Seán Ó Riain

Productivity – The Lever of Riches

New Economic Model: Pillar 1

This is the 13th in the NERI's long-read series. It is also the forth in a discussion series outlining a proposed economic framework or model for the twin economies on the Island of Ireland (North and South).

A productive economy is a vital element in a flourishing society. Productivity allows us to make the most of the hours that we work in our economy. High productivity generates resources that can be re-invested in the economy and in the development of future rounds of productive improvement. It is a measure of how good we are at producing and doing things that are valued nationally and internationally. The organisational practices and institutional conditions that enhance productivity also have profound effects on a broad range of economic issues – how the rewards of work are distributed, how different kinds of work are valued, where we allocate resources, the sustainability of our production of goods and services, and more.

However, measures of productivity and national income in the Republic of Ireland are famously distorted by the inflated incomes in the Republic's multinational sectors. Even more fundamentally, the domestic sector in the Republic of Ireland and the private sector in Northern Ireland are characterised by low productivity and investment, a low contribution of exports, infrastructural deficits, low levels of investment in R&D and an imbalance in the market economy that is skewed towards low-value-added activity.

Furthermore, while there is a great deal at stake in improving productivity, at the same time it is often a controversial topic. Often, 'improving productivity' is used as a stick to beat workers or less powerful organisations into concessions and undertaking a 'low road' to competitiveness based on cost reduction and unsustainable use of social and environmental resources. This long read outlines a path to a different 'high road' model of productivity in Ireland which links economic, social and environmental success in ways that are deeper and more sustainable and rewarding over time.

'Productivity, innovation and growth' are one of the four mutually reinforcing pillars that underpin the proposed economic framework. The other pillars are addressed elsewhere in the NERI long-read series and in various other NERI outputs. They are:

(A) More and better jobs
(B) Economic security and well-being, and
(C) Economic resilience.

The pillars are complementary and interdependent. A 'high road' to productivity underpins economic and employment growth as well as providing a solid foundation for more stable businesses and public finances. More and better jobs anchor a population's economic security and well-being. In turn, economic security is a necessary albeit not sufficient condition for a sustainable economic and social model. Insecure people make for unstable politics. Economic resilience and dynamism, for their part, enable an environment that is conducive to the high levels of innovative and productive capacity that ultimately allow for the possibility of high-quality jobs.

Some key issues and questions we need to consider include:

(1) How should we understand the many dimensions of productivity?
(2) What is the reality of productivity performance in Ireland's economies, behind the headline figures?
(3) How can innovation policies shape and develop the productivity of organisations, sectors and the economy as a whole?
(4) What does a productive firm look like – what is a 'Good Company'?

A genuinely productive economy can be the foundation of true social progress and national well-being.

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Productivity is a word whose meaning is often taken for granted but actually refers to a much broader set of concerns and dimensions. This can be masked by the numbers that are used regularly in economic debate. Most obviously, even our conventional measures of productivity are in dispute – particularly in the Republic of Ireland where the weight of foreign companies in the economy leads to major and increasing distortions in GDP and the reliance on alternative measures of national income such as GNI* (see Ní Chasaide, 2023).

However, there are broader questions that relate to how well GDP captures national well-being – raising questions of whether measures of productivity based only on monetary measures can fully capture the value that is created (NESC, 2023a). As the world economy most likely enters a period of low quantitative growth, this makes the quality of growth and the value generated by our activity all the more important.

Furthermore, related to this, the relationship between productivity at the individual, organisational and economy-wide levels can be contradictory. An individual can be highly productive in a specific role at the cost of broader organisational coordination and an organisation can be highly productive in generating revenues but impose significant hidden costs on the economy as a whole (e.g. in terms of environmental sustainability). Therefore, a genuinely productive economy is one based not only on productivity at the level of the firm or other organisations but also at the level of the economy and society.

Sustainable economic growth comes from the accumulation and use of labour and capital inputs (i.e. investments in people, technology, and infrastructure, as well as more hours worked) combined with improvements in the productivity of labour and capital arising from a variety of sources notably on-going scientific progress and

technological change and the diffusion of new ideas and practices. Crucially, additions to labour and capital are both subject to diminishing returns whereas productivity-based growth is not (see McDonnell, 2018).

For conceptual purposes we can identify two types of economic growth. These are (i) extensive growth and (ii) intensive growth. Extensive growth entails the accumulation and deployment of inputs such as people, land, materials, infrastructure, machinery and other capital goods. Extensive growth is possible, for example, when barriers to the full employment of resources have been artificially created and/or where private demand for labour is too low to support potential labour supply. In the long run, demographic and resource limitations mean that extensive growth is ultimately constrained.

In contrast, intensive or productivity-based growth allows us to obtain higher levels of output using the same volume of inputs, or alternatively, to obtain the same level of output using less inputs. In other words, productivity-based growth is not reliant on an ever-increasing use of resources, is potentially unconstrained in the long-run, and is, therefore, at least theoretically compatible with environmental sustainability.

Ultimately the determinant of average living standards is output per worker for a given effort – i.e. productivity. The key to productivity gains and what Mokyr (1992) calls the 'Lever of riches' is the production and diffusion of new knowledge and new ideas that are then applied in some economic context. These new ideas can be embodied in physical capital such as machinery or buildings, in intangible assets such as trades skills or intellectual property, or they can be applied directly by people as more efficient or novel work and organisational practices. There is also the related concept of innovations. Innovation is simply a catch-all-term for new ideas or combinations of existing ideas that manifest as a new product or service, a new market, a new source of supply, or even a new organisation. The economy's capacity to innovate helps determine its future potential productive capacity.

Economic growth based on 'new ideas' is sustainable ad infinitum as long as the process of creative and destructive innovation is allowed to continue indefinitely (see Aghion and Howitt, 2009). Technology diffusion is an intrinsic part of the innovation process. We can think of diffusion as the uncertain and varying processes by which individuals and firms in an economy and society adopt novel ideas and technologies or replace older ideas and technologies with improved versions.

