William's Update

Case Study and Data

William Clinton Co

July 24, 2025

Abstract

This paper provides an exploratory update in support of the research agenda "Productivity and Wedges: Economic Convergence and the Real Exchange Rate" (Devereux, Fujiwara, & Granados, 2025). It evaluates the possibility of applying a Korea-style case study framework, highlighting structural transformation, independent monetary regimes, and convergence to selected European Union (EU) economies. We identify datasets on real exchange rates and inflation targeting frameworks using sources such as Eurostat, the IMF (Zhang, 2025), and BIS (Chavaz, 2025). We also assess candidate countries for case study analysis, with particular focus on Estonia, Ireland, Slovakia, and Poland. Estonia and Slovakia are identified as the most promising analogues to Korea, given their respective strengths in technology and automotive exports.

Table of contents

1 Introduction

This document presents an exploratory update to support the development of a case study and data for a research project inspired by *"Productivity and Wedges: Economic Convergence and the Real Exchange Rate"* (Devereux, Fujiwara, & Granados, 2025). In particular, it considers whether

a case study approach similar to that of Irwin and Obstfeld (2024), which focused on Korea's structural reforms, currency regime, and convergence, can be applied to selected European Union (EU) member states.

We also identify datasets on real exchange rates (RER) and monetary policy frameworks and evaluate possible case study candidates among EU countries. Another goal is to identify economies with comparable dynamics to Korea, particularly in relation to structural transformation, tradable sector development, and macroeconomic convergence.

This document includes:

- Identified datasets on real exchange rates and monetary policy targets data
- An overview of potential EU case studies
- Comparative analysis of Estonia, Slovakia, Ireland, Poland, and others

2 Data Update

2.1 European Currency Data

We now have a dataset sourced from **Eurostat** that contains the **real exchange rates** of European Union countries.

Dataset details:

- **Time period:** Annual data from **2000 to 2021**
- **Scope:** Exchange rates are **relative to other EU countries**
- **Countries included:** Limited to those discussed, all of which are EU members (or closely aligned)

Relevant currencies:

- **BGN** – Bulgarian Lev *(Bulgaria)*
- **CZK** – Czech Koruna *(Czech Republic)*
- **DKK** – Danish Krone *(Denmark)*
- **HUF** – Hungarian Forint *(Hungary)*
- **PLN** – Polish Zloty *(Poland)*
- **RON** – Romanian Leu *(Romania)*
- **SEK** – Swedish Krona *(Sweden)*

Link to dataset:

- Eurostat: Real Exchange Rates (Annual)
- Github

2.2 Monetary Policy Dataset

There are two key datasets relevant for analyzing monetary policy frameworks in our study:

2.2.1 Zhongxia Zhang (IMF, 2025)

This dataset provides detailed information on inflation targeting regimes, including:

- **Inflation targets and bands**
- **Track records of target adherence**

The dataset is available via:

- Mendeley Data (Zhang 2025)
- GitHub Repository

This dataset is ideal for capturing **explicit inflation target levels**, **tolerance bands**, and the **credibility/track record** of central banks over time.

2.2.2 Boris Chavaz (2025)

The Chavaz dataset offers a complementary view by detailing:

- **Target horizons**
- **Central bank objectives beyond inflation**, including:
  - Real economy
  - Financial stability
- **Relative weightings assigned to each objective**

These weights help us understand whether price stability is the dominant concern or part of a broader set of macroeconomic goals.

- BIS Dataset – Chavaz (2025)
- BIS Publication Overview

An infographic chart that summarizes central bank objectives and their weights, such as numerical targets, horizons, and deviations from strict price stability

