UNEMPLOYMENT TRANSITIONS AND THE ROLE OF *MINIMUM WAGE*

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Aim of the paper

➢ Greece experienced the deepest and longest crisis recorded in an OECD country in the postwar period.

➢ Unemployment climbed up to 28% (almost tripled in 4 years).

➢ **Aim of the paper:** To examine the determinants of the unemployment dynamics and the impact of the minimum wage on the probability of making a transition into and out of unemployment.

Background

- In 2010 the country was cut off from international capital markets.

- Three Economic Adjustment Programs to avoid unruly default:
  - 2010, 2012 & 2015

- Eventually public finances were put in order, but Greece experienced the deepest crisis recorded in an OECD country in the postwar period

- GDP -25%, Unemployment rate 28%, Disposable income -42%, etc

- To close the fiscal gap expenditures were cut and taxes were raised

Background

➢ Sharp increase in unemployment since 2009 as a result of fiscal adjustment.

Unemployment rates, 2004 - 2020
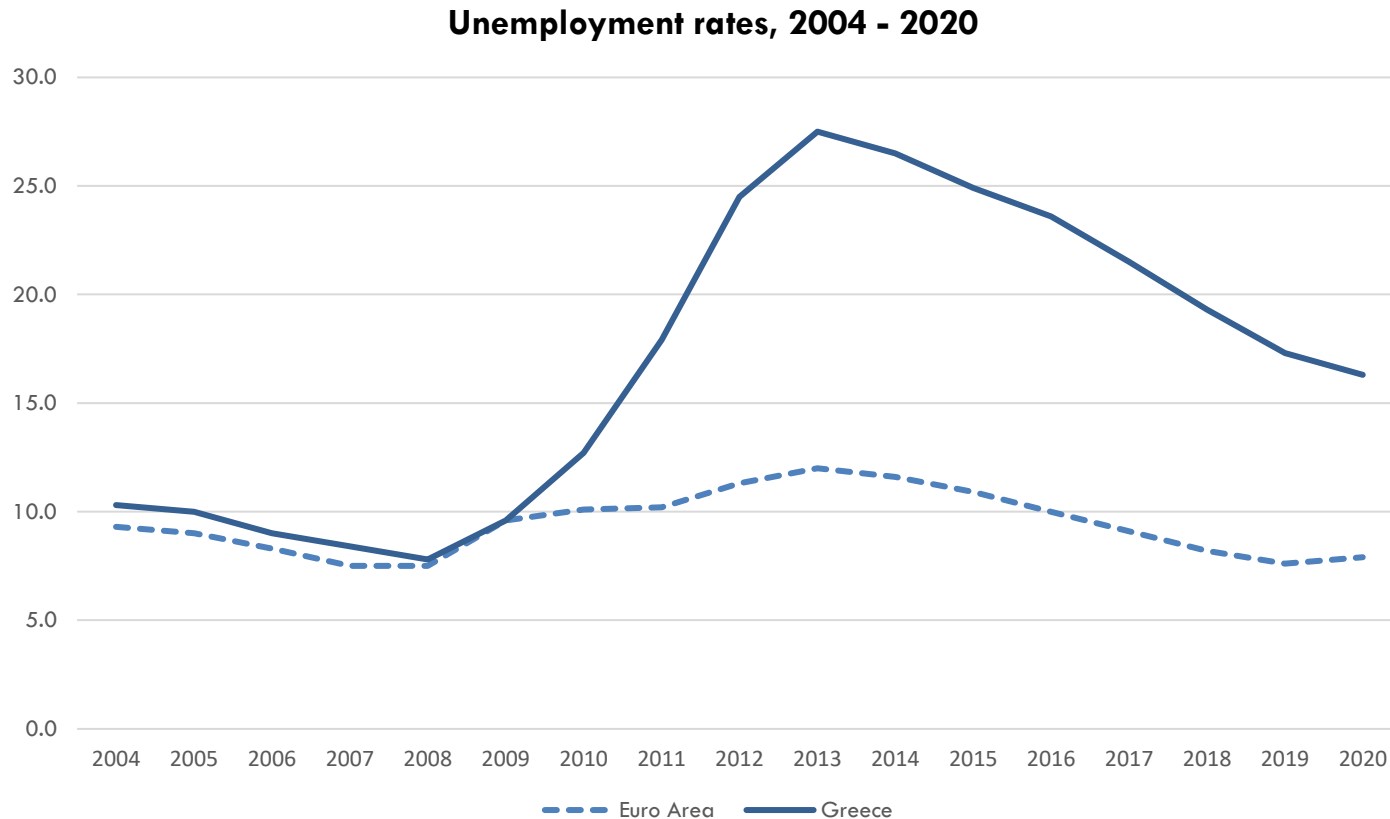
Background

➢ A number of labour market reforms have been adopted.

