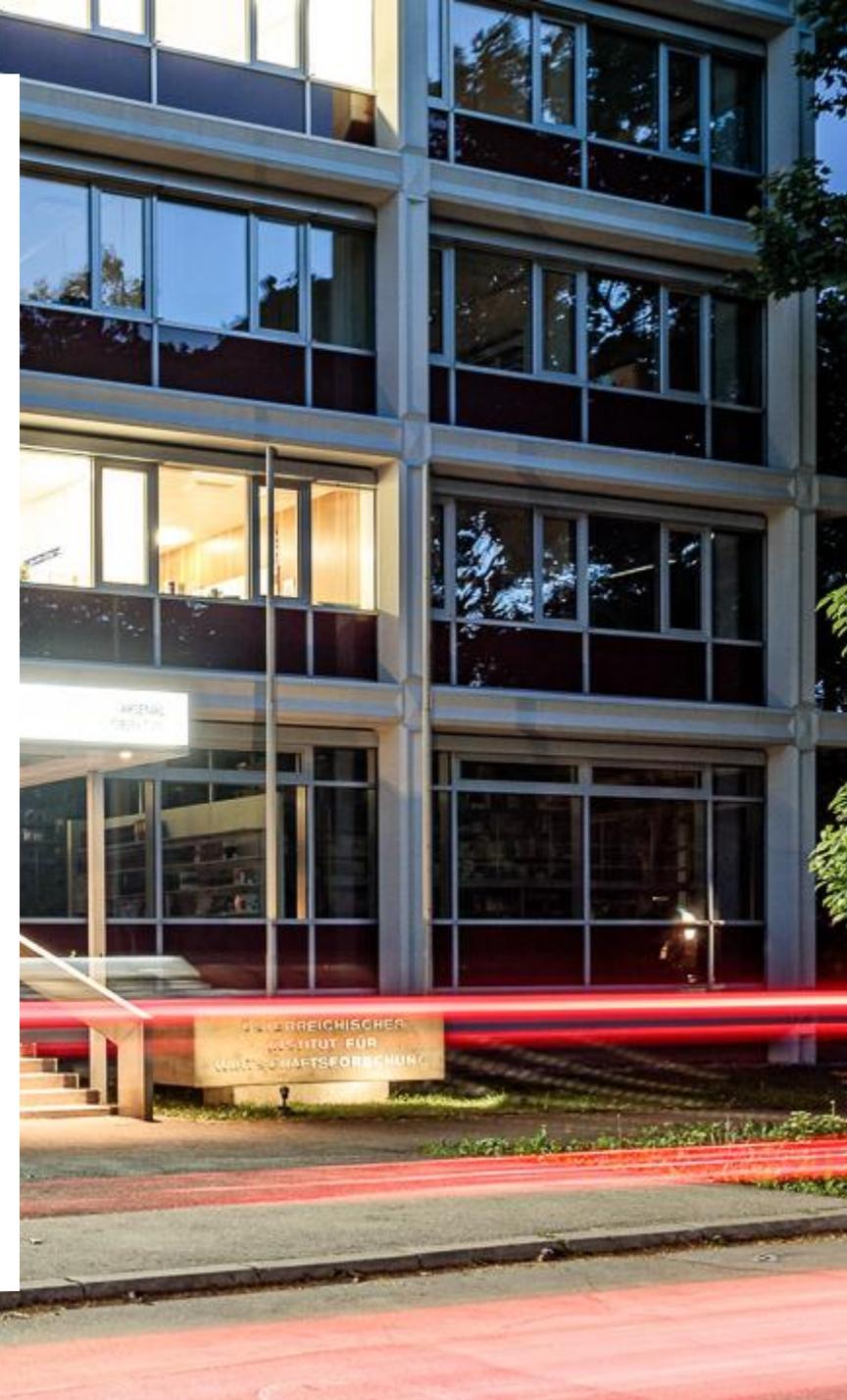


The Austrian economy

An introduction

Michael Peneder

Vienna University of Economics and Business
Vienna, October 2nd 2025



I. Introduction

Outline

- **I. Introduction**
 - Basic facts
 - What is „the economy“?
- **II. Notes on the current crisis**
 - Prices, wages & profitability
 - The tradeables dilemma
 - Labour shortages
- **III. International comparison,**
selected examples on
 - Economic performance
 - Determinants

Triple objective

- To learn about the
 - **Austrian** economy
 - Choice of **indicators**
 - Interpretation of **data**

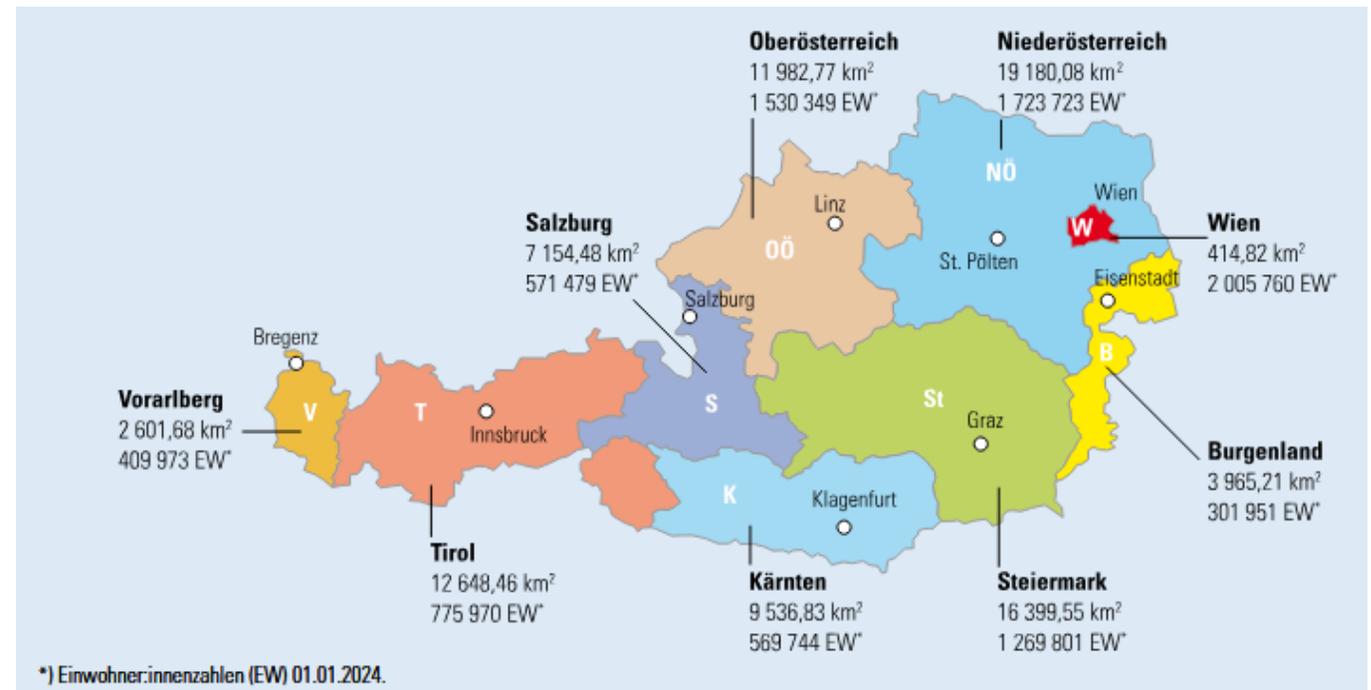
Austria, at first glance 2024

- **Population:** 9,2 million
- **GDP:** 494 billion €
- **GDP per capita:** 53.830 €
- **Unemployment:** 5.5% / 6.8% (2025 Q2, ILO/national)
- **Fiscal ratio:** 44.5 % of GDP
- **Debt ratio:** 82.3% of GDP (2025Q2)

- **Export ratio:** ca. 50 % of GDP
 - Problem: total sales (exports) versus value added (in GDP)
 - Export **accounts for roughly 30% of GDP** (I/O-Tables, 2020)

Anyway, no closed economy ...

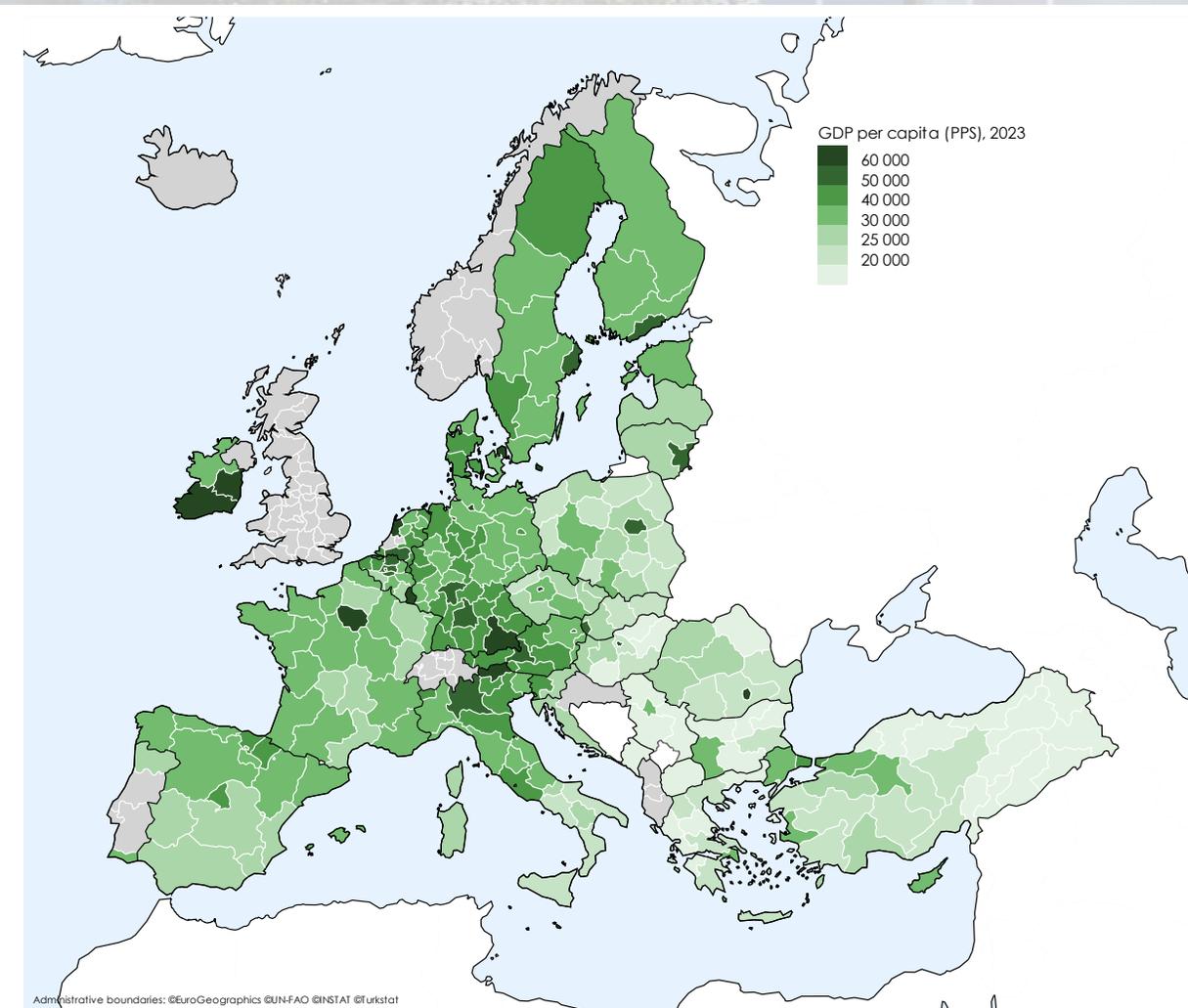
Austria as a federal state (2023)



Sources: ST.AT, Austria: Zahlen.Daten.Fakten 2024/25; WIFO.

Austria within Europe

GDP per capita 2023, PPS



■ Geography

- Transitional **climate** (oceanic / continental)
- Diverse landscape; large alpine areas
 - Infrastructure (e.g., transport)
 - Tourism

■ Integration

- 1976: Pegging Austrian currency to German D-Mark
- 1995: joining European Union
- 1999: Monetary Union (Eurozone)

■ Proximity to high-income regions (esp. South Germany, Switzerland, Northern Italy)

- High demand
- Sophisticated supply chains
- Knowledge spillovers

... but historically, a „**dead border**“ to the east.

GDP per capita growth

2013-2023 in %

CEE economic transition

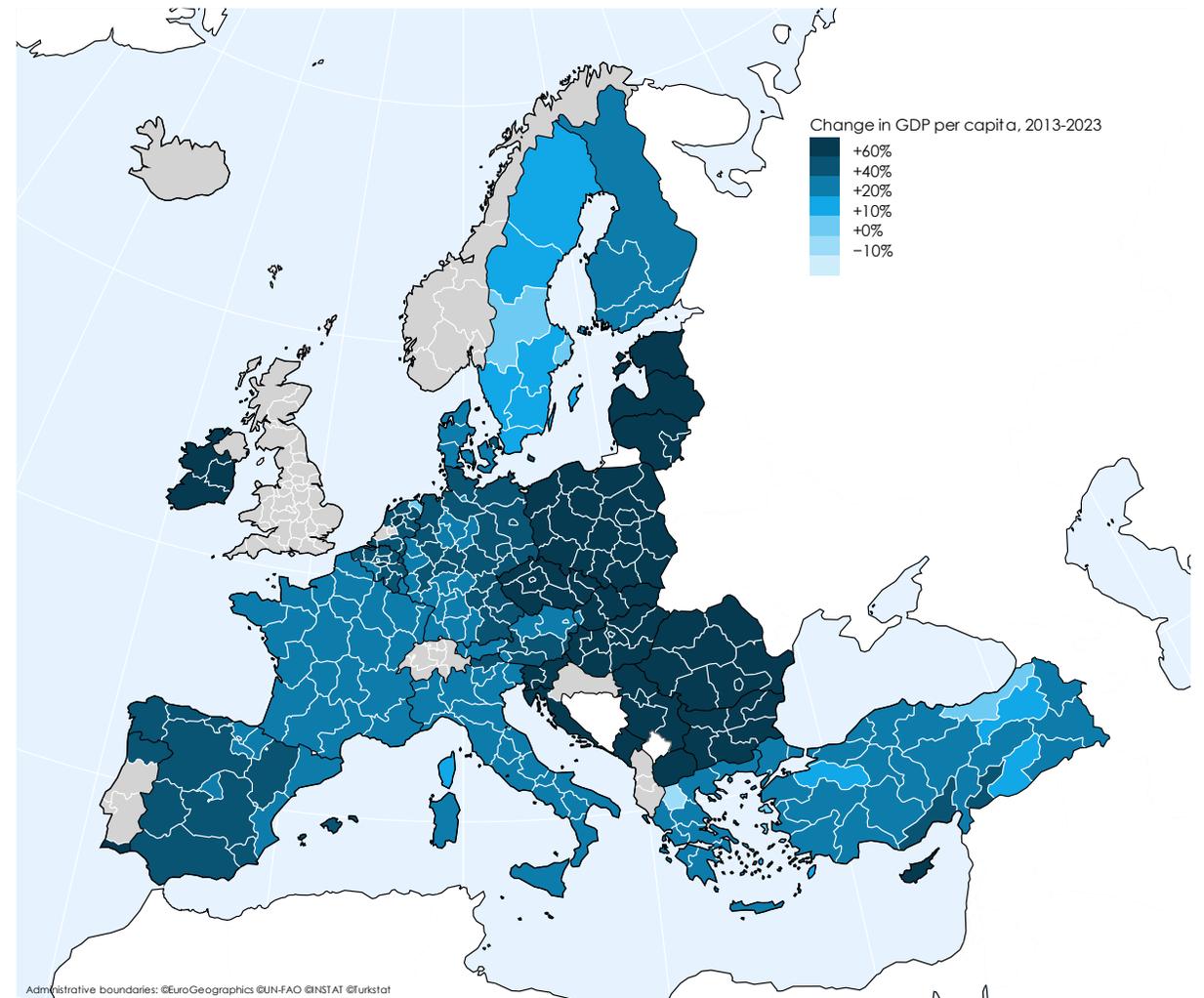
- In 1989 the „iron curtain“ fell apart
- System change from centrally planned to market economies
- Institutional reforms
- EU enlargement

➤ **Catching-up!**

Austria benefitted from **proximity to high-growth regions** along former „dead border“

- New (initially low-cost) competition
- New markets (demand)
- Opportunities for division of labour
- Migration (labour market)

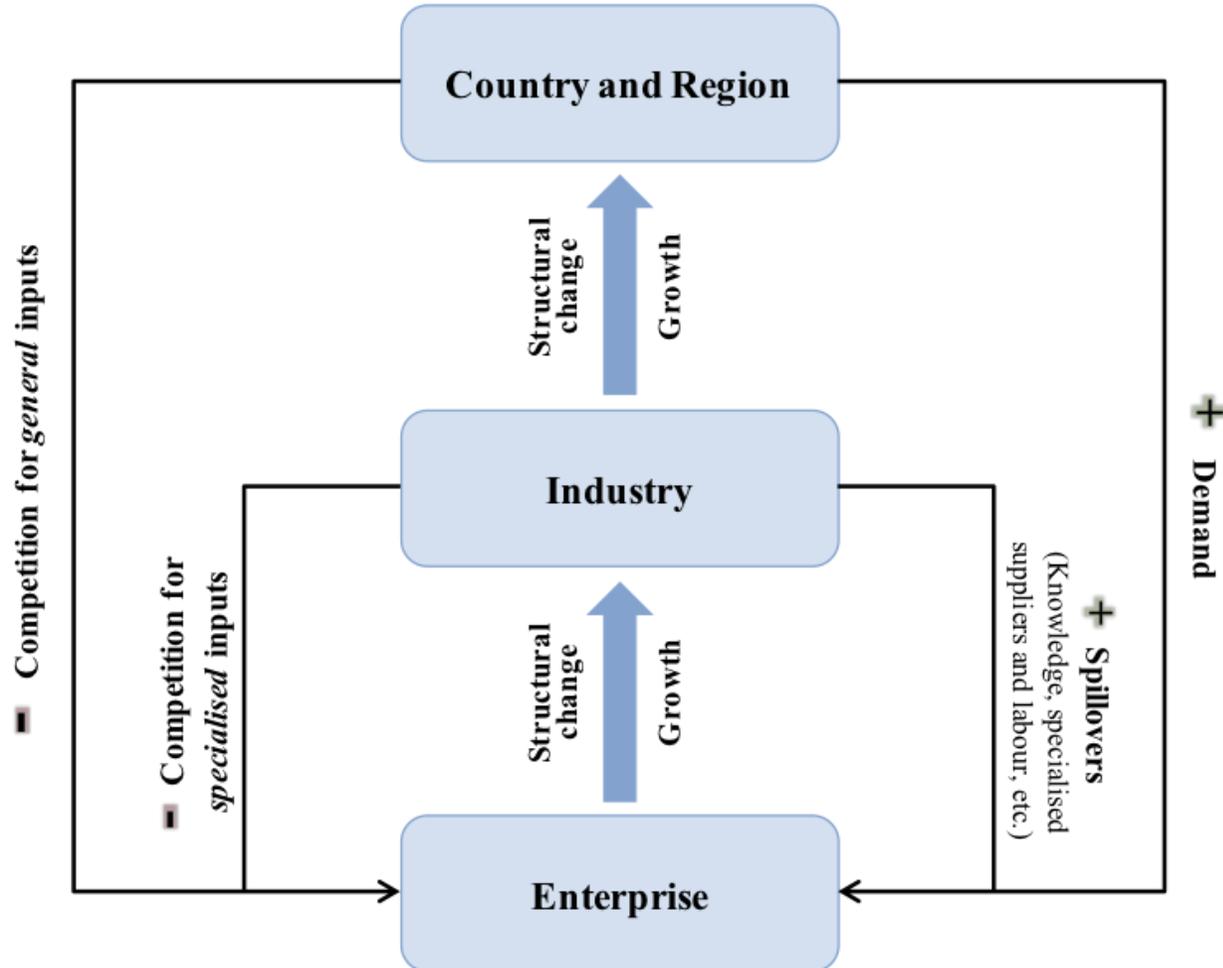
➤ **Growth and structural change!**



Source: EuroGeographics, WIFO.

■ But what is “**the economy**”?

Micro-, meso- and macro levels of activity, e.g. ...



Other **micro-actors**, e.g.

- Consumers
- Labour
- Entrepreneurs
- Investors

Other **meso-level structures**, e.g.

- Regions
- Technologies
- Goods & services (consumption, trade, GVCs)

... add e.g., public institutions

II. Notes on the current crisis

■ Exogenous macroeconomic shock

- Russian war against Ukraine triggered an international energy crisis
- Austria particular affected: general rise in energy prices

■ Different sectoral impacts

- Energy intensive industries (mostly manufacturing)
- Domestic/localized vs international competition (non-/tradeables)
- Different opportunities to pass on prices to consumers

■ Vicious circle (macro-meso-micro)

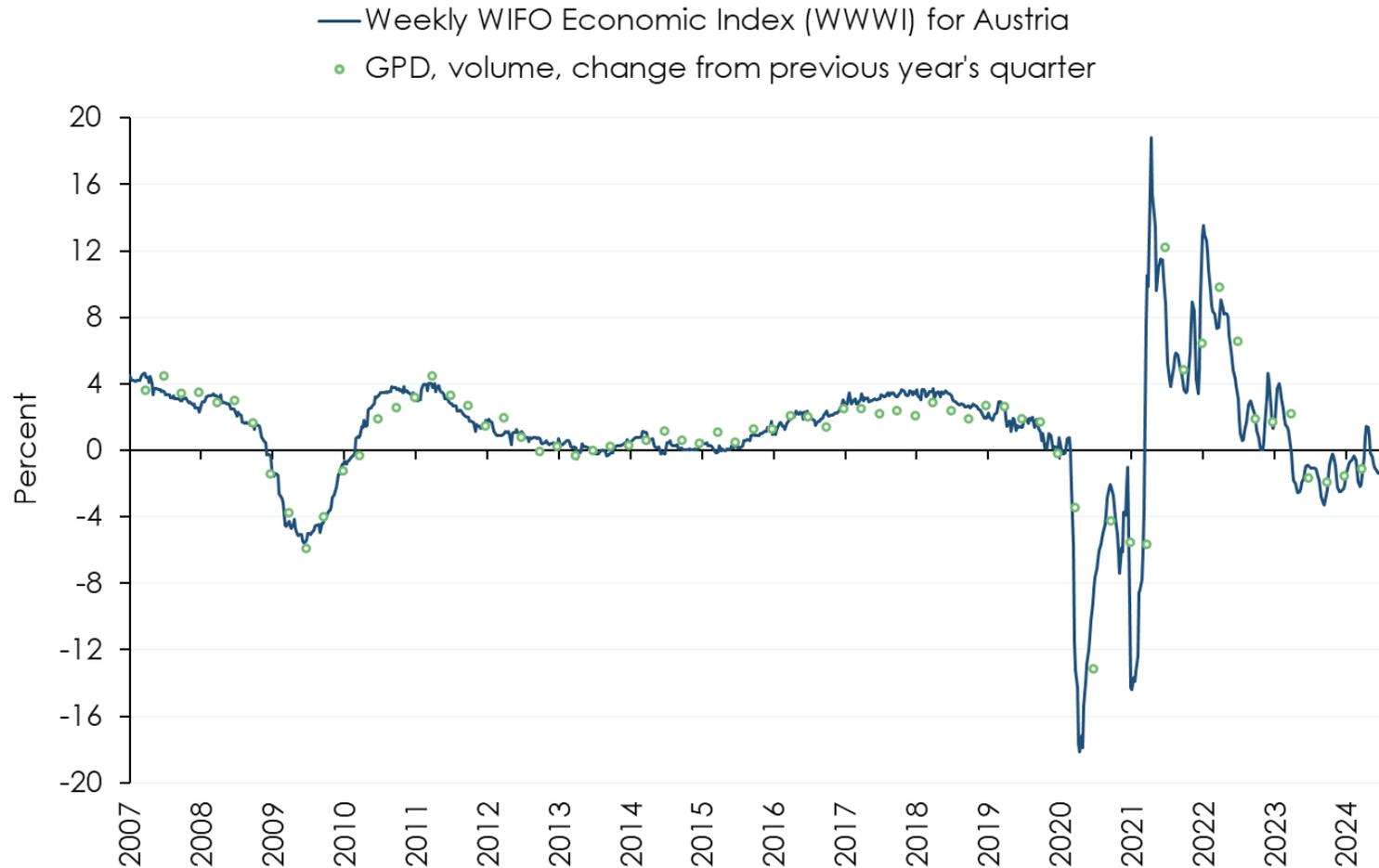
- **Services** driving up aggregate inflation (beyond international trend)
- Overall inflation drives **wage** increases (beyond international trend)
- **Manufacturing** lacks scope to pass on higher costs for energy and wages
 - Declining profits, investments and production
 - Corporate downsizing or exits; release of skilled labour

■ Labour shortages (demographic trends)

- May crisis help to cope with positive demand shock in **defence related** production?

