

Personnel Economics

Managing Turnover

(Chapter 4)

Open Questions

- Is turnover always bad for the firm? Why does it arise?
- Does it pay to poach new employees from other firms? When?
- How should firms react if employees are poached by other firms?
- Who should be laid off in bad times?
- Buy-out instead of lay off? What buy-out offers should be made? What buy-out offers are accepted?
- How to implement buy-outs?

Turnover Good or bad?

1. Turnover and screening

- Uncertainties about skills and “job matches” (compatibility between worker and job)
- Screening to find out about unobserved skills
- Turnover as result of screening should increase the quality of workers
- Particularly suitable for young, well-paid workers with high risk

2. Turnover and technology

- Outside hires bring new perceptions, ideas and technology
- Mix of older and younger employees (firm-specific human capital)
- In particular in technology-intensive fields

Turnover Good or bad?

3. Turnover and organizational change

- Knowledge about the organization needs constant stock of workers
- New hires bring new ideas about methods and processes (reduces organizational blindness)
- Important to adapt to changing circumstances

4. Turnover and hierarchical structure

- Fewer jobs at higher levels
- Non-promoted workers leave
- Motivational problems in flat hierarchies

5. Turnover and human capital

- General human capital: low costs of turnover
- Firm-specific human capital: high costs of turnover
- The more important firm-specific human capital is in the firm, the more costly is turnover

- Avoid non-desirable turnover
 - Compensation (market value)
 - Regard key employees as partners
 - Other benefits
 - Flexible hours
 - Training and job enrichment
 - Promotions
 - Avoid arbitrary treatment of workers
- Reduce costs of turnover
 - Avoid single key-employees, use teams in key-fields
 - Change tasks periodically
 - Use knowledge management systems (eg. documentations)
- Desired turnover: Up-or-out system (promotion or lay-off)

Raiding (Poaching)

Labor market for managers and highly skilled workers:

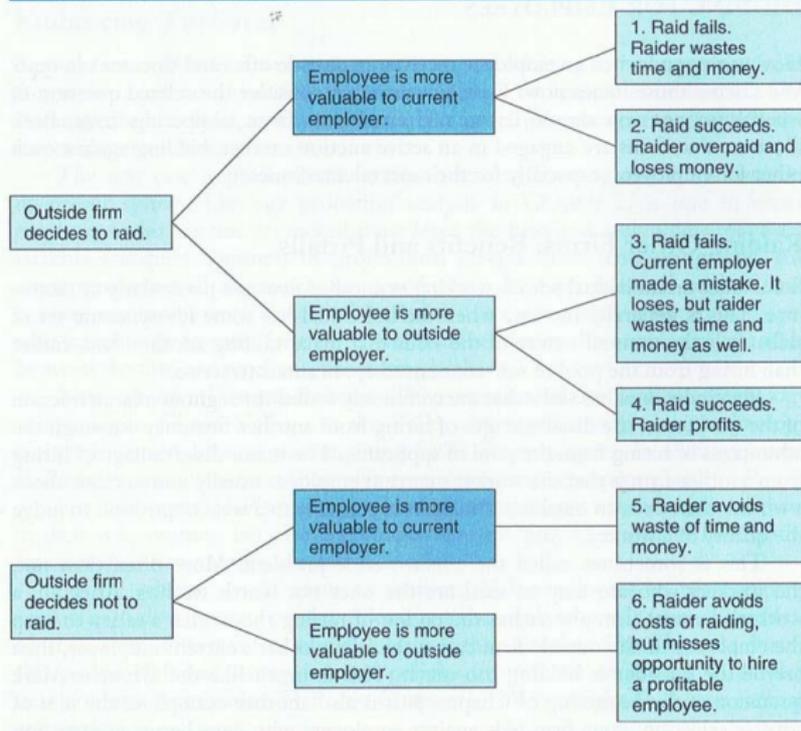
- Raiding other firms
 - Should workers from other firms be actively recruited?
- Match outside offers of employees
 - When is it reasonable to match outside offers and when not?

