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Household budget studies in the British dominions, 1873-1939

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Abstract

Household budget studies in the autonomous British dominions (Australia, Canada, New Zealand, and South Africa) were carried out sporadically before World War II. The similar history of household budget studies in the dominions reflects the similarity of the dominions' statistical infrastructure and the existence of other data sources that reduced the need to collect household budget studies. The budget studies that were conducted were influenced by the statistical school, and were similar in quality to contemporary European and American surveys. Statistical summaries of results are available, but only limited microdata survives in archives or publications.

Keywords: household budget studies; Australia; Canada; New Zealand; South Africa.

JEL classification: C83, N30, N31, N32, N37.

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1 Introduction

Studies of the expenditure of families or households played a significant role in the development of social statistics in the nineteenth century. The statistical study of large numbers of family budgets can be traced to the late eighteenth century surveys by David Davies and Frederick Morton Eden of the budgets of English farm labourers (Stigler, 1954). Surveying the published record of "studies of family living" in the mid-1930s, the American scholars Faith Williams and Carle Zimmerman documented more than 1500 studies in 52 countries (Williams & Zimmerman, 1935). The methods of conducting family budget studies and their results were shared widely as the field developed during the nineteenth century. The transnational development of budget studies is evident in the comparative studies conducted by British and American agencies analyzing household budgets at home and in several foreign countries (Commissioner of Labor, 1886; Great Britain Board of Trade, 1911; Young, 1876). International comparison of the methods and results of budget studies took a major step forward after World War I with the establishment of the International Labour Office in 1919. The Office's official journal made a regular feature of recent family budget studies in the 1920s and 1930s, bringing results otherwise confined to national statistical bulletins to an international audience.

The international development of household budget studies was uneven. A major international survey of the literature in 1935 identified five countries—the United States, Britain, Russia, France, and Germany—as being responsible for half of the studies identified (Williams & Zimmerman, 1935). Williams and Zimmerman identified two predominant methods of carrying out family budget studies. At one pole lay the intensive study of a small group of families, sometimes for multiple years, an approach identified with the work of Le Play (1855). At the other extreme were the "statistical schools" that gathered data on hundreds or thousands of family budgets, though typically hundreds. The culmination of this approach was the United States' federal study of consumer purchases in 1935/36 that surveyed 625,000 families in a multi-stage probability sample (Schoenberg & Parten, 1937). The statistical approach was predominant in the United States where it was undertaken largely by state bureaus of labor statistics directed or inspired by Carroll Wright (Carter, Ransom, & Sutch, 1991), and in Germany where Engel's work was influential. While not as numerous, statistical studies with samples in the hundreds by independent investigators, academics and social agencies were also important in Britain (Rowntree, 1901), Germany (Welker, 1916) and the United States (Houghteling, 1927).

The statistical method was also influential in smaller European nations including Denmark, Finland and Sweden, which all undertook several surveys along "statistical" lines after 1900. Outside of Europe there were multiple well-known surveys of family budgets in China and India in the late nineteenth and early twentieth century, conducted by both Europeans and investigators native to each country (Williams & Zimmerman, 1935).

This note sets out a history of budget studies that are less well-known: those in the autonomous British "dominions" of Australia, Canada, New Zealand, and South Africa.[2] Sharing a common history as British colonies, all of the jurisdictions had substantial control over domestic affairs from the mid-nineteenth century, including the collection of social and economic statistics (Eddy, Schreuder, & MacDonagh, 1988). Although full, formal independence from Britain was only technically achieved after the 1931 Statute of Westminster, in practice all four countries, or their constituent colonies before federation, exercised sovereignty over domestic affairs (Wheare, 1938). All four countries inherited some of their statistical practice from Britain, and form a group well suited for historical comparison, though the inclusion of South Africa among this group fell into disfavor in the late twentieth century with South Africa's history of apartheid and exit from the Commonwealth (Brady, 1947). Comparisons between these countries have a long tradition in economic history beginning with Heaton (1929, 1946), continuing through a literature on "regions of recent settlement" (Denoon, 1983; Ehrensaft & Armstrong, 1978; Fogarty, 1981), and flourishing today in an era of comparative history (Lloyd, 1998; Lloyd, Metzer, & Sutch, 2013).