Growth

GDP volume index (WWWI) since 2007



Source: WIFO, Statistics Austria.

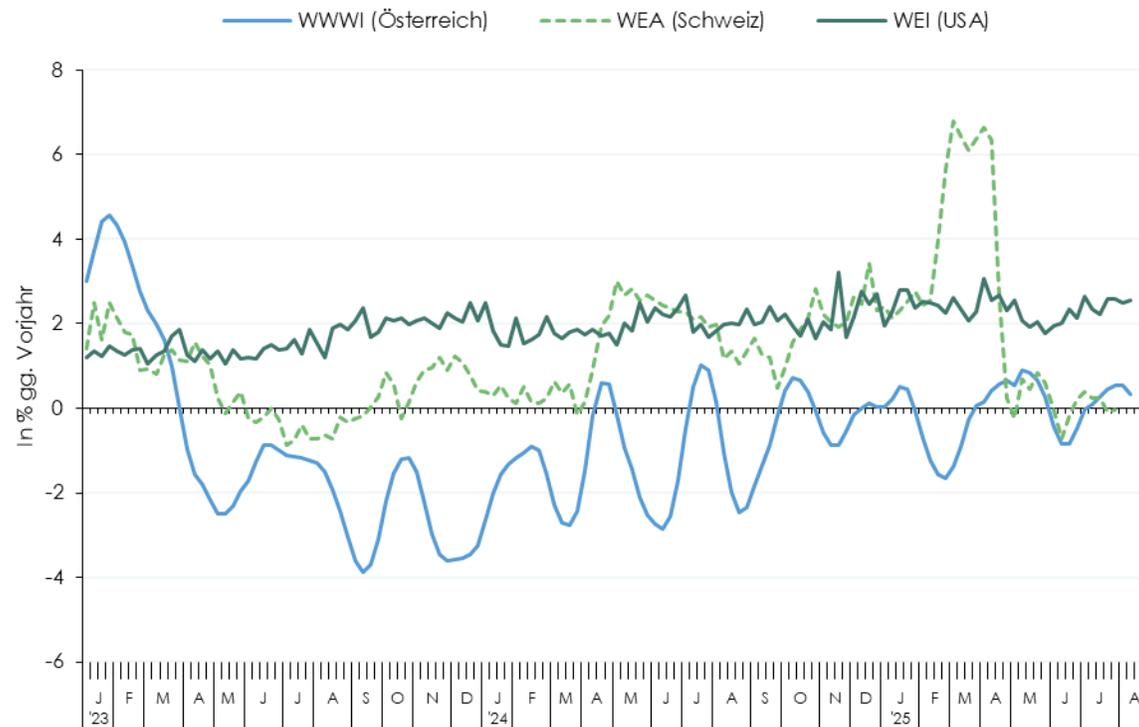
Turbulent times

- “Great **financial** and economic crisis“ of 2009
- **COVID-19** in 2020
- Russian invasion of the **Ukraine** in 2022

Contact (Josef Baumgartner), further details and **monthly updates** at

<https://www.wifo.ac.at/en/research/thematic-platforms/business-cycles-and-forecasting/weekly-wifo-economic-index/>

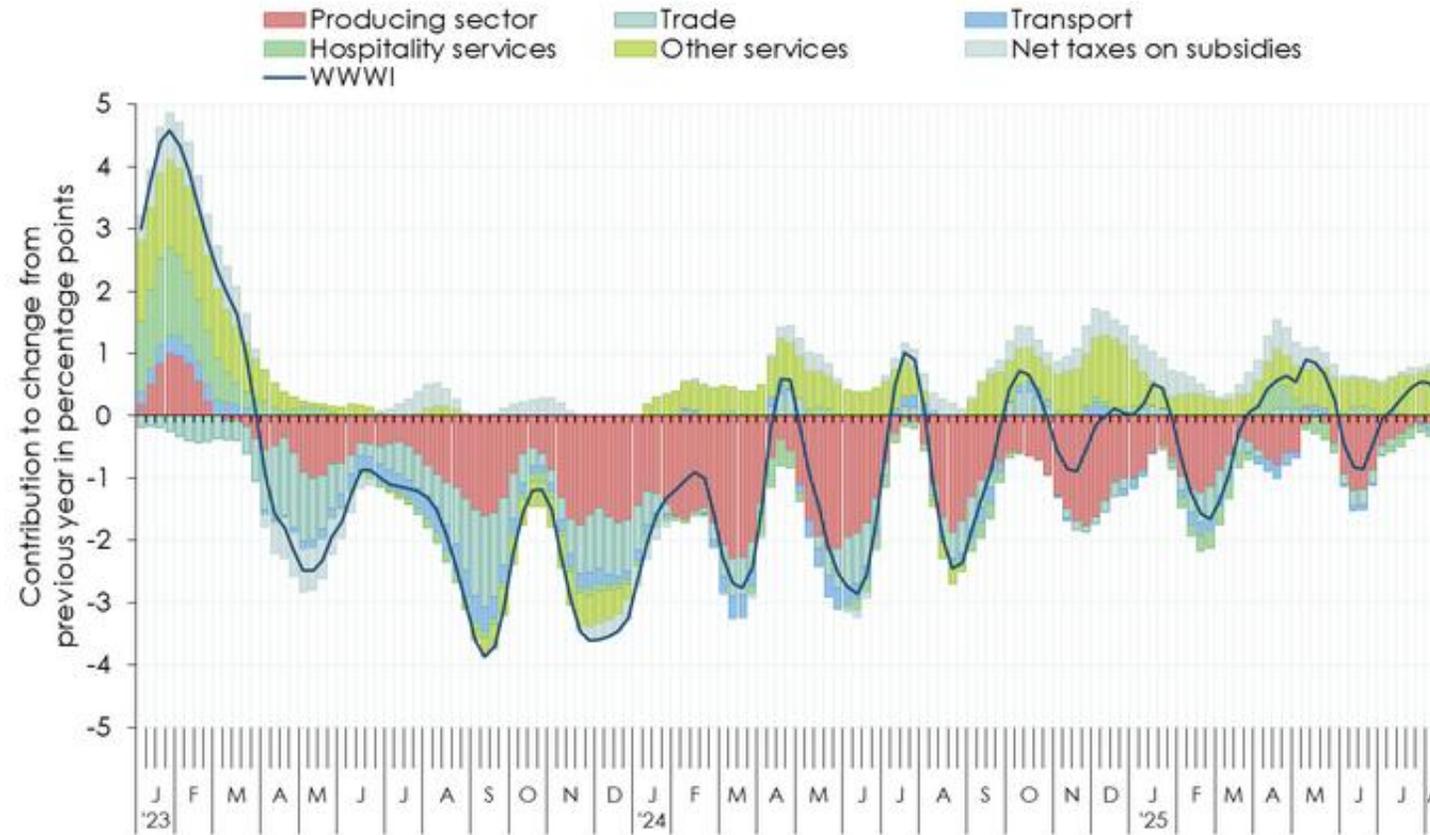
GDP volume index (WWWI), recent years



Q: WIFO, Fed, SECO, Macrobond. – WWWI ... Wöchentlicher WIFO-Wirtschaftsindex, WEI ... Weekly Economic Index, WEA ... Weekly Economic Activity.

Supply

Components of GDP growth



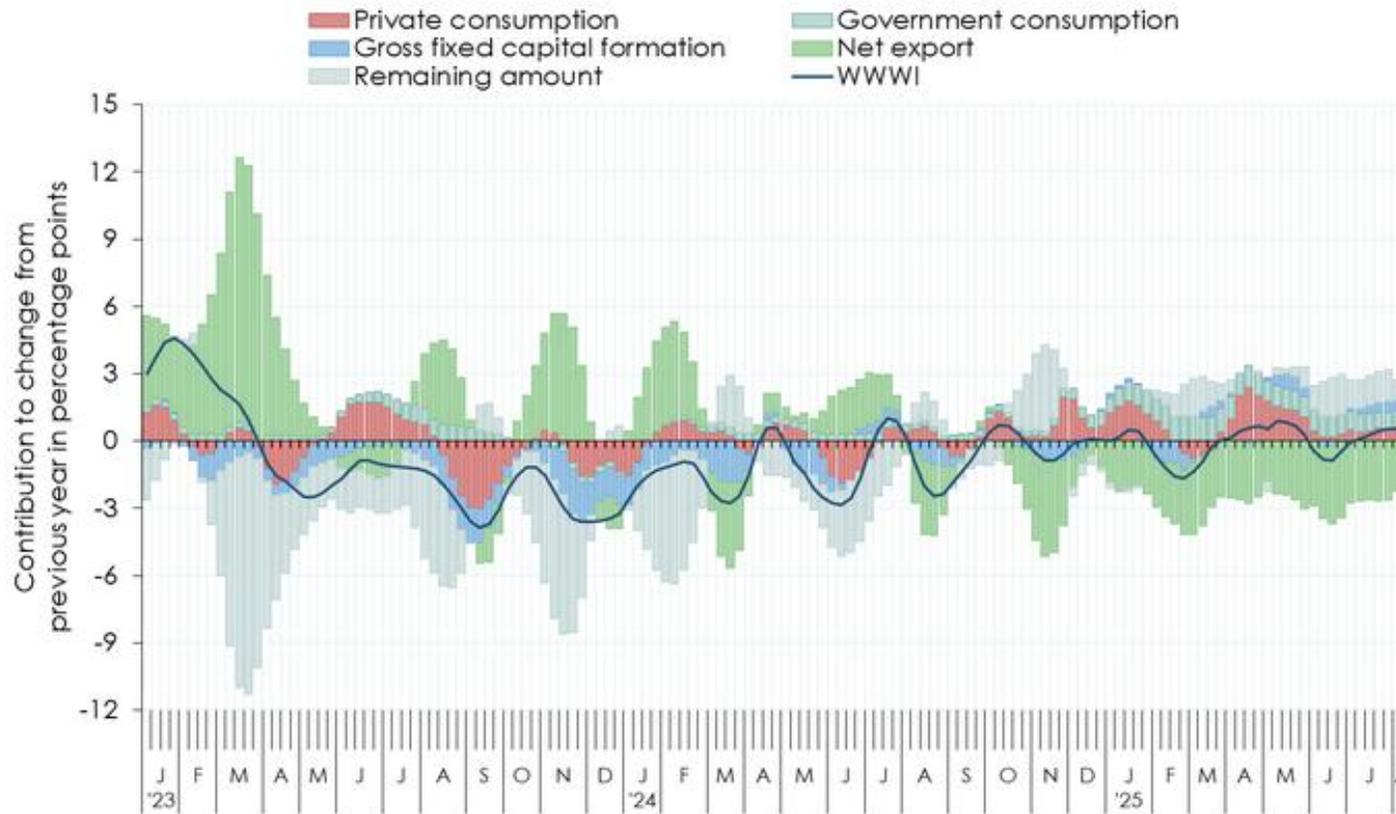
Source: WIFO, Statistics Austria. – Producing sector NACE A to F, Trade NACE G, Transport NACEH, Hospitality services NACEI, Other services NACE J to T. – The sum of the growth contributions of the subcomponents may differ from the estimated GDP growth (residual).

Contact (Josef Baumgartner),
further details and **monthly updates** at

<https://www.wifo.ac.at/en/research/thematic-platforms/business-cycles-and-forecasting/weekly-wifo-economic-index/>

Use

Components of GDP growth



Source: WIFO, Statistics Austria.

Contact (Josef Baumgartner),
further details and **monthly
updates** at

<https://www.wifo.ac.at/en/research/the-matic-platforms/business-cycles-and-forecasting/weekly-wifo-economic-index/>

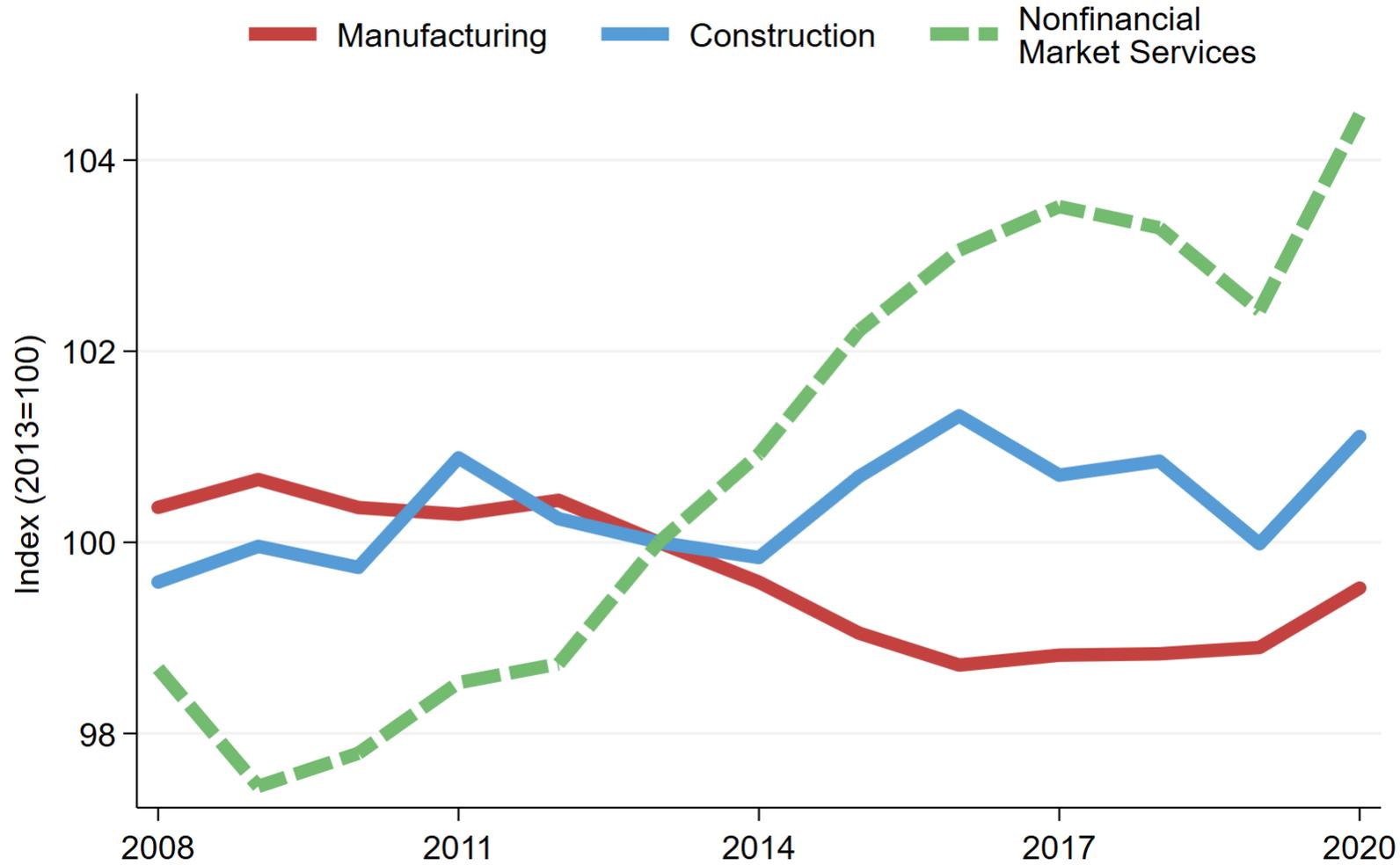
Sector shares (w/o public sector)

NACE section	2013			2023		
	Value added	Employees	Labour productivity	Value added	Employees	Labour productivity
	in % of total					
Manufacturing (C)	26,9	23,9	109,6	22,7	21,1	113,9
Construction (F)	7,9	10,4	81,1	8,2	9,6	82,4
Wholesale and retail trade (G)	17,2	22,8	74,7	15,7	19,6	83,0
Transportation and storage (H)	7,5	7,9	111,2	6,0	6,3	86,1
Accommodation and food service (I)	4,1	9,0	47,2	4,3	8,5	49,2
Professional & other services (incl. ICT) (J, M)	11,4	9,7	251,6	12,5	10,9	245,0
Finance and insurance (K)	10,3	4,8	176,8	8,2	3,5	196,5
Administrative and support services (N)	5,3	7,8	69,9	5,7	7,8	71,3
Others (B, D, E, L, S)	9,4	3,6	-	10,5	4,1	-

Source: Statistics Austria (SBS), WIFO.

Profitability

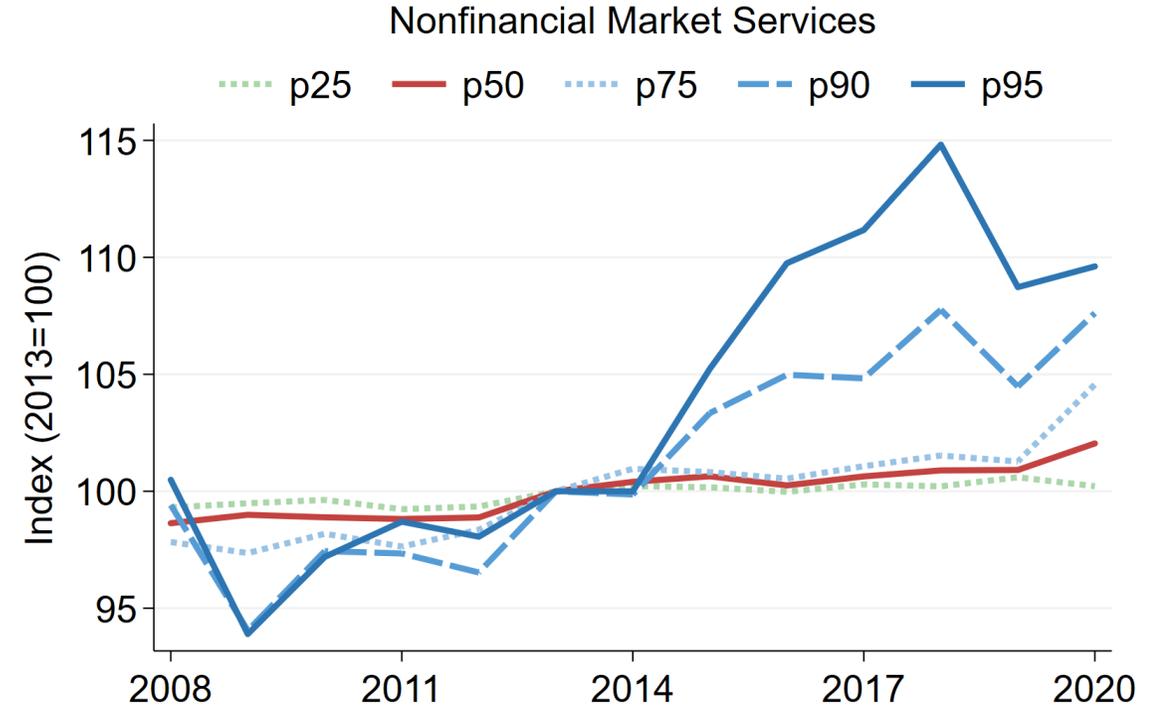
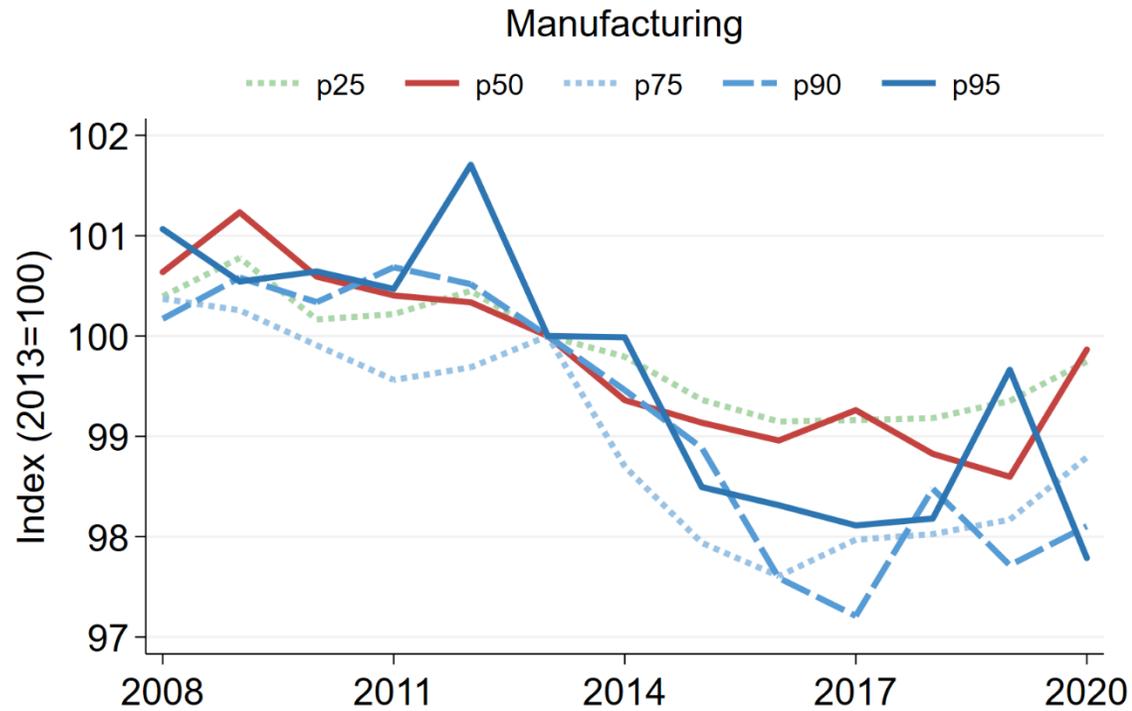
Average price-cost margins (markups), index: 2013 = 100



Source: Peneder – Unterlass (2024)

“Winners take more“

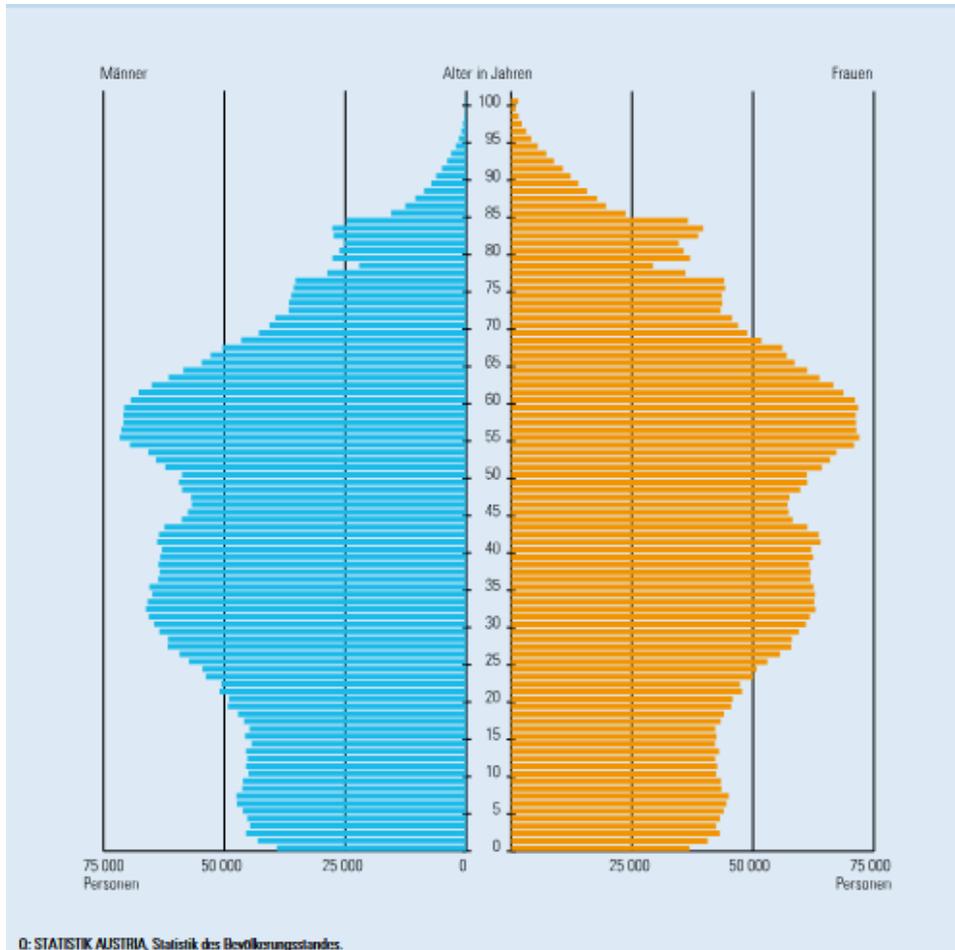
Markups by percentile, index: 2013 = 100



Source: Peneder – Unterlass (2024)

People

Population pyramid: Austria, 1 January 2024



Total population

- ca 1900: 6 million
- 2000: 8 million
- 2022: 9 million mark reached
- 10 million expected in 2060

Age pyramid

- 0-14 years: 14.4%
- 15-64 years: 65.8%
- 65+ years: 19.8%

➤ **Baby boomers** approach retirement age!

