



Minerva Access is the Institutional Repository of The University of Melbourne

Author/s:

Fahey, C;Sammartino, A

Title:

Work and Wages at a Melbourne Factory, the Guest Biscuit Works 1870-1921

Date:

2013

Citation:

Fahey, C. & Sammartino, A. (2013). Work and Wages at a Melbourne Factory, the Guest Biscuit Works 1870-1921. Australian Economic History Review, 53 (1), pp.22-46. <https://doi.org/10.1111/aehr.12003>.

Persistent Link:

<https://hdl.handle.net/11343/145380>

WORK AND WAGES AT A MELBOURNE FACTORY, THE GUEST BISCUIT WORKS 1870–1921

Charles Fahey and André Sammartino
La Trobe University and University of Melbourne

The story of wages in nineteenth- and early twentieth-century Australia has largely been told through official published statistics and the experiences of skilled artisans and construction labourers. Utilising wage book data from an early successful manufacturing plant – a biscuit factory – we reveal the earning histories of several neglected groups of Australian workers. We specifically investigate the effects of the 1890s depression, the introduction of a wages board, and shifting demographics on the wages of unskilled factory hands, women, juvenile workers, and commercial clerks. We demonstrate that typical Australian wage series studies have misinterpreted the impact of these phenomena.

JEL categories: N37, N87, M51, M52

Keywords: Australian firms, labour markets, Melbourne, wages, women workers

To appear in: Australian Economic History Review, Vol. 53, No. 1, pp.22-46 (March 2013)

INTRODUCTION

Surprisingly, little is known about the employment dynamics within Victoria's wide variety of pioneering private enterprises of the late nineteenth and early twentieth century. Although colonial, and later state, statisticians collected a great deal of information about wage rates, these data are often difficult to use and interpret and their coverage was focused mainly on skilled craftsmen and construction and rural labourers. Women workers, juvenile workers, unskilled factory operatives, and clerical workers are typically missing from these returns. The personnel records of Melbourne biscuit maker, T.B. Guest, offer insights into the remuneration experiences of all these groups. Furthermore, these records allow us to explore the shifting dynamics over a period of five decades.

In this article, we explore changes in wages and employment practices within this firm as it grew through the long boom of 1870–90, struggled with the 1890s depression, and responded to the changing demographics and labour regulations through the first two decades of the twentieth century. The Guest archive offers rare insight into long-term shifts in wages paid to

unskilled factory workers. Extending from the emergence of manufacturing in Melbourne in the 1870s to the early twentieth century, the records straddle a period during which factory work was totally unregulated to one where the state intervened: controlling hours of work, regulating the recruitment of women and juveniles, and setting minimum wages. The archive records a workforce in which most employees were recruited as juveniles without trade skills. Although these young workers were often transient, our article reveals a core of loyal workers who learned on-the-job skills and experienced wage mobility over the course of their working lives. The records also permit us to offer new, if tentative, insights into the declining real wages of commercial clerks.

PREVIOUS STUDIES OF THE MELBOURNE LABOUR MARKET AND WAGES

The period from 1870 to 1920 saw significant evolution in labour market dynamics in the burgeoning metropolis of Melbourne. Manufacturing emerged under the protection of the tariff in the 1870s, and in the early stages of growth, small masters and their artisan employees shared a social and political world. Davison argues that the cordial relationship between employers and employees was put under strain as factories became larger in the 1880s and new men of capital entered the world of manufacturing. The depression exacerbated industrial tensions.¹ This was an age of largely unregulated labour markets. In 1886, minimal regulation was introduced whereby the state sought to regulate the hours of women and juveniles (defined as those under 20 years old).² Regulation was extended in 1896 when the colonial government experimented with minimum wages through wages boards. These were not applied to the Guest factory, however, until November 1913 when a minimum wage determination for biscuit factories was gazetted.³

The fate and welfare of important segments of the working population during this period remain understudied. We do know a considerable amount about skilled workers, often through excellent biographies of the dominant craft unions – such as the engineers and the printers.⁴ For Noel Butlin, the period from 1870 to 1890 was one of unrivalled economic prosperity during which labour was scarce, real wages were high, and unions gained ground.⁵ Fitzgerald, however, has criticised economic historians for their reliance on published wage rates. Union officials, she argued, often provided these rates to the Government Statist and they more often reflected the aspirations of union leaders than the reality of the workplace.

¹ Davison, *Marvellous Melbourne*.

² The hours worked at Guest before 1886 is unknown. As men worked with boys, 8 hours was the norm after 1886.

³ Wage determinations in the biscuit industry can be followed in Public Records Office of Victoria, Biscuit, Wages Board File VPRS 5466/Po/Unit 8.

⁴ Hagan, *Printers and politics*; Buckley, *The amalgamated engineers in Australia*.

⁵ Butlin, *Investment*, pp. 390–8.

The wages reported were often those of skilled tradesmen or, in the case of labourers, the more highly paid building and iron trades unskilled workers. 'Alongside the stonemason's 11 s [shillings] a day and the builder's labourer's 8 s', she wrote, 'was the 5 s many factory workers and day labourers earned for longer hours, while wages paid to women and juveniles were well below this'.⁶

Macarthy voiced similar concerns to Fitzgerald. He argued that on 'closer examination', the apparent wealth of data in colonial Statistical Registers was misleading, as the wage rates reported were not only in imprecise 'ranges' but also remained unchanged for lengthy periods. In light of these inadequacies in the official records, Macarthy patched together series from a variety of sources, including wages books, to estimate skilled, semi-skilled, and unskilled wages through this period. Using these records, Macarthy argued that during the depression of the 1890s, the wages of unskilled labourers collapsed in Melbourne, and in the early twentieth century, many labourers, particularly in segments of the manufacturing sector, were paid a 'sub-labourer's wage' well below the rate prevailing in the boom years 1870–90.⁷ A major drive for state regulation of wages by unions was to restore the standard of the boom. Macarthy argued that the famous 7 shillings per day awarded by Justice H.B. Higgins in his Harvester Judgement of 1907 harked back to the boom standard. Most unskilled manufacturing workers did not achieve this standard until around 1921. Macarthy's argument is weakened by the very failings in the pre-1895 sources that he identified, as he assumed rather than demonstrated that rewards for unskilled and semiskilled work were, in his words, 'extraordinarily high'.⁸

The records of T.B. Guest offer an opportunity to examine the impact of the 1890s depression on the wages received by individual workers. Recent micro-level studies by Seltzer and Seltzer and Sammartino have analysed year-to-year wage cuts in the Australian banking industry and in the government operated Victorian Railways. Both these studies found that wage and salary cuts of existing workers were rare and that wage cuts were borne by incoming workers. Examining the Great Depression of the 1930s in Australia, Gregory, Ho, and McDermott questioned the contemporary rhetoric that called for a 'sharing of the burden'. They found that the real wages of those in employment were inflexible and that the burden of the depression was borne by the long-term unemployed. The Guest archive allows us to extend micro-level studies of wage cuts from large white-collar bureaucracies and government employment to a large manufacturing enterprise, and to an earlier economic downturn.⁹

⁶ Fitzgerald, *Rising damp*, pp. 140–68, 201.

⁷ Macarthy, *Wages for unskilled work*, p. 155.

⁸ Macarthy, *Wages in Australia*, p. 57.

⁹ Seltzer, *Did firms cut nominal wages*; Seltzer and Sammartino, *Nominal wage rigidity*; Gregory, Ho and McDermott, *Sharing the burden*.