2 Background

Williams and Zimmerman's influential survey of the literature on family budgets concluded that "excellent studies are available" in Australia and New Zealand "chiefly because of the interest in minimum wage legislation and the scientific zeal of Knibbs, Collins, and others" (Williams & Zimmerman, 1935). Yet later in their survey they quote the Australian economist D.T. Sawkins as deploring the "scantiness of the material at hand, especially the data on original expenditures"

[2] Technically dominion status only began in the twentieth century, yet this survey will cover the nineteenth century as well.

(Sawkins, 1928). Official assessments were similarly scathing. A 1948 parliamentary committee in New Zealand tasked with revising the consumer price index concluded that the country's "experience in family budget inquiries [was] uniformly disappointing" (Index Committee, 1948). Similarly in Canada, a 1913 Department of Labour report stated bluntly that "no attempt on a comprehensive scale to collect family budgets has been made" (Board of Trade, 1915, p. 1018), and Australian official described their own efforts as "meagre and unsatisfactory" (Knibbs, 1911).

The narrative of disappointment from contemporary officials and scholars in each country is clear. A comparative examination of the studies that were conducted, set in the context of what other statistics were collected, reveals a more complex picture, extending the conclusion reached in a recent study focusing on New Zealand budget studies (Roberts, 2014). While economic historians understandably wish these countries had collected better data, their historical failure to do so is understandable. The statistical tradition of family budget studies was one largely initiated and undertaken by national, state, and provincial governments to meet their needs for particular pieces of information at particular times. For example, federal government studies in the United States were motivated to investigate how living standards were affected by tariffs (1888/9) or to set weights for the consumer price index (1917/19) (Stapleford, 2009). Surveys by the American states often had among their objectives investigating the relative living standards of recent immigrants and native-born whites (Hatton, 1997). In Britain many studies were characterized by a "preoccupation with poverty, disease, and slum conditions which were caused by the high degree of urbanization in England" (Williams & Zimmerman, 1935). Thus the political context for data collection and the structure of government statistical agencies is important in understanding the history of family budget studies.

There are important structural similarities in the four countries considered here that form the context for their infrequent budget studies. All inherited at least part of their statistical practice from Britain. In Canada and South Africa, French and Dutch statistical practices also continued to be important in particular colonies or provinces. Although only New Zealand was a unitary state at the time of independence, the British influence on government administration meant that the national statistical office was the predominant collector of statistics in each country. Sub-national (state or provincial) agencies with an interest in economic and labour statistics were less

powerful in Australia, Canada and South Africa than in other federal systems such as Germany or the United States.

The strong central administration of statistics in the dominions was most evident in census collection and civil registration systems. Compared to Britain or the United States the censuses in the dominions asked more social and economic questions, and asked them earlier. For example, the Canadian census of 1901 asked about earnings, nearly forty years before the United States census first inquired about wages. New Zealand (1874) and several Australian colonies (South Australia and Queensland) undertook quinquennial censuses for some periods in the late nineteenth century (Fitzpatrick, 1938).

Civil registration systems for recording births, deaths, and marriages were decentralized to states or provinces in Australia, Canada and South Africa, generally continuing the agencies established in the separate colonies before federation or union. In New Zealand where the provinces were abolished in 1876 a national vital events registration system was established. In the other dominions national agencies compiled demographic information from vital statistics data from the late nineteenth century, pre-dating similar efforts to integrate registration data in the United States by more than 20 years. While the legal responsibility for registering vital events remained at the provincial or state level, the responsibility for statistical analysis was national.

Statistics of labor, employment and industry followed a similar pattern to civil registration data, with national agencies supplanting the role of provincial or state agencies after about 1900.. In the three federal Dominions (Australia, Canada, South Africa) the provinces and states were the initial creators of bureaus of labor and industry that collected data on industrial and agricultural output, employment and wages. But by World War I, the responsibility for labor and employment statistics was largely national (Commonwealth Bureau of Census and Statistics, 1914; Union of South Africa Economic Commission, 1914).