Raiding other firms

- Recruiting new employees by raiding other firms
- Overcome information problem when recruiting new employees (job candidates have more information about productivity than firms) \implies
Signal of productivity: employment at other firm
- When is raiding attractive?
 - What workers? Under what conditions?
- **Winner's Curse**
 - Current employer knows more about quality of worker than outsider (additional information asymmetry)
 - Those, who can be raided easily, may not be as productive
 - If raiding works, the price is too high
- When is it profitable?
 - *If workers possess (rare) skills that are more valuable in the outside firm than in the current firm.*

To raid or not to raid?

FIGURE 4.1
TO RAID OR NOT TO RAID



If workers are more valuable for the outsider . . .

- In general, **firm-specific human capital** already acquired and more valuable for current employer.
- Exemptions \implies Changes
 - Skills: qualified workers in firms with few promotion opportunities
 - Industry: workers in industries that loose importance or in firms that grow slower than others
- Pool of workers
 - Adverse selection of job applicants and unemployed (the best already have new jobs and do not apply)
 - Unemployed after bankruptcy find it easier to get a new job and earn higher wages than those who are unemployed due to other reasons

Should firms match outside offers?

- Bidding for workers is common part of labor market competition
- Sometimes policy of “no offer matching” (to discourage attempts by employees to raise salary by obtaining outside offers)
- Two options:
 - *Match offers*: Firm has to adapt job offer depending on the outside offer (higher wage)
 - *No offers*: Worker has to leave firm to realize higher wage
 - \implies Firm is more flexible if outside offers can be matched
 - \implies But, employees have incentive to search for other jobs (also those who are not willing to change the job)
- A “no offer matching”- policy is more profitable
 - if compensation includes non-monetary components (difficult to compare for worker) and
 - if compensation is low (more room for strategic outside offers)

Search behavior of employees

- Model parameters:

- Wage in current firm per year: W
- Number of other firms in the market: N
- Number of firms that offer higher wage: N' and W'
- Search cost: X
- Periods in the labor market: $t = 0, 1, 2 \dots T$
- Discount rate: r

- Search for another job if Return \geq Search cost

- First application:

$$\frac{N'}{N} \sum_{t=0}^T \frac{W' - W}{(1+r)^t} \geq X$$

- Second application:

$$\frac{N'}{N-1} \sum_{t=0}^T \frac{W' - W}{(1+r)^t} \geq X$$

- ...

- Return increases (prob. of finding a firm that pays a higher wage)
- Search costs are constant (increasing or decreasing costs possible)

Example Search behavior

After your studies in Business and Economics you have worked as an economic analyst in your company for 3 years. You earn 35.000 € per year. Some of your co-workers earn higher wages because they had attractive outside offers from other firms, which were matched by your company. In your city, there are 26 other firms of which 4 of them are known to pay higher wages, around 38.000 € per year. Your planning horizon comprises the next 4 years. You don't like to search for a new job, it can be annoying and it needs time. One application generates search costs of around 1.000 €. Since you are forward-looking, your discount rate amounts to 5%. Will you search for a new job?

- Sometimes firms must downsize and lay off employees \implies How to proceed?
- Lay off workers
 - Whom? The most expensive?
- Buy out workers
 - How should buyout offers be designed?