➢ Reduce rigidities, restore competitiveness and ease the entry to the formal labour market.

➢ Main labour market reforms:

    i.   Framework of collective bargaining

    ii.   Minimum wage setting system and [2012 minimum wage cut](#) (+ youth subminimum)

    iii.   Employment protection legislation

    iv.   Enhance flexible forms of employment

Background

➤ Labour market reforms contributed to restore competitiveness but partially to export-driven growth.

ULC vs Exports (% of GDP), 2004 - 2020
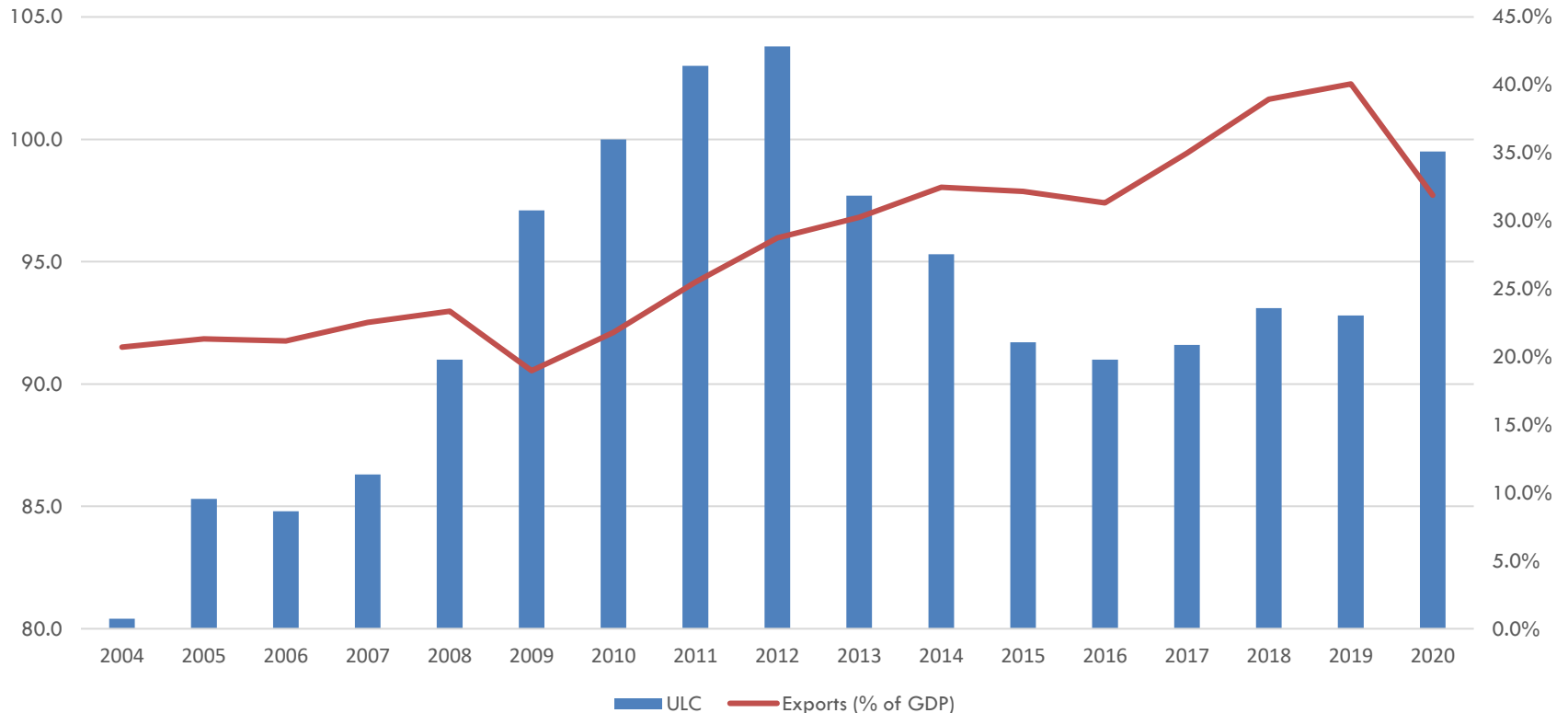
Paper contribution

➢ Paper contribution lies on two fields:

  ➢ Unemployment/employment dynamics

  ➢ Economics of the minimum wage

➢ Combination of individuals characteristics and macro control variables (minimum wage, Kaitz index, GDP growth).

