




Mismatch unemployment in Austria: The role of regional labour markets for skills

WIFO Research Seminar

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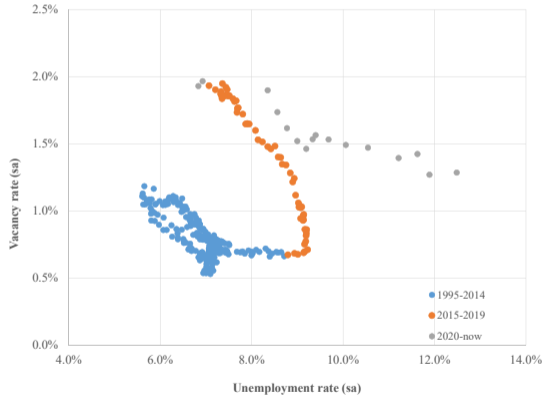
The findings, interpretations and conclusions expressed in this paper are entirely those of the authors. They should not be attributed to the European Commission. Any mistakes and all interpretations are the authors and theirs only.

Overview

- | **Motivation**
- | **Theoretical Background**
- | **Data**
- | **Results**
- | **Robustness**
- | **Conclusion and Outlook**

Motivation I

Figure: Beveridge Curve, Austria, 1995–now.



Source: Own calculation based on data from AMS.

Motivation II

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 - | Labour supply shock caused by the opening of the labour market to several Eastern European countries. (see [Schiman \(2021\)](#))
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- I Discussion: What caused this outward-shift?
 - I Labour supply shock caused by the opening of the labour market to several Eastern European countries. (see [Schiman \(2021\)](#))
 - I Mismatch: Increase in labour market mismatch (see [Christl et al. \(2016\)](#) or [Christl \(2020\)](#))
- I Research question: What caused the shift, and which labour markets are responsible for the shift?

Theoretical Background I

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- I The steady state unemployment is given by:

$$u_t^{ss} = \frac{s_t}{s_t + f_t}; \quad (2)$$

where the separation rate is $s_t = \theta_t^{EU} + (\theta_t^{EI} + \theta_t^{IU}) = (1 - \theta_t^{II})$ and the job finding rate is $f_t = \theta_t^{UE} + (\theta_t^{UI} + \theta_t^{IE}) = (1 - \theta_t^{II})$.

Theoretical Background II

- I We define mismatch unemployment as the difference between the steady state unemployment rate, u_t^{ss} , and the counterfactual unemployment rate, u_t , that would have been the outcome of stable matching function:

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- I Following [Veracierto \(2011\)](#) we calibrate our model separately by region and skill level.

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Vacancies and unemployment

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 - | interactive non-routine tasks, and
 - | cognitive routine tasks.

Data II

Labour market transitions

- I Quarterly data from 2004:Q1 until 2016:Q4 for five skill categories, and the nine federal states from [Statistik Austria \(2020\)](#): Austrian Labour Force Survey (LFS, 'Arbeitskräfteerhebung')

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- I Rotating panel structure.
- I Allows us to follow workers for five consecutive quarters) estimate transition rates by skill category and by region.

Data III

Figure: Unemployment rates and vacancy rates, by region.

Source: Vacancies and unemployment obtained from [AMS Österreich \(2020\)](#); data on employment obtained from [Statistik Austria \(2020\)](#).

Data IV

Figure: Unemployment rates and vacancy rates, by skill category.

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Data V

Figure: Transition rates, aggregated data for Austria, 2004–2016.

Results I

Figure: Mismatch Indicator and Beveridge Curves, Austria, 2004–2016.

Source: Own calculation based on data from [Statistik Austria \(2020\)](#) and [AMS Österreich \(2020\)](#).

Results II

Figure: Mismatch unemployment, Austria, 2004–2016.

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Results III

Figure: Mismatch unemployment, by region.

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Results IV

Figure: Mismatch unemployment, by skill level.

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Results V

Figure: Mismatch unemployment, by region and skill level.

