

Labour supply of households facing a risk of job loss

NBB Colloquium 2022

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Our research question

- Are individuals already adjusting their labour supply when their partner fears losing their job?

Motivation

- Important to better understand the drivers of labour supply within households

Answer

- YES
- If a person is at risk of losing his/her job, the partner is more likely to enter the labour market (if previously inactive) or to increase the number of hours worked (if previously employed)



Related literature

Added worker effect

Lundberg (1985), Maloney (1991), Stephens (2002),
Triebe (2015), Mankart and Oikonomou (2016),
Bredtmann *et al.* (2018)

Precautionary labour supply

Individual level: Pistaferri (2003), Flodén (2006),
Jessen *et al.* (2018)
Household level: Ellieroth (2022)



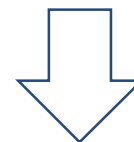
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Our contribution



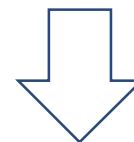
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Fear of job loss

Important additional
factor for household
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In particular during crisis



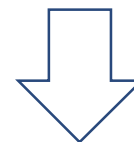
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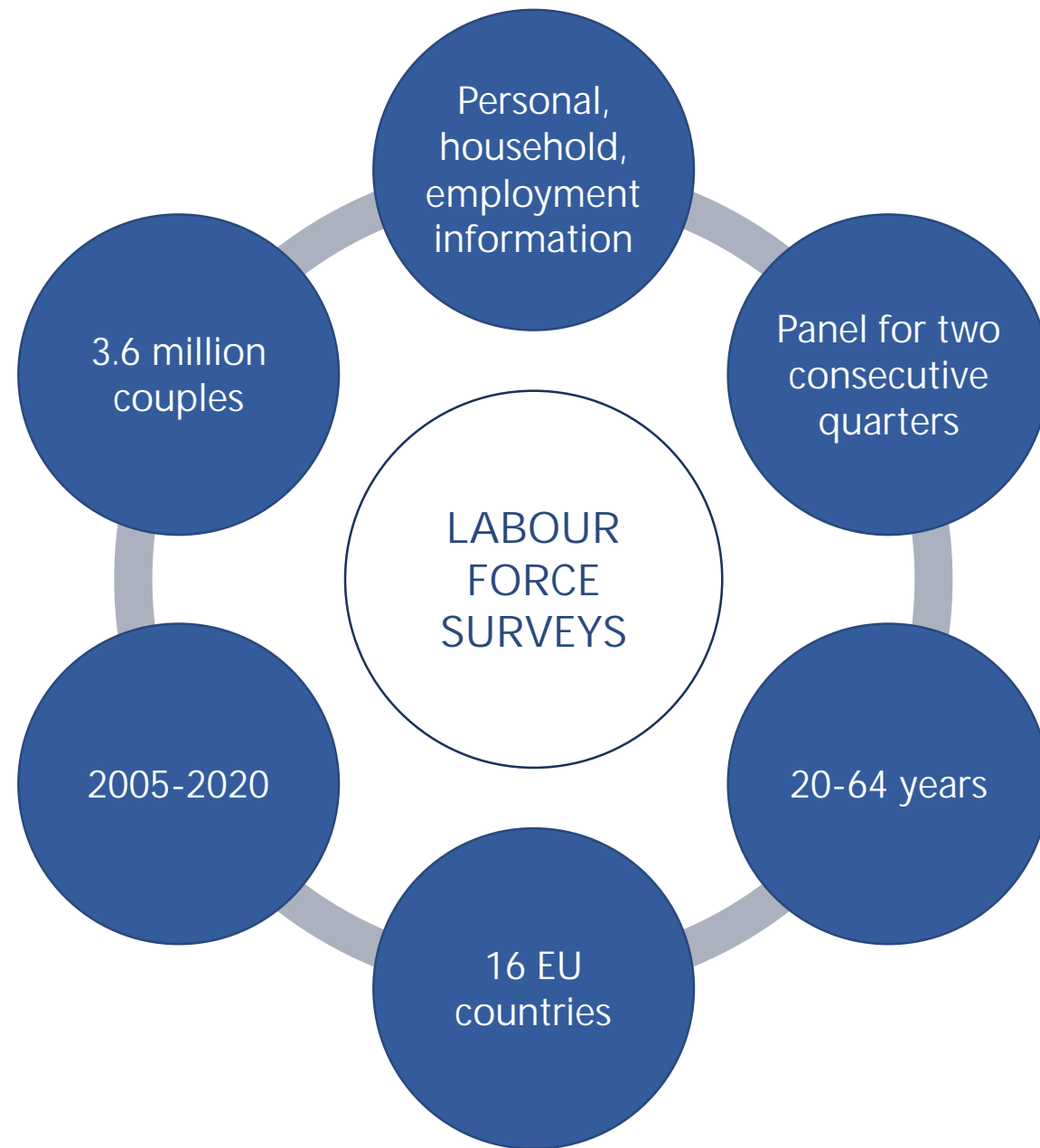
Heterogenous impact