Literature review

➢ Large part of the relevant literature on the relation between past unemployment experience and its impact on the unemployment probability.

    ➢ State dependence

➢ Most of the relevant papers focus on individual characteristics.

    ➢ Bradley et al. (2003), Gang (2003): skills

    ➢ Uhlendoff and Zimmermann (2014): nationality

Literature review

➤ Papers focusing on the phases of economic cycle:

  ➤ Cockx and Dejemeppe (2005)

  ➤ Shimer (2012)

  ➤ Garcia and van Soest (2017)

➤ Papers focusing on minimum wage:

  ➤ Most of studies use aggregate data.

  ➤ Minimum wage in Greece: Yannelis (2014), Kakoulidou et al. (2018)

Data and Methods

➤ Rotating panel data of the Greek Labour Force Survey for the period 2004-2019.

   ➤ 4,320,662 obs corresponding to 832,542 individuals.

➤ Transitions of the same individuals between quarters.

➤ Disadvantage: short observation period.

   ➤ The same individual can stay in the sample up to 6 consecutive quarters.

Data and Methods

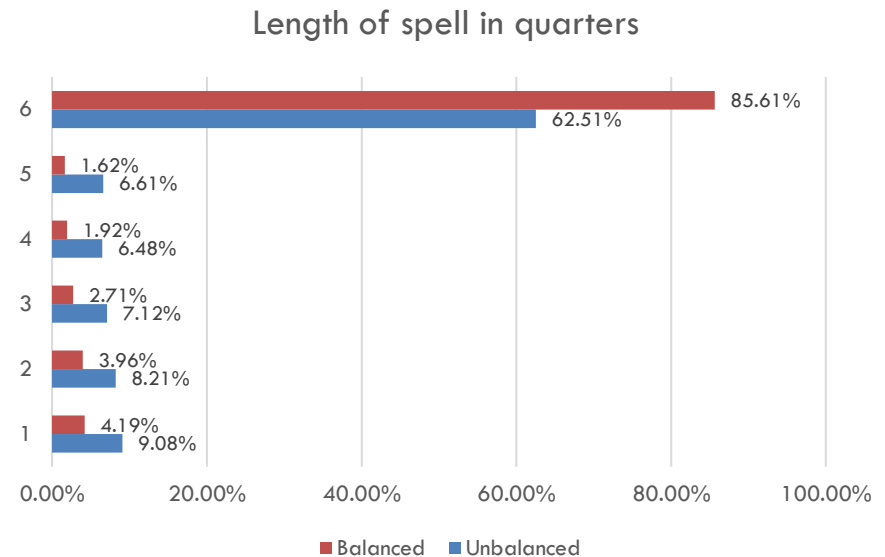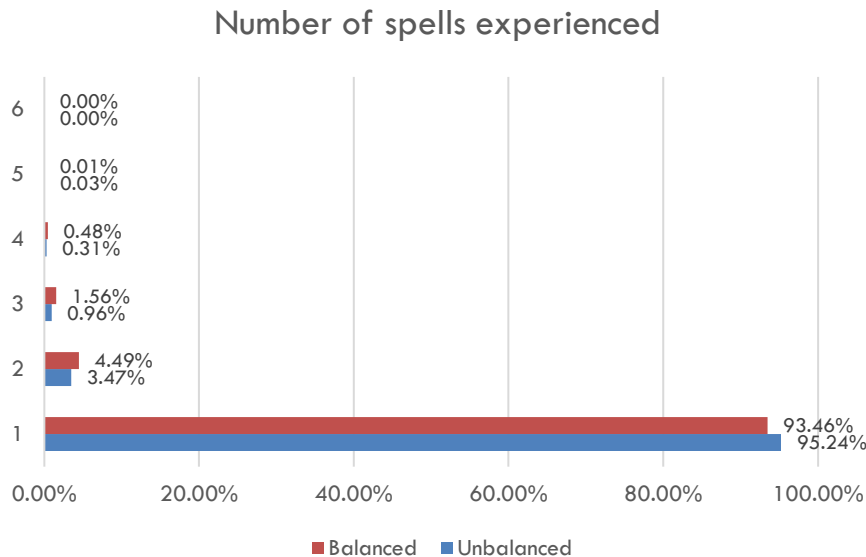➢ Spell analysis: unbalanced <u>and</u> balanced panel (only those who participate in the sample for six consecutive quarters).

