Labor Economics and Employment Policies

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1. Facts about job creations and job destructions
2. Job search (the basic model and its implications)
3. Matching (the basic model)
4. Matching (the implications of the basic model, in particular analysis of the relation between unemployment and growth...)
5. Minimum wage
6. Employment protection legislation
7. Working time regulation and employment
8. Public job creation and employment
9. Culture, institutions and labor market performance

Lecture 1: Facts about job creations and job destructions

- In all the OECD countries, workers' mobility among the different possible states in the labor market (from one job to another, from a job to unemployment, from unemployment to non-participation etc.) is a phenomenon of major dimensions.
- Every year about 15 percent of jobs are destroyed (and more are created, on average)
- For 100 jobs, there are about 40 hires and separations every year
- The duration of the transition periods between all possible states results mainly from imperfections inherent in the functioning of the labor market.

- Two kinds of data allow us to understand the dynamics of the labor market better:

    - job creation and destruction
    - worker flows

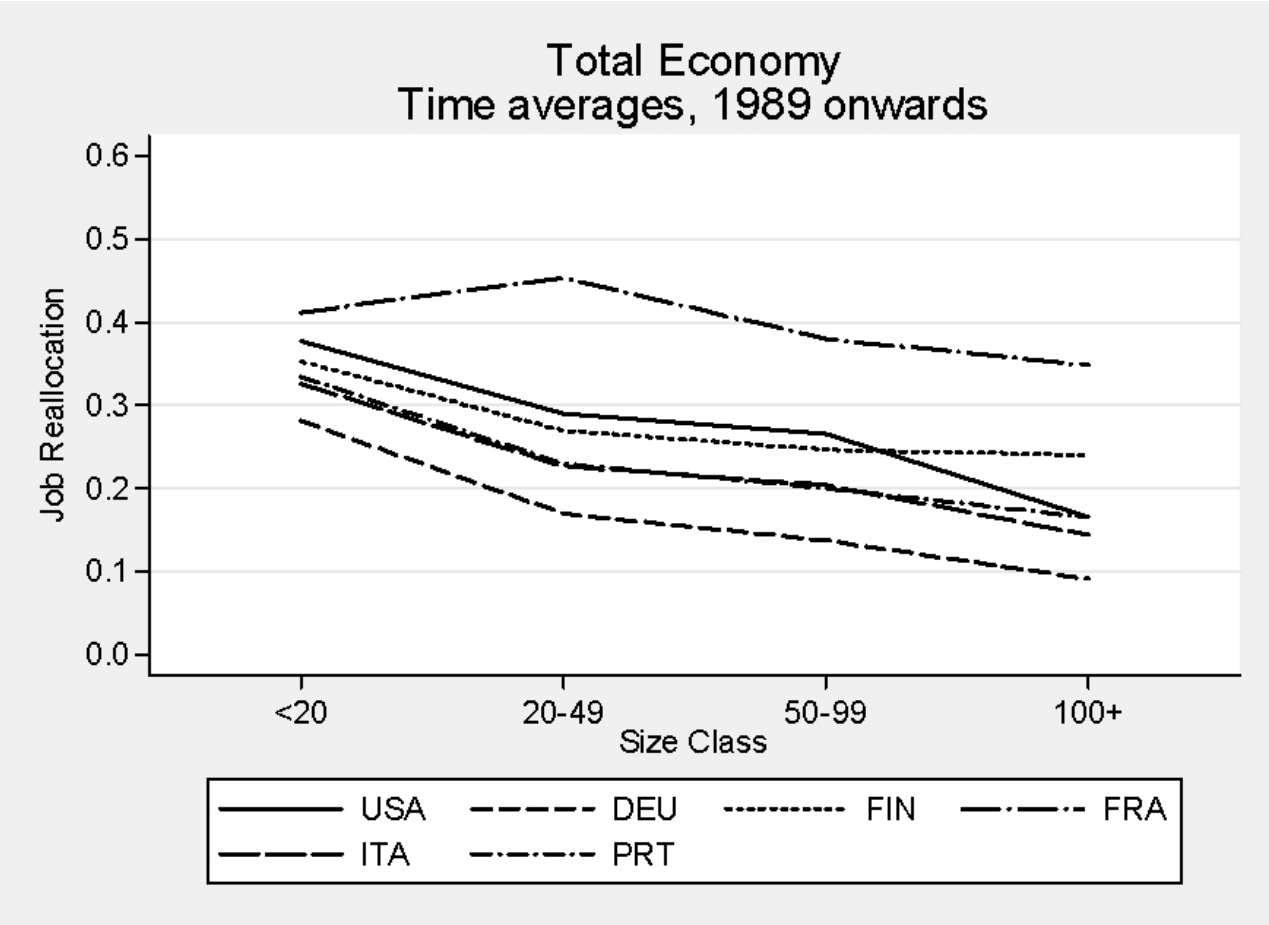
- Net employment changes = job creation - job destruction = hires - separations
- Plan: 1.

    1. Job flows
    2. Worker flows
    3. Relation between job and worker flows

1. Job flows

Country	Job creation	Job destruction	Net employment growth	Job reallocation
France (84-91)	12.7	11.8	0.9	24.5
Germany (83-90)	9.0	7.5	1.5	16.5
Netherlands(84-91)	8.2	7.2	1.0	15.4
United Kingdom (85-91)	8.7	6.6	2.1	15.3
United States (84-91)	13.0	10.4	2.6	23.4

Reallocation across firms of different sizes (Haltiwanger, Sarpetta, Schweiger, 2008)



The contribution of firm turn over to job flows in the 90s (Haltiwanger, Sarpetta, Schweiger, 2008)

OECD		
Job Creation Rate	448	0.127
Job Destruction Rate	448	0.127
Net Employment Growth	448	0.000
Job Reallocation Rate	448	0.254
Excess Job Reallocation Rate	448	0.223
Job Creation Rate (Entry)	448	0.045
Job Destruction Rate (Exit)	448	0.045

Job flows by industry in the US (Business employment dynamics survey, Davis, Faberman, Haltiwanger, 2006)

A. Average Quarterly Job Flow Rates in the BED, 1990:2–2005:1

	Job creation	*Job destruction*	*Net growth*
Total private	7.9	7.6	0.3
Construction	14.3	13.9	0.4
Manufacturing	4.9	5.3	−0.4
Retail trade	8.1	7.9	0.2
Professional & business services	9.9	9.1	0.8
Leisure & hospitality	10.7	10.2	0.5

The extent of within-sector reallocation

- If S designates the number of sectors, we look at the net employment growth in a given sector s (V_n^s) and the net employment growth in the economy as a whole (V_n).
- An initial indicator assesses the extent of job reallocations due to between-sector movements. It is defined by:

$$R_E = \sum_{s=1}^{S} |V_n^s| - |V_n|$$

- Let T_s be the job reallocation in sector s; the second indicator corresponds to the sum of excess job reallocations within each sector:

$$R_I = \sum_{s=1}^{S} (T_s - |V_n^s|)$$

The fraction of job reallocations due to between-sector shifts is then measured by the ratio $R_E/(R_I + R_E)$.

