The price for flexibility the temp worker wage gap in Sweden

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Outline

1. Introduction
2. Data and descriptive statistics
3. The temps' wages
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1. Introduction

- Temporary help agencies have a short history in most countries
- They were legalized in Sweden in 1993
- Few restrictions (no fees paid by the temps)
- Business cycle variations
- Growing sector: 11,000 employees in 1998 and 51,000 in 2008 (1.2 percent of all employed)

1. Introduction, cont.

- Regulated by collective agreements
  - Unions of those working in the industry
  - Unions in other (hiring) industries
- Growing worries about the working conditions of the temps (the price of flexibility)
  - Work environment
  - Wages – wage penalty

2. Data and descriptive statistics

- Individual data from registers at Statistics Sweden
- All employed in 1998-2008 (also information on those not employed)
- Employed in November each year
- Monthly wage (recalculated to full time)
- Other variables: Age, gender, family, education, country of birth

2. Data and descriptive statistics, cont.

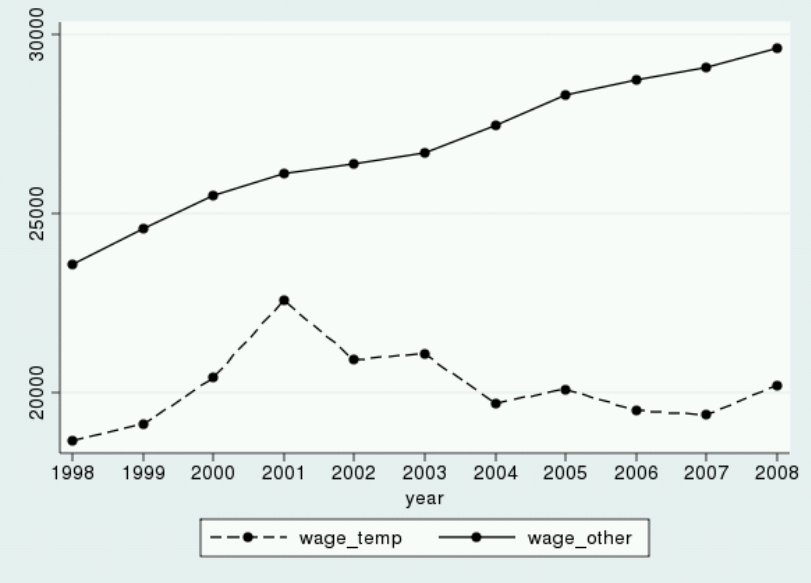
- Comparison 1998 and 2008
- Temp workers are young
- Declining share of women from 70 percent to below 50 percent
- Immigrants overrepresented (especially those who were born in non-Western countries)
- Educational level slightly higher than in the rest of the private sector

3. The temps' wages

- If no controls lower than for those working in other parts of the private sector
- The monthly earnings for those working in other parts were 19.6 percent higher in 1998 and 34.9 percent higher in 2008

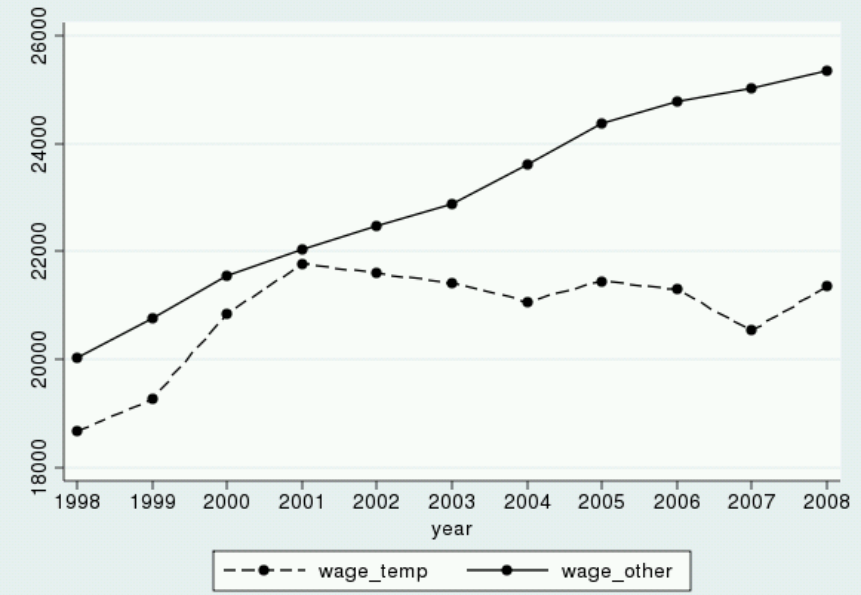
3. The temps' wages, cont.