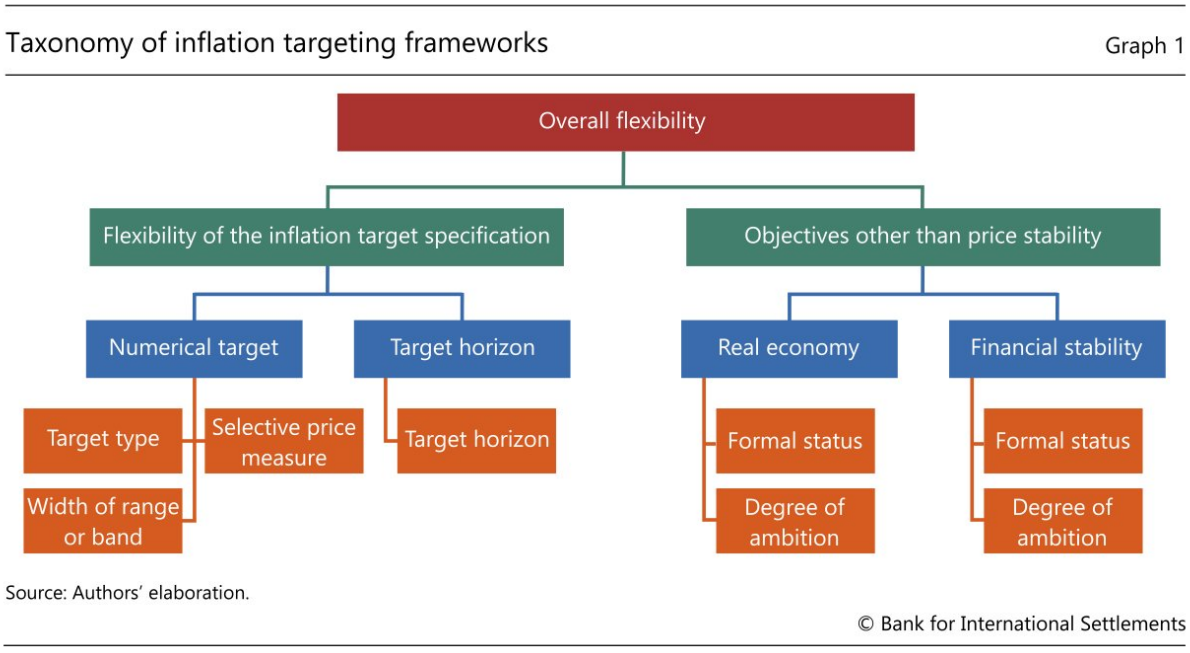


Figure 1: Central bank objectives and weights

These two datasets, when used together, allow us to assess both the **explicit inflation targeting frameworks** and the **broader monetary policy record** across countries.

3 Case Study

We investigated whether a case study, inspired by the approach of Douglas A. Irwin and Maurice Obstfeld (2024) [LINK], which focused on Korea, could be implemented similarly for our research.

To do this, we examined the aspects of their paper that made Korea a particularly compelling case. Notably, Korea experienced:

- Rapid growth in its tradable sector
- The presence of an independent currency
- Accelerated economic convergence

These characteristics made Korea an ideal candidate for analyzing real exchange rate dynamics and structural transformation.

To identify analogous cases within the European Union, we looked for countries exhibiting similar trends, especially rapid expansion of the tradable sector, structural reforms, and substantial convergence.

3.1 Ireland

Ireland emerged as a potential case due to the "Celtic Tiger" era during the 1990s, marked by:

- Rapid expansion in the tradable sector, particularly in technology and pharmaceuticals
- Significant foreign direct investment and export-led growth