Country	Period	Number of sectors	$R_E/(R_I+R_E)$
Germany	83-90	24	0.03
United States	72-88	980	0.14
France	84-88	15	0.06
France	84-91	600	0.17
Italy	86-91	28	0.02
Sweden	85-91	28	0.03

The persistence of job creation and destruction

Davis and Haltiwanger (1999) :

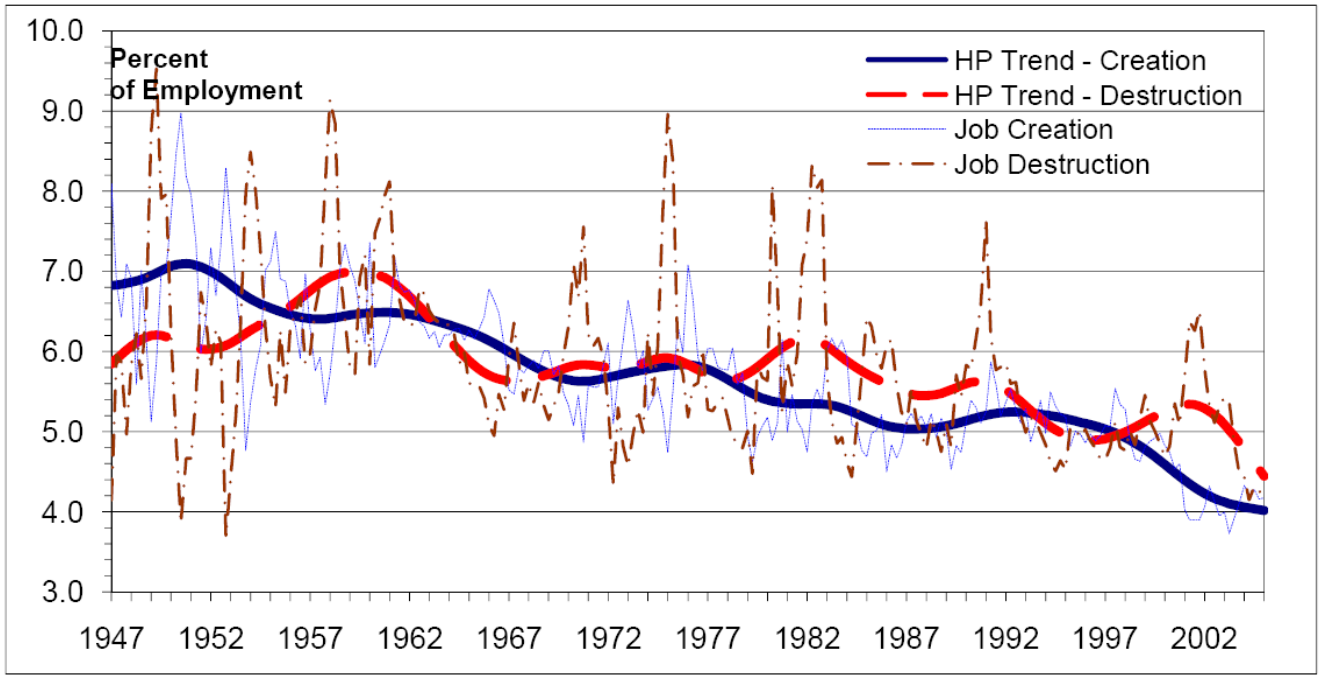
- Indicator of persistence of n periods of job creation as the percentage of jobs created in period t that are still in existence at the end of period $t + n$.
- Indicator of the persistence of job destruction is similarly defined as the percentage of jobs destroyed during period t that have not reappeared at date $t + n$.

Country	U.S.		France		Netherlands	
Period	73-88		85-91		79-93	
Horizon	1 year	2 years	1 year	2 years	1 year	2 years
Creations	70.2	54.4	73.4	61.5	77.9	58.8
Destructions	82.3	73.6	82.1	68.2	92.5	87.3

