Rialtas na hÉireann
Government of Ireland

Spending Review 2021

Executive Summaries – Tranche 8 Publications

DECEMBER 2021

These papers has been prepared by IGEES staff across a number of Departments. The views presented in the papers do not represent the official views of each Department or Minister.

IGEES
Irish Government Economic and Evaluation Service

Contents

Healthcare Capital Investment in Ireland Series:

Analysis of Historical Capital Investment in Healthcare

Executive Summary

1. This is the first of 3 papers in the series "Healthcare Capital Investment in Ireland".

2. The paper provides a historical overview of Public Capital Investment and Public Healthcare Capital Investment trends in Ireland, from early state provision of healthcare including the reliance on religious and voluntary organisations, through membership of the European Union up to the present day.

3. The paper then examines the level of Public capital investment relative to overall expenditure trends of the state including the balance of capital investment to current expenditure within the Health Budget, the relationship with the macroeconomic cycle and the position of the public finances.

4. The paper also compares the performance of Ireland's healthcare capital investments relative to international comparators on capital output metrics, including hospital occupancy rates, waiting lists/times and acute care beds per 1,000 inhabitants.

Key Findings

1. The paper indicates a lack of centralised strategic direction for healthcare historically, with investment policy not aligned with reports recommending a re-design and consolidation of the fragmented Irish hospital network.

2. The paper highlights the strong pro-cyclicality of Irish capital investment decisions historically, limiting the extent to which longer-term strategic investment decisions could be made. This pro-cyclicality is also evident in healthcare investment trends.

3. While there are limitations to direct comparison of international health expenditure available data indicates that Irish healthcare capital spending equated to 66% of the investment made by EU peers from the 1970s up to 1996. While the gap in spend has closed in recent years, it is likely that this has left a legacy of lower capital stock in Ireland relative to international comparators.

4. Within the total available health budget, growth in current expenditure has been prioritised over capital expenditure, which has historically equated to a small proportion of the total spend.

5. Ireland is behind European comparators on various capital related health metrics. These include:
    a. High average acute care occupancy (90% average acute care occupancy in Ireland, versus 79% average occupancy in the EU15 in 2018).
    b. Record highs in Outpatient Waiting List numbers (622,963 in Jan 2021), Close to record highs for Inpatient and Day Case Waiting List numbers (81,456 in Jan 2021).
    c. Ireland has the 3rd to the 6th longest wait times for various procedures versus other countries considered.
    d. Low acute care bed capacity, with an average of 3 beds per 1,000 inhabitants in Ireland 2019, versus 3.9 beds in the EU15, and 4.7 beds in the OECD.

- While these indicators can be driven by a wide range of factors, the direct relevance of healthcare capital stock to each motivates a further exploration of whether greater healthcare capital investment can be used to improve Irish performance in this context.

Policy Implications

1. To **reduce historic pro-cyclicality**, capital investment should be implemented in a more consistent and steady-state manner, where large fluctuations in expenditure programming are avoided.

2. Within available resources, both **the level capital investment in healthcare, and the balance between the current and capital expenditure, should be re-examined**.

3. This could be achieved through the development of a **Strategic Investment Framework for Healthcare.** This would identify the most efficient and effective use of capital resources, incorporating the existing capital stock profile and population needs by care setting and region. This would enable project selection to be based on longer-term strategic priorities over shorter-term considerations.

Healthcare Capital Investment in Ireland Series:

Strategic Considerations for Future Capital Investment in Healthcare

Executive Summary

1. This is the second of 3 papers in the series "Healthcare Capital Investment in Ireland".

2. The paper reviews the policy literature on the general and healthcare specific, challenges that frequently occur in the delivery of infrastructure projects, to support and inform policymakers in implementing objectives of the National Development Plan (NDP) to Healthcare in Ireland.

3. The paper evaluates relevant strategic documents to complement the literature review included in the paper. From this, a number of potential criteria are identified for a Strategic Investment Framework for healthcare:

4. This paper analyses planned healthcare investment under NDP 2018-2027 to project how capital investment would be spent by 2027 if implemented as planned. It then evaluates this prospective expenditure in healthcare with reference to the proposed strategic investment criteria and the existing NDP objectives.

Key Findings

1. Based on the literature, there are a number of general and healthcare specific challenges associated with the delivery of infrastructure projects which need to be considered by policymakers;

    - Political influence on project development can lead some projects to be subject to enhanced timelines and criteria, weakening ex-ante review.
    - The long-time horizons involved in the development of infrastructure projects can lead to issues related to cost overruns and multi-annual budgeting.
    - Capital projects need to be subject to increased levels of ex-post review, with data collected to enable evaluation of a project's performance.
    - Projects can often be subject to an over-focus on short term (tactical) rather than long run (strategic) outcomes, with the strategic success of a project ignored in favour of evaluation of whether it was "on time" and "within budget".
    - New healthcare infrastructure projects often fail to be adequately integrated into the overall health system, with appraisal of projects often evaluating performance in the context of a certain care setting rather than the effect on the system as a whole.