At the national level several of the dominions collected expenditure and earnings information in the census, which may have reduced the need to collect similar information in household budget studies. South Africa's census collected information on rental paid for housing in 1921, thus providing comprehensive information on a major item in household budgets (Union of South Africa Department of Labour, 1925). In Canada the federal census, both population and manufacturing, provided statistics on wages and earnings from the late nineteenth century.

Similarly in the Australian colonies before federation in 1901 and New Zealand, labor departments collected information on wage rates from surveys of employers, and these data were published locally, and with comparisons to the other Australasian colonies (Bullock, 1899).

Labor relations in the federal dominions were governed by both provincial or state, and national laws (Hartog, 1913; Kahn, 1943). In New Zealand the responsibility for both functions—law and statistics—belonged to the national government. Significantly in both Australia and New Zealand the arbitration system for negotiating industrial contracts led to highly centralized wage fixing, reducing the need to investigate natural variation in wages through surveys (Holt, 1983; Mitchell, 1989).

Demographic and social concerns about immigration and living standards also shared important similarities across the dominions. In all four settings the predominant nineteenth century immigration stream was from Britain (Canada and South Africa both had substantial European populations descended from non-British migrants. Compared to the United States, none of the dominions faced a pressing political question about whether late nineteenth century immigrants from new countries were assimilating into the labor market. Yet there were important differences: in Australia, Canada, and New Zealand the settler population rapidly surpassed the indigenous population (Fleras & Elliot, 1994; McHugh, 2009). At the turn of the twentieth century indigenous people were not a major share of the national labor market in Australia, Canada, or New Zealand; though in certain industries and locations they played a more substantial role. In general indigenous peoples in Canada and New Zealand were more integrated into the settler-dominated economy than in Australia (Petrie, 2006). The situation was quite different in South Africa, where the white settler population remained smaller than the indigenous African population, yet white settlers owned most of the nation's capital and employed large numbers of Africans in extractive industry, agriculture and personal service, giving rise to a racially structured labor market with parallels to the United States' South after slavery (Fredrickson, 1981).

Indeed, the racially structured labor market in South Africa with large numbers of poor Africans gave rise to several twentieth century surveys by academics to measure African workers' living standards. These were, as far as can be determined, the only non-governmental budget studies carried out in the dominions before World War II. In the five countries—Britain, France,

Germany, Russia, and the United States—responsible for the bulk of the household budget studies carried out before World War II, investigators independent of the government conducted many budget studies. In Australia, Canada and New Zealand, by contrast, nearly all the studies in this time period were carried out by government agencies, reflecting a general weakness of empirical social sciences in the universities in these countries.

3 Budget studies in the dominions

Table 1 presents a summary of statistical household budget studies in the British dominions before World War II. The definition of statistical is generous, including any study with more than one family, so as to include the range of South African anthropological studies of "native" and "coloured" families. The table was compiled firstly through examining the references in Williams and Zimmerman (1935) and United Nations summaries of relevant literature for developing countries that included South Africa (Department of Social Affairs, 1951). Several of the studies were uncovered through obtaining copies of the publications referenced in Williams and Zimmerman, and identifying earlier budget studies cited in the references.

The availability of microdata was investigated by searching the archival indices of the appropriate national, provincial, or state government, or through examining published reports which often printed summaries of each family's income and expenditure. Microdata availability for these surveys is relatively limited, with few of the studies publishing family-level responses. Table 1 summarizes what is known, and where researchers might investigate further, particularly for the many surveys carried out in the 1930s in South Africa. The least material appears to have survived in Australia. Statistical information in the published reports varies across the different studies. At the very least, every government study published average earnings and expenditures in major categories, such as food, clothing, and housing. Reporting of expenditure information became more detailed and disaggregated in later government surveys, particularly the 1930s surveys in Canada, New Zealand, and South Africa.

