

Early Influences On The Development Of A Consumers' Price Index In New Zealand

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Understanding price change is intrinsic to the study of economics. Price data support microeconomic analysis of market structures and macroeconomic analysis of overall price levels and changes. Long-term price series provide insight into changing economic structure and performance. From the early colonial period there is a long history of the collection and analysis of price data in New Zealand. In order that price changes can be used to assess real changes in economic outcomes it is important that price series are both consistent and well understood, lest artefacts of data collection be mistaken for substantive change. In the years since 1840, the methodologies of price collection have changed considerably, shaped by often conflicting demands for equitable wages, inflationary controls, wartime pressures, and international requirements for consistency and comparability. These changes followed a broad arc, gradually transforming New Zealand's price indices from a tightly prescribed list of consumer 'staples' deemed appropriate for the basic living standards of a working class family to a far more objective, positively determined set of data with broad implications for social, economic, and monetary policy.

History and development of the Consumers' Price Index

The early history of price collection in New Zealand was haphazard, and most nineteenth century records of consumer prices and expenditure patterns are

incomplete. The collection of commodity prices began soon after the establishment of a Crown Colony in 1840. For the next 18 years, annual 'Blue' Books recording retail prices were sent to London. After the passage of the 1852 New Zealand Constitution Act, national prices began to be recorded and published. Beginning in 1858, the *New Zealand Statistical Report* annuals were published, each summarising price data for the previous four years. Yet, New Zealand authorities had difficulty in collecting accurate statistics on consumer expenditure – official records alone provided patchy information on consumer prices and expenditure patterns. Rare instances of records on consumer budgets, such as the 1875-1876 Karamea government store ledger book, fill an important gap in New Zealand's economic history by detailing expenditures over a two-year period, in an admittedly atypical group of households.¹ Additionally, in 1893, the government undertook a survey of 146 working class family budgets – the most successful such survey conducted by any government department until the regular Household Expenditure Survey began in the 1970s.²

Despite these early efforts at collecting price information, nineteenth century New Zealand authorities did not know with much confidence what proportion of consumer expenditure was going toward broad commodity categories like food or clothing. They knew even less about how consumers substituted between goods in response to price changes. In comparison to countries such as Britain or the United States, we lack detailed information on consumer expenditure in New Zealand for substantial periods of our history.³

¹ Karamea Store Book, 1875-1876, NP Series 23, Box 5, item 6, Archives New Zealand (ANZ).

² 'Returns of Expenditure by Workingmen' Annual Report of the Department of Labour, *Appendices to the Journal of the House of Representatives* (AJHR), H-10, 1893, pp.40-51.

³ Thomas A. Stapleford, *The Cost of Living in America: A Political History of Economic Statistics, 1880-2000*, New York: Cambridge University Press, 2009, pp.22-58. John Burnett, *A History of the Cost of Living*, London: Penguin, 1969.

In the aftermath of the Long Depression (1879-1896), colonial politicians, administrators, and labour leaders sought 'objective' measures that would help ease industrial unrest. Although the colony suffered through the 1880s, the process of centralisation that followed the abolition of the provincial government system in 1876 extended the state's capacity to address colony-wide problems. Concurrent with state expansion, successive governments recognised that intervention was required to redress growing economic disparities and social unrest.⁴ Central to this process was the landmark Industrial Conciliation and Arbitration Act 1894 (IC&A), which established an Arbitration Court to 'end...the evils of industrial war'.⁵

Intended to settle industrial disputes, the Court soon became an 'important state mechanism for fixing fair wages for breadwinners'.⁶ Initially rulings were derived from the wages paid by 'reputable' employers, but by the early twentieth century, the consensus on 'fair wages' evaporated.⁷ In order to secure wage increases, trade unions argued their necessity based on the increased cost of living. Worried that the increased cost of living undermined the IC&A Act's intent, the Court, in conjunction with the Department of Labour, pioneered early cost of living surveys to provide a statistical basis for assessing workers' demands.⁸ As price indices rose, the Court increased the minimum wage for unskilled labour correspondingly so that workers could retain a constant purchasing power.

