Are Pro-Productivity Policies Fit for Purpose?

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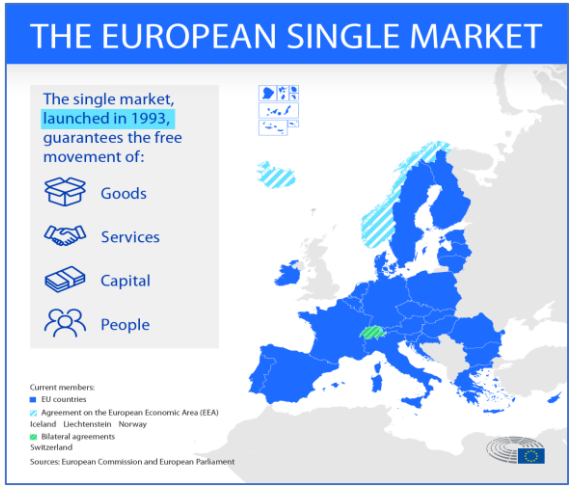
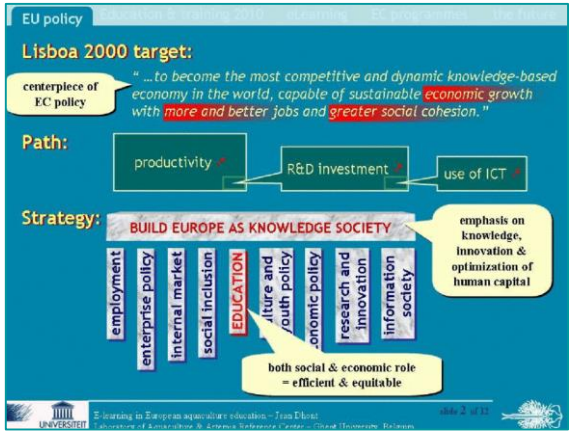
WHY PRODUCTIVITY MATTERS? HOW IS ITS ROLE CHANGING?

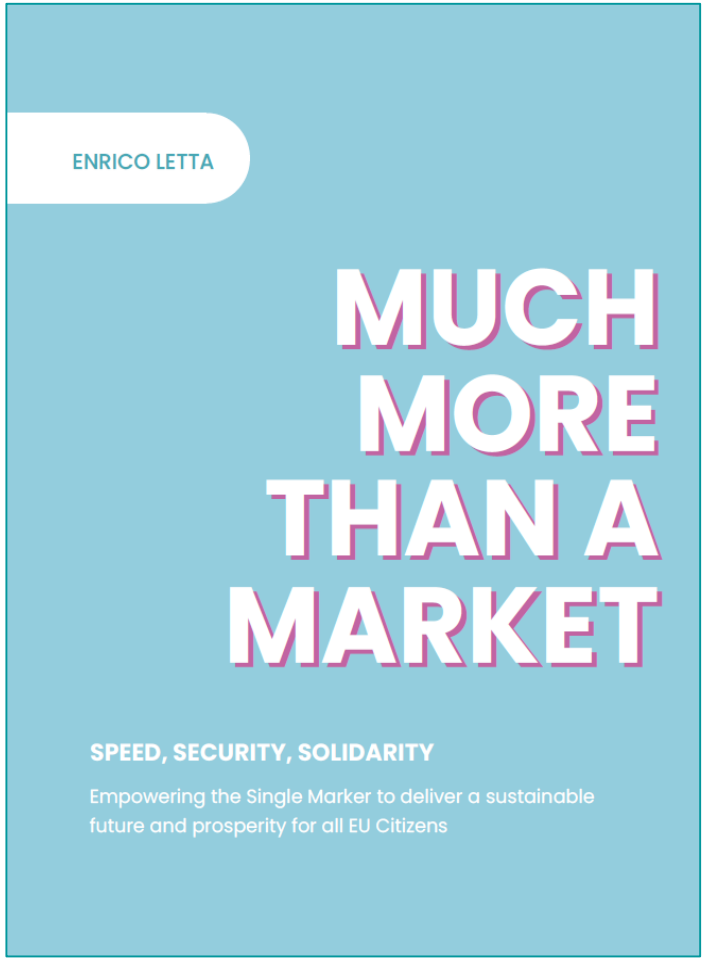
- Productivity is the only sustained source of economic growth in the long-term
- Once again, we are in a world of rapid technological progress but slowing productivity growth
- Are we reliving Solow's productivity paradox: "We see computers everywhere except in the productivity statistics?" (1987)
- Or will it be different this time: demographics, climate, deglobalisation, and the ugly sides of technology?
- Can a reset of a pro-productivity policies framework reverse the productivity trends, and make it more inclusive and sustainable?
- How will Europe's new industrial strategy contribute to productivity?

WE HAVE BEEN HERE BEFORE, BUT THE STAGING HAS CHANGED – WHAT ABOUT THE RECIPEE?





From single market, knowledge and competitiveness to …



… capital markets union, innovation and industrial policy …

…underpinned by resilience, national security and intervention

AGENDA

Why has productivity growth slowed?

Are we still measuring the right things?

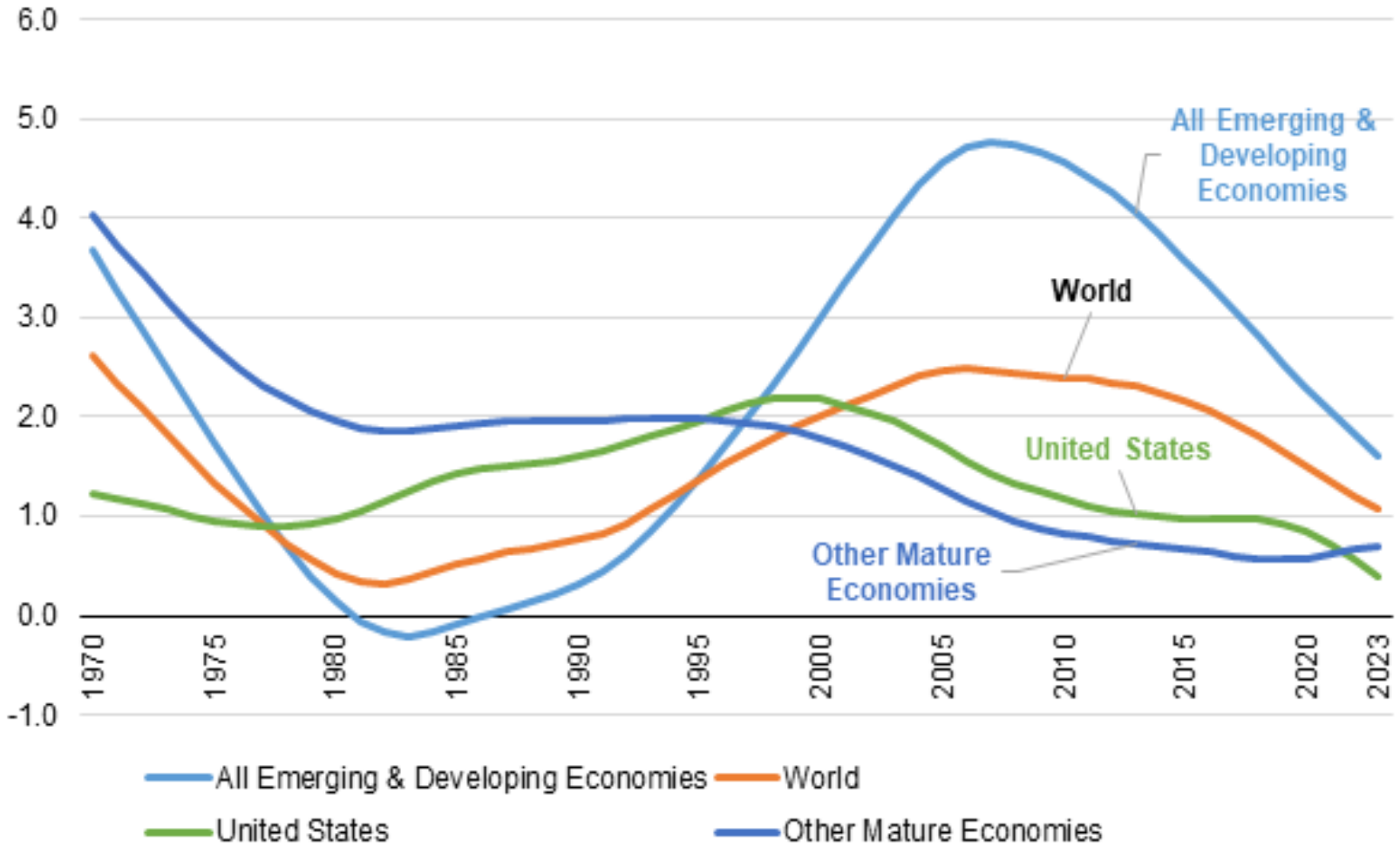
Accounting for the digital economy

Are intangibles loosing steam?