Children in the
household

Level of education



Definitions and statistics



Definition of our key variables



JOB LOSS

From employment to non-employment because of dismissal



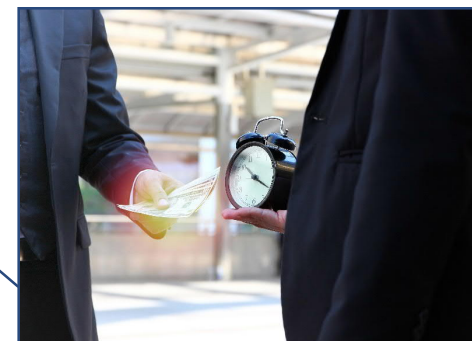
RISK OF JOB LOSS

Stays employed but feared to lose job



EXTENSIVE MARGIN

Enter the labour market



INTENSIVE MARGIN

Adapt working time

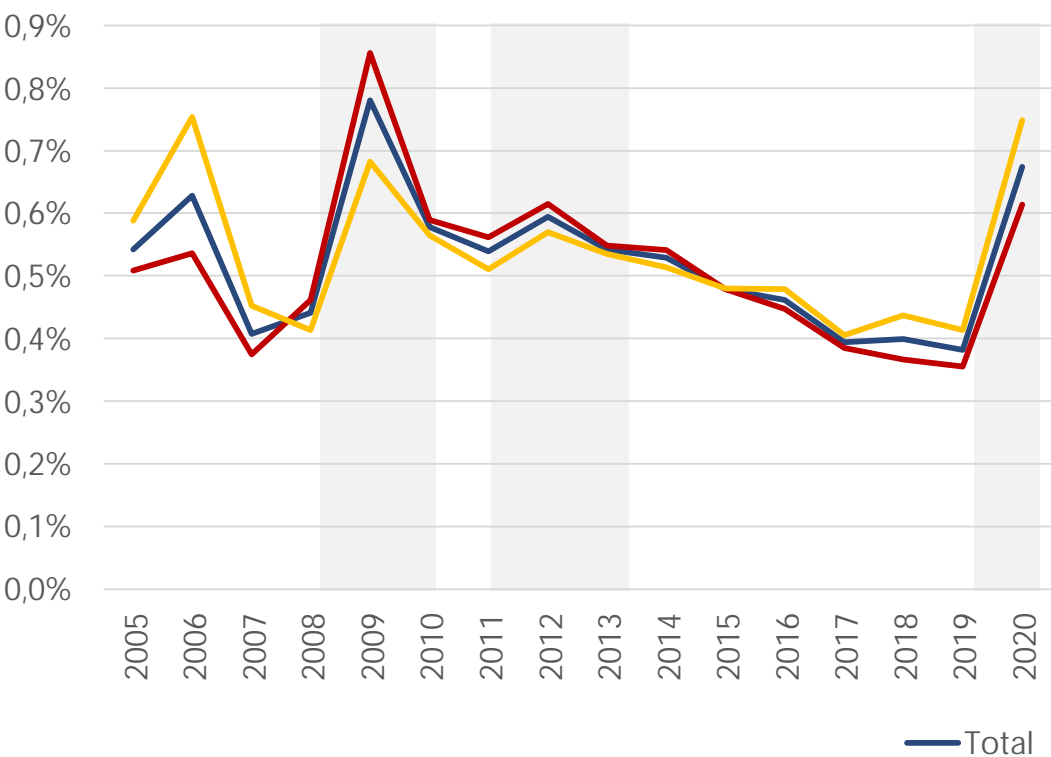
Partner 1

Partner 2

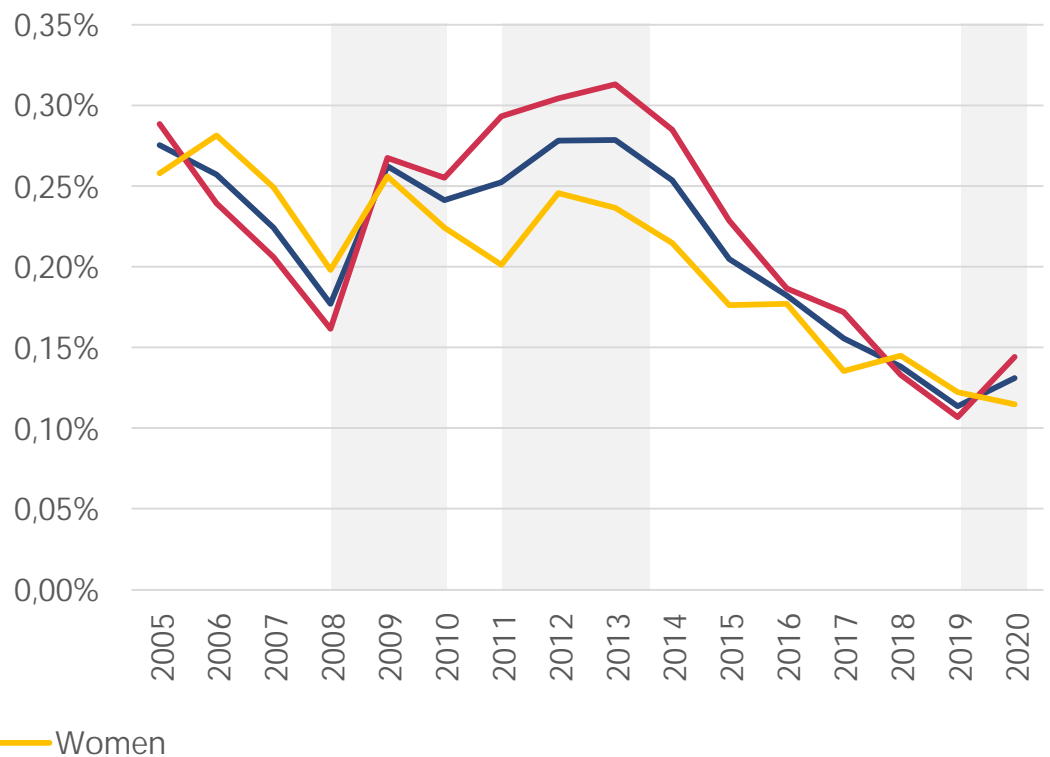


While not perfectly correlated, both series react to crisis periods

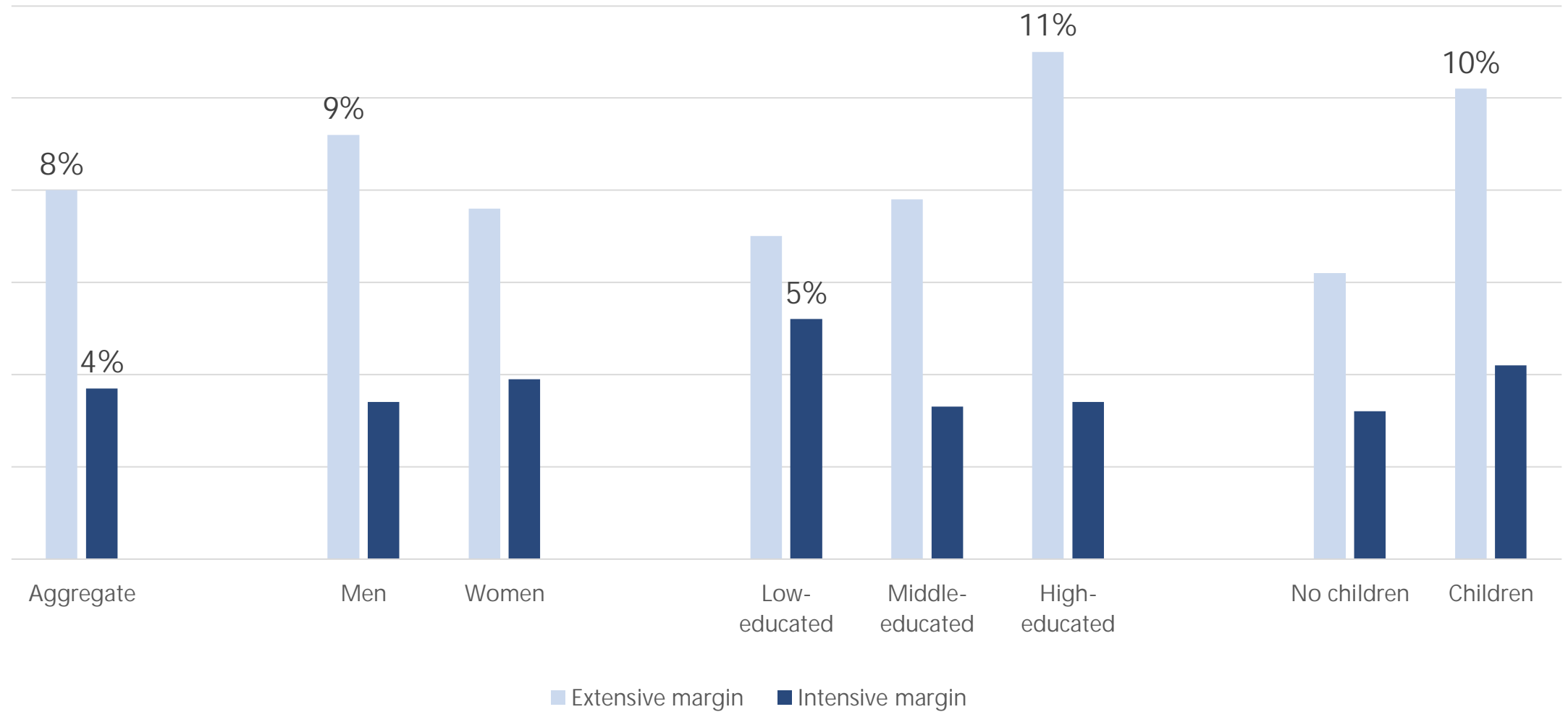
JOB LOSS: 0.52%



RISK OF JOB LOSS: 0.22%



Labour supply adjustments in the absence of (risk of) job loss





