

EMPLOYMENT OUTLOOK 2013

Chapter 4

ANNEX 4.A2

Review of Literature

Table 4.A2.1. Review of literature

Country	Author	Data	Years	Short-term earnings loss	Long-term earnings loss	Earnings definition	Long-term definition	Displacement definition and studied group (if targeted study)	Special points
Australia	Boreland et al. (2002)	Youth in Transition Survey	1981-94	No losses - possibly because sample covers youth only				Youth only; retrenchment (layoffs for economic reasons)	Displacement rate declines with tenure
Austria	Schwerdt et al. (2008)	Austrian Social Security Database (all private sector workers, linked to establishment information)	1982-88	1-20 quarters post displacement (average) White collar: 8.1% Blue collar: 2.3%	21-40 quarters post displacement White collar: 8.2% Blue collar: 0.6%	Mean daily earnings	5-10 years	Plant closures only	
Belgium	Albaek et al. (2002)	Administrative data from Belgian social security system	1980-91	2%	3.70%	Daily wages	3 years	Workers separating from firms with at least 5 employees before layoffs started and where employment fell by at least 30%; private sector only; workers with 3+ years of tenure; multiple job holders excluded	Losses primarily due to non-employment effects
Canada	Abe et al. (2002)	Canadian Out of Employment Panels (COEP)	1995	1.3% men 2.4% women		Respondents asked to report wage change hourly wages		Permanent layoffs	
Canada	Crossely et al. (1994)	Ontario Ministry of Labour – survey of mass layoffs	1982	Workers with 3-5 years of tenure: 4% men, 14% women workers with 25+ years of tenure: 24% men, 37% women				Plant closure or mass layoffs involving 50 or more workers	No counterfactual; women lose more than men and the size of loss increases with tenure
Canada	Morissette et al. (2007)	Statistics Canada Longitudinal Worker File (10% of Canadian workers who were displaced because of mass layoffs or firm closure)	1983-2002		25% men and 35% women - including those who experience non-employment 18% men and 26% women - only displaced workers with no non-employment	Annual earnings	5 years	Workers displaced from the commercial sector because of firm closure or mass layoffs (30%+ fall in employment), aged 25-49 and with 5+ years of tenure	No counterfactual; fixed-effect estimates; most substantial losses experienced by high-seniority workers
Canada	Neil and Schirle (2007)	Survey of Labour and Income Dynamics	1997-2006	23% high-educated workers 40% low-educated workers 29% urban workers 40% rural workers		Annual earnings		Job separations due to company closure or business slowdown; sample includes individuals displaced from a full-time job aged 50+ and observed returning to full time employment within 5 years	
Canada	Morissette, Qiu, and Chan (2013)	Statistics Canada Longitudinal Worker File (10% random sample of all Canadian workers)	1978-2009	Men 11-18%, women 12-22% (higher in manufacturing sectors) Men 23-31%, women 30-41% if inclusion of laid-off workers with no earning in the year following displacement	Men 3-4%, women 2-7%. Men 17-18%, women 22-27% with broader treatment group. 10 to 18% for high-seniority workers and individuals with stable labour market attachment (narrow treatment group).	annual earnings	5 years	Permanent layoffs. 2 treatment groups: broader (laid-off workers with no earning in the year following displacement included) and narrow (positive earning only), aged 25-54. Two sectors (manufacturing, non-manufacturing)	Fixed-effect estimates; Short-term earning losses highly sensitive to labour market tightness, long-term losses also sensitive but in a lesser extent.