Pro-productivity policies, industrial strategy and inclusive growth

WHY HAS PRODUCTIVITY SLOWED?

THE GLOBAL ECONOMY IS FACING BIG PRODUCTIVITY CHALLENGES ALL AROUND



Source: The Conference Board, 2023
Note: Trend growth rates are obtained using HP filtering method

G20 AGGREGATE PRODUCTIVITY GROWTH TREND WITH ALMOST ALL INDIVIDUAL COUNTRIES SLOWING

Growth in labour productivity (GDP per hour worked) by major G-20 group, annual average growth rates

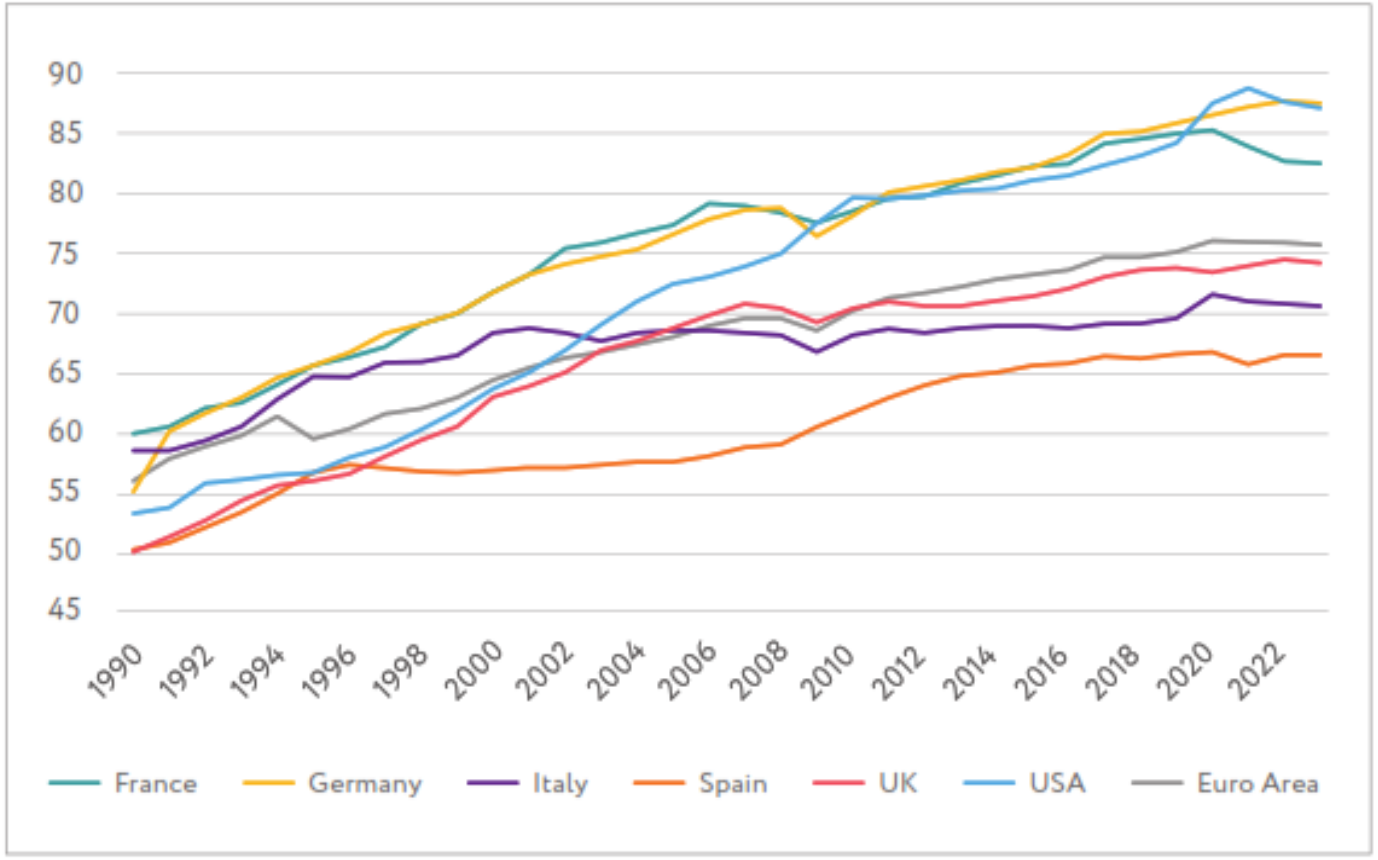
		1970s	1980s	1990s	2000s	2010s	2020s*
G20	***Total***	***2.8***	***1.6***	***1.9***	***2.9***	***2.8***	***2.1***
Leading but slowing	***Total***	***2.9***	***2.0***	***1.9***	***1.5***	***0.9***	***0.7***
	Japan	4.7	3.6	2.3	1.0	1.1	0.9
	United States	1.7	1.4	1.7	2.2	0.8	0.9
	United Kingdom	3.0	2.0	2.0	1.3	0.6	0.2
	France	4.1	2.9	1.8	1.0	0.9	-0.7
	Germany	3.9	2.3	2.2	0.9	1.2	0.5
	Australia	1.8	1.2	2.2	1.2	1.2	1.9
	Italy	3.9	1.7	1.4	0.0	0.4	0.4
	Canada	1.9	0.9	1.4	1.1	1.0	0.9
Lagging but growing	***Total***	***2.9***	***4.2***	***5.1***	***6.9***	***6.2***	***4.0***
	China	4.1	6.2	7.8	9.2	7.1	5.5
	India	0.4	3.2	3.9	5.7	6.6	1.6
	Turkey	4.1	3.3	1.7	3.5	3.4	3.0
	Indonesia	3.6	2.4	1.7	3.1	3.4	1.6
	South Korea	5.9	5.4	6.4	4.7	2.9	1.6
Muddling through	***Total***	***2.7***	***-0.6***	***-0.6***	***1.9***	***0.9***	***0.2***
	Russian Federation	2.5	0.9	-3.1	4.7	2.0	0.9
	Brazil	4.7	0.1	0.5	1.1	0.9	-0.1
	South Africa	2.4	-0.6	-0.7	2.7	0.5	1.4
	Argentina	2.0	-1.8	2.1	1.1	0.9	0.7
	Mexico	1.4	-1.5	0.6	0.3	0.7	-1.3
	Saudi Arabia	2.8	-8.3	0.9	-0.6	-1.5	0.2

- Eight developed G-20 members (G7: Japan, US, UK, France, Germany, Italy and Canada + Australia) in the **"leading levels but slowing growth"**-group.
- Five G-20 members (China, India, Turkey, Indonesia, and South Korea) are in the **"lagging levels but accelerating growth"**-group
- Remaining six G-20 members (Russia, Brazil, South Africa, Mexico and Saudi Arabia) are in the **"muddling through"**-group showing neither much growth in productivity nor any sizeable improvement in productivity levels relative to the leading group.

Note: Analysis is for 19 individual members of G-20, excluding European Union aggregate;
* 2020s includes projection for 2023.
Source: The Conference Board, Total Economy Database, April 2023

SLOW PRODUCTIVITY GROWTH AND LOW LEVELS ARE BOTH A PROBLEM IN THEIR OWN RIGHTS

Figure 1: GDP per hour (in US$, PPP converted), 1990-2023



Source: The Conference Board, Total Economy Database, April 2023

- ***Slow productivity growth*** affects dynamic innovation, slows structural change, and create low performance traps for people, firms and places
- ***Low productivity levels*** affect resilience of people, firms and places and to absorb shocks and create vulnerabilities

NOT ONE REASON FOR THE PRODUCTIVITY SLOWDOWN

- **Demand-side issues**:
  - **Short-term**: weak productive investment (e.g. aftermath of global financial crisis or interest rate increases), weak consumption (e.g. aftermath of pandemic, inflation and cost of living crisis)
  - **Long-term:** more low-productivity personal and public services (incl. Baumol effect)
- **Supply-side issues:**
  - **Short-term:** Supply-side "shocks", including pandemic, supply chain disruptions, stagflation, political uncertainty
  - **Long-term**: End of catch-up potential of emerging markets, demographics (ageing, mobility, labour shortages), climate change
- **Counter-productive policies**: regulation, tax, competition, anti-globalisation rhetoric, inequality
- **Weaker diffusion and slower adoption of technology (*the productivity paradox*)**
  - Time lag between adoption and productivity impact (Productivity J-curve)
  - "Winner takes all" effects and "superstar firms"
  - Weaker diffusion and slower adoption of (digital) technologies
- **Measurement issues** within and beyond the boundaries of the national accounts