What is the impact of a risk of job loss on the partner's labour supply?

Estimated regression

$$\Delta LS_{P_2} = \alpha + \beta_1 (\text{risk of}) \text{ job loss}_{P_1 t_1} + \beta_2 (\text{risk of}) \text{ job loss}_{P_1 t_1} \times \text{Gender}_{P_2} + \delta X + \gamma_{jyq} + \varepsilon$$

where:

α is a constant

ΔLS is the labour supply adjustment of P_2 (either at the extensive or the intensive margin)

Job loss or Risk of job loss is our variable of interest

X is a vector of control variables

γ_{jyq} is the country year-quarter fixed effect

ε is the error term

Change in labour supply in case of partner's (risk of) job loss

| | Extensive margin | | Intensive margin | |
|------------------------------|-----------------------|-----------------------|------------------------|-----------------------|
| Job loss | 0.0436*** (0.0049) | | 0.0291*** (0.0034) | |
| Job loss* P_2 Male | -0.0085 (0.0095) | | -0.0126*** (0.0043) | |
| Risk of job loss | | 0.0236*** (0.0079) | | 0.0191*** (0.0046) |
| Risk of job loss* P_2 Male | | -0.0010 (0.0225) | | -0.0001 (0.0063) |
| Nb obs | 822,362 | 816,567 | 3,321,079 | 3,307,970 |
| R ² | 0.131 | 0.131 | 0.068 | 0.067 |

When a household member is at risk of losing his/her job, the partner is **30%** more likely to enter the labour market and **52%** more likely to (want to) increase working hours

