



Economic and Social Research Council

Are Pro-Productivity Policies Fit for Purpose?

Bart van Ark

Economic and Social Research Institute Dublin, 4 December 2024





PRIFYSGOL CARDYD















WHY PRODUCTIVITY MATTERS? HOW ITS ROLE IS CHANGING?

- Productivity is the only sustained source of economic growth in the longterm
- 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)
- 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 slowdown, and make growth more inclusive and sustainable?
- How will Europe's new industrial strategy contribute to productivity?



AGENDA







Why has productivity growth slowed?

Is the digital economy coming to the rescue again?

Pro-productivity policies, industrial strategy and inclusive growth

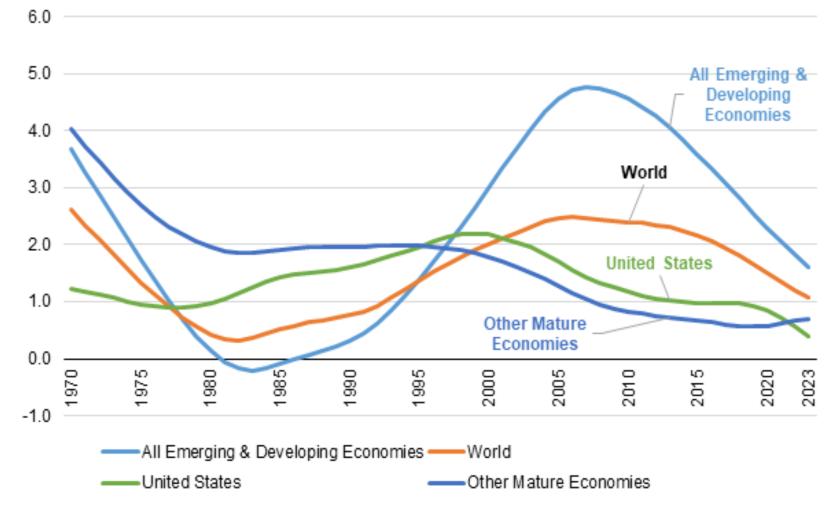


WHY HAS PRODUCTIVITY SLOWED?





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;

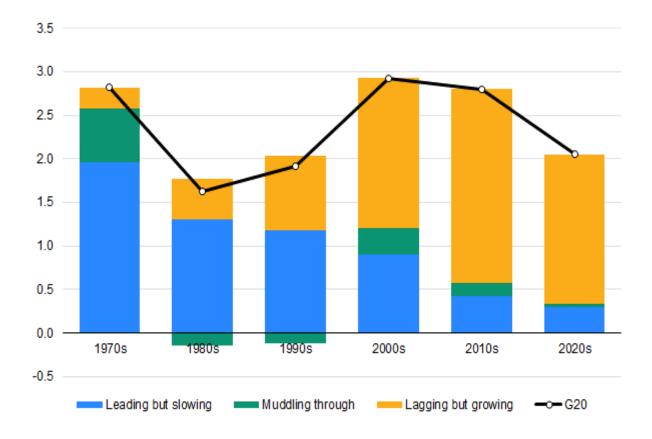
* 2020s includes projection for 2023.

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

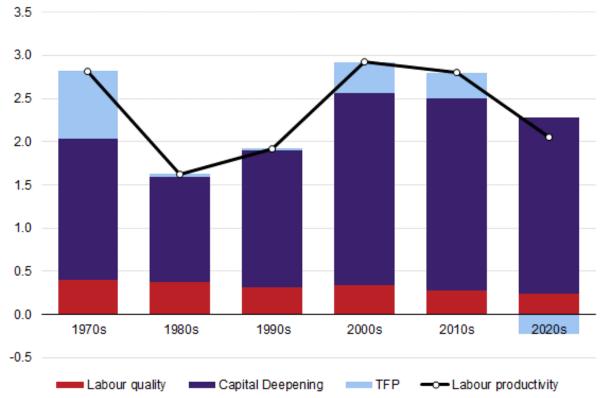


THE SLOWDOWN IS BROAD-BASED THOUGH WEAK TOTAL PRODUCTIVITY IS THE DRIVING FORCE BEHIND IT

Contributions from major groups to total G20 productivity growth, 1970s-2020s



Decomposition of growth of labour productivity (GDP per hour worked) into contributions of labour quality, capital deepening and total factor productivity, 1970s-2020s



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



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: excessive regulations, taxes, competition laws, protectionism
- 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 MEASURING OUTPUTS AND INPUTS CORRECTLY?



"For measurement to explain the productivity slowdown, you need to (1) identify a measurement problem, (2) that gets worse, (3) from a particular point in time." (Chad Syverson)

- 1. Deflators:
 - Distinguish price increases from quantity and quality improvements
- 2. Timing of (intangible) output and inputs
 - Measurement version of productivity paradox
- 3. Boundaries of output
 - From narrow to broad GDP
 - Beyond GDP: welfare and well-being
- 4. Boundaries on inputs
 - From tangibles to intangibles
 - Beyond measured capital