Despite each country conducting several budget studies in the late nineteenth and early twentieth centuries, the overall record of budget studies in the dominions was poor when compared to that of Britain, the United States, and Scandinavia, to which the dominions may be fairly compared.

The situation was worst in Australia. Though two national surveys in 1911 and 1913 were carried out to a similar standard as statistical surveys in Europe and the American states, following these there are only poorly reported studies carried out during World War I and shortly after in particular states. No further family budget studies appear to have been carried out in Australia until after World War II, although a major study was planned in the late 1930s. The Institute of Pacific Relations, an American-based non-governmental organization was interested in sponsoring research that compared living standards in developed countries around the Pacific Rim (Hooper, 1988). Starting in 1932 they began planning a comparative series of family-budget studies in Japan, the United States, New Zealand, and Australia (Huntingdon, Lasker, & Luck, 1937). In all four countries the studies were meant to encompass a group of wage-earners whose industry was exposed to international trade, and a comparison group of workers whose industries were not exposed to trade.

The grand comparative ambitions of the study were not quite realized. Only the American and New Zealand surveys reached the field, and only the American survey was published (Huntingdon, et al., 1937). The breakdown of American relations with Japan in the late 1930s derailed the survey in Japan, and it is unclear why the Australian survey was not completed (Eggleston, Walker, George Anderson, Nimmo, & Wood, 1939). The results of the New Zealand survey were politically contentious. The new Labour government, elected in 1935 and facing re-election in 1938 wanted the survey to show that working class families were doing well under Labour's policies. Initial analyses failed to show a politically palatable story, and the report's publication was delayed (Wood, 1976). The raw data survived, and were used to calculate expenditure weights for price indices during World War II (Economic Stabilisation Commission, 1944). Only a fraction of the survey manuscripts survive at Archives New Zealand, but the archives do hold drafts of the planned publication with many pages of statistical summaries of expenditure and earnings (Roberts, 2014). It would be possible to carry out part of the comparative analysis planned by the Institute of Pacific Relations, because the American and New Zealand studies used collection schedules that were consistent across the two locations. Correspondence between the two research groups is also documented in the archives (Roberts, 2014). In New Zealand an additional comparative survey of dairy farmers was also made, with systematic comparisons made to similarly designed surveys of dairy farmers in New York state (Doig, 1940).

While the final pre- World War II study in New Zealand made comparisons with American situations, a pair of earlier surveys in 1893 and 1911 had made more conventional comparisons with Britain and Australia. Microdata from the 1893 survey was published in the parliamentary report on the survey, in a similar format to the American state surveys of the time. The New Zealand Department of Labour received copies of the labour bureau reports from major American states, and their influence is apparent in the 1893 survey. The early New Zealand studies are of similar quality to the Australian studies of 1911 and 1913. Like many statistical surveys of this era, they had relatively low response rates (see Table 1). In both Australia and New Zealand expenditures on housing were under-estimated, mostly through failing to fully account for expenditures on owner-occupied housing. Despite the flaws of pre-World War I surveys in New Zealand the government commissioned more studies in later decades that attempted to address problems from earlier surveys (Roberts, 2014). Notably, in 1919 and 1930 the Statistics department offered financial incentives for households that participated through the entire survey period; and adjusted the length of the expenditure diary to reduce respondent burden. The 1937 study of urban workers was well conducted under the influence of the Institute of Pacific Relations. Some microdata and many original cross-tabulations on the full survey survive in New Zealand archives, and permit comparison with the companion study in the United States (Huntingdon, et al., 1937; International Labour Office, 1936).

Similarly in Canada and South Africa, the Great Depression led to well-designed surveys of household expenditures and income between 1936 and 1938. In both countries the design was geographically stratified and the target population well-defined, a significant advance on the design of previous surveys (Dominion Bureau of Statistics, 1941; Union of South Africa Office of Census and Statistics, 1937). Along with the New Zealand study of 1937, the South African and Canadian studies included detailed analysis of the nutritional adequacy of diets (Jackson, 1937). In all three countries the ability to analyse the nutritional composition reflected that the surveys had collected detailed daily and weekly information on the type and volume of food purchased, and the demographic composition of families. The surveys had advanced significantly from earlier recall based estimates of food expenditure. Yet the record of Canadian family budget studies before this date is thin, with just four other surveys conducted by Canadians.