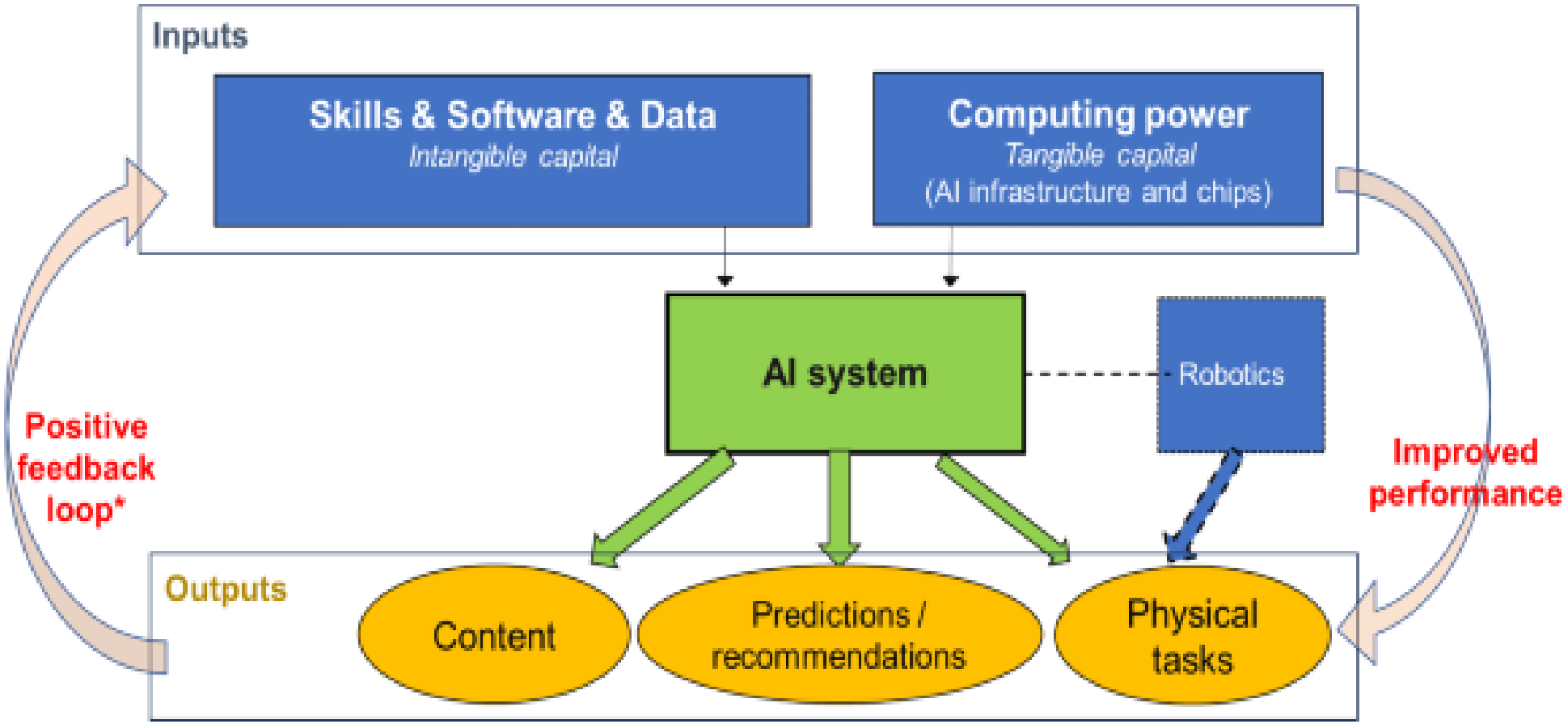
ARE WE STILL MEASURING THE RIGHT THINGS?

ARE WE MISSING THE PRODUCTIVITY REVIVAL BECAUSE OF MEASUREMENT PROBLEMS?

- **Chad Syverson**: "For measurement to explain the productivity slowdown, you need
  - a measurement problem …
  - … that gets worse …
  - … at a particular point in time."
- **Goldin et al. in Journal of Economic Literature (2024)**:
  - About 0.21 of 1.7 %-point slowdown in US between pre- and post 2005 period can be due to measurement problems
  - That is 13% of the productivity slowdown, but with a wide margin of uncertainty
  - Measurement of output (notably digital services) could be a bigger problem than measurement of inputs (notably investment)
  - It doesn't deal with "Beyond GDP" and "Beyond Measured Capital"
- But is the **AI technology revolution** may be different …?

THE PRODUCTION FUNCTION OF AI IS LARGELY AN INTANGIBLES STORY BUT WITH A TWIST ON COMPUTING POWER

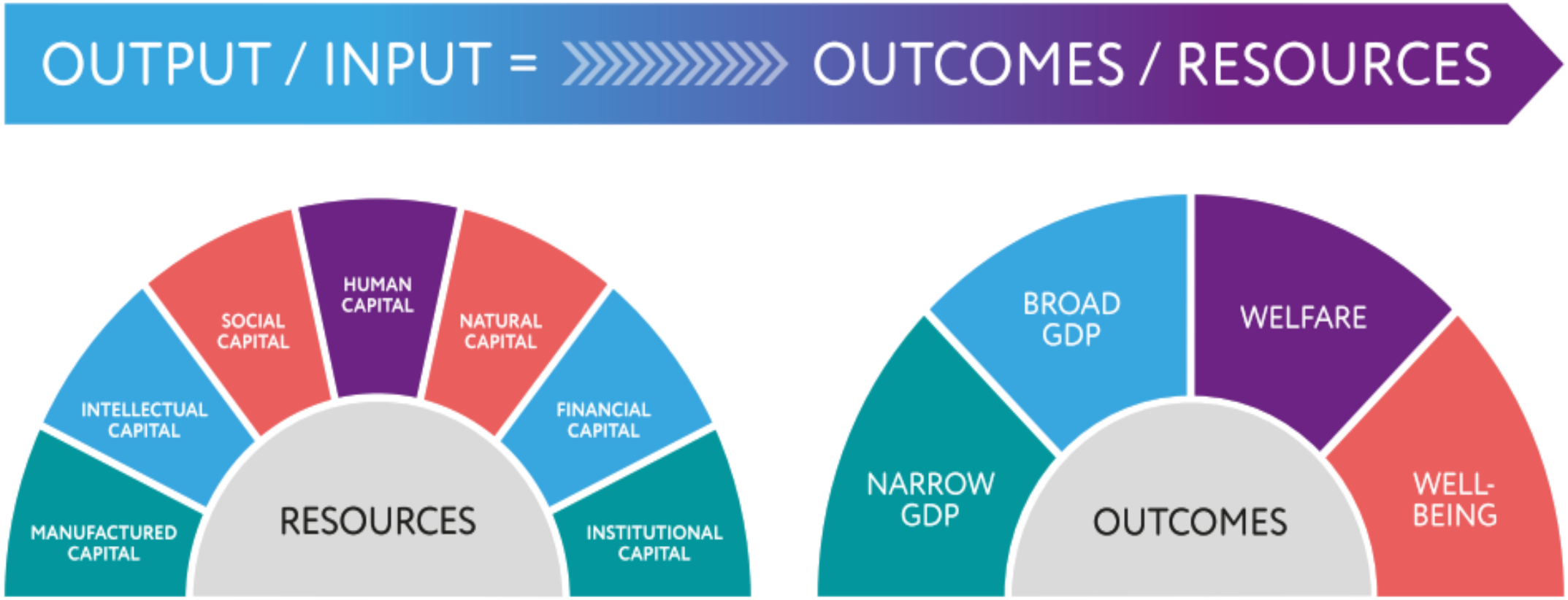
Figure 1. AI systems in a production function view: inputs and outputs



Source: Filppucci et al. (2024), The impact of Artificial Intelligence on productivity, distribution and growth: Key mechanisms, initial evidence and policy challenges, OECD Artificial Intelligence Papers No. 15.

MEASUREMENT FOR BROADER WELFARE: FROM OUTPUT/INPUT TO OUTCOMES/RESOURCES

"Productivity is about how to optimally use resources to get better outcomes for people, firms and the economy"



Sources: UK Government (2022) Levelling Up the United Kingdom; Heyes, Martin and Mkandawire (2019), GDP and Welfare: A spectrum of opportunity

ARE WE MEASURING OUTPUTS AND INPUTS CORRECTLY?

