A B Atkinson and Andrew Leigh. The Distribution of Top Incomes in Five Anglo-Saxon Countries Over the Long Run. *Economic Record*, 89:31–47, June 2013.

[14] Anthony Barnes Atkinson. Bringing income distribution in from the cold. *The Economic Journal*, 107(441):297–321, 1997.

[15] Anthony Barnes Atkinson. *The changing distribution of earnings in OECD countries*. Oxford University Press, 2008.

[16] Anthony Barnes Atkinson and Andrew Leigh. The Distribution of Top Incomes in Australia*. *Economic Record*, 83(262):247–261, September 2007.

[17] David H. Autor. The polarization of job opportunities in the US labor market: Implications for employment and earnings. Technical report, Center for American Progress and The Hamilton Project, 2010.

Level and rate of employment down post GFC; sharp increase in inequality as a result of excess demand for skills. Polarization of emp growth. high/low skills. Cause, mostly automation, international trade and offshoring somewhat. College-ed growth not kept pace with skill premium. Data: MORG in CPS; March CPS, microdata. Income deflated by personal consumption deflator (PCE); microdata.

[18] David H. Autor. The 'task approach' to labor markets: an overview. *Journal for Labour Market Research*, pages 1–15, 2013.

The task approach (ALM) presents an alternative to the canonical production function approach to labour markets. It separates the tasks performed by labour and technology, allowing substitutions between factors. Define a "task" as a unit of work, and a "skill" as a worker's stock of capabilities. The task-assignment model allocates high (H), medium (M) and low (L) skilled inputs on a unit interval. Computerization, due to decr in cost of computing power, in routine tasks displaces the H/M and M/L boundary. Wage of M decreases, wage of H and L increase due to q-complementarity. Major within-data limitations. Key: changing composition of tasks within jobs. Subject to continual optimisation. More recent literature considers actual tasks in jobs through surveys. Also, endogenous

task choice not considered by literature; should not assume assignment to skills are predetermined. Further, orthogonal category: "offshorability." Note Autor makes his skills data available at http://web.mit.edu/dautor/www

[19] David H. Autor and Daron Acemoglu. Skills, Tasks and Technologies Beyond the Canonical Model, 2012.

Presentation reviewing the difference between the "canonical model" and "task approach". C.M. failings: (1) wage inequality smaller than predicted, (2) real wages have fallen for some groups, (3) polarization and non-monotone growth not predicted, (4) rising importance of occupation as predictor of income, (5) trouble explaining impact of offshoring/direct skill replacement. Alternative: "Ricardian" model of skills. 3 types of labour (H,M,L). Each has production function. Comparative advantage gives rise to endogenous allocation of skill groups to tasks. Gives rise to wage equations. Task-replacing technology in middle-skill tasks gives rise to polarization; strong comp-adv for H relative to L.

[20] David H. Autor, Lawrence F Katz, and Melissa S Kearney. The Polarization of the U.S. Labor Market. *National Bureau of Economic Research Working Paper Series*, No. 11986, 2006.

Top part of wage distribution has grown steadily since 1980s. Bottom tail grew, but stagnated in the 1990s. Middle part of wage distribution fell in 1990s. Propose model of computers substituting "routine" tasks. C-D production function with 3 types of labour: abstract, routine and manual; non-college educated labour performs the second two types. Computer capital, which gets cheaper, displaces workers in the routine labour category. Routine workers self-select out, into manual labour. Data sources: 1. Hours-weighted wage data from US Current Population Survey (CPS) May samples 1973-78 2. Merged Outgoing Rotation Group (MORG) samples 1979-2004 3. 1980, 1990, 2000 Census Integrated Public Use Microsample (IPUMS) (–¿ percentiles from employment data) 4. Occupation code mappings for 1980-¿1990-¿2000 (Meyer & Osborne 2005) 5. Proxied skills/quality with initial wages/educational levels 6. CPS data: 3-digit census occupations, employment growth by industry-gender-education

[21] David H. Autor, Lawrence F Katz, and Melissa S Kearney. Trends in US wage inequality: Revising the revisionists. *The Review of Economics and Statistics*, 90(2):300–323, 2008.