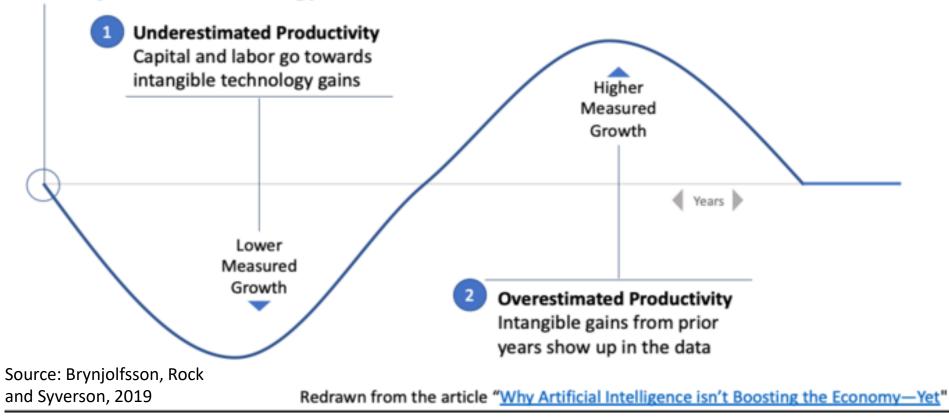






Productivity J-Curve

Skewed measurement of productivity growth after a *major new technology* is introduced





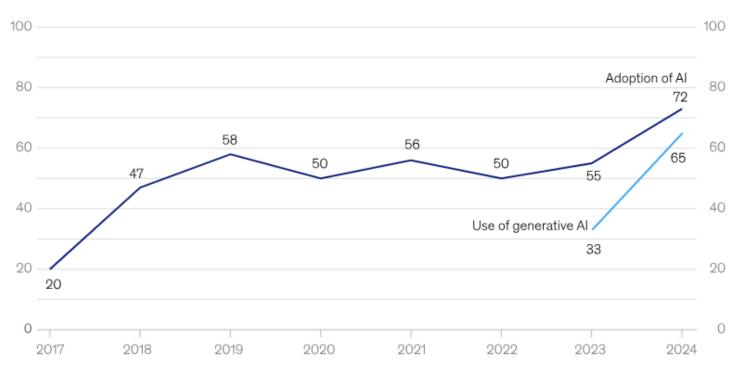
IS THE DIGITAL ECONOMY COMING FOR THE RESCUE AGAIN?





SOME EVIDENCE THAT THE AI ADOPTION HAS RAPIDLY INCREASED

Organizations that have adopted Al in at least 1 business function,¹% of respondents



Characteristics of survey:

- 1,363 participants at all levels in organisations
- Mainly (if not all) very large corporates
- Global, dominated by US
- Definition of AI not entirely clear

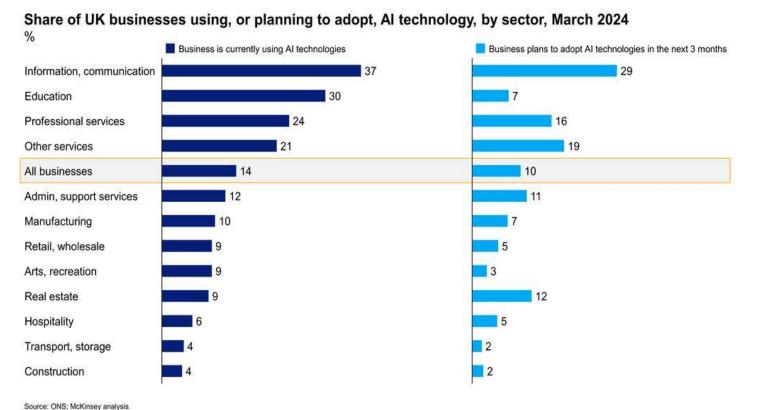
¹In 2017, the definition for AI adoption was using AI in a core part of the organization's business or at scale. In 2018 and 2019, the definition was embedding at least 1 AI capability in business processes or products. Since 2020, the definition has been that the organization has adopted AI in at least 1 function. Source: McKinsey Global Survey on AI, 1,363 participants at all levels of the organization, Feb 22–Mar 5, 2024

Source: QuantumBlack, AI by McKinsey, and McKinsey Digital., The state of AI in early 2024: Gen AI adoption spikes and starts to generate value (<u>https://www.mckinsey.com/capabilities/quantumblack/our-insights/the-state-of-ai</u>)



BUT IT DEPENDS ON WHAT YOU ASK AND WHO YOU ASK

In March 2024, fewer than 15% of UK businesses said they were using AI technology and only 10% said they planned to adopt it soon



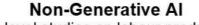
Characteristics of survey:

- Representative survey of all firms in UK by Office for National Statistics, weighted by firms by industry and size band, and the largest size band they have is 250+ employees
- Definition is much sharper: Which of the following artificial intelligence technologies, if any, does your business currently use:
 - autonomous vehicles
 - data processing using machine learning
 - image processing using machine learning
 - robotics
 - text generation using large language models
 - visual content creation
 - + other, not sure, business is not using AI
- So, not "accidental" adoption: like traditional search engines, google maps, etc.



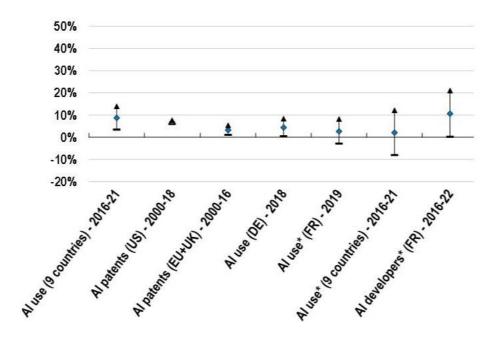
USE CASES SHOW LARGE PRODUCTIVITY GAINS FOR GENERATIVE AI FOR INDIVIDUAL FIRMS

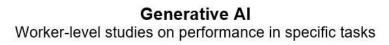
The size of the firm-level productivity gains from pre-Generative AI is comparable to previous digital technologies (up 10%) More recent Generative AI to assist with various tasks – writing, computer programming or customer service – show larger performance benefits (in the order of 20-50%)

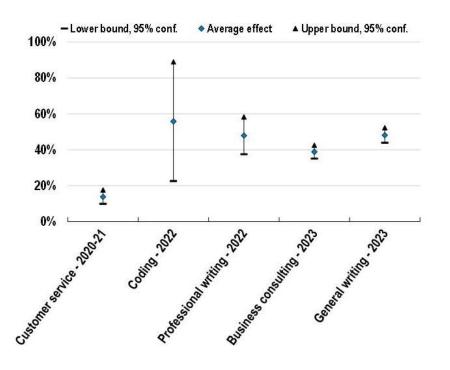


Firm-level studies on labour productivity

-Lower bound, 95% conf. Average effect A Upper bound, 95% conf.



