

# Shift Work in Europe: Ten facts

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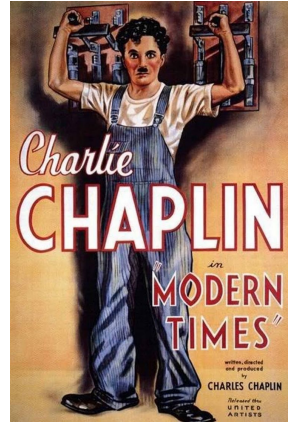
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(\*) The usual disclaimer applies. We thank the Eurostat Micro-data Access Team for providing us with the data and useful information.

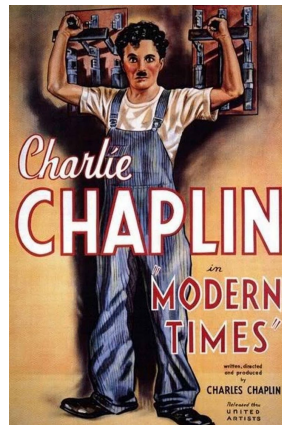
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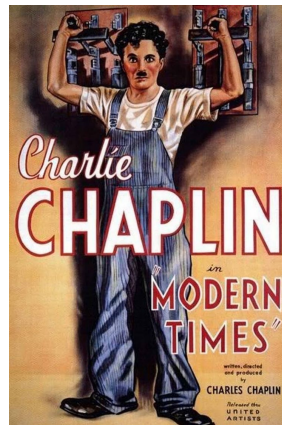
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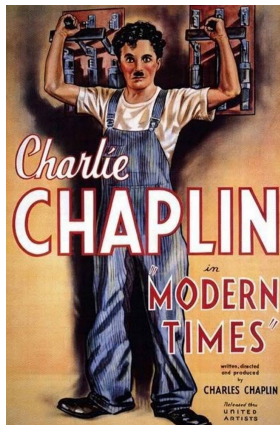
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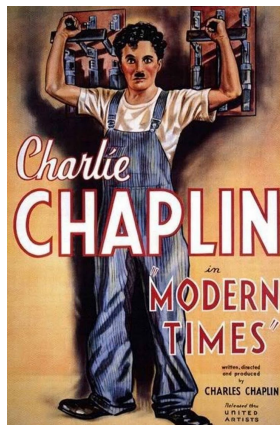
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- Policymakers mostly focused on the adverse effects of shift work on health.
- Economic incentives for doing shifts ? Are these incentives different across countries?



# What do we do?

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  - ▶ The shift worker profile.
  - ▶ Shift work incidence, the shift premium and economic growth.

# Data

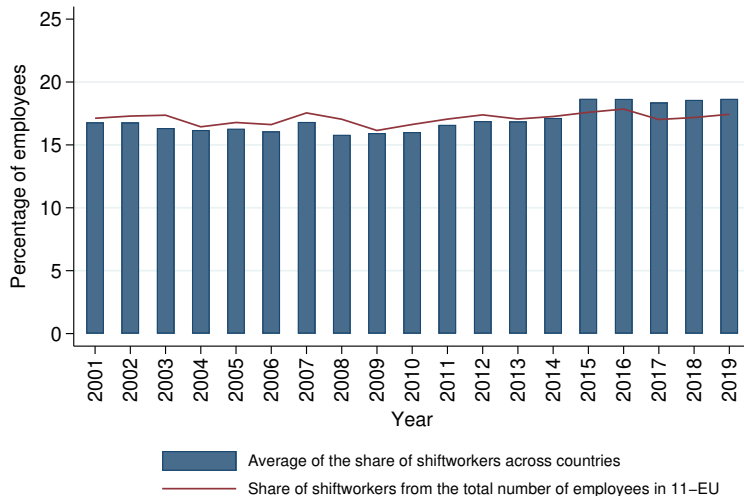
- The European Union Labor Force Survey (**EU-LFS**).
  - ▶ Section “Special schedule during the reference month (main activity)”.
    - **Prevalence of shift work** (*shiftwk*): share of shift workers from the population of employees between 15 and 64 years old.
  - ▶ Occupations, sectors, workers characteristics.
  - ▶ The EU-15
  - ▶ Period 2001-2019.