Data problems also confront those studying changes in female wage rates. Reacting to the work of feminist historians Conlon and Ryan, who emphasised the gender differences between men and women, Sinclair examined the participation rates of women in Melbourne and Sydney from 1871 through until the early twentieth century. He found that there was an inverse relationship between participation of women in the workforce and the state of the economy. In the booming 1880s, women withdrew from work, returned to the workforce in the depressed 1890s, and withdrew during the Edwardian boom. Sinclair also detected rising real wages over the period 1871–1921. From a base of 100 in 1871, factory wage rates rose to 150 in 1891, declined to 145 in 1901, but had reached 186 by 1911. The index declined slightly to 181 in 1921. Sinclair admitted that it ‘was difficult to construct an index of factory wages before 1890’, and the method he used was to ‘supplement the official statistics with the comments on female wages during the period made by T.A. Coghlan’.¹⁰ Drawing on the work of Sinclair, Frances argued that it was these structural changes in the workforce rather than wages boards that promoted wage increases for female manufacturing workers in the early twentieth century.¹¹

The records of T.B. Guest have been used in a number of historical studies. Raymond employed the Guest archive to examine working conditions for women between 1889 and 1899. Using the firm’s wages books, she presented descriptive evidence that the firm paid wages that were lower than the norm cited by Coghlan for Melbourne manufacturing in 1891. Accordingly, the girls voted with their feet and turnover was high before the 1890s depression. Between 1892 and 1898 voluntary turnover declined markedly, and there was an overall reduction in wages. In undertaking this study, Raymond did not adjust wages for changes in the cost of living, and her analysis of the decline in money wages was not based on tracing individual careers.¹²

In her study of the 1890s depression, Lee used the Guest records to provide illustrations of how labour was cut, work performance was more closely monitored, and work hours were policed more stringently in 1890s.¹³ Larson, in her study of growing up in Melbourne, took a sample of employees engaged at Guest between 1888 and 1895. She found that most young men entered employment between the ages of 14 and 16. Young women entered at older ages on average (16.5 versus 15 for males). Like Raymond, Larson also noted the high turnover of labour among both young men and women. This she argued was part of a transitional stage in the lives of young people: a period of relative freedom between leaving school at age 13 and entering full-time work in their late teens. Larson, however, had a different view to Raymond on wage rates. She argued that juvenile wages in the Guest factory were higher than rates

¹⁰ Sinclair, *Working women since 1871*, pp. 346–7, 352–3; Sinclair, *Women and work in Melbourne*, pp. 280–2.

¹¹ Frances, *Gender, skill and the regulation of labour markets*, pp. 406–7; Frances, *The politics of work*.

¹² Raymond, *Response of female industrial workers*, pp. 126–7.

¹³ Lee, *The marks of want and care*, pp. 199–200.

offered to apprentices in the skilled trades; this effectively locked Guest's recruits into unskilled factory work in their adult years.¹⁴

While the work of Raymond and Larson clearly show that the Guest archive is a major resource for studying juvenile and female employment in manufacturing, the company's records also offer insights into another neglected group in the Australian labour market: the commercial clerk. Apart from the works of Davison, Seltzer, and Merrett, historians have paid little attention to the emergence of white-collar work in Australia in the late nineteenth century.¹⁵ Our understanding of white-collar work is derived largely from the new and large bureaucracies that emerged in the period: the banks, the civil service, and the railways.¹⁶ Although few Australian firms had large office establishments compared with these large bureaucracies, commercial clerks were employed in significant numbers in manufacturing. As manufacturing firms grew and became more complex, the role of white-collar work became more crucial. This was certainly the case with the firm of T.B. Guest, and the firm provides an excellent case study of the evolution of clerical labour.¹⁷

In this article, we use the Guest archive in new ways to cast light on a number of critical issues relating to urban work in late nineteenth- and early twentieth-century Australia. Unlike previous studies, using the Guest archive, we have explored a long time frame – the half century from 1870 to 1921. Critically, our database examines individual wage histories as well as the wages of the whole workforce. Previous studies of the Melbourne labour market have acknowledged problems in investigating the wages of unskilled men and women before the tabulation of wages by the Chief Inspector of Factories in 1895. Through the Guest records, we can track the behaviour of unskilled manufacturing wages through the boom of 1870–90, in the depressed 1890s, during the recovery of the Edwardian years, and the disruption of the Great War. Over this extended period, we can test the hypothesis of Macarthy that the high unskilled wages of the 1870–90 boom collapsed in the 1890s and only slowly recovered in the new century. We offer the first long-term examination of a group of women working in Melbourne manufacturing, and test Sinclair's arguments that female manufacturing real wage rates grew in the late nineteenth and early twentieth century. Our chosen period also straddles the first generation of children educated through the new system of compulsory primary education, and we explore the impact of this on the supply of clerical labour and its remuneration.

¹⁴ Larson, *Growing up in Melbourne*, pp. 123–6 and 145–50.

¹⁵ Davison, *Marvellous Melbourne*, pp. 27–35; Seltzer and Merrett, *Personnel practices*.

¹⁶ Seltzer, *Controlling and motivating the workforce*; Seltzer and Sammartino, *Internal labour markets*; Seltzer and Simons, *Salaries and career opportunities*; Seltzer, *Did firms cut nominal wages*.

¹⁷ The Victorian Census is a poor count of clerical work. Clerks were often listed with other occupations. In the 1891 Census, for example, the building workers category reads 'Builder, building contractor, foreman, measurer, clerk'.

T.B. GUEST

Thomas Bibby Guest hardly fits the archetypal Melbourne manufacturing pioneer described by Davison. He did not emerge from the workshop floor as a skilled tradesman who became a small master, little different in social and political outlook than the men he employed. Indeed, he was more akin to the new style manufacturer of the 1880s, who brought outside capital to manufacturing, only he did so much earlier. The Guest papers are poor for the early years of the enterprise; however, it is clear from extant correspondence that Guest established his factory in 1856 with money borrowed from a family in his native Chester. The firm faced two major crises in its early decades: a fire destroyed the factory in 1870, but it was soon rebuilt, and financial ruin almost touched T.B. Guest. From his correspondence, we know that Guest speculated in 1865–67, and lost badly. This was a chastening experience, and as a result, Guest kept his distance from the excessive speculation of the 1880s. The first available wage book for June 1870 demonstrates that Guest's factory was already, by Melbourne standards, a large firm. In this year, the factory employed a workforce of 24, all males, of whom 6 were in the office or were travellers, and 18 were on the factory floor.¹⁸

Over the course of the long boom of 1870–90, the factory grew considerably. By 1880, the factory, located in William St in central Melbourne, was one of the most up-to-date manufacturing enterprises in the Australian colonies. A pamphlet prepared for the company's display at the 1880 Melbourne International Exhibition described a number of the firm's modern machines and baking processes. No longer were biscuits kneaded and shaped by hand. To give a consistent product, mechanical mixers were employed and automatic cutters formed the biscuit. Endless chains guided biscuit trays through an oven open at two ends to ensure uniform baking and texture. The firm also stocked large supplies of milk, sugar, flour, and eggs in basement warehouses and cool stores. This provided a regular supply of raw materials and helped to keep prices uniform throughout the year. The firm also paid scrupulous attention to cleanliness.¹⁹

¹⁸ Our account of T.B. Guest is drawn largely from his private letter books. While these include a great deal of routine business correspondence, Guest used his private letter books to write to his children when they were overseas and to his family in Melbourne and in Chester and business acquaintances and friends. They provide a revealing picture of boom entrepreneur and his world. In 1871, Victorian factories employed an average of 11.2 workers; in 1881, the figure grew to 17.4, and was 16.6 in 1891. See University of Melbourne Archives, T.B. Guest and Co. Pty Ltd. Accession 68/21, Outwards Correspondence.

¹⁹ This account of the works was compiled from a privately published pamphlet – T.B. Guest, biscuit manufacturers, William St Melbourne – prepared for the Melbourne Exhibition of 1880.

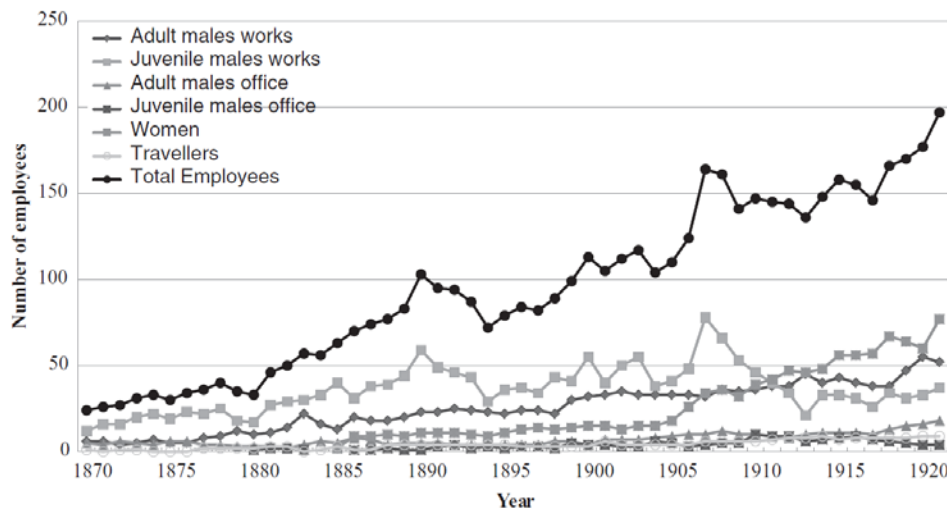


Figure 1. Employment at T.B. Guest Pty Ltd 1870–1921.

