High-pressure economy in the Hungarian regions before and after the pandemic crisis

Zsuzsanna Zsibók, PhD
research fellow, Centre for Economic and Regional Studies, Pécs, Hungary
zsibok.zsuzsanna@krtk.hu

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Background of the research

• After the 2008/09 global financial and economic crisis, Central and Eastern European countries underwent a remarkable economic development, which brought a spectacular convergence process for these countries towards the European average level of economic development.

• Behind these trends, several aspects of the so-called high-pressure economy emerged, such as
  • the tightness of the labour market
  • the intensive investment activity (primarily from EU sources and government initiatives)
  • and strong income growth

• In this research we evaluate the Hungarian growth trends in a regional disaggregation after 2010.

• Our focus is on the main economic development indicator, the (per capita) GDP and its underlying growth factors
  • the demographic,
  • the employment
  • and the productivity trends.

• Primarily due to structural reasons, the post-crisis recovery resulted in quite different growth paths at the regional level.
Background of the research
Economic growth in Hungary after the 2008/09 crisis at the national level

Volume index of GDP, previous year = 100%
Economic growth in Hungary after the 2008/09 crisis in regional disaggregation

GDP at constant prices as a percentage of the 2008 value, where > 100%

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Reasons behind the slow recovery

• Hysteresis
  • The crisis caused a hysteretic effect on trend growth, which means that the negative shock was more than a temporary downturn with a fast bounce-back as then expected by many experts.
  • Instead, the potential output itself proved to be endogenous as it decreased with the declining aggregate demand and the austerity measures (Fatás-Summers 2016, MNB 2016).

• In short:
  • Demand-side shocks have a permanent negative effect on potential (trend) growth
  • The endogeneity of potential output means that the long-run sustainable growth rate of the economy is not independent from the cyclical position

• Reasons behind hysteresis:
  • A crisis has permanent negative effect on both the quantity and the quality of the factors of production
    • labour force, physical capital, human capital, R&D&I expenditures, adaptation of new technology
  • Balance sheet adjustment induced shrinking aggregate demand
    • Credit demand and supply were both weak and the structure of the lending was unfavourable (credit defaults)

• See the 2016 Growth Report of the MNB
The 'novel' recipe for recovery: high-pressure economy

- Originated from Okun 1973
- An approach in contrast to the austerity-based recovery
- Novel adaptation of the concept to the post-crisis recovery by Ball 2009, Ball 2015
- Anti-cyclical economic policy: high demand-side pressure sustained by both fiscal and monetary policy measures
  - Goal: permanent increase of the potential output
  - The anti-cyclical policy turned to a pro-cyclical policy with the threat of over-heating the economy
- High-pressure economy in practice:
  - Persistent and predictable demand-side pressure → increasing corporate demand for physical capital and human resources
  - Stable employment and income → increasing consumer demand for goods and services
- Risks:
  - The potential output and the output gap is not observable, therefore the estimates are incorrect which may result in overcooling or overheating of the economy
  - Inflationary risks
    - They were not really effective due to the well-anchored inflation expectations and the flattening Phillips curve (which means that the relationship between the output gap and the inflation is weaker)
  - Asset price bubbles, external and internal imbalances
  - Tightening room for manouvre for economic policy in a case when anti-cyclical measures would become necessary
High-pressure economy in Hungary in the previous decade

- Accommodative monetary environment
  - Near-zero domestic and foreign nominal interest rates, negative real interest rates, weak domestic currency
    - Beneficial for FDI-driven, export-oriented sectors and regions
    - Quantitative easing – central bank programme to purchase financial assets to stimulate the economy
- Widening fiscal policy discretion
  - Low budget deficit, declining government debt
- High level of investments (government + FDI + domestic private sector), intensive use of the EU’s financial resources
- Improving labour market participation:
  - The employment rate increased in an extensive manner after the extreme low levels measured before the 2010s
  - The share of the working-age population decreased due to the natural population decline (ageing) and the Western outmigration
  - Tightening labour market
    - Labour shortage and unemployment coexist due to structural reasons (skill mismatch)
    - Wage growth exceeded productivity growth
  - The extensive increase of employment was accompanied by low productivity growth (an EU-wide and also a global phenomenon, called “productivity puzzle”)
  - Low-educated labour force entered the labour market
The decomposition of GDP-growth

• The decomposition of per capita GDP:

\[
\frac{Y}{N} = \frac{Y}{L} \cdot \frac{L}{NA} \cdot \frac{NA}{N} = \text{labour productivity} \cdot \text{employment rate} \cdot \text{share of working-age population}
\]