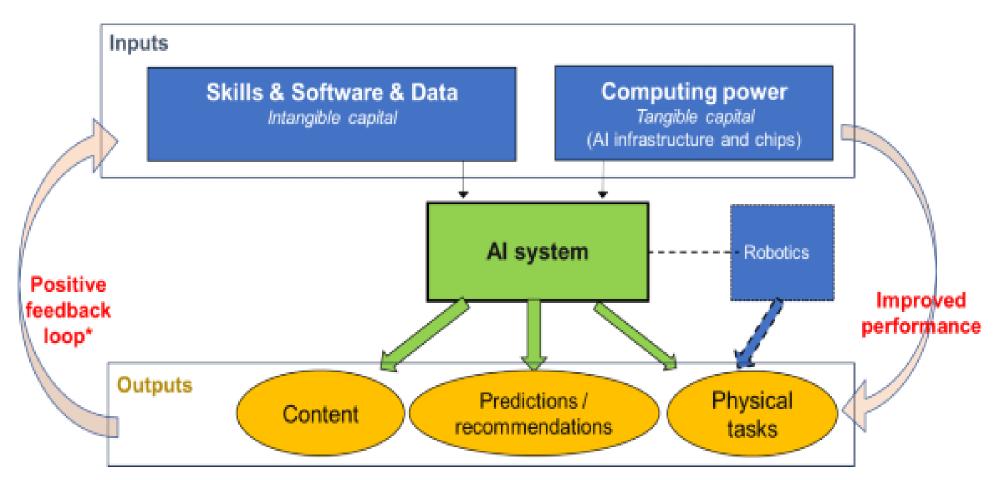






THE PRODUCTION FUNCTION OF AI IS LARGELY AN INTANGIBLES STORY BUT WITH A TWIST ON COMPUTING POWER

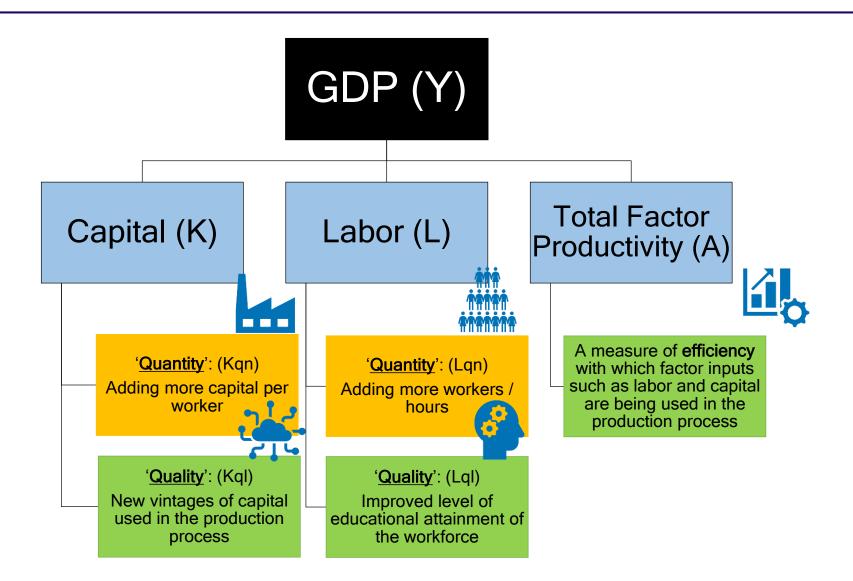
Figure 1. Al systems in a production function view: inputs and outputs



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.