Furthermore, the meaning of productivity is also challenged and transformed when an increasing amount of the work that we do in society is 'on' or, ideally, 'for' one another – through a variety of services and increasingly through care work. Such work

has of course always existed but often remained invisible within families and taken for granted as part of 'women's work'. It is a welcome development that it is increasingly widely recognised both in these 'invisible' forms and in the more 'visible' forms such as healthcare work which now employs approximately one in ten workers in high income countries.

Even this is only part of the story of a productive economy. In particular, all activities generate externalities, or knock on costs and/or benefits for the broader economy in which they are located. We have touched on this question as it relates to the impact of foreign investment on domestic enterprise and the broader economy. However, there are also more general externalities to be considered, as they relate to the conditions of any enterprise operating effectively and the impacts that leaves on the broader society.

This sounds impossibly broad but in practice two issues are critical – the societal and environmental sustainability of productive economies. Discussions of productive efficiency tend to focus on the producing employees and organisations, but understanding the productive economy reminds us that these employees take a great deal of care and effort to 'reproduce' away from production. This relates to the production of the workers themselves (e.g. through care and education) and the work that they do themselves to care for and 'reproduce' past and future producers – through eldercare and childcare in particular. The other obvious externality of organisational productivity is the impact on environmental sustainability. This includes a wide range of factors, reaching from direct emissions in different sectors to the transport needs arising from business organisation decisions around working hours, location, remote working and so on.

A 'high road' model of productivity is based on genuine learning and innovation and intensive and socially and environmentally sustainable growth.

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There are significant deficits – and possibilities – in productivity in Ireland's economies. The Republic's productivity combines a greatly exaggerated 'high productivity' foreign owned sector with a domestic sector which has comparatively low productivity (Smart and Taft, 2024). However, there is also significant potential in the long-standing record of foreign companies engaging in genuine productive activities (see e.g. Ó Riain 2004) and in the existence of significant pockets of enterprise upgrading in the domestic sector.

Across the most successful small open economies, the productivity of the export sector has been central to the success of the broader economy. The Republic shares this experience of an export sector that leads on all measures of productivity. However, as is well known, the Republic is also distinctive in the dominant role of foreign corporations and the distortions that this produces in measures of productivity, from macro measures such as GDP to micro measures such as returns on investment in R&D.

Overall, the foreign owned sector exhibits levels of 'productivity' that are so high that they can only be explained by financial flows and their accounting treatment, flows that have famously surged in the past decade. Nonetheless, fictional and real activities are entangled in complex ways in the foreign-dominated sectors and the foreign owned sector makes very significant contributions in terms of employment and higher wages (Ní Chasaide and Ó Riain, 2024).

The relation between the productivity of foreign firms and domestic enterprises and the broader economy is more complex – with a mix of limited spillovers, competition for labour and other resources and boosts to domestic demand. However, the impact of the dominance of foreign firms reaches beyond the measures used or the economic linkages (Ó Riain, 2024). The more successful small European economies historically combined the growth of exporters with key investments in and institutional supports for domestic innovation, workforce development, financial system development and social capabilities. In the Republic, the dominance of foreign investment put productivity bargains in a different position within the broader social contract. Productivity was imported directly with new corporations, rather than developed in conjunction with supporting institutions and local spillovers. In an economy dominated by foreign investors the central relation between exporters and the state came to be framed around questions of minimising taxation rather than managing the relation between wage increases and productivity improvements,

particularly when measured levels of productivity were largely fictional due to transfer pricing and other multinational firm accounting strategies.

Therefore, the Republic is characterised both by comparatively weak real productivity in domestic enterprises and the underdevelopment of the institutional systems that support productivity growth and enterprise upgrading. Whatever the role of the foreign investment led development strategy, it is clear that domestic private enterprise in Ireland is generally characterised by lower productivity than in comparable EU countries (see Table 1).

Table 1: Comparative Performance of Ireland and EU Peer Group Domestic Enterprise Base

	Real Productivity per Hour: 2017-2019 average	Manufacturing Investment per Employee: 2017-2019 average (000s)	Enterprise Exports as a % of GDP: 2022
EU Peer Group	32.8	11.1	21.7
ROI	28.0	2.2	9.7 *(GNI*)*

Source: Smart and Taft (2024)

Nonetheless, there is evidence that key moments of economic recovery were driven at least as much by Irish owned exporters as by foreign export firms (see Table 2). This shows that employment in Irish exporters increased much more quickly post-crash than it did in foreign firms. Foreign firms only passed out the contribution of Irish exporters once the economic recovery from the crash was well underway. This reflected the relative success of an enterprise policy focused on indigenous exporters that operated parallel to the foreign investment strategy, although with relatively few links to it.

Table 2: Domestic and Foreign Exporters in the Republic of Ireland (Employment change per annum in each period)

Years	Domestic	Foreign
Total 2001	47,750	154,419
2001-3 (Dot.com)	-2536	-4900
2004-7 (Recovery)	911	1020
2008-9 (Global Financial Crisis)	-1852	-5894
2010-12 (Recovery)	6165	1893
2013-2015 (Growth)	4160	4584
2016-2021 ('Leprechaun Economics')	3635	10918

Note: Export-Based Employment calculated as: Employment*(Exports/Total Sales)
Data: Annual Business Survey of Economic Impact (ABSEI); , CSO Database.

Even as the historical benefits of foreign investment were clear in employment growth and wage increases in the Republic, so were the costs of a system driven domestically by a distorted tax structure and facing significant international tensions. Nonetheless, the contribution of domestic enterprise at key moments suggests that there is significant potential for development and transformation. We can start to imagine what transformations in Irish society and economy could be achieved with a true leap in terms of productivity, given what has been achieved on fairly modest gains to date.

