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Human Services Economic Paper 1

What is Indexation?

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The Working Paper Series on the Economics of Human Services

The Centre for Public Value is a research entity within the UWA Business School at the University of Western Australia. This economics paper is the first in a series of working papers focused on explaining the development, operation, and management of the economics of human services in a mixed economy such that in Australia or New Zealand. The series is funded by the Centre for Public Value.

The Centre for Public Value seeks to contribute to sustainable policy and practice as a foundation for efficient and effective human services systems operating in a mixed economy. Therefore, our research focuses on achieving sustainable outcomes for the human services sectors, governments, and service users.

This working paper series has been designed to provide people with skills outside of economics with explanations and commentary relating to important economics topics that effect the sustainability of the human services sector in a mixed economy. As such, these working papers draw on, and add to, research and commentary undertaken by the Centre for Public Value which is available via our website.[1]

If you have any questions or comments, or simply want to find out more, please contact the authors directly.

Summary

This paper is a resource designed to provide information and commentary on the topic of indexation in human services systems. In it we consider the importance of indexation, and the impact poor indexation policy has on human services' sustainability. We want to increase readers' knowledge of this important area of sustainability management. To that end, we discuss:

- What indexation actually is;
- How appropriate indexation helps to support sustainability in the short- and medium-terms;
- What appropriate indexation models consist of; and
- What happens if the indexation model used is inappropriate.

Service procurement by governments is done via contracts which are agreed at a point in time and are funded as agreed at that point in time. Appropriate indexation is a short-term funding increase designed to support the purchasing power of funding in the face of cost increases experienced after the funding agreement has been implemented and which are part of the normal operation of the economy. These cost increases would threaten service sustainability if they were not met by indexation. Therefore, indexation is intended to support the consistent quality and quantity of service provision until a new contract for services is negotiated between the service provider and the funding agency. It is not usual for indexation to consider future changes in costs or to be used to support service providers where abnormal economic shocks (e.g. COVID-19) increase the costs of operation significantly. Therefore, indexation is one element required for service sustainability while regular and timely recontracting processes (e.g. tendering) combined with capital injections into the sector in the case of economic shocks (e.g. JobKeeper in the case of COVID-19) are also critical. Therefore, appropriate indexation does not solve the problem of cost increased but delays their impact.

[1] Website here: https://www.uwa.edu.au/schools/Research/Centre-for-Public-Value/Publications

We hope this paper adds clarity for those seeking to develop a better understanding of the way indexation operates and helps people in the human services sectors, governments and the wider community to understand and assess indexation policy more effectively.

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Related Papers in this Series:[2]

Economics Paper 2: Why CPI and WPI are not an Appropriate Basis for Human Services Funding Indexation

Economics Paper 5: What is Sustainability in the context of Human Services?

Other Relevant Papers Prepared by the Centre for Public Value:[3]

Gilchrist, D. J., and C. T. Feenan. 2023. “Challenging the Framework for Funding Indexation in Australian Human Services: Achieving Sustainability”, a report developed by the Centre for Public Value, UWA Business School, Perth, Australia.

Gilchrist, D. J., and C. T. Feenan. 2023. “Human Services and Cost Indexation Methodologies in Australia”, a report developed by the Centre for Public Value, UWA Business School, Perth, Australia.

Author Interest Statements

Professor David Gilchrist is Director of the Centre for Public Value at the University of Western Australia. He has received funding from governments, peak bodies and individual organisations for various research projects and consulting support predominantly related to the not-for-profit human services industry, Not-for-profit financial and performance reporting, sustainability and outcomes reporting, and policy and practice related to those areas. He has been a director and chair of a number of human services and policy organisations over past years and is currently chair of two policy-focused not-for-profits operating nationally in the education sector. He was made a Fellow of the Parliament of Western Australia in 2021.

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[2] Available at: https://www.uwa.edu.au/schools/Research/Centre-for-Public-Value

Paper

What is indexation?