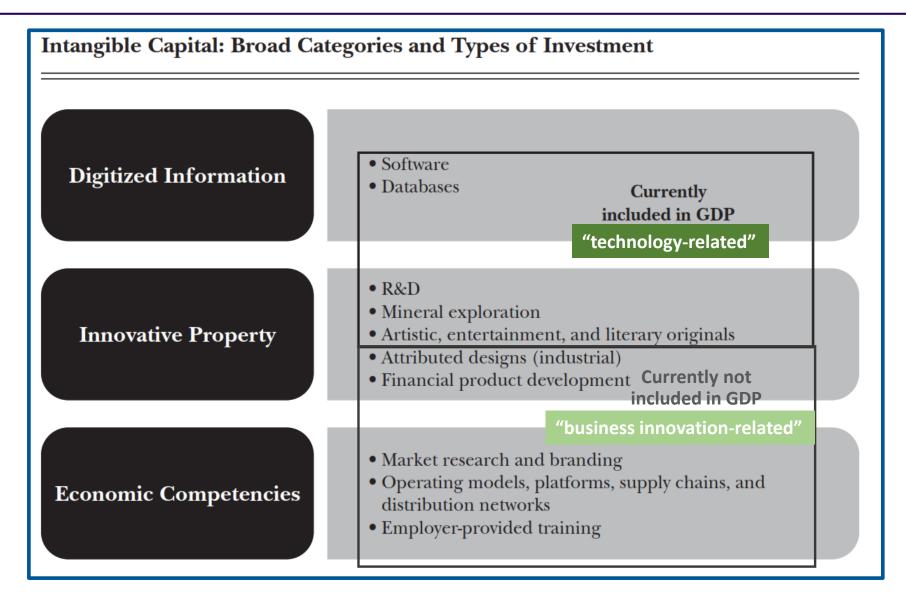


THE TRADITIONAL ACCOUNTING FRAMEWORK DOES NOT SUFFICE FOR THE DIGITAL ECONOMY





EXTENDING GROWTH ACCOUNTS TO INTANGIBLE CAPITAL

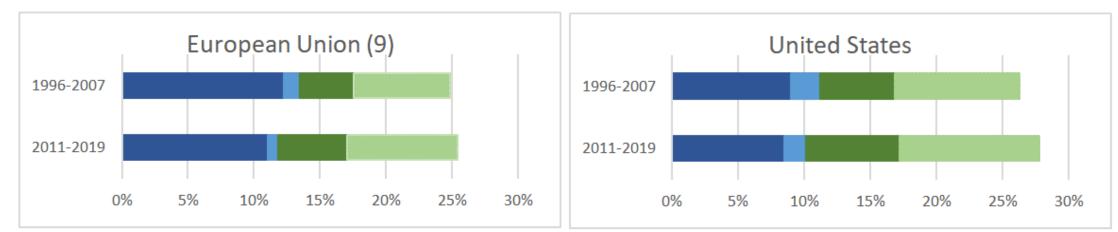


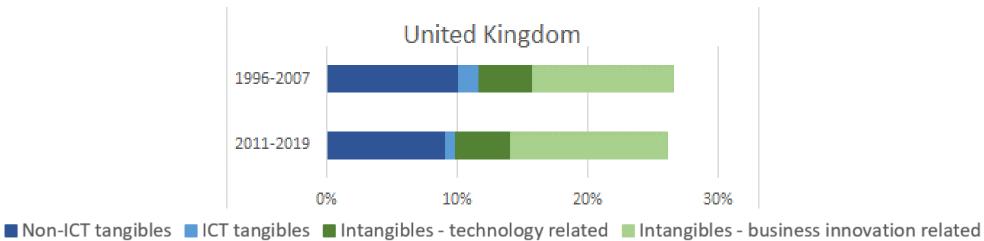
Source: based on Corrado et al. (2022)



EUROPE IS CATCHING UP ON UNITED STATES IN INTANGIBLES INTENSITY

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

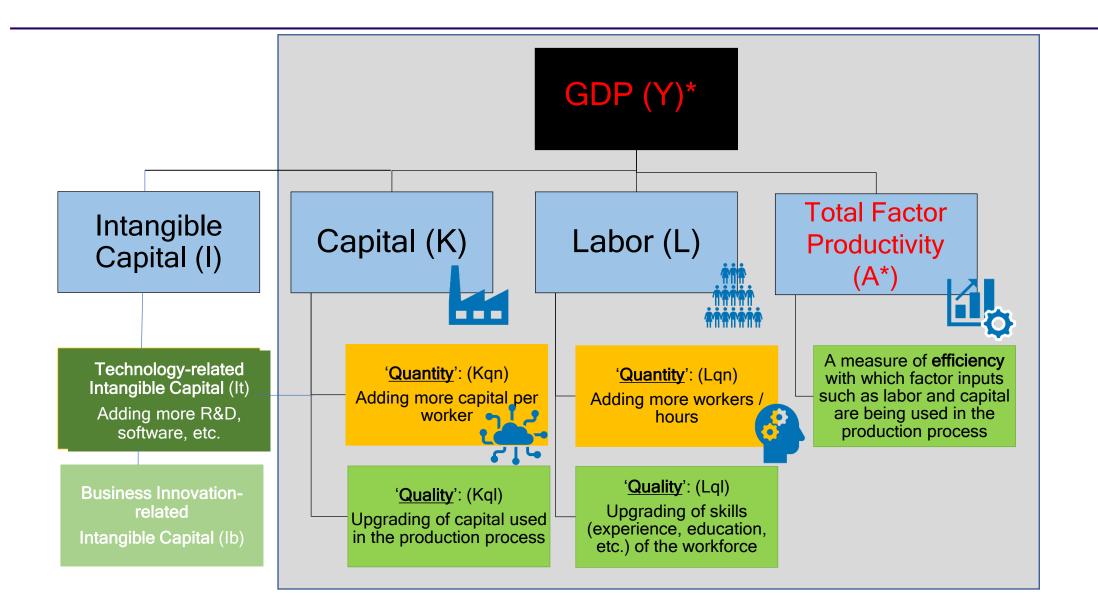




Note: European Union includes Austria, Germany, Denmark, Finland, France, Italy, Netherlands, Spain and Sweden. Source: Van Ark et al. (2024), Are Intangibles Running out of Steam, International Productivity Monitor