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Country	Author	Data	Years	Short-term earnings loss	Long-term earnings loss	Earnings definition	Long-term definition	Displacement definition and studied group (if targeted study)	Special points
Canada	Morissette, Qiu, and Chan (2013)	Statistics Canada Longitudinal Worker File (10% random sample of all Canadian workers)	1978-2009	Men 11-18%, women 12-22% (higher in manufacturing sectors) Men 23-31%, women 30-41% if inclusion of laid-off workers with no earning in the year following displacement	Men 3-4%, women 2-7%. Men 17-18%, women 22-27% with broader treatment group. 10 to 18% for high-seniority workers and individuals with stable labour market attachment (narrow treatment group).	Annual earnings	5 years	Permanent layoffs. 2 treatment groups: broader (laid-off workers with no earning in the year following displacement included) and narrow (positive earning only), aged 25-54. Two sectors (manufacturing, non-manufacturing)	Fixed-effect estimates; Short-term earning losses highly sensitive to labour market tightness, long-term losses also sensitive but in a lesser extent.
Canada	Bonikowska and Morissette (2013)	Statistics Canada Longitudinal Worker File (10% random sample of all Canadian workers)	1984-2008		Men 13-20%; Women 7-15%. Even during expansionary periods, and also for low-seniority workers.	Annual earnings	5 years	Permanent layoffs. Workers laid off during one of the 2 reference periods (1990-1993 or 2000-2003), with stable labor market attachment prior to job loss. Distinction between employment trajectories (high-seniority, low-seniority and previously laid-off);	Control groups; fixed-effect estimates; No clear evidence of higher losses in tighter labour market conditions for high/low-seniority, but for previously laid-off workers.
Denmark	Albaek et al. (2002)	Firm-based data linked to individual records	1980-91	4%	6.4%	hourly wages	3 years	Workers separating from firms with at least 5 employees before layoffs started and where employment fell by at least 30%; private sector only; workers with 3+ years of tenure; multiple job holders excluded	Losses primarily due to wage effect
Finland	Appelqvist (2007)	Finnish Longitudinal Employer Employee Data (FLEED)	1992 and 1997	1992: 42% 1997: 23%	1992: 9.2% 1997: 4%	Annual earnings	5 years	Workers aged 21-52 with 3+ years of tenure separating from private sector plants from each 50%+ employees left in base years: 1992 (depression) and 1997 (recovery)	Effect of displacement strongest for females
France	Bender et al. (2002)	<i>Déclarations Annuelles des Données Sociales</i> (Annual Social Data Reports) + INSEE <i>Échantillon Dynamique Permanent</i> (Permanent Dynamic Sample) + <i>Système Unifié de Statistiques d'Entreprise</i> (Unified System of Enterprise Statistics)	1976-95	32%	20%	Log of total real annual earnings	5 years	Separations due to firm closure; men aged 26-50, with 4 or more years of seniority in 1984	

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France	Lefranc (2003)	<i>Enquête Emploi</i> (French LFS)	1990-97	Average: 12% weekly wage 9% hourly wage Medium educated: 14% weekly and 11% hourly wage Low educated: 10% weekly and 7% hourly wage High educated: 6% weekly and 4% hourly wage		Weekly/ hourly wages		Workers on collective permanent layoffs and workers on individual permanent layoffs	Comparison of hourly and weekly losses indicates that displacement also induces a fall in hours worked; wage losses increase with seniority
Germany	Bender et al. (2002)	<i>Beschäftigungsstichprobe</i> (BS) of IAB (1% sample of overall employees' statistics from the Historic File of the Federal Department of Employment)	1975-90	11%	10-12%	Gross daily earnings	5 years	Men aged 25-50 in 1984 with 4 years of tenure - displacement defined as establishment closing down or reducing its workforce by at least 40%	
Germany	Burda and Mertens (2001)	German Socio-Economic Panel and IAB Social Insurance File	1986	Loss of 3.6% on average gain of 2% in lowest quintile loss of 38% in highest quintile	loss of 2.2% on average gain of 2.7% in lowest quintile loss of 34.4% in highest quintile	Daily wages	4 years	Involuntary job separations predicted from German Socio-Economic Panel and imputed to IAB individuals; full-time workers only, only first unemployment spell (occurring in 1986) is considered and workers are followed until 1990	Largest wage losses are associated with changes in industry
Germany	Couch (2001)	German Socio-Economic Panel	1991-96	16.5%	3.5%	Annual earnings	2 years	West Germany only, displaced because of business closure or layoff	
Germany	Schmieder et al. (2009)	IAB Employment History File, matched information on unemployment insurance reciprocity and German administrative data on mass layoffs and plant closings	1981-85	25-30%	12.0%	Annual earnings	10 years	Job separations during mass-layoffs (30% reduction in workforce or closure) at firms with 50+ employees	Reduction and recovery in time worked plays a role in explaining earnings losses during the first 10 years but majority of the long-run loss is due to a decline in wages
Italy	Rosolia (2002)	Random sample of Social Security individual records on non-agricultural private sector salaried employees	1974-97	11%	10%	Weekly year earnings	4 years	All job separations; workers with tenure of at least 16 quarters by second half of 1992	Largest losses observed for workers with very short spells of non-employment and for those who experience non-employment spells longer than 1 year