The large studies in Ontario in 1885 and Montréal in 1896 have deficiencies in different ways. Both were large, but the published reports give little detail beyond average expenditures for

major categories—such as food, housing, or clothing—within geographic areas. The description of the 1885 Ontario inquiry suggests it was similar to American studies of the same era with a large number of working men providing information on their earnings and how much they had spent in the past year on various categories of expenditure. By contrast Brown-Ames' study of Montréal families was extensively reported in a monograph (Brown Ames, 1897). Statistics for average earnings and housing expenditure were presented for thirty small geographic areas, covering the 7,670 families. The method of data collection—a house-to-house census with trained enumerators—is likely to have led to greater accuracy than the mail-back schedules used in many American studies of the era. Yet Brown-Ames only collected expenditure on rents. Microdata records from these surveys are not visible in the catalogues of Canadian archives. The collection of wage data in the Canadian population census may have reduced the impetus for additional collection of earnings data in budget studies.

South Africa's history of budget studies is somewhat distinctive when set against the other dominions. The history of modestly sized statistical studies is similar to that in Australia and New Zealand before 1930. Yet in the 1930s there was a proliferation of different budget studies undertaken by the national government, local governments, academics and independent investigators. Anthropologists played an important role in surveying indigenous workers, a situation without parallel in the other dominions (Hellman, 1936, 1948; Krige, 1934; Phillips, 1938). The role of anthropologists, and the sample definitions that highlighted racial categories show how budget studies fitted into the distinctive political economy of the South African labor market. In South Africa it was important to understand the comparative living standards of black, white and colored workers in a way that was similar to the American desire to understanding the labor market assimilation of European immigrants in the United States.

4 Conclusion

Contemporary statisticians and economists in the dominions deplored the quality of the budget studies that had been conducted in their countries. Set in comparative perspective the disappointments appear quite similar across the British dominions before the 1930s, suggesting similar official decision-making about the need for family budget studies in the four countries. Other aspects of each countries statistical apparatus were well administered. Excepting Australia,

all of the dominions managed to respond to the Great Depression with well-conducted budget studies between 1936 and 1938. The intermittent nature of the dominion budget studies and variation in their quality mean they must be used cautiously. Microdata for some surveys survives in New Zealand, and may well survive for the 1937/38 Canadian survey. Further investigation of the survival of microdata in South Africa is required. In all of the dominions there are extensive complementary sources on wages, employment, and prices that can be paired with the results of these budget studies to analyze changing living standards. Taken together the budget studies in the dominions are a useful resource for studying comparative living standards in the British Empire.

Table 1. Inventory of dominion budget studies, 1873-1939

Year(s)	*Sampling*	*Collection method*	*N (families)*	*Microdata*	*Citation*
AUSTRALIA					
1911	Mail out and back. No targeting of groups. (National survey)	Weekly account books for one year	212 (1500 sent)	None	Knibbs, 1911
1913	National press advertisements requesting assistance with inquiry	Daily accounts for four weeks (2-29 November 1913)	392 ("upwards of" 7000 sent)	None	Commonwealth Bureau of Census and Statistics, 1914
1914-16	In-person interviews with "wage earners" wives (Sydney area)	Daily or weekly accounts kept by wives for 1-4 weeks	657	None	New South Wales Board of Trade, 1918
1917	"Wide distribution" of account books in Western Australia	Weekly accounts kept for 13 weeks	66	None published. Potentially survives in archives.	Western Australia Royal Commission of Enquiry, 1917
1921	Questionnaire distributed to rural workers around New South Wales	Estimates of weekly expenditures requested	178	None	New South Wales Board of Trade, 1921
CANADA					
1873	Workingmen interviewed by consular agents in various cities	Weekly expenditures collected by interview	18	Published in report: *Labor in Europe & America*	Young, 1876
1885	Interviews with working men in Ontario by bureau agents	Annual earnings and expenditure collected by interview	2,637	None	Bureau of Industries, 1885