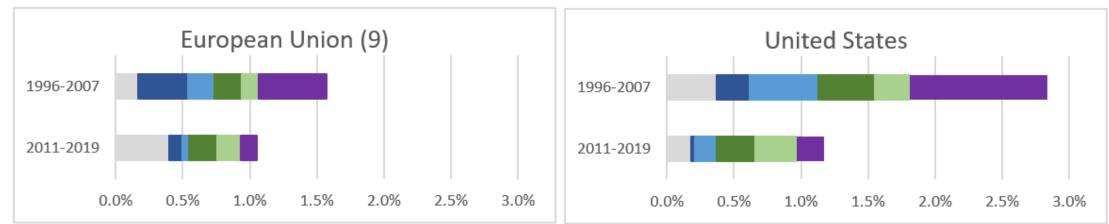
EXTENDED GROWTH ACCOUNTING INCLUDING INTANGIBLE CAPITAL

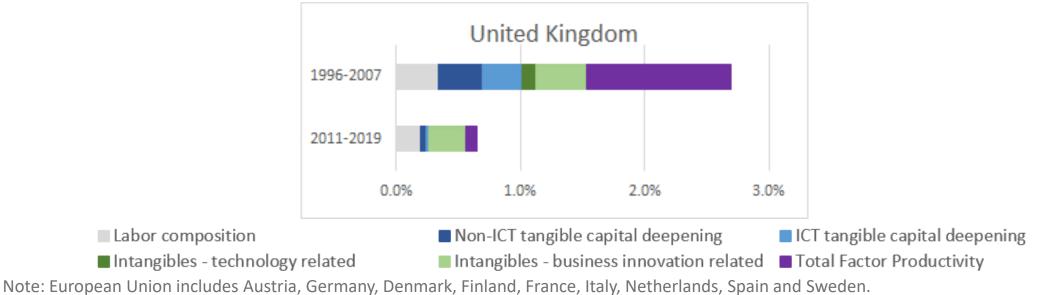




INTANGIBLES HAVE NOT STOPPED TFP GROWTH FROM SLOWING OR EVEN DECLINING

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





Source: Van Ark et al. (2024), Are Intangibles Running out of Steam, The Productivity Institute

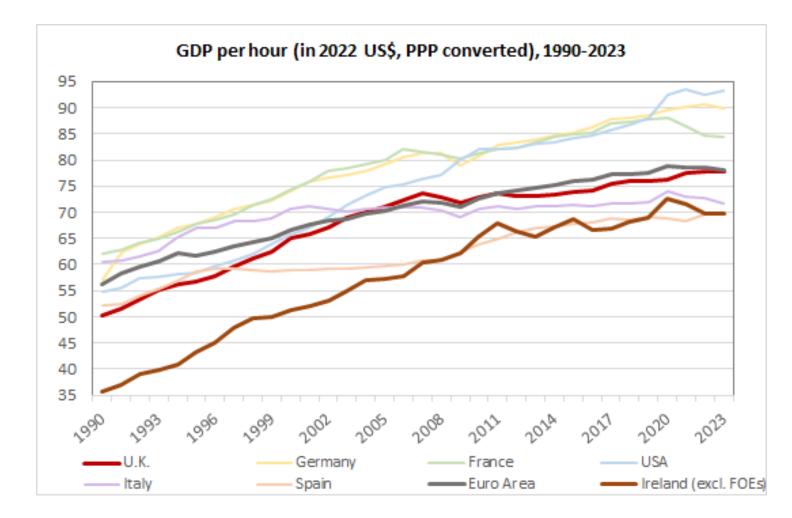


PRO-PRODUCTIVITY POLICIES AND INDUSTRIAL STRATEGY





WEAK PRODUCTIVITY CREATES VULNERABILITIES AND LACK OF RESILIENCE



Slow productivity growth affects dynamic process of innovation, slows structural change and weakens competitiveness

Low productivity levels affect resilience to absorb shocks and create vulnerabilities, and create low performance traps especially at a place-based levels

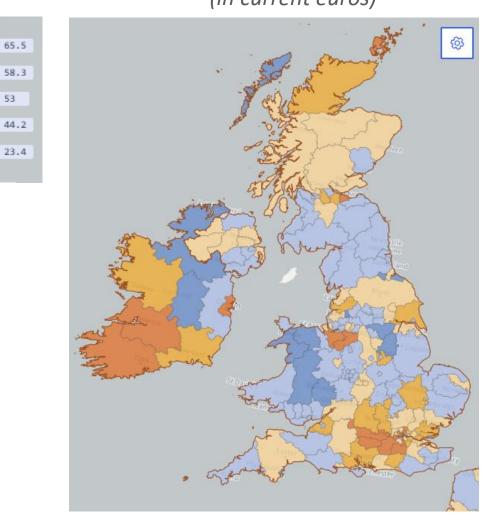
Source: The Conference Board, 2024

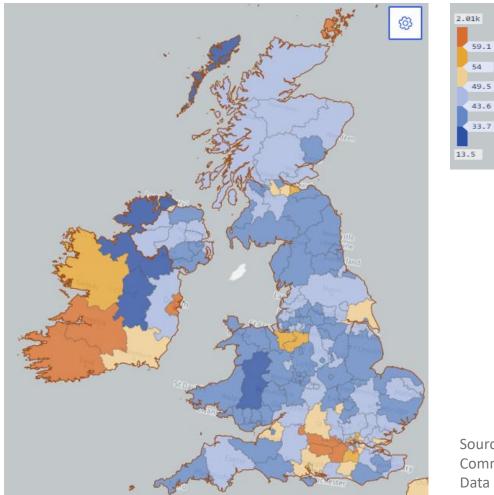


A LONG TAIL OF UNDERPERFORMING REGIONS, ESPECIALLY IN THE UK



Value added per hour worked by region NUTS3 region, 2023 (unadjusted for sector structure) (in current euros) (PPP converted)





Source: European Commission, Urban Data Platform Plus



INDUSTRIAL STRATEGY CAN BE PART OF THE ANSWER ...



