

Public Sector Productivity: Challenges, Innovations, and Future Directions

Introduction

On Wednesday 29 January 2025, the Productivity Institute Scotland Forum, in partnership with Prosper, hosted a roundtable discussion as part of Scotland's National Productivity Week. The event brought together experts, academics, and public sector leaders to explore strategies for enhancing Public Sector Productivity (PSP) in Scotland. The discussion was framed within the Scottish Government's 10-year public service reform plan, which prioritises efficiency, accountability, and improved service delivery.

The roundtable focused on several critical themes, including the conceptualisation and measurement of public sector productivity, the role of digital transformation and AI, and the challenge of balancing cost-efficiency with service quality. This briefing paper presents a synthesis of key discussions, insights, and policy considerations that emerged from the event.

Defining Public Sector Productivity

Unlike the private sector, where productivity is commonly assessed through output per unit of input, the public sector operates within a more complex framework that prioritises service quality and social outcomes. The discussion underscored the importance of moving beyond conventional economic measures and adopting a *triple-bottom-line* approach, which accounts for people, profit, and planet as essential dimensions of productivity. This broader conceptualisation reflects the increasing recognition that productivity is not solely about efficiency gains but must also consider sustainability and societal impact.

To provide a structured framework for evaluating productivity in public services, the panellists introduced the **public service delivery chain model**. This model assesses productivity through an interconnected analysis of budgets, inputs, organisational processes, and service outcomes. One of the principal challenges identified in this approach is the inherent difficulty in quantifying improvements in services such as healthcare, education, and policing, where the benefits of policy interventions often unfold over extended periods and are not immediately measurable.

Challenges in Measuring Public Sector Productivity

Discussions highlighted the limitations of traditional productivity metrics, which often fail to capture the full complexity of public services delivery. While standard efficiency indicators such as reduced hospital waiting times or streamlined administrative processes, are useful in assessing operational improvements, they do not fully reflect the broader impact on service quality and societal well-being.

The role of digital transformation in enhancing productivity was a recurring theme of discussion, with participants acknowledging the potential of technology to improve efficiency while also recognising the significant challenges associated with its implementation. Workforce-related issues, particularly in the areas of recruitment, retention, and training, were identified as major barriers to sustained productivity gains. Several speakers emphasised the necessity of **ongoing investment in human capital**, arguing that workforce development is critical to ensuring the long-term benefits of productivity-enhancing initiatives.

Examples of Successful Productivity Initiatives

The roundtable discussion included a series of case studies illustrating how productivity improvements have been successfully implemented across various sectors. In the finance and audit sector, the UK Government's internal audit function has developed AI-driven risk assessment tools that enhance fraud detection and streamline auditing processes. In healthcare, Scotland's NHS Cyber Centre of Excellence, established in 2021, has demonstrated how shared cybersecurity services can simultaneously improve productivity and digital security across public sector organizations.

Further examples were shared from local government, where the introduction of remote monitoring technologies in elderly care has reduced unnecessary staff visits while improving patient safety. In education, policy proposals aimed at reducing teacher contact hours sparked debate on the extent to which workload reductions contribute to better grades and improved teacher well-being. These cases collectively reinforced the argument that **productivity improvements must be designed to complement rather than compromise service quality**, and ensuring operational efficiencies translate into meaningful public benefits.

The Role of AI and Digital Transformation

A key theme throughout Scotland's National Productivity Week was the role of AI-tools and digitalization in enhancing Scotland's productivity. Similarly to the Unlocking AI workshop, AI was identified as a tool with significant potential to improve efficiency in the public sector, particularly in; administrative processes, risk assessment, and service delivery. However, AI is not a silver bullet, and concerns were raised regarding the ethical and practical risks associated with AI adoption, including workforce

displacement, data security vulnerabilities, and algorithmic biases when handling sensitive public data.