Source: University of Melbourne Archives, T.B. Guest and Co. Pty Ltd. Accession 68/21, Wages Books and Salaries Books, Engagement Books.

Guest's enterprise prospered in the two decades of the long boom. From 1870 to 1879, there was a steady but unspectacular growth in the number of men he employed. The recession of the late 1870s may have slightly curtailed the firm's growth, but the 1880s were a period of strong rise in employment. By the end of the 1880s boom, his enterprise employed almost 100 hands (Fig. 1). By then, the business had grown sufficiently for Guest and his wife to visit the home country, and his sons were sent to the United States and England as part of their commercial education. Even so, Guest was concerned that competition in the industry was fierce. In these years, his correspondence clearly shows that he colluded with one of his major competitors, Swallow and Ariel, on prices. When the manager of this firm, Frederick Derham, floated his works on the Melbourne stock exchange, T.B. Guest feared that large dividends promised in the prospectus would lead Derham into cut-throat competition. This was indeed the case when the collapse of the boom left Derham in deep financial trouble. Guest, however, avoided large debts during the boom and weathered the depression.

Unlike many manufacturers, Guest did not have to resort to major employment reductions in the 1890s depression. Indeed, towards the end of the 1890s, he took advantage of reduced real estate prices to buy a new and larger factory in North Melbourne. In 1898, Guest turned his business into a proprietary company with all the shares in the name of family members, and the majority controlled by T.B. himself. By the end of the decade, prosperity had returned, and the factory expanded in the early years of the century. T.B. Guest Junior and

Edgar Leonard Guest took control of the firm when their father died in 1908, and the business grew significantly in the second decade of the century.²⁰

DATA

Unlike most other firms from nineteenth-century Melbourne, the surviving records of T.B. Guest include a continuous series of wages books dating from 1870 to the 1920s (and beyond). For this article, the wages for the second week in January have been recorded for each employee from 1871 to 1921 (for 1870, the first extant wages book in June was employed), and individual workers were linked from year to year to compile employment histories. From 1875, the books divide the enterprise into divisions, and we can clearly distinguish white-collar ('office') from manual ('works') employees.²¹ Although occupational titles were not consistently listed, a handful of wages sheets give detailed descriptions of the works and its employees. With the imposition of the Biscuit Industry Wages Board in 1913, the firm started a new series of wages records, with wages of the 'office' and the 'works' kept in separate books. The wages books record days worked per week and the proportion of each day worked (as fraction of the day but not in hours). From these, we can determine actual earnings and the full-time wage rate for each employee.

The Factories and Shops Act of 1885 (which became law on 1 March 1886) required the registration of factories in Victorian cities, towns, and boroughs where six or more persons were employed and any office, building, or place in which 'steam or other mechanical power' was used. The Act limited the employment of women and children to 8 hours per day, made provisions for proper ventilation, observance of sanitary requirements, and for the guarding and fencing of machinery. The Act stipulated that firms keep records of the names of employees and the ages of those under 20.²² In response to these regulations, T.B. Guest instigated 'engagement books' in which the name, age, and address of new employees were recorded. The books also listed where recruits had previously worked and their former wage. In addition, the names and occupations of the parents and guardians of juveniles were elicited from potential employees. The earlier engagement books also record the length of stay in the factory. The firm kept these engagement books from 1888 to 1889 (there is also some recording of earlier recruits) into the mid-1920s. From the late 1880s, the engagement books have been linked to wages books to determine ages of employees. The firm also kept a number of annual

²⁰ T.B. Guest, Private letter books, 1870–1901. When he died in 1908, Guest was assessed for probate with a net estate of £47851. Public Records Office Victoria. VA 2620 Registrar of Probates, Supreme Court, VPRS 7591/P2, probate inventory and will 107/629. T.B. Guest's net worth was in the top 1 per cent of deceased estates.

²¹ We have adopted the terminology used by the firm to distinguish between white-collar and manual work.

²² The regulation of Victorian factories can be followed in the Victoria, *Annual Reports of the Chief Inspector of Factories* from 1886. See also Linge, *Industrial awakening*, pp. 279–89

returns compiled for the government's factory inspectors that listed the names of employees at the end of the year, whether employees were aged over 20 and the ages of those under 20. A number of internal lists recorded whether employees were married and if they were friendly society lodge members. These latter returns often gave detailed addresses. From these returns, employees have been traced through the indexes of the registry of births, deaths, and marriages to determine the ages of employees not available in company records. Nevertheless, actual age (in years) at time of observation is only available for 70.3 per cent of the sample, whereas age bracket data (in the 10-year range) is available for 88.2 per cent of the sample.

Thomas Guest, and later his sons, used the wages and engagement books to record employment policy and decisions made about individual employees. In the wages books are the annotated factory rules, details of arrangements for holidays, and the terms and the conditions of employment they negotiated with individual employees. The wages books also recorded details of employees' behaviour. Indiscretions such as stealing biscuits or slow work were noted. Furthermore, the firm watched its workers beyond the factory gates. If deviant behaviour, domestic quarrels, or drunkenness came before the magistrates' courts, the newspaper reports recording these cases were glued or pinned to the employment records. Under the severest scrutiny were those in positions of trust, travellers, and clerks, and the firm asked for references, often from clergymen, for those seeking employment in these positions, and they grilled prospective clerical employees about their past employment history.

Real wages have been computed by linking the McLean and Woodland consumer price index for Melbourne from 1854 to 1914 to the Commonwealth Statistician's A-Series Index.²³ To place the Guest works in a comparative context, the records of a South Melbourne firm of engineers and boilermakers, Buchanan and Brock, have been examined. From the late 1880s, we have extant wages books for this firm that record time worked, wages rates, earnings, and the occupations of those employed. Unlike the Guest factory, at this enterprise, a large proportion of the Buchanan and Brock workforce comprised skilled and unionised metal tradesmen: fitters, turners, blacksmith, and boilermakers.²⁴

There are 1,634 workers in our T.B. Guest data set (including 544 females), and 5,153 employee years of data. We are able to report aggregated data over the period (e.g. average wages for the firm and for subgroups of workers) and investigate the key determinants of remuneration outcomes through ordinary least squares (OLS) regressions. These regressions

²³ McLean and Woodland, Consumer prices in Australia, appendix table 6; Commonwealth Bureau of Census and Statistics, *Labour Report*, 14, p. 29.

²⁴ The earnings of travellers at T.B. Guest will not be examined in this paper. These men were paid a retaining wage and rewarded with commission payments on orders secured. We have only been able to find aggregate commission payments to travellers from annual reports after 1898.

reflect the standard wage equations used in the personnel economics literature, with log of real earnings as the dependent variable, and a range of explanatory variables, namely, tenure (in linear and higher order forms), gender dummies, year dummies, and dummies for white-collar versus manual work as independent variables.²⁵ Because of the aforementioned gaps in age data availability, regressions were run with age range dummies. The regressions for the entire data set are reported in Table 1.

WAGES

Wages in the nineteenth century

Traditionally, economic historians have measured nineteenth-century wage rates through the published returns in the *Statistical Register*.²⁶ For the early years of the 1870s, *Statistical Register* coverage is not very comprehensive, and the annual volumes mainly report the building trades and traditional crafts, such as the metal and printing trades. The *Statistical Registers* did cover important fields of employment but they fail to record a large number of factories producing food and consumer goods. The boot trades are an obvious example. Although official wage tabulations published information on boot making piece rates, these cannot readily be translated into estimates of earnings as we have no accurate figures on average employee output. Other important sectors of the manufacturing economy were simply not enumerated. Rates in the metal trades – blacksmiths, for example – refer mainly to the jobbing engineering shops; here, rates were higher than for men employed in agricultural implements, or working as blacksmiths in a range of manufacturing concerns. Furthermore, as noted previously, the official returns give ranges of wage rates, and we have no indication of how workers were distributed about these ranges.²⁷

In the 1880s, when parliamentary investigators turned their attention to the problem of ‘sweating’, the main focus of their attentions was not the skilled metal worker or the building tradesmen. They investigated the factories that grew behind tariff walls: clothing factories, boot manufacturers, paper mills, rope and food preserving works, bakeries and confectionary works, bottle works, candle making factories, and flour mills.²⁸ Here, large numbers of women and juveniles were employed, and the typical adult male worker was not the highly skilled

²⁵ For an explanation of standard earnings equations, see Lazear, *Personnel economics*.

²⁶ For a recent example see Allen, Real incomes.

²⁷ The statistics for wages in Victoria were published in *Statistical Register – Interchange* from 1870 to 1895. Thereafter, they were published in *Statistical Register – Production*. For their shortcomings, they remain our best source of wage rates and their coverage increased dramatically in the early twentieth century.

