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Challenging Existing Frameworks for Price Indexation in Australian Human Services Procurement: Achieving Sustainability

David Gilchrist & Clare Feenan

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Contact Information:

Professor David Gilchrist
Director, Centre for Public Value
University of Western Australia

E: david.gilchrist@uwa.edu.au
M: +61 404 515 270
W: https://www.uwa.edu.au/schools/Research/Centre-for-Public-Value

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Statement of Interests:

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 sector, 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.

Ms Clare Feenan is Research Manager of Centre for Public Value. She holds a Bachelor of Science (Statistics) from RMIT, Postgraduate Certificate of Business (Economics and Econometrics) from Monash University and is undertaking Master of Economics at University of Western Australia. Clare has extensive business operations and analytical experience including auditing, compliance, and profitability. Clare is passionate about the non-profit sector and achieving sustainable operations through data analytics.

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Key Insights

The most vulnerable people and communities rely on timely, reliable, and appropriate human services in order to live their lives (e.g. aged care, disability services).

Charitable organisations are largely the providers of Human Services which is a diverse and complex industry ingrained with historical underfunding and pressured by growing need.

Sustainability framework required for human services includes appropriate indexation policies, capital injections, and 5 yearly comprehensive tenders. This would support sustainability in long term planning, business decisions, finances, and charitable purpose.

Current indexation models used in Australia are inadequate and inappropriate. Their continued use over time by governments means significant shortfalls in funding are built into the funding base and future applications of indexation retain this shortfall. Human services providers bear this cost and associated risks with service users.

Recent economic events including COVID-19 impacted the financial sustainability of human services providers as well as other industries in the economy. These events emphasised the innate lack of sustainability rather than caused it.

Neither new nor a surprise: inadequate funding by indexation has been identified by peak bodies and other organisations across Australia for a number of years. The indexation failings over time cumulate and become major funding shortfalls which are reflected in service delivery. Significant reports have been published over time describing these impacts.[i]

Insufficient funding directly impacts decisions on operations, finances, and strategy over time. These impacts have flow on effects for sustainability, efficiency, and effectiveness. These pressures are then embodied in the quality and/or quantity of service provision.

Financial pressures reduce opportunities for organisational innovation and investment and increase the challenges in employee recruitment and retention—in turn this increases costs, reduces the service mix and increases risk to the sector as experienced, trained personnel leave.

Indexation is retrospective not prospective and hence inadequate indexation not only fails to support increased costs as incurred, but also fails to support future sustainability of services.

Increasing need of services also impacts the appropriateness of indexation. As demand increases, additional funding is required to ensure the standard of service is maintained. Increased costs of recruitment and retention are not factored into an indexation rate which does not consider these prospective cost increases.

The current indexation models used by state governments across Australia do not work to a significant extent because they are not relevant to the Human Services Industry. Variations of CPI/ WPI and arbitrary rates may ease government administration but are applied outside of intended and designed use.

Household consumption is the basis of the CPI which differs significantly to human services costs, while the WPI misrepresents the real cost of labour to a business. Average wage as represented by the WPI excludes on-costs paid by organisations and the sample workforce composition differs to human services providers. Hence the ABS creates industry specific indexes.

Creating an index which is representative and accurate is time consuming, costly, and requires monitoring and regular revision. It is critical that the index reflects the intended population.

[i] For instance, see: https://www.uwa.edu.au/schools/Research/Centre-for-Public-Value/Publications for the WA Not-for-profits Landscape 2020 Report and the 2021 NDIS Pricing Review: Western Australian Costs Assessment – Drivers of Cost Increases

Quick Guide: Why the current indexation model does not work

Western Australia, Queensland, Tasmania, the Northern Territory, and the Australian Capital Territory governments current Human Services Indexation formulas are combinations of the Australian Bureau of Statistics (ABS) state and capital city Wage Price Index and Consumer Price Index. New South Wales, Victoria, and South Australia use arbitrary rates not reflective of economic price changes.

Table 1. State Wage Price Index compared to REAL human services wage expenditure

Wage Price Index (State)		Human Services (Wage Expenditure)
✓	Wage Inflation as cost to business	✓
✗	Mandatory superannuation contribution increases	✓
✓	Represents multiple industries across the state	✗
✗	Minimum wage overrepresented (and increases)	✓
✗	Female dominated workforce	✓
✗	Business paid maternity leave	✓
✗	Workers' compensation payments	✓
✗	Recruitment and retention costs	✓
✗	Penalty rates and allowances	✓
✗	Bonuses and benefits	✓
✗	Training and personal development	✓
✗	NDIS compliance (training and admin costs)	✓
✗	Increases reflected from success of outcome	✓

Table 2. Capital City Consumer Price Index compared to REAL human services expenditure

Consumer Price Index (Capital City)		Human Services (Non-Wage Expenditure)
✓	Outcome: household utility in living standards	✗
✗	Outcome: demand and quality of service provision	✓
✓	Represents capital city average household	✗
✗	Represents state-wide Human Services organisations	✓
✓	Represents optional purchases (alcohol, take away, holidays)	✗
✗	Overrepresentation in essential items (financial services, communication, housing)	✓
✓	Elasticity in discretionary and discretionary spending	✗
✗	Business related purchases (subscriptions, PPE)	✓
✗	Timely response to market goods and prices	✓
✗	New goods and technology	✓
✗	Significant savings or investment component (land, capital goods)	✓
✗	Taxes	✓
✗	Interest Charges	✓
✗	Second hand goods	✓
✓	Subsidised by flexible wealth and debt management	✗

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Purpose of this report

The aim of this research is to demonstrate and better understand why current indexation methodologies are inadequate. The Consumer Price Index (CPI) and Wage Price Index (WPI) are inappropriate in relation to human services industry pricing indexation and arbitrary indexation rates are not reflective of economic changes. In understanding the nature of each of these indexes relating to input, output, and methodology it can be seen that the human services industry requires an alternative approach to funding indexation which includes considering of the real costs of service delivery, demand and service quality.