1. ***Boundaries of output***
   - From narrow to broad GDP
   - Beyond GDP: welfare and well-being

2. ***Boundaries on inputs***
   - From tangibles to intangibles
   - Beyond measured capital

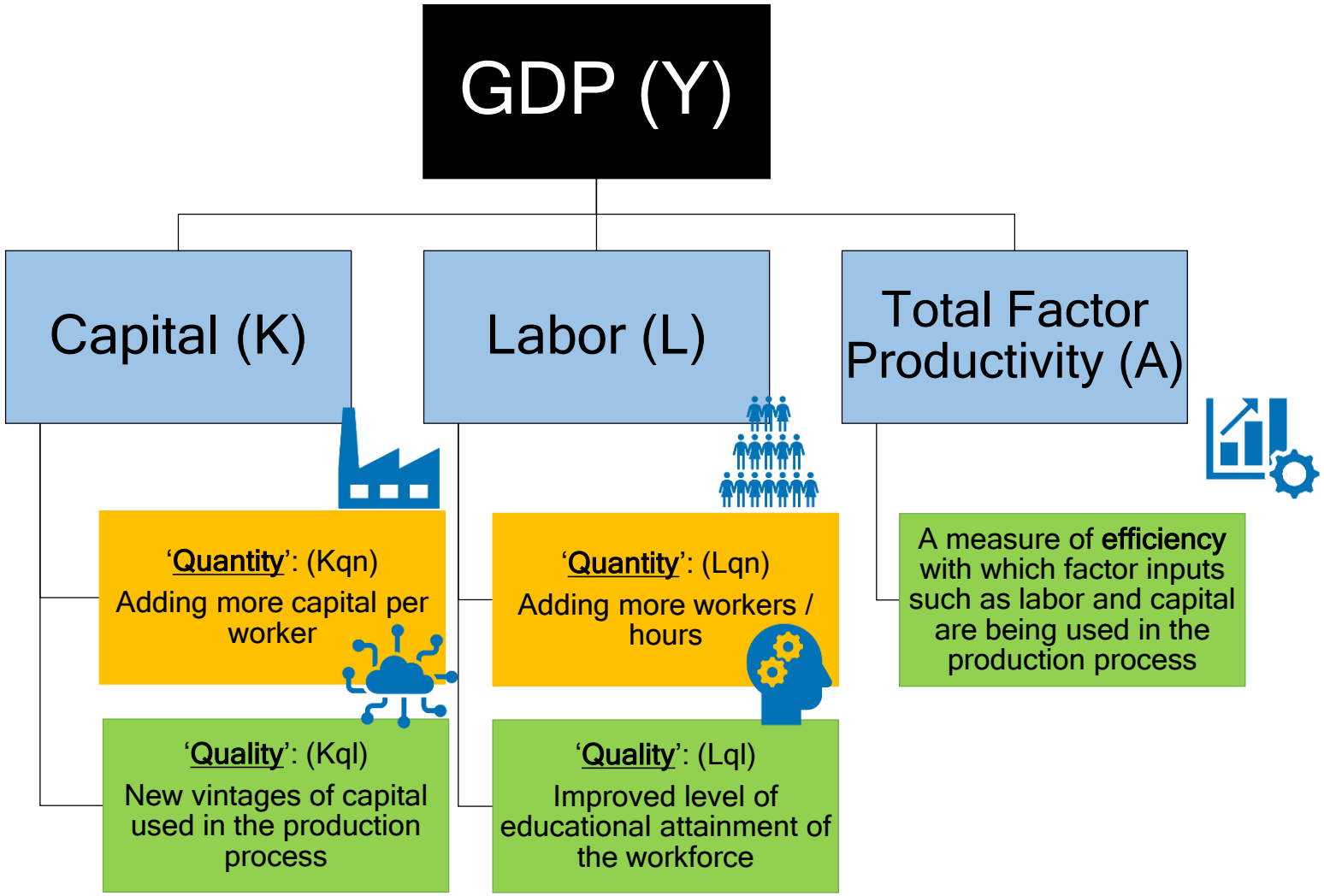
3. ***Deflators***:
   - Distinguish price increases from quantity and quality improvements

4. ***Timing of (intangible) output and inputs***
   - Measurement version of productivity paradox

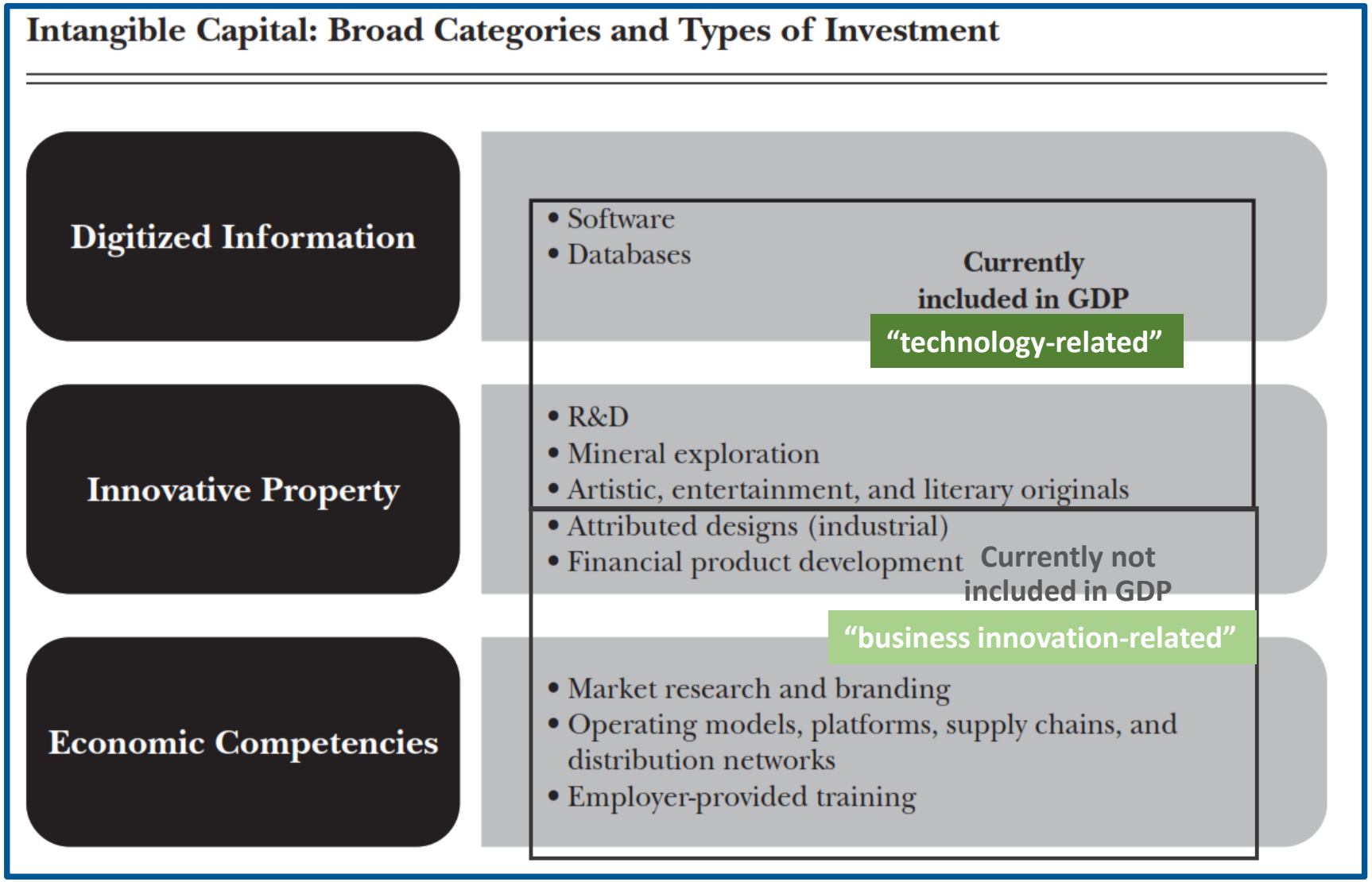
ACCOUNTING FOR THE DIGITAL ECONOMY

Are intangibles running out of steam?