Long run trend in the US

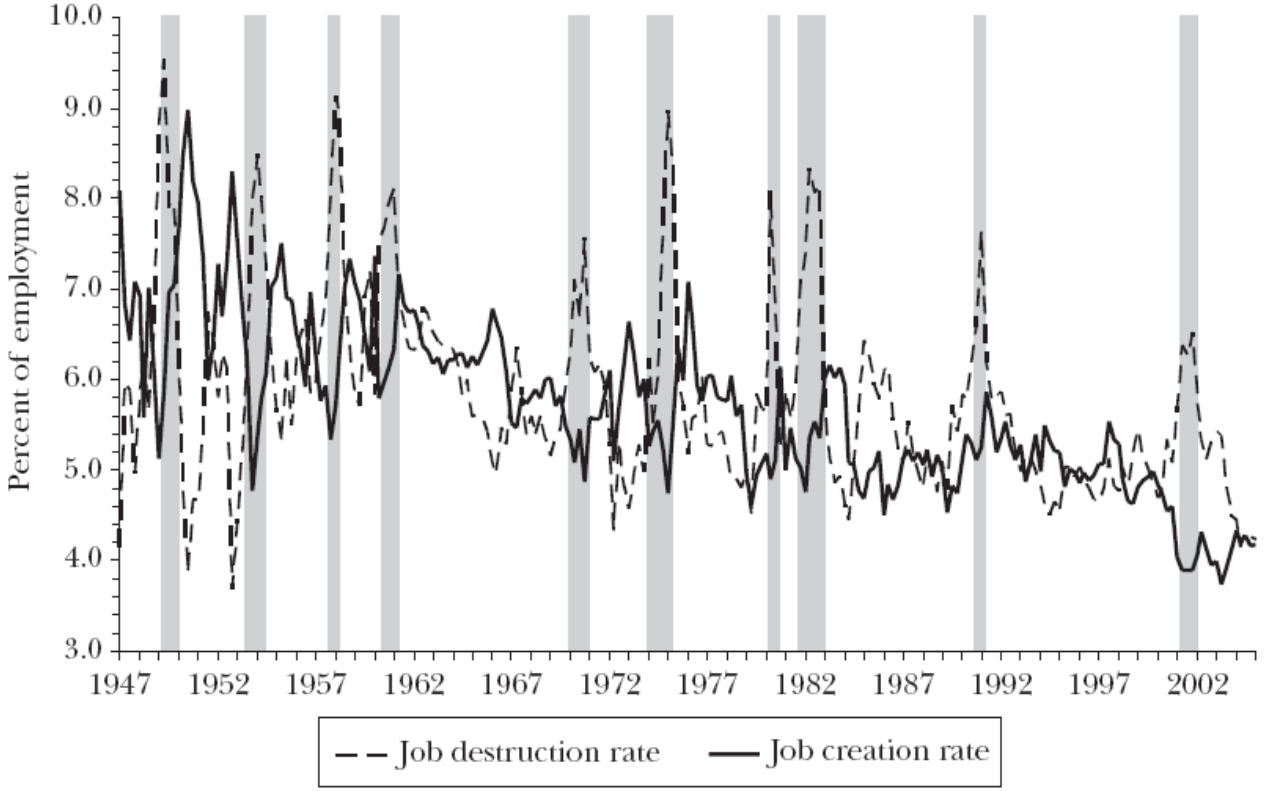
Figure 4. Quarterly Job Flows Trends, Manufacturing and Nonfarm Business

(a) U.S. Manufacturing, 1947-2005



Cycles in the US

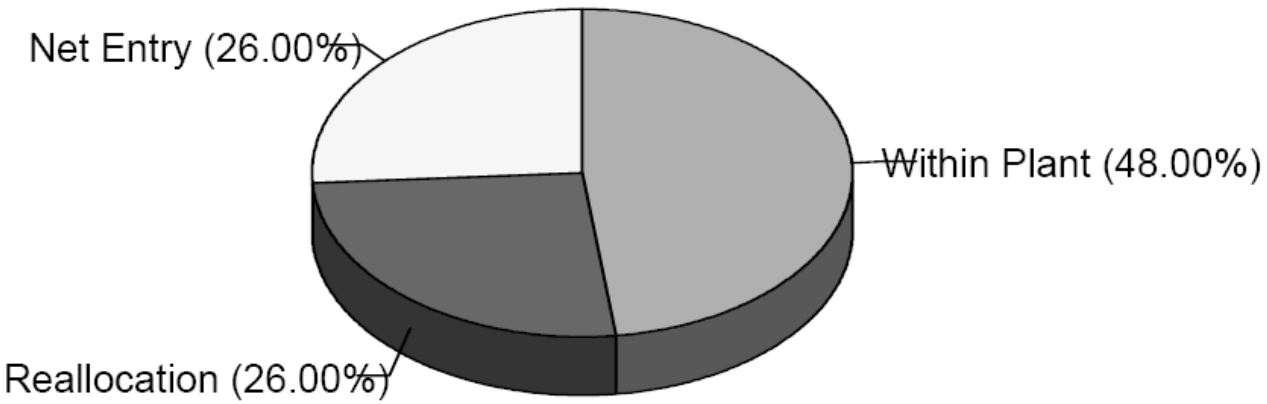
Quarterly Job Flows in Manufacturing, 1947–2005