⁴ John E. Martin, *The House: New Zealand's House of Representatives 1854-2004*, Palmerston North: Dunmore Press, 2004, p.103.

⁵ New Zealand Parliamentary Debates [NZPD], 1892, Vol. 78, p.181.

⁶ John E. Martin, *Honouring the Contract*, Wellington: Victoria University Press, 2010, p.170.

⁷ J. Holt, 'Compulsory Arbitration in New Zealand, 1894-1901: The Evolution of an Industrial Relations System', in Judith Binney (ed.), *The Shaping of History: Essays from the New Zealand Journal of History*. Wellington: Bridget Williams Books, 2001, pp.152-53; Noel S. Woods, *Industrial Conciliation and Arbitration in New Zealand*, Wellington: R.E. Owen, Government Publisher, 1963, pp.66-67.

⁸ Martin, *Honouring the Contract*, pp.172-73.

Mirroring the haphazard nature of price collection in the colonial period, New Zealand's early price indices were moulded by a variety of influences. Price index figures were first officially released in 1908, when John Findlay, the Minister of Internal Affairs, discussed price and wage increases at public meetings in Wanganui and Wellington.⁹ Three years later, in 1911, James McIlraith's doctoral thesis indexing wholesale price changes between 1861 and 1910 was published as *The Course of Prices in New Zealand*.¹⁰ In the same year, the Department of Labour concluded a two-year budget survey aimed at determining the cost of living for an average New Zealand family. Though the survey was, as the Department admitted, a failure (just 69 of the 1,800 household account books distributed were 'of any practical use'), the data collected provided government statisticians with a starting point for calculating movements in the cost of living.¹¹

One such endeavour was the 1912 Royal Commission on the Cost of Living, appointed by the Massey Government to investigate increases in the cost of living and suggest anti-inflationary measures. The Commission enquired broadly into changes in the cost of living since 1894, relying on data collected during the Department of Labour investigation, McIlraith's book, and expert testimony from 270 witnesses from trade union and business backgrounds. Adjusted for changes in the quality of consumer goods, the Commission found that the cost of living increased 'by at least 16 per cent' between 1894 and 1911.¹² While the figure was considered low by international standards, the report emphasised the impact of higher wages, increased

⁹ *New Zealand Official Yearbook*, Wellington: Government Printer, 1908, p.540.

¹⁰ J.W. McIlraith, *The Course of Prices in New Zealand: An Inquiry into the Nature and Causes of the Variations in the Standard of Value in New Zealand*, Wellington: Government Printing Office, 1911.

¹¹ J.W. Collins, *Inquiry into the Cost of Living in New Zealand, 1910-1911*, Wellington: Government Printer, 1912, pp.7-9.

¹² 'Cost of Living in New Zealand (Report and Evidence of the Royal Commission On)', *AJHR*, 1912 Session II, H-18, p.xcix.

international demand for agricultural exports, price collusion between retailers and importers, and increases in taxation and customs duties.

Among the suggestions for ameliorating the impact of rising prices included the creation of an independent statistics advisory board under the direction of the Government Statistician (a position created in 1910). The Commissioners feared that the lack of a permanent bureaucracy dedicated to statistical analysis reduced the quality and reliability of the country's official statistics. Essentially, they wanted price indices and the bodies that created them to have a greater influence in the determination of economic policy.¹³

Although the government ultimately ignored the Royal Commission's recommendations, the outbreak of World War One in 1914 served to advance the inquiry's proposals. Prompted by surging wartime inflation, Government Statistician Malcolm Fraser published the first official index of New Zealand retail price figures, the *Report on the Cost of Living in New Zealand, 1891-1914*, in 1915. The report served both as a compilation of historical price data and a starting point for a continuing system of price collection and index compilation.¹⁴ The composition of Fraser's index, which monitored price data on 67 'staple' items within the broad categories of food, rent, fuel, and light reflected its primary use as a tool to help the Arbitration Court settle wage disputes. While the historical index only featured data from Auckland, Wellington, Christchurch, and Dunedin, from 1914 prices were collected by surveying retailers in 25 towns, but the index base remained linked to prices in the main centres. The range of price information collected by the Census and Statistics Office (later the Department of Statistics) dramatically increased in December 1918, when Parliament passed the War Legislation and Statute

¹³ 'Cost of Living in New Zealand', *AJHR*, 1912 Session II, H-18, pp.lxxxvii-lxxxviii.