[22] David H Autor, Lawrence F Katz, and Alan B Krueger. Computing Inequality: Have Computers Changed the Labor Market? *The Quarterly Journal of Economics*, 113(4):1169–1213, November 1998.

10.1162/003355398555874

[23] David H. Autor, Frank Levy, and Richard J Murnane. Upstairs, Downstairs: Computers and Skills on Two Floors of a Large Bank. *Industrial and Labor Relations Review*, 55(3):432–447, April 2002.

Qualitative evidence of the kinds of tasks that computers can do, and hence replace. Computers tend to replace tasks that can be described in terms of rules. Non-computerized jobs also changed as a result of others being computerized. For some tasks, that meant narrower specialization; for others, it meant broader fields of responsibility. Allows, on one hand, efficiencies from specialization, and on the other, task interdependencies. Short-run technical change depends on regulatory changes (but causality reversed in long run.)

[24] David H. Autor, Frank Levy, and Richard J Murnane. The skill content of recent technological change: An empirical exploration. *The Quarterly Journal of Economics*, 118(4):1279–1333, 2003.

Seminal paper in the task approach. Consider computer capital substitute for workers performing "routine tasks," and complement for workers performing nonroutine tasks. Found: decreasing manual, increasing cognitive task inputs; input shifts in computerizing industries; shifts at all educational levels; computerization caused shift from routine to nonroutine tasks. Causal force is price of computer capital. Model is Cobb-Douglas, with routine labour and computer capital perfect substitutes. Het'ous workers choose to supply routine and/or non-routine labour. Lower cost of computer capital lowers routine wage, causes marginal workers to substitute to non-routine tasks. Also models heterogeneous industries. Authors analyze (1) extensive margin shifts, holding occupation constant, and (2) intensive margin shifts, within occupations. Data: Dictionary of Occupational Titles (DOT) plus CPS combined to form panel, 1960 to 1998. Gives task inputs by industry x educational group x occupation.

[25] Marigee Bacolod, Bernardo S Blum, and William C Strange. Skills in the city. *Journal of Urban Economics*, 65(2):136–153, March 2009.

[26] Paula Barnes and Sharon Kennard. Skill and Australia's productivity surge. 2002.

[27] JUAN D BARÓN and DEBORAH A COBB-CLARK. Occupational Segregation and the Gender Wage Gap in Private- and Public-Sector Employment: A Distributional Analysis*. *Economic Record*, 86(273):227–246, June 2010.

[28] Paul Beaudry, David A Green, and Benjamin M Sand. Spatial Equilibrium with Unemployment and Wage Bargaining: Theory and Estimation. *National Bureau of Economic Research Working Paper Series*, No. 19118, 2013.

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[29] Paul Beaudry, David A Green, and Benjamin M Sand. The Great Reversal in the Demand for Skill and Cognitive Tasks. Working Paper 18901, National Bureau of Economic Research, March 2013.

[30] Alan S Blinder. Wage Discrimination: Reduced Form and Structural Estimates. *The Journal of Human Resources*, 8(4):436–455, October 1973.

[31] Nick Bloom. Skill Biased Technical Change (SBTC), 2013.

USA wage inequality rising since 1960s, especially in the top half of the earnings distribution. But changing distribution of education doesn't explain rise in inequality. Robust to industry (shown with census data.) US, Canadian and British experience particularly pronounced. Europe experienced similar increase in inequality; borne out more in unemployment than wage (institutional explanation.) The key explanation has been SBTC, which is increasingly rapid due to technical advances. Supply of skilled workers sped up in 1970s, slowed in 1980s; under this explanation excess of demand gives wage increase. Causes of SBTC include (a) cheaper capital/computers, (b) institutional changes. Skills can be considered (a) complement physical+computer capital, or (b) particular skills needed for rapid change. Other explanations incude international openness and trade, increasing competition for jobs at low end of spectrum. Further, labor institutions are changing, especially weaker unions. Industry-level evidence: all industries increase in skill demand, skill premium. Change more rapid in industries with increasing computerization.