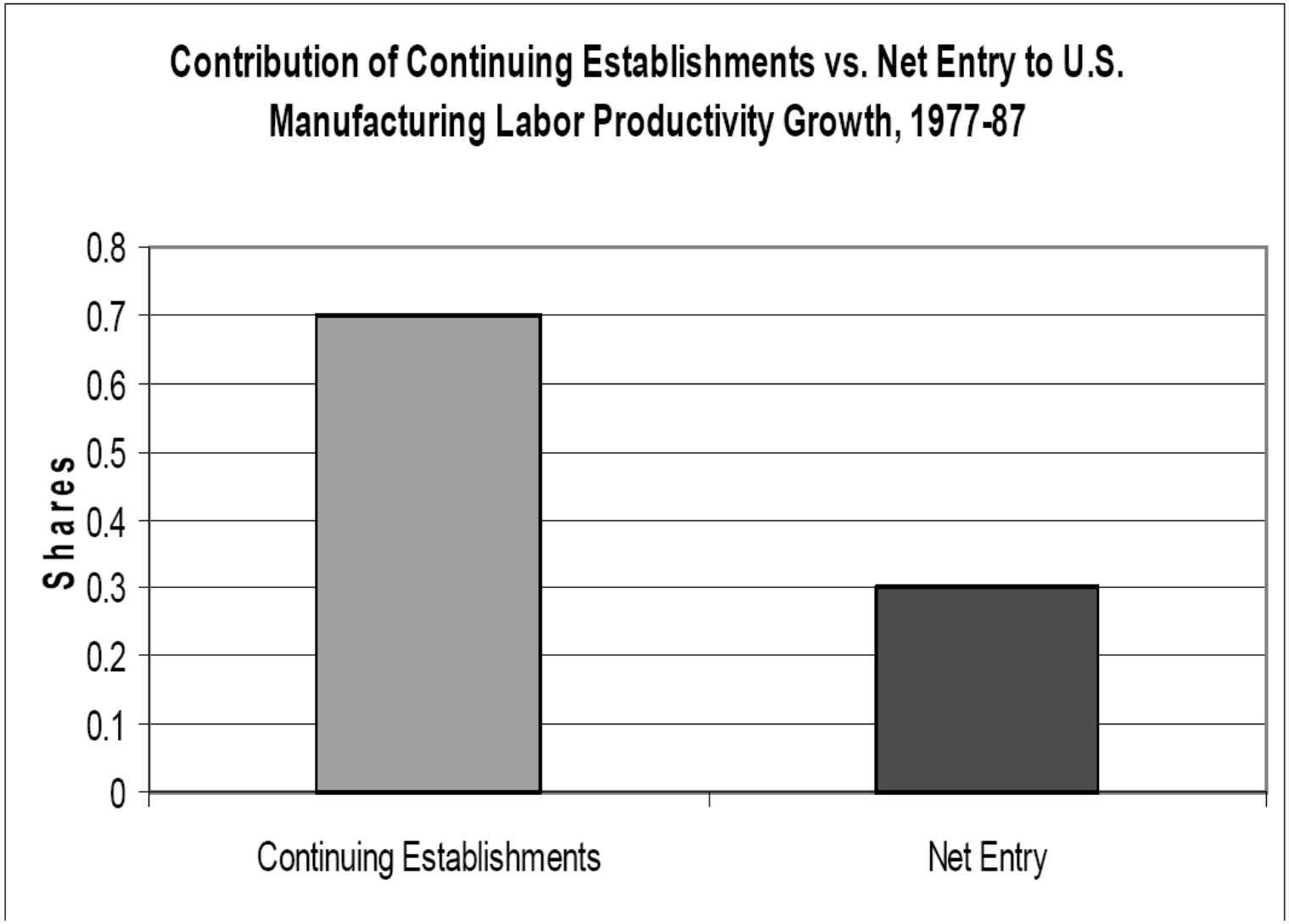


Job flows and productivity in France (1994-1997, Crepon et al. 2003)

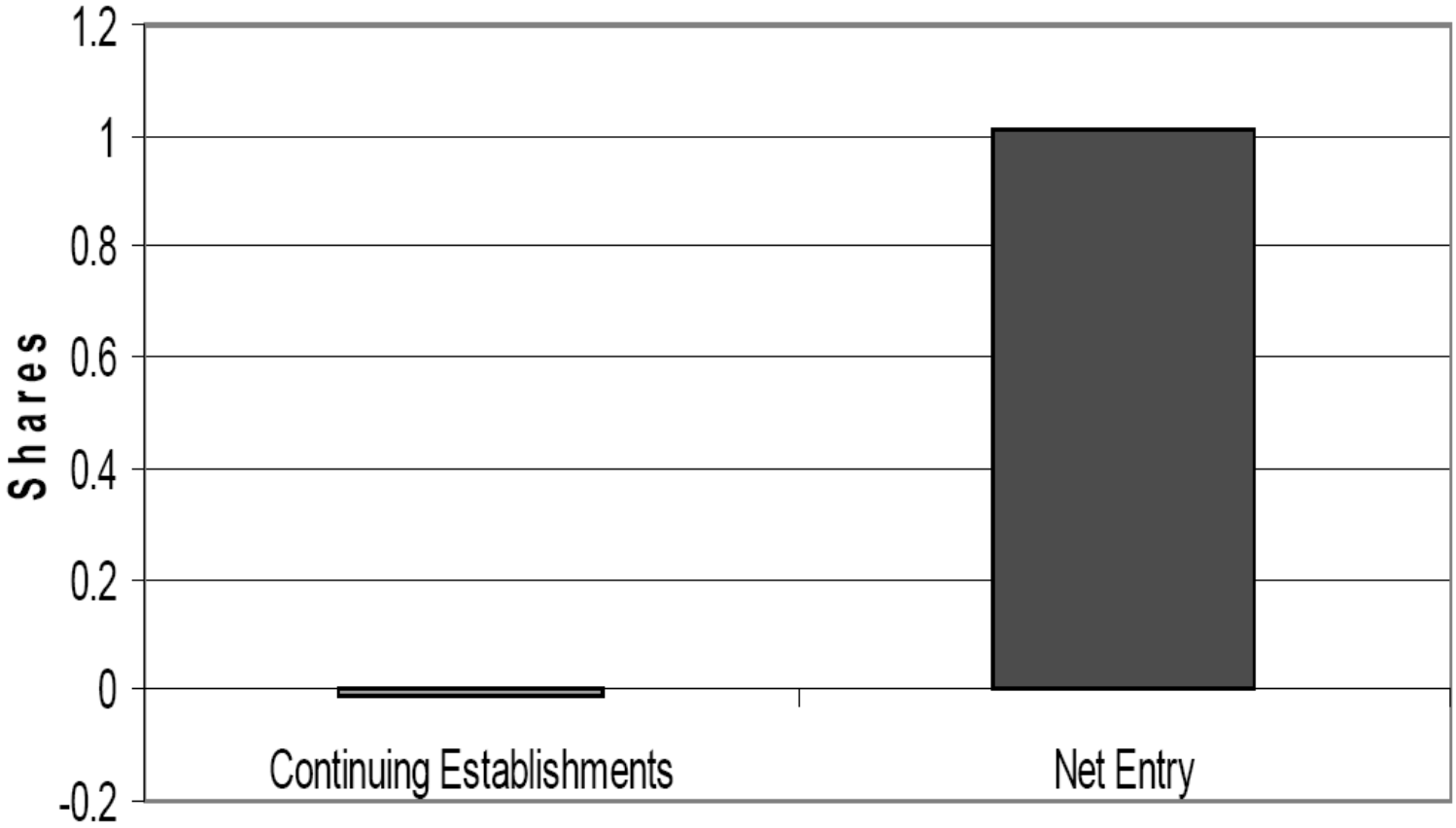
	1st quartile			4th quartile		
	JC	JD	Net change	JC	JD	Net change
Manufacturing	8.8	-14.2	-5.3	8.5	-7.2	1.3
Services	16	-19.5	-3.5	15.8	-11.7	4.1

Decomposition of TFP in U.S. Mfg
1977-1987




Contribution of Continuing Establishments vs. Net Entry to U.S. Manufacturing Labor Productivity Growth, 1977-87
Shares
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Continuing Establishments
Net Entry

Contribution of Continuing Establishments vs. Net Entry to U.S. Retail Trade Labor Productivity Growth, 1987-97



2. **Worker flows**

- Worker reallocation can be identified by observing the flow of entries into and exits from employment and unemployment
- Net employment changes = job creation - job destruction = hires - separations