¹⁴ *Consumers' Price Index Revision Report 1993*, Wellington: Statistics New Zealand, 1995, p.13.

Amendment Act. The legislation required the Office to collect a much wider range of price data, expanding the regimen to include household furnishings and ironmongery, public transportation fares, and newspapers.¹⁵

Following World War I, as a founding member of the League of Nations in 1919, New Zealand shared the organisation's conviction that world peace would be achieved through social and political reform. Fundamental to the idea of the 'makeable society' – the notion that the state was central to the construction of an equitable society – was universal access to a 'basic living wage'.¹⁶ Established alongside the League of Nations at the Versailles Conference, the International Labour Organisation (ILO) operated under the assumption that 'universal and lasting peace can be established only if it is based upon social justice'.¹⁷ Central to this goal was the standardisation of social and economic statistics for comparison between nations in support of the ILO's labour activism. While the New Zealand government eagerly participated in these international endeavours, price indices continued to serve an important domestic purpose.

In 1921, a new Retail Price Index (RPI) was created, expanding on the work undertaken by Malcolm Fraser in 1914. The purpose of the revised index was to determine basic wages and their relationship to the prices of staples. In order to determine a 'truly representative' average working wage, wages in different industries

¹⁵ *Consumers' Price Index 1955 Revision*, Wellington: R.E. Owen, Government Printer, 1956, p.12.

¹⁶ J. Van Daele, 'Engineering Social Peace: Networks, Ideas, and the Founding of the International Labour Organization', *International Review of Social History*, Vol. 50, p.435.

¹⁷ 'Constitution of the International Labour Organisation', *United Nations High Commissioner on Refugees*; available from <http://www.unhcr.org/refworld/docid3bbd5391a.htm>; accessed 10 March 2011.

were weighted by the numbers of workers enrolled in trade unions.¹⁸ Price information on a series of prescribed staples (rather than total household expenditure) was collected in another Household Budget survey. As in 1911, the survey was a failure. Twenty thousand household account books were printed, yet only 318 were returned completed correctly, thus the revised index was based on earlier data.¹⁹ Although the RPI was compiled in 1921, the new index was not published until 1924. In the intervening three years the Arbitration Court used the index as a confidential wage-setting tool. The Census and Statistics Act 1926 provided for the prosecution of businesses that persistently failed to comply with the Government Statistician's requests for price information. The provision of punitive powers to the Census and Statistics Office was an attempt to ensure compliance with a government organisation that had no permanent field organisation, and no branch offices outside Wellington.²⁰

Under advice from the ILO, and in light of their previous failures, the Census and Statistics Office undertook another family budget inquiry in 1930. The aim was a revision of the RPI 'to ensure more ready and exact [international] comparability'.²¹ One of the main uses of the information collected in the RPI was the collation of global prices by both national and international organisations. The figures were used in conjunction with international data to trace worldwide price movements.²² In a break from previous surveys, the inquiry was not limited to 'working class families',

¹⁸ M. Fraser to The Secretary, New Zealand Seamen's Union, 20 October 1921, STATS Series 1, Box 29, Record 22/6/15, ANZ.

¹⁹ George Wood, *Progress in Official Statistics 1840-1957: A Personal History*, Wellington: Department of Statistics, 1976, p.76.

²⁰ Prosecution of Firms for Failure to Furnish Price Returns, in STATS Series 1, Box 30, Record 22/30/21, ANZ.

²¹ M. Fraser to Newspaper Editors, 10 February 1930, in STATS Series 1, Box 22, Record 22/1/82, ANZ.