[32] Jeff Borland. Earnings inequality in Australia: changes, causes and consequences. *Economic Record*, 75(2):177–202, 1999.

[33] Jeff Borland. The Australian labour market in the 2000s: The quiet decade. *The Australian Economy in the 2000s*, 2011.

[34] Jeff Borland, Joseph Hirschberg, and Jenny Lye. Computer knowledge and earnings: evidence for Australia. *Applied Economics*, 36(17):1979–1993, September 2004.

Introduction of computers has led to a change in skill demand. Paper attempts to estimate return to computer skill. On this topic, three kinds of studies. (1) earnings vs industry tech usage; (2) relationship between tech change and demand for labour (skill composition of workforce); (3) workplace-level studiesof technological change, workplace reorganization, demand for labour. Data: 1993 ABS Training and Education Experience Survey. Microdata; includes subjective computer skills (basic/inter/adv). A key problem is that computer knowledge is correlated with unobserved skills. Also, wage data is censored above, requiring a tobit-style regression. Find the premium is approx 18%, similar to GER, USA. Reduced to 10% when controls included. Level of skills important; usual practice of employing a single dummy may obscure results.

[35] Jeff Borland and Steven Kennedy. Dimensions, Structure and History of Australian Unemployment. RBA Annual Conference Volume. Reserve Bank of Australia, 1998.

[36] Jeff Borland and Roger Wilkins. Earnings Inequality in Australia. *Economic Record*, 72(216):7–23, March 1996.

[37] Chris Briggs, John Buchanan, and Ian Watson. *Wages policy in an era of deepening wage inequality.* Academy of the Social Sciences in Australia, 2006.

[38] W D A Bryant. *General equilibrium: theory and evidence.* World Scientific Publishing Company Incorporated, 2010.

[39] E Brynjolfsson and A McAfee. *Race against the machine: How the digital revolution is accelerating innovation, driving productivity, and irreversibly transforming employment and the economy.* 2011.

Authors argue that trends in routinization since the 1970s have been hidden by other macroeconomic trends (.com/housing boom, lingering 07-08 recession, etc). Further, advances in the "reasoning" ability of computers are expanding the number of tasks that can be replaced. This expansion of scope is likely to grow at an increasing rate. B&M point out there's no economic reason why jobs must be replaced.

[40] David Card. Chapter 30 The causal effect of education on earnings. volume Volume 3,, pages 1801–1863. Elsevier, 1999.

[41] David Card and Thomas Lemieux. Can Falling Supply Explain the Rising Return to College for Younger Men? A Cohort-Based Analysis. *The Quarterly Journal of Economics*, 116(2):705–746, May 2001.

[42] David Card, Thomas Lemieux, and W.Craig Riddell. Unions and wage inequality. *Journal of Labor Research*, 25(4):519–559, 2004.

[43] I Castles and L W Cook. *Australian and New Zealand standard industrial classification.* Australian Bureau of Statistics, Department of Statistics, New Zealand, 1993.

[44] Ian Castles. *Australian standard classification of occupations: Statistical classification.* Australian Bureau of Statistics, 1986.

[45] Michael Coelli and Roger Wilkins. Credential Changes and Education Earnings Premia in Australia. *Economic Record*, 85(270):239–259, September 2009.

College premium did not rise in Australia as overseas. Several explanations. (1) Rapid expansion of degree labour in Australia; met supply. (2) Expansion of definition of 'Bachelor Degree' since 80s to include much broader range of programs. Relabelling may account for 6% of women's skill premium, men less. Authors point out that decline in premia a puzzle, given rising education costs. Possible explanation is decline in participation of low skill males. Possible low-efficiency workers priced out of full-time jobs by minimum wage, so avg is higher. Skilled immigration may also account for high-skill individuals earning less. Emmigration of brightest Australians ('brain drain') effect in same direction. Other causes of increasing demand for education: (1) education may deliver returns in terms of probability of full-time work, not wage. (2) employer preference shift to degree, not certificates. Data: 1% census 1981-2001, inc. unit record files for income, ANZCO I & II, various educational datasets (see appendix).