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Country	Author	Data	Years	Short-term earnings loss	Long-term earnings loss	Earnings definition	Long-term definition	Displacement definition and studied group (if targeted study)	Special points
Japan	Abe et al. (2002)	Employment Mobility Survey - Survey of Employment Trends	1995	4.25% men; no effect for women; gains for age<44-54; losses at 55+		Respondents asked to report wage change		Layoffs for: management convenience (including <i>shukko</i>); firing; mandatory retirement	Earnings fall rises with age, particularly for men (age 60-64: 14.5% men and 4.4% women)
Japan	Bognanno and Delgado (2008)	Data provided by a firm engaged in job placement services	2000-03	25.7%; no effect at age 30-34; rising losses 35+		Yearly earnings		All separations excluding quitters; workers displaced from high-paying large firms	Workers incur larger penalties when they change industry after displacement
Japan	Bognanno and Kambayashi (2007)	Employment Mobility Survey - Survey of Employment Trends	1991-2005	1.28% overall; gains for age<55-59; 5% for 55-59 and 13% for 60-64		Respondents asked to report wage change		Layoffs for: management convenience (including <i>shukko</i>); firing; mandatory retirement	During the period, job-change penalties and the extent to which they are wage-related increased; effect of displacement stronger for men
Netherlands	Abbring et al. (2002)	Firm employment dataset + administrative longitudinal UI data set + Dutch labour force survey	1992-96	No loss on average 5% for workers with at least 1 year of tenure significant wage losses for workers who experience long joblessness		Weekly earnings		Workers displaced from firms reducing their workforce by at least 30%	Short-tenured workers more likely to be displaced than long-tenured workers
New Zealand	Dixon and Stillman (2009)	Statistics New Zealand's Linked Employer-Employee Data (LEED)	2001-04	22%	16%	Monthly earnings	4 years	Firm closures only; 25-64-year olds with at least 2 months of tenure	Employees displaced from small and medium-sized establishments experienced greater employment and earnings losses and so did older and longer-tenured employees
Norway	Huttenen et al. (2005)	Norwegian employer-employee survey	1988-2000	2%	5%	Annual earnings	3 years	Plant closure; workers observed in the years preceding and following closure; full time male workers aged 25-55	
Portugal	Carneiro and Portugal (2003)	Quadros do pessoal (all workers, administrative)	1994-96	10% men 7% women	12% men 9% women	Real hourly earnings	4 years	Workers displaced due to firm closure	35% of re-employed workers changed industry
Sweden	Eliason and Storrie (2006)	Linked employer-employee data	1986-87	Earnings differential = SEK 8 394	SEK 5 584	Annual earnings	3 years	Workers aged 21-50 in 1986, displaced due to establishment closure	

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Country	Author	Data	Years	Short-term earnings loss	Long-term earnings loss	Earnings definition	Long-term definition	Displacement definition and studied group (if targeted study)	Special points
United Kingdom	Boreland et al. (2002)	British Household Panel Survey	1991-96	14% total 9% full-time before and after		Weekly earnings		Workers stating that they left their previous job for reason of redundancy or the end of a temporary contract	Older and low-educated workers least likely to return to work; largest wage losses for women (22%), long-tenured (30%), older (23% for 50+) and low-educated (19%) workers
United Kingdom	Hijzen et al. (2010)	New Earnings Survey Inter-Departmental Business Register Annual Business Inquiry	1994-2003	Yearly losses (average over 5 years 1998-2002) firm-closure: 35% total; 18% displaced only once; 1% no unemployment spell mass layoff: 25% displaced one or more times; no loss if no unemployment		Annual income		Firm closures and mass layoffs	Losses computed assuming UI income during unemployment (larger losses if income during unemployment set at 0); income losses driven by non-employment
United States	Abbring et al. (2002)	Displaced Workers' Surveys (DWS - regular supplement to the February Current Population Survey)	1993-95	On average, wage gain but significant dispersion: one-third of displaced workers earn 10% more than before displacement but weekly earnings fall by 25% for 52% of workers		Average real weekly earnings		Permanent job separations initiated by employers because of adverse economic conditions	Age differences in re-employment rates are small up to late forties but workers 50+ suffer more prolonged unemployment; likelihood of joblessness after displacement rises with tenure and age; workers 55+ experience very large wage losses
United States	Carrington and Zaman (1994)	Displaced Workers' Surveys (DWS - regular supplement to the January Current Population Survey)	1984-88	From loss of 45.5% in petroleum and gas extraction to gain of 3% in leather products manufacturing; At 1-digit industry: losses in mining 40%, construction and manufacturing 15-16%, retail and finance 11-12%, transport, trade and agriculture 10% and gain of 3% in services		Weekly earnings		Sample restricted to males, aged 21-63, displaced in plant closings or mass layoffs from full-time, private sector jobs; uses County Business Patterns data to distinguish firm-level displacement from working in declining state or industry	The tenure and experience profiles of wage reductions vary by industry and are not fully explained by cross-industry variation in firm size, unionization, wage levels, and the incidence of employer-provided training
United States	Cha and Morgan (2010)	Displaced Workers' Surveys (DWS - regular supplement to the January Current Population Survey)	2006 and 2008	Industry movers - manuf. to: service (36%); sales (42%); construct. (52%); pub. Admin. (40%); transp. (3%); agric. (9%) - all other moves 15%		Weekly earnings		Individuals aged 18-64 with positive earnings suffering involuntary separation based on operating decisions of the employer	Industry stayers experience mix of gains and losses: manuf., transp. & utilities, agric. gain (2, 6, 15% resp.) - service, sales, construct., pub. admin loss (13, 11, 14, 60% resp.)