➢ Logit analysis: <u>only</u> the unbalanced panel.

➢ To predict the transition probability, binary multivariate logistic model:

$$Pr(y_{it}=1)=F(\beta x_i)=p_{it}$$

➢ Control for individuals' characteristics, macroeconomic and regional determinants and unobserved heterogeneity.

Results – Spell analysis

Number of spells experienced

Category	Balanced	Unbalanced
6	0.00%	0.00%
5	0.01%	0.03%
4	0.48%	0.31%
3	1.56%	0.96%
2	4.49%	3.47%
1	93.46%	95.24%

Length of spell in quarters

Category	Balanced	Unbalanced
6	85.61%	62.51%
5	1.62%	6.61%
4	1.92%	6.48%
3	2.71%	7.12%
2	3.96%	8.21%
1	4.19%	9.08%

➢ Low labour market mobility
  ➢ Low number of spells experienced.
  ➢ High length of spells

Results – Spell analysis

Duration of biggest spell in unemployment

	Balanced	Unbalanced
6	65.67%	39.82%
5	4.13%	7.84%
4	5.11%	9.02%
3	7.07%	11.37%
2	9.37%	14.65%
1	8.66%	17.31%

Total quarters in unemployment

	Balanced	Unbalanced
6	65.80%	42.11%
5	5.35%	8.83%
4	6.37%	9.91%
3	7.30%	11.32%
2	7.66%	12.94%
1	7.51%	14.88%
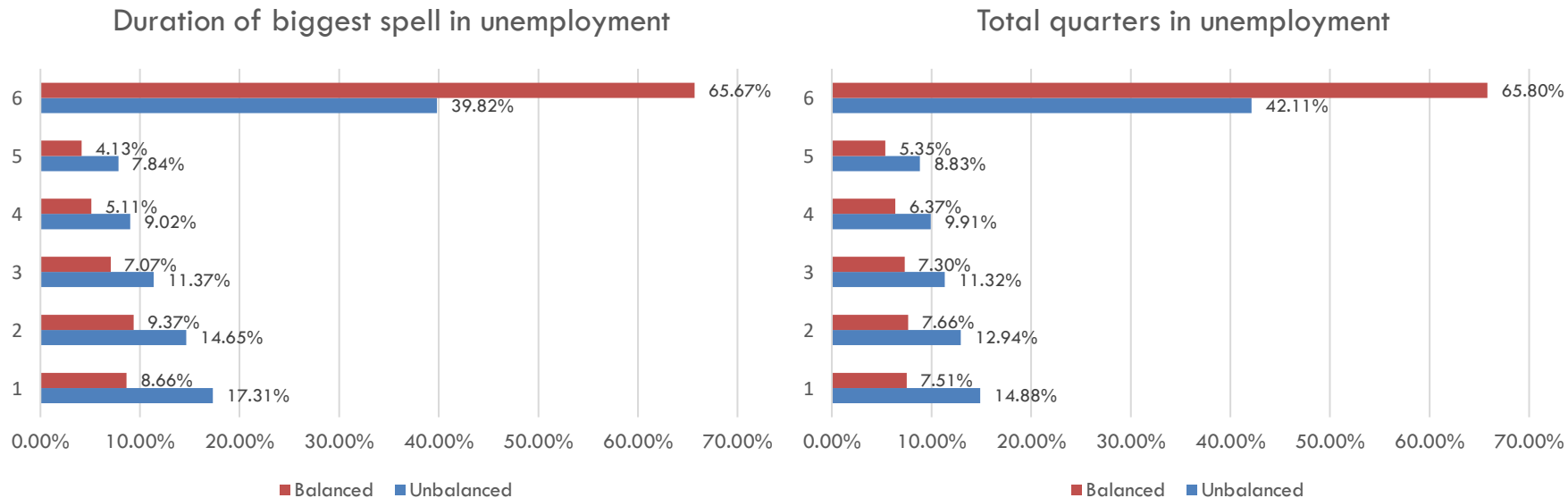
➢ Unemployment is a persistent status.
➢ Especially for the unbalanced panel, unemployment is either permanent or temporary.