Economic and Social Research Council



Improve competitiveness, protect economy security, and deliver the green and digital transitions

- 1. Energy: Emphasizing the need for sustainable and competitive energy solutions
- 2. Clean Technologies: Focusing on green technologies to align with the EU's climate goals
- 3. Key Raw Materials: Ensuring a stable supply of essential materials for various industries
- **4. Automotive**: Supporting the transition to electric vehicles and sustainable transport solutions
- 5. Pharmaceuticals: Enhancing innovation and competitiveness in the healthcare sector
- 6. Transport: Improving infrastructure and connectivity across the EU
- 7. Aerospace: Maintaining Europe's competitive edge in aerospace technology
- 8. High-Tech Sectors: Investing in advanced technologies and digital innovation



Drive sustainable, inclusive, and resilient growth by focusing on high-potential sectors and regions

- 1. Advanced Manufacturing: Emphasizing high-tech and precision manufacturing processes.
- 2. Clean Energy Industries: Focusing on renewable energy sources and sustainable energy solutions.
- 3. Creative Industries: Covering areas like media, entertainment, and design.
- 4. Defence: Enhancing capabilities in national security and defence technologies.
- 5. Digital Technologies: Including IT, software development, and emerging technologies like AI & blockchain.
- 6. Financial Services: Strengthening the UK's position as a global financial hub.
- **7.** Life Sciences: Advancing medical research, biotechnology, and pharmaceuticals.
- 8. Professional & Business Services: Supporting a wide range of activities, from consulting to legal services



... BUT ONLY WHEN INTEGRATED WITH A BROADER AGENDA FOR INCLUSIVE GROWTH



Research Council



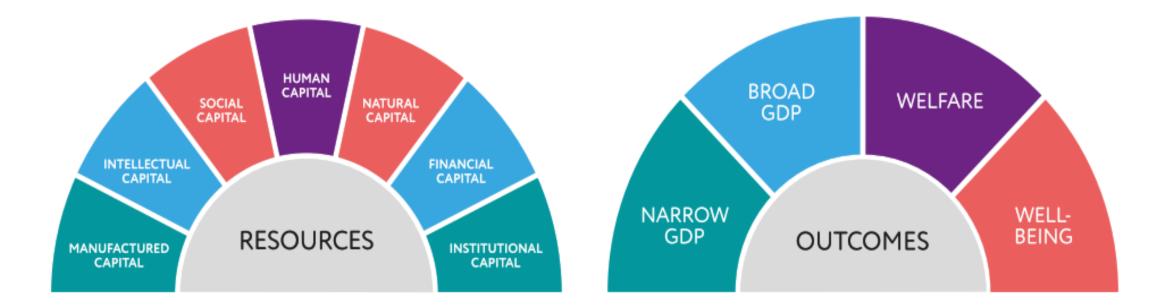
Productivity for inclusive growth *is created by: (1) providing broad based access to all resources; (2) transforming resources into outcomes in an efficient and sustainable way; (3) distributing the gains widely across society*



TRANSFORM THE PRODUCTIVITY NARRATIVE FROM OUTPUT/INPUT TO OUTCOMES/RESOURCES



Economic and Social Research Council

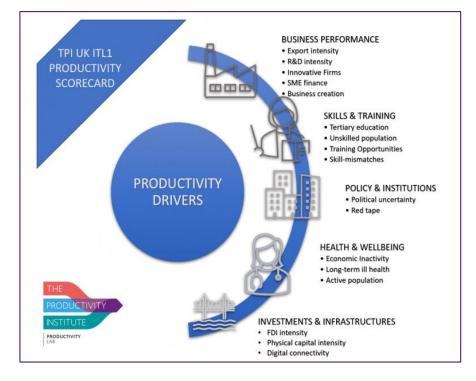




PRODUCTIVITY DRIVERS ARE BROAD-BASED IN A STRONGLY PLACE-BASED CONTEXT



Economic and Social Research Council



кеу	
	Better: higher than 105% of ITL1 median
	Equal: within 95-105% of ITL1 median
	Worse: lower than 95% of ITL1 median

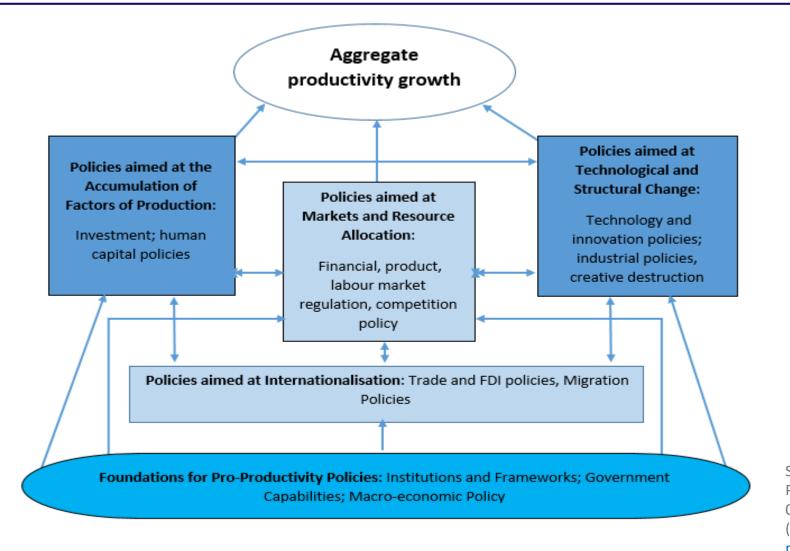
Category	Productivity driver	ITL1 median	London (1st)	South East (2nd)	Scotland (3rd)	East of England (4th)	North West (5th)	South West (6th)	West Midland (7th)	East Midland (8th)	North East (9th)	Yorks & The Humber (10th)	Wales (11th)	Norther Ireland (12th)
Business performance	Export Intensity	24.2%												
Business performance	R&D Intensity	£631.55												
Business performance	Innovative Firms	45.3%												
Business performance	SME Finance	8.0%												
Business performance	Business Creation	11.6%												
Skills & training	Tertiary Education	39.3%												
Skills & training	Unskilled population	17.5%												
Skills & training	Training Opportunities	50.0%												
Skills & training	Skill-mismatches	5.0%					- 81.3533							
Policy & institutions	Political Uncertainty	24.0%												
Policy & institutions	Red Tape	21.0%												
Health & wellbeing	Economic Inactivity	21.6%												
Health & wellbeing	Long-term ill Health	24.6%												
Health & wellbeing	Active Population	62.0%												
Investments & infrastructure	FDI Intensity	£30,858					433							
Investments & infrastructure	Physical Capital Intensity	£10,122												

Source: TPI Productivity Lab, The TPI Productivity Scorecards for English Regions and Devolved Nations (<u>https://www.productivity.ac.uk/the-productivity-lab/</u>).