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Country	Author	Data	Years	Short-term earnings loss	Long-term earnings loss	Earnings definition	Long-term definition	Displacement definition and studied group (if targeted study)	Special points
United States	Couch and Placzec (2010)	Administrative files from Connecticut linked to wage data from the quarterly census of employment and wages	1993-2004	No comparison group 33% with comparison group 32%	No comparison group 15% with comparison group 12%	Quarterly earnings	6 years	Includes quitters and workers fired for cause in the main estimation	Older workers and women found to suffer larger losses; focusing only on UI recipients ensures that quitters and workers fired for cause are excluded but overestimates the effect of layoffs because it excludes job-to-job movements: earnings loss 49% at separation and 32% six years later
United States	Couch et al. (2009)	Administrative files from Connecticut linked to wage data from the quarterly census of employment and wages	1993-2004	40-year olds: 22% 57-year olds: 48%	40-year olds: 14% 57-year olds: 52%	Quarterly earnings	6 years	Mass layoff: job loss occurring within a year either before or after a quarter in which a firm's employment was 30% less than the max observed over the period long-tenured workers only (workers continuously employed between 1993 and 1998) and aged 40+	Losses are larger when displaced workers change industry
United States	Fallick et al. (2011)	US Census Bureau's Longitudinal Employer-Household Dynamics matched with Quarterly Census of Employment and Wages	1991-2008	No losses for workers re-employed in same quarter of separation; 20% losses if 4 quarters of non-employment		Quarterly earnings		Workers aged 25-55 with 1+ year of job tenure who experience a separation in their main job in 1995; only transitions within states are included; distressed-firm separations if firm experiences a 30%+ reduction in employment in the year ending with the quarter after separation	In 1995: most displacement from financial sector; in 2001, most displacement from professional and business services; both 1999 and 2001 higher share of manufacturing displacement than in 1995
United States	Farber (1993)	Displaced Workers' Surveys (DWS - regular supplement to the January Current Population Survey)	1982-91	1984 12% 1986 14% 1988 12% 1990 10% 1992 17%		Weekly earnings		Individuals 20-64 suffering involuntary separation based on operating decisions of the employer	No counterfactual available in DWS
United States	Farber (1997)	Displaced Workers' Surveys (DWS - regular supplement to the January Current Population Survey)	1981-95	13% (average 1981-1995) 9% FT to FT (6.4% FT to FT with college; 9.3% FT to FT with high-school education)		Weekly earnings		Individuals 20-64 suffering involuntary separation based on operating decisions of the employer	No counterfactual available in DWS
United States	Farber (2011)	Displaced Workers' Surveys (DWS - regular supplement to the Current Population Survey)	1981-2010	FT-to-FT job losers: 1998-00: 1% 2002: 8% 2004: 12% 2006-08: 5% 2010: 11%		Weekly earnings		Individuals 20-64 suffering involuntary separation based on operating decisions of the employer - rates for 1981-1995 as in Farber (1997)	No counterfactual available in DWS; non-employment after displacement is higher for youth and older workers; higher for women; higher for low-educated