Sources: ST.AT, Austria: Zahlen.Daten.Fakten 2024/25

Labour

Expected change of working age population (EWPG)

- Long term decline since 1970s
- Turned negative in 2018
- Tends to stabilise at negative rates

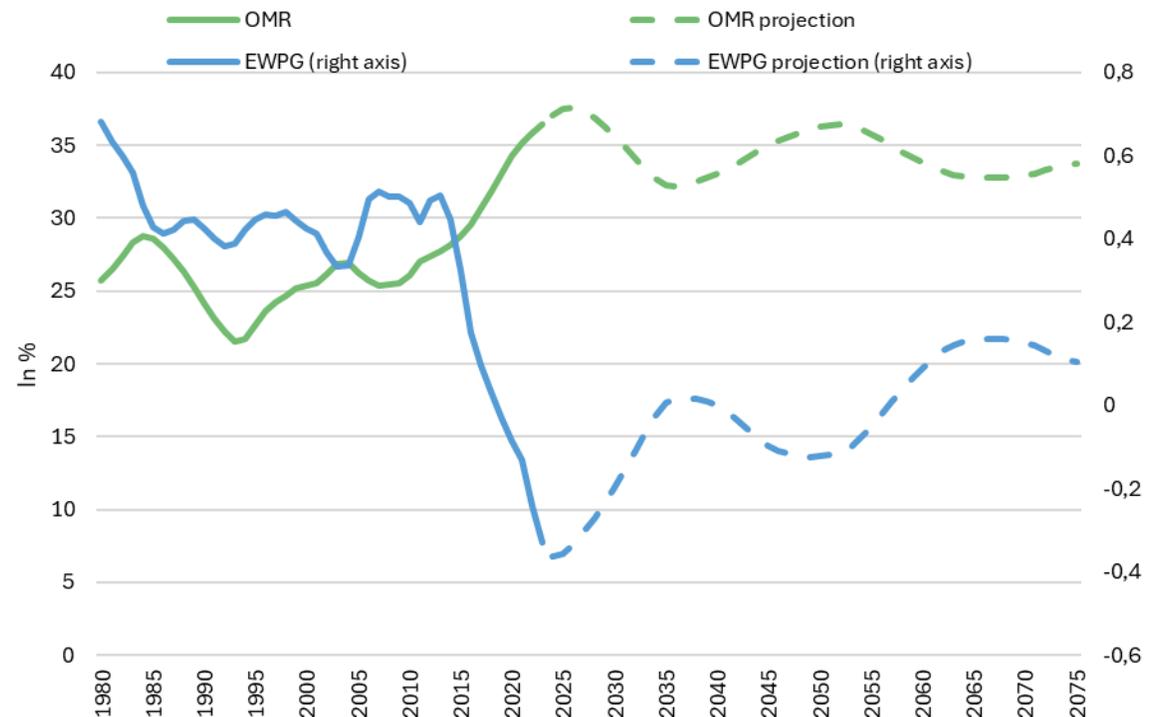
Ratio of old to middle-aged persons (OMR) in labour force

- Increases since the 1990s
- Expected to **peak** ca. **2030**
- ... then stabilise

Likely **impacts** on

- Productivity growth
- Migration
- etc.

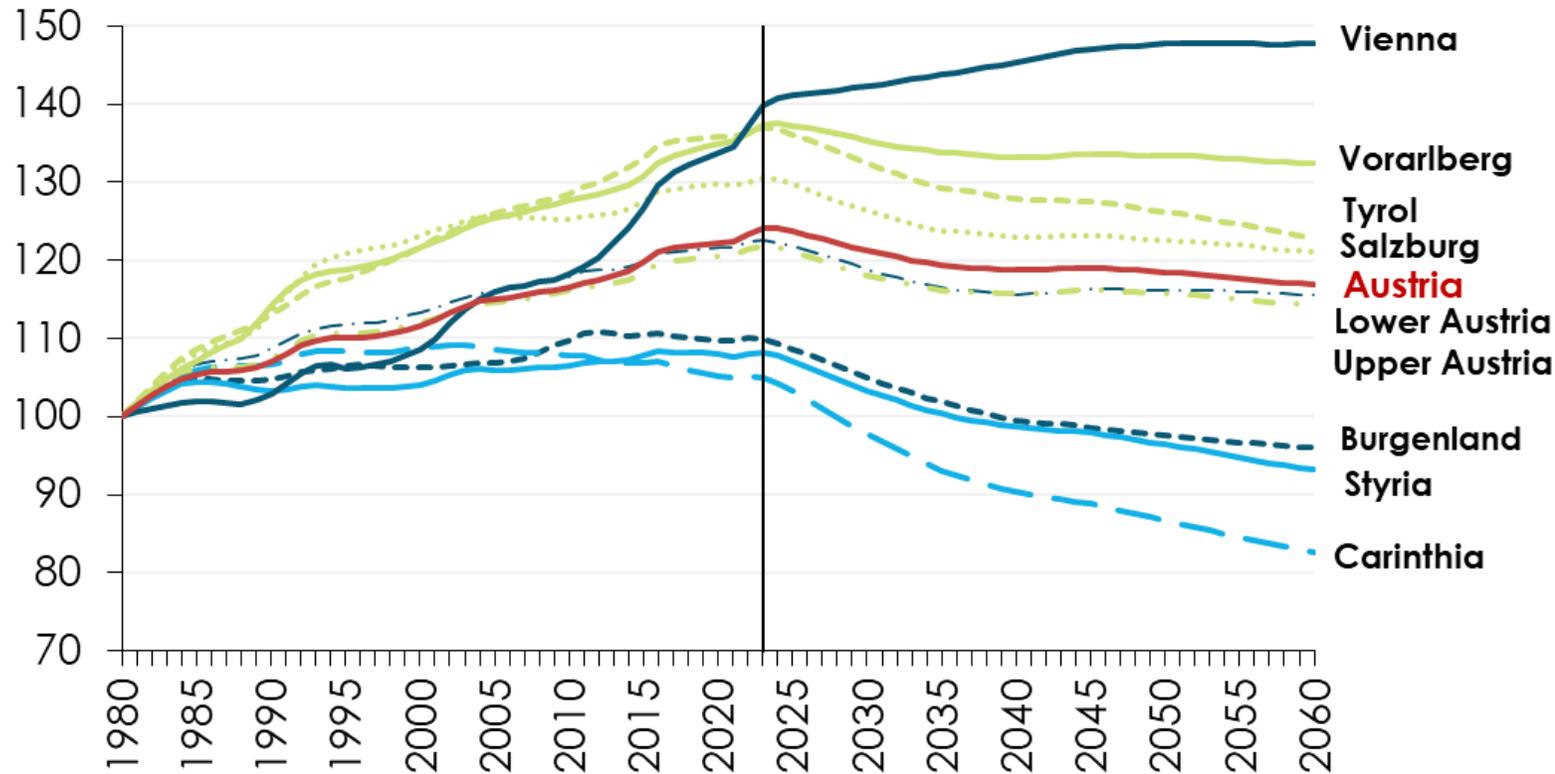
- **EWPG = Expected change in working-age population (15-64 years)** over the next 10 years (right axis)
- **OMR = ratio of old (55-64 years) to middle-aged (25-54 years) persons** in the labour force (left axis)



Source: Statistics Austria (Bevölkerungsstatistik und -prognose), WIFO (Kaniowski – Url).

Labour force by regions

Population 15-64 years old; 1980 = 100



Regional disparities expected to increase

- **Fertility** in rural areas tends to converge to lower values in the cities
- Cities, especially Vienna, attract most of **migration**

Source: Statistics Austria (Bevölkerungstatistik und -prognose), WIFO-calculations.

II. International comparisons

- **WIFO radar** of competitiveness
- **Iceberg model**
- Selected **indicators**
 - Productivity
 - Resources and cost
 - Industrial structure
 - Systems
- *Sources*
 - Peneder M., Bittschi B., Burton A., Köppl A., Url T. (2025), **Wirtschaftsstandort Österreich: Wettbewerbsfähigkeit und nachhaltige Entwicklung**, Springer-Gabler, Wiesbaden <https://link.springer.com/book/10.1007/978-3-658-47984-8>
 - **WIFO Radar of Competitiveness** (interactive online tool): <https://www.wifo.ac.at/en/research/thematic-platforms/competitiveness/competitiveness-radar/>

Book Alert

- **3 pillars of competitiveness**
 - Economic performance
 - Social cohesion
 - Ecological transformation
 - Positive & negative **trade offs**
- Comprehensive collection of indicators, including numerous **determinants** of economic performance:
 - Competition
 - Education, training & skills
 - Innovation
 - Financing
 - Infrastructure
 - Public institutions
- Published June 2025
<https://link.springer.com/book/10.1007/978-3-658-47984-8>

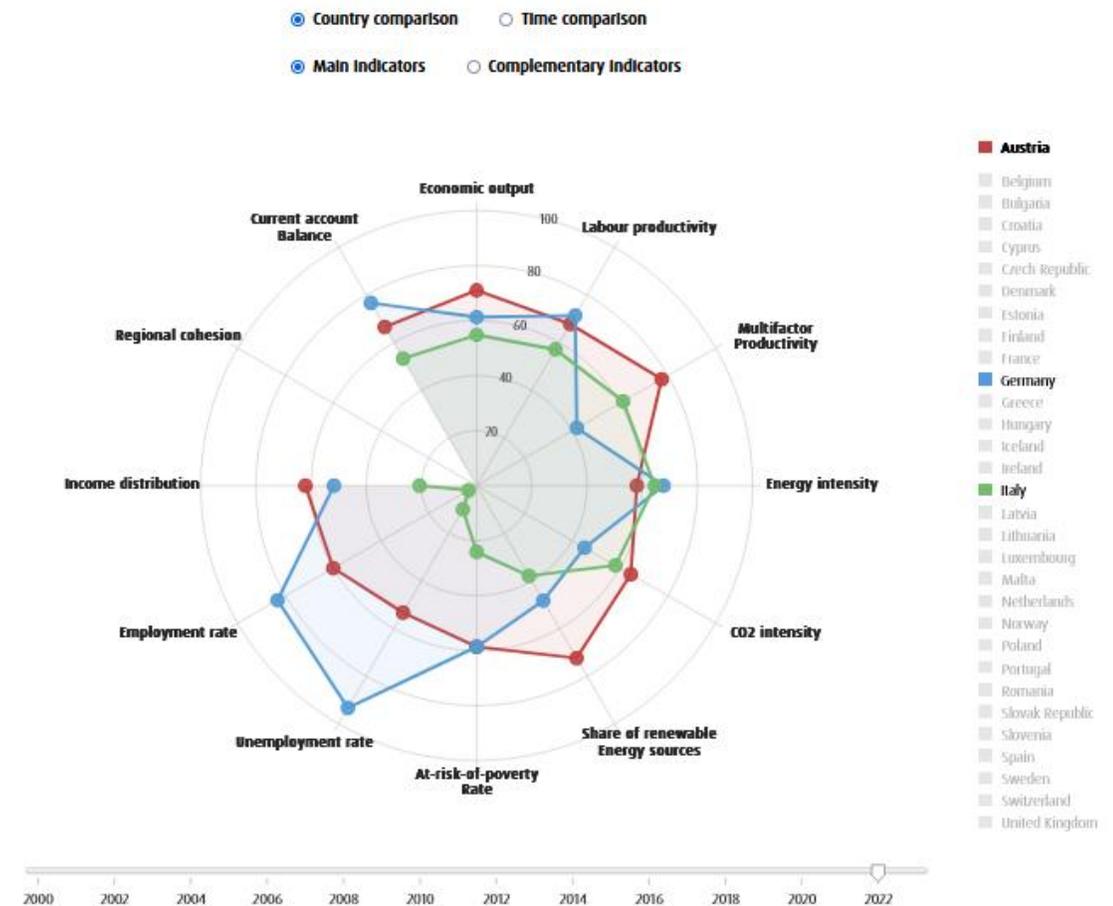
Michael Peneder · Benjamin Bittschi ·
Anna Burton · Angela Köppl · Thomas Url

Wirtschaftsstandort Österreich: Wettbewerbsfähigkeit und nachhaltige Entwicklung

 Springer Gabler

WIFO-radar of competitiveness (I)

- **3 pillars:** economic, social & ecological
- **24 KPIs** (key performance indicators) for ca. 30 European countries
- **Percentile ranks:** share of countries with equal or worse values
- **Austria** trails **behind** the **top third** of European countries (mean percentile rank: **61.6**) ...
- <https://www.wifo.ac.at/forschung/themenplattformen/wettbewerbsfaehigkeit/radar-der-wettbewerbsfaehigkeit/>



WIFO-radar of competitiveness (II)

■ ... and is **falling behind**:

■ year t : 61,6

■ $t-1$: 65,3

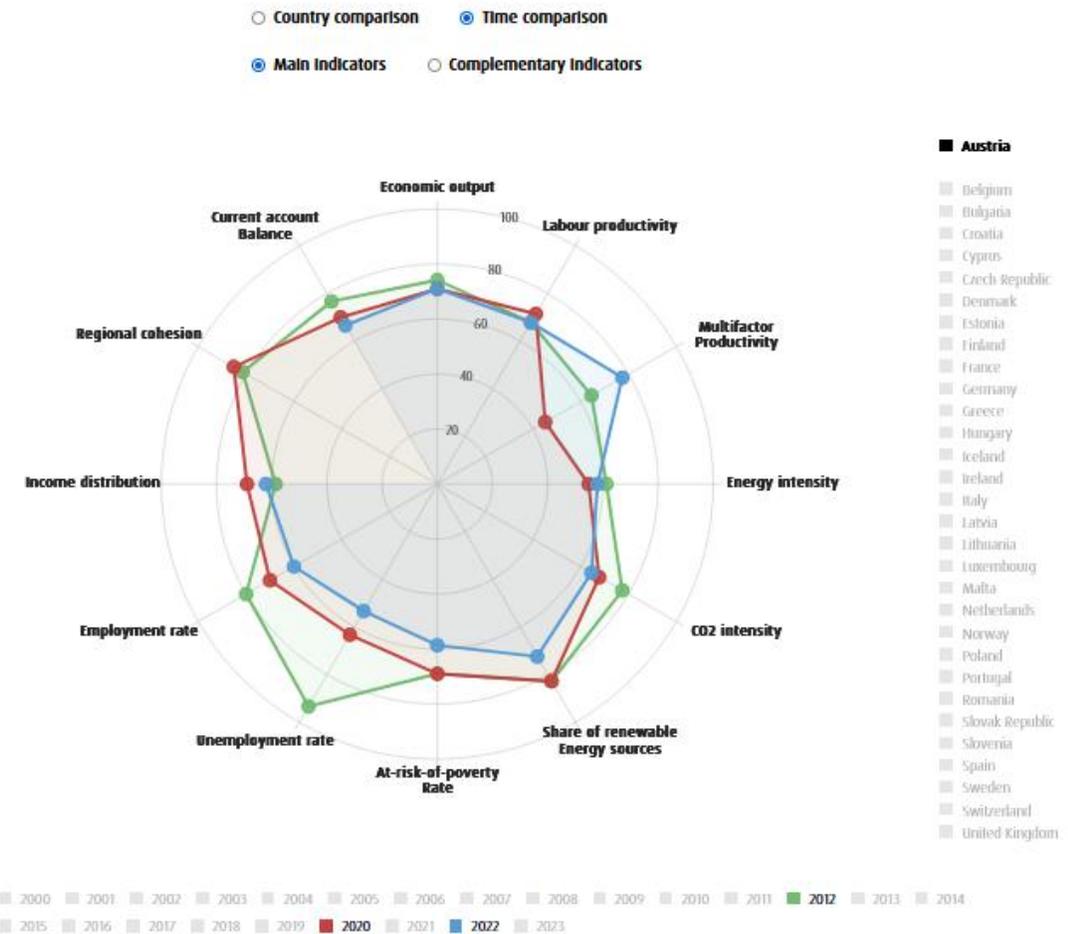
■ $t-3$: 66,3

■ $t-10$: 69,0

➤ Setting realistic **targets**, e.g.

■ to break the downward trend **by 2026** and

■ establish Austria among the top third of European countries **by 2030**



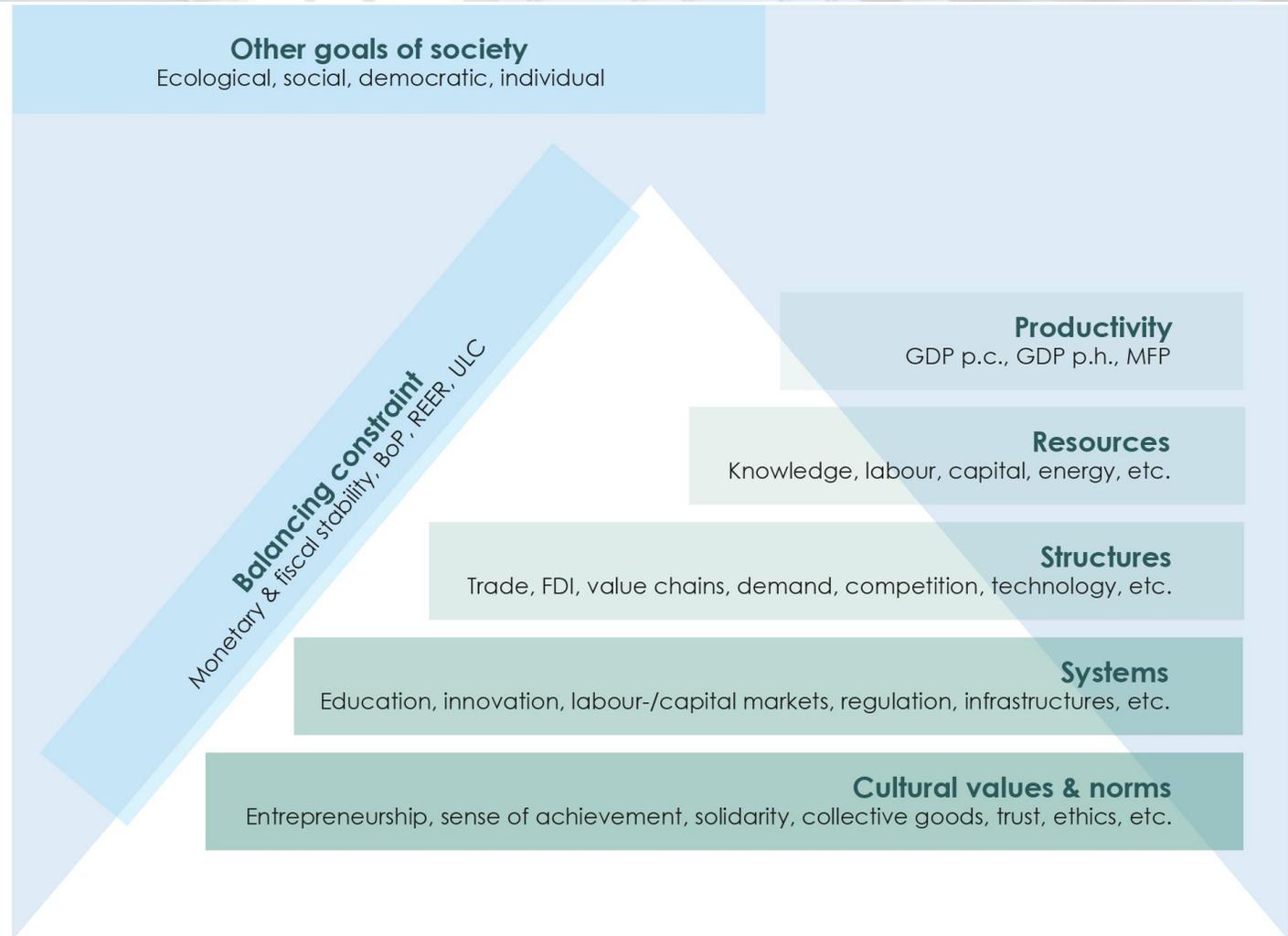
Iceberg model

Shift of paradigms

- Growth
- Welfare
- **Development**

Three pillars

- **Economic** performance
- [Social balance/inclusion]
- [Ecological transformation]



Source: Peneder (2017).