²⁸ Food, drink and tobacco, and footwear and clothing employed 34.7 per cent of registered factory workers in Victoria in 1890–91. See Linge, *Industrial awakening*, p. 745.

Table 1. The OLS regressions on log of real earnings: T.B. Guest employees 1876–1921

	Log of real earnings							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Tenure	0.256 (26.46)**	0.255 (27.07)**	0.231 (25.40)**	0.233 (26.59)**	0.230 (26.59)**	0.234 (26.53)**	0.098 (15.46)**	0.101 (16.67)**
Tenure ²	-0.014 (12.39)**	-0.015 (13.16)**	-0.012 (11.49)**	-0.012 (11.82)**	-0.012 (11.84)**	-0.012 (11.79)**	-0.006 (8.99)**	-0.008 (11.24)**
Tenure ³	0.0004 (8.12)**	0.0004 (4.68)**	0.0003 (7.25)**	0.0003 (7.23)**	0.0003 (7.27)**	0.0003 (7.18)**	0.0002 (6.55)**	0.0002 (9.30)**
Tenure ⁴	-0.0000 (6.48)**	-0.0000 (7.12)**	-0.0000 (5.60)**	-0.0000 (5.53)**	-0.0000 (5.62)**	-0.0000 (5.47)**	-0.0000 (5.65)**	-0.0000 (3.38)**
Gender (female)		-0.302 (16.52)**	-0.243 (13.68)**	-0.330 (18.32)**	-0.360 (20.32)**	-0.328 (4.80)**	-0.246 (8.08)**	-0.353 (3.08)**
Division-office			0.493 (21.27)**	0.462 (20.79)**	0.001 (0.01)	0.459 (20.64)**	0.426 (26.69)**	0.373 (26.69)**
Year dummies				Yes	Yes	Yes	Yes	Yes
Division-year interaction (office)								
Gender-year interaction (female)						Yes	Yes	Yes
Age (20–29)								
Age (30–39)								
Age (40+)								
Age group year interaction								
Constant	2.129 (225.23)**	2.211 (129.09)**	2.189 (133.28)**	2.524 (68.76)**	2.594 (68.97)**	2.523 (56.27)**	2.353 (78.80)**	2.513 (57.95)**
Observations	4982	4982	4982	4982	4982	4982	4522	4522
Adjusted R^2	0.55	0.57	0.60	0.65	0.66	0.64	0.86	0.88
F Statistic	1491.72**	1313.18**	1268.95**	157.05**	89.79**	91.86**	287.054**	142.75**

Absolute value of t -statistics in parentheses. *Significant at 5% level; **Significant at 1% level.

Sources: See Figure 1.

labour aristocrat but the unskilled and semiskilled labourer. For most of the long boom, these industries were not unionised, and the unionisation that did emerge in the late 1880s was swept away in the depression of the 1890s. Enduring trade unions of the unskilled only emerged under the protection of wages boards in the early twentieth century.²⁹ This places the last two decades of the nineteenth century as a veritable *natural experiment* in how an unfettered labour market might deal with significant booms and busts.

Macarthy argued that 1890s depression marked a major shift in the remuneration of labourers and the base rate of 7 shillings per day in the boom was replaced with two streams: the labourers on a full labourer's wage and the emergence of wages for sub-labourers. This division was subsequently maintained by early wages boards' determinations. There are serious flaws in Macarthy's thesis however. The argument is based on a misunderstanding of the wage rates obtainable during the late boom. The sum of 7 shillings per day or more was certainly paid to some unskilled workers, particularly for heavy unskilled labouring such as in the construction sector. Yet many unskilled labourers – shop carters or implement makers, for example – fell short of this standard even during the most prosperous years of the boom.

Wages at T.B. Guest

This is certainly borne out at T.B. Guest. Figure 2 shows the average money wage (i.e. not adjusted for inflation) of various groupings of male workers within Guest over the period of our

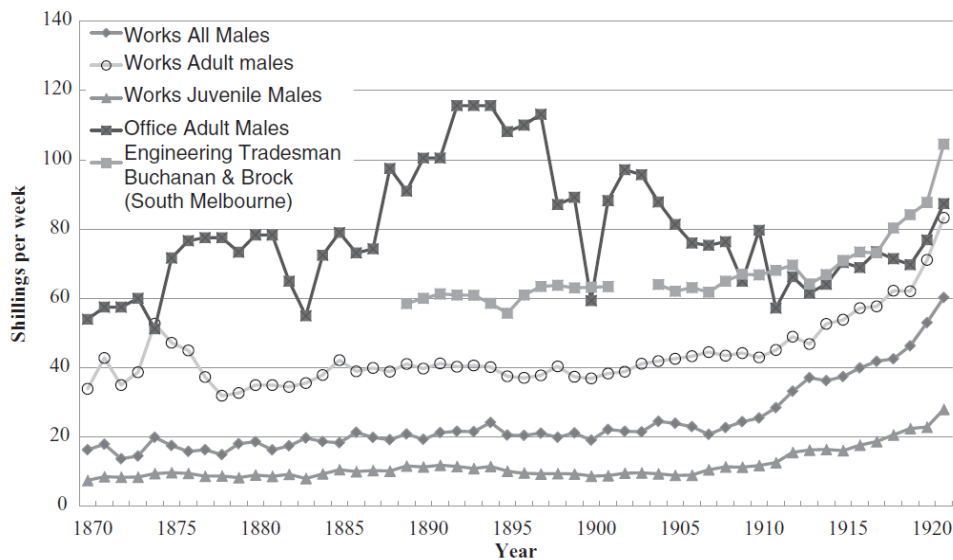


Figure 2. Average money wages at T.B. Guest Pty Ltd 1870–1921.

Sources: See Figure 1, and University of Melbourne Archives, Buchanan and Brock Wages Books.

²⁹ For the growth of Victorian unions see Macarthy, *The Harvester Judgement*, appendix 4.

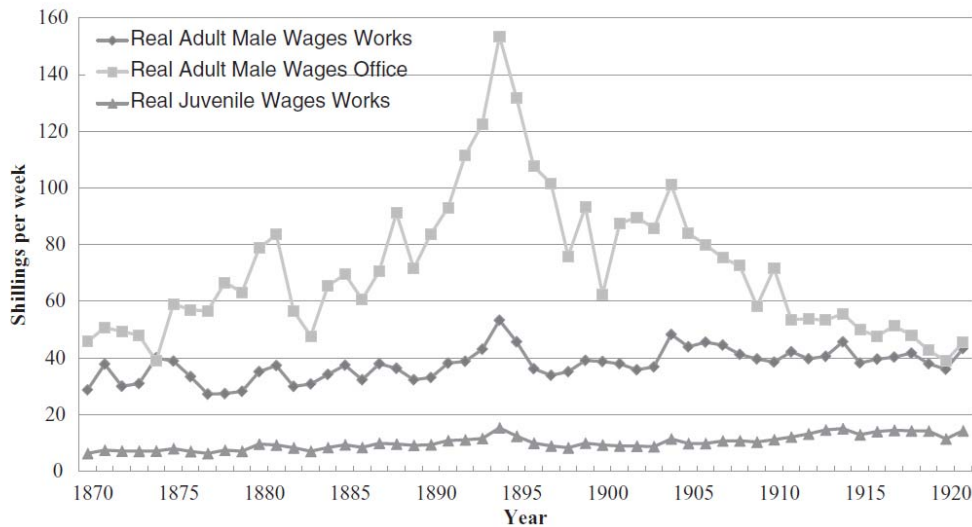


Figure 3. Real wages (1907 constant prices) at T.B. Guest Pty Ltd 1870–1921.

Source: See Figure 1.

study. Although Figure 2 is based on very few observations in the early 1870s, it does demonstrate that pay to adult factory workers at Guest from the mid-1870s until the end of the long boom in the early 1890s generally fell short of the iconic 7 shillings per day.³⁰ Wages at the Guest works were also well below the standard for a skilled metal tradesman and employment of juvenile males at the biscuit works ensured that average wage rates of all males were around half the rate at the Buchanan and Brock engineering works. Figure 3 adjusts these wages to their 1907 equivalent, and this further highlights the struggle of the average Guest worker to achieve the Harvester ideal of 7 shillings per day (or 42 shillings per week). This threshold was only breached in 3 years in the decades leading up to Federation.