²² J.W. Butcher (Government Statistician), to the Minister in charge of Census and Statistics, 24 February 1943, in STATS Series 1, Box 27, Record 22/1/71, ANZ.

yet the index weightings were still based on a ‘working class’ living standard.²³ As with the initial RPI survey, collection of household budget data was undertaken by selected families in 25 towns, with cash prizes advertised in metropolitan and regional newspapers as incentives to complete the survey. Respondents were instructed to complete the ‘Householder’s Diary Account Book’ which detailed household income and expenditure.²⁴ As with previous revisions to price indices, the standard minimum pay rate for unskilled workers was calculated against the revised RPI by the Court of Arbitration so that real wages would retain their purchasing power.

During World War Two, the government required ~~finish introductory sentence.~~ ~~The~~ accurate price information to direct price and wage restrictions as well as limiting ~~ing~~ inflation. On 31 December 1942 the War Cabinet indefinitely suspended publication of the RPI (though it was still compiled) and replaced it with the Wartime Prices Index (WPI).²⁵ Price information on a new schedule of commodities and services was recorded at the discretion of the Minister of Industries and Commerce. As with previous indices, the WPI provided a reference point from which wages could be adjusted to match changes in the retail prices of ‘essential’ goods and services. Yet, the scope of the index was much wider than the RPI. Central to the government’s economic stabilisation scheme was keeping inflation, as measured by the WPI, below a 2.5 per cent threshold which ~~would~~ trigger increases in wages and farm payouts.²⁶ In aid of this goal, the Fraser Government implemented a series of price controls and

²³ As George Wood, (Government Statistician 1946-1957) noted, while the survey was not explicitly limited to working class families (as defined by income), the study remained ‘typical of tradesmen’s incomes rather than overall average wage earner’s incomes.’ Wood, *Progress in Official Statistics*, pp.76, 91.

²⁴ Wood, *Progress in Official Statistics*, pp.75-76.

²⁵ Memorandum, Director of Stabilization, to Minister in charge of Stabilization, 4 June 1943, in STATS Series 1, Box 27, Record 22/1/71, ANZ.

²⁶ J.V.T. Baker, *The New Zealand People at War: War Economy*, Wellington: Historical Publications Branch, Department of Internal Affairs, 1965, pp.288-297.

inveighed against cost increases. Where cost increases were unavoidable, extensive subsidies were applied to a range of commodities (110 of the 238 items on the regimen) to prevent price rises from influencing the WPI.²⁷ After the war, trade unions urged the government to construct a revised index, as they recognised that the WPI tended to understate price movements. Political interference, in the form of subsidies, and the failure to record the rising prices of substitute products, prompted the suspicion that the index was “loaded against the worker.”²⁸

While the war ended in 1945, parts of the government’s economic stabilisation structure remained over the course of the decade. As a post-war consumer economy emerged, tensions emerged between the contradictory visions of the WPI as a tool to limit wage movements, *a measure that would allow wages to match the cost of living, and a means of ‘insulating’ New Zealand exporters from price shocks,* ~~and a measure that would allow wages to match the cost of living (does this make sense).~~²⁹ What followed, over the next 30 years, was a re-imagining of New Zealand’s price indices, as the paternalistic, prescriptive approach towards the basket of goods was replaced with a new, technocratic focus on a regimen that reflected what New Zealanders were actually buying.

The construction of the Consumers’ Price Index (CPI) in 1949 was a major step in this new direction. With trade unions’ concerns in mind, in 1948 the Fraser Government established a Committee ‘to investigate the need and method of establishing a revised cost-of-living index.’³⁰ The Index Committee noted that the commodities and services selected to represent ‘reasonable wartime standards of

²⁷ G.R. Hawke, *The Making of New Zealand: A Economic History*, Cambridge: Cambridge University Press, 1985, p.171.

²⁸ Woods, *Industrial Conciliation and Arbitration in New Zealand*, p.161.

²⁹ G.R. Hawke, *The Making of New Zealand*, pp.163-173.