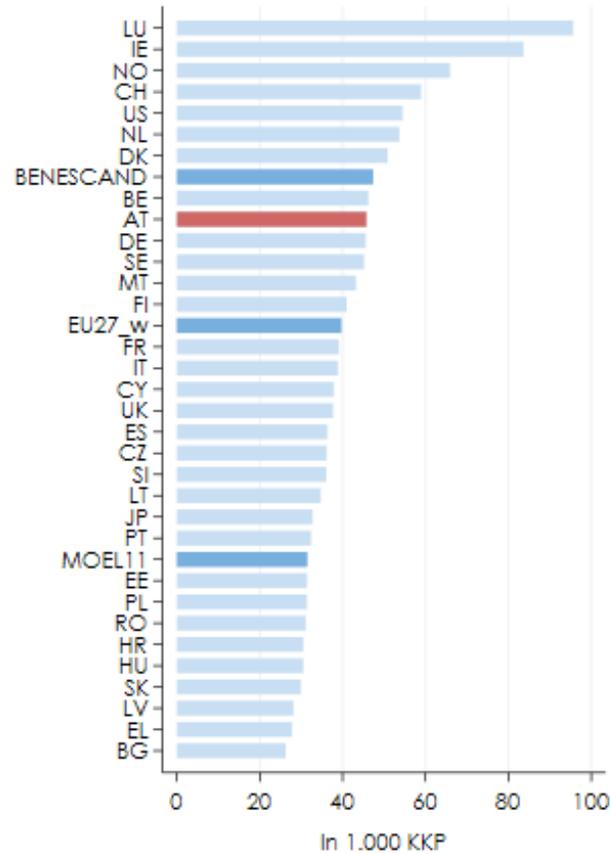
Comparison groups

- **EU27**: European Union
- **MOEL11**: Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Hungary, Slovenia, Romania, Bulgaria, Croatia
- **BENESCAND**: Belgium, Netherlands, Denmark, Sweden, Finland

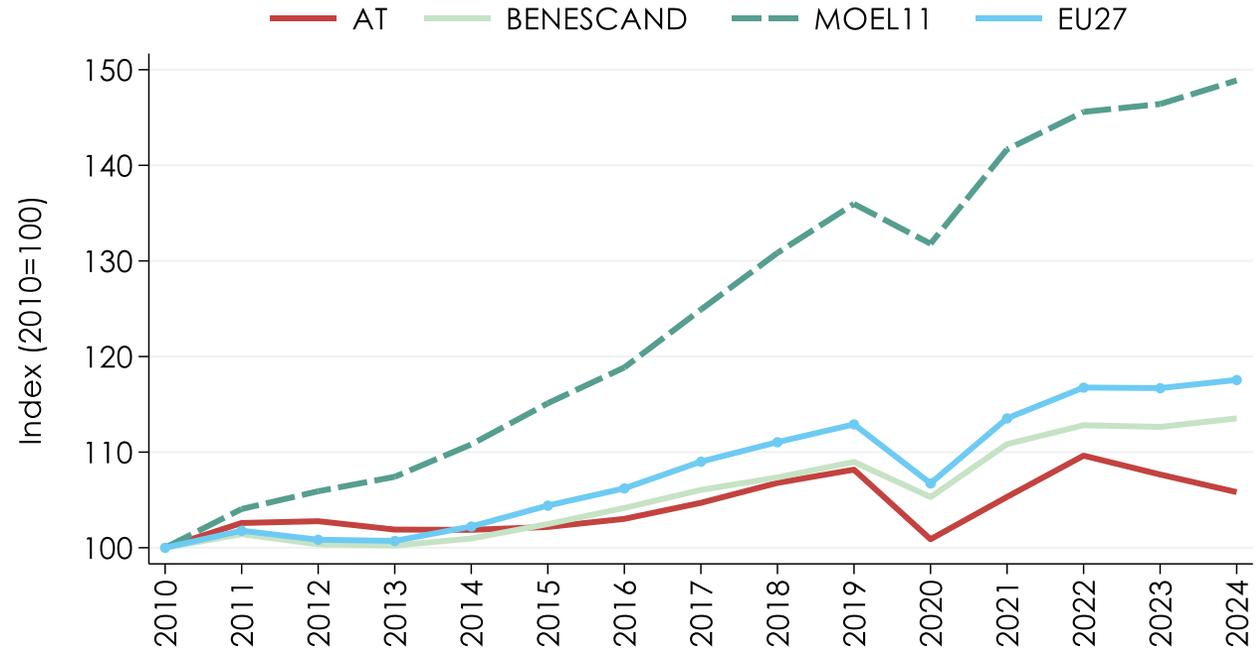
GDP per capita

Current prices, PPP

2024

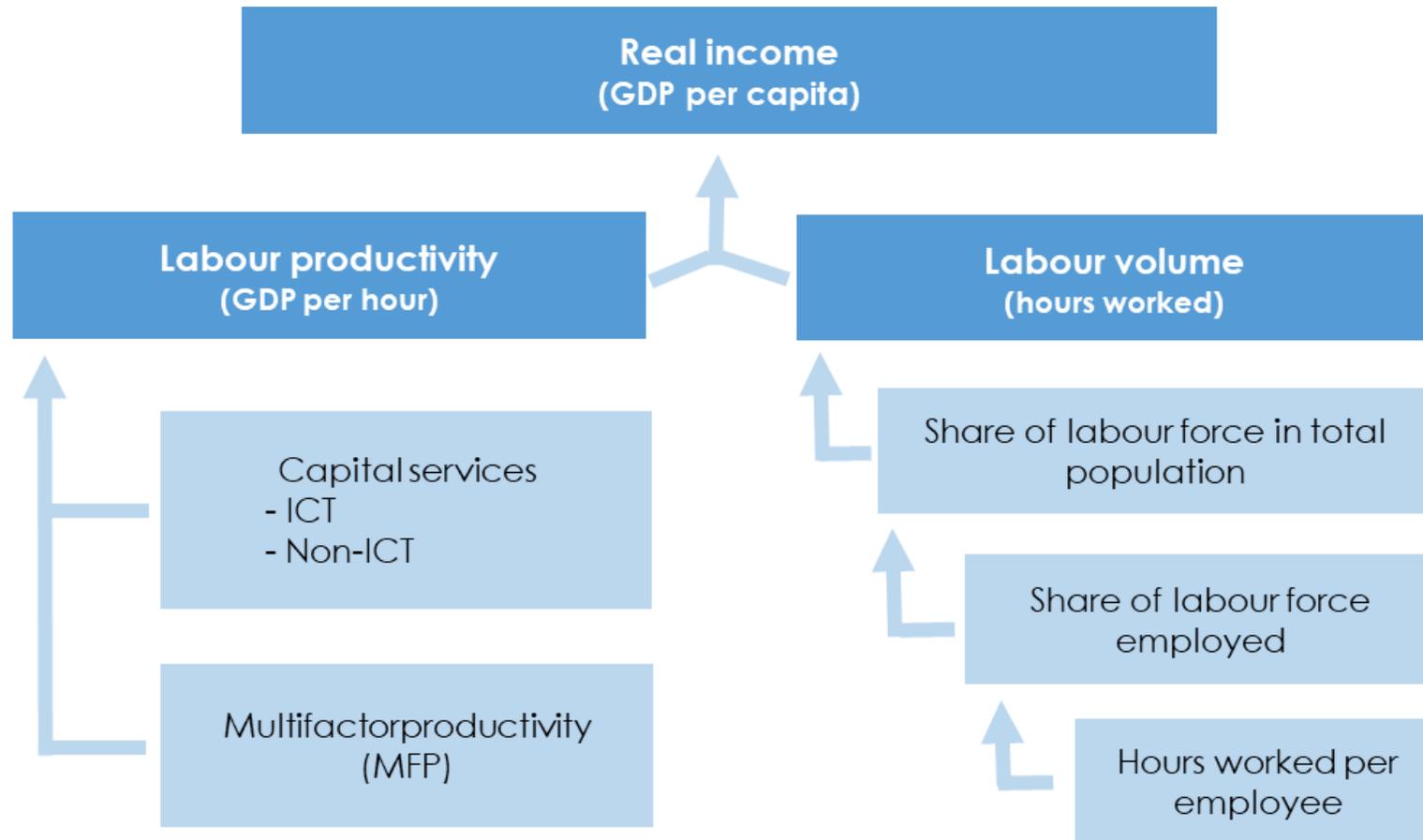


Index 2010=100



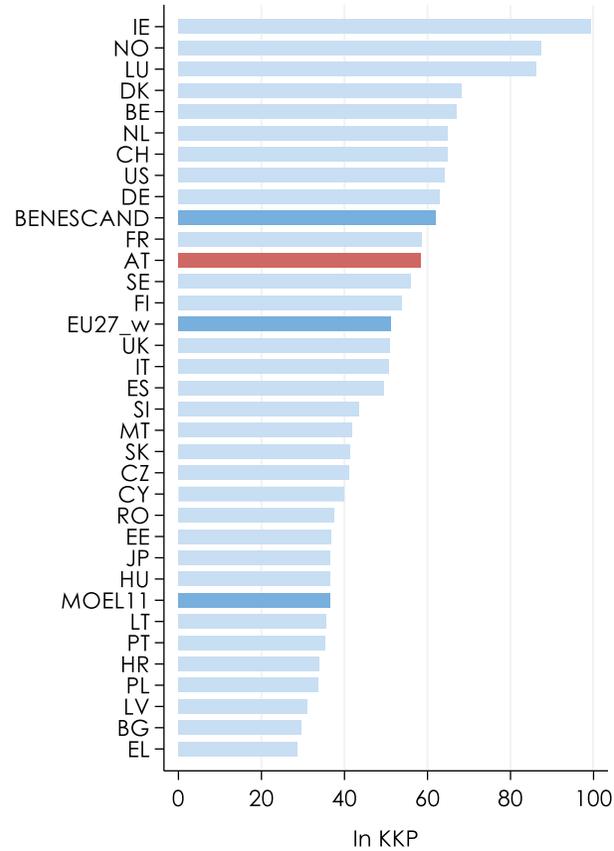
Source: EUROSTAT (AMECO), WIFO. Note: Aggregated values for the European Union. Unweighted averages for the country groups MOEL11 and BENESCAND.

Productivity, capital and labour inputs

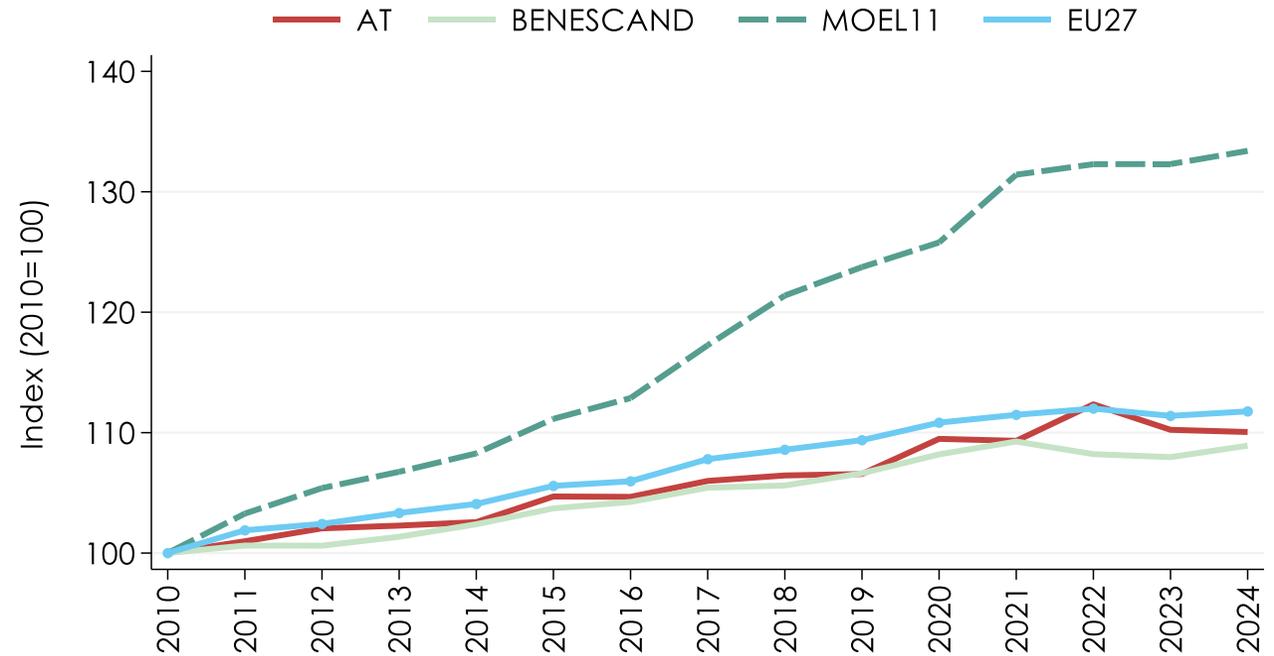


GDP per hour worked

2024



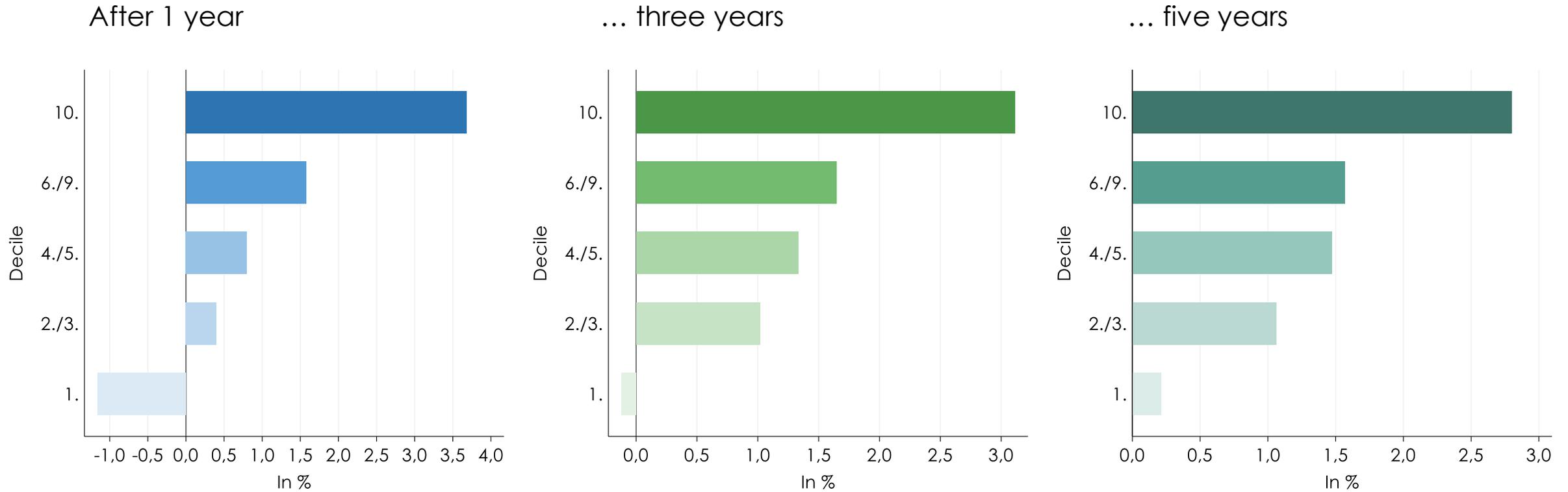
Index 2010=100



Source: EUROSTAT (AMECO), WIFO. Note: Aggregated values for the European Union. Unweighted averages for the country groups MOEL11 and BENESCAND.

Employment growth by decile of firms' labour productivity

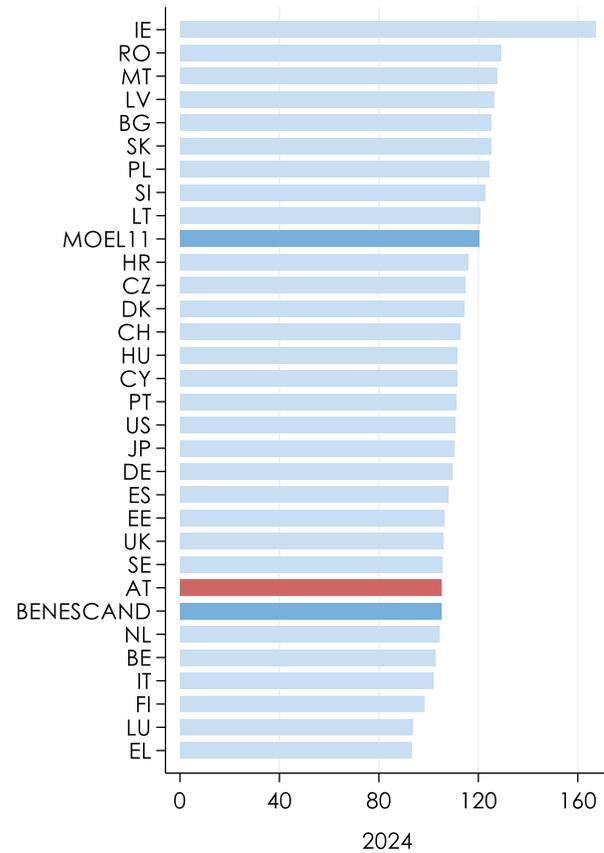
Mean change 2014-2020 in %



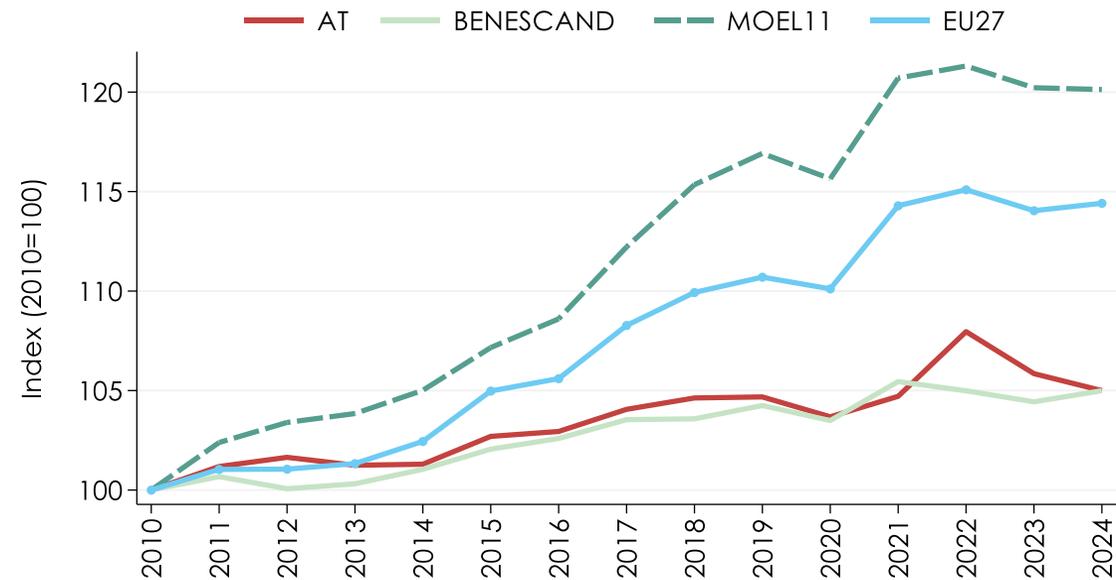
Source: Peneder – Unterlass (2024).

Multifactor productivity (MFP)

2024



Index 2010=100

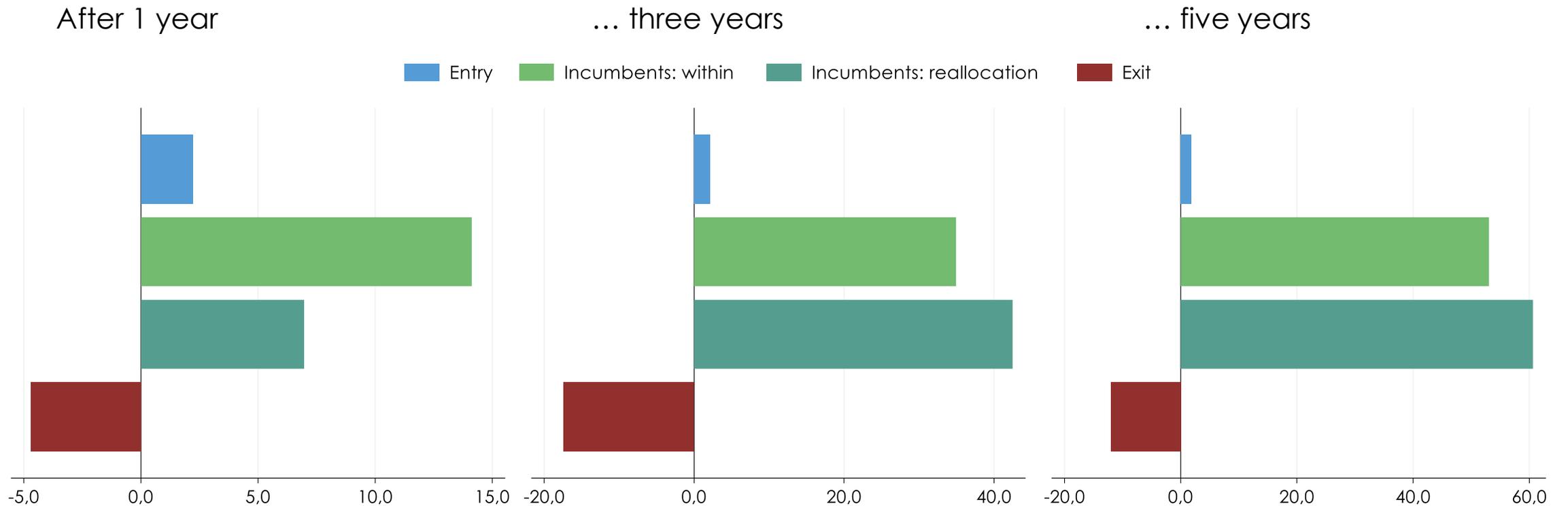


Source: EUROSTAT (AMECO), WIFO. Note: Aggregated values for the European Union. Unweighted averages for the country groups MOEL11 and BENESCAND.

Firm dynamics and MFP growth

Mean contribution in Log differences, 2014-2020

Non-financial services

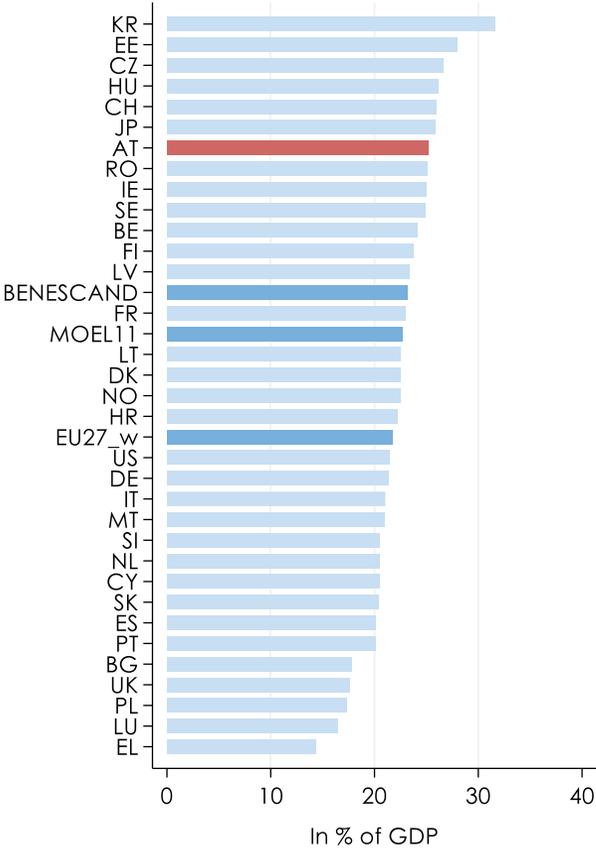


Source: Peneder – Unterlass (2024).

Gross fixed capital formation

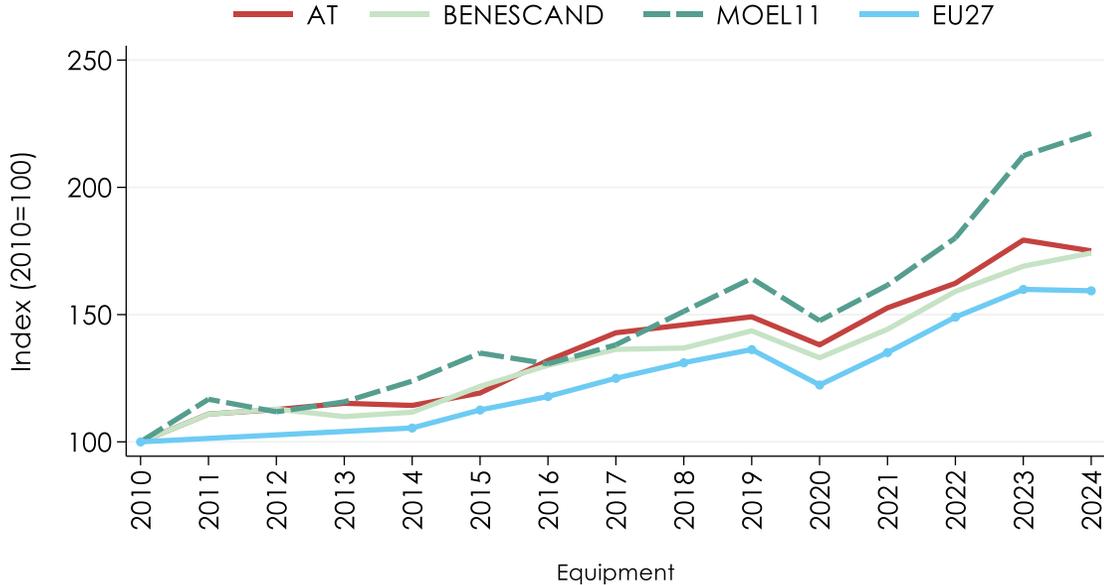
Mean 2020-2024

Total



Index 2010=100

Equipment

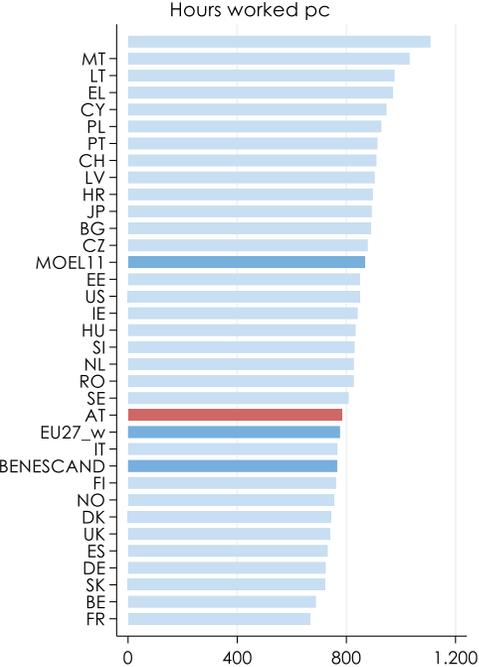


Source: EUROSTAT (AMECO), WIFO. Note: Aggregated values for the European Union. Unweighted averages for the country groups MOEL11 and BENESCAND.