How do results vary with the business cycle?

| | Extensive margin | | | | Intensive margin | | | |
|------------------------------|-----------------------|-----------------------|--------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| | No crisis | Crisis | No crisis | Crisis | No crisis | Crisis | No crisis | Crisis |
| Job loss | 0.0448*** (0.0066) | 0.0423*** (0.0074) | | | 0.0326*** (0.0046) | 0.0251*** (0.0051) | | |
| Job loss* P_2 Male | -0.0192 (0.0120) | 0.0075 (0.0157) | | | -0.0179*** (0.0056) | -0.0058 (0.0067) | | |
| Risk of job loss | | | 0.0121 (0.0094) | 0.0446*** (0.0141) | | | 0.0193*** (0.0059) | 0.0193*** (0.0073) |
| Risk of job loss* P_2 Male | | | 0.0057 (0.0262) | -0.0131 (0.0435) | | | 0.0036 (0.0080) | -0.0097 (0.0103) |
| Nb obs | 539,545 | 282,817 | 536,188 | 280,379 | 2,296,569 | 1,024,510 | 2,288,667 | 1,019,303 |
| R ² | 0.132 | 0.130 | 0.132 | 0.130 | 0.062 | 0.082 | 0.062 | 0.082 |

During crises, the effects of fear of job loss
and actual job loss are **equally big**



Heterogenous effects

The presence of children and
the level of education as important factors

The impact of the presence of children in the household

| | Extensive margin | | | | Intensive margin | | | |
|------------------------------|-----------------------|-----------------------|--------------------|-----------------------|-----------------------|-----------------------|----------------------|-----------------------|
| | No child | Children | No child | Children | No child | Children | No child | Children |
| Job loss | 0.0253*** (0.0062) | 0.0604*** (0.0075) | | | 0.0259*** (0.0044) | 0.0327*** (0.0053) | | |
| Job loss* P_2 Male | -0.0011 (0.0103) | 0.0154 (0.0252) | | | -0.0118** (0.0056) | -0.0140** (0.0066) | | |
| Risk of job loss | | | 0.0141 (0.0120) | 0.0266*** (0.0103) | | | 0.0167** (0.0067) | 0.0205*** (0.0064) |
| Risk of job loss* P_2 Male | | | 0.0008 (0.0242) | 0.0253 (0.0545) | | | 0.0035 (0.0092) | -0.0024 (0.0086) |
| Nb obs | 471,211 | 351,151 | 467,965 | 348,602 | 1,747,492 | 1,573,587 | 1,740,772 | 1,567,198 |
| R ² | 0.137 | 0.125 | 0.137 | 0.125 | 0.071 | 0.065 | 0.071 | 0.065 |

The reaction of a parent, to enter the labour market following a partner's job loss, is almost **three times bigger** than the adjustment of non-parents