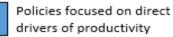
A FRAMEWORK FOR PRO-PRODUCTIVITY POLICIES





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-proproductivity-policies-fit-for-purpose-productivity-driversand-policies-in-g-20-economies/)





Foundational policies





Table 2: Policies aimed at the accumulation of productive factors by development stage

	Early stage (low- income, start of development process)	Middle stage (middle- income, overcoming middle-income trap)	Advanced Stage (highly developed and internationalised)
Investment	Increase Business Investment, Attract FDI, Infrastructure	Quality of Investment, Expansion of Infrastructure	Intangibles, Advanced Infrastructure, Equity Financing, Reallocation of Capital
Human capital	Primary, Secondary & Vocational Education, Basic Skills, Some Tertiary Education	Access to Education, Tertiary Education, More Advanced Skills	Quality of Education, Advanced Skills, Life- Long Learning, Skills Allocation & Mismatch

Source: Authors elaboration.





Table 3: Policies for technological and structural change by development stage

	Early stage (low-	Middle stage (middle-	Advanced stage (highly
	income, start of	income, overcoming	developed and
	development process)	middle-income trap)	internationalised)
Innovation & technology policies	Development of absorptive capacity, use of local knowledge, investment in public R&D, fostering private R&D	Development of own strengths, tapping into foreign knowledge, greater private and public investment in R&D, innovation system	Deepening of strengths, specialisation and greater regional, national and international collaboration in innovation system
Industrial policies	Support for potential high-	More advanced industrial	Facilitating structural
	growth areas,	policies, focused on more	change, foster new growth
	Industrialisation Policies,	advanced stages of	areas, balance with
	structural change, sector-	production & services,	competition, sectoral
	specific policies	diversification	policies, regional policy
Policies to foster creative destruction and business dynamics	Improve relevant institutional frameworks, remove barriers to firm entry and growth	Remove barriers to firm entry, growth and exit	Facilitate growth and change, address new and unnecessary barriers to entry, exit and growth

. . .

.





Research Council

Table 4: Policies for markets and resource allocation by development stage

	Early stage (low-income, start of development process)	Middle stage (middle- income, overcoming middle-income trap)	Advanced stage (highly developed and internationalised)
Financial market policies and regulation	Development of financial and banking system, financial regulation, scope for e- banking	Evolution of financial system, equity financing	Financing for intangible assets, VC financing, ESG financing
Product market policies and regulation	Reduce regulatory and administrative barriers (e.g., red tape), assess state ownership	Reducing state ownership, removal of regulatory barriers, opening to (international) competition	Innovation-friendly regulation, regulation of new markets, local and regional barriers
Labour market policies and regulation	Labour market frameworks and regulations, workers' rights	Labour market regulation and flexibility, policies to address informality	Labour market mobility, increase participation, migration policies
Competition Policies	Assessing competition in domestic markets; basic competition policy	More advanced competition policy	Competition policy for digital markets, market assessments, international dimensions



Internationalisation



Economic and Social Research Council

Table 5: Policies for internationalisation by development stage

	Early stage (low-income,	Middle stage (middle-	Advanced stage (highly
	start of development	income, overcoming	developed and
	process)	middle-income trap)	internationalised)
Trade policies	Trade Openness; Export Promotion (sometimes with import substitution)	Upgrading Engagement in GVCs, Trade in Services	Growing complexity of trade and engagement in GVCs; trade in services, digital trade
FDI	Attracting FDI for Export-	Upgrading FDI; Build	Attractiveness to Advanced
	led Growth, Engaging in	Linkages between Domestic	FDI; Increasing Benefits of
	GVCs	and Foreign Sector	FDI, Outward FDI, Security
Immigration	Facilitate Migration, Remittances	Facilitate returnees and immigration, more advanced migration policy	Immigration aimed at attracting high-end skills and addressing skills gaps





and Social Research Council

Table 6: Policies for institutions and frameworks by development stage

	Early stage (low- income, start of development process)	Middle stage (middle-income, overcoming middle- income trap)	Advanced stage (highly developed and internationalised)
Institutions	Institution building	Deepening of institutions	Advanced frameworks, new institutions, protecting institutions
Government capabilities	t capabilities Training of civil servants, development of frameworks and processes, salaries civil servants		More integrated policies, advanced skills and tools to support policy, e.g., procurement
Macroeconomic policy	Control of inflation, stability of exchange rates, budget stability	Extending tax base, stability of policies	Stable and well- established policies



Country applications (UK and South Korea)



Economic and Social Research Council

Table 10: Stylised pro-productivity policies for the UK, 1960s-1970s, 1980s-1990s and 2010s-2020s