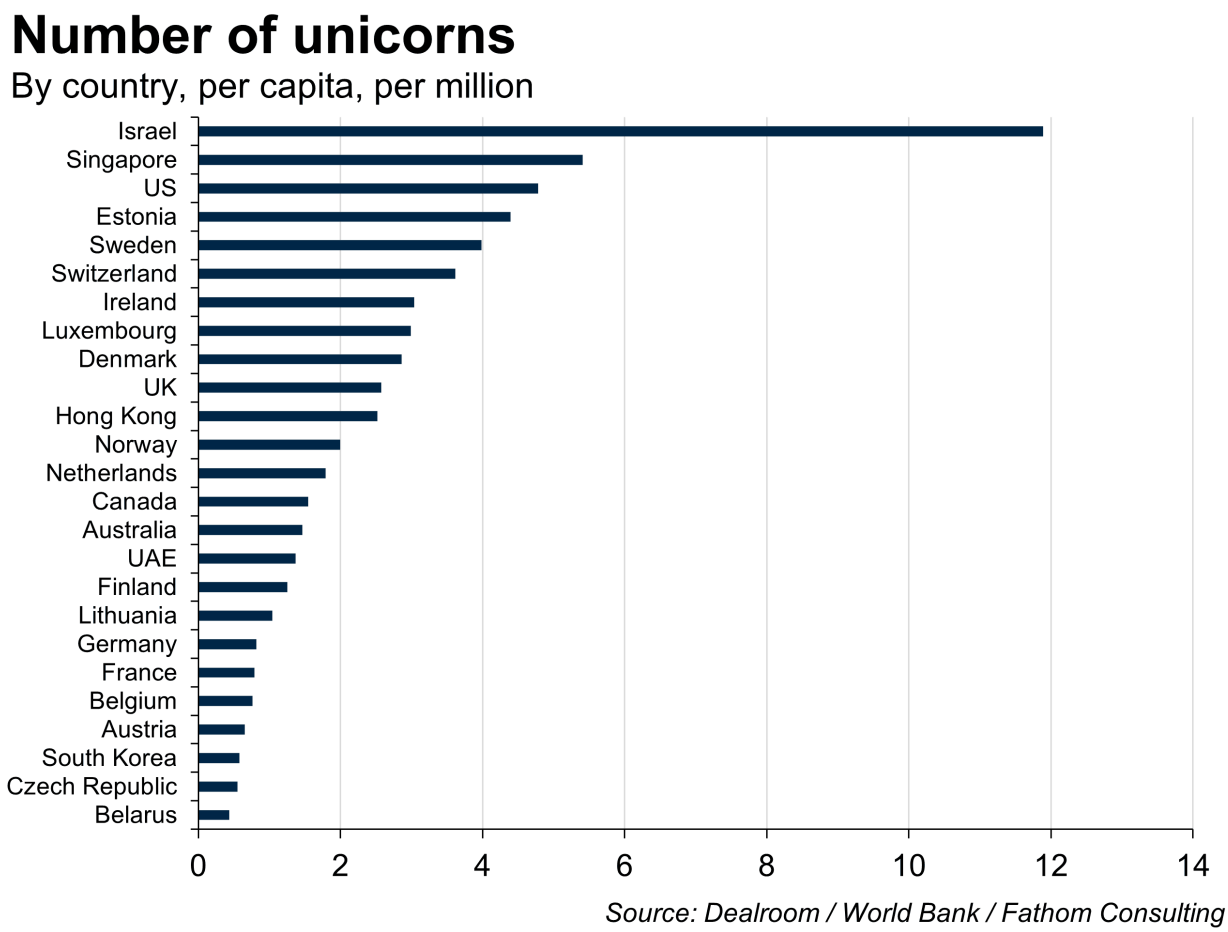
However, a major limitation of using Ireland is its status as a financial and corporate tax haven. This distorts national accounts data due to profit-shifting and accounting practices of multinationals, potentially biasing observations.

3.2 Estonia

Estonia is a strong candidate, with:

- Remarkable productivity growth
- Rapid development in technology sector
- Rapid convergence of export tradables since its post-Soviet transition
- Inolved in EU and had independent currency
- Ties to former Soviet Union

Estonia has the highest number of technology unicorns per capita in the world. Notable companies include **Skype**, **Bolt**, and **Wise**.



Estonia joined the European Union in 2004 and adopted the euro in 2011. Its economy is highly open, with exports comprising over 80% of GDP. Like Korea, Estonia implemented deep structural reforms during a period of economic crisis, making it a relevant comparison case.