Turning to Northern Ireland, we can see from Table 3 that it is underperforming relative to Great Britain in relation to its productivity. Despite some improvement in recent years, output per hour worked in 2022 was just 86 percent of the UK average and Northern Ireland was the second worst performing region, only coming narrowly ahead of Wales. Business investment in research and development (R&D) as a share of GDP is just over 70 percent of the UK average in Northern Ireland. This is the 4th lowest of the UK's 12 regions. This is compounded by the UK having one of the lowest rates on business investment in the G7 group of major economies. Exports in Northern Ireland also underperformed the UK average. This is despite Northern Ireland having access to both the UK and EU internal markets under the Windsor Framework agreement that governs trading rules post-Brexit.

Table 3: Comparative performance of Northern Ireland relative to the UK

	Productivity per Hour: 2023	Business Research and Development as share of GDP	Exports as a % of GDP: 2023
As % of UK average	87.6	72.3	80.2

Finally, the domestic market economy is unbalanced, with a high level of employment and economic activity in low value-added sectors such as hospitality in both the Republic of Ireland and Northern Ireland. For instance, in our peer group of comparable European countries, hospitality makes up only 7 percent of total domestic market employment. In the Republic, it is 12.2 percent – nearly twice our peer group level (see Smart and Taft, 2024). Hospitality is a notoriously low-productivity sector. Our over-reliance suggests a structural imbalance in the market economy which drives down overall productivity in both economies. We, therefore, need to transition resources – labour and capital – to higher-income and higher-productivity sectors. We consider these and other economic deficits in our proposals later in this section.

Northern Ireland's productivity performance has been a longstanding issue that has remained a persistent problem even during more benevolent economic times. Notwithstanding the many distortions that plague economic output statistics in the Republic of Ireland, it significantly out-performs the Northern Ireland economy on a range of economic indicators. In many sectors where there are limited distortions in the ROI data and in sectors where NI competes directly with ROI, significant gaps remain. Furthermore, Northern Ireland has fallen significantly behind other regions of the UK on many of the same indicators. This performance impacts not only on living standards through wages, but also affects the fiscal capacity of Northern Ireland. The causes of Northern Ireland's productivity gap are many and complex and there has been much significant research in recent years which details many of the prospective causes and indeed many of the anomalies of that performance.

Jordan and Turner (2021) provide an overview of the scale of the productivity gap between NI and the rest of the UK and they also examine differences in rates of business investment, research and development spending and measures of human capital investment. NI has the second lowest level of Higher Education research and

development spending as a share of GDP of all UK regions. In 2023, 3.8% of workers in Northern Ireland received job-related training compared to 8.3% of the workforce at UK level. FitzGerald and Morgenroth (2019) look at the gap in performance between NI, ROI and all UK regions, identifying under achievement and inequality in education as a key driver of the poor performance of productivity in NI. Northern Ireland has the highest percentage of people aged 16-64 with no recognised qualifications of all UK regions. 12.3% of people have no RQF qualifications in NI which is almost double the UK average which is 6.6%. Bergin and McGuinness (2022) examine how well the drivers of productivity influence the productivity performance of both NI and ROI. They find that productivity levels in NI appear to be unresponsive to changes in the standard set of productivity determinants, which poses significant challenges for policy responses.

Table 4 below sets out the comparative performance of productivity in NI, ROI and UK. As mentioned already, GVA gives a distorted picture of productivity in ROI, and therefore making direct comparisons between some sectors in NI and ROI would be inappropriate. However, what Table 4 does show it that in many sectors where there is no significant foreign distortion and in sectors where NI faces more equal competition with ROI, it still underperforms. Productivity is measured as output per person employed due to data restrictions in NI. It shows that in all but 3 sectors of economic activity, ROI has the highest productivity performance. The level of productivity in NI does not exceed both the ROI or UK in any sector. It comes ahead of ROI in Construction, while it comes ahead of the UK in Health. The UK exceeds the ROI performance in Agriculture, Construction, Accommodation and Food and Other Services. The UK also comes close to the ROI productivity performance in Finance and Real Estate.

Northern Ireland's economy clearly underperforms both the UK and ROI economies. Measured labour productivity is lower in all sectors of activity. If Northern Ireland is to try and close these gaps, that task needs to be both ambitious and realistic. While FDI does play a role in NI's economy, it is more similar to that of a continental European economy than it is to either ROI or the UK. Even within the UK, NI has the lowest share of GVA produced by foreign owned firms. However, while foreign-owned firms may produce a lower than average share of output, the proportion of firms that are foreign owned in Northern Ireland is only slightly below the UK average and is higher than many other regions. This would imply that the quantity of foreign firms in NI is not the main issue, it is the quality of those firms. This means that simply pumping the existing model of FDI in NI will not automatically bring the kind of success that it has in ROI. It may be that the same issues that have held

back indigenous industry, such as educational underachievement and infrastructure deficits, are likely to be holding back foreign investment.

Table 4 GVA per worker by Sector (PPS) NI, ROI and UK 2022 (PPS 000's)

Sector	NI	ROI	UK
Agriculture, forestry and fishing	64469	45432	73977
Industry	76726	512374	81153
Construction	60467	53567	60980
Wholesale and retail trade; repair of motor vehicles	62734	71367	61619
Transportation and storage	49776	73977	46639
Accommodation and food service activities	34253	35463	39799
Information and communication	59159	420174	83367
Finance and Real Estate	209657	274675	254623
Professional, scientific and technical activities	41355	114074	63793
Administrative and support service activities	44347	187074	75461
Public administration and defence	40838	74081	43309
Education	30225	45516	37426
Human health and social work activities	44082	47272	36443
Other Services	24672	34702	37827
Total	56113	156766	65503