Year(s)	*Sampling*	*Collection method*	*N (families)*	*Microdata*	*Citation*
1896	House-to-house census in south-east Montréal	Income and rental expenditures only monetary items collected	7,670	None	Brown Ames, 1897
1913	Manitoba families interviewed in person	Monthly incomes and expenditures collected by interview	13	Published in report	Board of Inquiry, 1915
1931	Red River Valley (Manitoba) farmers interviewed in person	Annual incomes and expenditures collected by interview	129	None	Parker, 1933
1937-38	Multi-stage stratified national sample	Annual schedule of living expenditures. Three separate weekly food accounts.	1,346	Potentially survives	Dominion Bureau of Statistics, 1941
NEW ZEALAND					
1893	Schedules sent to labour inspectors, agents, trade unions secretaries, "others"	Retrospective inquiries aggregated over one year	146 (800 sent)	106 published (parliamentary papers)	Department of Labour, 1893
1911	Schedules distributed by Labour department agents in "four main centres" (Auckland, Wellington, Christchurch, Dunedin)	Account books recording itemized expenditure over year	69 (2000 printed)	None	Collins, 1912
1919	Account books distributed nationally through grocers shops. Prizes for best books.	Account books recording itemized expenditure over one year	109	None	New Zealand Census and Statistics Office, 1920

Year(s)	*Sampling*	*Collection method*	*N (families)*	*Microdata*	*Citation*
1930	Account books "distributed by various channels to householders"	Account books recording itemized expenditure over three months	318	None	New Zealand Census and Statistics Office, 1930
1937	Tramway and shoe workers in Wellington and Christchurch.	Account books for itemized expenditure over four weeks	250	68 budget forms; 92 household schedules	Results not published. References in Economic Stabilisation Commission, 1944; Wood, 1976
SOUTH AFRICA					
1905	Working men with artisan's incomes interviewed in person	Personal interviews by investigator about monthly expenditure	22	Some published in article	Aiken, 1905
1914	Representative workers in industrial employment	Retrospective questionnaires on annual expenditures	238	Archival records from commission survive	Union of South Africa Economic Commission, 1914
1925	Schedules distributed to variety of occupations	Accounts kept for a week or a month.	442	None apparent	Union of South Africa Department of Labour, 1925
1933	"Poor" Indians in Johannesburg	Personal interviews	5	Unstructured data in article	Beemer, 1933
1933	Selected families out of larger study of 100 native families	Daily budgets kept for 1-5 months	14	Unstructured data in article	Hellman, 1936, 1948
1933	Urban Bantu families in Bantule and Pretoria	Budgets collected through in-person interviews over 6 months	9	Unstructured data in article	Krige, 1934
1933	Interviews with selection of people receiving aid from January to June '33	Interviews with questions on income and expenditure	295 European 872 non-Euro	None apparent	Wagner, 1936

Year(s)	*Sampling*	*Collection method*	*N (families)*	*Microdata*	*Citation*
1935	Educated Bantu families in Witwatersrand	Three months budget data collected in personal interviews	48	Some data in book	Phillips, 1938
1936	European white families with 1 or more children in principal urban areas	Monthly account books	1,618	Unknown	Union of South Africa Office of Census and Statistics, 1937
1938-39	3% stratified sample of Cape Town with in-person interviews	Incomes and prices paid for consumer goods recalled in interview	1017 European 834 Coloured	Unknown	Batson, 1941-50; Lavis, 1942
1939	Selection from 100 African families in Johannesburg	Personal interview with recalled expenditures and incomes	93 (providing expenditures)	Unknown	City of Johannesburg: Non-European and Native Affairs Department, 1939
1939	Survey of native employees "other than domestic servants"	Schedule collected by interviewer.	57	Unstructured data in article	Johannesburg Rotary Club, 1940

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