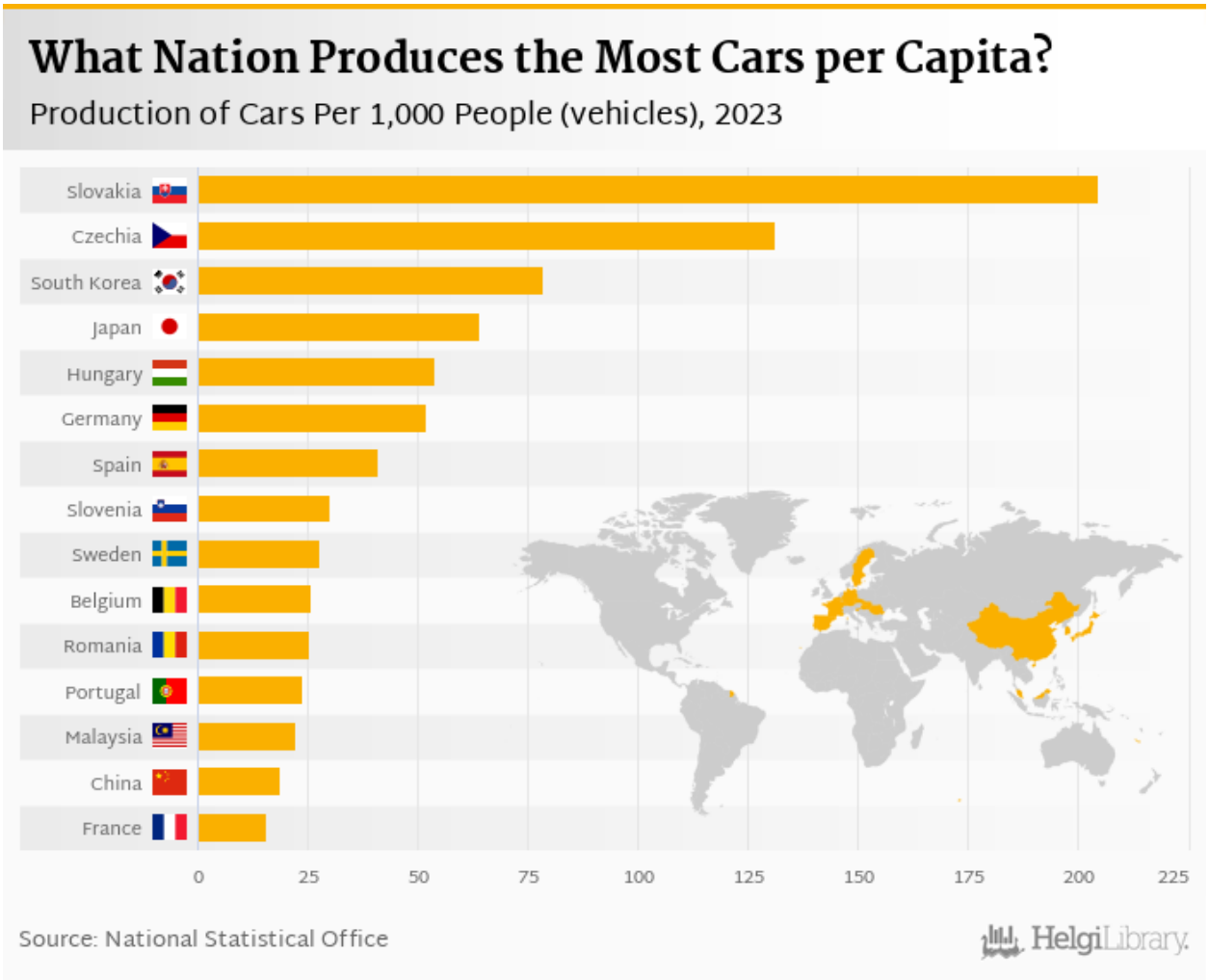
Historically, Estonia's economy under Soviet rule was centered on oil shale processing and supplying energy to the Soviet Union. Following independence, Estonia embarked on an ambitious path of economic modernization and integration with Western Europe, aiming to catch up with fellow Nordic countries such as Finland.

A pivotal moment was the **Tiger Leap** initiative launched in 1996, which prioritized investment in internet access and human capital. As a result, Estonia developed exceptional digital infrastructure, with both the public and private sectors embracing digital technologies. Today, Estonia is known for its fully digital government and is a global leader in e-governance.

One limitation, however, is its small economic size relative to other EU economies, which may affect the generalizability of findings.

3.3 Slovakia

Slovakia may be a strong candidate for analysis due to its strong automotive export sector.



While Estonia lacks a robust automotive industry, and Slovakia does not have a notable technology sector, Korea stands out for having both.

Given this, it may be worth exploring a combined case study using both Estonia and Slovakia as a composite benchmark. By examining their complementary strengths, technology in Estonia and automotive exports in Slovakia, we can construct a useful comparison to Korea and assess whether similar structural dynamics are at play.

3.4 Poland

Poland is a large and rapidly growing economy but lacks standout statistics like Slovakia's high number of cars per capita or Estonia's high number of unicorns per capita

Poland is:

- The largest post-communist economy in the European Union
- A major recipient of EU cohesion funds
- A country that has experienced remarkable and sustained economic growth since its transition

However, compared to countries like Korea, with globally recognized technology giants such as Samsung. Poland does not have a similarly distinctive anchor, which may limit our case study.

3.5 Other Countries Considered

Hungary, the Czech Republic, and Spain were also evaluated as potential case study candidates. However, they were determined less suitable due to the absence of distinctive sectoral developments relative to the previous countries mentioned.

4 Closing Thoughts

It would be helpful to examine the most recent data on the convergence of real exchange rates RER and GDP among the 12 countries considered in the meeting last July 17, 2025. Such could offer additional insights.