OUR TRADITIONAL ACCOUNTING FRAMEWORK DOES NOT SUFFICE FOR THE DIGITAL ECONOMY



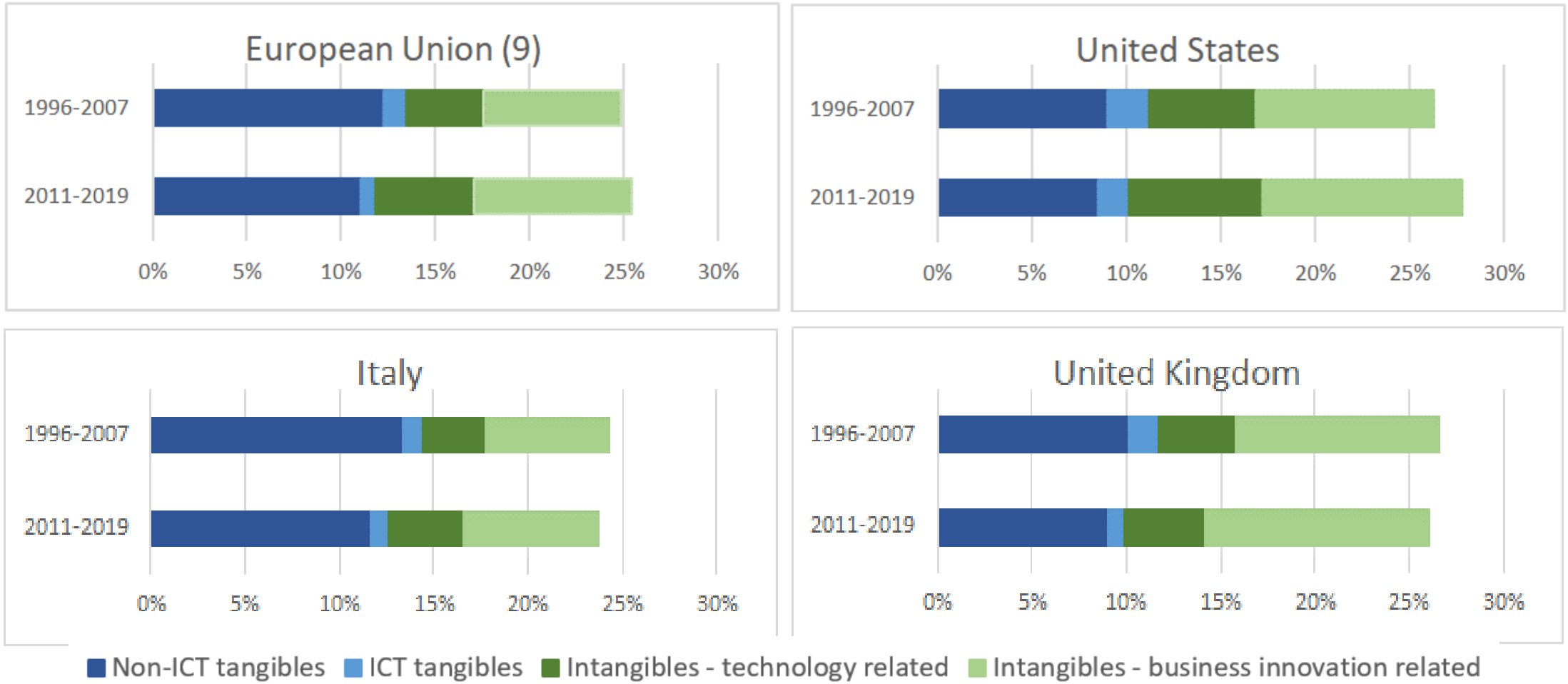
EXTENDING GROWTH ACCOUNTS TO INTANGIBLE CAPITAL



Source: based on Corrado et al. (2022)

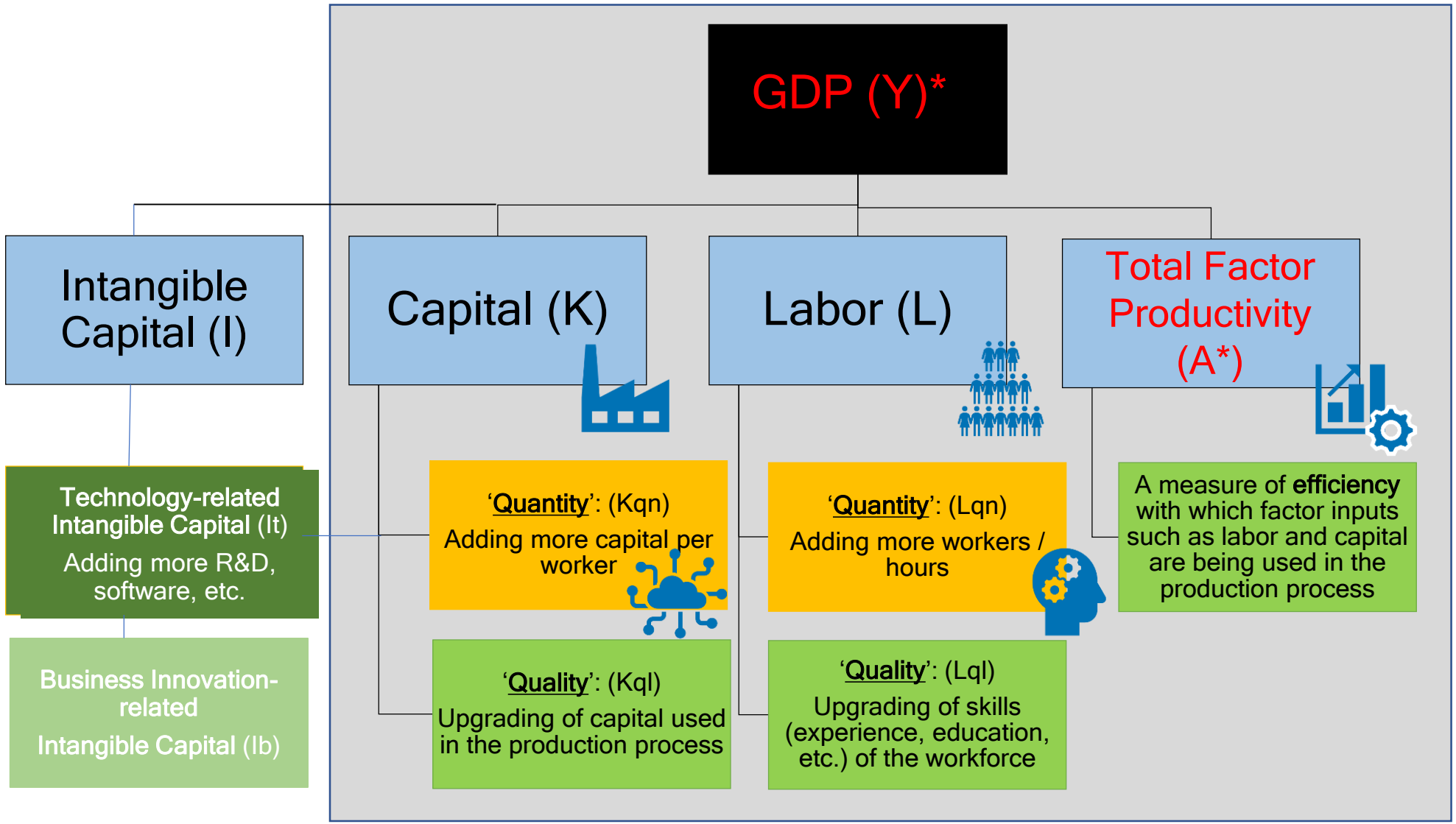
EUROPE IS CATCHING UP ON UNITED STATES IN INTANGIBLES ITALY AT LOWER END OF INTANGIBLES INTENSITY

Investment Share in Value Added, Tangibles and Intangibles, Market Economy, 1996-2007 and 2011-2019