We also consider some of the issues that arise, in the Republic in particular, around the link between the organisational and economy-wide levels of productivity. Socially, the Republic and NI have both long relied on family structures of care to provide the work at home that enables participation in employment but these patterns of care are under significant pressure with a variety of social changes. Indeed, the demographic pressures around these demands of care are in many ways increasing,

particularly as a 'sandwich generation' increasingly faces demands of childcare, eldercare and their own working lives at the same time (McGarrigle and Kenny, 2013). Such workers face complex arrangements to reconcile paid work and unpaid care, linking together in their everyday lives the macroeconomic imperatives of productivity and the reproduction of the social foundations that sustain that productivity (for the dilemmas involved see Lafferty et al, 2023). The ability to reconcile these is challenged by organisational changes where the demands of work are often intensified, both in the work process itself and the balance between work and non-work. Indeed, Ó Riain and Healy (2024) find across Europe that workers who are in the more secure, better paid positions face significant challenges of the intensification of work and the intrusion of work into the rest of their lives – suggesting a significant tension between organisational productivity and its social foundations.

Furthermore, the Republic faces particularly significant challenges as we note that certain types of production are generating significant environmental costs, including in both domestic dominated agriculture and foreign-dominated data and technology. There are various direct environmental effects of productive activity. Emissions vary significantly by sector, as do projections of future emissions trends (without mitigating measures) – with agriculture a large producer of emissions forecast to remain fairly stable and the smaller emissions producers of manufacturing and industrial processes forecast to decrease and increase, respectively (EPA, 2025). The inputs into sectors can also have significant environmental effects, with the energy (and to a lesser extent water) demands of data centres having a significantly increased effect on the energy infrastructure in recent years.

However, there are multiple other points of connection between the productive system and its environmental conditions. The organisation of working time and the mix of in-person and remote work are major influences on the transport needs and patterns of the workforce, for example. Indeed, the debates on remote working

(extending back well before the pandemic in Irish public policy e.g. DBEI, 2019) involve different perspectives on the particular balance and mix of the role of in-person collaboration in improving productivity, the environmental benefits of reduced commuting and the benefits of employee flexibility (linking it to the care issue discussed above).

Therefore, we can see that genuine productivity is linked not only to organisational efficiencies but to firms and organisations that don't simply offload the demands or costs of productivity onto the broader society. There is a need for a synergy between firms and the institutions and social structures that enable them. Much of these hours, most notably care work, are unpaid or undervalued and, therefore, not fully reflected in official output statistics. More broadly, however, the discussion of productivity relates not only to the revenues that are generated within the economy but also to what gets counted and valued through those revenues (NESC, 2023). Furthermore, productivity is enhanced when it draws on broader social capabilities and these in turn are only strengthened and developed when they are expressed in the productive and business strategies of firms. Successful societies are good at doing good things. For example, the promotion of the wind energy sector in Denmark boosted private energy providers, enhanced the public renewable energy sector and was linked to more sustainable transport and industrial energy practices (Van Est, 2022).

There are distortions and challenges in the productivity patterns of the two economies but also opportunities for development with huge potential benefits.

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Innovation policy is a critical element in enhancing productivity. Sustainable growth in output per hour worked depends on improving labour productivity and the economy's productive capacity. This in turn depends, at least in part, on the economy's innovative capacity because the greater the ability to innovate and the spread or diffusion of economically useful ideas and technologies, the greater will be the economy-wide benefits. At a national level we can frame it as National Innovative Capacity (NIC) with each country or region having its own innovation system comprised of innovating organisations with various capacities and different linkages to each other, as well as to knowledge flows; all nested within a set of enabling institutions.

In essence, enhancing their respective national innovative capacities is the critical dimension to improving the long-term performance of the two economies on the Island of Ireland. Ultimately a strong innovative capacity depends on developing, nurturing and safeguarding the conditions in which the promethean fire of human creativity can thrive and be rewarded. A country's innovative capacity is a function of:

(a) People's education, skills, experience and contacts (human capital);
(b) Prior investments in infrastructure, machinery and intangible assets, and in public and private research (R&D);
(c) The cost of, and capacity for, knowledge production, diffusion and use, and
(d) The quality and diversity of private capital markets and the enterprise structure.

Specific public policy measures can typically be justified to the extent that the society-wide benefits outweigh the deadweight, opportunity, and other costs of providing the measure. Enterprise policies and supports for business can be justified to the extent that a society's overall well-being is enhanced by a fast but sustainable

rate of inclusive economic growth over the longer term, and to the extent that properly designed enterprise policies can potentially facilitate such growth and use it as a tool to tackle societal challenges. Nonetheless, despite these specific requirements, enterprise policy and pervasive publicly supported business ecosystems are in all successful economies a key support for the growth of key organisational resources that form systems of innovation that are the long-term foundations of productivity. The weak development of such 'systems of innovation' has been a historical key weakness of the economies on the island of Ireland compared to other small open European economies (Mjoset, 1992).

The overuse of tax reliefs as a key element of Ireland's enterprise and innovation policy requires significant reform. In particular, tax reliefs that subsidise and preferentially promote low value-added business activities or failing business models, and/or impede meritocracy and intergenerational equality of opportunity can be understood as forestalling the processes of dynamic churn and economic development. Such policies carry fiscal and other opportunity costs and are likely to be counterproductive by producing slower growth in the long-run. Examples of these policies include preferential reduced VAT rates for low-value added activities, blanket reductions in corporation tax and preferential inheritance tax breaks that entrench inequality of opportunity and often keep business management in less than capable hands.

Overall, the use of tax expenditures as a tool of public policy should be minimised. Similarly, subsidies for business (including agriculture) can be deleterious to long-run growth to the extent that they skew incentives and distort resource allocation. Given the various downsides (e.g. perverse incentives, market distortions, deadweight, negative distributional effects, rent-seeking, complexity), tax expenditures are only justifiable where there is clear evidence of inherent structural market failure. Specifically, tax expenditures for SMEs/entrepreneurs are only justified if they pass a number of tests:

A) There must be a clear and defined market failure;
B) The market failure cannot be adequately remedied through regulatory reform or otherwise through direct government intervention;
C) Direct government subsidies or other interventions are unlikely to end or sufficiently ameliorate the market failure, or could only end the market failure at a higher fiscal cost than via tax expenditure.