Figure 1 Development of monthly earnings in temporary help agencies and other parts of the private sector, MEN, 1998-2008



3. The temps' wages, cont.

Figure 2 Development of monthly earnings in temporary help agencies and other parts of the private sector, WOMEN, 1998-2008



3. The temps' wages, cont.

Different attempts to explain the pattern

- Changes in the policies regarding hiring medical doctors and other health personnel
- The IT-industry expansion and the crisis

Wage differential between workers in the temp industry and workers in other industries in the private sector. MEN and WOMEN

MEN	2001	2003	2005	2007	2008
Temp worker	-0.007	-0.110**	-0.162**	-0.197**	-0.188**
	(0.004)	(0.003)	(0.003)	(0.002)	(0.002)
Observations	660,390	665,509	668,539	677,480	687,541
R-squared	0.654	0.662	0.650	0.653	0.651
WOMEN					
Temp worker	0.011**	-0.052**	-0.119**	-0.184**	-0.175**
	(0.003)	(0.002)	(0.003)	(0.002)	(0.002)
Observations	395,755	393,706	387,650	399,272	431,537
R-squared	0.630	0.649	0.641	0.660	0.659

The model include controls for age, age squared, education, county, married, small children, country of origin, and occupation. Robust standard errors within parentheses. ** p<0.01, * p<0.05

4. Which factors contribute to explain the wage differences?

- Observed individual characteristics
- Occupation
- Unobserved individual characteristics

Table 4 (Log)Wages in private sector 2001-2008. Men and women. **Unweighted** OLS regression and FE regression

	Model I OLS	Model II OLS	Model III OLS	Model I FE	Model II FE	Model III FE
MEN						
Temporary help agencies	-0.307**	-0.161**	-0.158**	-0.110**	-0.108**	-0.111**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Year (2002-2008)	Yes	Yes	Yes	Yes	Yes	Yes
Age, education, family status, small children, country of origin, municipality		Yes	Yes		Yes	Yes
Occupation (3-digit level)			Yes			Yes
Number of observations	5,403,806	5,403,806	5,365,717	5,403,806	5,403,806	5,365,717
R^2	0.021	0.432	0.657	0.300	0.338	0.354
WOMEN						
Temporary help agencies	-0.102**	-0.095**	-0.108**	-0.078**	-0.078**	-0.082**
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)
Year (2002-2008)	Yes	Yes	Yes	Yes	Yes	Yes
Age, education, family status, small children, country of origin, municipality		Yes	Yes		Yes	Yes
Occupation (3-digit level)			Yes			Yes
Number of observations	3,199,094	3,199,094	3,189,136	3,199,094	3,199,094	3,189,136
R^2	0.026	0.430	0.649	0.343	0.378	0.398

Note. OLS = Ordinary Least Squares. FE=regression with individual fixed effects. Standard errors within parentheses. ** p<0.01, * p<0.05

Table 5 (Log)Wages in private sector 2001-2008. Men and women. **Weighted** OLS regression

	Model I OLS	Model II OLS	Model III OLS
MEN			
Temporary help agencies	-0.199**	-0.108**	-0.093**
	(0.005)	(0.003)	(0.003)
Year (2001-2008)	Yes	Yes	Yes
Age, education, family status, small children, country of origin, municipality		Yes	Yes
Occupation (3-digit level)			Yes
Number of observations	5,271,636	5,271,636	5,235,399
R^2	0.016	0.399	0.605
WOMEN			
Temporary help agencies	-0.029**	-0.045**	-0.059**
	(0.004)	(0.003)	(0.003)
Year (2001-2008)	Yes	Yes	Yes
Age, education, family status, small children, country of origin, municipality		Yes	Yes
Occupation (3-digit level)			Yes
Number of observations	3,103,700	3,103,700	3,094,716
R^2	0.021	0.410	0.623

Note. OLS = Ordinary Least Squares. Robust standard errors within parentheses. ** p<0.01, * p<0.05

4. Which factors contribute to explain the wage differences?, cont.

- Studying the flows between the sectors
- Including also the public sector
- The flows between 2007 and 2008

Table 6 Average wages in 2007 and 2008, all sectors. MEN.