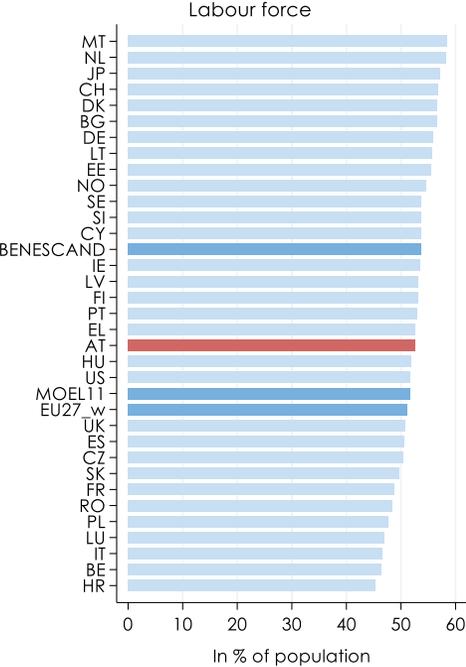
Labour input and its components (i)

2024

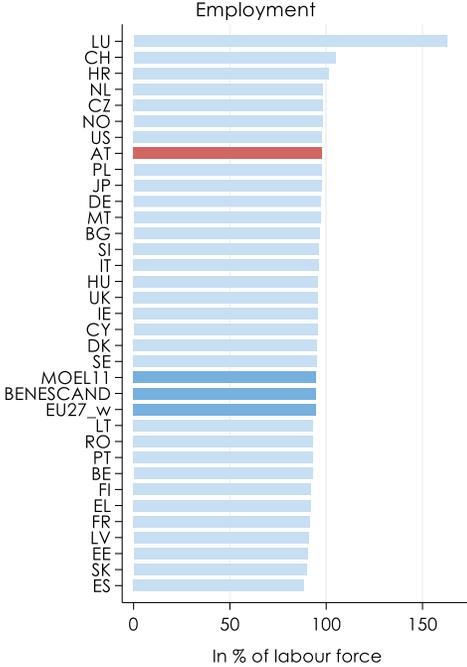
Hours worked pc



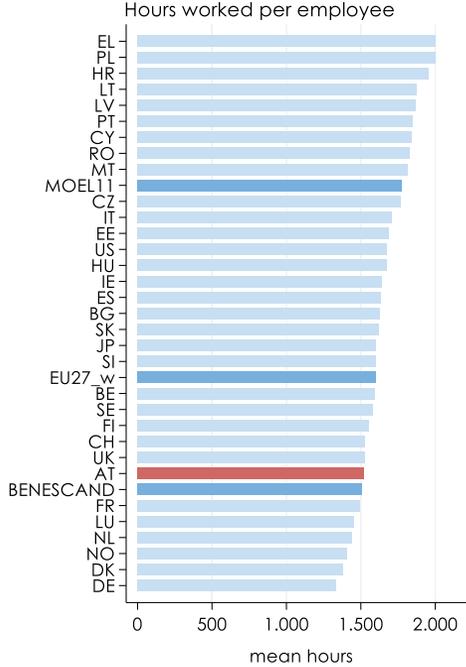
Labour force



Employment



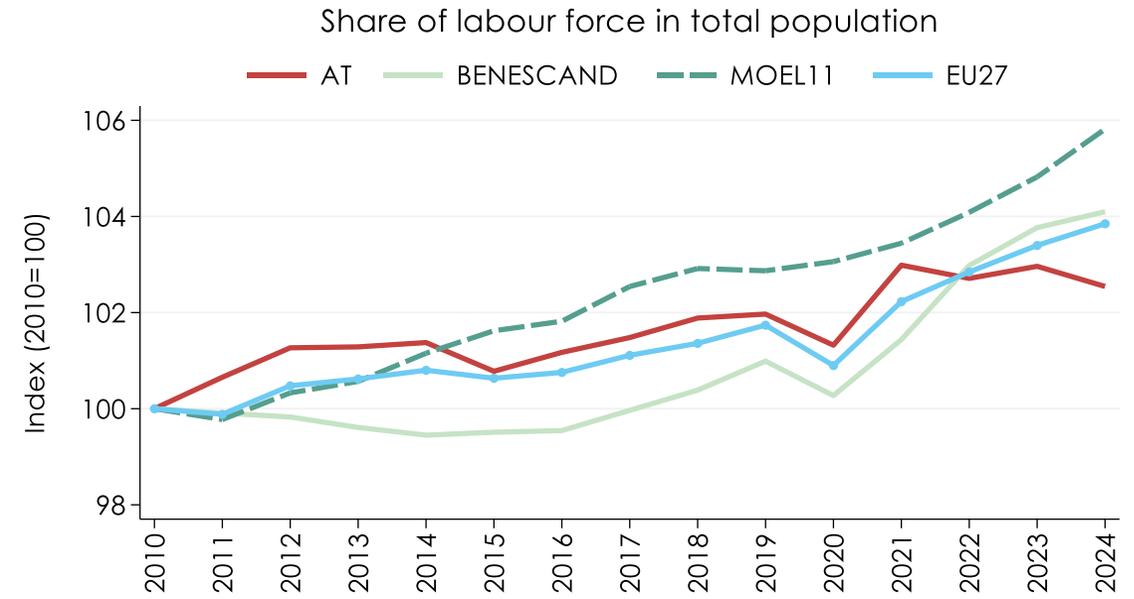
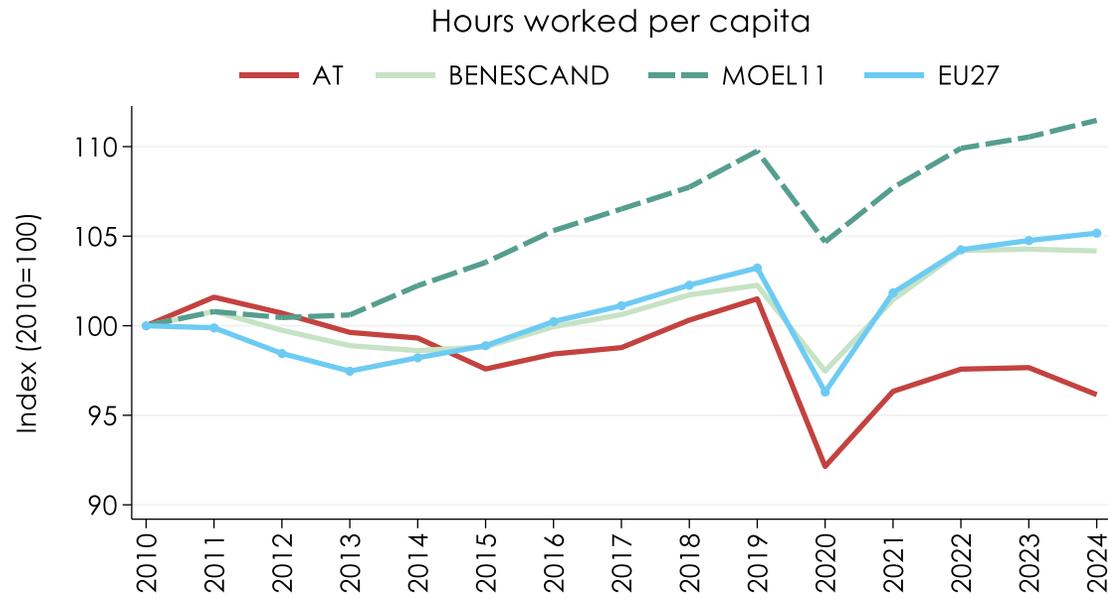
Hours worked per employee



Source: EUROSTAT (AMECO), WIFO. Note: Aggregated values for the European Union. Unweighted averages for the country groups MOEL11 and BENESCAND.

Labour input (ii)

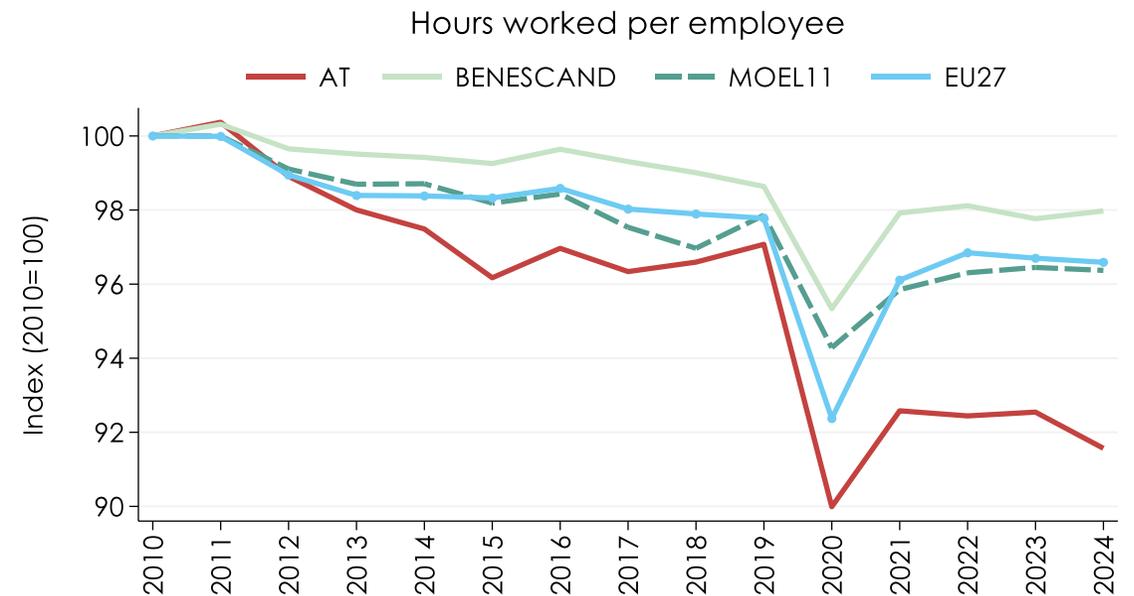
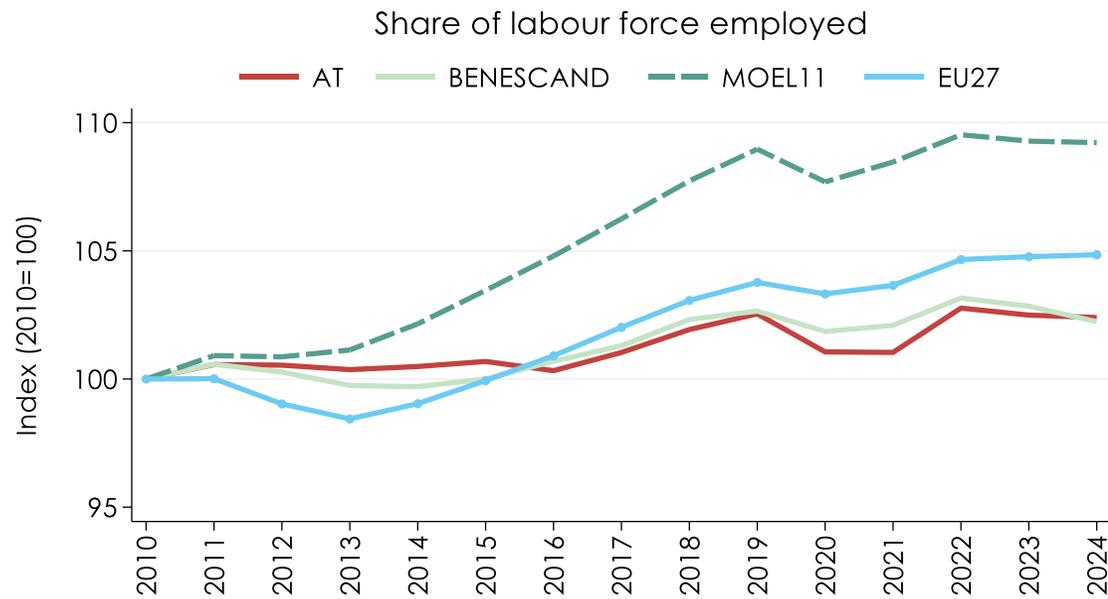
Index 2010=100



Source: EUROSTAT (AMECO), WIFO. Note: Aggregated values for the European Union. Unweighted averages for the country groups MOEL11 and BENESCAND.

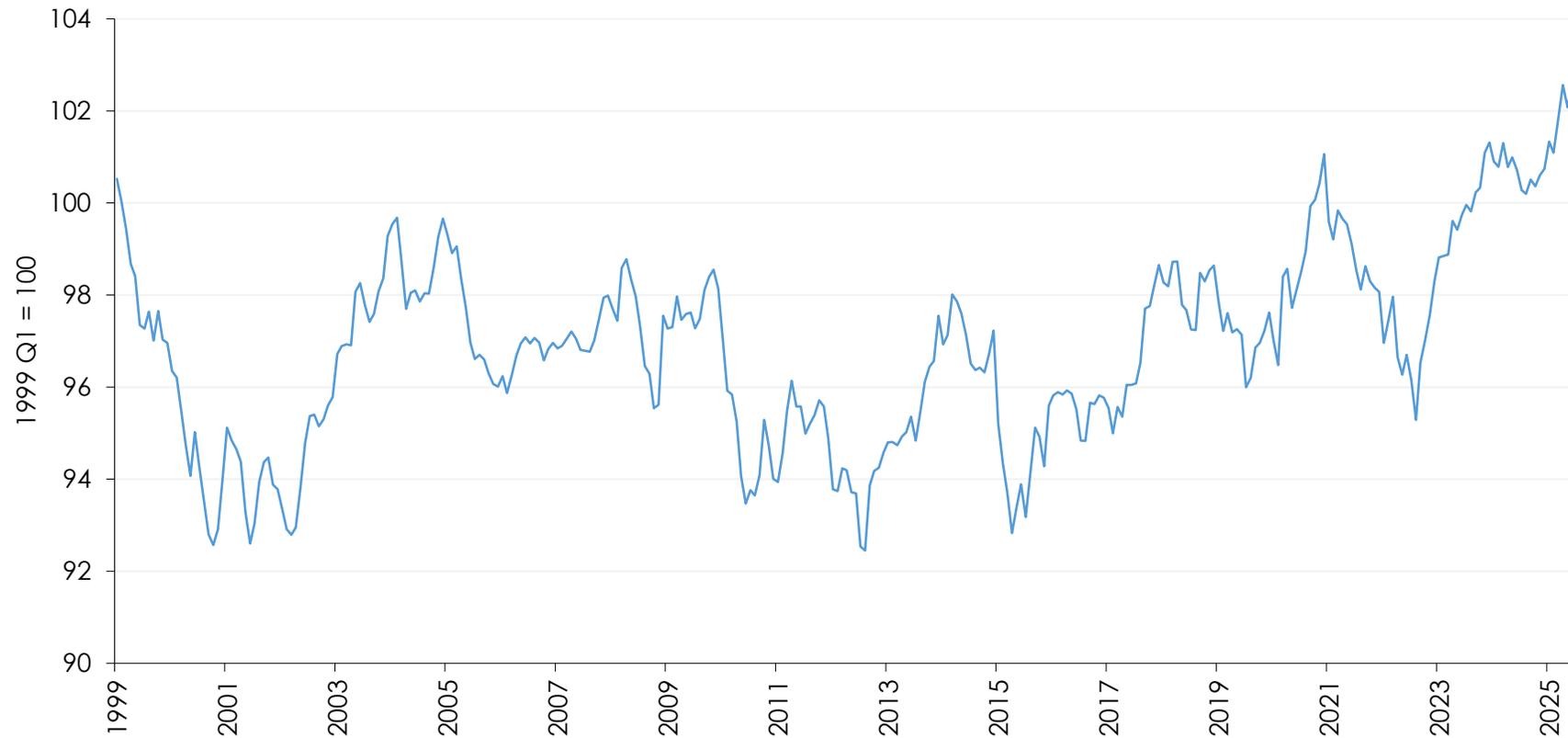
Labour input (iii)

Index 2010=100



Source: EUROSTAT (AMECO), WIFO. Note: Aggregated values for the European Union. Unweighted averages for the country groups MOEL11 and BENESCAND.

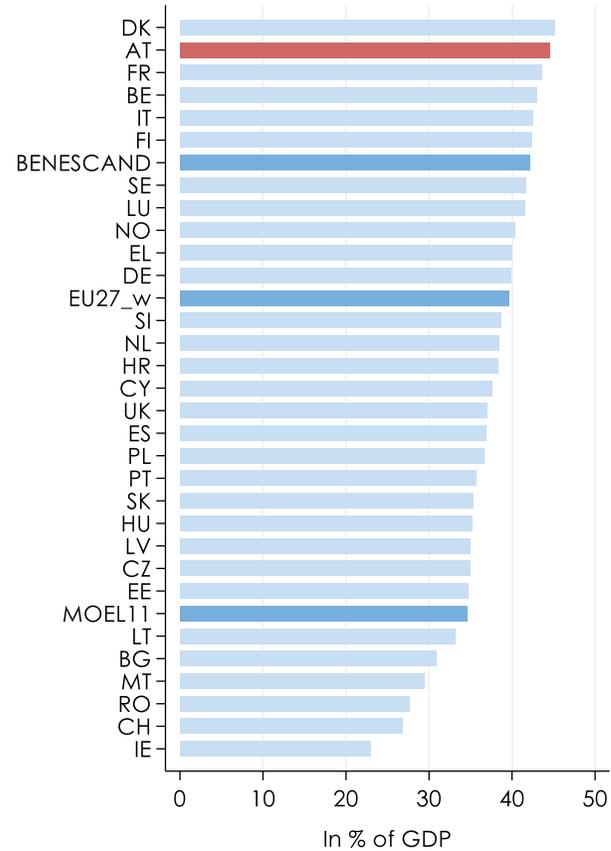
Real effective exchange rate (REER)



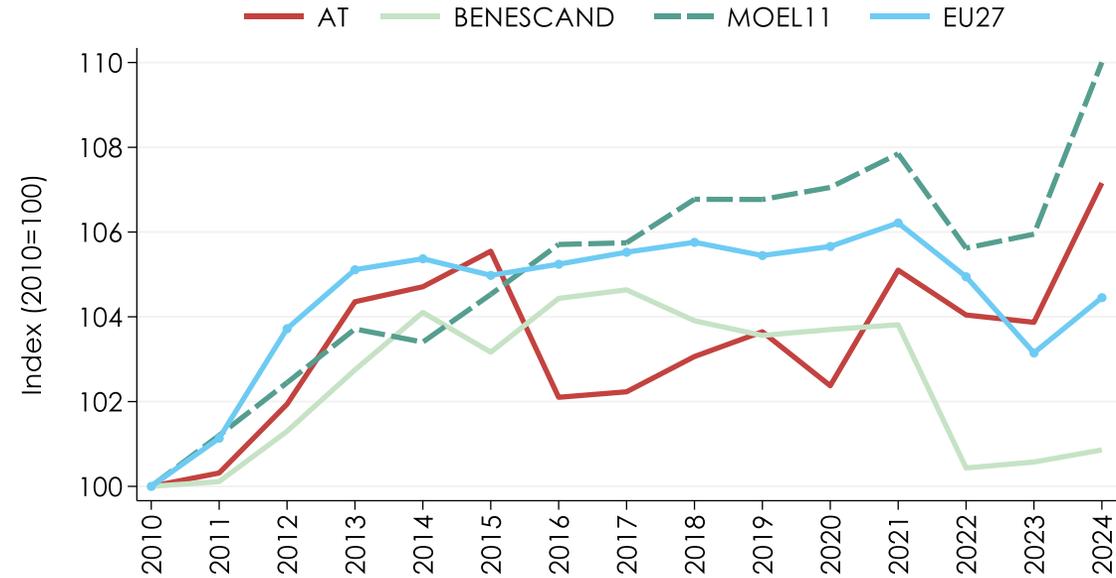
Source: OeNB, WIFO (Thomas Url). Deflated with (H)ICP.

Fiscal burden

2024



Index 2010=100



Source: EUROSTAT (AMECO), WIFO. Note: Aggregated values for the European Union. Unweighted averages for the country groups MOEL11 and BENESCAND.

Main findings (i)

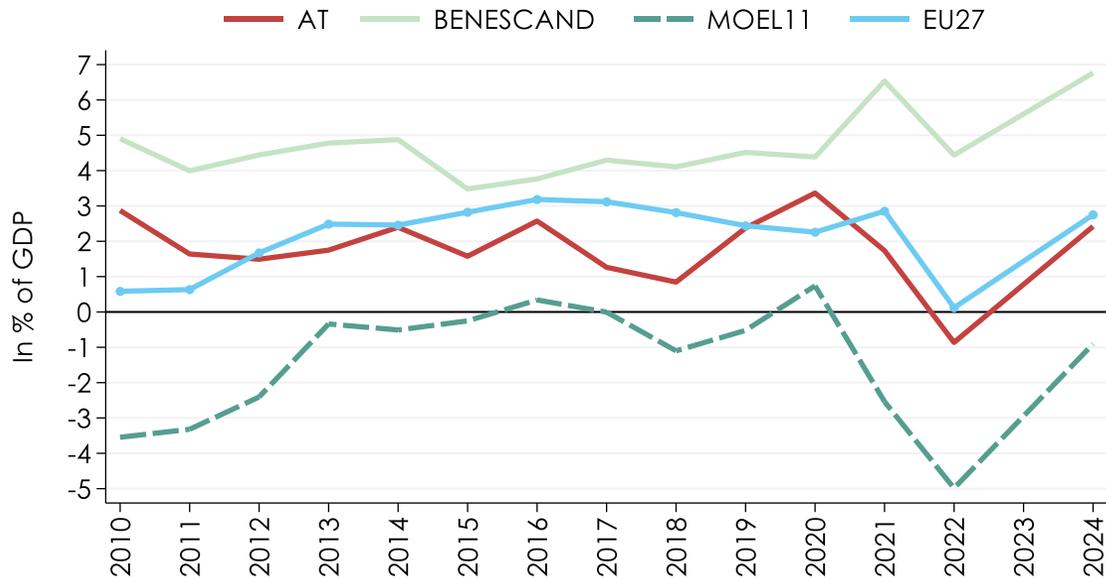
- Long shadow of multiple crises
 - Great recession; COVID-19, invasion of Ukraine / energy / inflation)
- Low dynamics of productivity and growth
 - Average performance in labour productivity
 - Poor growth of multifactor productivity (MFP)
 - Comparatively low average hours per employee
- Yearly fluctuations, but deteriorating cost competitiveness (REER)

Structural characteristics, selected aspects

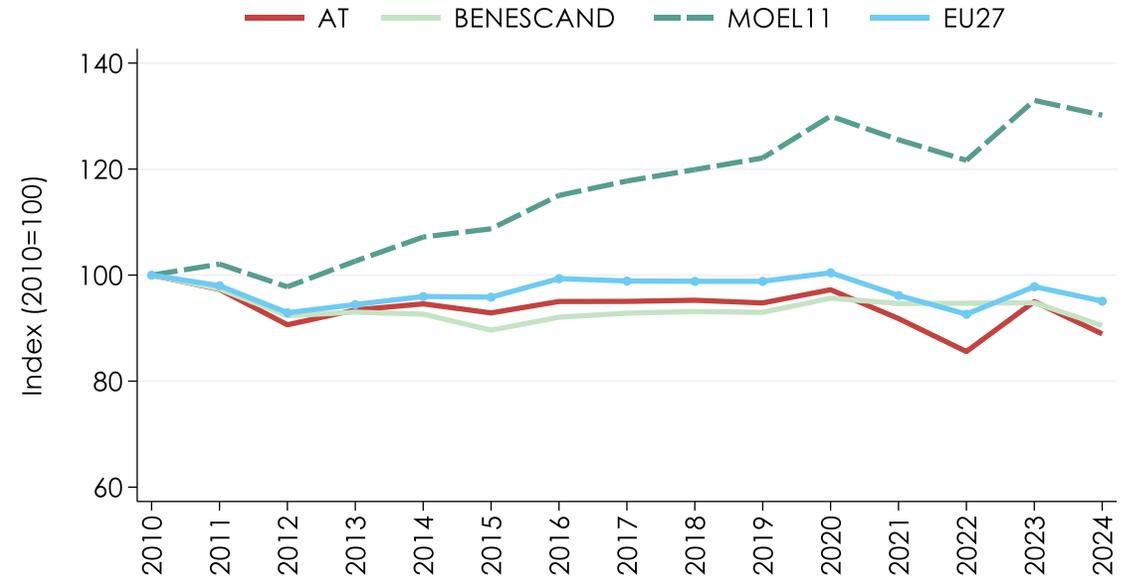
- **International trade**
 - Current account
 - Share in world exports
 - Complexity
 - Diversification
 - Global value chains
- **Foreign direct investments (FDI)**
 - Outward
 - Inward
- **Knowledge** intensive industries
 - Educational intensity
 - Innovation intensity
 - ICT producers