Even when these criteria are fulfilled, the rationale for the tax expenditure should be assessed on an ongoing basis to establish its effectiveness at ameliorating the market failure, the scale of the deadweight loss, any unintended consequences, the distributional impact, and the opportunity costs including the cost to the exchequer and the policy options foregone. Finally, sunset clauses and caps should always form part of tax relief design.

Supports for the continuation of non-viable existing businesses also have little merit in terms of generating new ideas and new innovations, or in terms of promoting a vibrant churn of business entry and exit. A high rate of Schumpeterian business churn is an important element in the ongoing process of generating innovation and technology diffusion. Policymakers should, therefore, seek to avoid trapping resources in underperforming or even 'zombie' firms with unviable business models or weak management practices.

Other policy has emphasised the freeing of private capital through reduced taxes, regulatory change and 'market making'. However, there is little evidence that private finance played a central role in Ireland's economic transformation (Honohan, 2006). Surges in such financing have shaped the construction sector significantly. Another policy has targeted the low productivity domestic sectors more explicitly but with a view to maintaining them rather than transforming and growing them. This strategy has emphasised the reduction of costs – most explicitly by reducing the 'tax wedge' for employers (by coordinating the minimum wage and tax bands, by keeping

employer payroll taxes comparatively low and through some welfare subsidies for low pay rates). Such policy approaches lock in low cost, low productivity strategies. It is perhaps no surprise that the Republic has one of the highest rates of low pay in Europe, particularly among middle aged and older workers.

However, there are the seeds of more rewarding enterprise policy approaches. The Republic has a set of institutions that have been relatively successful in supporting and guiding indigenous firms towards organisational development and ultimately successful exporting – from the programmes of Enterprise Ireland to the network of Local Enterprise Offices that feed into them. While funding is an important element, even more significant are the supports for organisational development, including networking, mentoring and a variety of investments. A network of state agencies played a crucial role in supporting and promoting this upgrading, especially in the Irish owned sectors through grant aid, soft supports, promoting associations and networking and providing and incentivising financing of businesses. Significant additional state funding of research activity and infrastructure, albeit highly concentrated in priority sectors, has been provided for 25 years. This complex mix of supports has been concentrated on export activities, with a preference for technology-based firms. The evidence we have suggests that state grants and R&D investments have had positive effects on exports and employment. This model is now firmly institutionalised, centred particularly around the well-established agencies of Enterprise Ireland.

There are multiple existing and potential points of engagement between firms and the policy system in the Republic. These include direct contact with firms by agencies such as Enterprise Ireland but also county enterprise boards, Skillnets or other institutions. The key activity of such agencies is ‘enabling winners’ not ‘picking’ them – a critical goal is organisational transformation and enhancing productivity. The resources and supports provided through these contacts are important but just as significant are that these connections form part of a learning ecosystem within

sectors. The ‘footprint’ of such agencies can be continually extended to generate new activity, particular in regions with lower rates of growth.

Policy should seek to reduce financial and administrative barriers to firm entry and exit, and to avoid economic ‘lock-in’ to particular activities or outdated technologies. Examples of good policy in this regard include generous and expeditious bankruptcy laws that do not penalise failure and that encourage young firms to exit the market quickly and entrepreneurs to ‘learn and try again’ differently. A greater acceptance of churn also necessitates generous and ongoing supports for life-long learning and education in order to enable workers to learn new skills and adapt to new technologies. Such supports will facilitate people transitioning to employment or entrepreneurship in growing sectors of the economy. This is essential from a just transition and, therefore, political economy perspective but also makes sense from a productive and innovative capacity perspective.

Furthermore, we need to think about enterprise development as more than simply a focus on generating additional exports and even employment. The development of organisational capabilities in a society is the core of enterprise policy but is also central to tackling societal challenges. If, for example, enterprises or networks of enterprises emerged that were making new strides in promoting environmentally sound construction or care pathways in community healthcare provision these might lead to exports but would be of enormous economic and social value even if they didn’t. Enterprise policy can be a significant part of what drives reform in these areas as it bumps up against the problems and highlights them for a cohort of organisations that have a high profile within the political system. Improving enterprise policy can also address challenges for Irish society.

Northern Ireland (NI) has, in many ways attempted to borrow many elements of the policy environment in the Republic, particularly as it relates to supporting FDI and wrap around investment supports for domestic firms. However, much of that support has been called into question given the relative underperformance of the NI economy

over the past two decades. Invest Northern Ireland is the main economic development agency in NI and delivers many of the economic policy objectives outlined by the Department of the Economy. A recent review of Invest NI (Independent Review of Invest Northern Ireland, 2023) has provided some welcome evaluation of the policy impact to date and shows a clear need for change based on its findings.

Overall the review found that while Invest NI's programmes had a "positive impact on employment growth among assisted firms", it became almost solely focused on job creation and was "acting as a job promotion agency without a firm understanding of jobs actually created through the support." Of its total support spending, two thirds went to domestic firms, while over 50 percent of the support provided to foreign owned firms went to just 10 companies. An overarching theme within the analysis of Invest NI's support programmes was the on-going support which was provided to many firms. In this sense, much of the resources allocated to economic development was going to preservation of existing client firms rather than seeking out new firms or new growth opportunities.

Of the many recommendations for Invest NI from the review, there was a clear focus on recognising that FDI is not intrinsically more productive than indigenous industry and that financial support to firms, foreign and domestic needs to focus on additionality and added value.