The speaker's panel provided several examples of AI-driven improvements already being implemented, such as automated risk analysis in financial auditing, AI-assisted cybersecurity systems in Scottish healthcare, and chatbot-based customer service solutions in government agencies. While these technologies offer promising avenues for cost reduction and efficiency gains, participants emphasized the need for **responsible AI governance** to ensure that AI tools are implemented to enhance, rather than replace human expertise. The discussion on AI concluded that AI should be viewed as an augmentative tool rather than a substitute, with digital tools integrated in ways that preserve public trust and service accessibility. One potential way this can be achieved is through increased accountability and transparency from public service bodies over their use of AI.

Balancing Cost Savings with Quality of Service

One of the most pressing questions raised during the discussion concerned the **allocation of cost savings derived from productivity improvements**. It was noted that increased efficiency does not necessarily result in financial surplus, as productivity gains are frequently offset by rising demand for public services. This is particularly evident in healthcare and social care, where demographic shifts and increasing service complexity create ongoing pressures that absorb efficiency-related savings.

The discussion also explored the **"spend to save"** approach, which advocates for long-term investment in efficiency-enhancing measures rather than short-term budget reductions. Several panellists stressed the importance of multi-year budgeting as a mechanism for ensuring financial sustainability and preventing efficiency initiatives from undermining service delivery. The consensus was that public sector organisations must prioritise **investment in innovation, workforce training, and infrastructure development** rather than pursuing short-term cost-cutting strategies that may lead to diminished service quality.

The Ethical Dimensions of Productivity Reforms

The ethical implications of AI and automation in public service delivery formed a crucial component of the discussion. Participants emphasized the importance of **user-centered service design**, ensuring that productivity improvements do not disproportionately disadvantage vulnerable populations. Concerns were raised regarding the potential for algorithmic biases in automated decision-making systems, particularly in areas such as welfare distribution and healthcare prioritization.

Several examples of community-focused initiatives were presented to illustrate how **efficiency and accessibility can be balanced effectively**. One-stop public service

hubs were cited as a model for improving citizen engagement while maintaining operational efficiency. These discussions highlighted the need for **robust regulatory frameworks** to govern the ethical deployment of AI and automation in public administration.

Lessons from International Case Studies

Comparative insights were drawn from international case studies, with particular attention given to models in **South Africa, Kenya, and New Zealand**. The **New Zealand approach to preventative spending** was highlighted as an effective strategy for achieving long-term efficiency gains. This model prioritizes **proactive investment in social services** to mitigate future costs, offering a framework that could be adapted to the Scottish context.

The panel noted that **data-driven approaches to PSP measurement**, as seen in other nations, could enhance Scotland's ability to assess and improve public sector efficiency. The importance of international collaboration and knowledge exchange was underscored as a means of refining domestic policy frameworks.

Final Reflections and Open Questions

The roundtable discussion concluded with several key questions for further research and policy development. Participants considered how PSP could be measured effectively without reducing service delivery to a cost-cutting exercise, how digital transformation could be implemented without creating new administrative burdens, and how immediate budget constraints could be reconciled with long-term investments in preventative measures. The role of AI and automation in public service delivery remained a focal point, with panelists stressing the need for **ethical implementation and continuous oversight**.

Conclusion

The discussions at the roundtable underscored the **multifaceted nature of public sector productivity**. While digital transformation and AI offer significant opportunities, their adoption must be carefully managed to align with **citizen needs, ethical considerations, and sustainable governance principles**. The session reaffirmed the importance of **data-driven policymaking, strategic investment, and cross-sector collaboration** in shaping the future of Scotland's public sector productivity. Moving forward, ongoing research and engagement between **government agencies, industry leaders, and academic institutions** will be critical in developing effective and equitable productivity-enhancing strategies.

The TL; DR

Unlike the private sector, public sector productivity is harder to measure, often requiring a **triple-bottom-line** approach that considers service quality and societal impact.

Digital transformation, AI, and workforce investment were highlighted as key drivers of efficiency, while acknowledging challenges such as **data security, ethical risks, and funding constraints**.

International case studies showcased best practices in **preventative spending and AI-driven risk assessment**, and reflected on the need for **long-term investment, ethical AI governance, and evidence-based policymaking** to enhance public service delivery without compromising on quality.