Results
Spell analysis in different periods

Unbalanced | Balanced

Legend: 2004q1-2008q3, 2008q4-2016q1, 2016q2-2091q4
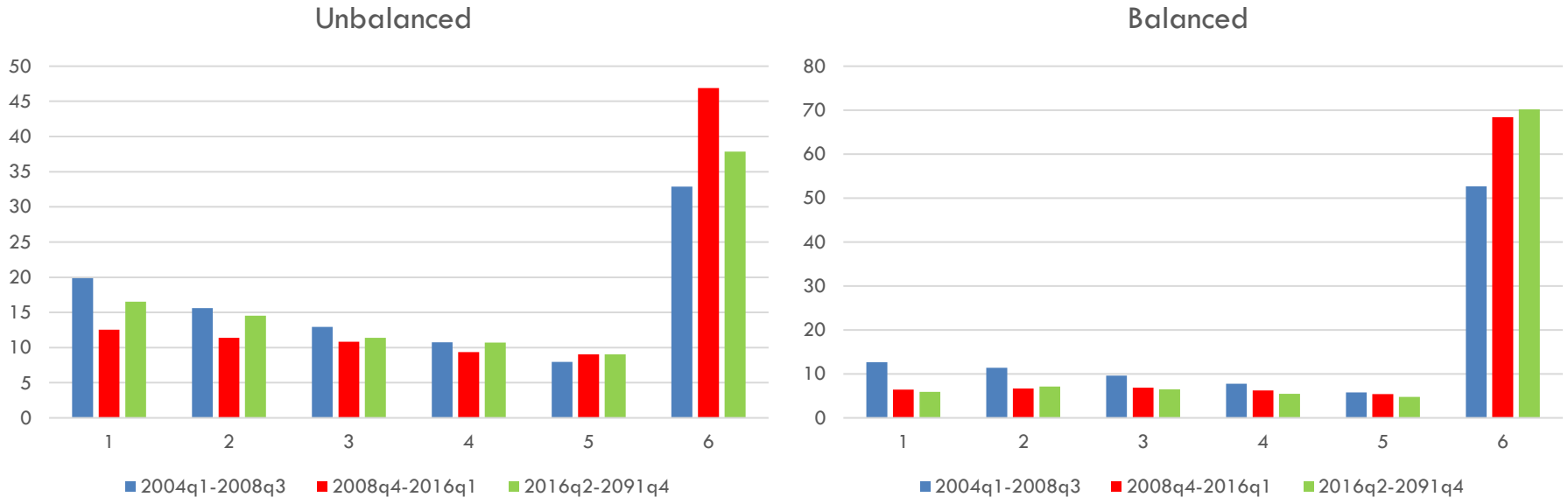
➢ Regardless the period, most of individuals have experienced six quarters in unemployment.
➢ During the crisis, the duration of unemployment spells increased.

Results
Logit analysis for unem. entries

	Specification 1				Specification 2			
	Total Period	Period 1	Period 2	Period 3	Total Period	Period 1	Period 2	Period 3
per_dif_minwage	1.00	1.05	0.98***	0.98	0.99	1.06	0.98	0.95
per_dif_minwage # 15-24	.	.	.	.	1.01	1.01	1.00	1.03
per_dif_minwage # 25-34	.	.	.	.	1.01	1.01	1.00	1.09*
per_dif_minwage # 35-49	.	.	.	.	1.00	0.99	1.00	1.02

➢ Using the Δ(minimum wage)% as the main control variable:
  ➢ No statistically significant impact on unemployment entries.
  ➢ Exception: the 'crisis' period (Period 2).
➢ Other individual characteristics (gender, age, nationality etc.) play more important role.
➢ Higher growth rate implies a lower probability of making a transition from employment to unemployment.