Overall, extensive fiscal supports should generally be restricted to firms with significant developmental potential – which can include the development of new capabilities in a region; potential areas of import substitution such as renewable energy; and most clearly export-oriented sectors. Evaluation of particular enterprise policies should be based on the broader long-run 'societal' impacts, including the opportunity costs, and not just on the private firm impact. Such criteria could be included in reports on local and national impacts of enterprise supports. For example, the characteristics of knowledge and the potential for gains from knowledge spill-

overs suggests that 'new ideas' will be produced by markets at a level below the socially optimal rate. This means there is a strong societal justification for government intervention to encourage R&D activities either through direct provision, through subsidies for business or indeed through tax reliefs for business notwithstanding other concerns about the use of tax expenditures. A similar positive case can be made for firms seeking to invest in green technologies.

The optimal approach to encouraging a dynamic economy and society is to focus on openness and opportunity and on the economic security that encourages risk-taking. Measures to support employment quality and economic and social security provide a strong foundation for such innovation and experimentation. More specifically, enterprise policy should focus on the wider picture of maximising the economy's overall innovative capacity. Most obviously, governments could increase public funding for both basic and commercially driven research in order to increase the production, diffusion and use of new ideas. Ideally, this would be accompanied by the establishment of more attractive and secure career paths for researchers and by the establishment of deeper collaborative linkages between government, firms and universities.

In addition, governments should continuously examine the scope for reforms to education policy in order to ensure a balance between alignment with the developmental needs of the economy and society, an ongoing diversity of expertise and perspectives, and to ensure that it does not leave certain cohorts behind. Related to this is the need to meaningfully increase investment in education, and in personal development and skills, particularly for those disadvantaged cohorts that are most at risk of falling behind. Development policy should take a particular focus on early years learning and on measures to eliminate childhood poverty. Eliminating child poverty is not just a moral necessity but also an economic imperative.

Where capital markets are not well-functioning there is a case for some form of state support to provide patient long-term finance in order to support innovative

effort and technology diffusion. Crucially, the concept of the state as an investor entails equity stakes in speculative high-risk and high-potential start-ups with an additional but less important secondary function of providing conditional[1] low-cost loans for private enterprise. Mazzucato (2013) describes the notion of the entrepreneurial state. The state is seen as primarily an 'innovative mission-oriented investor of last resort', not a 'lender of last resort', and as a 'sharer in risk-taking' and not just a 'reactive fixer of market failures'. For example, she emphasises the need for a mission-oriented approach to the enormous but necessary economy-wide transition to net zero, and she notes the unique ability of the state to provide the patient, long-term, strategic, committed finance necessary to make that transition. As noted above, the Republic in particular has a reasonably developed institutional infrastructure of such supports – these supports can be extended downwards to support early stage company development and upwards to link to major societal challenges – including for example, housing, health and just transition.

Public policies are essential to developing new innovative capacities and organisations – but need to be focused on developmental goals

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Fundamental to good growth is the promotion of productivity at firm level. It's clear that tax breaks, wage suppression and deregulation do not drive productivity. Instead the more reliable route to productivity runs through high quality

[1] E.g. conditions related to minimum environmental and labour standards. Follow-up loans could additionally be conditional on factors such as export performance.

employment and employee participation, learning and innovation (Holm and Lorenz, 2015). However, Ireland's workplaces are often characterised by high levels of hierarchy and control and there is much to be done to develop 'learning organisations'. We instead propose a strategy predicated on (a) democratically transforming industrial and governance practices in current enterprises, (b) incentivising new and more productive enterprises through social conditionalities and minimum standards, and (c) creating a dynamic, competitive and innovative enterprise model.

Such strategies are closely tied to the organisation of work, which has a direct effect on productivity. Employer labour market and employment strategies and practices are shaped by what employees are expected to do at work and the organisation of work itself. This takes a number of typical forms across Europe (Ó Riain and Healy, 2024). Put most simply, these organisational approaches are formed from two key dimensions – *Learning*, whether there's an opportunity for learning and whether the job involves complex tasks, and *Autonomy*, how much scope people have at work to make decisions about their own work and how it's done. Where there is little complexity and little autonomy, we find 'Simple' jobs, most common in Mediterranean economies. Where there is a lot of learning but relatively low autonomy, you get the now classic model of lean production that has been much debated in recent decades with the influence of Japanese production methods in particular. Highly pressured, it is most common in large scale services and manufacturing. Finally, there is a learning system where the workers have a lot of complexity to face, but also a lot of autonomy. The Learning forms of work are strongest in the Nordics and Lean is generally strongest in the UK, the Republic and continental countries such as Germany, France and Austria. Overall, there is a shift towards more pressurised work, but also a growth in its complexity. Work is often more interesting, but also more demanding.

Table 5 provides a brief comparison of these key features of productive organisations in Denmark, the Republic, the Netherlands and the UK in 2021, for both all sectors and the Less Knowledge Intensive Services (LKIS), which tend to be characterised by low productivity. The Republic and the UK have a particularly high level of training provided on the job although it is unclear what exactly this involves and the degree of training being referred to. Perhaps more reliably, the gaps between countries in rates of 'learning on the job' are fairly negligible.

Table 5: Learning and Autonomy at Work, 2021; Less Knowledge Intensive Services (LKIS) and All Sectors. Employees Only

	All				LKIS			
	DK	IE	NL	UK	DK	IE	NL	UK
Training paid by Employer	29.7	59.7	50.9	60.5	22.6	45.8	38.7	47.9
Training on the job	49.1	60.2	43.5	57.1	44.5	56.1	32.9	52.4
Learning New Things	56.1	59.7	55.1	57.8	47.2	48.4	40.9	45.6
Autonomy	54.2	38.6	57.5	41.6	49.9	32.6	52.2	40.1
High on both	33.8	25.9	35.1	26.5	27.3	19.9	28.1	21.1

Source: Author's Calculations, European Survey of Working Conditions
Autonomy: (High – often or always across tasks, methods and pace)
Learning New Things: (High – often or always)

What is perhaps more telling is the relatively low percentage of employees in the Republic and the UK who have significant autonomy in controlling their own work tasks, method and pace. Denmark and Netherlands have similarly high levels of autonomy at work. It's also worth noting that while there are some small differences in autonomy in work in the service sector compared to all employment, country

differences are in fact much more consistent and significant. Not surprisingly then we find that the percentage of workers who have high levels of both autonomy and learning are significantly higher in Denmark and the Netherlands than in the Republic and the UK. Broadly speaking, this reflects the dominance of Lean organisations in the UK and Ireland with 'constrained-learning' while Denmark and Netherlands have a higher proportion of Learning organisations characterised by 'discretionary-learning', with more scope for workers to decide how to apply their knowledge.