International trade

Current account



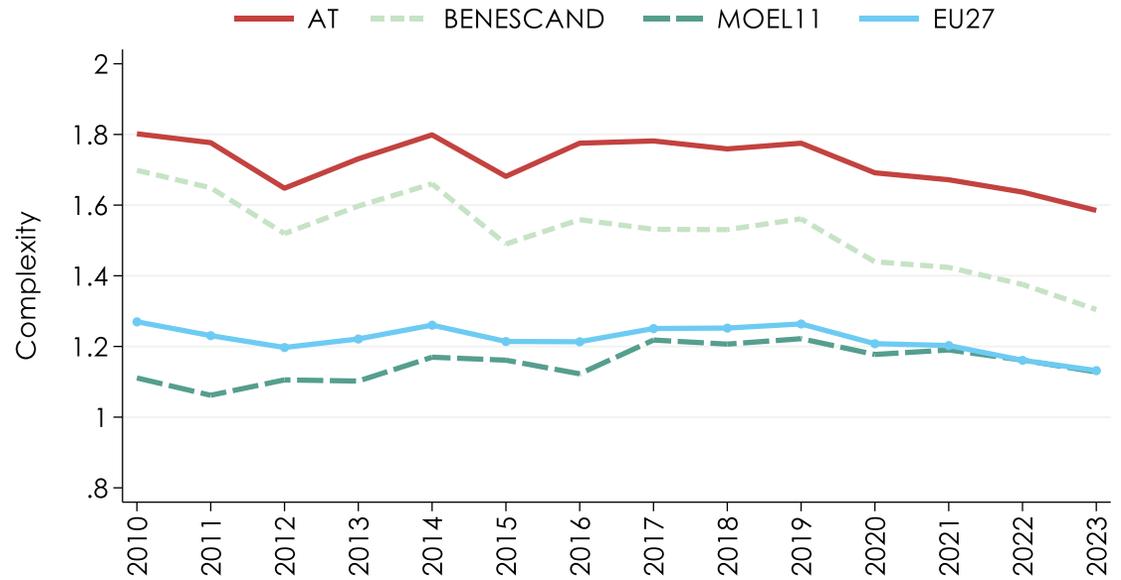
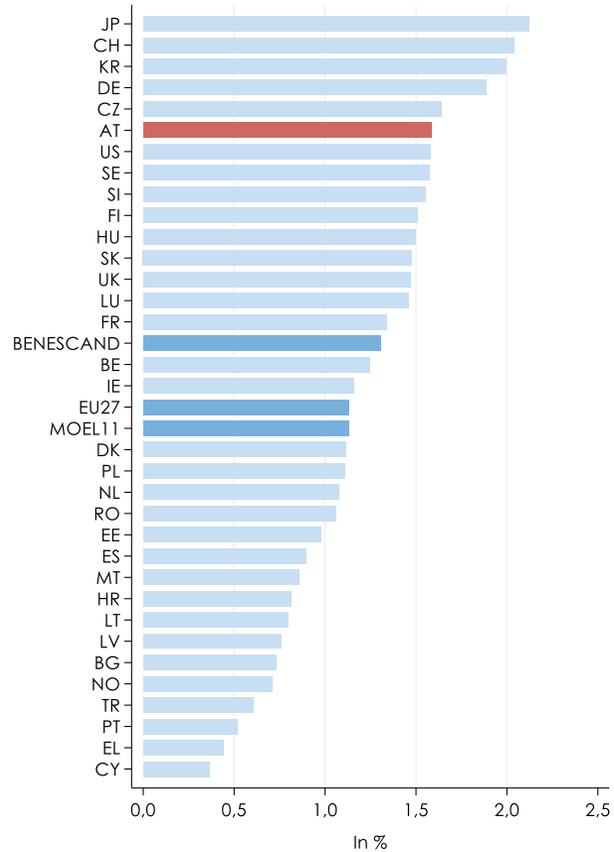
Share in world exports of goods



Source: EUROSTAT (AMECO), WIFO. Note: Aggregated values for the European Union. Unweighted averages for the country groups MOEL11 and BENESCAND.

Complexity of goods exports

2023

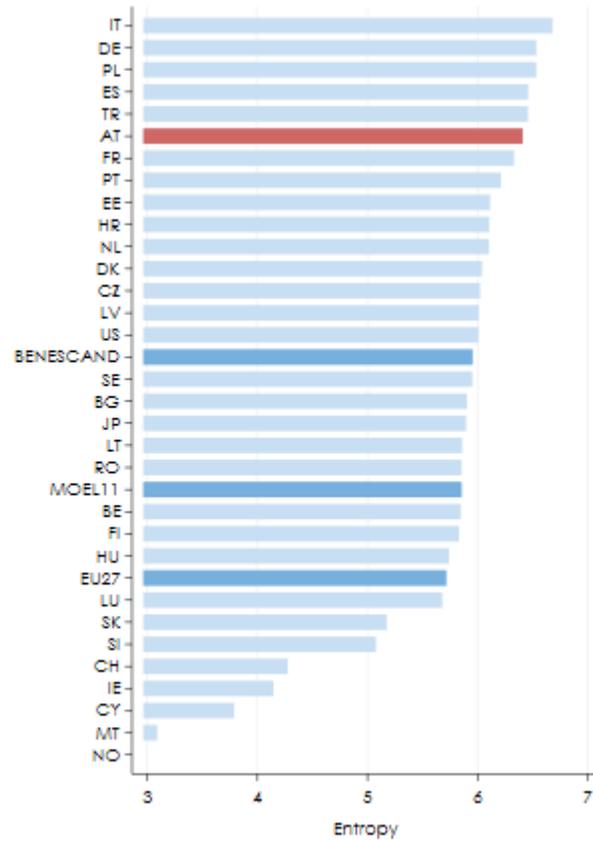


Source: BACI, WIFO.

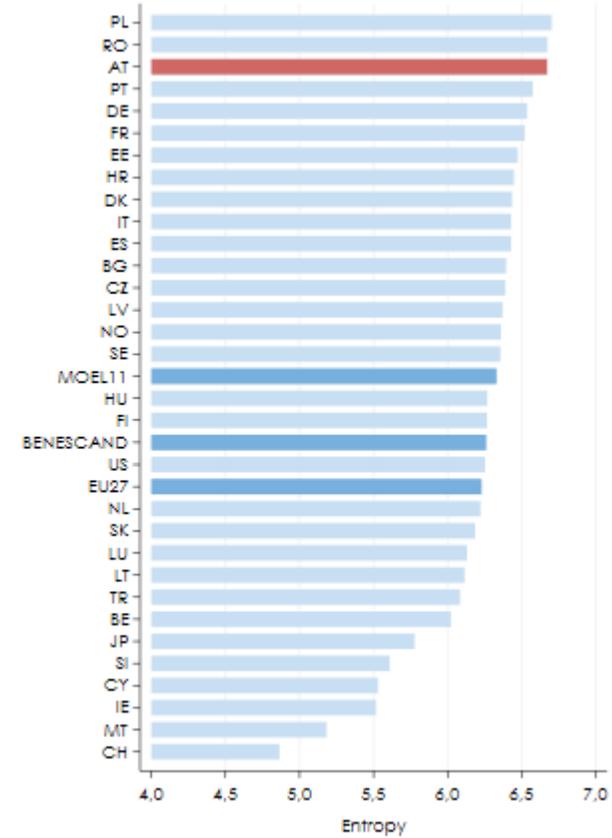
Trade diversification: goods

Entropy 2023

Exports



Imports

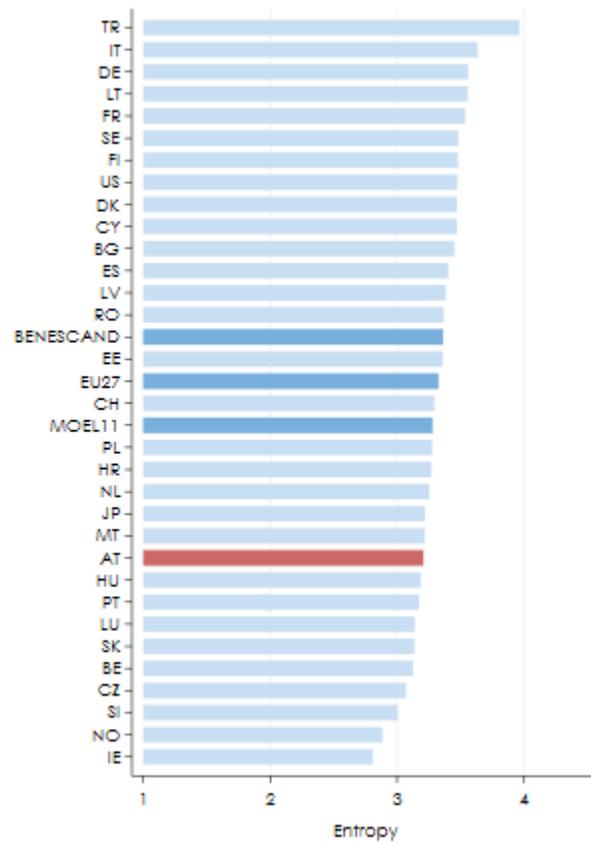


Source: BACI, WIFO.

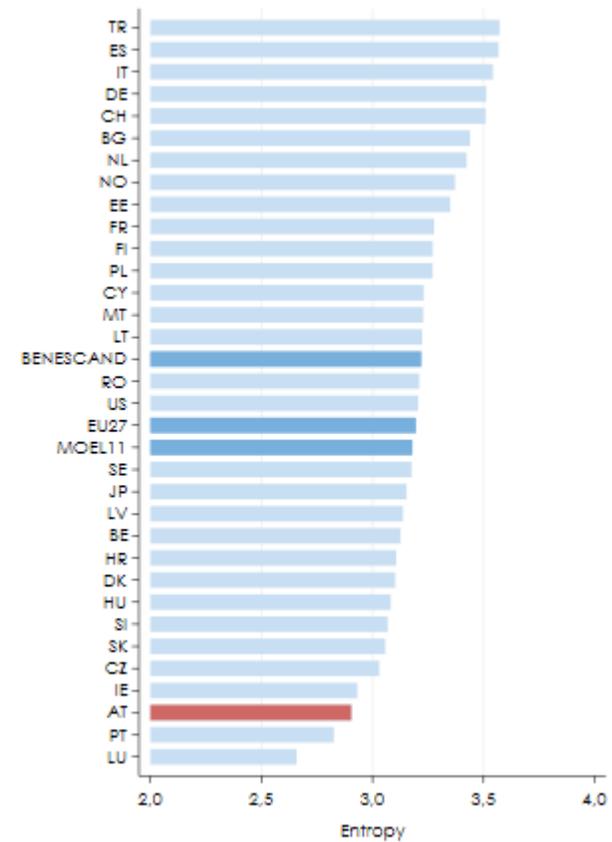
Trade diversification: partner regions

Entropy 2023

Export destinations



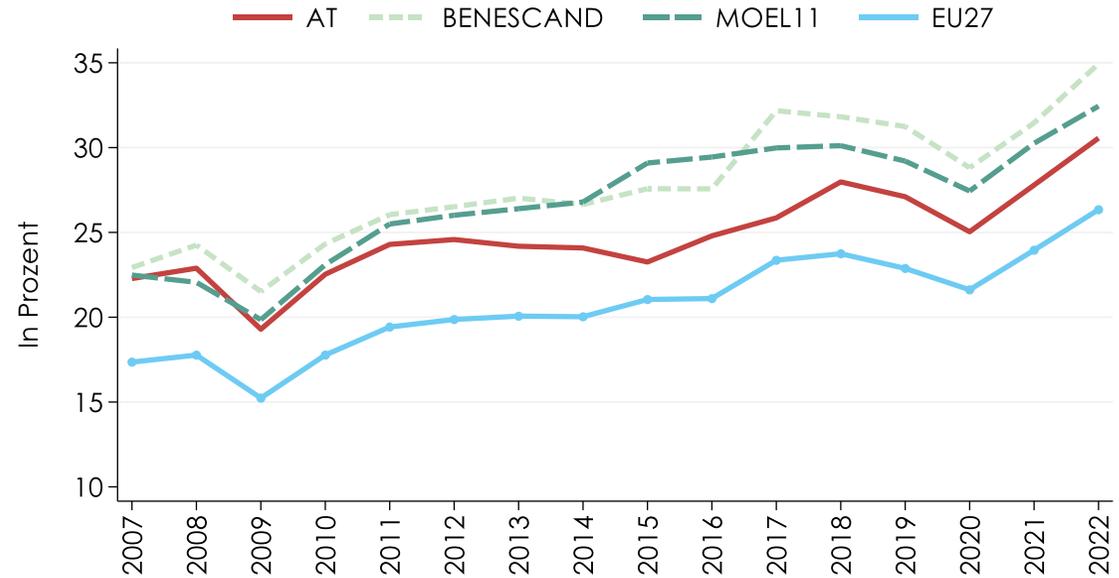
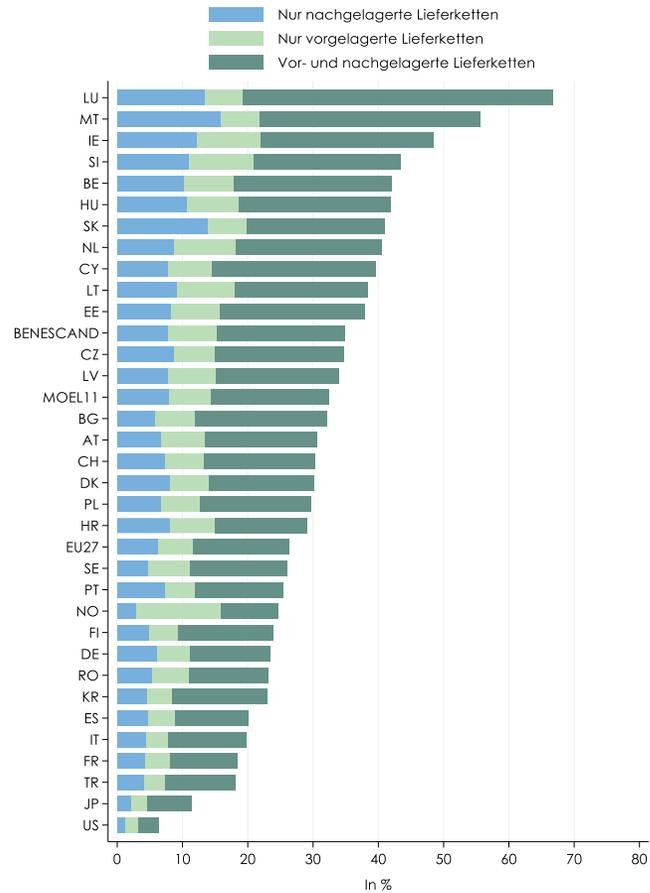
Origin of imports



Source: BACI, WIFO.

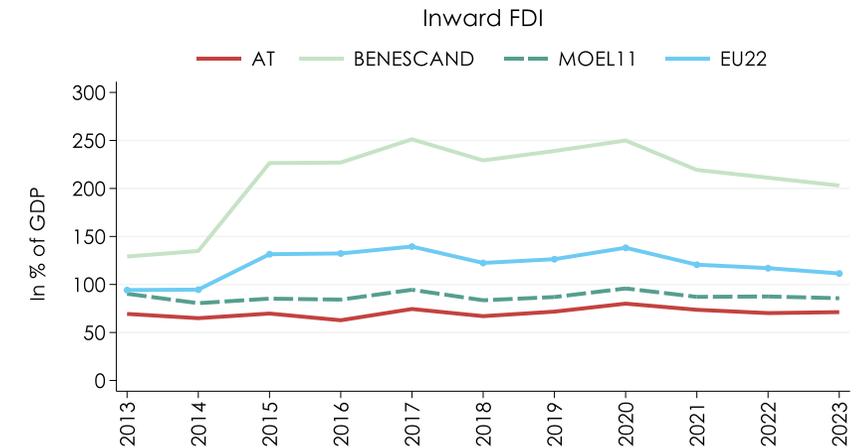
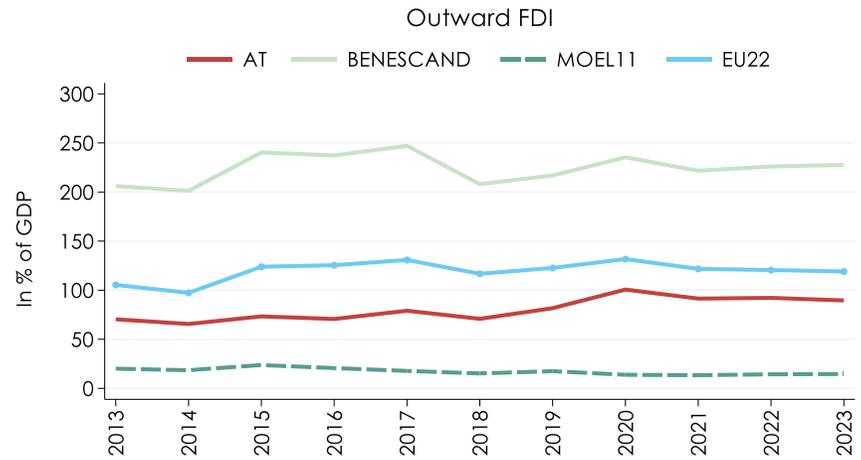
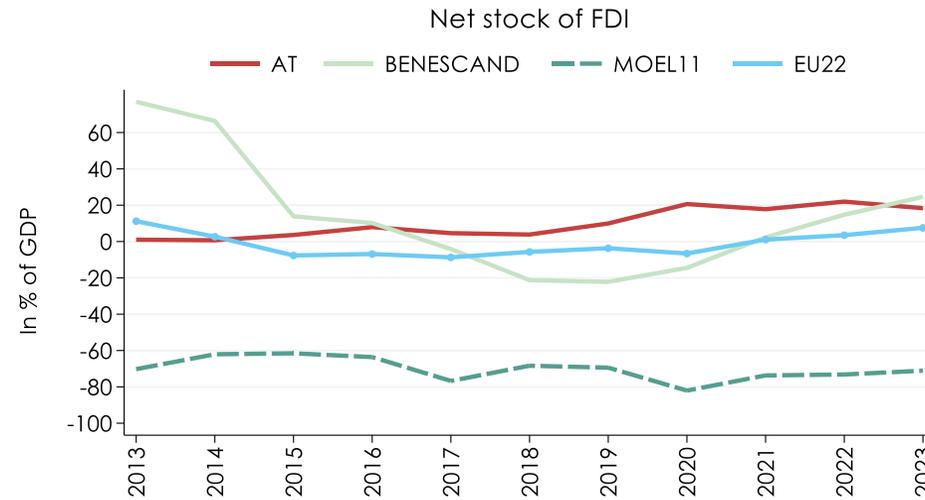
Global value chains

WITS Index of integration



Source: WITS, WIFO.

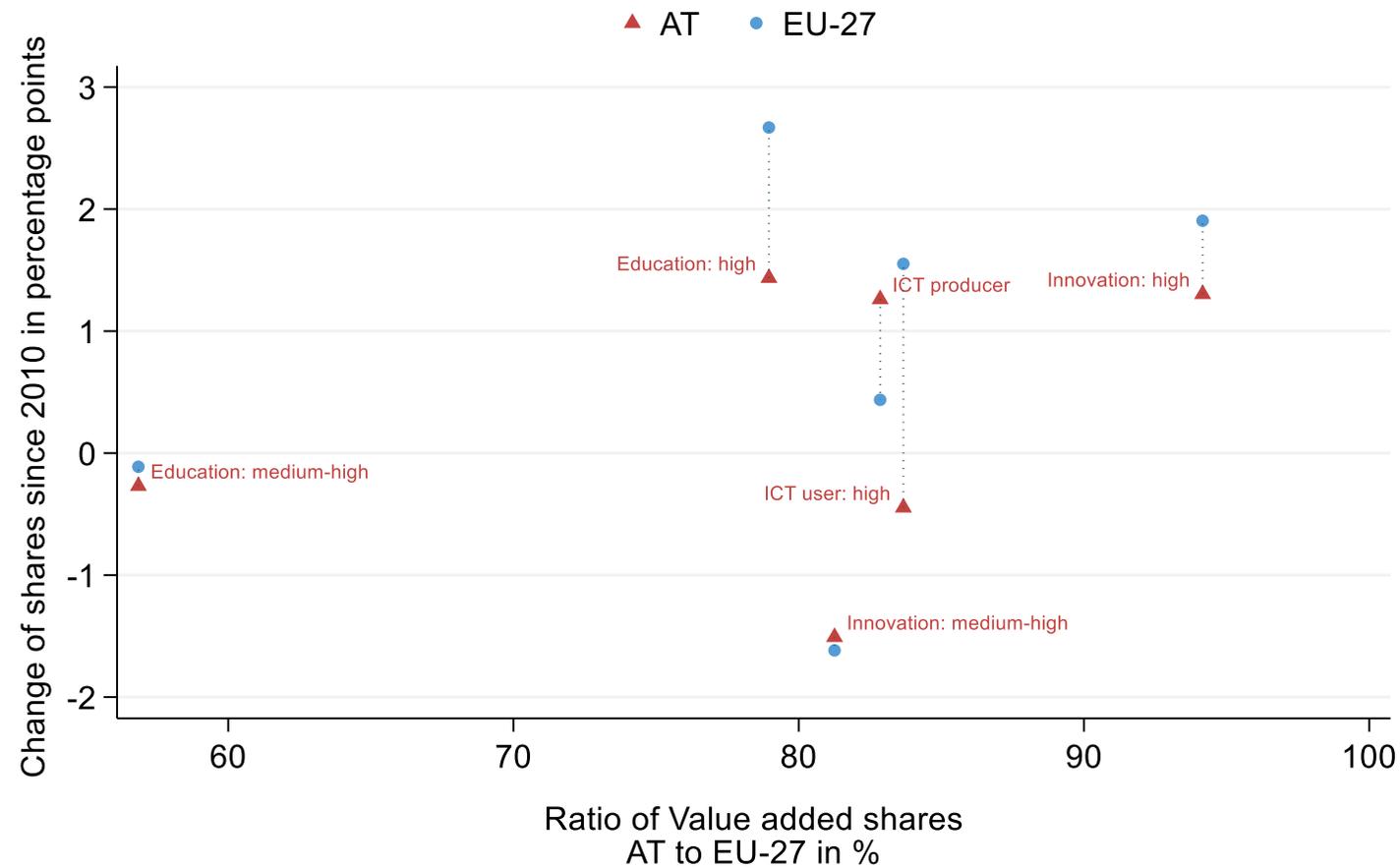
Stock of foreign direct investments (FDI)



Source: OECD (FDI statistics), WIFO.

Knowledge-intensive industries

Value added shares, Austria vs. EU27 2023



Source: EUROSTAT (SBS, B-N+S95 ohne K), WIFO.