	1960s-1970s	1980s-early 1990s	2010s-2020s
Institutions & frameworks			
Institution building			Fragmented institution building without joined up growth strategy
Government capabilities			Political instability, exacerbated by Brexit vote (2016)
Macroeconomic policy	Cycles of expansionary fiscal stance putting pressure on exchange rate causing monetary tightness	Restoration of macro-economic stability	Independence of Bank of England (2007)
Factor Accumulation			
Investment		Privatisation of public services to improve customer performance	National Infrastructure Commission (2015) to strengthen infrastructure
Education & skills	Failure to introduce adequate vocational training	Rapid expansion of higher education system	Introduction of Local Skills Improvement Plans (LSIPs) to better meet local skill needs
Resources			Implementation of Net-Zero Policy and Climate Change Commission
Technology			
Innovation & technology		Failure to modernise innovation policies (R&D and diffusion)	Introduction of R&D Tax Credit (2000) Introduction of Catapult Centres (2011) to accelerate diffusion
	National Economic Development Office to develop growth and investment strategy		Introduction of Industrial Strategy Council (2017)
Industrial policy	Attempts at state-led industrialisation stranded in lack of unity between government, unions and employers		Industrial Strategy Council abolished (2021)
Creative destruction		Reduction in inefficiencies through higher churning of inefficient firms	Creation of long tail of inefficient firms because of low wage levels relative to cost of investment
Markets			
		Big Bang reforms (1986) deregulating the London Stock Exchange and	British Business Bank (2014) to facilitate SME finance
Financial markets		Deregulation of financial services	Revision of Financial Services and Markets Bill to respond to new developments in financial markets, incl. fintech (2023)
Product markets		Product market deregulation Rapid increase in ICT investment especially in services	Failure of reform in land-use planning
Labour markets	Rigidly demarcated labour market policies	Deregulation of labour markets and reform of industrial relations	
Competition policy		Privatisation of State-Owned Assets incl. utilities and transport	Establishment of Competition and Market Authority
Internationalisation			
Trade	Too slow reorientation of Commonwealth to EC trade		Brexit vote (2016)
	Entry into the EEC (1973)		EU-UK Trade and Cooperation Agreement (2021) complicating trade relationships
FDI	Failure to attract new FDI		
Migration			Expansion of liberal migration policy (as of 2004)
Inclusion			Levelling up of disadvantaged regions

Notes: 1. The colours point to pro-productivity policies typical for different levels of economic development, as follows:

Stylised policies low-income	Stylised policy middle-income	Stylised policy advanced	Potential anti-
economy	economy	economy	productivity effects

	1960s	Late 1990s to early 2000s	Late 2010 to early 2020s		
Institutions & frameworks					
	Development of state institutions aimed		Establishment of independent anti-corruptio		
Institution building	at planning and implementation		agency		
0	Development civil service as				
Government capabilities	professional & meritocratic institution				
Macroeconomic policy	Stable macroeconomic policies				
Factor Accumulation					
	Strong public investment in	Reforms to corporate governance	Reforms to corporate governance, strategic		
Investment	infrastructure	frameworks	investment in selected industries		
Education R ability	Rapid expansion of secondary and	Expansion of training following			
Education & skills	tertiary education	economic crisis			
Resources		Development of national planning	Green New Deal with focus on transition to		
Resources		and land-use system	low-carbon and green economy		
Technology					
0.		Promotion of knowledge-based			
land the R to the st	Encouragement of up-to-date	economy and information			
Innovation & technology	technology from abroad	infrastructure, strengthening of R&D	Increase in R&D budget		
		frameworks			
Industrial policy	Aggressive export promotion combined		Strategic investment in (4) strategic areas an		
industrial policy	with protection domestic market	-	support to (8) key industries		
	Large enterprise (chaebol) creation	Significant corporate restructuring:	Reform of SME support policies, tax		
Creative destruction	encouraged by state, selection linked to	reforms to bankruptcy system to	reductions and exemptions for start-ups,		
	export success	facilitate exit; some reductions in protection of SMEs	creation of venture and start-up eco-syster		
		protection of siviles			
Markets					
		Financial sector restructuring			
Financial markets	State control of financial system with	programme, including privatisation	Reforms of corporate governance		
	focus on risk sharing	of commercial banks, range of other reforms to financial markets			
	Protection infant industries, promotion	Privatisation, liberalisation of trade	Introduction of regulatory sandboxes and		
Product markets	export industries	and FDI, range of regulatory reforms	regulation-free special zones		
			Expansion of public employment, increase in		
			minimum wage, focus on labour market		
Labour markets	Little labour unrest, low union activity	Expansion of employment insurance	participation under-represented groups,		
Labour markets	Entire labour an est, low anon activity	and social welfare schemes	expansion of training and social insurance,		
			reduction in working hours		
	Competition in context of export	Privatisation programme of several			
Competition policy	promotion strategy, but also focus on	state-owned enterprises,			
	concentration	strengthening of competition			
Internationalisation					
		Trade liberalisation, including			
		abolition of most quotas, first FTA	Construint of Designal Come of the		
Trade	Export promotion strategy	(with Chile),	Conclusion of Regional Comprehensive Economic Partnership		
		No liberalisation in services and	Economic Partnership		
		agriculture			
FDI	No liberalisation	Reduced barriers to FDI and			
	Deline of an annu basis durin for toos	incentives to encourage FDI inflows			
Migration	Policy of reverse brain drain from 1966		Constants of any second seller (
Inclusion	Build on relatively egalitarian society,		Core focus of government policy from 2017		
Notes: 1 The colours point to r	investment in education pro-productivity policies typical for different	levels of economic development as follo	2022		
Stylised policies early	Stylised policy middle	Stylised policy advanced	Potential anti-		
development stage	development stage	development stage	productivity effects		



THE MIX OF PRODUCTIVITY POLICIES CHANGES OVER TIME AND BETWEEN COUNTRIES

- Pro-productivity policies are not separate from core policy areas including macroeconomic, structural and reform policies, trade, science & innovation, etc.
- 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 shows that while 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



- 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.
- It cannot happen without competition to allocate resources to most productive uses.
- Stronger institutions and capabilities should allow for continuous and dynamic learning about pro-productivity policies across countries and over time.