Indexation is a term used to describe changes in a data series – usually cost changes. For instance, many readers will be familiar with the Consumer Price Index (CPI). This is an index calculated by the Australian Bureau of Statistics (ABS) to give us an understanding of the changes occurring in household costs from one period to the next. That is, the CPI figure is intended to tell us how the cost of a household has changed from one point in time to the next. The ABS also calculates many other indices, which often have an industry purpose and are intended to convey information relating to changes in costs, terms of trade and/or other economic activities.

Governments procure services from human services providers (organisations that are usually not-for-profits/charities) in order that those providers deliver services and supports that would otherwise have to be delivered by governments. The industry and governments usually refer to the procurement price (the amount paid by government for these services and supports) as "funding". The funding amount is agreed at iterative contracting points over time, and we tend to consider it more efficient to recontract after an extended period—say, 3 or 5 years—as this reduces the level of transactions costs and increases confidence in service providers. However, the prices of inputs change after the funding amount is agreed and before the next contracting point.

Therefore, when we discuss the term "indexation", we are referring to the percentage increase provided by government funders to human services providers to assist those organisations in remaining sustainable as their costs of operation increase over time and between the creation of new contracts. This indexation is typically calculated as a percentage of funding provided and is usually calculated annually and applied to funding transfers during the course of a subsequent financial year. In effect it usually increases the funding provided by government agencies for contracted service delivery provided by service providers. However, funding never catches up to cost increases as they continue to increase even while the indexed funding amount is being paid. It is only when recontracting occurs that the price can be re-balanced to the actual cost of service delivery.

Governments usually devise a model to determine the indexation amount because there are no extant models calculated by the ABS (or other agency) that calculates the cost changes experienced by human services organisations year-on-year. They should also publish this model so that there is transparency over how indexation is calculated. Additionally, governments often create their model by using a combination of indices calculated and published by the ABS. The idea is that the use of ABS calculated indexes represents a measure of independence from the funding government and a measure of statistical reliability in terms of the calculation made. However, if they use the wrong indices, they can get indexation wrong and place human services providers or the public purse in danger. As such, there are real problems created if the indexes used by governments are inappropriate to the purpose.

Why indexation is important?

Generally, indexes can give us valuable information and insight into the economy by;

- Measuring the expected expenditure by household, industry or elsewhere and can indicate inflation, risk, and health of an economy.
- Informing decision makers in public and private sectors—including households—allowing them to monitor and understand costs and cost drivers for short-term and longer-term planning.
- Signalling social change and technological advancement by reporting on economic changes associated with products or trends.

- Indicating consumer preferences and elasticity of goods. As prices increase, certain goods and services which show little to no change in quantity sold are considered inelastic; those that change in quantity sold are considered elastic. This is an important consideration as certain industries face higher or lower elasticity in the inputs they purchase and so face more or less substantial threats of sustainability impacts accordingly.

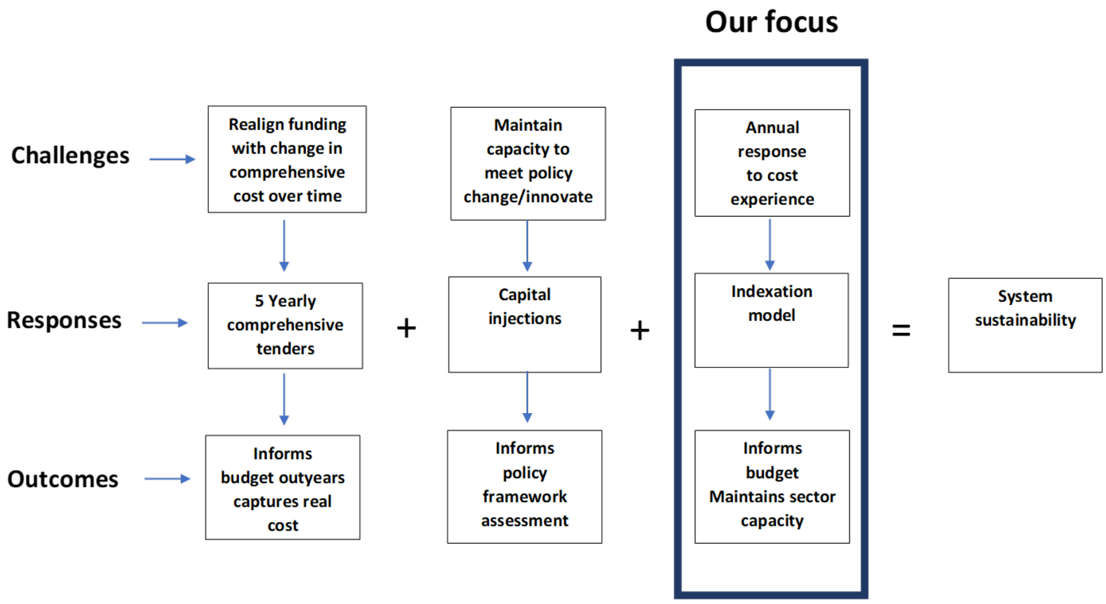
As such, the provision of appropriate indexation is critical in ensuring the sustainability of human service delivery. Sustainability of human service delivery means services are reliably delivered:

- At the right quality
- In the right quantity and
- At the right timing

That is, sustainable human services are reliable, predictable, effective, and efficient.

As readers would know, increases in costs can negatively impact sustainability. Therefore, an appropriate indexation calculation is critical to the ongoing sustainable provision of service delivery for the needs of vulnerable people and communities. However, indexation cannot be used to resolve all sustainability issues. Indeed, there are three elements of sustainability that need to be considered in the context of this discussion. Figure 1 below provides a schematic description of the essential funding drivers of sustainability.

Figure 1. Sustainability Model



These are:

1. The regular re-alignment of funding with costs via recontracting processes (e.g. regular tendering process);
2. The provision of capital injections needed to support service sustainability during an economic shock where costs increase dramatically and/or where income reduces significantly (e.g. the payment of JobKeeper during the COVID-19 Pandemic); and
3. Indexation – the regular increase in funding for services purchased.

Our focus in this paper is on the third element above. However, readers should be aware that the ongoing sustainability of human services delivery relies heavily on all three elements described in figure 1.

How is indexation measured?

Wherever possible, an index should be purpose-built to provide valuable insights into economic activity. There are numerous types of formulae, data collection and sampling methods which must be considered when determining the appropriateness of an index. If readers would like more information pertaining to these aspects, please contact the authors.

As indicated above, the ABS designs, monitors and produces numerous indices at varying time points. These are accessible to the public via their website[3] and are released monthly, quarterly, or annually as appropriate. The most widely known and referenced index is the household Consumer Price Index (CPI) which is often used in discussions around inflation.

An index is compiled by:

- Devising a sample of the represented population and relevant market basket of goods and services. In our case, this would mean a sample of cost data of organisations operating in the human services sector together with information on the prices associated with the costs they incur and the proportion of those costs in the context of their total costs and activity.
- Monitoring prices of products within market basket (e.g. labour costs, office space, IT services). Note that all costs are referred to as prices, even labour.
- Collecting the sample's expenditure behaviour by market basket prices and quantities to be used as expenditure weights. That is, what human services organisations buy and in what quantities. This includes costs such as labour.

Therefore, data is collected on the price and quantity of market basket purchases. This data is used to analyse change across time periods. In large datasets, goods may be organised into 'groups', 'sub groups', and 'expenditure classes' to allow insight such as from a group 'food and non-alcoholic beverages' through subgroup 'bread and cereal products' to expenditure classes, such as 'breakfast cereals'.

Accurate data of price and quantities ensure representative changes in expenditure and insights into drivers of change are developed. Price increases may incite simple substitutes such as buying beef instead of lamb. However, increases in the sale of meat-free products or reductions in overall meat consumption may be responses to price or societal preferences. Likewise, prices may increase, but without increases in income we may see modified behaviours—that is, people change their purchasing preferences because they prefer to spend money on an alternative product if their first choice is too expensive—this occurs most where a good is price elastic.