This report shows that the current indexation rate and formula is inadequate and inappropriate. It has caused a significantly underfunded social services industry through cumulative inadequate indexation increases year-on-year. A more appropriate cost index formula is possible if all human services economic conditions and variables are understood. An appropriate indexation model would go some way to establishing a sustainable funding basis for human services in Australia.

Why is this paper necessary?

The non-profit and charitable human services sector is a vulnerable industry—this is why government must fund the resources necessary to meet the costs of service delivery as the market will not provide them. To rely on government funding and donations, means an inherent lack of control for service providers in planning and responding to the increasing demands in service delivery. Unmet needs of clients do not disappear without a service, remain consistent during waiting periods, nor are they isolated from additional indicators of inequality.

Engaging with and providing services to community members in vulnerable circumstances, the human services industry delivers considerable positive impacts on community wellbeing. Inaccurate indexation has a cumulative impact in underfunding these organisations and place the services and supports required at risk. As such, the flow on effects have consequences which are often worn by very vulnerable service users. This in turn may reduce the quality and effect of service delivery by means of: staff shortages; inadequate training for staff; lack of resources; and may create starvation cycles in the organisation. It can also impact staff by additional stress levels, workload and burnout.

Further technical information

Readers are also encouraged to access additional publications by the Centre of Public Value available on our website. [ii] These publications draw on and add to further insights and mechanisms mentioned-some, briefly- in this report.

The *Working Paper Series on the Economics of Human Services* is designed to provide people with skills outside of economics with brief explainers relating to important economics topics that effect the sustainability of the human services sector in Australia.

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

Several state and territory specific reports on the value of human services sector, contributions and impacts are available– the most recent at time of publication:

> Gilchrist, David, J., and Clare T. Feenan. 2022. "Tasmania's Community Services Industry: Sustainability and Market Failure Risk", a report developed by the *Centre for Public Value UWA* for the *Tasmanian Council of Social Service*, Hobart, Australia.

Which frames the sector's sustainability and risk, to precede analyses of inflation and indexation in some of those states such as the report below:

> Gilchrist, David, J., and Clare T. Feenan. 2022. "Tasmania's Cost Indexation for Government Purchasing of Community Services", a report developed by the *Centre for Public Value UWA* for the *Tasmanian Council of Social Service*, Hobart, Australia.

One further additional report accompanies document as it examines cost indexation and provides technical information pertaining to the models, process, and requirements and can be seen below:

> Gilchrist, David, J., and Clare 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.

Are costs actually rising for human services providers?

Recent research into Western Australia's rising costs in the disability sector identified changes in business structures and requirements as significant factors in the rising costs.[iii] There are many parallels between the findings from research and the broader Community Services sector and are consistent across states. Rises in labour costs were the result of wage increases by the ERO and additional labour required. Use of labour increased due to NDIS requirements including training, administration, and reporting also requiring recruitment of additional personnel.[1] Employee vacancy rates led to increased costs by utilisation of agency staffing with increased costs and recruitment costs to fill positions.

Facilities and marketing both demonstrated a rise in costs over recent years. This could be due to recovery from COVID-related decrease and rise in market competition. Increasing requirements in compliance, quality control, and auditing have had a significant effect on the industry to adhere to, with additional requirements of employing appropriately skilled personnel to undertake processes.

What is a cost index?

A cost index is a retrospective number calculated to represent the change of costs to maintain a certain standard of utility over a period of time. That is, it demonstrates changes in the cost of inputs associated with producing a particular output. To maintain the provision of that output sustainably

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[iii] Please see our report *The 2021 NDIS Pricing Review: Western Australian Costs Assessment – Drivers of Cost Increases.* Available at: https://www.uwa.edu.au/schools/-/media/Not-for-profits-UWA/NDIS-and-Disability-Services/Working-Paper---NDIS-Costs-Commentary.pdf and *NDIS Green Paper No. 6: Cost Differentials, Cost Pressures & Labour Competition Impacting Western Australian Disability Service Delivery,* Not-for-profits UWA. Available from: https://www.uwa.edu.au/schools/-/media/Not-for-profits-UWA/NDIS-and-Disability-Services/GP6---WA-Cost-Differentials.pdf

over time, at a constant quality and in a constant quantity, the price paid for the output must be changed to meet the true cost of inputs. As such, it measures the minimum amount of additional expenditure required to sustain a standard of utility taking into account the costs experienced. All indexes begin with the base period as a reference point up to any past or present point in time.

Of course, such an index looks at historical increases in costs. Therefore, the calculation itself and any subsequent increased payment for human services based on that index only bring the service provider up to the starting point with respect to the cost of service delivery. An index does not meet prospective increasing costs, but simply maintain the value over time. Therefore, human service providers must fund cost increases going forward out of their reserves.

There are many ways to calculate an index. Formulas, sampling, and methods of data collection require resourcing—both in terms of who collects the data and analyses it and who provides the data—and can significantly impact the accuracy and relevance of the index developed. Biases may arise from the measurements which can cause over- or underestimations in costs, while drifts from the true index value may cumulate over multiple iterations. As any with measurement, the aim is to ensure that it accurately measures what it is claimed —and intended —to measure.