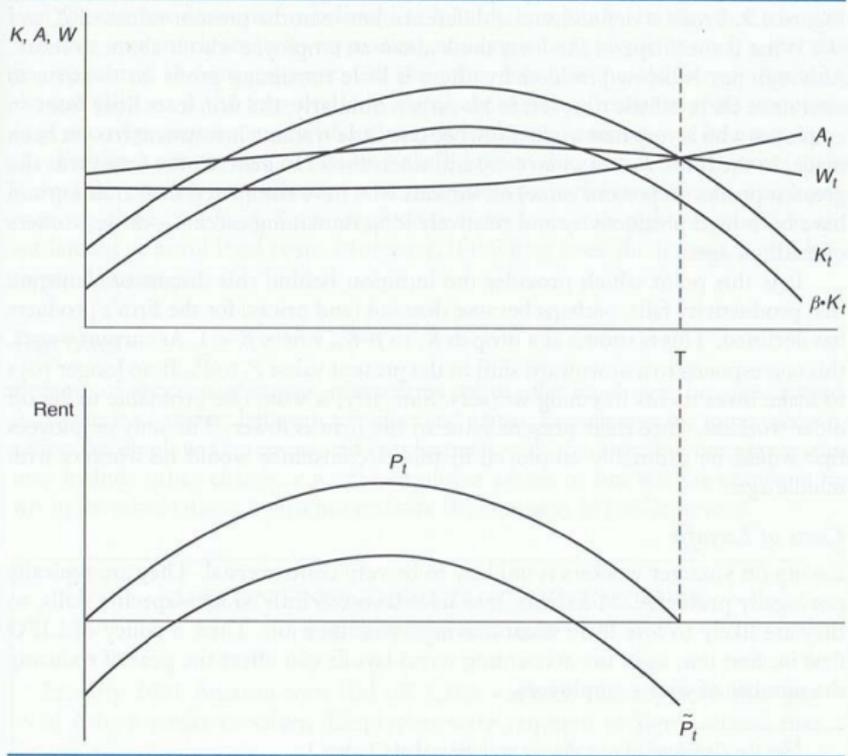
Layoffs Whom?

- The most expensive? The least productive?
 - Highly paid and relatively unproductive workers
 - Compare costs per output: W/Q (as with hiring)
- Firm-specific human capital
 - Often, workers and firms split the costs and benefits of trainings
 - If firm-specific human capital is important, the firm should first lay off
 - the youngest &
 - the oldest
- **Why?**

Typical careers (with firm-specific human capital)

FIGURE 4.2

EARNINGS & PRODUCTIVITY OVER THE CAREER



Typical careers (with firm-specific human capital)

- Productivity, wages and alternative values over time
 - Productivity in the firm: K_t
 - Wage in the firm: W_t
 - Investment in training: first $W_t > K_t$, then $W_t < K_t$
 - Value of alternative (outside wage, leisure): A_t
 - Optimal time of retirement: T ($A_t = W_t, A_t = K_t$)
- Competitive labor market, training and firm rent
 - $PV(A) < PV(W)$ and $PV(A) < PV(K)$
 - Training: Worker and firm share costs and benefits
 - $PV(W) = PV(K)$ at $t = 0$
 - $PV(W) < PV(K)$ at $t > 0$ (because $W_0 > K_0$)
 - Firm rent: $P = PV(K) - PV(W)$
- Demand shock
 - Productivity: βK_t (with $\beta < 1$)
 - Firm rent: \tilde{P}_t
 - $\implies \tilde{P}_t < 0$ for young and old workers

Typical careers (with firm-specific human capital)

TABLE 4.1
ANALYSIS OF WHICH WORKERS TO LAY OFF

<i>Age</i>	<i>W</i>	<i>A</i>	<i>K</i>	<i>PV(W)</i>	<i>PV(A)</i>	<i>PV(K)</i>	βK	<i>PV(\beta K)</i>
25	\$30	\$20.0	\$20.0	\$145.5	\$ 99.3	\$145.5	\$14.0	\$101.8
26	30	20.1	23.2	145.5	99.9	158.1	16.2	110.6
27	30	20.3	26.2	145.5	100.5	169.9	18.3	118.9
28	30	20.4	29.1	145.5	101.1	181.1	20.4	126.7
29	30	20.5	31.8	145.5	101.7	191.5	22.3	134.0
30	30	20.6	34.4	145.4	102.3	201.2	24.1	140.8
35	30	21.3	45.0	145.4	105.3	238.6	31.5	167.1
45	30	22.5	55.0	144.3	110.5	258.7	38.5	181.1
55	30	23.8	50.0	134.0	109.1	211.3	35.0	147.9
56	30	23.9	48.7	131.0	105.8	191.2	34.1	141.3
57	30	24.0	47.2	127.3	103.2	179.6	33.0	125.7
58	30	24.1	45.6	122.5	99.7	166.8	31.9	116.7
59	30	24.3	43.8	116.6	95.3	152.7	30.7	106.9
60	30	24.4	41.9	109.1	89.5	137.2	29.3	96.0
61	30	24.5	39.8	99.6	82.0	120.1	27.9	84.0
62	30	24.6	37.6	87.7	72.4	101.1	26.3	70.8
63	30	24.8	35.2	72.7	60.2	80.0	24.6	56.0
64	30	24.9	32.7	53.8	44.7	56.5	22.9	39.5
65	30	25.0	30.0	30.0	25.0	30.0	21.0	21.0