³⁰ Woods, *Industrial Conciliation and Arbitration in New Zealand*, p.161.

consumption' could not be regarded as a suitable gauge of post-war prices. Some of the major changes noted since the 1930 Family Budget Inquiry were the greater household use of electricity, and increased relative consumption of fruit, vegetables, and dairy products. While past indexes had been governed by the criterion of 'essentiality', the new index incorporated normal living expenses in the average home – including expenditure regarded as 'non-essential or socially undesirable'.³¹ This remit was not entirely fulfilled. Part of the Committee's mandate was to consider whether 'the index should cover only *necessary* items of expenditure or *all* items of expenditure?' The report on the construction of the CPI noted that 'it was felt that some line must be drawn to exclude what might be regarded as luxury spending'. Luxuries were not defined specifically, but included alcoholic liquors, private motoring, and a variety of leisure activities.³²

Thus although the Committee boasted that the new regimen, adopted by Cabinet and first published in June 1949, encompassed 'the whole range of commodities and services used in the average household,' it represented an ongoing compromise between competing conceptions of the CPI.³³ Ultimately the Census and Statistics Office continued to record 'respectable' rather than actual consumer expenditure.³⁴ The main groups of commodities and services covered by the new index were Food, Housing, Fuel and Lighting, Clothing and Footwear, and a broad range of Miscellaneous items (including Household goods; Medicines; Education; Services). Within these groups a selection of 308 'key items' was made for which prices were

³¹ Report of Index Committee, *Appendices to the Journal of the House of Representatives (AJHR)*, H-48, 1948, pp.4-5.

³² *Retail Prices in New Zealand with Special Reference to the Consumers' Price Index*, Wellington: R.E. Owen, Government Printer, 1949, p.4

³³ Report of Index Committee, *AJHR*, H-48, 1948, pp.13-22.

³⁴ When informed that the Committee intended to include beer in the regimen, Prime Minister Peter Fraser reacted swiftly to ensure its exclusion, horrified at the possibility that wages would rise in sympathy with the price of alcohol. Wood, *Progress in Official Statistics*, pp.95-96.

collected in 21 urban centres, and weighted to represent similar items. The Committee noted that a regimen of 308 items would make the New Zealand CPI the most comprehensive in the world (Australia had 160; UK – 230; Canada – 152; USA – 160). No survey was undertaken to establish new weightings, rather the index was weighted based on recent production, trade, and manufacturing data in comparison with the weightings given for the WPI.³⁵ Furthermore, the construction of the new index followed the recommendations and statistical standards of the 1947 ILO Statisticians Conference ‘as closely as possible’.³⁶

By the time the CPI underwent its first ‘revision’ in 1955, it was noted that a tendency towards ‘more liberal thinking on the part of index number statisticians’ prevailed at the Department of Statistics (renamed in 1955).³⁷ With the economy buoyed by the end of rationing in 1950, and the subsequent easing of import restrictions, statisticians could no longer ignore household consumption of luxuries, particularly as these were now measured in the newly revised Canadian, American, and British indices. Furthermore, the 1955 revision was aided by the availability of a range of new economic information including the 1952-1953 Public Service Association household budget survey and the 1951 census. The revised index reflected these changes, with the regimen expanding from 308 to 375 items, including alcohol, private motoring, private telephones, and recreational goods. Covering around 85 per cent of household expenditure, compared with 65 per cent in the original 1949 index, the revision aligned with the Department’s policy of making the

³⁵ Report of Index Committee, *AJHR*, H-48, 1948, p.48.

³⁶ G.E. Wood (Government Statistician) to R.B. Ainsworth (Director of Statistics, UK Ministry of Labour and National Service), 1 February 1949, in *STATS Series 1, Box 27, Record 22/1/78, ANZ*.

³⁷ *Consumers’ Price Index 1955 Revision*, Wellington: R.E. Owen, Government Printer, 1956, p.5.