Results
Logit analysis for unem. entries

	Specification 1				Specification 2			
	Total Period	Period1 (pre-crisis)	Period2 (crisis)	Period3 (recovery)	Total Period	Period1 (pre-crisis)	Period2 (crisis)	Period3 (recovery)
15-24	4.17	3.59***	5.98	4.23***	4.17	3.78	5.20***	4.22***
25-34	2.83***	2.63***	3.63***	2.58***	2.82***	2.73***	3.25***	2.54***
35-49	1.93***	1.99***	2.16***	1.57**	1.93***	2.08***	2.05***	1.57**
Female	2.40***	2.59***	2.30***	2.31***	2.40***	2.72***	2.13***	2.32***
Married	0.57***	0.45***	0.71*	0.45**	0.57***	0.44***	0.74	0.45***
Female # Married	0.76***	1.01	0.58***	1.03	0.76***	1.01	0.61***	1.03
Less than primary/Primary	0.66	0.42***	0.83	0.65	0.66	0.41	0.84	0.65
Lower Secondary	1.37	1.39	1.63	0.81	1.37	1.41	1.54	0.81
Post-secondary	0.14***	0.20***	0.11***	0.10***	0.14***	0.19***	0.14*	0.10***
Tertiary	0.79***	0.65	0.99	0.55***	0.79***	0.64***	1.00	0.55***
Post-tertiary education	0.83**	0.69	0.90	0.64***	0.83**	0.69**	0.90	0.64***
Immigrant	0.45	0.89	0.42	0.31	0.45	0.89	0.45	0.31

Results
Logit analysis for unem. exits

	Specification 1				Specification 2			
	Total Period	Period1 (pre-crisis)	Period2 (crisis)	Period3 (recovery)	Total Period	Period1 (pre-crisis)	Period2 (crisis)	Period3 (recovery)
per_dif_minwage	1.04***	1.07***	1.03***	1.04***	1.02***	1.02	1.03**	1.05**
per_dif_minwage # 15-24	.	.	.	.	1.03**	1.08***	1.01	1.00
per_dif_minwage # 25-34	.	.	.	.	1.02	1.05*	1.01	0.99
per_dif_minwage # 35-49	.	.	.	.	1.01	1.05*	1.01	0.99

➤ In contrast with the theoretical predictions:
  ➤ Positive impact on unemployment exits.
  ➤ Higher change in the minimum wage leads to higher unemployment exits (?).
➤ Stronger effects of individual – level variables.
➤ Increased growth rate implies a higher probability of finding a job (unemployment exit).

Results
Logit analysis for unem. exits

	Specification 1				Specification 2			
	Total Period	Period1 (pre-crisis)	Period2 (crisis)	Period3 (recovery)	Total Period	Period1 (pre-crisis)	Period2 (crisis)	Period3 (recovery)
15-24	1.51***	1.01	1.35***	1.76***	1.52***	0.99	1.36***	1.76***
25-34	1.71***	1.20*	1.61***	1.91***	1.71***	1.19*	1.62***	1.92***
35-49	1.48***	1.16*	1.49***	1.60***	1.48***	1.15	1.50***	1.61***
Female	0.71***	0.50***	0.76***	0.92	0.71***	0.50***	0.76***	0.92
Married	1.72***	1.74***	1.62***	1.89***	1.72***	1.74***	1.62***	1.89***
Female # Married	0.54***	0.54***	0.53***	0.49***	0.54***	0.54***	0.53***	0.49***
Less than primary/Primary	1.30***	1.56***	1.25*	1.10	1.30***	1.56***	1.25*	1.10
Lower Secondary	1.31	2.57***	0.99	0.28*	1.31	2.56***	0.99	0.28*
Post-secondary	1.10	1.29	1.02	0.52	1.10	1.28	1.02	0.52
Tertiary	1.33***	1.34	1.37**	1.24	1.33***	1.34	1.37**	1.25
Post-tertiary education	1.12	1.42*	1.08	1.00	1.12	1.42*	1.08	1.00
Immigrant	0.52***	0.50***	0.52***	0.42***	0.52***	0.51***	0.52***	0.42***

Conclusions

➢ The Greek labour market was a low mobility market.

➢ The crisis and the recovery period did not affect the prevailing model.

➢ As expected, duration of unemployment increased during the crisis.

Conclusions

➤ No causal relationship between minimum wage changes and transitions into unemployment.

➤ Transitions out of unemployment seem to be slightly positively affected by increases in minimum wage.