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  - ▶ Period 2001-2019.
- Structure of Earnings Survey (**SES**).
  - ▶ Statistics on firms with at least 10 employees (conducted every four years).
  - ▶ Main interest: wage premium for shift work.
    - **Special Payments for shift work** (*B422*)
  - ▶ Waves 2010, 2014 and 2018.

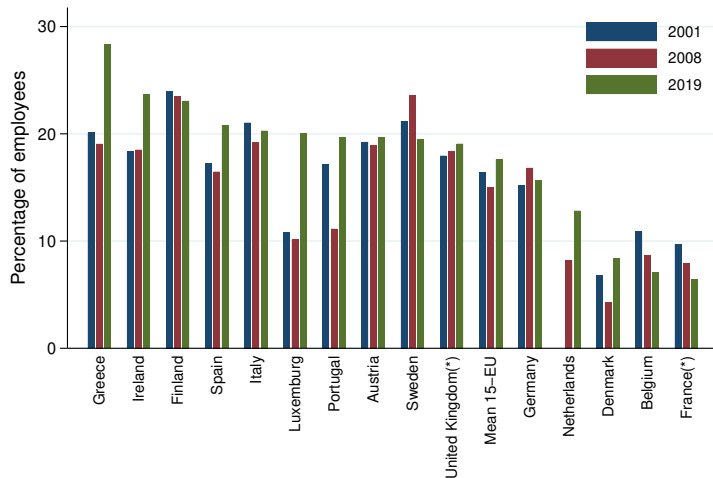
# 1. Shift work prevalence and cross countries differences

## Fact I. Shift work is a common practice and has remained stable over time.



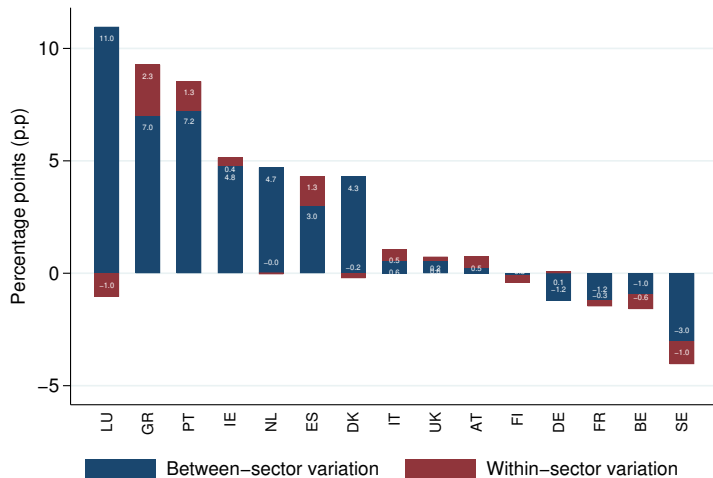
Source: Microdata EU-LFS.

## Fact II. The incidence of shift work differs across countries.



Source: Microdata EU-LFS

Fact III. Changes in the evolution of shift work (2008-2019) are mainly explained by changes in the sectoral composition of the economies.

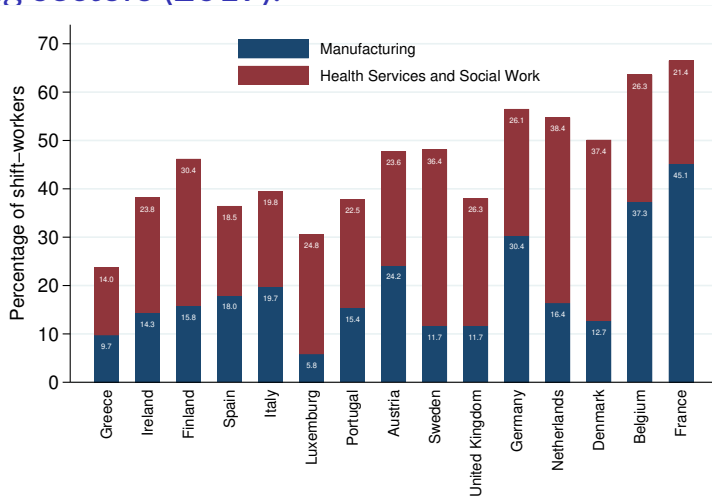


Source: Microdata EU-LFS.



## 2. The shift worker profile

## Fact IV. Almost half of shift workers are employed in the health and manufacturing sectors (2019).



Source: Microdata EU-LFS.