- Healthcare projects are often insufficiently flexible to incorporate changes to the delivery of care, highlighting the need to incorporate more flexible architecture to account for varying technical lifespans of different components of a hospital or residential facility.
- With limitations around the data further research will be completed to ensure an understanding of the drivers of issues discussed within this paper.

2. Potential criteria are identified for a Strategic Investment Framework for healthcare:
    a. Patient Safety and Quality
    b. Value for Money
    c. Resilience
    d. Accessibility
    e. Regional Diversity
    f. Alignment with Sláintecare
    g. Future Healthcare Demand
    h. Adaptability

3. The analysis of the Health Sector NDP 2018-2027 reveals a number of areas where prospective investment may not align with our expectations or the proposed criteria for the Strategic Investment Framework. In each case detailed analytical work will be required to support decision-making between different investment priorities in line with proposed criteria.

    - **Care-Setting Balance / Sláintecare Alignment:** The majority of planned healthcare capital investment is in the Acute care setting, with a 70% Acute to 30% Community Care expenditure ratio across the NDP 2018-2027 health portfolio.

    - **Regional Diversity / Accessibility**: Even when "National" investment is excluded, Dublin continues to account for the majority of capital investment at (47%), with Galway the region with the next greatest share at (7%), with Cork (6.5%), Limerick (5.5%) and Sligo (2%) following after. This may run counter to expected investment under the National Planning Framework, which calls for balanced regional growth.

    - **Value for Money / Long-term Feasibility**: 76% of expenditure under the NDP 2018-2027 has yet to take place (Construction, Commissioned, Installation, Complete). This may present scalability challenges for the sectors capacity to deliver such a substantial proportion of investment in a short timeframe.

- **Value for Money / Long-Term Feasibility**: Over €4bn (42%) of the planned investment is in the "appraisal" stage. The literature finds that cost estimate uncertainty is greatest before the Tender stage, due to the absence of a detailed design brief and market engagement. Therefore, the uncertainty around this €4bn estimate is large and presents risks in the form of noise, underestimation bias, optimism bias. These risks can be observed in the growth in cost estimates of the National Children's and Maternity Hospitals. (Cost variance risk and solutions are discussed in the 3rd paper in this series).

- **Patient Safety / Long-term Feasibility / Adaptability / Accessibility / Regional Diversity**: A significant proportion (35%) of the total NDP allocation is in "Maternity" and "Paediatric" care, which may not align with the demand implied by current population projections. Conversely there is a considerably lower spend on "Older People" Care, despite the current aging of the population and need for increased capacity in this care setting. (Lindberg and Mccarthy 2021).

Policy Implications:

1. **Development and Implementation of a Strategic Investment Framework:**
   This analysis underpins the need for the development of a Strategic Investment Framework for healthcare to ensure that future health capital funding allocations align with National (NDP) and sectoral (Sláintecare) objectives. Such a strategic investment framework can be conceived as a dynamic multi-criteria analysis, where projects are scored against each criterion to provide a comprehensive assessment. Development and implementation of such a framework would result in a more transparent and coherent process by which health investment priorities are selected.

2. **Further Development of Data and Evidence related to Healthcare Capital Investment:**
   A significant limitation of the analysis undertaken in this paper is the lack of availability of a healthcare capital stock database. This means the analysis can only identify areas where investment may be not align with our expectations or the proposed criteria for the Strategic Investment Framework. From an operational perspective, detailed healthcare capital stock data and the evaluation of investment requirements by care setting and region will be required to implement the framework in practice. It should be noted that the incorporation of stock data was underway but interrupted by the cyber-attack on HSE systems in May 2021. The stock data will instead be the subject of future analysis.

3. **Greater Alignment of Healthcare Investment Priorities with Health and Overall Government Strategies:**
   The analysis presented in this paper identifies potential issues related to the distribution of expenditure by care setting, region, and project stage. Any non-alignment of investment priorities with Sláintecare, and overall government strategies, may present challenges to the deliverability of policy objectives including the transition to Primary and Community based services.

Health Capital Investment in Ireland Series:

Dealing with Uncertainty & Risk: The Application of Reference Class Forecasting to Future Capital Investment in Healthcare

Executive Summary

1. This paper is the third in the series "Health Capital Investment in Ireland"
2. The paper examines the relevant policy literature on the topic of large project management and capital investment.
3. Specifically, the paper examines the challenges of frequent cost underestimation and benefits shortfalls, which occurs repeatedly across countries and sectors.
4. The paper explores the potential of Reference Class Forecasting as a tool to mitigate cost variance. This is implements an approach recommended within the Public Spending code (2019).