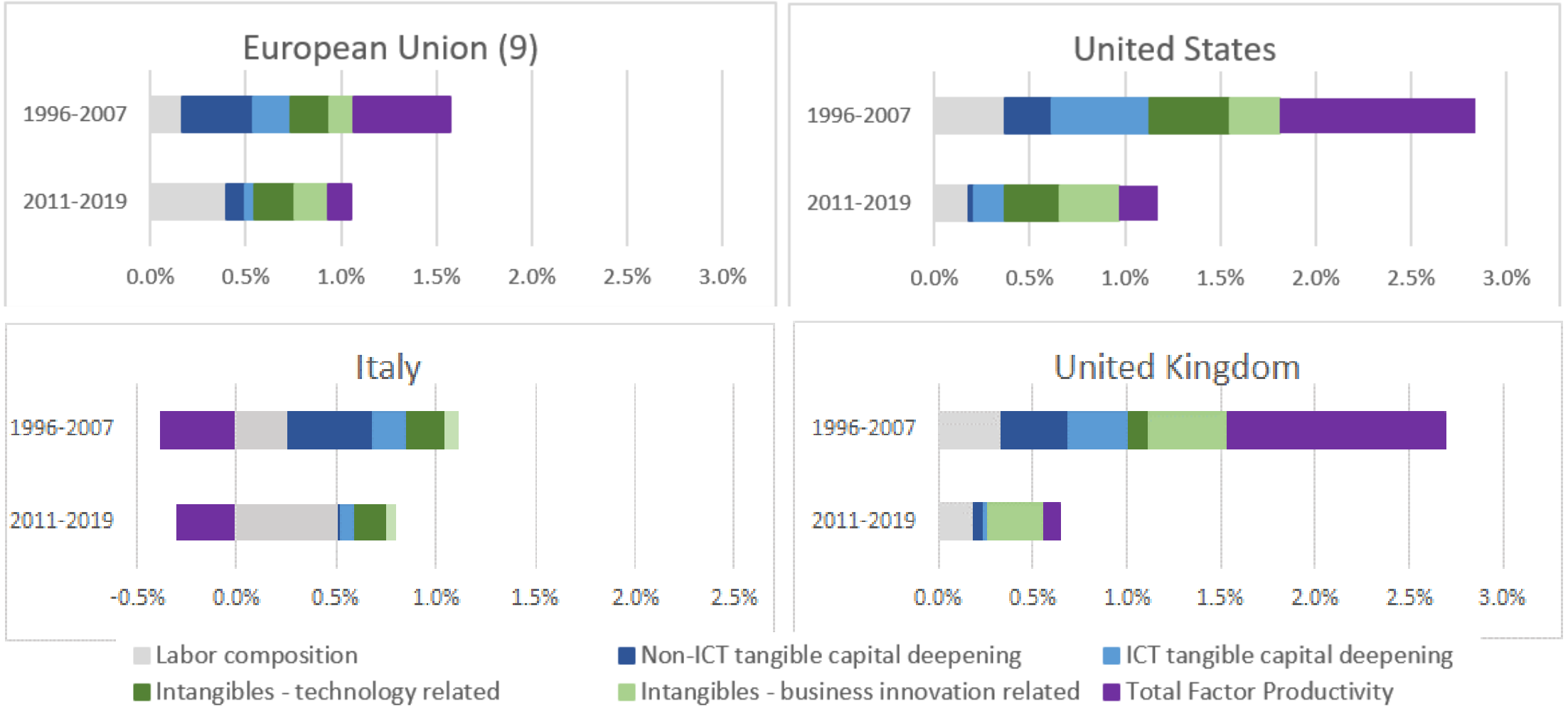
Note: European Union includes Austria, Germany, Denmark, Finland, France, Italy, Netherlands, Spain and Sweden.
Source: Van Ark et al. (2024), Are Intangibles Running out of Steam, International Productivity Monitor

EXTENDED GROWTH ACCOUNTING INCLUDING INTANGIBLE CAPITAL



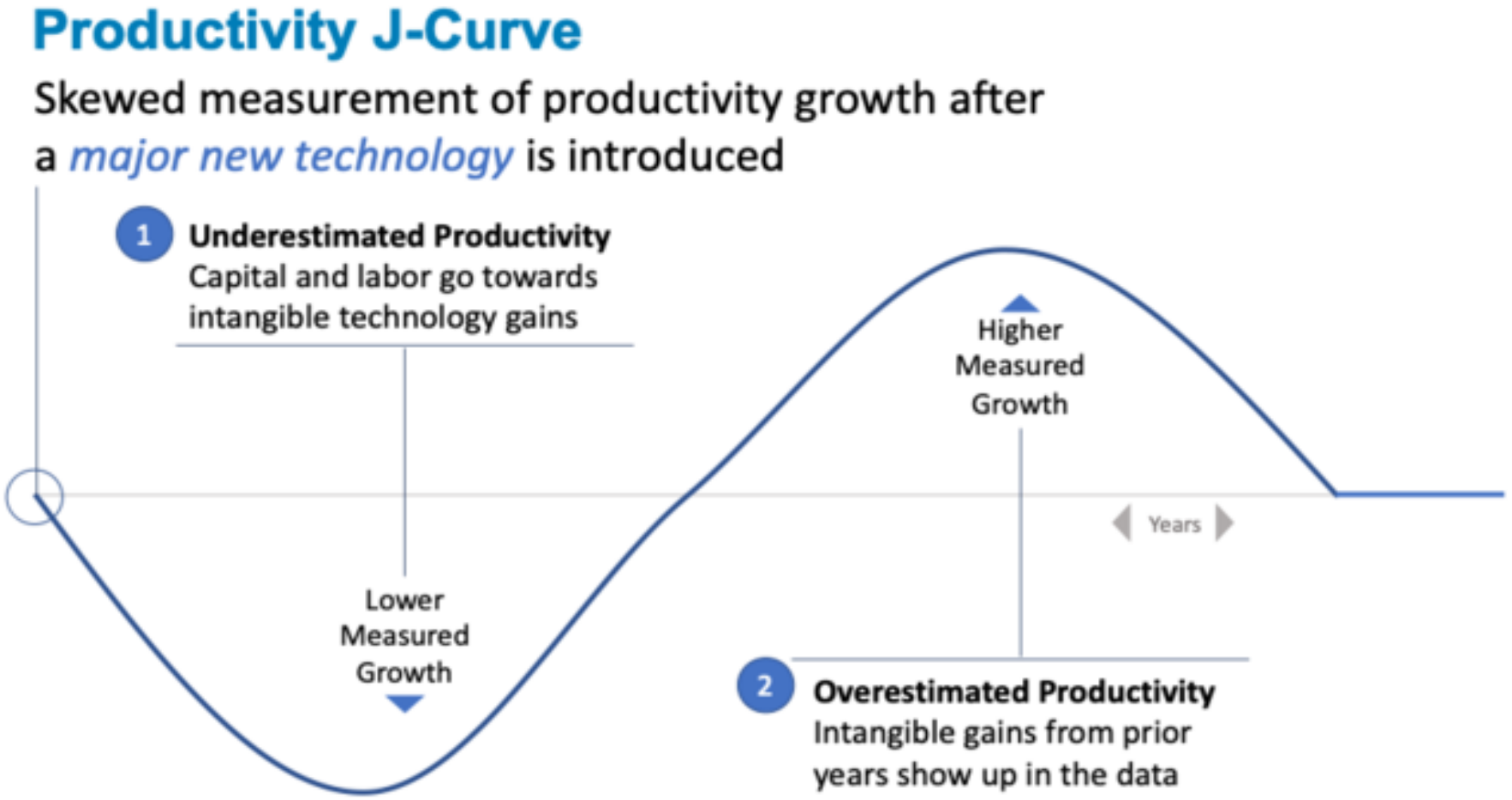
INTANGIBLES HAVE NOT STOPPED TFP GROWTH FROM SLOWING OR EVEN DECLINING

Extended Growth Accounting Decomposition of Labour Productivity, Market Economy, 1996-2007 and 2011-2019



Note: European Union includes Austria, Germany, Denmark, Finland, France, Italy, Netherlands, Spain and Sweden.
Source: Van Ark et al. (2024), Are Intangibles Running out of Steam, The Productivity Institute

COULD THIS BE A MATTER OF TIME?



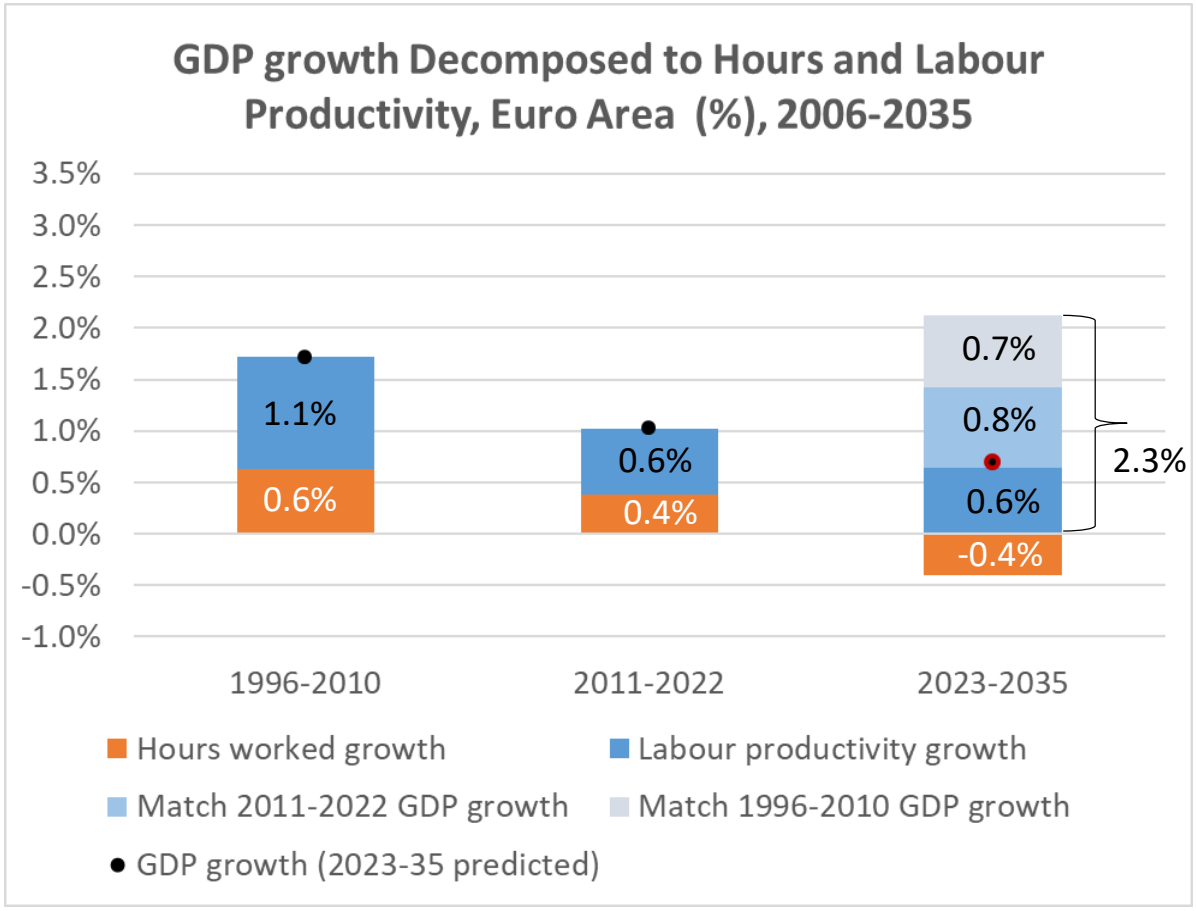
Source: Brynjolfsson, Rock and Syverson, 2019