Main findings (ii)

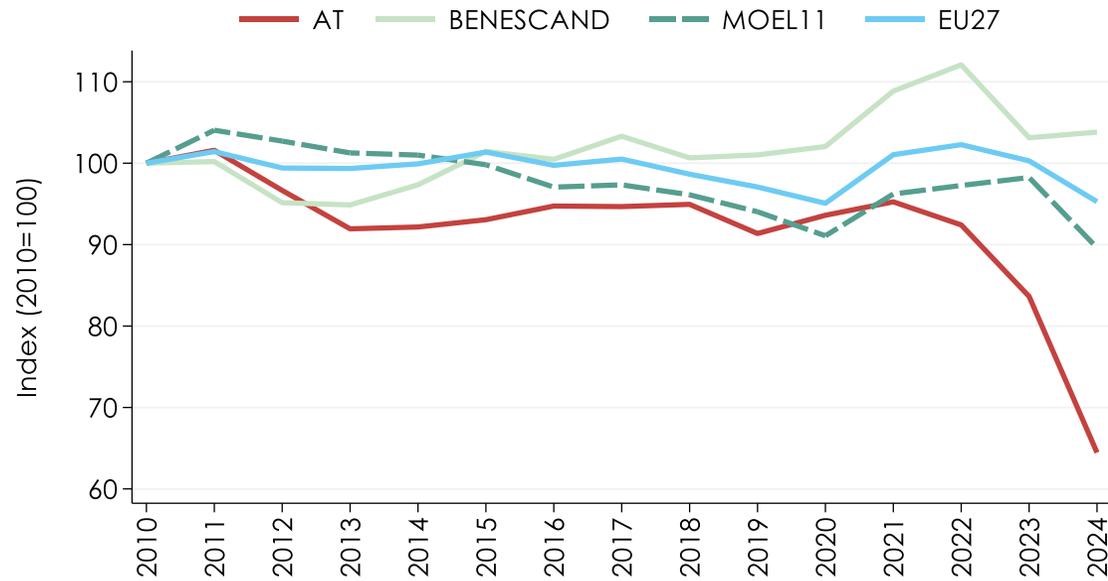
- Austrian **structure performance paradox**
 - High rank in GDP pc, but
 - Low share of especially knowledge-intensive industries
- Austria **holds up well** in current account balance but tends to lose market shares
 - Average degree of integration in global value chains
 - High but declining complexity of exported goods
 - Low diversification of trade partners
- Geo-economics and **increasing fragmentation** of international trade
 - Requires more **diversification** in foreign trade
 - Trade-off between the objectives of **efficiency** and **resilience**
 - European Union strives for more **strategic autonomy**
- Effective **European co-ordination** remains the most important foreign trade policy instrument also in Austria

The system level

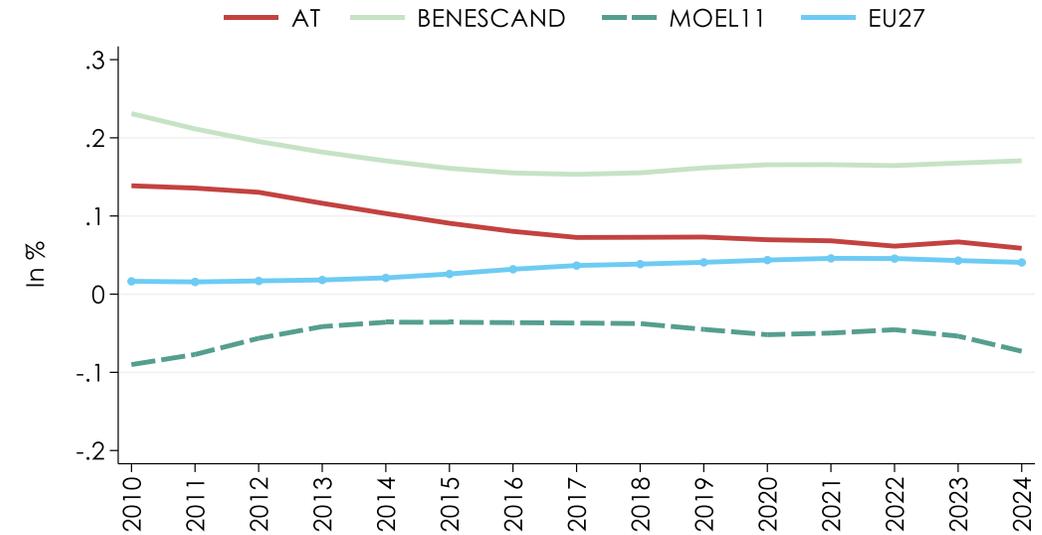
- Competition
- Innovation
- Education
- Corporate finance
- Infrastructure and quality of public institutions

Competition

Net operating surplus



Trade openness, size corrected

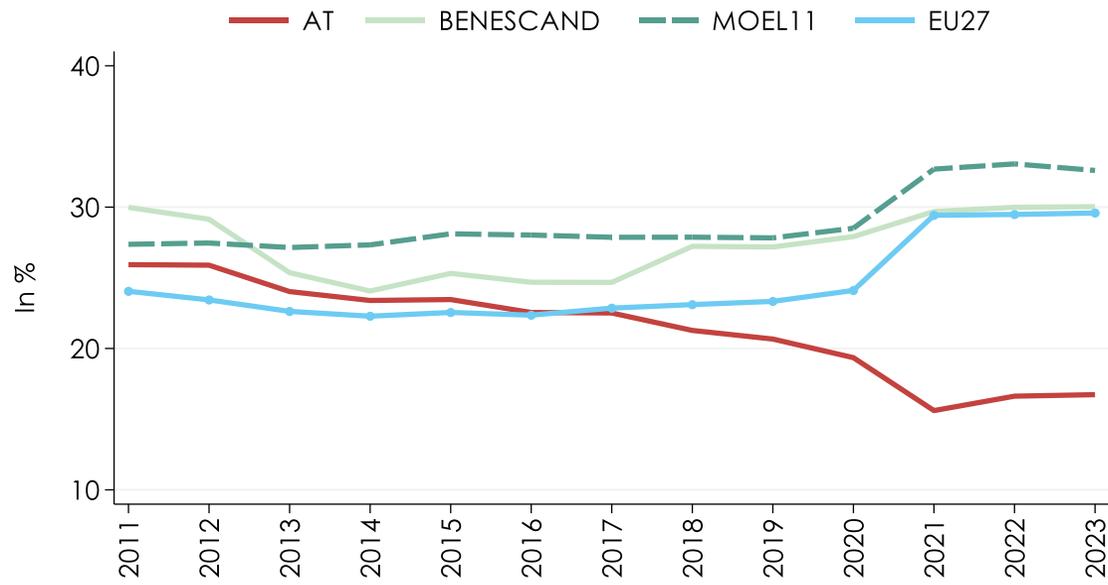
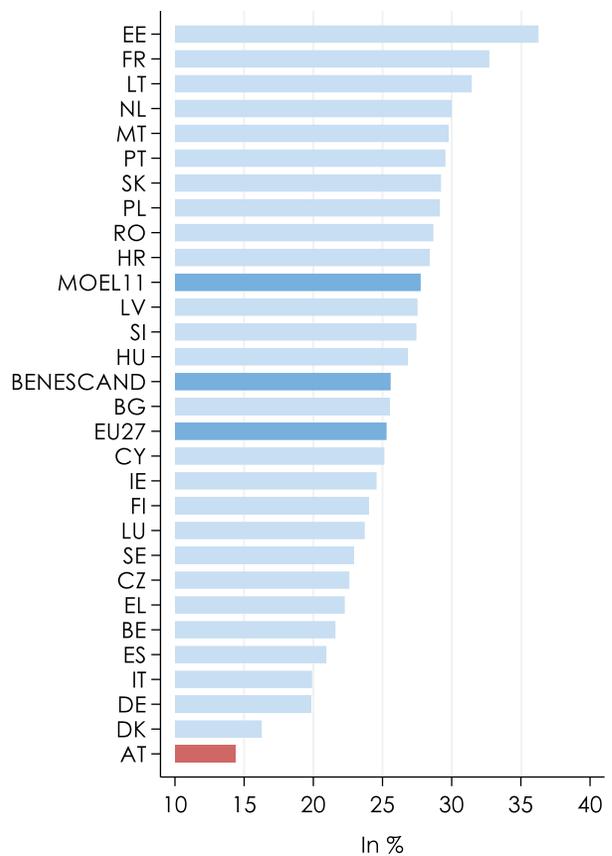


Source: EUROSTAT (AMECO), WIFO. Note: Aggregated values for the European Union. Unweighted averages for the country groups MOEL11 and BENESCAND.

Firm dynamics

Share of young firms (< 5 years old)

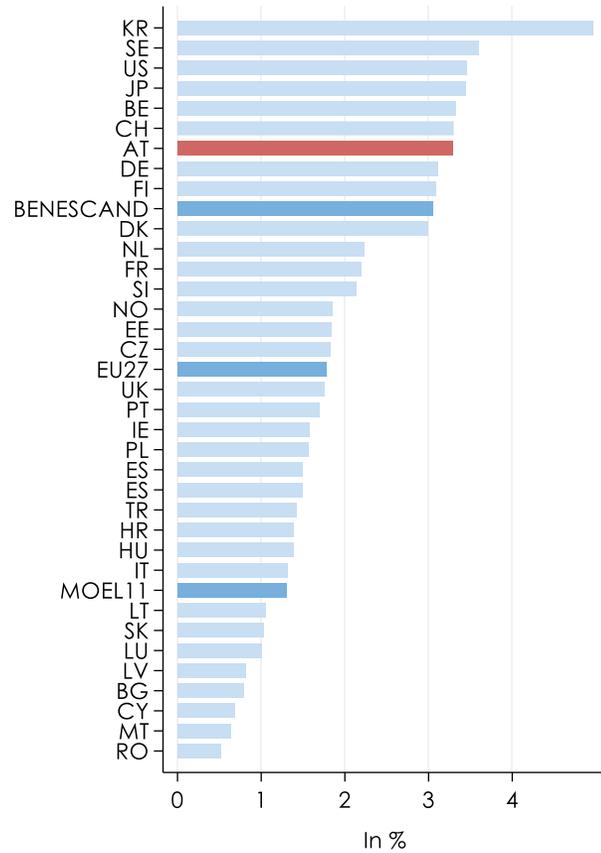
2023



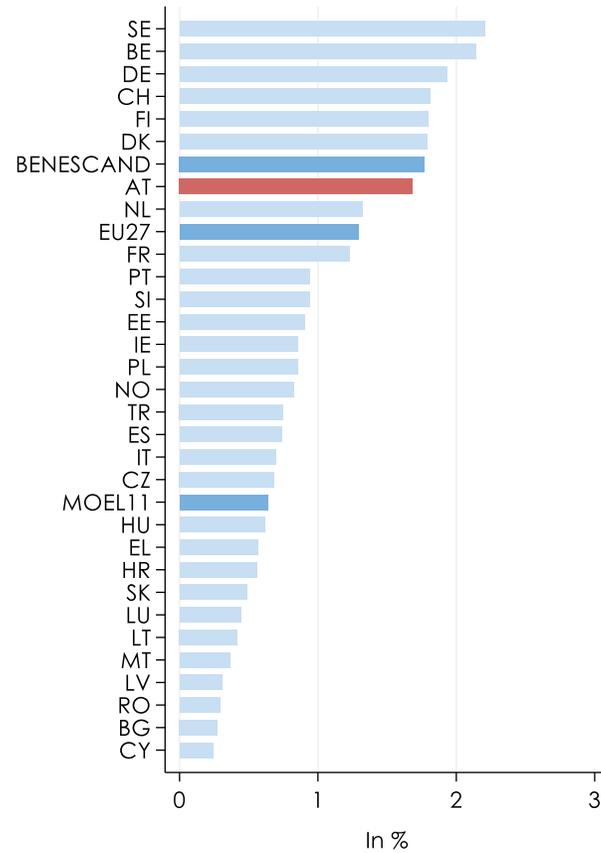
R&D expenditures

in % of GDP, 2023

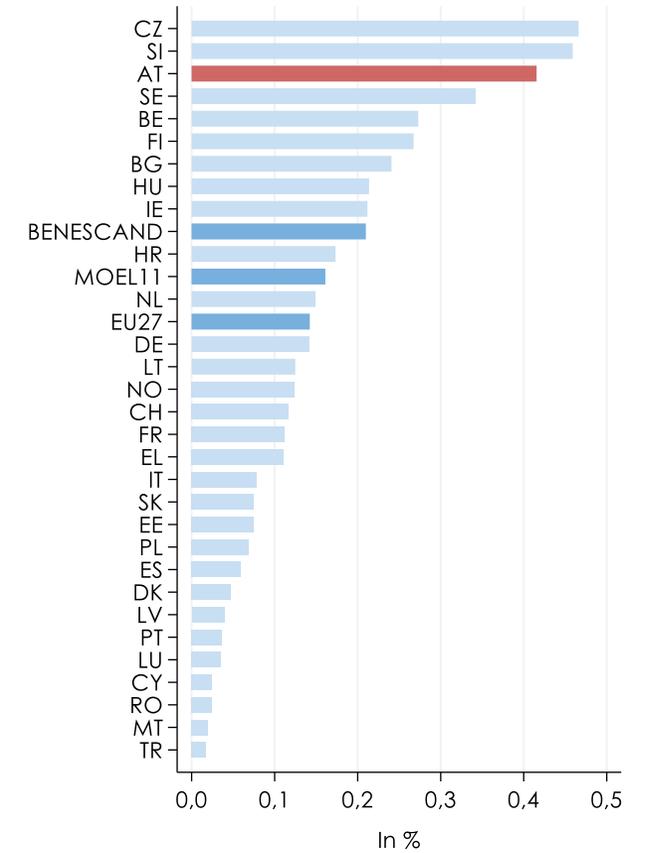
Total R&D expenditures



R&D expenditures by firms



Foreign financed (by firms)

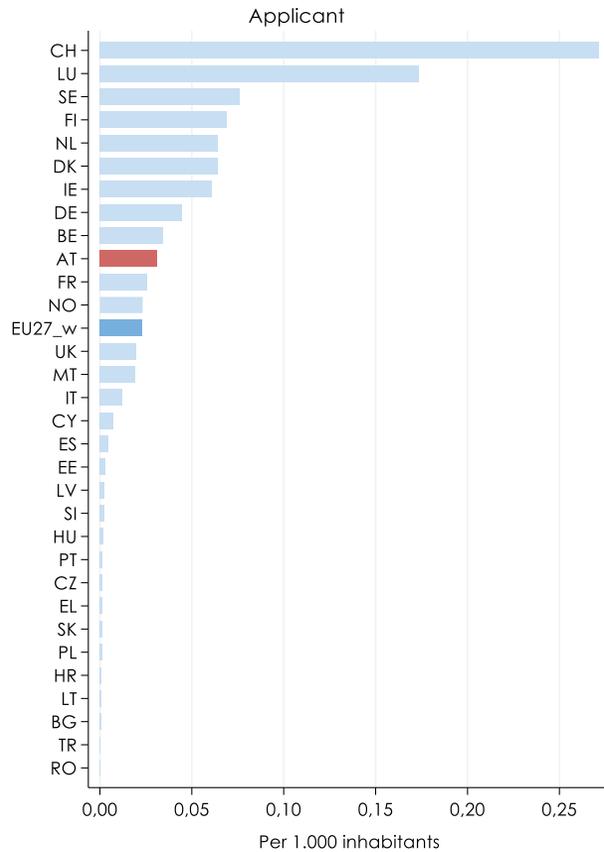


Source: EUROSTAT, WIFO.

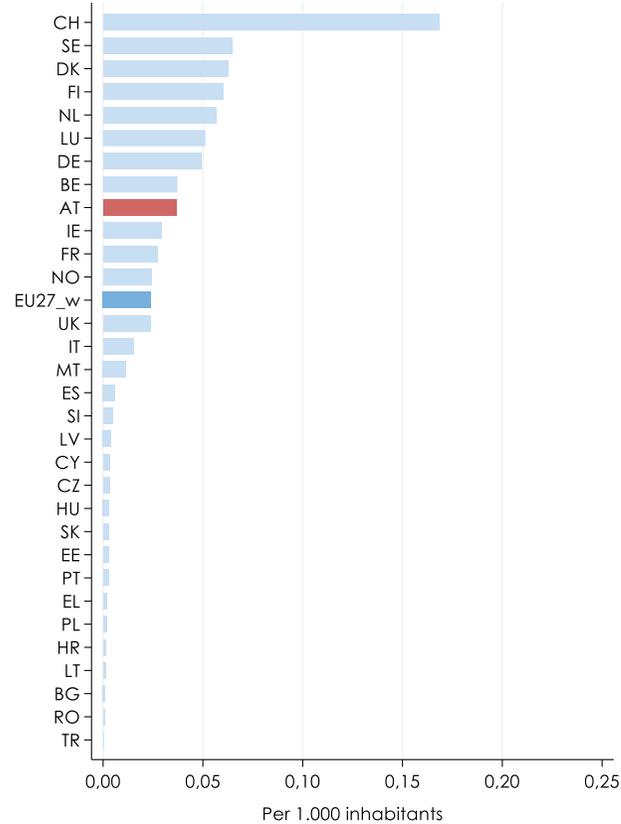
Patents

per 1.000 inhabitants / relative to EU average

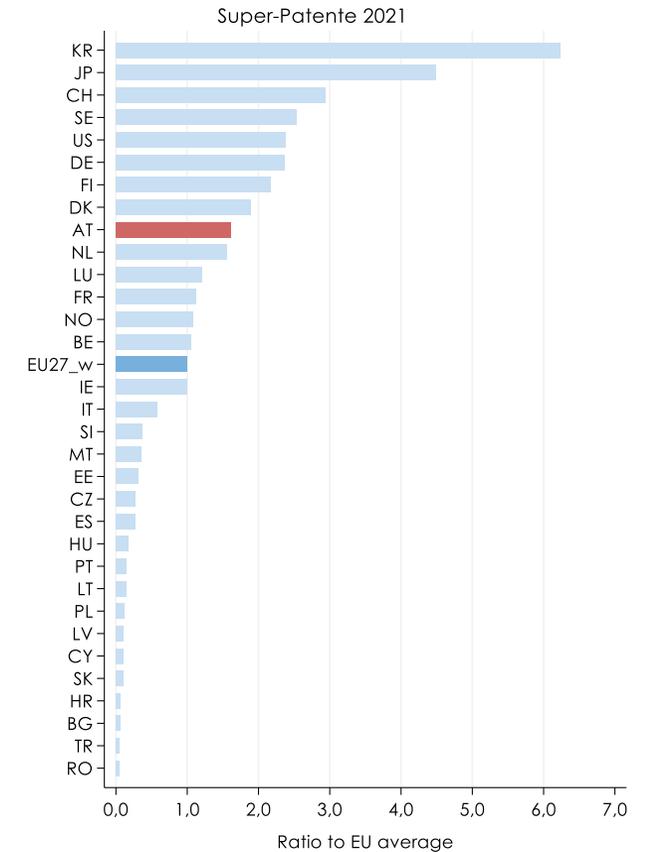
Triadic patents, 2021



Inventor



Super patents, 2021

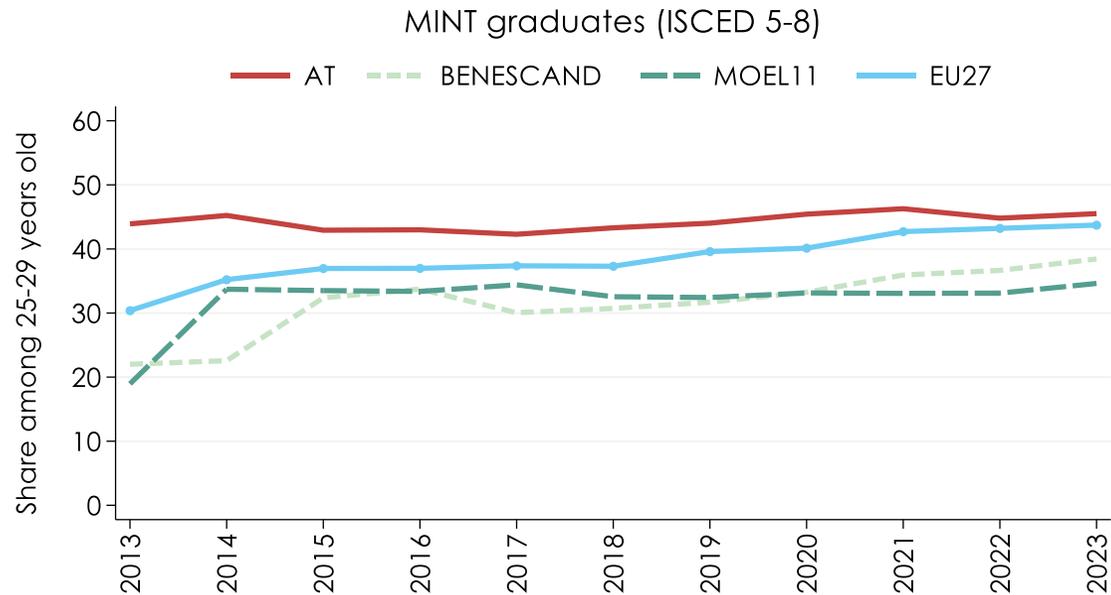


Source: Patstat, WIFO.

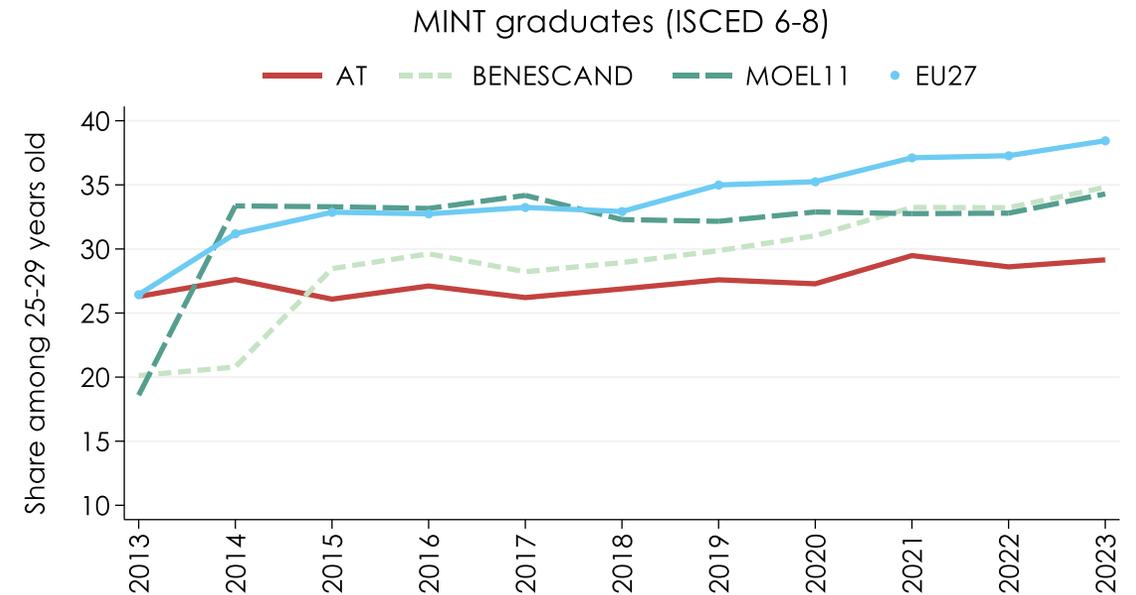
Education: MINT graduates

Share among 25-29 years old

ISCED 5-8



ISCED 6-8

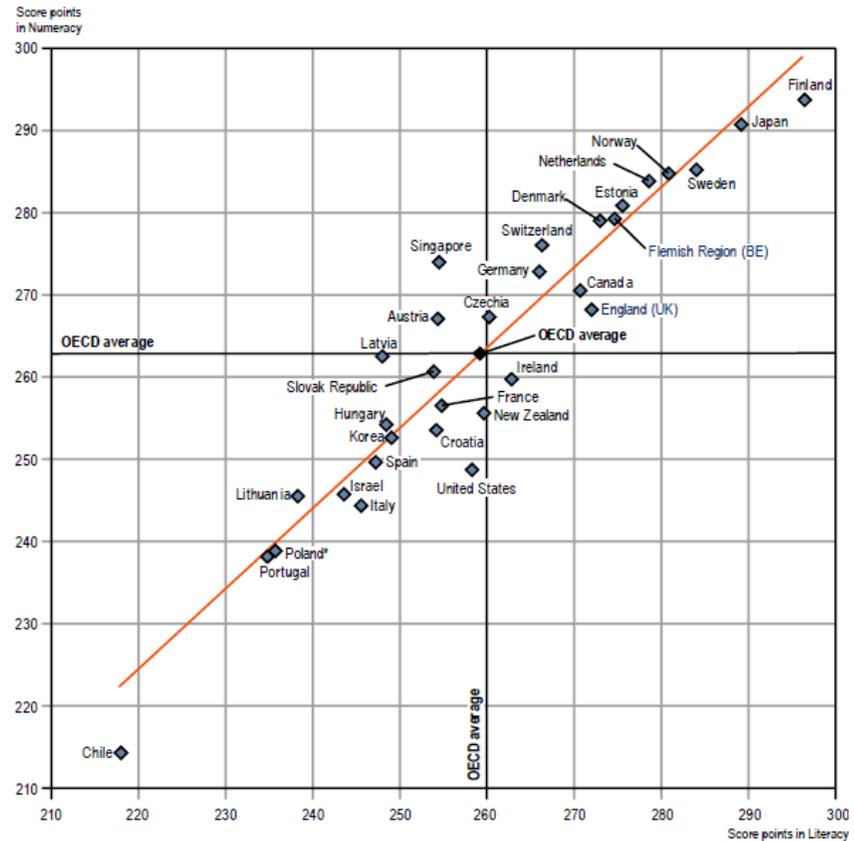


Source: Eurostat, WIFO.