This is true in the LKIS sectors, where the Republic's (and Northern Ireland's) 'low learning trap' is a significant barrier to productivity improvement (Ó Riain and Healy, 2018; Mac Flynn, 2017). In such sectors, there is relatively weak access to computer use; less access to decision-making and less access to learning; greater exposure to different forms of precarious employment. In the Republic today, even as the overall labour market is upgrading in many respects, significant parts of the low productivity domestic labour market are caught in a low learning trap. People are coming into that labour market with gaps in education, networks, experience and other resources - but the labour market itself is not enabling them to bridge those gaps. Indeed, it is reinforcing them.

However, this is far from inevitable. Indeed, Curran and O'Driscoll (2023) provide a fascinating case study of the Armada Hotel which has put 'decent work' and the McKinsey 7 S framework at the centre of its productivity strategy in a LKIS sector. They argue that it provides "a case of exceptionally good practice that could inspire and inform other establishments in the industry as they grapple with post-pandemic recovery" (2023: 4). Similarly, Fáilte Ireland research and practice seeks to place improved workplace conditions at the heart of new recruitment and productivity strategies in tourism (Fáilte Ireland, 2022).

There are significant elements in Ireland of a 'high road' towards productivity that is driven by organisational upgrading, new capabilities in sectors and society and by work systems that draw on worker skills and give them the freedom to use them in

enhancing productivity. Such a 'high road' does not have to be invented from scratch but can be built on some existing foundations, although it would require that competing approaches be sidelined. The remainder of this paper outlines some broad strokes of an approach to doing this.

The promotion of human capital at the firm level has the capacity to drive productivity and firm performance. This involves inclusive and democratic practices in business governance. Particularly important is the vindication of employee collective bargaining rights. While different systems can have varying effects, international research shows that collective bargaining boosts enterprise productivity. This is primarily due to collective bargaining's capacity to solve problems in production and efficiency, produce new ideas and commercial and innovative activity, and avoid narrow management group-think. To put it another way, owners and management that deny collective bargaining are undermining enterprise efficiency and national productivity. They are a barrier to an innovative, dynamic economy. Linked to enterprise policies as discussed above, collective bargaining also provides a mechanism for searching for and activating supports for the development of productivity in firms.

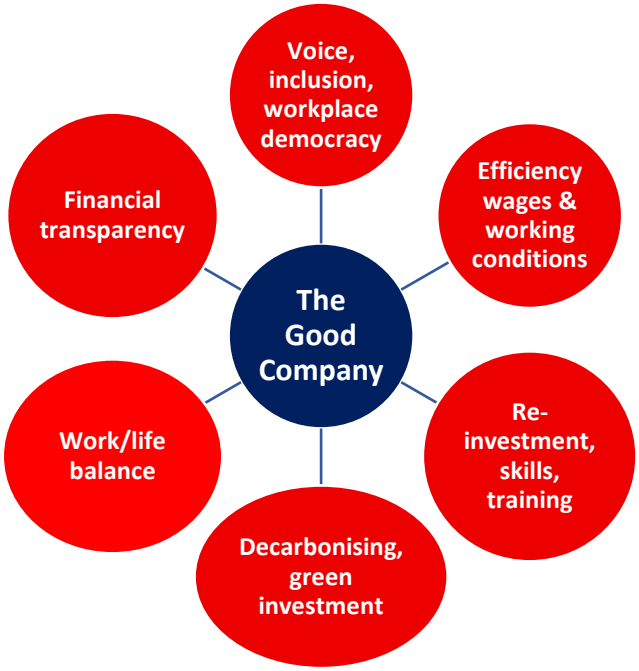
Workplace democracy can also embrace a number of other initiatives from board level employee representation in the form of worker directors, to enterprise councils co-managing the firm, to labour-managed enterprises. It is reasonable that including people with accumulated years of experience, knowledge and skills could improve business performance. In the first instance, there could be a programme of wide-scale experimentation in new democratic governance with enterprises willing to participate being publicly supported and resourced. A national centre for partnership and performance could sponsor a range of democratic initiatives – designing and assessing experimental activities. Evidence based conclusions could then inform the public debate over time.

In addition, we need to promote '*Good Companies*' and commensurately shift resources away from low-road employers. Good Companies (see Figure 1):

- Integrate all stakeholders into firm level decision–making (collective bargaining, flatten hierarchies, board membership, employee participation, enterprise councils, etc). This is about voice, inclusion and respect;
- Pursue efficiency wages and practice good working conditions, including work-life balance over the life course;
- Invest in skills, training (apprentices) and career progression; and in new technologies and enterprise expansion - pursuing high value-added strategies and prioritising the social utility of profits (that is, investment);
- Pursue environmentally sustainable activities (green production and sourcing, circular economy);
- Provide financial transparency.

Good Companies can be incentivised and supported through a process of social innovation, using instruments of social conditionalities and interventions that ensure that our domestic enterprise base drives productivity and coheres to social need. Such incentivising instruments could include: (a) prioritisation in public procurement contracts; (b) special grant-aiding for start-up and incumbent firms, including in-kind supports such as expertise and foreign market research and (c) de-risking investment through equity funding from the state.