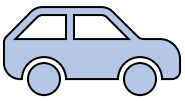
Costs do — and will continue to — rise across an economy. This is known as inflation. In order to maintain purchasing power in a contractual agreement over time, the agreed payment at time of contract is annually adjusted based on changes in the economy. Adjusting for the change in expenditure for the same output is known as indexation. Without appropriate indexation, increases in prices lead to increases in costs which cannot be sustained and delivering the same level of output is then unlikely.

A rise in costs with an inadequate response has similar results to a rise in costs which go without a response. Both scenarios lead to fundamental underfunding and an inability to deliver the same level of output. In the case of human services, this would be a failure to deliver a consistent level of service quality, quantity, and timing to those who need it.

There may be multiple factors involved in the capacity of a human services organisation to respond in times of price rises which are not met by appropriate indexation. Increases in costs impact organisations differently based on resources, adaptability, responsibilities, and the amount of information available which do not translate to a consumer's preferences although often compared as the same economic model by many decision makers.

An example?

Say for example, the price of fuel increases (can you imagine?). From $1.50/ L to $2/L —an increase of 25%. To a regular driver, there are a few options to respond to such a price increase as shown by the three consumers below…

Consumer A	Consumer B	Consumer C
		
Use the same amount of fuel	**Spend the same amount of money**	**Use less fuel and pay some increased costs**
• Increase in fuel costs by 25%	• Reduce car use by 25% to save on fuel costs	• Combine reduced car use and increased fuel costs
• Utility calculation shows preferences in transport and restrictions in non-economic resources	• Utility calculation shows preferences to money and economic restrictions	• Utility calculation shows preferences to money and transport with economic and non-economic restrictions
• Reduce savings, increase debt, or reduce spending of optional purchases	• Find alternative transport, reduce transport	• Reduce spending, reduce wealth, and reduce driving by alternative or less transport
• Resources required; flexible movement of spending, wealth, cognitive capacity for planning economic resources	• Resources required; time, cognitive capacity, physical ability, location, and ability to adapt using non-economic resources	• Resources required; time, cognitive capacity, community, location, and ability to adapt using non-economic resources, physical ability, flexibility in spending
• Impacts other preferences which had required money as a resource	• Impacts other wellbeing factors which had previously used time and energy	• Impacts other preferences which had previously used time, energy, and cognitive capacity

We can see that fuel consumption in this scenario is somewhat inelastic as an increase in price causes a reduction in fuel consumption. Although it is not completely inelastic as the increase of price shows an effect on consumption, the decrease is not in proportion to the price increase and some consumers still purchase the same amount of fuel.

Elasticity shows that the consumption of a good is optional. Some people can be fine without the use of fuel or using a significant reduction. The use of fuel or expenditure can be substituted for something else and this choice signifies what is essential and non-essential— otherwise discussed as non-discretionary and discretionary goods.

Preferences shown by each of the consumers are based on the individual's own lifestyle, values, and personal commitments, with the available resources — known as budget constraints. The main resources which could be drawn on were wealth and income, physical and cognitive capacity, time, and energy.

These resources haven't increased proportionate to increases in prices, and hence using these resources then reduces their previous allocation amounts in maximizing utility. That is, even though the consumers decided on these allocations of time, energy, and money, they're still not better off as they were before the price increases.

In reality, a combination of these resources would be reallocated, and impacts would be felt directly and indirectly by the individual and those surrounding them. In the above scenario, we can go deeper as the real world not so simple.

Say Consumer A is unable to reduce the amount they drive due to personal commitments and their occupation. They now revise their budget and although fortunate to have wealth and savings, this causes a delay in saving for a mortgage to subsidize the increased travel costs.

Consumer B begins taking public transport, which is possible from their house but they get home from work later and have a reduction in leisure time. The price of public transport and occasional use of the car remains at about the same amount in costs for transport as before the price increase.

Consumer C begins car-pooling for social commitments. The car pool participants share what is calculated for petrol, but time and energy are now drawn on to organise and now the consumer has restrictions and responsibilities that they didn't before. After some time of ongoing price increases, other friends join the car-pool because their utility calculations changed their preferences.

A little more detail …

If all consumers know if this price increase is short-term or long-term, they can better plan where they would like to spend their resources. Consumer A may trade their car for an electric vehicle, consumer B may move closer to public transport, and consumer C may find be able to work from home some days.

Each of these alternatives require the consumer to have enough information to make appropriate long-term calculations and action their decisions. If it's known that this is a short-term price hike, consumers may use 'band aid-solutions' such as drawing on wealth (or debt) to avoid reallocating non-economic resources (minimal lifestyle changes) or saving a drive to the shops by eating what's at home (minor change). Any possible impacts may not seem so bad knowing it's only temporary.

Likewise, if there had been advanced warning of fuel increases, consumers could have begun planning and considering reallocation of resources earlier. This would have smoothed consumption and reduced shock of immediate demand of resources.

However, imagine it's unknown how long the price is increased for. This drives uncertainty and increases other prices the consumers pay. Shipping and logistics increase the prices of food, bicycles are more expensive because of demand, and public transport is crowded because demand has outgrown planned infrastructure upgrades. Now not only is the challenge the initial rise in the price of fuel, but there are additional indirect impacts on reduced resources and utility.

How do we use cost indexes?