Important though average wages are in determining living standards in boom and depression, they leave many questions unanswered. Consider the case of Stephen Curthoys, who wrote a curt note to his employer in November 1885:³¹

I take my Pen In hand to Let you know that I Am not coming Back to Work Any more As the Place Is not Agree With me and I do not See Any chance off (sic) Getting on As I have Been In the Bakehouse for A Long Time And I Was kept Down to[o] much If you Will kindly oblige By giving me a Reference And Leave With Judd [a foreman] As I will come by on Friday for my money And oblige.

As an afterthought, and perhaps with his reference in mind, he reminded his employer that ‘I was 6 1/2 years with you’. He started at 14 years of age in 1879, earning 7 shillings per

³⁰ Note that Figure 2 reports weekly wages for the Guest workers. The working week was 6 days. After the introduction of the 8-hour day, the typical pattern of work in Victoria was 5 days of 8 1/2 hours and 1 day (Saturday) of 5 1/2 hours. As such, 7 shillings per day rate equates to 42 shillings a week.

³¹ Letter attached to Engagement Book, 1888–98. We have retained Curthoys’s unusual use of capitals and lack of punctuation.

week. By his exit at almost 21 years old, he had progressed to 28 shillings per week. Although Curthoys considered that he had not ‘got on’ at the Guest works, he had achieved wage mobility. The Guest wages books suggest that further wage increases may have come more slowly.

The OLS regressions reported in Table 1 allow us to explore more closely the impact of tenure on wage rates for the entire Guest labour force. Model 1, the simplest of the regressions, assesses the nature of the tenure relationship, while models 2–4 add information about gender, division (i.e. works versus office), and year. Figure 4 plots the resultant ‘returns to tenure’ – namely, the change in real earnings resulting from each additional year of service. It shows that typically a Guest employee could expect his or her wages to increase over the early years of their career but that growth was at a declining rate. Indeed, more than half of career wage growth occurred in the first 6–7 years of service with the firm and in most cases would effectively level off by the 20-year service mark.

One problem with assessing tenure effects is distinguishing them from broader ‘life experience effects’ (i.e. the tendency of a worker to become more productive with age). For example, some workers spent much of the career within Guest (hence their tenure and age move in tandem, most directly if they joined Guest in the mid-teens). Meanwhile, others acquired some human capital in the external labour market (presumably through employment elsewhere) before joining Guest, and age and tenure have a larger ‘gap’. In light of these differences, we ran further regressions using age range dummies (models 7 and 8). Age clearly was rewarded at Guest (hence the positive, substantial, and significant coefficients on each age group dummy in models 7 and 8, and the very substantial increase in the explanatory power of these regressions,

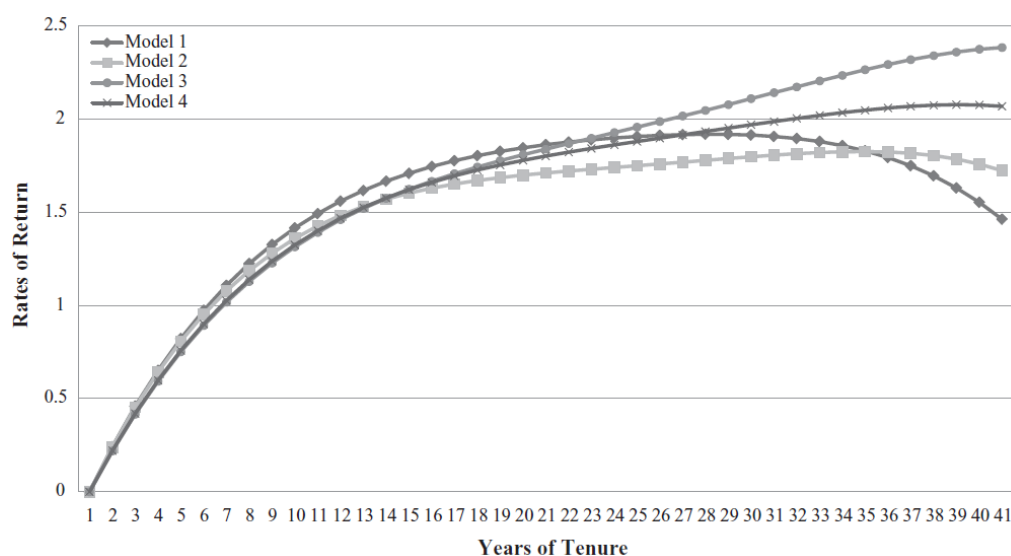


Figure 4. Rates of return to tenure T.B. Guest.

as indicated by the adjusted R^2 s. Tenure retains its shape and significance in these regressions (while the scale diminishes), suggesting independent rewards for both general and firm-specific experience.

The impact of the 1890s depression

Macarthy claimed that unskilled wages were high through the boom times prior to the onset of the 1890 depression, but dropped swiftly, recovering slowly over the subsequent decade and a half. Broader evidence of the impact of this depression on Melbourne industrial workers is limited; our best estimate of unemployment comes from the returns of the Amalgamated Society of Engineers where almost a quarter of members were unemployed in 1893.³²

At the Guest works, the impact of the depression was much less severe. On the wages sheet for 29 December 1893, a cryptic note appeared about an employee – ‘Page getting careless again’. At this date, Frederick Page had been employed for over 20 years by the firm, and he had risen from the rate of 15 shillings per week in 1870 to 75 shillings by the end of 1893. On 5 January 1894, the wage book recorded that ‘Page left Friday 5 January’. Although the reasons for his leaving at such an inauspicious time are unclear, among adult employees in the works, it was unusual. As shown in Figure 1, from 1891 to 1895, the number of adult male workers remained stable. The main group suffering retrenchments were juveniles, and the total juvenile workforce was cut from 49 to 29. For those who held their jobs, wages were not reduced and workers traced from 1891 to 1895 either had their wage rate increased (mainly young workers who remained) or maintained their money wage from 1891 to 1895. Our regressions confirm this. Figure 5 plots the coefficients on the year dummies in model 8 (our most comprehensive regression). Real wages appear to have been maintained until around 1894 before a significant fall. This trough looks to run through until 1910 or thereabouts.

The firm did make economies on a non-wage front; long-serving employees lost paid holidays and younger employees were put on short-time when orders were slow. The net impact was that adult male workers enjoyed a rise in real wages during the 1890s depression (Fig. 3).³³ New recruits taken on after 1895, however, were employed at reduced wages. In 1891, the average wage of new juvenile employees was 11.41 shillings per week, while in 1895, it had declined to 8.29. Interaction dummies (year and age group) in our regression model 8 (not shown) confirm this, with only employees aged less than 30 experiencing a net negative year effect through the latter half of the 1890s. Those over 30 years of age maintained their real wage rates. This

³² Macarthy, *Wages in Australia*, p. 69.

³³ Lee, *The marks of want and care*, p. 199. Jenny Lee argues that short-time cut into real wages in the years 1893–95. This was not the case with adult males at Guest. Our calculation from the wages books are that junior workers lost 13 per cent of full-time wages in 1893 and 22 per cent in 1894.

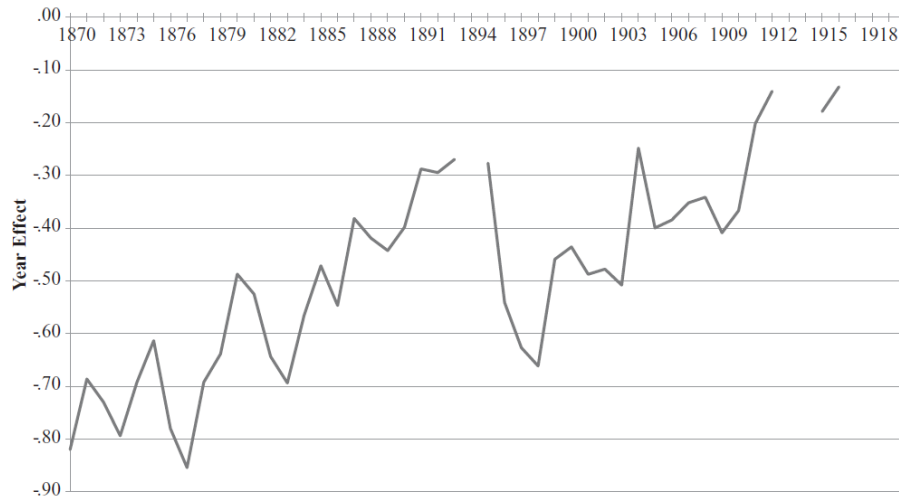


Figure 5. Impact of year dummies on log of real wages 1870–1920 (model 8).