Figure 1: The Good Company



Policy can both demand and enable the growth of 'good companies' through a number of different mechanisms. Here we simply note three. Firstly, public agencies can provide key resources – sometimes in the form of direct grants, advice and contacts but also through supports for business upgrading (e.g. R&D supports and technology diffusion) and for labour upgrading (e.g. resources for training but also to support work-life balance and care).

Second, public policy can place constraints on firms, pushing firms to comply with high standards but also imposing a floor of conditions that takes away the 'low road' to competitiveness and forces companies to pursue 'high road' productivity enhancing strategies.

Third, if firms are to be pushed down the high road, they will need supports and assistance along the way. A banking system that would provide patient finance would be a vital element in this. Moreover, the public policy system would be critical in providing 'enabling services' to firms from the local economy to export markets, as a

partner in the organisational transformation process. This triangle of investment in collective resources, 'beneficial constraints' and 'enabling services' is critical to the enhanced development of good companies.

Good Company criteria would not just be reserved for private sector companies: co-determination companies, management buy-outs with employee participation, benefit corporations (for-profit firms with legal duties to a range of stakeholders), public enterprise (including municipal and local government enterprises), non-profits and mutuals, community-owned and labour-owned/labour managed firms; all these and other forms of enterprise would be supported through the Good Company criteria. We need a plurality of different enterprise forms to boost both economic and social activity.

Radically expanding democracy in the workplace and promoting 'Good Companies' can unleash the potential of our domestic market economies. It involves doing business better, investing in people's skills and know-how, and redirecting subsidies away from low-road employers.

Finally, we need to consider the potential role for sectoral taskforces. Specifically, we need a '*negotiated*' strategy for the economy that promotes a competitiveness and productivity agenda. In essence, this would be an evolving informed consensus between the state, employees and employers. Each stakeholder has a critical role, and consensus is best achieved at sectoral level where sector-specific issues and challenges can be assessed across a range of areas including:

- Wages, profits and re-investment;
- The megatrends e.g. de-carbonisation and the introduction of Artificial Intelligence and other transformative technologies;
- The potential for expansion into foreign markets;
- Local and regional resources, weaknesses and strengths;
- Current and potential skill shortages.

Sectoral taskforces also offer the potential to link together policy developments in financing, skills and education, research and innovation, procurement, export strategies and more into coherent sets of developmental supports. Inter-firm connections and learning within sectors are relatively weakly developed in some sectors and can also be critical here in promoting 'best practice' of 'good companies' – as Curran and O'Driscoll (2023) outlined for the Armada Hotel case discussed above. At the policy level, sectoral taskforces and inter-organisational learning can be important mechanisms for more organic development of policies that support good companies in their business development and employment quality.

The Republic's 2020 Programme for Government committed to establishing *Sectoral Taskforces.* These were to include the relevant stakeholders (state, employees, employers, civil society) engaging with the relevant Minister. While this proposal wasn't implemented it could become the basis for a full-blown tier of properly-resourced, full-time sectoral planning agencies based around economic sectors (e.g. food manufacturing, retail, hospitality, freight transport).

In Northern Ireland (NI), the Departments for the Economy launched a series of sectoral action plans for six key industries. These sectors were chosen on the basis of public consultation and stakeholder engagement and are considered to be the industries with greatest growth potential in the NI economy. However, sectoral planning is not just about developing niche high growth sectors. It is also about tackling those sectors that are underperforming and therefore holding the economy back from its potential.

Collective bargaining boosts productivity as do work systems that rely on employee input and creativity – huge productivity boosts will come from growing 'good companies'.

* * * * *

From the previous discussion we can point to a number of policy recommendations:

A) Allocating higher levels of per capita spending on public R&D and providing generous subsidies and tax breaks for private research across a range of sectors and activities;

B) Creating a safety net for entrepreneurship and risk-taking including via social insurance reforms and lenient bankruptcy laws;

C) Establishing attractive career paths for STEM workers and for other researchers, particularly at PhD level and beyond;

D) Providing fiscal supports for ICT adoption and financial and other supports that encourage the life-long re-or-up-skilling of workers and managers more generally;

E) Improving technical, organisational and regulatory infrastructure especially in technologies that facilitate communication and learning such as broadband and artificial intelligence (AI);

F) Enacting patent reform at EU and UK levels to prevent the monopolisation or mothballing of technologies;

G) Building on existing institutions to enhance an entrepreneurial state in which the state takes a leading and activist innovation and entrepreneurship role;

H) Extending the footprint of enterprise support agencies to support a wider range of enterprises but within the constraints of avoiding deadweight and boosting sectoral development and social and environmental goals;

I) Increasing the economy-wide rate of generation of high potential start-ups (HPSUs) and raising equity finance for HPSUs – looking across a range of sectors and activities;

J) Incentivising research, development and innovation;

K) Developing existing public banks and funds to extend the provision of finance to invest in medium and long-term developmental priorities;

L) Encouraging inward migration in order to bring in a flow of new skills, new ideas and new perspectives into the economy;

M) Promoting horizontal innovations from within organisations by encouraging a greater degree of employee voice and autonomy, more active learning by doing, and better communication of internal expertise;

N) Ensuring greater economic and social inclusivity including the elimination of child poverty and the other barriers that prevent individuals fully participating and flourishing in the economy;

O) Radically expanding democracy in the workplace and boosting employee learning and autonomy;

P) Promoting 'Good Companies' through a number of different mechanisms – providing key resources, putting constraints on 'low road' strategies and providing supports and guidance for 'high road' approaches;

Q) Using sectoral taskforces to link together policy developments in financing, skills and education, research and innovation, procurement, export strategies and more into coherent sets of developmental supports and,

R) Developing a '*negotiated*' strategy for the economy that promotes a competitiveness and productivity agenda.

Workplace democracy and national innovation systems can work together to boost productivity across the economy