Group (number of individuals in parentheses)	Wage 2007 SEK	Wage 2008 SEK	Wage change (2008-2007) SEK
Leave the temporary help agency industry (1,868)	19,223	22,748	3,525
Start in the temporary help agency industry (919)	21,171	20,157	-1,014
Remain in the temporary help agency industry (4,213)	20,203	20,927	724
Change employer but not in the temporary help agency industry (40,549)	27,466	28,898	1,432
Remain in the same company but not in the temporary help agency industry (777,910)	29,010	29,736	726

Table 7 Wages in 2007 and 2008, all sectors. WOMEN

Group (number of individuals in parentheses)	Wage 2007 SEK	Wage 2008 SEK	Wage change (2008-2007) SEK
Leave the temporary help agency industry (1,687)	19,870	23,587	3,717
Start in the temporary help agency industry (1,033)	20,833	20,780	-53
Remain in the temporary help agency industry (4,071)	21,510	22,550	1,040
Change employer but not in the temporary help agency industry (62,353)	21,258	22,691	1,433
Remain in the same company but not in the temporary help agency industry (109,6883)	23,476	24,099	623

5. Temporary employment agency work and effects on future wages

- What is happening afterwards?
- Scaring effect of temporary agency work in the short run? Also in the long run?

Table 8 Association between experience from temporary help agency work in 1998-2007 and wage in 2008 ((log)Wage). MEN

	Covariates measured in 2008			
Temp agency work in year	None	age, education, sector, county, married, small children, country of origin, temporary help agency work in 2008	and occupation	Number of observations
1998	-0.088**	-0.019	-0.024*	468,833
	(0.016)	(0.014)	(0.011)	
1999	-0.106**	-0.031**	-0.040**	504,931
	(0.011)	(0.010)	(0.007)	
2000	-0.128**	-0.019**	-0.036**	558,820
	(0.008)	(0.007)	(0.005)	
2001	-0.097**	-0.000	-0.024**	577,944
	(0.008)	(0.007)	(0.005)	
2002	-0.095**	-0.001	-0.027**	609,949
	(0.008)	(0.007)	(0.005)	
2003	-0.099**	0.013*	-0.020**	636,891
	(0.007)	(0.006)	(0.005)	
2004	-0.189**	-0.023**	-0.038**	662,820
	(0.006)	(0.005)	(0.004)	
2005	-0.206**	-0.024**	-0.039**	697,420
	(0.005)	(0.005)	(0.004)	
2006	-0.234**	-0.018**	-0.045**	756,164
	(0.004)	(0.004)	(0.003)	
2007	-0.298**	-0.036**	-0.048**	820,540
	(0.003)	(0.004)	(0.004)	

Note: Every estimate is from a separate estimation. Therefore the table based on 30 different regressions. Robust Standard errors within parentheses. ** p<0.01, * p<0.05

Table 10 Association between experience from temporary help agency work in 1998-2007 and wage in 2008 ((log)Wage). WOMEN

	Covariates measured in 2008			
Temp agency work in year	None	age, education, sector, county, married, small children, country of origin, temporary help agency work in 2008	and occupation	Number of observations
1998	0.045**	0.049**	0.017**	689,020
	(0.008)	(0.007)	(0.006)	
1999	0.013*	0.026**	0.003	732,999
	(0.005)	(0.005)	(0.004)	
2000	0.024**	0.039**	0.008*	782,764
	(0.005)	(0.004)	(0.003)	
2001	0.024**	0.040**	0.009**	813,911
	(0.004)	(0.004)	(0.003)	
2002	0.024**	0.039**	0.016**	851,228
	(0.004)	(0.004)	(0.003)	
2003	0.020**	0.048**	0.019**	881,471
	(0.004)	(0.004)	(0.003)	
2004	-0.022**	0.031**	0.008*	912,215
	(0.004)	(0.004)	(0.004)	
2005	-0.026**	0.035**	0.006	950,605
	(0.004)	(0.004)	(0.003)	
2006	-0.031**	0.044**	0.004	1,056,535
	(0.004)	(0.004)	(0.003)	
2007	-0.081**	0.023**	-0.014**	1,126,128
	(0.003)	(0.004)	(0.003)	

Note: Every estimate is from a separate estimation. Therefore the table based on 30 different regressions. Robust Standard errors within parentheses. ** p<0.01, * p<0.05

6. Conclusion

- Lower wages than in other parts of the private sector when controlling for observable characteristics (16 percent for men, 10 percent for women)
- Introducing fixed effects (men 11 percent and women 8 percent lower wages)
- Large variations over time
- Small negative short run effects, no long run negative wage effects
- There is a price for the flexibility, but it is rather low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