A cost index is an economic indicator which provides insights into expenditure and may assist in economic decision making. It is an estimate only. They are often used to estimate inflation in an industry and be a tool for forecasting based on cost trends—if we assume the costs keep rising by their historical average for instance.[2] If a price index clause is used in a contract, a cost index may also provide a basis for the adjustment of prices.

Cost indexes may be used by anyone to measure and calculate historical growth in costs and expenditure and as a means to manage sustainability in multi-year contracts. Multi-year agreements must have some form of remuneration increase for the service provider otherwise they are not

sustainable. The use of an index allows budgets and forecasts to be in line with growth and appropriately plan, budget, and fund as necessary. However, as indicated above, it is important to be aware that indexes are a basis for forecasting NOT a representative of future cost increases.

Index numbers cannot be compared across unrelated areas and are a measure of proportionate change in two or more historical time periods. A price or cost index can be used in the private sector, public sector and households to measure anything from the economy's inflation, product demand, or a cost of living. They can be used to analyse growing costs and have influence on wages, policy, interest rates, funding and more.

They cannot be used to assess historical cost growth in unrelated areas—the historical cost data used and the calculation method applied must be relevant to the particular industry.

What does the ABS do in this area?

As stated, a cost index is a measure of historical costs, it can also represent changes in the purchasing power of a dollar over time.[3] Types of index uses range from informing the broad public such as those calculated by the ABS in relation to industry-specific uses which in turn help business in forecasting expenditure on projects and investments.

At the national and state/territory levels, the CPI and WPI are often discussed in relation to inflation and wages growth for the entire economy. They are used as shorthand to help communicate whether the economy is likely to be healthy or not. They cannot be applied to specific industries, sectors or other subgroupings of the economy as the relationships between the numbers and activity are not sound. This is discussed more below.

The ABS calculates multiple indexes quarterly and annually – and now monthly – to provide timely data on cost and price movements. These indexes are used as economic indicators for businesses, organisations, analysts, academics, and policy makers as well as the general public in decision making.

The calculation of these indexes is undertaken using statistical operations that have been devised over many years and been shown to be relevant to their purpose. For instance, all price indexes the ABS produce are in the Laspeyres-type formula which is used by most statistical agencies.[4] This is then usually weighted for relevance and chained for smoothing over extended time periods.[5] Biases are estimated using the Fisher index which requires more data, however is more accurate. It is not necessary for the reader to appreciate the nuances of statistics here but to be aware that the process of arriving at a useful index requires that it:

- Uses good data
- Is calculated specific for its use
- Is not applied outside of its specific purpose
- Is understood by those using it

A brief review of the ABS site will demonstrate that the indexes used by business are very specific to their purpose. For instance, the indexes published by the ABS can help identify key cost drivers and pressures for local and domestic economies while international trade price indexes measure changes

in import and export prices paid and received for merchandise to and from Australia.[6] Taxes, policy frameworks and trade deals use these indicators closely to ensure sustainability and sound business and economic decision making, as well as informing businesses in international markets.

Producer Price Indexes (PPIs) measure the change in prices for industries producing goods and services in comparison to consumption costs. The ABS produces PPIs for construction, manufacturing, services and mining industries. Note, these industries do not apply general, economy-wide indexes in the way that governments do to index funding. Note also that the ABS produces these indexes for industry and this can be a logical step for the human services industry.

The Healthcare and Social Assistance Index is a subindex of the Producer Price Index.[7] This is calculated as part of the service industries. The index also includes its own subindexes of; medical services, general practise and medical services, specialist medical services, pathology and diagnostic imaging services, other allied health services, and childcare services.[8] Other services indexes under the PPI are: accommodation and food services; transport; postal; warehousing; rental; hiring and real estate services; professional, scientific and technical services; and higher education in education and training services. Each of these indexes is also comprised of further subindexes representing various cost drivers.

Also representing key cost drivers or subgroups of the economy are indexes such as Total Value of Dwellings and Selected Cost of Living Indexes. Total Value of Dwellings measures changes in the housing property markets across city, regional and state geographical areas.[9] Selected Cost of Living Indices represents various types of government transfer recipient and self-funded retirees as the CPI represents the average household.[10] Cost drivers impact these groups differently to the general population and their main source of income is government funded.

Why don't the current indexation methods work?

The current funding indexation rate for Non-Government Human Services in many states and territories in Australia as funded by the respective State Government are calculated based on a mix of CPI and WPI. Western Australia, Queensland, Tasmania, the Northern Territory, and the Australian Capital Territory governments use these formula indexes which are updated annually before the state budget, while New South Wales, Victoria, and South Australia arbitrary rates not reflective of economic price changes. The CPI and WPI figures are found in the ABS's calculations and the respective state governments decide the proportion of the two indexes applied in arriving at the indexation rate for any year. Current formula proportions used are shown below:

$$Indexation\ Rate = 0.8 \times WPI + 0.2 \times CPI^{11}$$

$$Indexation\ Rate = 0.75 \times WPI + 0.25 \times CPI^{12}$$

$$Indexation\ Rate = 1.00 \times CPI^{13}$$

These seem to be reasonable indexation methodologies as they use indicators of inflation and wages and is transparently calculated by an unbiased and independent body. These indexes can be consistent and simple in the administration and application. That is, the cost to government and the

industry are minimal in the application of an indexation formula calculated by a third party. The weights may be decided on by the estimated expenditure on labour and non-labour related costs to ease administrative burden.