[46] Arnaud Costinot and Jonathan Vogel. Matching and Inequality in the World Economy. *Journal of political economy*, 118(4):747–786, 2010.

[47] Mark Cully. More or less skilled workforce?: changes in the occupational composition of employment, 1993 to 1999. Technical report, National Institute of Labour Studies, Adelaide, South Australia, 1999.

Finds, contrary to international evidence, that Austalia does not experience skill bias. Posits growth in both areas. Data: ASCO II, which includes tasks, and ABS cat. no. 6203.0. ABS developed two-way mapping; 1996 census maps to both. Insufficient detail in census returns.

[48] Mark Cully. The Cleaner, the Waiter, the Computer Operator: Job Change, 1986-2001. *Australian Bulletin of Labour*, 28(3):141–162, 2002.

[49] Steve J Davis and John Haltiwanger. Wage Dispersion Between and Within U.S. Manufacturing Plants, 1963-1986. *National Bureau of Economic Research Working Paper Series*, No. 3722, 1991.

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[50] Peter Dawkins, Paul Gregg, and Rosanna Scutella. Employment Polarisation in Australia. *Economic Record*, 81(255):336–350, December 2005.

At a household level, a marked polarization in employment in Australia 1990s-present. Increase in households were no jobs held; corresponding increase in households where all adults employed. Compounded by smaller household trend. (1) Only partly explained by changes in employment opportunities. (2) Sharp increase in earnings inequality. (3) Compression near minimum wage (4) Disproportionate impact on hholds with children, renters.

[51] John DiNardo, Nicole M Fortin, and Thomas Lemieux. Labor Market Institutions and the Distribution of Wages, 1973-1992: A Semiparametric Approach. *Econometrica*, 64(5):1001–1044, September 1996.

[52] John E DiNardo and Jörn-Steffen Pischke. The returns to computer use revisited: Have pencils changed the wage structure too? *The Quarterly Journal of Economics*, 112(1):291–303, 1997.

Questions Kreuger's finding that computer use is associated with a wage premium. Finds similar results for Germany. BUT, also finds a similar result for pencil use. The point is that the computer use literature is flawed, because computer use is correlated with so many other attributes. Contribution: first use of task-level data in literature.

[53] Yvonne Dunlop and Peter Sheehan. Technology, skills and the changing nature of work. *Australian Bulletin of Labour*, 24(4):317–332, 1998.

[54] Theo S Eicher. Interaction Between Endogenous Human Capital and Technological Change. *The Review of Economic Studies*, 63(1):127–144, January 1996.

10.2307/2298118

[55] Alexis Esposto. Skill: An elusive and ambiguous concept in labour market studies. *Australian Bulletin of Labour*, 34(1):100–124, 2008.

[56] Alexis Esposto. Upskilling and polarisation in the Australian labour market: a simple analysis. *Australian Bulletin of Labour*, 37(2):191–216, 2012.

Follows Cully 1999's methodology. Basically decomposes labour demanded into categories given by the ASCO, and monitors trend. Simple, ordered skill categories devised. Data: ASCO I & II; ABS survey of Employee Earnings, Benefits and Trade Union Membership (EEBTUM). Annual supplement to monthly LFS; since 1988. (Compatibility: 1989 data obtained at 4-digit level, re-coded for ASCO II.) Increase in demand for managerial ASCO labour and "intermediate" category. Found the labour force is upskilling, but this effect is different for part-time & full-time workers. Part-time males are de-skilling, on average, and female part-time upskilling somewhat. Secondly, the patterns for upskilling depend on sex and work type.

[57] Alexis Esposto and Malcolm Abbott. A Look at the Long-term Accumulation of Human Capital and Knowledge Intensity of Work in Australia. *Economic Papers: A journal of applied economics and policy*, 30(3):414–430, September 2011.

[58] Alexis Esposto and Andrea Garing. The Worker Activities of Australian Employees. *Economic Papers: A journal of applied economics and policy*, 31(3):346–358, September 2012.