In the case of the human services sector, inadequate indexation impacts sustainability and hence, quantity, quality and timing of service delivery may change if funding is not increased via indexation in a timely manner. Importantly, directors and officers of not-for-profit human services providers are obliged to act in order to ensure solvency and so must modify their service offering if pricing is not modified appropriately. The development of an index assists in calculating the appropriate funding change.

However, the development of an index is time consuming and arduous for both analysts and those providing the information. Significant amounts of up-to-date and accurate data are required for an accurate index and, if not collected appropriately biases and misrepresentative indices result in poor funding outcomes and sustainability threats.

What isn't represented in an index?

An index is developed with the intention of maintaining a standard of sustainable service delivery as an output. The price and quantity of the market basket are the inputs, and the index simply

[3]Available at: https://www.abs.gov.au/statistics/economy/price-indexes-and-inflation

indicates changes in the cost of these inputs—either as result of the mix of inputs and/or their prices. None of this takes into consideration non-economic resources used (e.g. volunteers), changes to costs outside of the market basket, nor changes to the expected quality delivered as an output.

To use only an index to maintain human services funding would disregard significant aspects of service delivery and operational costs change such as changes in the:

- Demand for services;
- Expected standard of services - including the impacts of complexity;
- Policies which require mandatory but unfunded costs to be incurred such as training or quality/standards audits;
- Industry specific costs such as workforce recruitment and retention;
- Prospective award rate increases;
- Mandatory policy changes such as prospective superannuation increases; and
- New costs which may not be represented in the market basket or the sample which might be caused by changes in business terms, such as IT systems transitioning from capital purchases for one-off licencing to subscription-based fees.

What happens if indexation is miscalculated?

Currently, there is no nationally produced human services cost index and so governments must rely on a composite of ABS-produced indices to calculate their funding indexation value each year or establish and calculate the index themselves. This presents real dangers in relation to sustainability if the indices chosen are not appropriate to the purpose. **That is, the indices chosen do not represent the cost changes experienced by the human services sector.**

Given their purpose in ensuring informed decision making, an index which misrepresents its intended use can have severe and detrimental impacts. These impacts compact over time with inappropriate indexation accumulating year-on-year and decreasing sustainability accordingly. Therefore, the re-contracting point is the only stage where the cycle can be broken if the funder gathers sufficient real-time cost data.

How do we get indexation right?

Understanding the mechanisms that inform the creation of an index and what they represent allows us to better develop and use these calculations. Indices, as calculated by the ABS, are sound in method and analysis, but if we were to use such an index inappropriately, we would be misrepresenting both indices and misdirecting any decisions based off this information. For instance, CPI represents cost increases experienced in operating a household NOT a human services organisation and yet a number of governments use this index as part of their annual indexation calculation and so miscalculate the indexation value required to maintain service sustainability.

Indices are only representative of their sample. Hence, getting indexation right in human services means developing a purpose-built human services index which could appropriately represent the real cost increases and drivers for the system as a whole.[4]

Developing a fit-for-purpose indexation method is costly and demanding. However, existing resources are already developed by statistical agencies such as the ABS who could undertake and maintain the development appropriately, accurately and with minimal comparative impact as

[4] Please see **Economics Paper 2: Why CPI and WPI are not an Appropriate Basis for Human Services Funding Indexation** for further information regarding the current methods used by some governments to calculate annual indexation.

much of the data is collected for other indices. Additionally, getting indexation wrong will cost governments much more in the long run as they have to make good where sustainability causes service delivery disruption.

The development and use of such an index would require government and the human services sector to collaborate with the ABS. Additionally, creating a fit-for-purpose index in support of sustainable human services funding ensures the index formula:

- uses a representative sample of the population;
- uses a market basket of goods and services used by the sample and population;
- is able to be used to estimate the increases in costs which have been incurred in operating a human services organisation; and
- is seen as legitimate by service users, governments and human service providers.