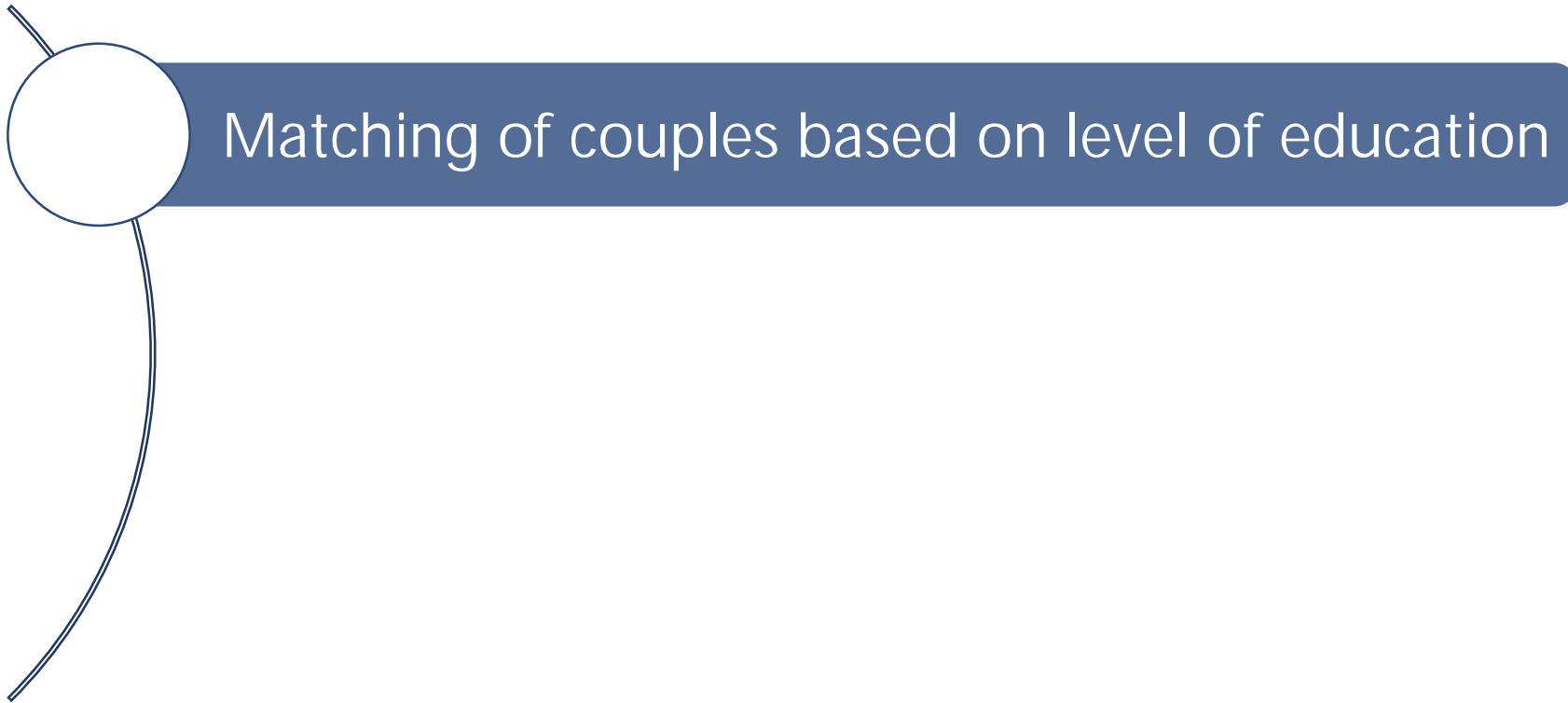
Change in labour supply depending on the level of education of P_2

| | Extensive margin | | | Intensive margin | | |
|------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | Low | Medium | High | Low | Medium | High |
| Job loss | 0.0348*** (0.0061) | 0.0563*** (0.0084) | 0.0701*** (0.0233) | 0.0365*** (0.0079) | 0.0258*** (0.0045) | 0.0293*** (0.0065) |
| Job loss* P_2 Male | -0.0268* (0.0137) | -0.0062 (0.0142) | -0.0045 (0.0402) | -0.0134 (0.0100) | -0.0121** (0.0055) | -0.0140 (0.0088) |
| Nb obs | 310,559 | 401,967 | 109,836 | 593,418 | 1,682,703 | 1,044,958 |
| R ² | 0.129 | 0.135 | 0.147 | 0.080 | 0.066 | 0.060 |
| Risk of job loss | 0.0428*** (0.0110) | -0.0066 (0.0117) | 0.0336 (0.0309) | 0.0439*** (0.0126) | 0.0122* (0.0064) | 0.0158** (0.0075) |
| Risk of job loss* P_2 Male | -0.0680** (0.0315) | 0.0769** (0.0335) | -0.0587 (0.0771) | -0.0069 (0.0165) | -0.0014 (0.0085) | 0.0014 (0.0111) |
| Nb obs | 307,531 | 399,573 | 109,463 | 590,068 | 1,675,780 | 1,042,122 |
| R ² | 0.129 | 0.135 | 0.147 | 0.080 | 0.066 | 0.060 |

Low-educated individuals strongly increase their labour supply already when they perceive a risk of job loss
High-educated people wait for their partner's job loss to materialise