Job and workers flows in the US (Davis and Haltiwanger, 2006, JEP)

Table 1

Job and Worker Flow Rates by Sampling Frequency and Data Source

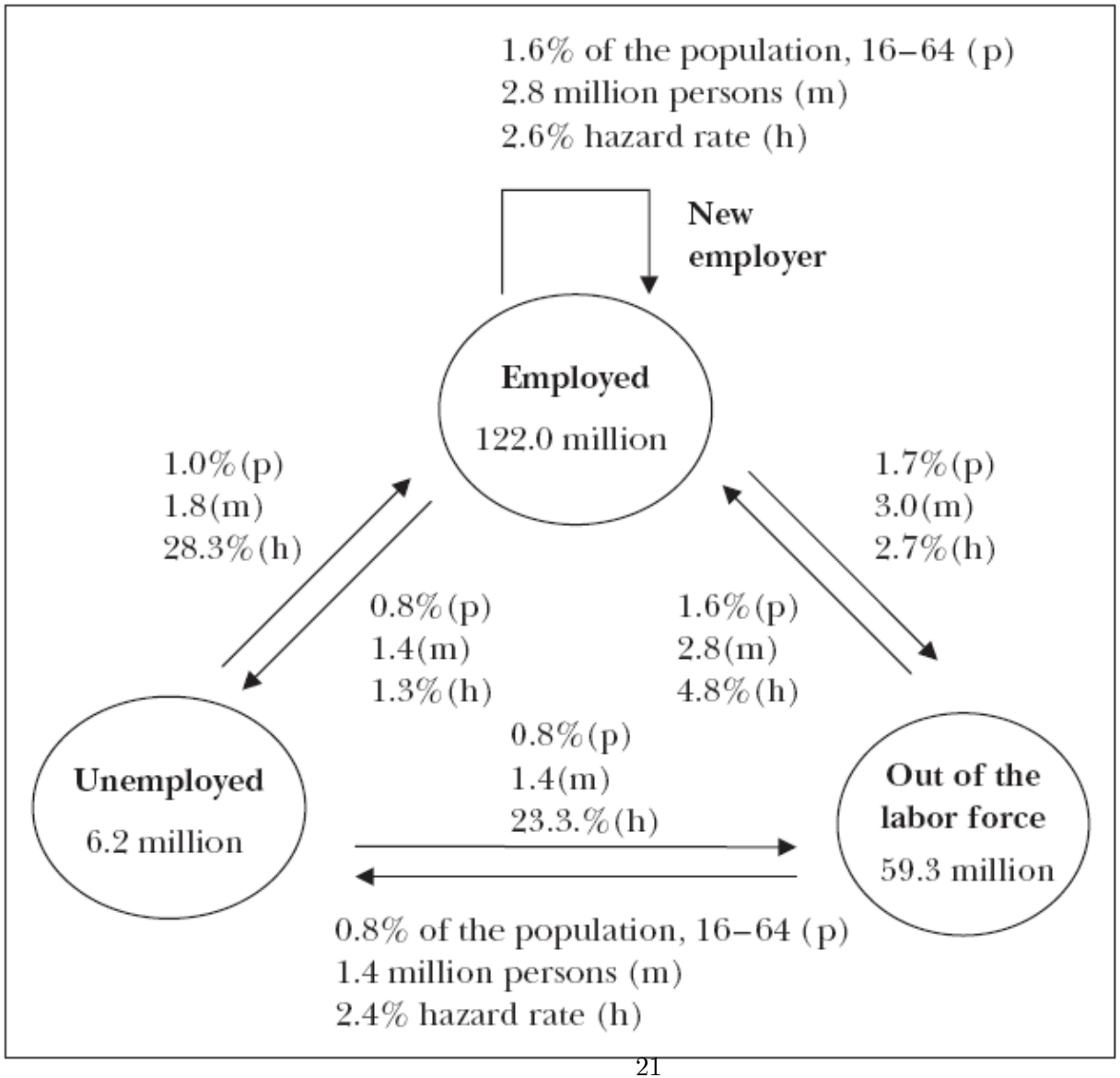
Sampling Frequency and Data Source	*Job creation*	*Job destruction*	*Hires*	*Separations*
Monthly				
JOLTS, continuous monthly units from microdata, Dec. 2000 to Jan. 2005	1.5	1.5	3.2	3.1
Quarterly				
JOLTS, continuous quarterly units from microdata, Dec. 2000 to Jan. 2005	3.4	3.1	9.5	9.2
BED, all private establishments, 1990:2–2005:1	7.9	7.6	—	—
LEHD, all transitions, ten selected states, 1993:2–2003:3	7.0	6.0	25.0	24.0
LEHD, "full-quarter" transitions, ten selected states, 1993:2–2003:3	7.6	5.2	13.1	10.7
Annual				
BED, from Pinkston and Spletzer (2004), private establishments, 1998–2002	14.6	13.7	—	—

Sources: JOLTS is the Job Openings and Labor Turnover Survey; BED is Business Employment Dynamics data; and LEHD is Longitudinal Employer Household Dynamics data.

B. Average Monthly Worker Flow Rates in JOLTS, December 2000 to January 2005

	Hires	*Separations*	*Quits*	*Layoffs*
Total nonfarm	3.2	3.1	1.7	1.1
Construction	5.3	5.5	2.1	3.2
Manufacturing	2.2	2.7	1.2	1.2
Retail trade	4.3	4.2	2.6	1.3
Professional & business services	4.2	3.9	2.0	1.6
Leisure & hospitality	6.1	5.9	3.9	1.8

Average Monthly Worker Flows, Current Population Survey, 1996–2003



Source: Fallick and Fleischman (2004).