However, the use of the CPI and WPI are not relevant to that which is purported to be measured—historical cost movements impacting the human services industry. Human services organisations do not act as households and face growth in demand of services and changes in delivery policies, compliance requirements, and wage rates. Likewise, the cost to business is not represented in the WPI, nor does the WPI represent the workforce in the human services industry.

The use of arbitrary figures of indexation are likewise inadequate, and arguably even more so as they have zero input from real economic fluctuations. These figures may be set and agreed on years ahead and reflect actual activity to an even lesser extent. A shining grace in this methodology is that it is transparent, and organisations can plan and expect the payment changes, although it is sufficiently an ease of administrative burden and budget planning for governments. South Australia is a clear example of this method since 2017 with the indexation rate at 2% until 2019 and increased to 2.5% until 2025. [14]

What is the Consumer Price Index?

Readers might revisit the schedules provided above in the Quick Guide to assist in their review of this section. Additionally, please contact the authors if you have any questions, comments or wish to discuss any aspect of this section or, indeed, any part of the report.

The CPI is very well known and recognised. It is often used as an indicator of inflation. Although considered a measure of a Cost-of-Living Index (COLI) it is more correctly a Cost-of-Goods-Index (COGI) for households in its calculations and representations. In Australia, the CPI is calculated by the ABS for each capital city and the nation.[15] The CPI is designed to be an indicator of expenditure required for the average household to maintain a particular standard of living.[16]

The CPI measures the percentage change in the price of a basket of goods and services consumed by the average household. The CPI has been criticized for having both an upward bias (overstating inflation) and a downward bias (understating inflation) depending on the perspective of the user. Biases arise from many factors such as the formula used, the sample, and data collection. Using a fixed basket of goods, price data and household expenditure is collected to represent the changes from the reference period.

How is the Consumer Price Index compiled?

The CPI is calculated using a Laspeyres-type formula. Retailers' price data is collected by the ABS in the form of personal visits, online and telephone collection, and administrative data, including scanner and transactions data. Weightings are comprehensively collected by using the Household Expenditure Survey (HES) conducted every 6 years and other years by the Household Final Consumption Expenditure (HFCE)[17]. Therefore, the data used may not be appropriately representative of the time and context of the rising inflation in Australia.

Biases arise and represent the difference between the calculated CPI and true COGI. Biases are well documented in CPI and the literature references 7 types: substitution bias, elementary aggregate bias, outlet substitution bias, quality change bias, new product bias, and inseparable property of item bias, and lack of individual relevance.[18][19][20] Each bias indicating that the calculated CPI is less relevant or accurate to the intended measure.

Why is the Consumer Price Index not relevant in estimating historical cost increases for the human services industry?

As the CPI is a representation of household consumption and spending, it is not representative of the costs of operations for human services. The CPI is measured on prices of goods consumed by households while organisations outside of the household sector operate very differently. Better used as an indicator of overall inflation, both the basket and use of items is not proportional nor relevant to expenditure in the human services industry.

For instance, methods used to calculate the CPI can be critiqued to hold biases compounding the lack of relevance. The bias referred to as lack of individual relevance bias points to the average household's behaviour being irrelevant to households which differ from the average. Likewise using the average household's behaviour is not relevant to bodies outside of the private household sector. Any costs of goods or behaviour of organisations are not represented such as: office supplies, use of technology, insurance, training, and audit and compliance measures. While there is an overrepresentation of unsuitable household expenditure that relates to tobacco, alcohol, and leisure activities.

The nature of organisations in the human services industry is that they do not act as standard businesses nor households. That is, the demand of service does not fall away at increase of price or decrease of supply/[21] This adds another level of complexity when analysing appropriate indexes as the utility of a household represented by CPI could be cross referenced as the standard of service delivery per client. If client need or service demand is held constant (such as household utility is theoretically in COLI), an index can be measured on rising expenditure and prices. However, if there is also rising demand of services, either the quality or quantity of services will decline (utility in a household), or the organisation's resources which also have sustainability implications.

Economic challenges in rising costs faced by organisations may also be those faced by individuals needing services. This dynamic of supply and demand is a combination of funding being set by the government and not representing demand or activity, and services users are not making consumption decisions as it is a need driven by external variables over which they have no control.[22] If social service organisations cannot afford to deliver services, the service user absorbs the impact.[iv]

Essential spending is often completely non-negotiable in human services delivery, and non-essential spending is minimal. Discretionary and non-discretionary spending can be an indicator in this context of what prices have increased, how, and their impacts. The ABS considers non-discretionary spending

[iv] The NDIS is a good example of this economic phenomenon. Please see our "Green Paper No. 4: Demand, Supply & the NDIS: A Matter of Words?". Available at: https://www.uwa.edu.au/schools/Research/Not-for-Profits-UWA/Publications

as goods or services which are purchased because they: meet a basic need (food, shelter, healthcare), are required to maintain current living arrangements (car maintenance, school fees), or are a legal obligation (compulsory insurance, stamp duty).[23] Discretionary goods or services are those which could be considered optional purchases, such as tertiary education, take away meals, alcohol, and holidays.

Changes in underlying inflation represented by the CPI represents rising costs of greater significance for the human services industry. Discretionary inflation has grown by 6.8% annually in the latest release in December 2022 while non-discretionary inflation has grown by 7.2% in the same time frame. As CPI is a combination of expenditure in both of these categories, it has risen by 7% [24]. This shows that the increase of necessary spending has increased above the CPI which is held by the weight of inessential spending. As human services industry organisations engage in minimal discretionary spending, the CPI fails to represent the market basket of human services providers. As the price of necessities increase, the expenditure increases leaving less marginal spending for new resources, growth, training, and investment spending.