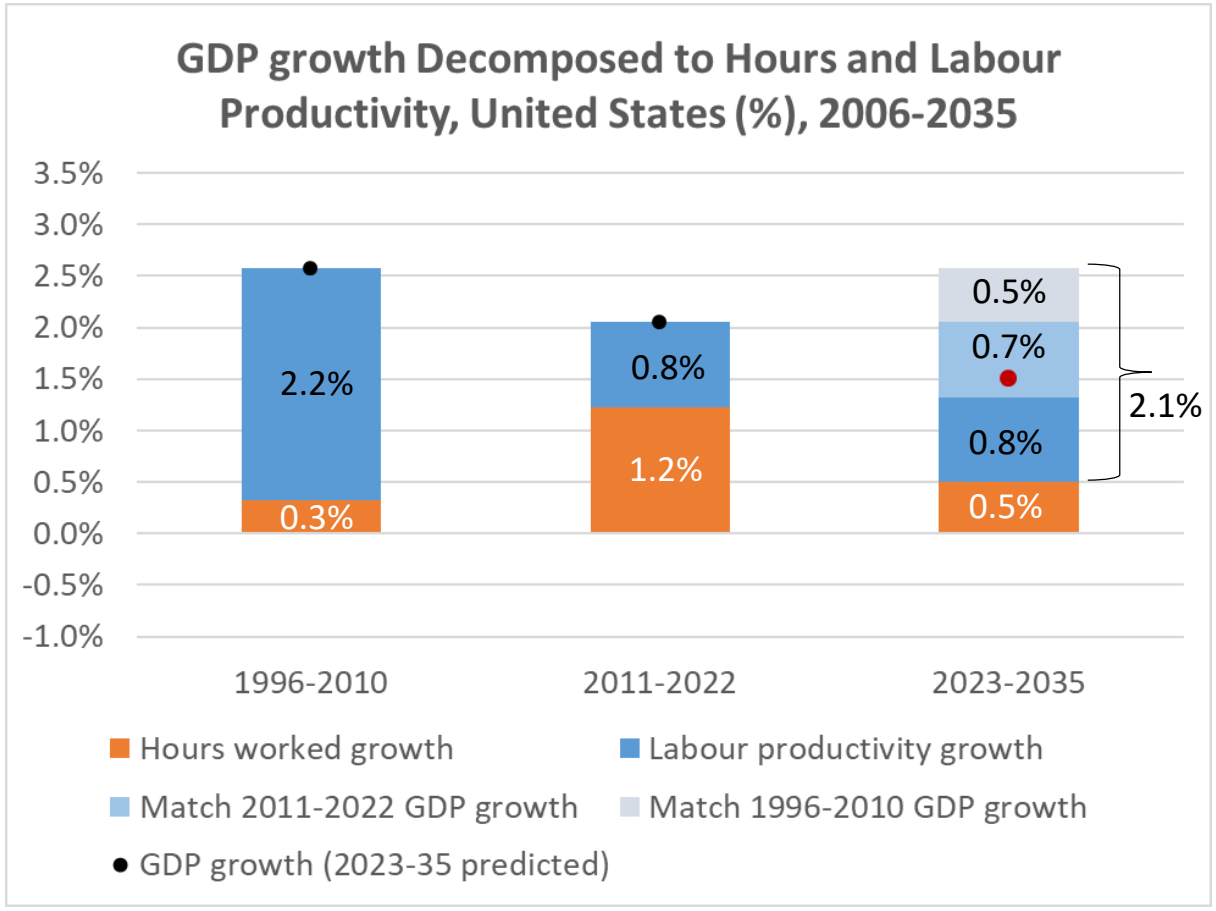
Redrawn from the article "Why Artificial Intelligence isn't Boosting the Economy—Yet"

PRO-PRODUCTIVITY POLICIES AND INDUSTRIAL STRATEGY

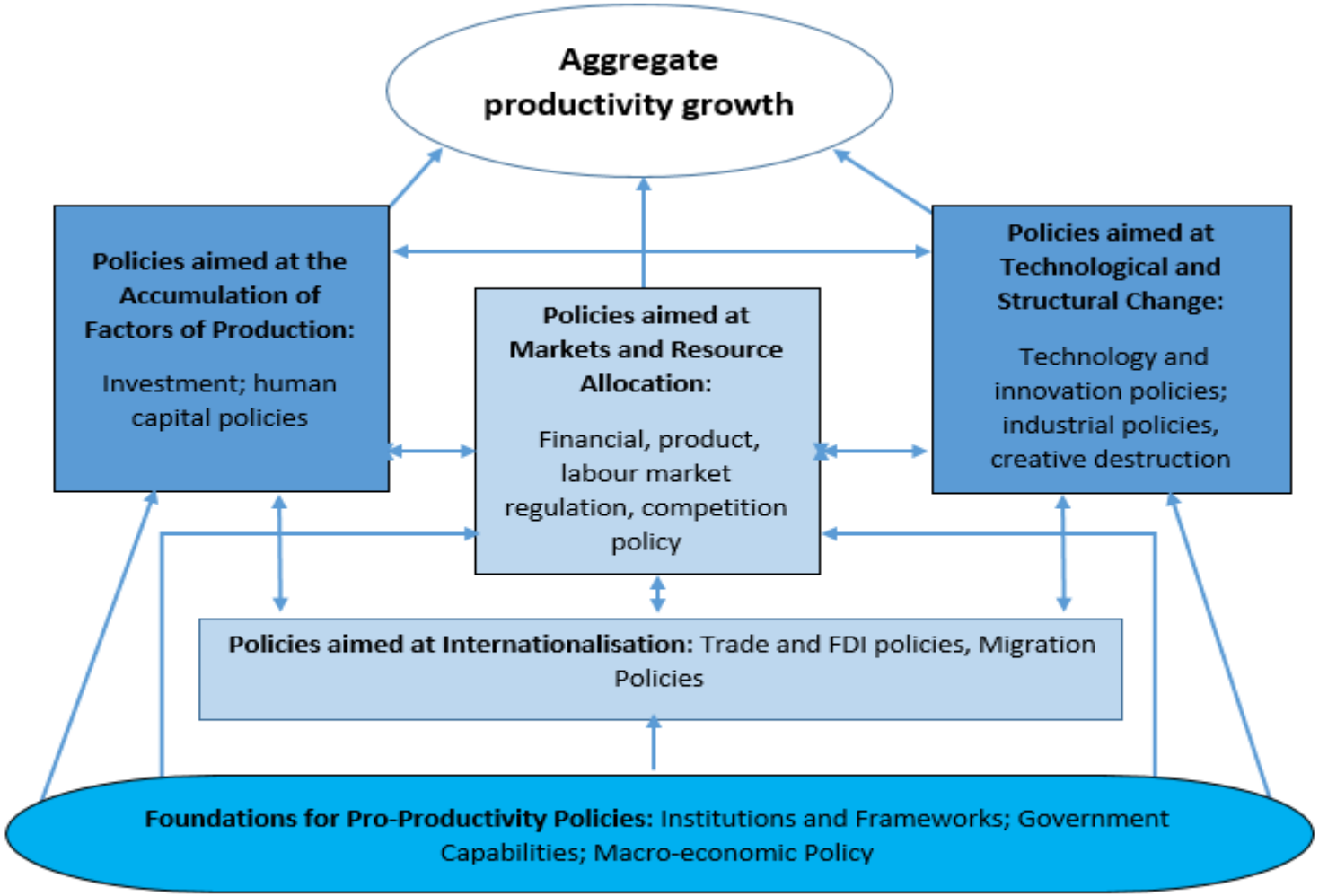
The Role of Pro-Productivity Polices and Industrial Strategy