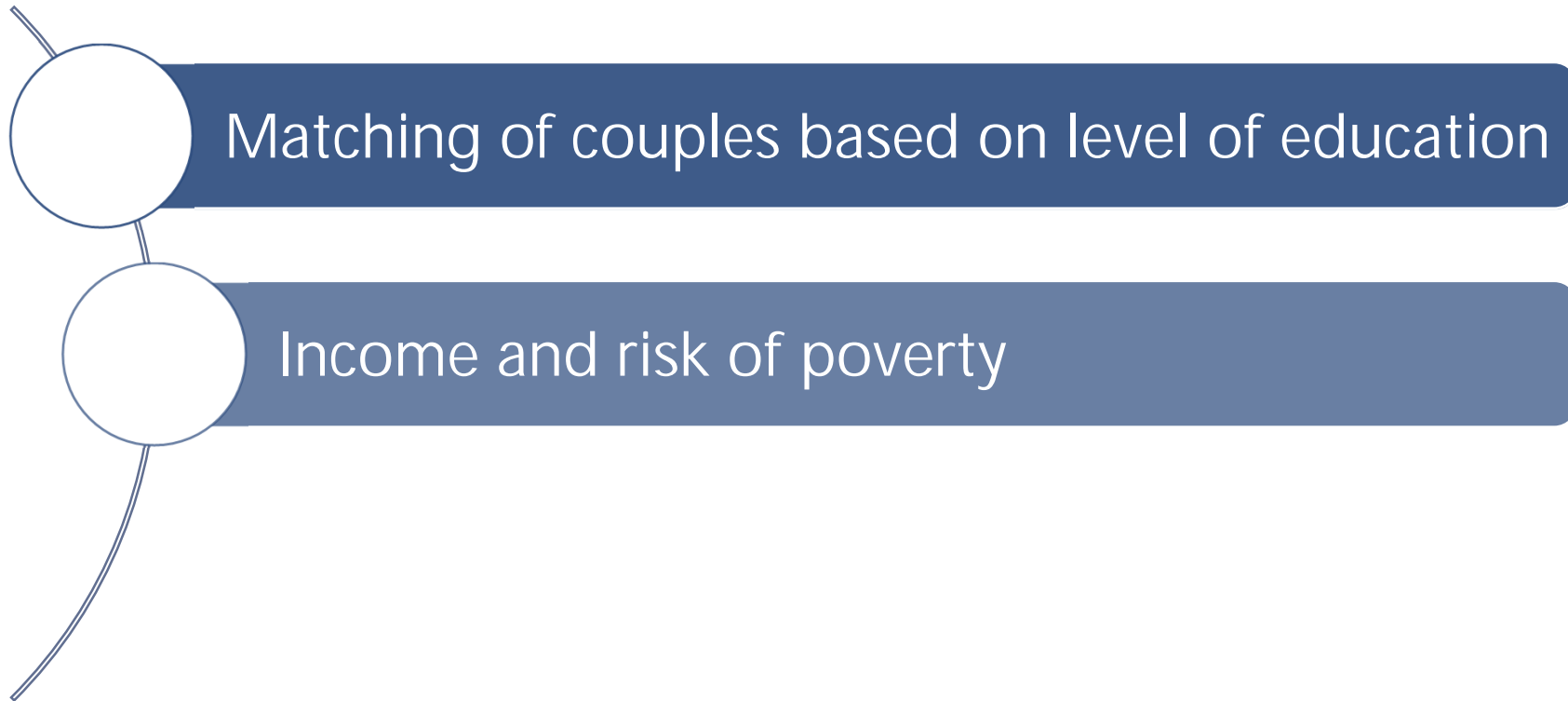
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A word on Belgium

- Data limitations:
 - panel starting in 2017
 - not all information for all quarters
- Based on any transition out of employment
 - Results both at the extensive and intensive margin are similar to those obtained for other EU countries

The pattern observed in this study
could be similar for Belgium



Conclusion

KEY TAKEAWAYS



Importance of uncertainty in household level labour supply decisions

Risk of job loss: 30% increase at the extensive margin
52% increase at the intensive margin

Larger effect during crises

No gender differences
except at the intensive margin for actual job loss

The presence of children changes the reaction
in the case of an actual job loss

Low-educated partners adjust already at risk
High-educated wait for the risk to materialise



Many thanks for your attention!

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Working paper available at
www.nbb.be