The data collection process for the CPI indicates a lack of timeliness potentially impacting accuracy in some areas which would further compound the irrelevance of the indexes in relation to the human services industry. The HES used for weighting is conducted every 6 years, and although the ABS began reweighting annually since 2017 using the HFCE, it is not considered the best fit. This process would further impact biases which require accurate and up to date market baskets for price collection. The new goods bias would severely impact the human services industry which arises when a widely purchased new product in the market is not captured until sometime later. The price of this items is then usually much cheaper when captured in the delayed market basket also misrepresenting the reduced purchasing power at point of purchase. The human services industry requires timeliness in funding changed for appropriate responses to rising cost and demands.

Misrepresentative weightings might as well be misrepresentative prices as either way, it produces misrepresentative expenditure and indexation. With an example prepared earlier, allow further explanation below.

For the sake of simplicity, a household's fuel expenditure budget is 5% of total expenditure at $50. When $1.50/L, the household can purchase 33.3L of fuel within budget. As the price increases to $2/L, the same expenditure weighting would only allow 25L of fuel which was the case for consumer B. For consumer A to purchase the same amount of fuel, the cost increases to $67, an increased weight of 33%. Consumer C had both increased weighting on fuel as well as substituted expenditure from other areas.

Without appropriate weighing, these changes aren't suitably captured. An index may assume that a household spends $67 on fuel and misses the possibility that they research fuel prices, purchase bicycles, use public transport, reduce other spending and any other updated behavioural changes since the last weighting. These are elementary aggregate bias, substitution outlet bias, and substitution bias.

Finally, the CPI does not take into account the use of, or addition to, savings, wealth, or debt. Each of these are a variable in the dynamic of maintaining a standard of living or utility of the household. In a

tough economy a household may be able to leverage off of their relationship with debt. Either adding to debt via loans and credit cards or reducing repayments of debt they already have increased mortgage repayments. Savings can likewise be lent on. A household may reduce the amount they save or spend some of their savings in order to maintain the standard of living or utility of the household. The relationship with wealth is also unable to be tracked in the CPI by nature and methodology. Maintaining assets, selling of assets, and unpaid labour and services consumed by a household are not captured in CPI. In human services, it is less likely an organisation can make these decisions and alterations feely to maintain the expected standard.

What is the Wage Price Index?

The WPI is used as an indicator to the changes of the price of labour in the Australian labour market. It measures change over time in wages and salaries for employee jobs, unaffected by changes in the quality or quantity of work performed. The WPI is calculated by the ABS by state/territory and is weighted to arrive at a national figure. As the major measure of inflationary pressure on wages and salaries, it is one of the preferred indicators when assessing monetary policy such as setting award wages by Fair Work Australia and various policy measures applied by the Reserve Bank. [25]

The primary limitation of the WPI is that the broadness of the market basket of wages and salaries fails to accurately reflect specific sectors, such as human services. Additionally, the WPI does not capture all labour on-costs paid by businesses related to wages which hinders its relevance when used for costings of business. The WPI for any two periods can be used to measure the change or movement between the periods. If the WPI is higher or lower in one place or period, it does not mean wage levels are necessarily higher or lower, but the changes in growth are higher or lower.

How is the Wage Price Index compiled?

The WPI is also a Laspeyres-type index covering wage and salary costs. Data for the WPI is collected using quarterly mail-out, mail-back questionnaires to businesses selected by stratified samples from the ABS Business Register. Businesses are then instructed to select a sample of jobs from their payroll by stratification. The survey sample is refreshed annually to ease the burden on selected businesses and to help ensure the WPI remains relevant.

Fundamentally, the WPI is calculated to measure the change in the price of wages between the current period and the price at a given base period with the quantity and quality of labour services held constant. It is an index for the total hourly rates of pay excluding bonuses. To ensure that the quality and quantity of labour services are held constant, changes in the composition of the labour force, nature of work, hours worked, quality of work, location of work performed, time of work performed, and changes in characteristics of employees are all excluded from the index.

Why is the Wage Price Index not helpful?

In its calculation, the WPI is designed to represent the average workforce by geographical location and therefore is not a representative index for any industry unless it is calculated for a specified WPI subgroup. The WPI is based on wages and salaries as a true index and does not include on-costs as paid by businesses. The composition of the human services workforce and job quality differ from the

WPI samples which represents the average state/territory or national labour force. These discrepancies have many implications on the use of the WPI in determining increases to human services funding. The ABS states:

> "The WPI may also be used in indexation arrangements in business contracts, where the WPI may account for inflation of the wage component of costs." [26]

Already a female dominated industry, the human services sector is experiencing further increasing ratios of women to men employees in recent years.[27] There are more part-time employees and primary care givers in this industry which signifies a disproportionate and increasing amount of parental leave comparted to what is represented in the WPI. This is significant in terms of the costs of recruitment, retraining, and backfilling positions for employee leave, while in human services job quality continues to decline and recruitment and retention remains a significant cost.

Further to that, employee benefits, such as optional business paid parental leave, are unable to be provided in underfunded organisations. Attracting and retaining the right people for positions is crucial for the health and success of any business. If competitive salaries and benefits can be found elsewhere, quality trained and experienced individuals may reconsider engaging in the human services industry.

