

# Public sector productivity in Scotland – literature review.

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## Introduction

Public sector productivity (PSP) is central to discussion on economic efficiency and governance, where the public sector plays a significant role in delivering essential services. The Scottish Government prioritizes inclusive growth and a well-being-based economy, and enhancing PSP is crucial for both economic resilience and social equity. However, both measuring and improving productivity in the public sector are challenging due to multiple factors including policy reforms, regional disparities, and the inherent differences between public and private sector outputs.

This literature review will briefly cover the discourse in the literature that underpin PSP in Scotland, particularly regarding its conceptualisation, measurement, and historical approaches. It will provide a short recommendation section for future policy outcomes based on the findings, along with some international comparisons. This is not an exhaustive dialogue, rather giving an overview of the existing literature and discourse surrounding PSP that can be applied to the Scottish context looking ahead to 2025.

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## Conceptualizing public sector productivity

Productivity, generally understood as the ratio of outputs to inputs, presents unique challenges when applied to the public sector. Unlike the private sector, where outputs are often tangible and easily measured, public sector outputs involve non-market services such as education, healthcare, and social services. As Lau et al. (2017) explain, "the measurement of public sector productivity...is fraught with challenges, as the public sector differs substantially from the private sector in some of its key characteristics". These characteristics include the absence of direct market prices for public goods and services, making it difficult to assess productivity using traditional metrics.

Additionally, Dunleavy (2017) further emphasizes that PSP cannot be fully captured without considering the quality and outcomes of the services provided. He argues that "productivity in the public sector is often misunderstood and misrepresented, particularly when quality adjustments are not made for the outputs being measured". This perspective is crucial in the Scottish context, where regional variations and sector-specific challenges complicate the measurement and interpretation of productivity data. Further, Dunleavy argues that PSP cannot be understood without the ability to measure it, which requires good quality data and "if possible, internationally comparable input and output measures of public sector services". This complexity underscores the need for tailored approaches to measuring PSP that consider the quality and outcomes of services provided – a difficult task.

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## Challenges in measuring public sector productivity

Measuring PSP involves overcoming several methodological challenges, many of which stem from the public sector's complex and multifaceted nature. Lau et al. (2017) identify five key areas where improvements are necessary:

- 1. input measurement and cost accounting**
- 2. standardization and comparability of measures,**
- 3. output measurement beyond traditional sectors like education and health**
- 4. typology of activities at the micro level**
- 5. intra-governmental coordination on productivity measurement.**

In Scotland, these challenges are exacerbated by significant regional disparities in productivity levels. Deloitte's State of the State - Scotland (2024) report notes that while regions like Edinburgh and Aberdeen outperform the national average, "other areas, particularly rural regions, continue to lag significantly behind, posing a substantial bottleneck to overall productivity growth". This uneven development complicates efforts to create a cohesive national strategy for improving public sector efficiency. These disparities are further explored by Tsoukalas (2021), who's white paper on Scotland's productivity puzzle notes that while some regions, such as Edinburgh and Aberdeen, have achieved high productivity levels, "other areas, particularly rural regions, continue to struggle, reflecting differences in industrial structure, access to skilled labour, and levels of investment in infrastructure and technology". These disparities highlight the need for targeted interventions that address the specific challenges faced by less productive regions.

Moreover, Scotland faces specific challenges related to the measurement of PSP. Given that many public sector outputs lack market prices, traditional productivity measures often fail to capture the full scope of public sector contributions. As the OECD report by Lau et al. (2017) points out, "too often, improving PSP is equated simply with spending or staff cuts, rather than searching for

strategic agility, improving the mix and use of inputs, and enhancing the quality of outputs for better public outcomes".

Quality adjustment in output measurement is another critical issue. Dunleavy (2017) highlights the potential for misinterpretation when quality is not factored into productivity measures, noting that "a reduction in the length of hospital stays might appear to decrease productivity if measured purely by the volume of services provided, despite potentially indicating an improvement in service efficiency", highlighting the nuances that are aligned with PSP and how it can be effectively measured.

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## **Drivers and impediments to public sector productivity in Scotland**

Scotland's PSP is shaped by a variety of drivers and impediments, many of which are tied to broader economic and policy contexts. As such, policy reforms can play a significant role in influencing productivity outcomes in Scotland's public sector. Égert (2022) discusses the general impact of policy reforms on productivity: "while some reforms have streamlined operations and improved service delivery, others encounter resistance or are challenging to implement due to the complexity of regulatory environments". This gives context in the difficulty that faces the public sector when considering reforms to boost its productivity. Further, two reports from the early 2010s highlight some of the key contexts specific to Scotland, and how its public sector can reform to boost its productivity.

The Commission on the Future Delivery of Public Services ('Christie Commission', 2011) and the Independent Budget Review ('IBR', 2010) both emphasize the importance of up-skilling the public sector workforce to drive productivity improvements, with both reports agreeing that for public services to meet growing demands within tighter budgets, the public sector workforce must be equipped with modern skills and be empowered through leadership training. This is within a context of severely constrained long-term budgets. The IBR forecast (back in 2010) a 12.5% contraction in public expenditure by 2014-15, with hopes for a recovery in 2025-26. However, nascent impacts of Brexit, the Covid-19 pandemic and policy constraints have pushed back even this delayed timeline. These factors, coupled with increased digitalisation have exacerbated the need for improved workforce efficiency, driven by up-skilling and leadership development.