Source: Own calculation based on data from [Statistik Austria \(2020\)](#) and [AMS Österreich \(2020\)](#).

Robustness I

Figure: Model prediction of the unemployment rate, by regions

Source: Own calculations, based on data from [AMS Österreich \(2020\)](#) and [Statistik Austria \(2020\)](#).

Robustness II

Figure: Model prediction of the unemployment rate, by skill level

Source: Own calculations, based on data from [AMS Österreich \(2020\)](#) and [Statistik Austria \(2020\)](#).

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- I We analyze the Austrian Beveridge curve shift after 2014, using detailed vacancy data and labour market transition data, on both skill and regional level.

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- I Substantial increase in mismatch unemployment after 2014
 - I Austria : 0.5%) 2%.
 - I Regions : Increase is especially strong in Vienna : 0.5%) 3%.
 - I Skills : Strong increase in mismatch unemployment for manual routine tasks . 1.5%) 8%.

Conclusions II

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- I Demand problems in the labour market are often transitory. The same holds true for shifts due to labour supply shocks, which are usually not persistent.
- I A decrease in matching efficiency is typically persistent. As such, a decrease in matching efficiency requires different policy responses than cyclical problems.
- I Regional and skill disaggregation especially important from a policy point of view, since policies to tackle the mismatch problems on the labour market can be targeted especially on the identified labour markets.

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Thank you

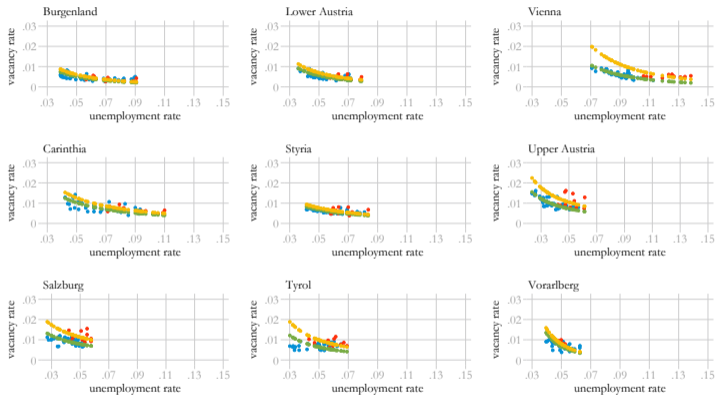


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Additional Figures I

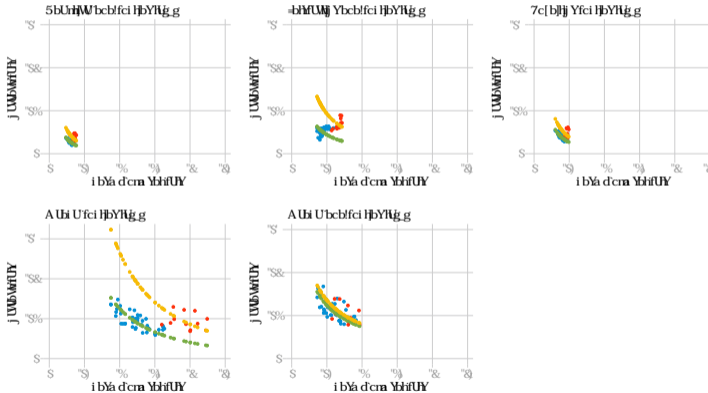
Figure: Beveridge curve, by region, 2004–2016.



- Beveridge Curve (till 2014)
- Beveridge Curve (after 2014)
- hypothetical BC (till 2014)
- hypothetical BC (after 2014)

Additional Figures II

Figure: Beveridge curves, by skill level, 2004–2016.



- 6Y YfX'Y7i fj Yfh' 88%L
- 6Y YfX'Y7i fj YfLZM' 88%L
- \ndch YfjW'67 fh' 88%L
- \ndch YfjW'67 fLZM' 88%L