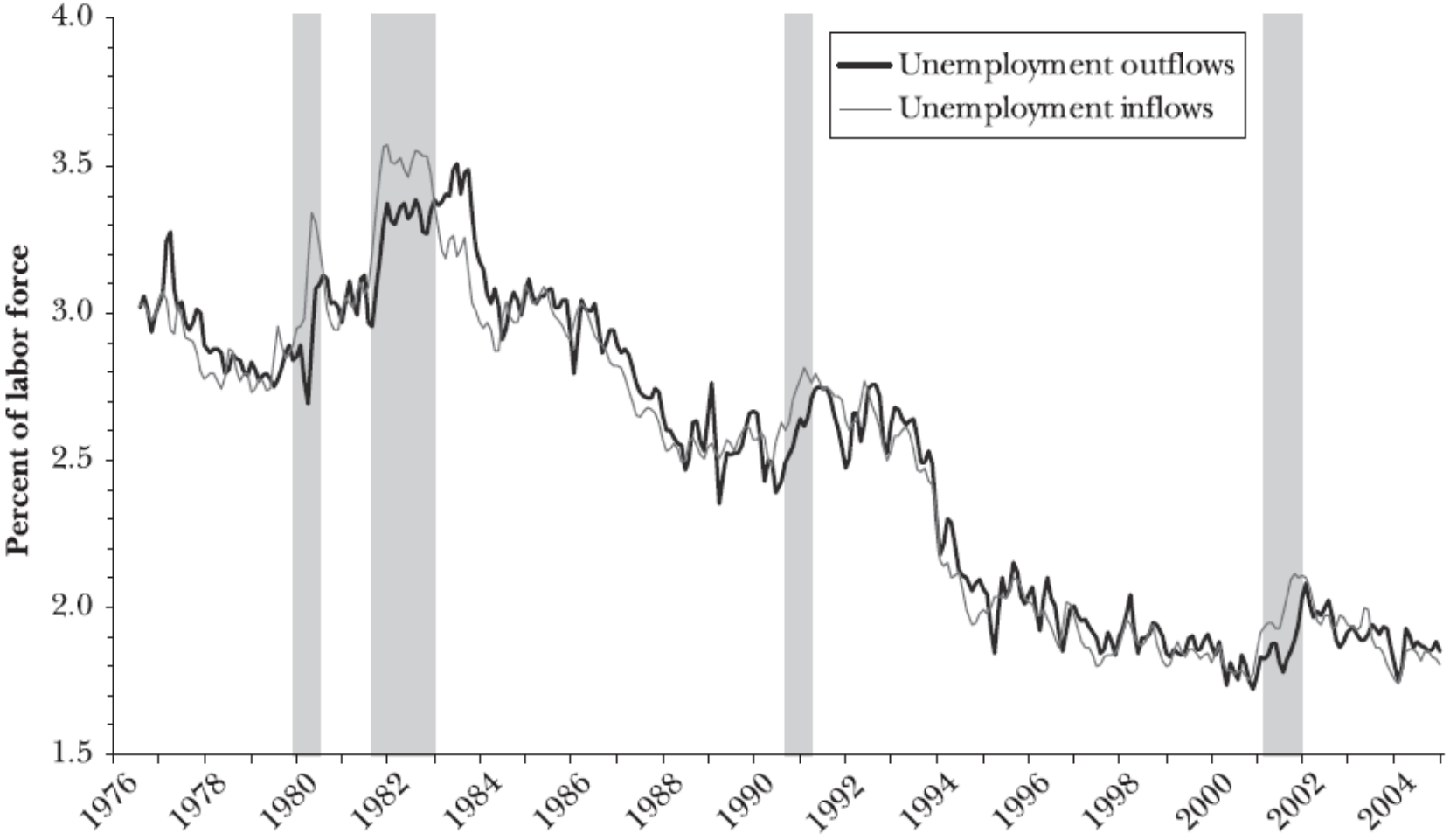
For the G5 countries during the year 1987 (annual employment infllows and outflows)

Country	Entry rate	Exit rate
United States	26	27
France	29	31
Japan	9	9
United Kingdom	11	11
Germany	22	21

Monthly unemployment inflows and outflows in OECD countries in 1993

Country	Entry rate	Exit rate
United States	2.06	37.4
France	0.34	3.4
Japan	0.38	17.1
United Kingdom	0.67	9.3
Germany	0.57	9.0

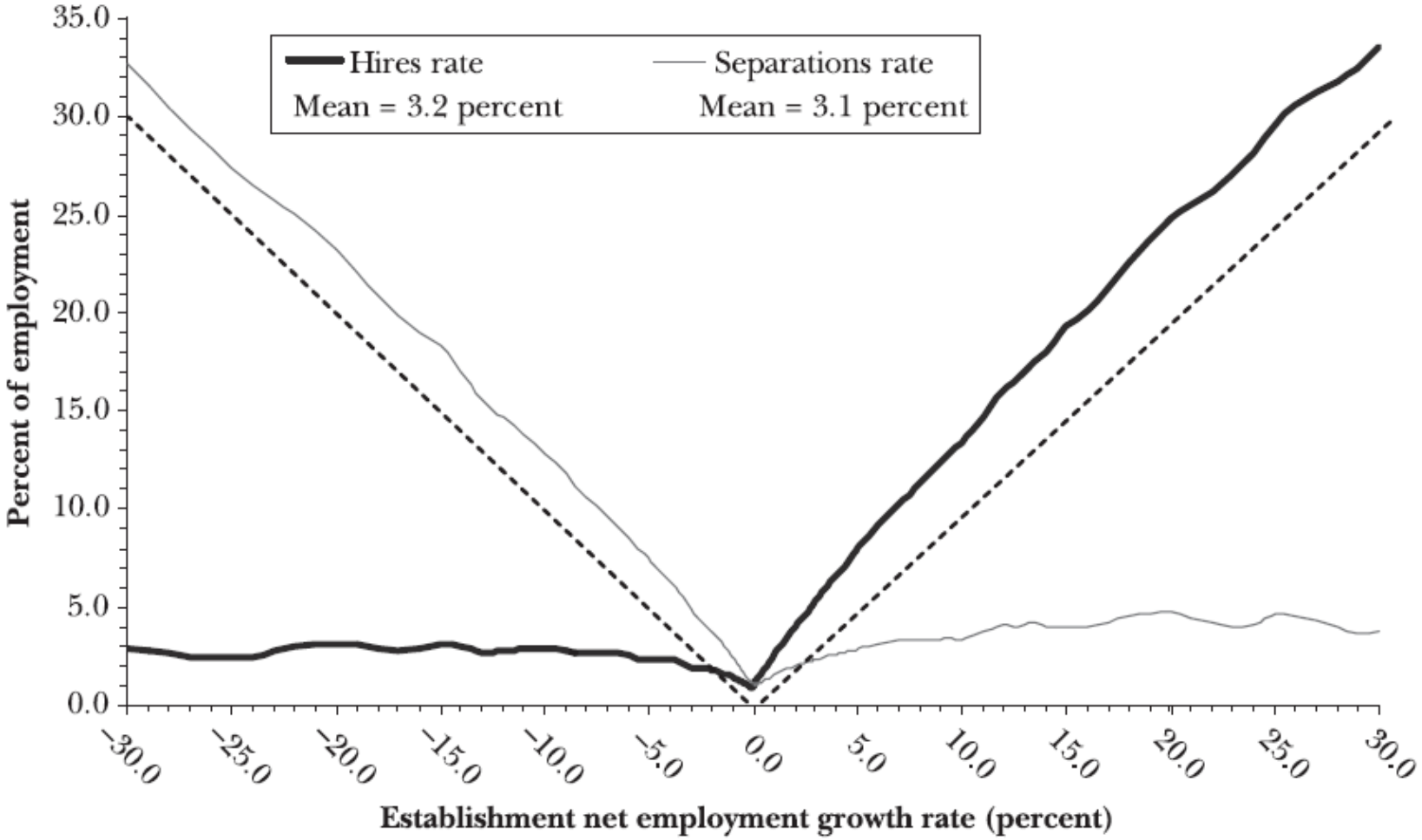
Monthly Unemployment Inflows and Outflows, 1976–2005