As such, the IBR advocates for a strategic approach to workforce development, emphasizing that upskilling can help bridge productivity gaps. Further, leadership training programmes and opportunities for professional development are promoted to enable employees to work more efficiently and deliver higher quality services, thereby boosting productivity across the public sector. Similarly, the Christie Commission argues that frontline staff should be "empowered by managers

and leaders” in an environment that encourages innovation and partnership working, with the IBR arguing that “strong leadership and management skills” are key to ensuring that public services can operate efficiently within tighter financial constraints.

Another critical recommendation from the Christie commission is the prioritization of preventative spending. The report notes that up to 40% of public spending was reactive – addressing issues that could have been mitigated or prevented through earlier intervention. By focusing on prevention, the Commission argues that Scotland could reduce long-term demand on public services, improving both social and economic outcomes and boosting its productivity by improving its cost-effectiveness.

However, the IBR notes that efficiency savings alone will not fill the funding gap – although progress in public sector efficiencies have been made ((especially through initiatives like the McClelland Review of Procurement (2023) and the Crerar Review of scrutiny and regulation (2007)) – find that deeper structural changes are necessary to bridge the shortfall. This ties into findings from the Christie Commission, which identifies fragmented services and a lack of cross-sector collaboration as significant barriers to efficiency. The report emphasises that public services must be integrated and centred around people and communities, empowering citizens to play a direct role in the design and delivery of services, thereby increasing the participatory nature of PSP.

Management practices within the public sector are another critical determinant of productivity. Fenizia (2022) underscores the importance of effective leadership, stating that "strong management is correlated with higher productivity levels, yet many public sector organizations struggle to cultivate the necessary leadership skills". In Scotland, Deloitte’s (2024) report similarly highlights the link between management quality and productivity, observing that "regions with better-managed public sector organizations tend to perform better in terms of productivity".

Regional disparities further complicate efforts to enhance public sector productivity in Scotland. Prof. Tsoukalas’ 2021 report on Scotland’s Productivity Challenge points out that while some regions, such as Edinburgh and Aberdeen, have achieved high productivity levels, "other areas, particularly rural regions, continue to struggle, reflecting differences in industrial structure, access to skilled labour, and levels of investment in infrastructure and technology". These disparities highlight the need for targeted interventions that address the specific challenges faced by less productive regions.

Broader economic factors also play a role in shaping public sector productivity in Scotland. Deloitte’s (2024) report emphasizes the critical role of sectors such as education and health in driving productivity growth but notes that "persistent challenges, such as underinvestment in digital technologies and gaps in employee skills, hinder the public sector's ability to fully leverage its potential". As such, investment in these critical services will be crucial in driving PSP, but the foundations of where that investment will come from remain unclear.

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## International comparisons and lessons

It is helpful to gain a better understanding of Scotland's PSP by placing it within a broader international context. The OECD's work on public sector productivity, as detailed by Lau et al. (2017), offers valuable insights into how different countries approach the measurement and improvement of productivity in the public sector. For example, countries like Denmark have developed sophisticated methods for measuring productivity at both the macro and micro levels. Lau et al. (2017) note that "Denmark's shift from an input-based to an output-based measurement approach has provided more accurate reflections of productivity, particularly in individual non-market services such as health care and education".

Further, Boyle's (2006) report on measuring public sector productivity comparatively against international counterparts underscores the importance of adopting standardized measurement approaches. The report argues that "standardization is crucial for enabling meaningful comparisons between countries and regions". Extrapolating this for the Scottish context would allow policymakers to benchmark Scotland's performance against international standards and identify areas for improvement. This international perspective is important for understanding where Scotland stands in terms of its PSP through a standardized measurement process, and for identifying best practices that could be applied to the Scottish context.

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## Policy recommendations and future directions

Based on the evidence given throughout this literature review, 4 key policy recommendations emerge for improving PSP in Scotland.

1. **Robust and standardised measurement frameworks:** As emphasised by Lau et.al (2017), a reliable cost accounting system is crucial to ensure that PSP assessments capture both the quantity and quality of outputs – making targeted improvements and efficiencies easier to both measure and prove.
2. **Addressing regional disparities:** Targeted investments in infrastructure, education, and digital technologies could help “level the playing field” between more and less productive regions, as noted by Deloitte (2024) and Tsoukalas (2021), while at the same time upskilling the workforce, futureproofing against future digitalisations and improving efficiency & output capacity.
3. **Preventative spending:** The Christie Commission's recommendation to prioritise prevention over reaction remains relevant, offering a pathway to reduce long-term costs and improve

social outcomes through greater output efficiency. (This may be of particular interest due to the new government's more interventionist policy direction?).

4. **Collaboration and shared services:** Both the Christie Commission and the IBR advocate for greater integration and collaboration across public, private and third sectors. Public service partnerships could also play a key role in improving efficiency.

These policy recommendations draw on the findings from the literature review, giving overall insights and a lens through which to approach Scotland's PSP puzzle.

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## Conclusion

In conclusion, PSP in Scotland is a complex issue shaped by a range of factors, including policy reforms, management practices, and regional disparities. While significant challenges exist in measuring and improving productivity, this literature review provides valuable insights into PSP's complexities and takes the first step in offering practical recommendations for policymakers, building on a growing body of literature framing Scotland's PSP context. By adopting more robust measurement frameworks, addressing regional disparities, and investing in leadership and management, Scotland can enhance its PSP, with the overall goal of contributing to a stronger, more resilient economy with better, more efficient public services.

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