Note: The omitted year was 1921. Missing data points reflect those dummies that were not significant at the 5 per cent level.

supports earlier work by Seltzer and Sammartino that even in relatively unregulated labour markets, economic downturns will not have universally deleterious effects. Rather, employers will tend to reward those with greater human capital by shielding them from the worst of the turmoil. The unfortunates in such periods are those new to the labour market or still in the skill acquisition phase, as they will find themselves without work or facing lower wages. Again, this highlights the need to look beyond simple wage averages or official rates. As in the Great Depression of the 1930s, the Guest records suggest that many employed workers may have borne little of the burden of the 1890s depression.

The impact of wage regulation

In the first two decades of the twentieth century, state and federal governments intervened in the labour market: the former provided minimum wages through wages boards and the latter attempted to ameliorate industrial disputes that crossed state borders through the Commonwealth Arbitration Court. In his pioneering work on these years, Macarthy argued that it was not until the early 1920s that unskilled workers saw a return to the high wage rates of the late 1880s. The Guest wages books allow us to put the first two decades of wage regulation into a long-term perspective and present a more optimistic picture of rising real wages. Although the Guest workers did not enjoy a wages board until November 1913, the Guest family had to recruit labour in the booming Melbourne market of the pre-war years. Average adult wages at Guest were in excess of the rate Macarthy labelled the Harvester Equivalent (7 shillings per day in 1907) for 6 of the 11 years from 1904 to 1914 (Fig. 3).

The prosperity of the pre-war years was challenged by the wartime inflation, and real wages were eroded in 1915, 1916, and 1917. The introduction of a wages board gave the Guest workers a forum for collective bargaining, and wages board determinations were made in September 1915 and 1917. Real wages dropped again in the immediate post-war years of 1919 and 1920, and further amendments to the Wages Board were negotiated in January 1919, August 1920, and June 1921. By 1921, Guest adult workers were paid above the Harvester Equivalent. The willingness of employers to engage in wages board negotiations should also be viewed within the broader industrial relations context. Such concessions may have persuaded their employees not to engage in the major waves of industrial unrest that broke out in Melbourne in 1917 and in 1920–21.³⁴

Despite the inflationary stresses of the war and post-war years, there is no doubt that the Guest Biscuit workers, particularly the younger members of the workforce, benefited from the changes in wage structures instituted with the coming of wages boards. Among the more significant features of the wages board determinations was that it set a precise age bound on the payment of adult, or full labouring, wage rates; at age 21, employers were legally obliged to pay an adult wage. With the coming of the wages board, the firm had no alternative other than to pay 10 adult men, who were receiving wages ranging from 27 to 40 shillings, the full base rate of 45 shillings.³⁵ The long-term impact of the wages board is detectable in the interaction dummies (year and age group) in our regression model 8 (not shown), as adult employees' (i.e. the 20–29, 30–39, and 40+ age groups) year effects were much more subdued from 1913 when compared to their previous decade. This suggests the returns to tenure had declined significantly. In light of this finding – that the firm may have been adjusting the make-up of its labour force in light of the shifting regulatory and labour market conditions – and due the richness of the Guest data set, we can also explore the different dynamics of the firm's relations with female and clerical workers, and the impact of juveniles on the latter.

FEMALE WORKERS AT T.B. GUEST

As Frances et al. observe, the historiography regarding the experience of Australia's female labour force in the early twentieth century presents two divergent lines of argument. Those following the pioneering work of Ryan and Conlon have argued that the Harvester Decision and the subsequent Fruit Packer's case of Justice Higgins institutionalised low wages for women. A second alternative argument is that wages boards and arbitration set a floor below which wages

³⁴ For the disputes of these years see Victoria, *Annual Reports of the Chief Inspector of Factories*, 1918, 1920, and 1921. For the wages board determinations, see Public Records Office of Victoria, Biscuit, Wages Board File VPRS 5466/PO/Unit 8.

³⁵ University of Melbourne Archives, T.B. Guest and Co. Pty Ltd. Accession 68/21, Wages Books and Salaries Books.

could not fall. Frances et al. observe that evidence on female wages was very sparse for the years before published determinations of wages boards and arbitration courts.³⁶ Although they acknowledge that female wages rose in the early twentieth century, Frances *et al.* argue that this owed more to changes in the structure of female employment than the decisions of wages boards.

For most of the long boom, the Guest works relied very heavily on male juvenile employment. During the height of the boom in the late 1880s, almost 60 per cent of works employees were young men aged less than 20, with the remainder being overwhelmingly male. Women were first employed in 1884, and their numbers had grown to more than 10 per cent of the employees in the factory by the beginning of the 1890s. The proportion of women fluctuated in the 1890s and early 1900s, reaching almost a fifth in 1907 (see Fig. 1). In the first two decades of the new century, women began to replace young men as the most typical hire. By 1921, women made up almost a half of the manual workforce at the Guest factory and more than half of the most recently hired employees (see Fig. 6).

Like juvenile men, young women from the 1880s through until the early twentieth century were a source of cheap labour at the Guest factory, and young women in these years were paid

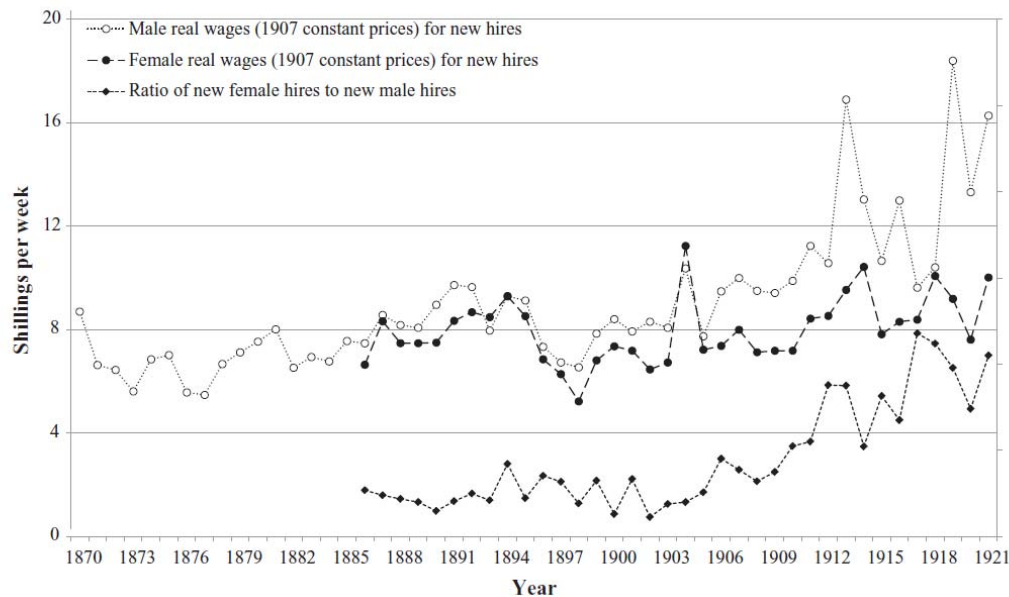


Figure 6. Wages to new hires at T.B. Guest and ratios of hire by gender.

Sources: See Figure 1.

³⁶ Frances *et al.*, *Women and wage labour*, pp. 60–1.

slightly less than their juvenile male colleagues. Figure 6 tracks the median wage levels for male and female new hires (i.e. those joining within the past year) over the period of our study, as well as the ratio of male to female new hires that appear in our data set. It demonstrates that the gap between male and female wages at entry widened considerably through much of the period from 1905 onwards. At the same time, the ratio of women to men in this new labour pool leaped.

With the introduction of the wages board in 1913, there was a strong inducement to employ women. Although this determination set juvenile wages for males and females at the same rate for the first 2 years of employment, thereafter, women fell behind men. By early adulthood, men had a clear advantage over women; the wages board determination set a minimum adult wage for women age 21 years at 22 shillings and 5 pence, or half the rate of a male. As the firm turned to women, they also employed older women. In 1887-91, over 80 per cent of female employees were aged under 20; by 1917-21, the proportion had declined to less than a half. Clearly, Guest was responsive to these regulatory changes and the disincentive to hiring males. Indeed, this wage determination could be seen as escalating the feminisation of this form of manual labour.