CPI more representative of actual household consumption.³⁸ The trend toward a more inclusive and representative index continued in 1965, when further revisions to the CPI accounted for almost 90 per cent of consumer expenditure. In accordance with the Department's desire to include 'luxury' items, 136 new commodities were added to the basket of goods, including household electronics, professionals' fees, beer, and long-distance public transport.³⁹

Reporting in 1972, the CPI Review Committee reflected this transition to an objective, positivist index, describing the Department of Statistics' task as 'essentially the ascertaining of a set of facts about the real world of contemporary existence.'⁴⁰ The Committee (composed of technical experts and representatives from government, national federations of employers, farmers, retailers, and labour organisations) was established by the Department to examine the CPI, which had remained unchanged for seven years. The 1965 revision reflected consumption patterns from as early as 1963, thus inadequately represented contemporary expenditure. The Committee delivered a broad range of recommendations including a revision of the index to represent actual household expenditure; expanding the geographical coverage of the index; and scheduling revisions to the index every five years to weight the relative importance of items in the regimen according to contemporary consumption patterns.⁴¹

The change in the conceptual base of the CPI from an index charting notional consumption to an index measuring actual household expenditure was fundamental. To obtain the data required to implement the new weighting system, the Department

³⁸ *Consumers' Price Index 1955 Revision*, pp.6-8, 22.

³⁹ *Consumers' Price Index Revision Report 1993*, Wellington: Statistics New Zealand, 1995, p.15.

⁴⁰ *Report on Consumers' Price Index Revision*, Wellington: Department of Statistics, 1976, p.9.

⁴¹ *Household Sample Survey: Handbook for Field Interviewers*, Wellington: Department of Statistics, 1974, p.1.

introduced its first comprehensive household budget survey since 1930. For the previous 43 years, statisticians had derived consumption data from production, retail trade, and external trade statistics as well as ‘limited special sample surveys’ of merchants and retailers.⁴² Introduced in 1973, the ‘Household Expenditure and Income Survey’ had three major aims: the regular provision of household expenditure data for use in the revision and weighting of the CPI; in preparing the proposed New Zealand system of National Accounts; and in the provision of household socio-economic statistics. Beginning in 1973, the survey sampled 4,600 households in the North and South Islands (Stewart Island and dependencies were dismissed as too expensive to survey) over a period of two weeks. Those interviewed were given a personal expenditure diary and asked to record their daily expenditure, and return the diary to their field interviewer. For larger items of spending (automobiles, major appliances, houses) participants were asked to recall their spending over the previous 12 months.⁴³ The revised CPI appeared in 1974, and remains the model for current price indices.

Summary

The measurement of prices is nearly coincident with the entire history of New Zealand as a British colony and independent country. State administrators have collected price information in New Zealand for over 150 years. Initially, these efforts were rudimentary, providing the Colonial Office with trade figures from a distant outpost of the British Empire. Yet population growth, industrial pressures, and the impact of declining commodity prices in the late nineteenth century all prompted a

⁴² *Household Sample Survey: Handbook for Field Interviewers*, Wellington: Department of Statistics, 1974, p.1.

⁴³ Household Sample Expenditure Survey, 1975, in Department of Internal Affairs Series 6015, Box 226, Record 103/492/8/1C, ANZ.

realisation that state intervention in the domestic economy was both necessary and desirable. Reformist politicians and bureaucrats, influenced by the liberal tradition of state social engineering, sought to both understand and mould New Zealand's social and economic growth. Alongside these domestic concerns, the desire for international comparison drove the implementation of systematic price collection at the turn of the century. For much of the twentieth century these concerns operated in tandem, pushing the development of increasingly extensive and sophisticated indices, both to protect a 'reasonable' standard of living for New Zealand families, and to meet the country's growing international obligations.

The pre-war price indices that served to regulate workers' wages became useful inflationary measures during wartime, and their international significance heightened as New Zealand enthusiastically joined post-war institutions that promoted peace through the application of the living wage. Gradually responding to the development of a post-war consumer economy, the CPI became a positive index of New Zealand household consumer spending, a departure from its origin as a prescriptive list of state sanctioned 'staples'. As the basket of goods grew to reflect consumer expenditure and the collection and compilation of price indices became increasingly sophisticated they evolved from strictly proscribed data sets constructed to meet the direct needs of government and the Arbitration Court to far more 'open' sets of data with widespread implications for social, economic, and monetary policy. The CPI has evolved from a haphazard survey of prices in the major centres, to a comprehensive index reflecting national household spending.