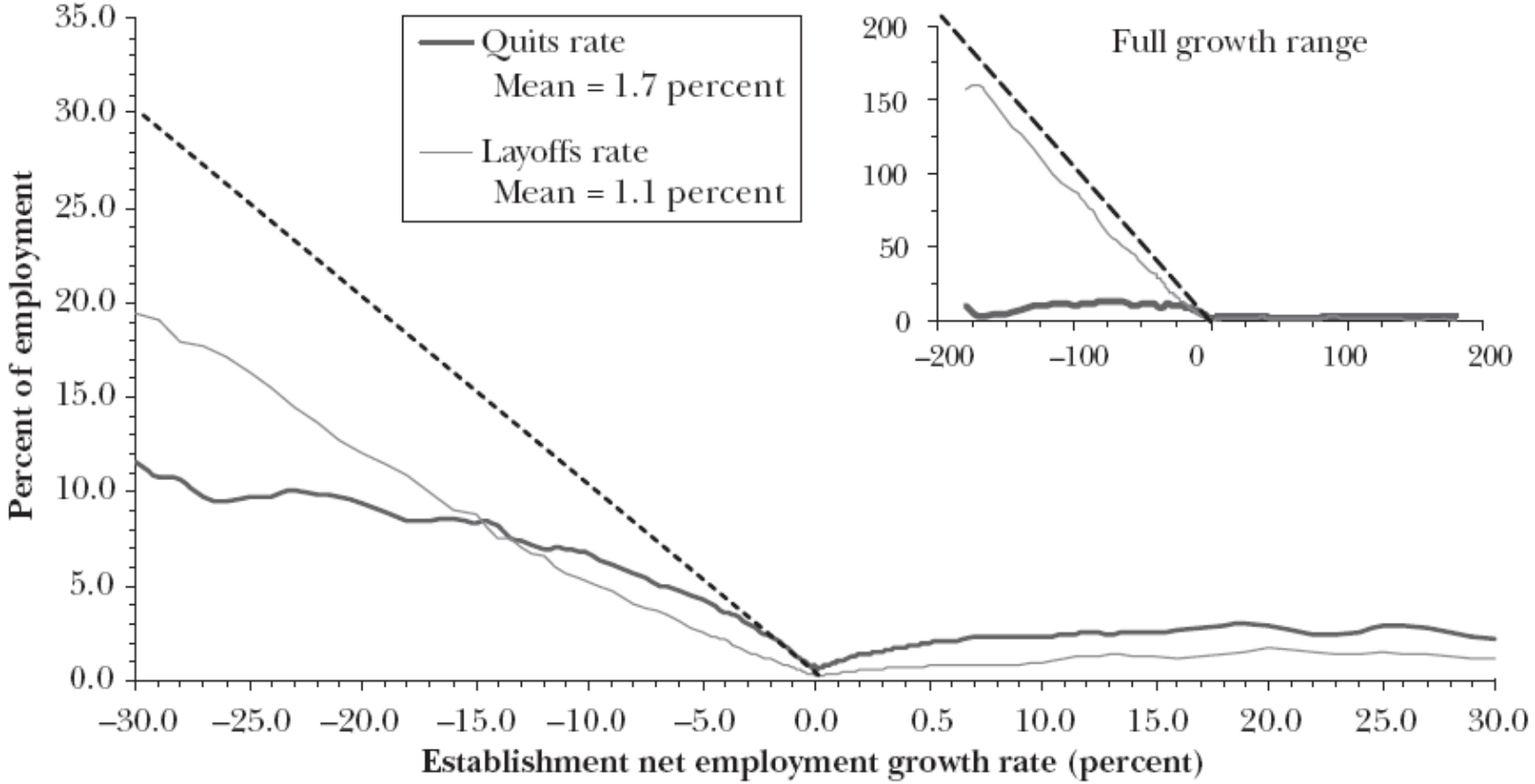
Notes: The figure depicts three-month centered moving averages of estimated gross flows of persons into and out of unemployment based on Current Population Survey (CPS) data. Shaded areas show NBER-dated recessions.