THE SIZE OF THE PRIZE BY DOUBLING OF TRIPLING THE PRODUCTIVITY GROWTH RATE





A Framework for Pro-Productivity Policies



Source: B. van Ark, K. de Vries, D. Pilat (2023) Are Pro-Productivity Policies Fit for Purpose? Working Paper No. 038, The Productivity Institute (https://www.productivity.ac.uk/research/are-pro-productivity-policies-fit-for-purpose-productivity-drivers-and-policies-in-g-20-economies/)

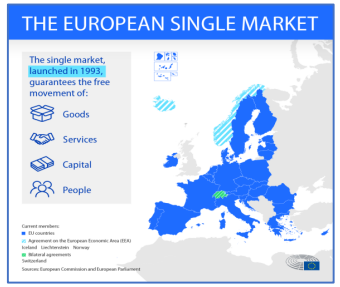
The mix of pro-productivity policies has changed over time and across countries

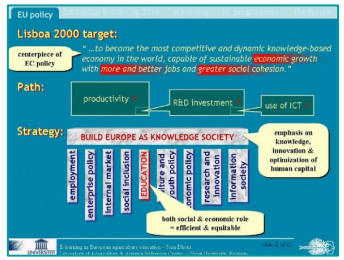
- Pro-productivity policies are **not separate from core policy areas** including macroeconomic, structural and reform policies, trade, science & innovation, etc.
- But the **policy mix changes over time** depending on level of development, changes in technology & innovation regimes, thinking about pro-growth and structural policies and government capabilities.
- Detailed analysis of individual countries show that while certain stylised policies are characteristic for a certain level of economic development, there is **no single pathway to productivity growth**.
- **Comparisons and learnings from experiences** in different countries can help to design the pathway forward

Making pro-productivity policies fit for purpose to tackle the global productivity slowdown

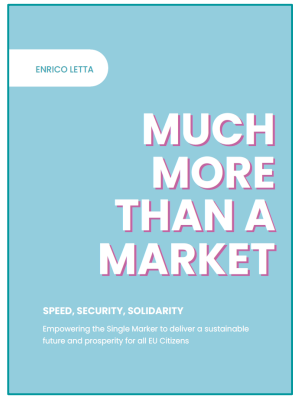
- Science and innovation policies need to better **balance technological progress with the diffusion of knowledge** and stronger **absorptive capacity of firms and ecosystems**.
- Need for a **new paradigm for innovation and industrial policies** that can support productivity and inclusive and sustainable growth in the future.
- **Greater attention to investment-related policies consistent with sustainable growth**, notably as regards to intangibles and role of public investment.
- But it cannot go without **competition to allocate resources to most productivity uses**.
- **Stronger institutions and capabilities** should allow for continuous and dynamic learning about pro-productivity policies across countries and over time.

WHAT WILL INDUSTRIAL STRATEGY DO TO PRODUCTIVITY?





From single market, knowledge and competitiveness to …

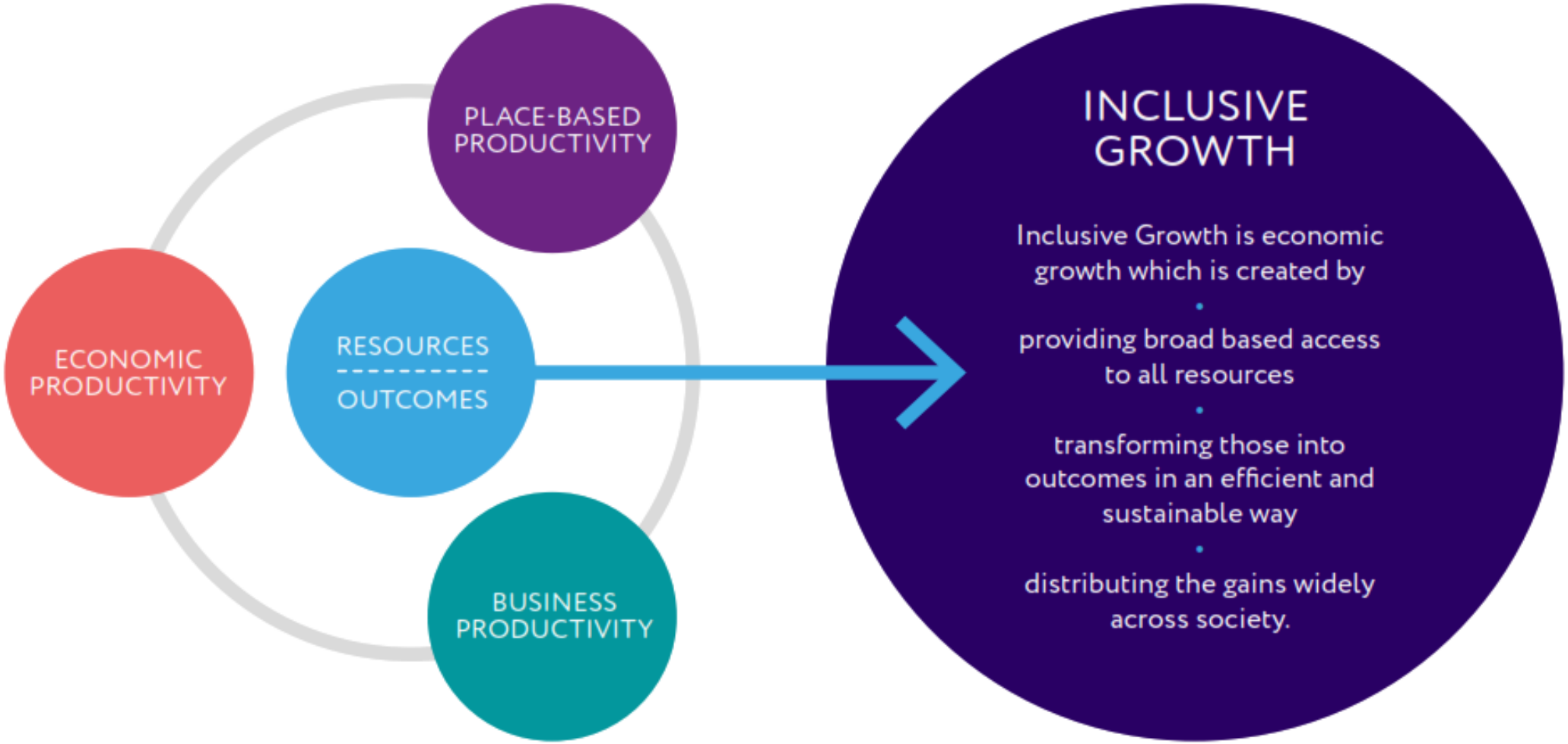


… capital markets union, innovation and industrial policy …

…to resilience, national security and intervention

- **Draghi report**: *Europe must strengthen its industrial base, simplify its regulatory framework, and increase investment in defense and innovation*
- **A new trilemma?** Improve competitiveness (and innovation and productivity), protect economy security, and deliver the green and digital transitions
- The key will be **industrial strategy;** some hard choices to make:
  - Market vs. government
  - Protection vs. resilience?
  - Frontier (inequality?) vs. catchup (“jam-spreading”)?
  - Industry focus, clusters (e.g. defence, energy, digital, etc.),
  - EU-wide, national, regional?
  - Stability vs. risk
- Productivity is mainly done by the private sector. We need **strong state capacity** in the public sector to facilitate it.

THE DISTRIBUTIVE EFFECTS OF PRODUCTIVITY FOR INCLUSIVE GROWTH SHOULD BE PART OF THE PRIZE



HOW TO NOT MISS THE PRODUCTIVITY REVIVAL AGAIN?

We must understand the past, act in the present, build the future

There is a tide in the affairs of men.
Which, taken at the flood, leads on to fortune;
Omitted, all the voyage of their life
Is bound in shallows and in miseries.
On such a full sea are we now afloat,
And we must take the current when it serves,
Or lose our ventures.

Source: William Shakespeare, *Julius Caesar Act 4, scene 3*, 218–224.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