Specific to female dominated industries are concerns in areas such as additional paid parental leave and pressure to rectify the wage gap. A lack of additional or negotiable benefits such as paid parental leave or holidays could both deter suitable candidates or put further pressure on employees to switch industries who would benefit from such schemes. Low wages also represent low super contributions exacerbating a perennial problem of underfunded superannuation held by women workers.

By ABS design, the WPI is intended to measure changes in the price employers pay for labour that arise from market factors. Specifically, the changes in the price of wages and salaries and does not include wage-related costs to businesses such as: superannuation, leave coverage costs, recruitment and retention costs, penalty rates, workers' compensation costs, non-maintainable jobs, supervision, or personal development and training. A variation in any of these on-costs proportions is not reflected in the WPI nor in any funding increase influenced by the WPI.

Inappropriately applying the WPI has other impacts as a result of pay rates and increases. As much of the industry pays minimum wage or award rate, the Fair Work Commission's announcements of a 5.2% raise of the minimum wage also disproportionately affected the human services industry.[28] This comes after the realignment of pay rises from the Equal Renumeration Order (ERO). Superannuation, as an on-cost, is also not represented in the WPI which will be increasing over coming years. The compulsory superannuation guarantee contributions will have increased by 2.5% from 2021 to 2025 or by 0.5% each year.[29]

Under-indexing and hence underfunding in operations naturally flows through to impacts on job quality and wages. Organisations may rely—sometimes heavily—on volunteers in their workforce, while wages and salaries are kept modest in order to stretch funding as far as possible.[30] In an underfunded environment job quality indicators such as; wage, working conditions, desirable hours

and benefits are compromised. For current or prospective employees these roles are less desirable as may be impacted by these factors or seek roles outside of the industry.

The human services industry as a non-profit sector is heavily reliant and compliant to government funding and policies. For any policy changes by reigning governments, the organisations must abide within their funding budgets. Any costs from such changes are worn by the organisations, which in turn pass them down directly or indirectly in a quality or quantity service reduction. These costs and changes can be seen in such circumstances as NDIS launch and compliance training and costs. Employees and organisations complete this training as policies are rolled out and are not compensated by any funding subsidies. These such discrepancies can be worn in short term, but any habitual underfunding may become cumulative for regular costs and further outweigh variations to funding structures.

This opens to an obvious issue with regard to utilising indexes of any sort to ensure sustainability of social service delivery—indexes are retrospective not prospective and so cost increases are felt before adjustments to the funding levels are made thus reducing sustainability regardless of the extent to which the index used is appropriate.

What is done across Australia?

Each state and territory in Australia indexes human services differently. Although the true indexes would vary across states and territories depending on needs of the communities served, a lack of transparency in terms of the calculation process and data used raises concerns about the legitimacy of indexation calculations and, therefore, changes decisions made by those charged with the governance of social service organisations.

The CPI and WPI mixed method is used by Western Australia, Queensland, Tasmania, the Northern Territory, and the Australian Capital Territory.[313233] Western Australia and Queensland use weighting of 80% WPI and 20% CPI, Queensland and Northern Territory use 75% WPI and 25% CPI, and Tasmania 100% CPI.[34] However, due to inflation in 2022, after advocacy Queensland received a rise to 5.07%, Australian Capital Territory to 4.43% and Western Australia to 3.53%.[353637] South Australia, Victoria, and New South Wales all used what appear to be arbitrary indexation numbers over recent years. South Australia with 2.5%, Victoria 2% and New South Wales 2%, 1.75%, 2.75% in recent years.[3839] Advocacy also benefitted Victoria and New South Wales for results of 4.6% and 5.5% respectively.[404142].

It is also noteworthy to that this is a developing process and so these figures are relevant at the time of publication and may change as cost increases impact sustainability further.

What are other relevant funding models are used in Australia for publicly funded services?

Public Hospitals mainly use a combination of both block funding and activity funding. The Council of Australian Governments (COAG) agreed to the introduction and phased implementation of Activity Based Funding (ABF) as part of the 2011 National Health Reform Agreement (NHRA).[43,44] Block funding supports teaching, training and research in public hospital and public health programs. In

some instances, for hospitals block funding is more appropriate such as smaller rural and regional hospitals.

Activity Based Funding is the preferred funding model for public hospital services in Australia. ABF is based on the number of weighted services provided and the prices to be paid for delivering those services. This method involves national classifications for service types, price weights, the National Efficient Price that is independently determined by the Independent Hospital Pricing Authority, and level of activity as represented by the National Weighted Activity Unit. That is, the National Efficient Price, is the price per National Weighted Activity Unit.[45]

Recommendations to Australian State Government Indexation Policies

Theoretically, anecdotally, and through quantitative research it is without doubt that Human Services is in need of policy reform for each contracting State Government. One aspect this report is addressing is indexation adequacy on multi-year contracts with State Government Departments.

Below are short-, medium- and long-term recommendations for the state government policy reform we deem vital in the in sustainability and future of the human services industry in Australia.

1) Immediate monetary injections to all organisations in contracts with State Government Departments to appropriately rectify cost differences. This should use appropriate reflective non-discretionary consumption indexation and labour cost increases including superannuation and award rate changes.

AND

2) The Australian Bureau of Statistics to develop and maintain a purpose-specific industry cost index. This index could then be used by governments to understand and support the industry with transparency, meaning and direction. The ABS already samples, collects data, and produces multiple indexes for producers and industries and subindustries across Australia and is appropriately positioned to undertake this task. State governments and industry peak bodies would collaborate to advocate and develop this index.