• Hence, GDP can be decomposed as

\[
Y = N \cdot \frac{Y}{L} \cdot \frac{L}{NA} \cdot \frac{NA}{N}
\]

• The contribution of the elements to the change of the GDP between period 0 and 1:

\[
Y_1 - Y_0 = (N_1 - N_0) \cdot \left( \frac{Y}{L} \right)_0 \cdot \left( \frac{L}{NA} \right)_0 \cdot \left( \frac{NA}{N} \right)_0 + \left( \frac{Y}{L} \right)_1 - \left( \frac{Y}{L} \right)_0 \cdot N_1 \cdot \left( \frac{L}{NA} \right)_0 \cdot \left( \frac{NA}{N} \right)_0
\]

\[
+ \left( \frac{L}{NA} \right)_1 - \left( \frac{L}{NA} \right)_0 \cdot N_1 \cdot \left( \frac{Y}{L} \right)_1 \cdot \left( \frac{NA}{N} \right)_0 + \left( \frac{NA}{N} \right)_1 - \left( \frac{NA}{N} \right)_0 \cdot N_1 \cdot \left( \frac{Y}{L} \right)_1 \cdot \left( \frac{L}{NA} \right)_1
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Growth factors during the 2010s at the national level

The decomposition of the GDP change (million HUF at constant prices)

- Population
- Labour productivity
- Share of working-age population
- Employment
Spatial disaggregation

• Territorial classification
  • Based on economic structure, the level of development and growth dynamics

• See:
  • Lengyel-Varga 2018
  • Konka-Török 2019
  • Lux 2017
    • Central regions
    • Intermediate regions
    • Peripheral regions
Sub-national distribution of the GDP

NUTS3-level breakdown of the national GDP in 2019

Hirschmann-Herfindahl index (NUTS 3-level GDP)
The growth factors in the different county groups after the crisis

The decomposition of the GDP-change, 2010-15

Centre  FDI manufacturing  Re-industrializing  Knowledge centre  Rural

- population
- labour productivity
- share of working-age population
- employment
The growth factors in the different county groups in the high-pressure economy

The decomposition of the GDP-change, 2015-19
What can we expect 'after' the Covid-19 crisis?

• The high-pressure economy seems to return, however, in a different form
  • Labour shortage remains to be a great challenge
  • Due to increasing inflation and the weak currency, the monetary environment is unfavourable and it has adverse effects on real income and domestic demand
  • Large-scale EU and governmental supports boost economic recovery (strong investment dynamics)
    • Their efficient use will be a challenge

• Regional development remains to be path-dependent, thereby imbalances are persistent
  • The extent of the temporary downturn is not that important compared to the economic resilience (adaptive capacity) of the regions
  • Those areas that have been originally better-off are expected to recover faster (primarily manufacturing and FDI-oriented regions)
    • In the long run, these areas may benefit from a potential/partial de-globalisation (nearshoring) tendency
    • The recovery may widen the gap between local SMEs and large multinational companies and the areas reliant on them.
  • Hysteresis is expected to appear after the Covid-19 crisis, too, due to the high level of uncertainty which detriorates private investments and restructures employment in certain sectors (tourism, catering).
  • Peripheral areas will possibly face an L-shaped growth path due to their lower level of resilience.

• The emerging new economic trends include digitisation and green economy
  • Digitization and teleworking may have a positive effect on peripheral economies but they possibly won’t be able to counterbalance the lack of resources
    • Digital innovations need a high level of adaptive capacity regarding human resources and infrastructural environment
  • Circular economy is a key element in the renewal of peripheral areas, but it may be effective only in the long run
Conclusions

• All regions benefited from the results of high-pressure economy but to different degrees
• We cannot expect that spatial inequalities will diminish in the short or medium run
• The years of extensive employment growth will soon end, therefore upgrading the quality of the labour force is essential
  • Jobs with high value-added
  • Human resource development (including managerial skills) is number one priority
  • Improving local business environment

(see: Vorley-McCann 2021)
• Further research
  • extend this partial analysis with other important aspects of the high-pressure economy, namely, private, public (incl. EU) and FDI investment activities as well as income dynamics at the sub-national level.
References


MNB (2016) Növekedési jelentés. MNB, Budapest


Thank you for your attention!

Zsuzsanna ZSIBÓK, PhD
zsibok.zsuzsanna@krtk.hu