Activity intensity in Aust jobs: full/part time, male/female, with respect to GWA ("generalised worker activities.") Mapping between O*NET and ASCO; determine job complexity. Calculated weighted GWA intensity index for 9 areas, from 42 O*NET descriptors ("WA"). Found that worker intensity (complexity) grew over last 35 years for full-timers, esp. women. Comparison of 9 areas for male/female and full/part time for 1971-2006. Full-timers do less physical work. Clear trend for full-time women moving into management; part-time men to manual labor. Data: Census, ASCO (I, II), O*NET

[59] Alexis Esposto, Andrea Garing, Anne Langworthy, and Rebecca Feldmann. Skills Intensity: A Human Capital Approach to Understanding the Development of Regions. *International Review of Business Research Papers*, 8(4):80–93, 2012.

[60] Alexis S Esposto. Dimensions of Earnings Inequality in Australia. 2005.

[61] Sergio Firpo, Nicole M Fortin, and Thomas Lemieux. Unconditional Quantile Regressions. *Econometrica*, 77(3):953–973, May 2009.

[62] Sergio Firpo, Nicole M Fortin, and Thomas Lemieux. Occupational tasks and changes in the wage structure. 2011.

[63] Nicole M Fortin, Thomas Lemieux, and Sergio Firpo. Decomposition Methods in Economics. In David Card and Orley Ashenfelter, editors, *Handbook of Labor Economics*, volume Volume 4,, chapter 1, pages 1–102. Elsevier, 2011.

[64] Richard B Freeman. How Much Has De-Unionization Contributed to the Rise in Male Earnings Inequality? In Sheldon Danziger and Peter Gottschalk, editors, *Uneven tides*, page 133. Russell Sage Foundation, 1994.

[65] Noel Gaston and Gulasekaran Rajaguru. The Long-run Determinants of Australian Income Inequality. *Economic Record*, 85(270):260–275, September 2009.

Income inequality in Australia (non-)Granger caused by technological growth. Technique for testing hypothesis: Yamamoto and Kurozumi (2006). Data: (1) Uses inequality statistics of Leigh (2005), derived from income tax data. (2) Globalization: KOF index: summary of 13 variables; incl. 3 sub-indices. (3) Dependence on overseas cs: ToT. (4) Rate of unionization (5) ln RGDP

[66] Claudia Goldin and Lawrence F Katz. Long-Run Changes in the U.S. Wage Structure: Narrowing, Widening, Polarizing. *National Bureau of Economic Research Working Paper Series*, No. 13568, 2007.

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[67] Maarten Goos and Alan Manning. Lousy and Lovely Jobs: The Rising Polarization of Work in Britain. *Review of Economics and Statistics*, 89(1):118–133, February 2007.

[68] Maarten Goos, Alan Manning, and Anna Salomons. Job Polarization in Europe. *American Economic Review*, 99(2):58–63, May 2009.

[69] Maarten Goos, Alan Manning, and Anna Salomons. Explaining job polarization in Europe: the roles of technology, globalization and institutions. Technical report, 2010.

[70] Dominique Goux and Eric Maurin. The Decline in Demand for Unskilled Labor: An Empirical Analysis Method and Its Application to France. *The Review of Economics and Statistics*, 82(4):596–607, November 2000.

[71] Zvi Griliches. Capital-skill complementarity. *The review of Economics and Statistics*, 51(4):465–468, 1969.

Proposed capital skill-complementarity for 'skilled' rather than 'unskilled' labour.

[72] Fatih Guvenen, Serdar Ozkan, and Jae Song. The Nature of Countercyclical Income Risk. Working Paper 18035, National Bureau of Economic Research, May 2012.

Income polarization seems to occur most strongly during expansions.

[73] Ann Harding. The suffering middle: Trends in income inequality in Australia, 1982 to 199394. *Australian Economic Review*, 30(4):341–358, 1997.

[74] Richard G Harris and Peter E Robertson. The Dynamic Effects of the US Productivity Boom on Australia. *Economic Record*, 83:S35—-S45, 2007.

[75] James J Heckman and Christopher Taber. Roy model. In Steven N Durlauf and Lawrence E Blume, editors, *The New Palgrave Dictionary of Economics*. Palgrave Macmillan, Basingstoke, 2008.