OR

3) If the above is not possible, a suitable industry index would be required to be calculated annually. This would include appropriate sampling and data collection for analysis and may be administratively heavy on organisations already resource stricken. The Laspeyres formula would be deemed appropriate for data collection and analysis as already used by the ABS. Industry peak bodies would also collaborate with their respective state governments to confirm the relevance of the Laspeyres formula and annual production of the formula. This would require:
    a) The identification and allocation of resources from government in order to support the implementation process and the on-going operation of the scheme, including in relation to financial support to SSOs chosen as part of the panel to contribute their data
    b) The industry and state government to agree a panel of SSOs from which data will be collected with panel members being selected based on the need to represent the industry in Western Australia
    c) The industry and state government agree the data attributes required

d) The establishment of a data collection process (preferably automatic and direct)
e) The establishment of an analysis and reporting process, including the identification of a body to undertake these processes

Wrapping it all up

Appropriate cost indexation of government funding is critical in ensuring the human services industry is able to deliver timely quality services to individuals who need them and maintaining sustainability over time.

The current indexation models are not relevant nor representative of the industry's cost base. Misplaced use of such models has cumulative impacts over time. Organisations become underfunded and their expenditure then reflects this starvation cycle, operating in less strategic and sustainable methods.

The gradual increased unsustainability seems to have been managed through a combination of techniques but the recent economic shocks such are the COVID-19 pandemic, the War in Ukraine, as well as local environmental disasters have significantly increased costs and has brought the lack of sustainability inherent in the Australian human services industry to the fore.

This industry is disproportionately impacted by the rise of costs in necessary expenditure with minimal discretionary spending.

Non-profit organisations do not operate in the same economic framework as businesses do in context of free markets. The individuals using the services also do not have the same elasticity of demand nor buying power as a consumer in a free market. Policy framework and industry specific costs, such as quality assurance, also fall outside the scope of the funding framework.

Whatever the future funding indexation methods may be, monitoring and analysis is required to ensure effectiveness. Organisations who have been chronically underfunded will also require suitable funding boosts to realign income, expenditure and organisational behaviours to sustainable and acceptable levels.

Appendix: Links to relevant UWA Not for Profit Research Publications and Contributions

Centre for Public Value UWA Research Team Website:
https://www.uwa.edu.au/schools/Research/Centre-for-Public-Value

Gilchrist, D. J., Perks, B., 2022, *The Challenge of Sustainability: Queensland's Not-for-profit Sector and the Impact of Growing Financial Pressure,* Not-for-profits UWA Research Team
Available from:
https://www.uwa.edu.au/schools/-/media/Not-for-profits-UWA/Policy-and-Economics/2022-FINAL-Queensland-NFPs-Cost-Increases.pdf

Gilchrist, D. J., P. A. Knight and T. Emery, 2020, *Green Paper 1: Data Assets, Efficiency and the NDIS*. Not-for-profits UWA
Available from:
https://www.research.uwa.edu.au/not-for-profits-uwa#six-years-and-counting-ndis-green-papers

Gilchrist, D. J., 2020, *Green Paper 3: The Value of Quality Sector Analyses*, A Report of Not-for-profits UWA, Perth, Australia. Available from:
https://www.research.uwa.edu.au/__data/assets/pdf_file/0004/3640981/Green-Paper-3-Proxies-for-Risk-6-October-2020.pdf

Gilchrist, D. J., Chand, S., and Emery, T., 2021, *NDIS Green Paper 4: Demand, Supply & the NDIS—A Matter of Words?* Not-for-profits UWA
Available from: https://www.uwa.edu.au/schools/-/media/Not-for-profits-UWA/NDIS-and-Disability-Services/Green-Paper-4-NDIS-Economic-Model-11-March-2021.pdf

Gilchrist, D. J., Emery, T., Perks, B., 2021, *NDIS Green Paper No. 5 NDIS Industry Literature Summary A Review of the Collection of Industry, Government and Academic Reports,* Not-for-profits UWA. Available from: https://www.uwa.edu.au/schools/-/media/Not-for-profits-UWA/NDIS-and-Disability-Services/Green-Paper-5-Grey-Literature-Summary-18-March-2021.pdf

Gilchrist, D., 2021, *NDIS Green Paper No. 6 Cost Differentials, Cost Pressures & Labour Competition Impacting Western Australian Disability Service Delivery,* Not-for-profits UWA. Available from:
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Martinov-Bennie, N., Gilchrist, D., and Tweedie, D., *Board Performance and Governance in Small Not-for-Profits: Report for Participants.*
Available from: https://www.uwa.edu.au/schools/-/media/Not-for-profits-UWA/Regulation-and-Governance/Board-Performance-and-Governance-in-Small-Not-for-Profits---Report-for-Participants.pdf

Chartered Accountants Australia and New Zealand, 2020, *Remunerating Not-for-profit Directors*. Available from: https://www.uwa.edu.au/schools/-/media/Not-for-profits-UWA/External-Research-and-Resources-Contributed-To/2020---CAANZ-Remuneration-for-NFP-Directors_NFP-Insight-paper.pdf

Council of Regional Disability Organisations, 2022, NDIS Annual Price Review 2021-22.
Available from:
https://www.uwa.edu.au/schools/-/media/Not-for-profits-UWA/External-Research-and-Resources-Contributed-To/CORDS-Submission---Annual-Price-Review-2021-22-November-2021-(002).pdf

2020 Commonwealth Bank Not-for-profit Balance Sheet Tool
Available at:
https://www.research.uwa.edu.au/not-for-profits-uwa#nfp-finances

Endnotes

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