3. The relation between job and worker flows

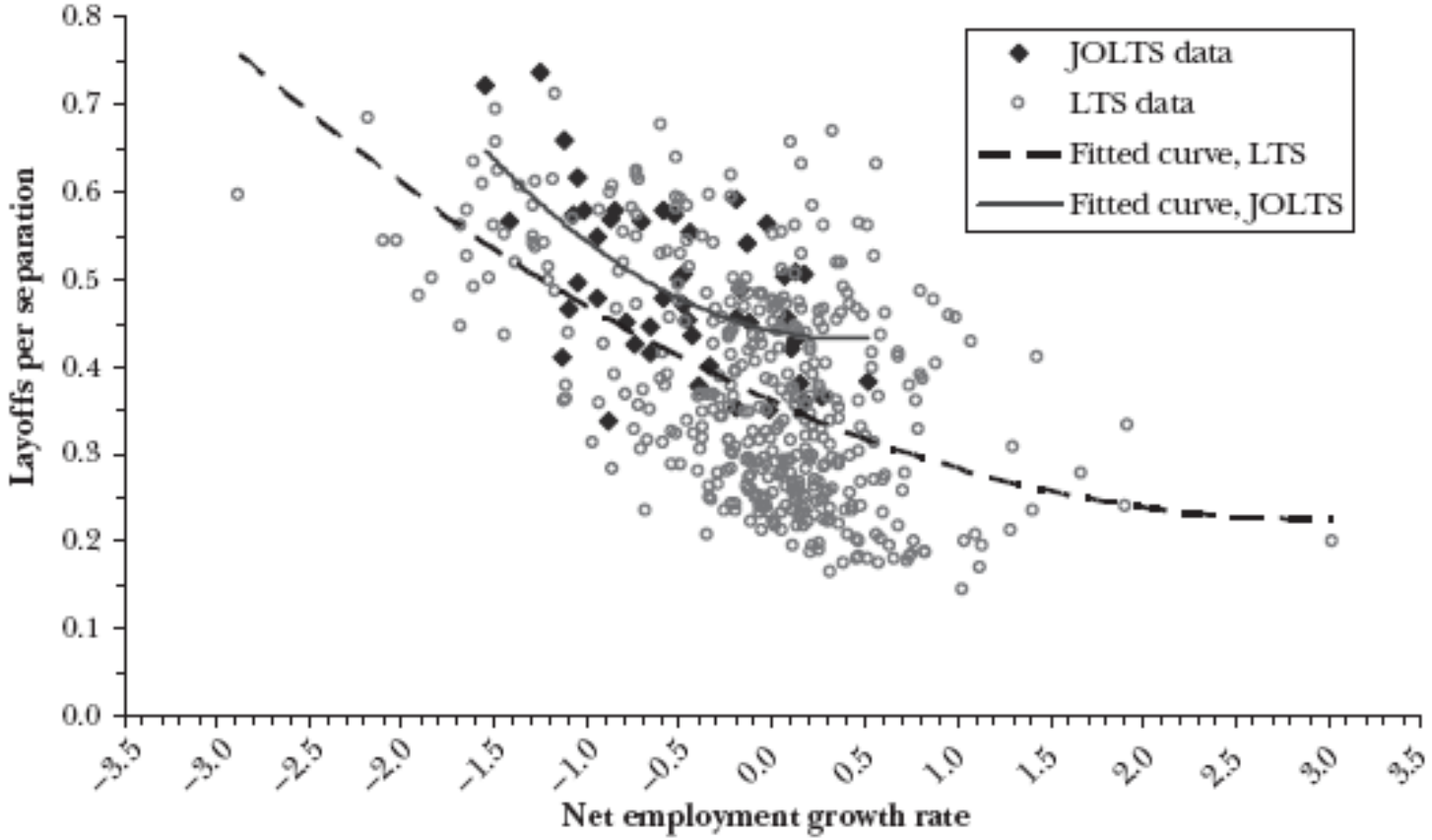
The Relationship of Hires and Separations to Establishment Growth



The Relationship of Quits and Layoffs to Establishment Growth



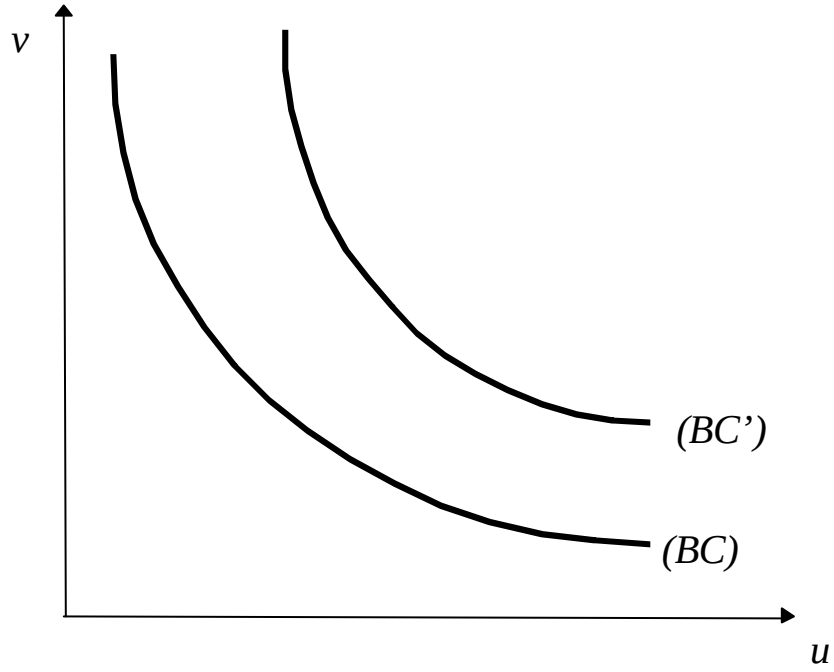
Layoffs–Separation Ratio as a Function of the Net Employment Growth Rate, Manufacturing Sector, Seasonally Adjusted Monthly Data



On displacements in some OECD countries

Country	Period	Population	Annual rate
U.S.	1993-95	age 20-64	4.9
Netherlands	1993-95	under 60	4.1
Canada	1995	age 15 and over	4.9
U. K.	1990-96	more than 18	4.7
Australia	1995	employed worker	5.2

The Beveridge curve



Further readings

- Pierre Cahuc and André Zylberberg, *The Natural Survival of Work, job creation and job destruction in a growing economy*, MIT Press, Cambridge, 2006.
- Steven Davis, John Haltiwanger and Scott Schuh, *Job Creation and Destruction*, MIT Press: Cambridge, 1996.
- Steven Davis John Haltiwanger and Jason Faberman, The Flow Approach to Labor Markets: New Data Sources and Micro-Macro Links, *Journal of Economic Perspectives*, Summer 2006
- The web page of John Haltiwanger: http://www.econ.umd.edu/~haltiwan/