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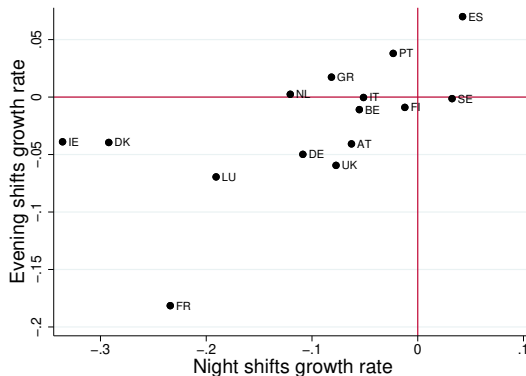
## Fact V. About one third of the shift workers are service and sales workers.

- Shift workers are common in certain occupations and almost non-existent in others.
- This proportion has remained stable over the last decade.
- Countries with a high prevalence of shift work have more than 30% of shift workers in these occupations.

## Fact VI. Shift workers are young, high school graduates.

- A popular belief: “shift workers are low educated”.
- In the EU-15, shift workers have completed an upper secondary education.
- Differences across countries are related to their average population level of education.
- Non-significant differences exist in the distribution of shift workers by sex.
- Around 50% of shift workers are between **25 and 44 years old** (+4 p.p. than non-shift workers).

Fact VII. Night shifts, the least desirable shifts, have decreased during the last decade.



### 3. Shift work, the shift premium and economic growth.



Fact VIII. The shift premium ranges from 5% to 16% of gross earnings in the EU-15.

	SES 2010	SES 2014	SES 2018
Belgium	8.5%	8.7%	
Germany	6.9%	7.6%	7.4%
Denmark		7.5%	6.5%
Greece	15.5%	13.6%	15.3%
Spain	11.6%	10.7%	11.2%
Finland	11.0%	11.0%	11.3%
France	8.9%	8.0%	8.4%
Italy	7.2%	4.8%	4.9%
Luxembourg	8.0%	8.8%	8.9%
Netherlands		10.7%	
Portugal	11.0%	11.5%	12.8%
Sweden	9.4%	9.1%	10.1%
United Kingdom	12.6%	11.5%	

## Fact IX. Shift work is positively correlated to the shift premium.

	SES 2014		SES 2018	
	(1)	(2)	(3)	(4)
Shift premium (as a share of gross earnings)	0.9750*** (0.3426)	0.6130** (0.3012)	1.3292*** (0.2423)	1.2396*** (0.3838)
Constant	0.0600** (0.0293)	0.0050 (0.0250)	0.0516*** (0.0187)	0.0155 (0.0314)
Wave Control	No	No	No	No
Country Control	No	Yes	No	Yes
R2	0.0883	0.2436	0.1565	0.2675
Observations	214	214	188	188

## Fact X. Shift work is weakly associated with economic growth.

	(1)	(2)	(3)	(4)
Log of GDP per capita	-0.0418*** (0.0087)	-0.0865** (0.0363)		
Ln(Gross Added Value Manufacturing)			-0.0036 (0.0045)	-0.0419 (0.0393)
Constant	0.6002*** (0.0897)	1.0833*** (0.3773)	0.2611*** (0.0614)	0.8072 (0.4955)
Time Control	Yes	Yes	Yes	Yes
Country Control	No	Yes	No	Yes
R2	0.0931	0.8864	0.0159	0.9109
Observations	275	275	178	178

Mayshar and Halevy (1997) and Mayshar and Solon (1993) examine shift work in the U.S over the period between 1951 and 1990 and find evidence of a pro-cyclical trend.

# Conclusions

- Surprisingly, not many studies document statistics about shift work in the EU.
- We uncover some surprising facts.
- This research is by definition descriptive but raises many interesting questions for future research with more refined approaches.
  - ▶ Shift work seems to have remained stable even if GDP has on average increased. Why?
  - ▶ Shift work is more prevalent in Greece than in Belgium. Why? Do labor market institutions play a role?
  - ▶ Firms are still opting for shift work. Is replacing shift work by standard hours of work unfeasible? Or is it the fact that shift work is relatively cheap?

*Thank you!*

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# References I

Mayshar, J. and Halevy, Y. (1997). Shiftwork. *Journal of Labor Economics*, 15(1, Part 2):S198–S222.

Mayshar, J. and Solon, G. (1993). Shift work and the business cycle. *The American Economic Review*, 83(2):224–228.