Our OLS regressions provide further insight into the female remuneration experience. While the gender term in the regressions in Table 1 consistently shows a *female discount*, this discount does vary considerably over time. The gender-year interactions from model 8 (not shown) indicate women incurred a considerably lower wage discount than men through much of the 1890s. Table 2 reports OLS regressions on only the female employees. Interestingly, the

Table 2. The OLS regressions on log of real earnings: female T.B. Guest employees 1876-1921

	Log of real earnings		
	(1)	(2)	(3)
Tenure	0.225 (3.49)**	0.283 (6.03)**	0.276 (5.88)**
Tenure ²	-0.025 (-1.19)	-0.066 (-4.30)**	-0.065 (-4.66)**
Tenure ³	0.0158 (0.64)	0.0066 (3.69)**	0.0066 (3.59)**
Tenure ⁴	-0.0000 (0.51)	-0.0002 (-3.43)**	-0.0002 (-3.24)**
Year dummies	Yes	Yes	Yes
Age (20-29)		0.442 (25.67)**	0.510 (10.96)**
Age (30-39)		1.051 (15.21)**	0.532 (2.54)*
Age (40+)		0.831 (13.83)**	0.715 (4.94)**
Age group-year interactions			Yes
Constant	2.307 (37.34)**	2.117 (46.63)**	2.099 (42.89)**
Observations	1038	1038	1038
Adjusted R ²	0.47	0.72	0.75
F-Statistic	21.595**	56.94**	31.22**

Absolute value of *t*-statistics in parentheses. *Significant at 5% level. **Significant at 1% level.

Sources: see Figure 1.

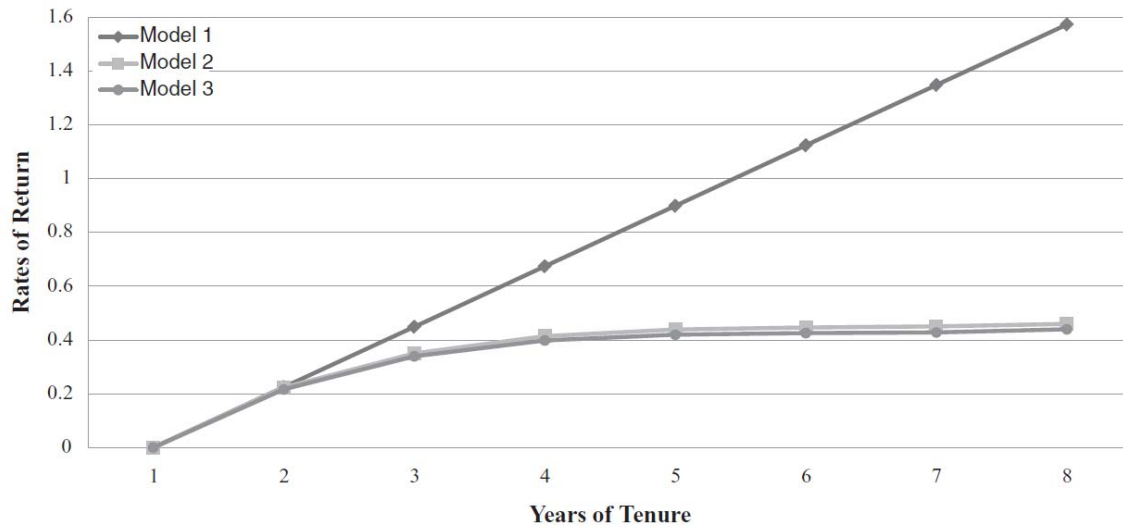


Figure 7. Rates of return to tenure T.B. Guest (female employees).

tenure effects are much weaker here (as plotted in Fig. 7), with a substantially lower overall gain compared with their male counterparts, and much of the wage growth occurring within a few years of commencement (presumably reflective of the transition from junior to adult wages). Coupled with the evidence of limiting growth in starting wages, these findings provide strong support for Frances' suggestion that any real wage growth for women during this period was due to changes in the structure of female employment – in the case of Guest factory, women were older – and women in their 20s experienced little growth in real wages between the two periods. There is little evidence to support Sinclair's suggestion of real wage increases in the order of 20 per cent between 1891 and 1921.³⁷

THE IMPACT OF EDUCATED JUVENILES ON CLERICAL STAFF

One of the more important social changes in the late nineteenth and early twentieth century was the rise of white-collar and clerical work. Davison charted the growth of clerical labour in Melbourne in the 1880s and the subsequent desire for parents to push their children into office work. Melbourne's leading businessmen, who had risen to prominence in the decades after the gold rush, were faced with the problem of providing for their own sons. One of their responses was to abandon their former practices of promoting trusted clerks to partnerships. These they now bestowed on own children.³⁸ Anderson has noted a similar pattern in Britain, with a decline in the position of Liverpool clerks. The late nineteenth century saw structural changes in the market for clerks with the increasing employment of female clerks and typists

³⁷ Sinclair, *Women and work*; Sinclair, *Women and economic change*.

³⁸ Davison, *Marvellous Melbourne*, pp. 29–33. In examining the position of commercial clerks, Davison has misread the 1891 census and overestimated the proportion of clerks who were under 21. He states that 65 per cent were aged under 21. The census actually states that 65 per cent (5,188) were aged 20 or more. See Victoria, *Census 1891*, p. 491, and Davison, *Marvellous Melbourne*, p. 29.

and of poorly paid young male clerks: 'With the spread of literacy and the search for respectable and secure employment by the sons of lower-middle-class and respectable working-class parents the number of potential clerks was growing fast'. According to Anderson, clerks did remain relatively more secure than most other workers, but there emerged before the Great War 'a marginal group within the stratum struggling to find employment, made redundant by employers' bankruptcies or economies, or employed on a merely temporary basis'.³⁹

As the surviving records attest, T.B. Guest early on became a meticulous record keeper, and the clerical office was an essential arm of his enterprise. For most of the nineteenth century, the office was small, and a handful of clerks and accountants worked alongside Thomas Guest senior. There were also a number of travellers who moved throughout the metropolis and into rural Victoria taking orders from grocers. As Guest's sons were brought into the enterprise, they commenced their work as office boys and rose through the clerical ranks. Guest carefully monitored all aspects of his enterprise. The surviving company records demonstrate many facets of clerical work, and its centrality and importance to a large enterprise. Clerks were responsible for keeping wages, time, and engagement records up to date. Stock was also monitored and surviving ledgers record supplies of such basic commodities as eggs, flour, and fruit. In an age before mass paper packaging, biscuits were delivered in tin containers, and these were of significant capital value. Simply controlling the supply and return of biscuit tins was a necessary clerical task. Much of the dealing with suburban and country grocers was on credit, and Guest and his accountants had to watch carefully for impecunious storekeepers. Guest and his clerks carefully monitored the price of rivals' products.⁴⁰

Throughout the nineteenth century, the office staff at Guest enjoyed a privileged position in the labour market, and they were well paid compared with their manual colleagues and skilled tradesmen in other workplaces (Fig. 2). In 1891, the accountant, Charles Young, was paid £8 per week and Leslie Whitton, a senior clerk, received £4/10/-. Both received wages well above £3/1/-, the average rate for a skilled metal tradesman at Buchanan and Brock (Fig. 2). Work was regular and even in the depression wages were not reduced, nor was short-time introduced.

In the early twentieth century, the clerical workforce grew in line with the general labour force at the Guest works. As old servants retired, the Guest family was able to draw on the growing army of literate and numerate males produced by a generation of free secular and compulsory education. The impact of declining opportunities for clerical work can be seen in our OLS regressions (Table 1). While models 3–4 and models 6–8 report a large division (office)

³⁹ Anderson, *Victorian clerks*, p. 2.

⁴⁰ The work of clerks is evident from the various records that Guest kept and their importance can also be pieced together from references in the private letter books.

premium, the inclusion of a division-year interaction in model 5 sees this dummy variable become virtually zero and statistically insignificant. The interaction terms (not shown) reveal the substantial decline of the clerk premium over manual employees. For the first three decades of our study, it is a statistically significant, large positive term (between 130 and 50 per cent for almost every year until 1900). Yet by 1910, this was down to around 25 per cent, and through the subsequent decade, there was typically no statistically significant premium. This was likely a general trend across the metropolitan workforce, and in July 1911, the clerks union petitioned for a wages board. The eventual award confirmed their status as little above the ranks of the unskilled.⁴¹

CONCLUSION

Few Australian labour studies have looked at individual level data for the remuneration of manual factory employees, and our understanding of white-collar work comes from large bureaucratic workplaces such as the large banks. This study has granted insight into a more disparate set of dynamics within Australian labour markets in the late nineteenth and early twentieth centuries and suggests several promising areas for future investigation.