➤ Individual-level characteristics both observed and unobserved play an important role in making a transition into or out of unemployment.
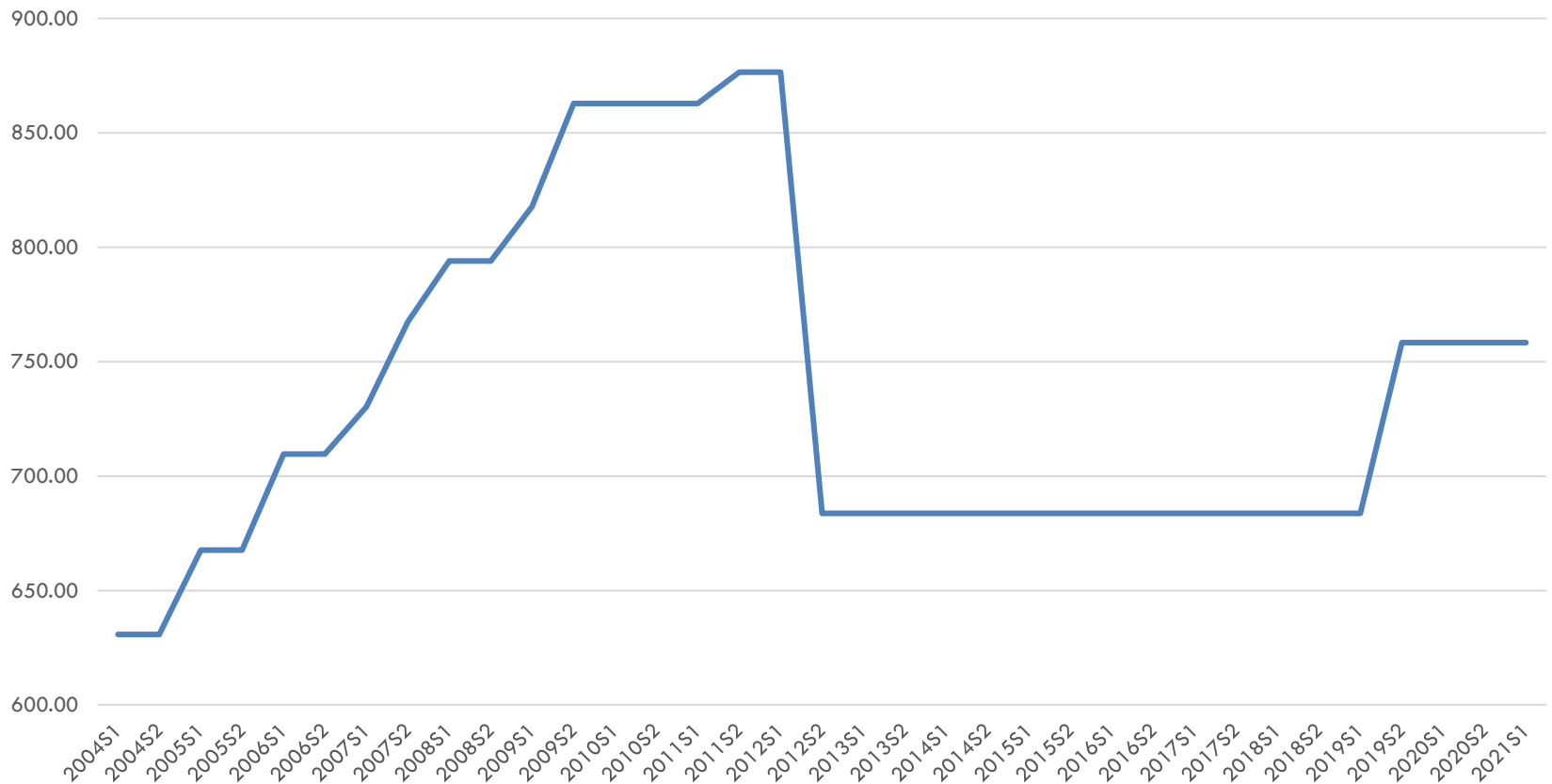
Conclusions

➢ Policy implications:

  ➢ Unemployment entries are not driven by minimum wage.

  ➢ Re-think the effectiveness and scope of sub-minimum wage policies

  ➢ Large differences across regions: differences in labour demand due to seasonal characteristics.

  ➢ Facilitate labour market mobility through investment in training, re-skilling and up-skilling.

*Thank you very much
for your attention!*

Minimum wage data

Minimum wage in Greece (EUR), 2004 – 2019.

Data on income and unemployment

Mean equivalized disposable income vs GDP per capita and unemployment rate (2010 prices)

- GDP per capita (rhs)
- Mean Equivalized Disposable Income (rhs)
- Unemployment Rate (lhs)