Education: adult skills

Proficiency in literacy and numeracy (OECD survey)

Figure 2.1. Comparison of countries' and economies' average proficiency in literacy and numeracy

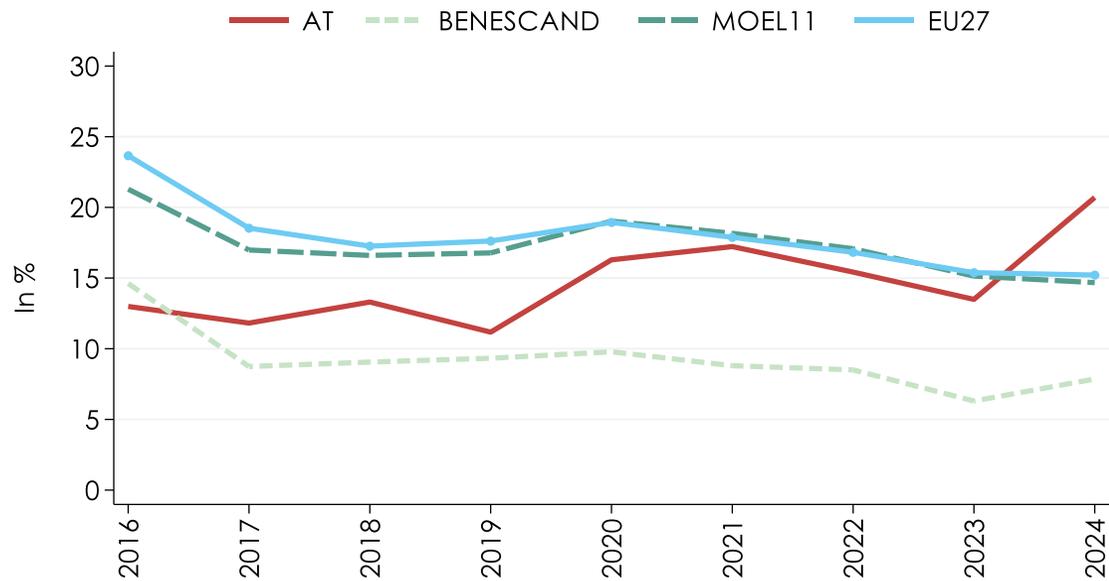


Note: The correlation in this figure is based on countries' and economies' average proficiency in literacy and numeracy. *Caution is required in interpreting results due to the high share of respondents with unusual response patterns. See the Note for Poland in the Reader's Guide.
Source: Table A.2.1. (L, N) in Annex A.

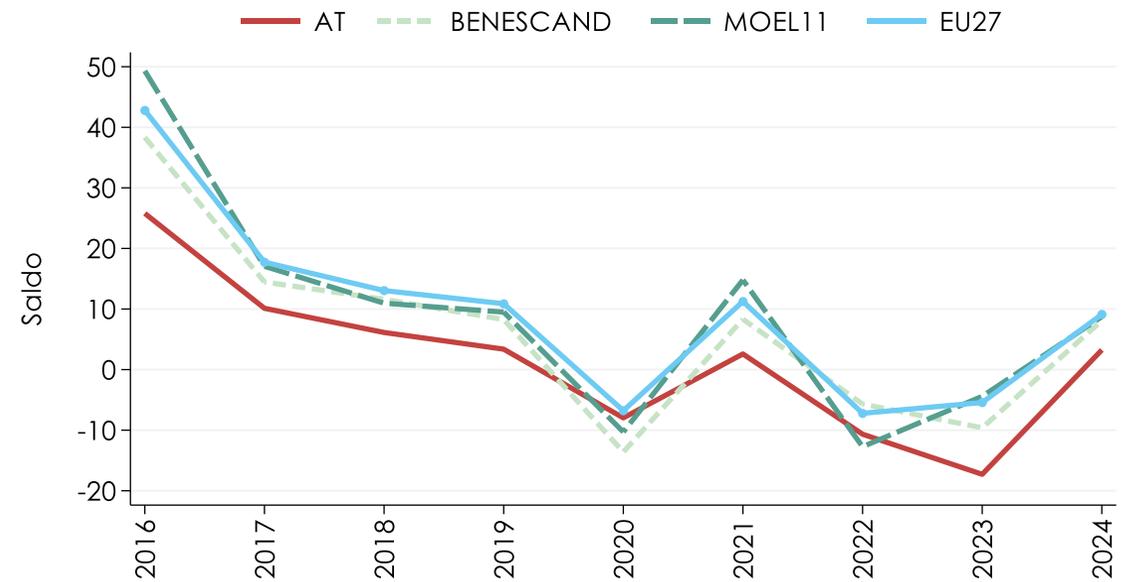
Source: OECD SURVEY OF ADULT SKILLS 2023

Financing constraints

Major financing constraints



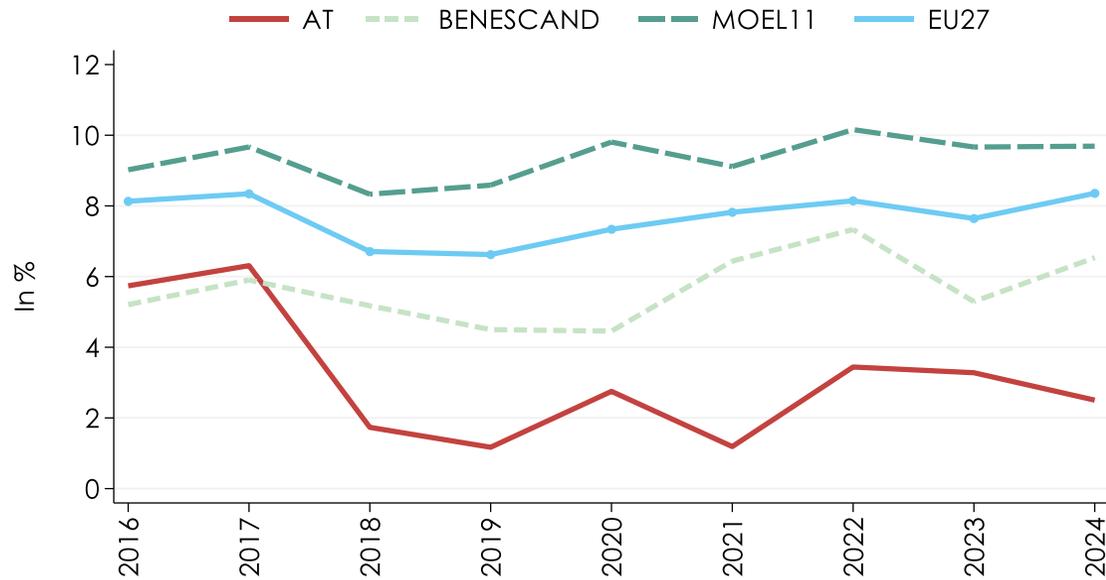
Constraints in external finance



Source: EIBIS, WIFO.

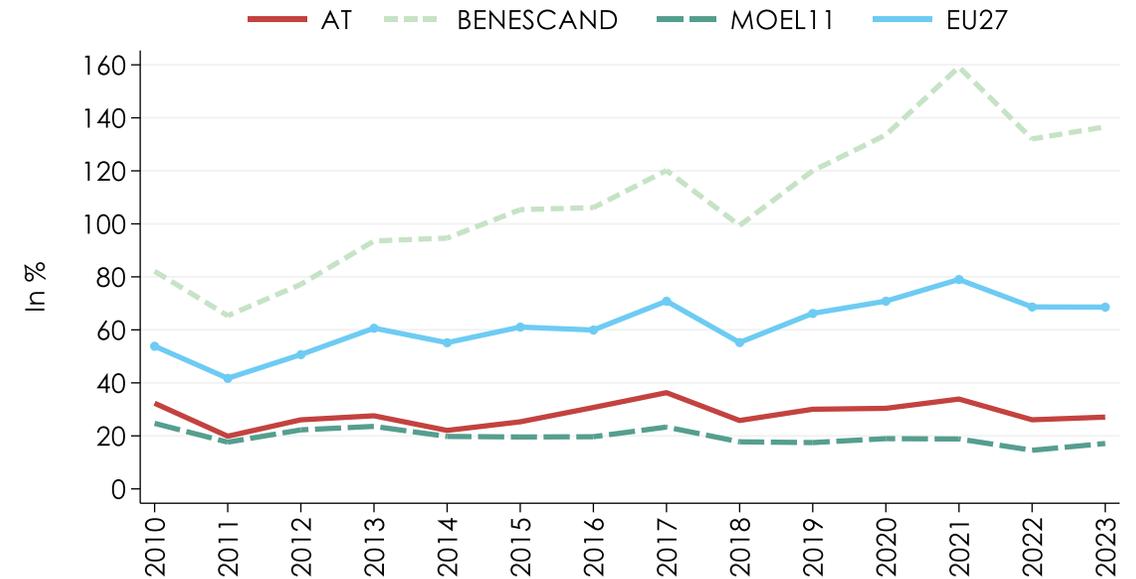
Credit constraints and market capitalisation

Credit constrained firms



Source: EIBIS, WIFO.

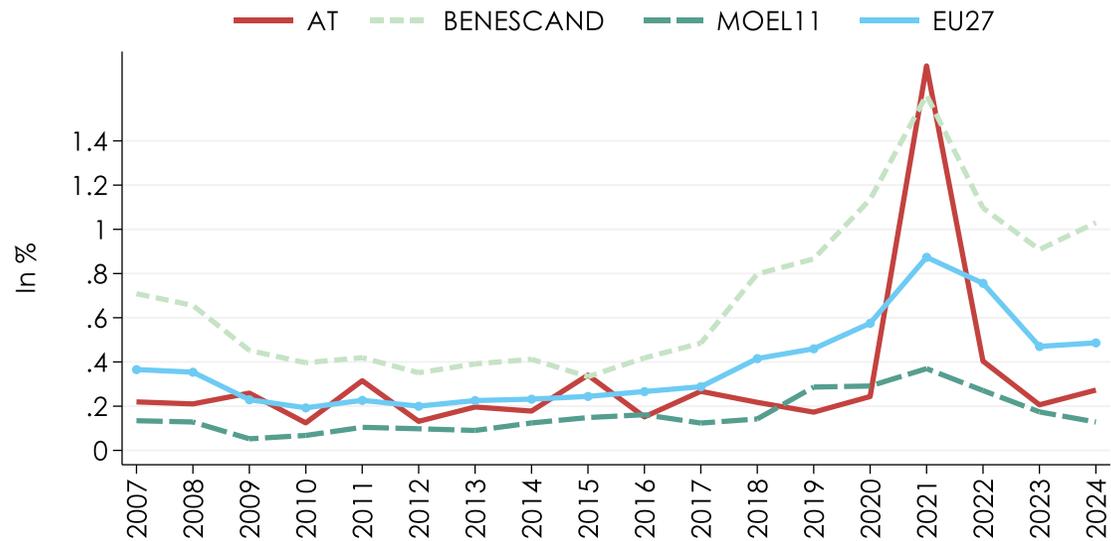
Market capitalisation



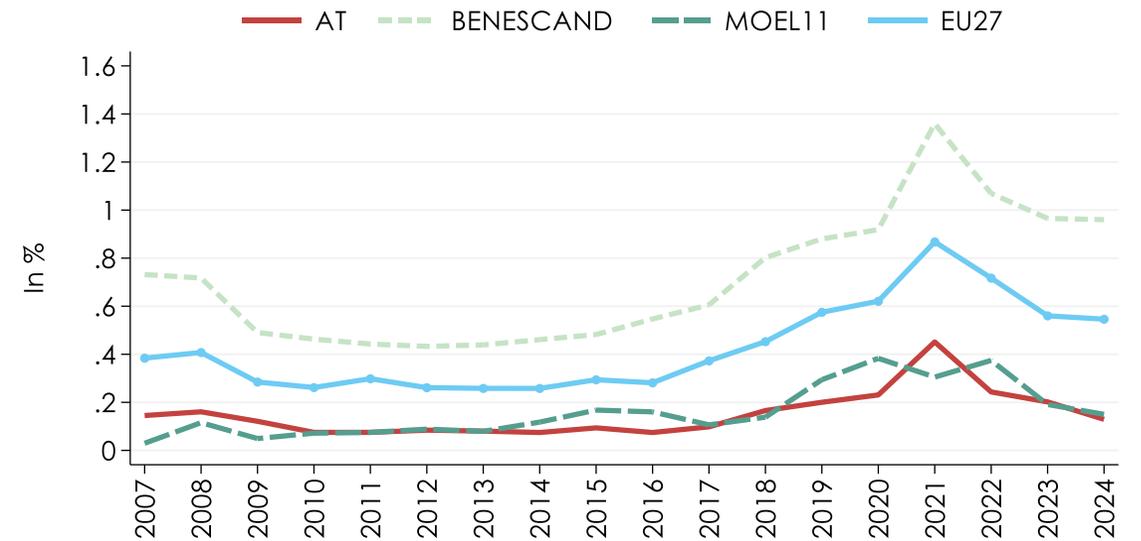
Source: WDI, CEIC Homepage, World Federation of Exchanges, WIFO.

Venture capital

Market statistics



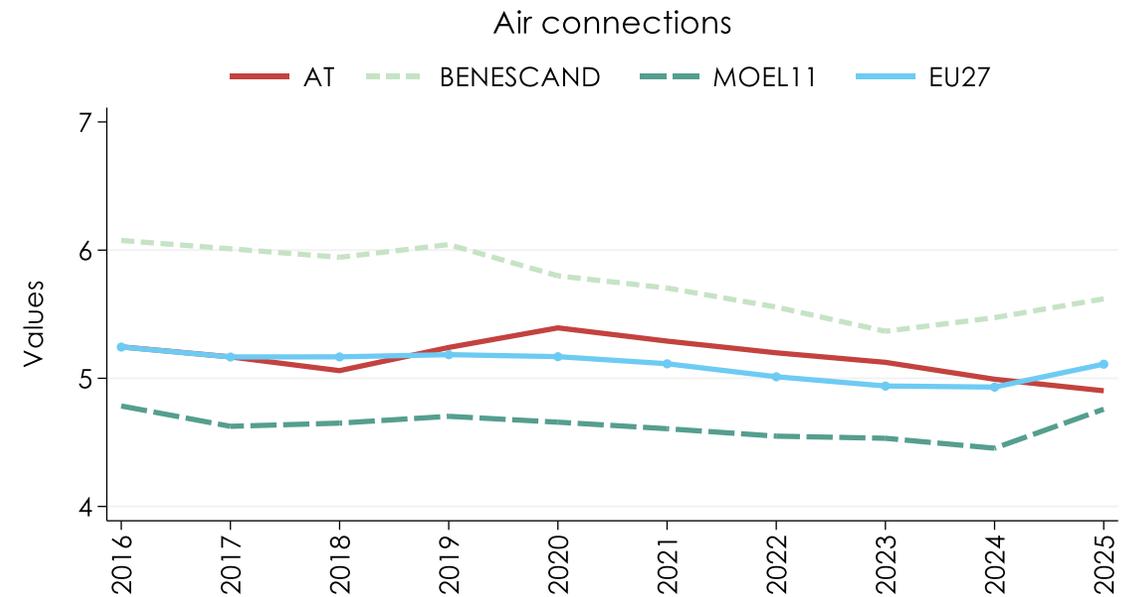
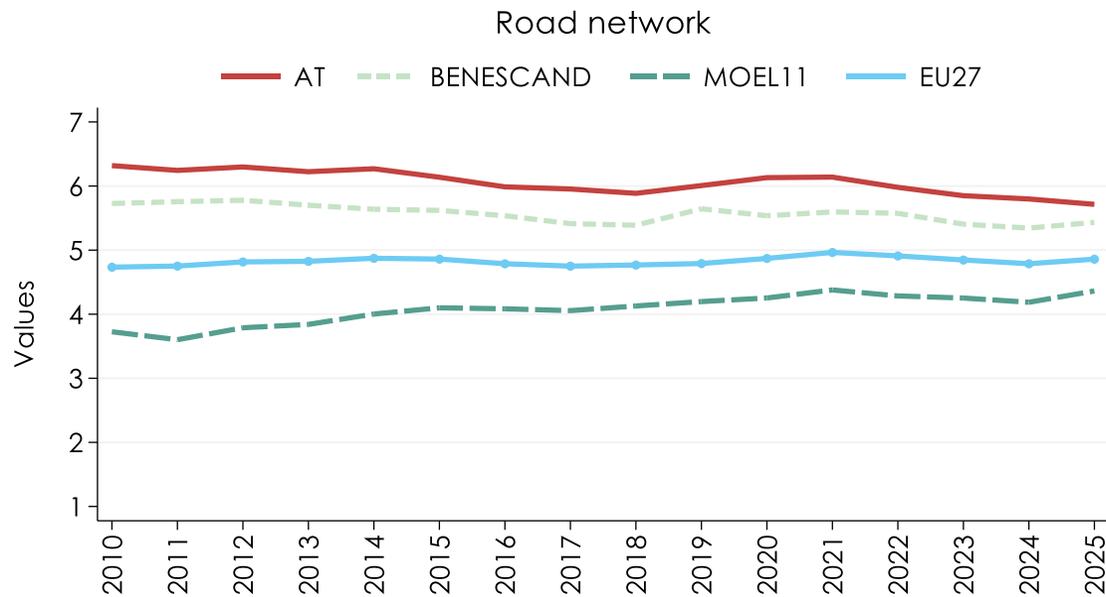
Industry statistics



Source: Invest Europe, WIFO.

Quality of public infrastructure

Executive opinion survey (EOS 2025)

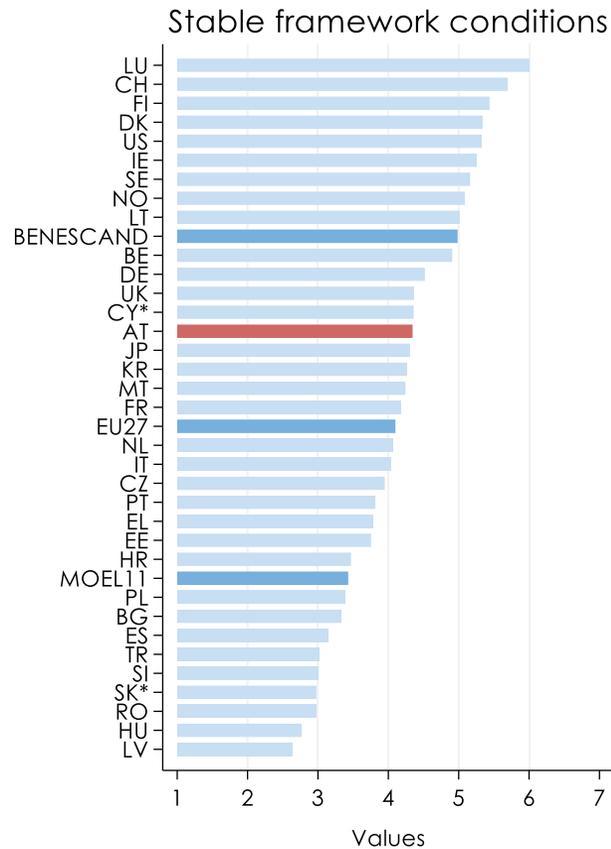


Source: WEF, WIFO.

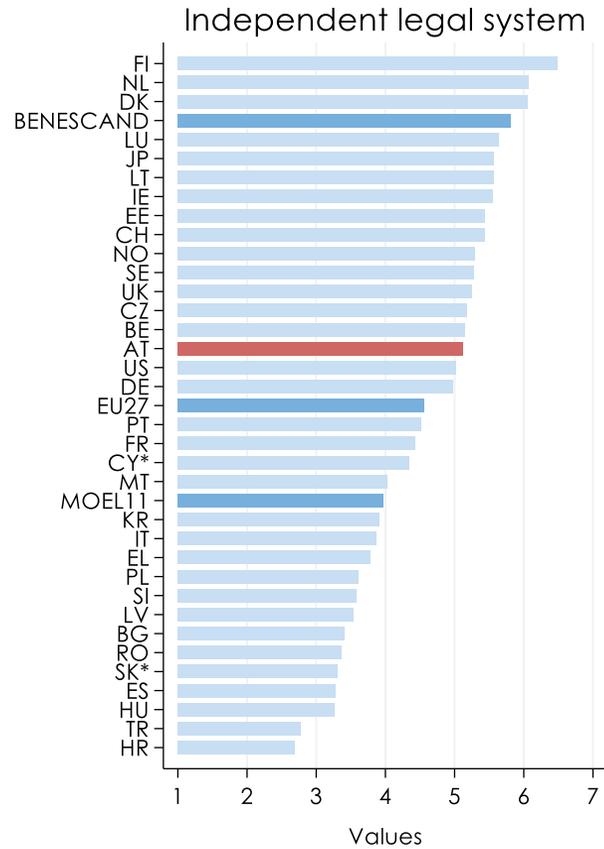
Quality of public institutions

Executive opinion survey (EOS 2025)

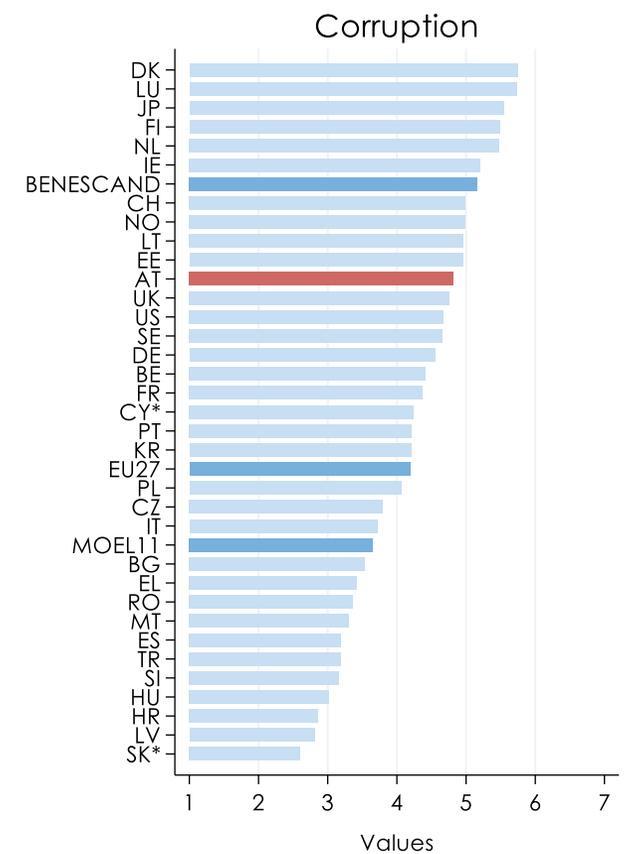
Stable framework conditions



Independent legal system



Corruption



Source: WEF, WIFO. *)values from 2024

Main findings (iii)

■ Competition

- Very low share of young companies (< 5 years)

■ Innovation

- High R&D expenditures but intermediate patent performance

■ Education

- Only intermediate performance

■ Corporate finance

- Below-average market capitalization and little venture capital

■ Infrastructure

- Generally positive; exception: fixed-line broadband

■ Public institutions

- In recent years Austria has fallen back into midfield regarding the quality of public institutions

Economic policy

Menu of priorities

1. Macroeconomic stabilisation

- Fiscal consolidation
- Fighting inflation

2. Productivity growth

- Education, training & skills
- Innovation, technological transformation => **venture capital**
- Competition (e.g., services sector, digital platforms) => **monitoring**, entry barriers etc.
- Resilience, new industrial policy, etc.
- **Framework conditions & incentives** (business start-ups, investments, work hours, ...)

3. Institutional reforms

- Many levers: pensions, healthcare, education, subsidies, regulatory burden, etc.
- **Institutional trust** (politics, justice, federalism, social partners, science, ...)

WIFO

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