[76] Jian Huang and Jon A Wellner. Regression models with interval censoring. *Probability theory and mathematical statistics (St. Petersburg, 1993)*, pages 269–296, 1993.

[77] J Bradford Jensen and Lori G Kletzer. Measuring tradable services and the task content of offshorable services jobs. In *Labor in the new economy*, pages 309–335. University of Chicago Press, 2010.

[78] Dale W Jorgenson and Kevin J Stiroh. Information Technology and Growth. *The American Economic Review*, 89(2):109–115 CR – Copyright © 1999 American Econom, May 1999.

[79] Chinhui Juhn, Kevin M Murphy, and Brooks Pierce. Wage Inequality and the Rise in Returns to Skill. *Journal of Political Economy*, 101(3):410–442, June 1993.

[80] Katz and Kevin J Murphy. Changes in Relative Wages, 1963-1987: Supply and Demand Factors. *Quarterly Journal of Economics*, 107:35–78, 1992.

[81] Michael Keating. The Labour Market and Inequality. *Australian Economic Review*, 36(4):374–396, December 2003.

[82] Ross Kelly and Philip Lewis. The change in labour skills in Australia over the business cycle. 2010.

[83] Alan B Krueger. How Computers Have Changed the Wage Structure: Evidence from Microdata, 1984–1989. *The Quarterly Journal of Economics*, 108(1):33–60, February 1993.

10.2307/2118494

[84] Per Krusell, Lee E Ohanian, José-Víctor Ríos-Rull, and Giovanni L Violante. Capital-skill Complementarity and Inequality: A Macroeconomic Analysis. *Econometrica*, 68(5):1029–1053, 2000.

Latent variable estimation of the skill premium for labour-capital complementarity. Much of variation explained by factor quantities. The authors modify Stokey 1996, based on Griliches 1969 (neoclassical aggregate P.F. with skill complementarity. Equipment, unskilled labor perfect substitutes; unit elasticity of substitution with skilled labor.) Use instead a four factor model; different elasticities of substitution among factors. Find that model explains most of variation in skill premium over 30 years. 4 factor model consistent with returns to income shares over time. Data: annual K and L, 1963-1992. Capital stock from National Income and Product Accounts; note critique of quality adjustment over time. Labor types based on education; college/non-college, from US CPS. Estimated using two-step SPML, 1963-1992. Subs elasticities b/w labour and equipment high for unskilled, low for skilled, which implies complementarity.

[85] Rainer Lanz, Sébastien Miroudot, and Hildegunn Nordå s. Trade in tasks. In *Policy Priorities for International Trade and Jobs*, chapter Ch. 7, pages 237–248. OECD Publishing, 2011.

[86] Andrew Leigh. Deriving Long-Run Inequality Series from Tax Data. *Economic Record*, 81(s1):S58–S70, 2005.

Income surveys only available for past 20-30 years; tax data used to derive inequality series. Finds inequality falling 1950s-1970s; rose 1980s-90s, consistent with UK. Individual income may be poor proxy for household income. Misses non-filers. Other corrections needed.

[87] Andrew Leigh. Permanent Income Inequality: Australia, Britain, Germany, and the United States Compared. 2009.

[88] Andrew Leigh. *Battlers & Billionaires: The Story of Inequality in Australia*. Redback Series. Black Incorporated, 2013.

Three causes of inequality: 1. unions down 2. technological change 3. decrease in income tax

[89] Thomas Lemieux. Increasing Residual Wage Inequality: Composition Effects, Noisy Data, or Rising Demand for Skill? *The American Economic Review*, 96(3):461–498, June 2006.

[90] Thomas Lemieux. The changing nature of wage inequality. *Journal of Population Economics*, 21(1):21–48, 2008.

[91] Frank Levy and Richard J Murnane. *The new division of labor: how computers change the way we work*. Princeton University Press, New York, 2004.

[92] Rosa L Matzkin. Nonparametric Estimation of Nonadditive Random Functions. *Econometrica*, 71(5):1339–1375, September 2003.

[93] Peter B Meyer and Anastasiya M Osborne. *Proposed category system for 1960-2000 Census occupations*. US Department of Labor, Bureau of Labor Statistics, Office of Productivity and Technology, 2005.