The records of employment at the Guest works show that wages often fell short of the high rates quoted in official returns for skilled craftsmen or strong armed construction labourers. Industrialising Melbourne depended on the labour of both young men and women, whose wages fell well below those of adult males. The world of adult manual work was complex, and there was clearly a diverse range of remuneration practices at play, especially during the unregulated decades of the late nineteenth century. Even with regulation of hours and some conditions from 1885, it is clear that there are considerable gaps existing between workers based on skill, tenure, and industry. The relatively unskilled manual workers at Guest experienced neither the 1880s boom nor the 1890s depression in the same fashion as their counterparts in more skilled or organised vocations. There were differential effects for the more experienced than the less, and likewise, intriguing adaptations by Guest as an employer in response to differences in the labour supply.

The Guest archive also suggests subtle shifts in the way young women were employed. Guest's hiring of a greater proportion of women predated the introduction of the wages board, but the pace quickened after 1913 when minimum wages were established. What is particularly noticeable – and requires investigation in other sectors – is the tendency for older women to be employed. Before the wages board, the typical female Guest employee was a teenager; after the

⁴¹ Public Records Office Victoria, Commercial Clerks, Wages Board File, VPRS/5466/P/41.

wages board, she was just as likely to be in her early 20s. This may reflect a deliberate employer strategy to lower adult wage costs, and/or a response by these women to a more gender-friendly workplace. It certainly resulted in a feminisation of the key manufacturing activities within this firm. Exploring this dynamic in other firms during this period would undoubtedly increase our very limited understanding of the employment of women in the early twentieth-century economies of Australia.

Clerical workers are, in many ways, an even more neglected group in Australian history. The Guest example opens a window on the thousands of small offices that were dotted around the factories and workplaces of Melbourne, Sydney, and other Australian cities. In the nineteenth century, Guest's clerical workers were loyal, trusted, and well-remunerated employees. By the second decade of the twentieth century, however, this privileged position had disappeared. Unlike the banks, entrance exams did not screen out potential employees, and the ranks of those with basic literacy had been greatly enlarged by state education. Compared with the banks and the railways – where clear career paths were possible – Guest's biscuit business was not a large employer of clerical labour, but the experiences here may be more typical of the broader environment. The working world of isolated clerical workers remains largely untold. The Guest story indicates that the early twentieth century was a time of profound change, and one that needs more research.

Finally, in light of this evidence, we argue that attempts to construct wages series for entire colonies, states, or nations from surveys of a small number of workgroups, or indeed from single sets of employment records, may well be a futile and misleading exercise, given the diversity of experiences within just this one medium-sized firm. The complexity of establishing and administering the web of wages boards and industrial awards during the first few decades of the twentieth century highlights these very issues. Further illumination of the impact of Australian labour markets, labour market regulations and employer practices is likely to come from detailed firm- and industry-level examinations.

REFERENCES

- Allen, R. C. (1994) Real incomes in the English-speaking world 1879–1913. In: G. Grantham and M. Mackinnon, eds. *Labour Market Evolution: The Economic History of Market Integration, Wage Flexibility and the Employment Relation* (London: Routledge).
- Anderson, G. (1976) *Victorian Clerks* (Manchester: Manchester University Press).
- Buckley, K. D. (1970) *The Amalgamated Engineers in Australia, 1852–1920* (Canberra: Department of Economic History, Australian National University).
- Butlin, N. G. (1964) *Investment in Australian Economic Development, 1861–1900* (Cambridge: Cambridge University Press).
- Commonwealth Bureau of Census and Statistics (1923) *Labour Report, 1923*, No. 14.

- Davison, G. (1978) *The Rise and Fall of Marvellous Melbourne* (Melbourne: University of Melbourne Press).
- Fitzgerald, S. (1987) *Rising Damp, Sydney 1870–90* (Melbourne: Oxford University Press).
- Frances, R., Kealey, L., and Sangster, J. (1996) Women and wage labour in Australia and Canada, 1880–1980, *Labour History*, 71, 54–89.
- Frances, R. (1993) *The Politics of Work: Gender and Labour in Victoria, 1880–1939* (Cambridge: Cambridge University Press).
- Frances, R. (1998) Gender, skill and the regulation of labour markets: Victoria 1890–1930, *Journal of Industrial Relations*, 40, 401–8.
- Gregory, R. G., Ho, V., and McDermott, L. (1988) Sharing the burden: The Australian labour market during the 1930s. In: R.G. Gregory and N.G. Butlin, eds. *Recovery from the Depression: Australia and the World Economy in the 1930s* (Cambridge: Cambridge University Press).
- Hagan, J. (1966) *Printers and Politics: A History of the Australian Printing Unions, 1850–1950* (Canberra: Australian National University Press).
- Larson, A. (1994) *Growing up in Melbourne: Family Life in the Late Nineteenth Century* (Canberra: Demography Program, Australian National University).
- Lazear, E. (1996) *Personnel Economics* (Boston: MIT Press).
- Lee, J. (1988) The marks of want and care. In: V. Bergmann and J. Lee, eds. *Making a Life: A People's History of Australia Since 1788* (Melbourne: McPhee Gribble/Penguin).
- Linge, G. J. R. (1979) *Industrial Awakening, A Geography of Australian Manufacturing 1788 to 1890* (Canberra: Australian National University Press).
- Macarthy, P. (1967) The harvester judgement – an historical assessment, (PhD thesis) (Canberra: Australian National University).
- Macarthy, P. (1970) Wages in Australia, 1891–1914. *Australian Economic History Review*, 10, 56–76.
- Macarthy, P. (1972) Wages for unskilled work and margins for skill, Australia, 1901–1921. *Australian Economic History Review*, 11, 142–160.
- McLean, I. W., and Woodland, S. J. (1992) Consumer Prices in Australia, 1850–1914, Department of Economics University of Adelaide, Working Paper, No. 92–4.
- Public Records Office Victoria. VA 1010 Conciliation and Arbitration Boards, VPRS/5466/Po Commercial Clerks, Wages Board File, Unit 41.
- Public Records Office Victoria. VA 1010 Conciliation and Arbitration Boards, VPRS/5466/Po Biscuit, Wages Board File, Unit 8.
- Public Records Office Victoria. VA 2620 Registrar of Probates, Supreme Court, VPRS, 7591/P2 Will of Thomas B Guest, Unit 422, file 107/629.
- Public Records Office Victoria. VA 2620 Registrar of Probates, Supreme Court, VPRS, 28/P2 Inventory of Thomas B Guest, Unit 846, file 107/629.
- Raymond, M. (1991) Response of female industrial workers: a case study of the Guest Biscuit Factory, 1888–1899. *Labour History*, 61, 123–32.
- Seltzer, A. (2000) Controlling and motivating the workforce: evidence from the banking industry in the late 19th and early 20th centuries. *Australian Economic History Review*, 40, 219–38.
- Seltzer, A. (2010) Did firms cut nominal wages in a deflationary environment?: Micro-level evidence from the late 19th and early 20th century banking industry. *Explorations in Economic History*, 47, 112–25.
- Seltzer, A., and Merrett, D. (2000) Personnel practices at the Union Bank of Australia: panel evidence from the 1887–1900 entry cohorts. *Journal of Labor Economics*, 18, 573–613.
- Seltzer, A., and Sammartino, A. (2009) Internal labour markets: evidence from two large Australian employers. *Australian Economic History Review*, 49, 107–37.
- Seltzer, A., and Sammartino, A. (2011) Nominal wage rigidity prior to compulsory arbitration: evidence from the Victorian Railways, 1902–1921. *Cliometrica*, 5, 53–78.
- Seltzer, A., and Simons, K. (2001) Salaries and career opportunities in the banking industry: evidence from the personnel records of the Union Bank of Australia. *Explorations in Economic History*, 38, 195–224.
- Sinclair, W. A. (1981) Women and work in Melbourne and Adelaide since 1871. *Economic Record*, 57, 344–53.
- Sinclair, W. A. (1982) Women and economic change in Melbourne 1871–1921. *Historical Studies*, 20, 278–91.
- University of Melbourne Archives, T.B. Guest and Co. Pty Ltd. Accession 68/21, Wages Books and Salaries Books. June 1870–February 1926, 10/10/1–23.
- University of Melbourne Archives, T.B. Guest and Co. Pty Ltd. Accession 68/21, Engagement Books. August 1888–October 1926, 12/4/1–7.

University of Melbourne Archives, T.B. Guest and Co. Pty Ltd. Accession 68/21, Outwards Correspondence, 1/1/1-6.

University of Melbourne Archives. Buchanan and Brock, Wages Books. 1889–1921, Accession 1984.0106.

Victoria. *Annual Reports of the Chief Inspector of Factories for the Year Ended 31 December 1886, 1888, 1918, 1920 and 1921.*

Victoria. *Census of Victoria, 1891, Part IX – Occupations of the People.*