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United States	Jacobson et al. (1993)	Longitudinal dataset constructed from UI tax records and firms' quarterly reports on employment	1982	50%	25%	Quarterly earnings	5 years	Pennsylvania only (i.e. dominated by traditional sectors, notably automobile industry); workers with 6+ years of tenure and positive earnings every year (i.e. only short unemployment durations captured); firms reducing employment by 30%+ but reason for separation unknown	Losses vary modestly with local labor-market conditions, industry and firm size; do not vary with gender and age; are large even if re-employed in similar firms
United States	Kodrzycki (2007)	Matched data from: JTPA (Massachusetts); Massachusetts unemployment insurance (UI) claims files; and Massachusetts UI-covered wage records	1993-2003	21%	11%	Annual earnings	10 years	All permanent involuntary layoffs; Massachusetts only; compares permanently displaced workers to recalled workers	Recalled workers suffered substantial wage losses; costs of permanent job loss larger for workers with no formal education beyond high school than for those with at least some college; participation in job training or gen. education as part of JTPA did not augment re-employment pay compared with only basic re-employment services
United States	Podgursky and Swaim (1987)	Displaced Workers' Surveys (DWS - regular supplement to the January Current Population Survey)	1979-84	10% Blue-collar workers 5% Service and white-collar workers		Weekly earnings		Sample of workers aged 20-61 who lost or left a full-time job because of a plant closing, an employer going out of business, or other permanent layoff; non- agricultural jobs only between 1979 and 1984	Greater general education significantly reduces earnings losses for both blue-collar and white-collar and service workers; it also significantly increases the likelihood of full-time re-employment; workers with large investments in specific human capital suffer larger re-employment earnings losses
United States	Ruhm (1991)	Panel Study of Income Dynamics	1971-75	16%	14%	Weekly wages	4 years	Plant closures or permanent layoffs (excluding departures from temporary or seasonal jobs); only workers in labour force between t and $t+5$	
United States	Shoeni and Dardia (1996)	Administrative data from California	1991	59%	17%-25% (depends on counterfactual used for non-separating workers)	Quarterly earnings	3 years	Reason for separation unknown; 2/3 of sample in aerospace sector; positive earnings for every year required (i.e. only short unemployment durations captured)	No pre-displacement losses found; losses vary among workers, year of displacement, economic conditions, firm size and industry of re-employment and number of subsequent separations

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United States	Stevens (1997)	Panel Study of Income Dynamics	1968-88	25% annual earnings; 13% hourly wages	10%: 4 years after job loss; 6%-7%: 10+ years after job loss	Real hourly wages and annual earnings	10+ years	Household heads present in the survey every year (1968-1988) with positive earnings each year; leaving due to plant or business closure or to being laidoff or fired	Persistence explained by additional job losses in years following initial displacement; workers who avoid additional displacements have earnings and wage losses of 1% and 4% 6 or more years after job loss; risk of further job loss is 10%-12% in first 2 years and 6%-9% in the following 3 years; less educated workers more likely to experience multiple displacements
United States	Swaim and Podgursky	Displaced Workers' Surveys (DWS - regular supplement to the January Current Population Survey)	1984-86	Median losses by education years: <=11y 16.1%; 12y 10.2%; 13-15y 8.4%; 16+y 2%		Weekly earnings		Sample of workers aged 20-61 who lost or left a full-time job because of a plant closing, an employer going out of business, or other permanent layoff; non- agricultural jobs only between 1979 and 1984	Strongest (negative) effect of education on full-time weekly earnings losses observed for white-collar and women in service sector; strongest (negative) effect on loss of work weeks observed for blue-collar women
United States	von Wachter et al. (2009a)	Match of Displaced Worker Survey and administrative wage records from California	1991-2000	50-70%		3-year change in quarterly earnings		Permanent layoffs, plant closing, employer going out of business; workers aged 20-64	Earnings measure chosen (weekly vs. quarterly, survey vs. administrative) can make an important difference for assessing the cost of job loss
United States	von Wachter et al. (2009b)	Continuous Work History Sample, Master Earnings File, Longitudinal Employee-Employer Data	1980-86	30%	20%	Annual earnings	10-20 years	Workers dismissed during mass layoffs over 1980-1986 followed up to 2004	