[94] Guy Michaels, Ashwini Natraj, and John Van Reenen. Has ICT polarized skill demand? Evidence from eleven countries over 25 years. *Review of Economics and Statistics*, In press., 2013.

[95] Jacob Mincer. On-the-job training: Costs, returns, and some implications. *The Journal of Political Economy*, 70(5):50–79, 1962.

[96] Daniel J B Mitchell. Wage Pressures and Labor Shortages: The 1960s and 1980s. *Brookings Papers on Economic Activity*, 1989(2):191–231 CR – Copyright © 1989 Brookings Inst, January 1989.

[97] Kevin M Murphy and Finis Welch. The Structure of Wages. *The Quarterly Journal of Economics*, 107(1):285–326, February 1992.

10.2307/2118330

[98] William D Nordhaus. Two Centuries of Productivity Growth in Computing. *The Journal of Economic History*, 67(01):128–159, 2007.

[99] Ronald Oaxaca. Male-Female Wage Differentials in Urban Labor Markets. *International Economic Review*, 14(3):693–709 CR – Copyright © 1973 Economics Depar, October 1973.

[100] Ronald L Oaxaca. Male-Female Wage Differentials in Urban Labor Markets. *International Economic Review*, 14(3):693–709 CR – Copyright © 1973 Economics Depar, October 1973.

[101] Ronald L Oaxaca and Michael R Ransom. On discrimination and the decomposition of wage differentials. *Journal of Econometrics*, 61(1):5–21, March 1994.

[102] Tuomas Pekkarinen. Complexity, wages, and the O-ring production function: evidence from Finnish panel data. *Labour Economics*, 9(4):531–546, September 2002.

[103] Giovanni Peri and Chad Sparber. Task Specialisation, Immigration and Wages. *Centro Studi Luca d'Agliano Development Studies Working Paper*, (252), 2008.

[104] Jeremy Rifkin and Ellen Kruger. *The end of work*. Jeremy P. Tarcher, 1996.

[105] A D Roy. Some Thoughts on the Distribution of Earnings. *Oxford Economic Papers*, 3(2):135–146 CR – Copyright © 1951 Oxford Universi, June 1951.

[106] Kirkpatrick Sale. The Achievements of General Ludd: A Brief History of the Luddites. *The Ecologist*, 29(5):310–314, 1999.

[107] Shubhasree Seshanna and Stéphane Decornez. Income polarization and inequality across countries: an empirical study. *Journal of Policy Modeling*, 25(4):335–358, June 2003.

[108] A Smith. The Wealth of Nations, 1910 ed. *Everyman's Library, London*, 1776.

[109] Robert M Solow. A Contribution to the Theory of Economic Growth. *The Quarterly Journal of Economics*, 70(1):65–94, February 1956.

10.2307/1884513

[110] Robert M Solow. Technical Change and the Aggregate Production Function. *The Review of Economics and Statistics*, 39(3):312–320 CR – Copyright © 1957 The MIT Press, August 1957.

[111] Jan Tinbergen. Substitution of Graduate by Other Labour. *Kyklos*, 27(2):217–226, 1974.

[112] Jan Tinbergen. Income differences: recent research. chapter 2. 1975.

[113] Dennis John Trewin and Brian N Pink. *ANZSCO: Australian and New Zealand Standard Classification of Occupations*. Australian Bureau of Statistics/Statistics New Zealand, 2006.

[114] James Vickery. RDP1999-12 Unemployment and Skills in Australia. 1999.

[115] Finis Welch. Linear Synthesis of Skill Distribution. *The Journal of Human Resources*, 4(3):311–327, July 1969.

[116] Geoff Willis and Juergen Mimkes. Evidence for the independence of waged and unwaged income, evidence for Boltzmann distributions in waged income, and the outlines of a coherent theory of income distribution. *arXiv preprint cond-mat/0406694*, 2004.

[117] Mark Wooden. The Changing Skill Composition of Labour Demand. *Australian Bulletin of Labour*, 26(3):191–198, 2000.