- Costs of layoffs of workers
 - Job protection
 - Firm-specific human capital
 - Reputation of firm
 - \implies Costs are lower for younger workers (less protected by law, less firm-specific human capital and less controversial)
- **Example from Austria**
 - 1996: Layoff tax introduced for firms who lay off workers aged 50+
 - 2000: Layoff tax increased
 - Amount depends on age, tenure, legal retirement age and gross income

Layoff tax in Austria

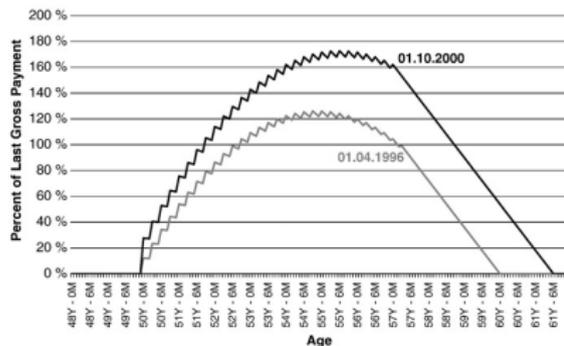


Fig. 1. Layoff tax for male workers in percent of last gross income.

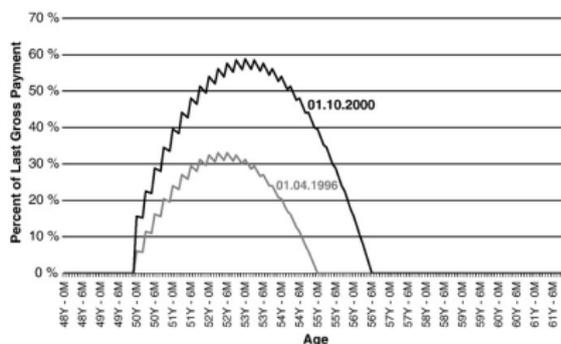


Fig. 2. Layoff tax for female workers in percent of last gross income.

- Schnalzenberger & Winter-Ebmer, Labour Economics 2009
- Introduction: no impact
- Increase: reduction in layoffs of older workers
 - Males: -25%, Females: -30%
 - Around half of the effect is substituted by firm (firing non-taxable workers)

Buyouts (“Golden handshake”)

- Buyouts \implies Incentive to leave the firm (to reduce layoff costs)
- Who accepts what buyout offer?
 - depends on $PV(W)$ and $PV(A)$
 - Buyout B and probability of layoff p (if offer not accepted)
- Worker
 - Accepts offer: $B + PV(A)$
 - Does not accept offer: $PV(W) * (1 - p) + PV(A) * p$

Example Buyout

What amount would you offer an employee at the age of 45, 55 and 60 to buy him/her out? Assume that the employees believe that their layoff probability is 25% (use Table 4.1 to calculate the offers).

Buyout offers

Minimum buyout offer: $B^* = (1 - p)[PV(W) - PV(A)]$

$$\frac{\partial B^*}{\partial p} < 0 \quad \text{and} \quad \frac{\partial B^*}{\partial PV(W)} > 0 \quad \text{and} \quad \frac{\partial B^*}{\partial PV(A)} < 0$$

The amount of the (accepted) buyout offer ...

- declines in probability of layoff p
- increases in the present value of wages $PV(W)$
- decreases in the present value of alternatives $PV(A)$
(i.e. also with age)

A relative to W gets higher, the older the worker

Implementation of Buyouts

- Small **time frame** between offer and acceptance/denial
 - reduces incentive for worker to be strategically unproductive to get a higher offer
 - reduces time for worker to get an appropriate outside offer
- **Threat of layoff** reduces price, but needs to be credible (layoffs need to be carried out)
- Downsizing should be made deliberately and fast (time of insecurity reduces motivation and productivity)

Questions?