Key Findings:

1. Significant cost variance pertains to large capital investment projects internationally, so much so that the "iron law of megaprojects" is identified as a main challenge to megaproject management: "Over budget, over time, under benefits, over and over again." (Flyvbjerg, 2017).
2. From the Suez Canal to the Boston Big-Dig, large capital investment projects surprise stakeholders with ex-post realisation of cost underestimation and benefit overestimation.
3. Ireland is not an exception to this challenge, with a history of large capital investment projects suffering from the same phenomenon empirically across all sectors and industries (Irish Fiscal Advisory Council, 2019).
4. In the Health sector, a sample of 25 domestic and international healthcare capital, shows projects had an average cost variance of 100%.
5. Using this sample as the basis of a preliminary reference class forecasting model and applying this to the healthcare NDP, the model highlights a potential 66% increase in costs (€1.4bn) from the 2018 estimates, to deliver the 6 projects >€100m currently at Appraisal Stage.

Policy Implications:

1. Preliminary use of the reference class forecasting technique, as recommended by the Public Spending Code, raises questions around the deliverability and affordability of the portfolio in its entirety, as it currently stands.

2. It is possible that the costs contained in the current NDP portfolio may be underestimated. Therefore, fewer projects may be able to be delivered than is planned for a similar level of expenditure.

3. This highlights the need for competitive internal prioritisation of potential infrastructural investment projects within a Strategic Investment Framework to deliver on the NDP objectives in healthcare.

4. Proven cost mitigation strategies identified in the literature should be employed to ensure efficient delivery of the portfolio. These include standardisation, “hard” deadlines, robust business cases evaluation in line with the Public Spending Code.

Review of Civil and Public Service Professional Added Years Schemes

Executive Summary

Professional Added Years (PAYs) are additional years of notional pensionable service added to the actual service of civil and public servants in professional, technical, and specialist grades.

Introduced in Ireland in the 19th Century by local authorities, PAYs were used as a policy tool for recruiting and retaining doctors, architects, lawyers and engineers. There are now twenty-eight (28) main civil and public service PAY schemes in operation.

PAYs awards were calculated traditionally as an additional one-third of service. Most PAYs awards are now calculated on the basis of pre-recruitment qualifications and the professional experience required for appointment which preclude appointees from accruing a full pension based on 40 years of reckonable service.

The aims of this review are :

- To examine the evolution of the policy of awarding PAY;
- To consider the continued relevance of PAY, together with its effectiveness; and to
- To assess the financial cost of PAY schemes; and

Key Findings

Policy Evolution

During the last 30 years, the broad trend has been to reform PAYs awards. A number of landmark changes have reduced the generosity of awards and improved policy coherence:

- *New Scheme* (1997): introduced a less favourable formula for calculating civil service PAYs awards;
- *New Entrant Scheme* (2005): introduced a public service-wide scheme for new entrants and reduced maximum awards;
- *Single Scheme* (2013): made no provision for PAYs.

Continued Relevance and Effectiveness

The continued relevance of PAYs to today's civil and public service is open to question. Reasons for this include:

- Salary and allowances, not PAYs, are now the main incentive for recruitment and retention;

- PAYs awards are generally not transferable and may hinder mobility across the public service, e.g. in certain Local Government, Health, and Education schemes the individual receives no award if they leave before the age of 60;
- The increased maximum retirement age (70) creates additional opportunity for civil and public servants to acquire 40 years of pensionable service;

- PAYs dates from a time when life expectancy was shorter and the related costs will now be incurred for longer periods than originally envisaged (PAYs could remain a facet of the public service pensions bill for the next 60 to 70 years - longevity beyond 65 years of age has more than doubled since the 1980s);
- There are seemingly no clear and directly comparable schemes currently being provided in other EU states; and
- Assessing eligibility for awards has proven difficult in cases where the relevant competition records have not been comprehensively maintained.

Costs

- While the annual cash cost may be comparatively low in the context of total public service pension expenditure, a small award of added years can have significant capital cost implications over the life of a pension;
- There is a lack of transparency regarding the ongoing financial cost of PAYs, with only local authorities collecting this data; and
- Processing PAYs applications can be administratively complex, involving calculations of both Gross Awards (at any time) and Net Awards (at the time of retirement) on each case. It may also necessitate legal/ actuarial input.

Conclusions and Recommendations

- PAYs awards are generous and difficult to justify in the current broader pensions policy and sustainability context. Accordingly, there should be no circumstances under which additional grades or roles would be added into older schemes.

- In addition, it is recommended that:

    - Enhanced recording and retention of PAYs data should be available across the public service, particularly regarding average awards, annual financial cost, and capital costs in order to promote better accountability and governance; and
    - A periodic assessment of the long term costs of PAYs should be carried out