The Survival and Decline of the Apprenticeship System in the Australian and UK Construction Industries

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**Introduction**

The preservation of the apprenticeship system in the Australian construction industry contrasts with its collapse in Britain over the last three decades. Given that the Australian construction industry has undergone the same structural changes that are conventionally advanced to account for the decline of apprentice training in the United Kingdom construction industry, this difference in outcome requires explanation. Echoing the findings of Howard Gospel (1994), this paper suggests that the differences may be attributable to institutional differences in the organisation of labour, employers and the training system across the two countries.

It is well established that the development and survival of national apprenticeship systems relies on a set of inter-locking institutional supports. In the literature on this subject there are three distinct themes:

- First, identifying supporting institutions, such as multi-employer co-ordination of industrial relations and training that ensures training content and delivery meets industry needs; strong unions that demand training result in general and transferable skills to balance the firm-specific training bias of employers; statutory regulations governing the contract of employment and training of apprentices; regulation of the labour market providing quasi-rents for workers investing their time in an apprenticeship and state financial support for training infrastructure and overall supervision of the system (Curtain 1987; Finegold 1999; Buttler et al 1995; Estevez-Abe, Iversen, and Soskice 2001).

- Second, explaining how changes to these institutions have led to the growth or decline of apprenticeship systems (Elbaum 1991; Gospel 1994; Finegold and Soskice 1988; Culpepper and Finegold 1999; Ryan 2000). The UK and US are invariably used as examples of failing or
failed systems and Europe as a continuing, although threatened, system.

- Third, identifying the virtuous circle between apprenticeship systems, product markets and industrial structure. This literature identifies how the advantages conferred by an apprenticeship system, in particular a large supply of intermediate skills of certified quality, promotes the development of industries that intensively use these skills – thus the notion of ‘high skill equilibrium’ (Finegold and Soskice 1988, Wagner 1991). There is a circular and cumulative relation between the supply of and demand for higher intermediate skills. Obversely, the literature identifies a vicious circle whereby a decline in national apprenticeship systems results in difficulties for productivity, quality and capacity for innovation due to long-term shortages of adequately trained intermediate skills (Prais 1995; Anderton and Schultz 1999). Firms adapt to these shortages by pursuing production strategies more reliant on semi-skilled labour and product market strategies based on standardised commodity-style output in which scale economies and price are the basis of competitive success (Keep and Mayhew 1999).

This paper draws on these insights from the literature to consider why the apprenticeship system has survived in the Australian construction industry, albeit with many difficulties, but has collapsed in the United Kingdom construction industry.

**Comparative Training Rates**

Arguably the best indicator of the output of an apprenticeship system is the training rate, which measures the ratio of the stock of apprentices-in-training to the stock of employed tradespersons. It measures the extent to which an occupation is reproducing itself through the domestic training system. In Australia there has been a sustained decline in the construction industry’s apprentice-in-training rate from the early 1990s to the present. When compared
to the previous two decades it represents a decline of approximately 15 per cent. Over the last decade the construction apprentice-in-training rate has averaged 9.7 per cent.

![Figure 1](image)

It is much harder to obtain similar long-run data for the United Kingdom. However, the nearest estimates indicate that in 1975 the training rate was 7-8 per cent, but in 1998 it was 2 per cent (derived from Winch 1998 and CITB 1999). Other studies found that between the mid-1980s and the mid-1990s the number of apprentices registered with the Construction Industry Training Board fell by 60 per cent (ILO 2001: 40).

**Explaining the Decline in Construction Industry Training Rates**

The possibility that the decline in United Kingdom investment in apprentice training reflects a decline in construction output can be discounted. Over most of the last decade the United Kingdom construction industry experienced relatively steady growth (CITB 1999:11). Significantly, differences in the occupational structure of the two construction labour markets are another factor to discount. If the proportion of trade-based occupations was much lower in the United Kingdom than Australia, then this would imply that there is less demand for
apprentices to supply these occupations. However, this is not the case, as the occupational structures are broadly similar (Table 1). In both countries around 50 percent of the construction workforce is comprised of persons classified to trade or 'skilled craft' occupations (CITB 1999:14). The share of tradespersons in the construction workforce has been steady in Australia for at least the last three decades (Toner 2000: 44).

Table 1  Occupational Composition of the UK and Australian Construction Industries

<table>
<thead>
<tr>
<th>Occupation</th>
<th>UK 1999</th>
<th>Australia 2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers</td>
<td>9.6</td>
<td>10.1</td>
</tr>
<tr>
<td>Clerical</td>
<td>8.5</td>
<td>15</td>
</tr>
<tr>
<td>Professionals</td>
<td>2.8</td>
<td>2.9</td>
</tr>
<tr>
<td>Carpenters</td>
<td>14.5</td>
<td>10.3</td>
</tr>
<tr>
<td>Bricklayers</td>
<td>8.2</td>
<td>3.5</td>
</tr>
<tr>
<td>Painters</td>
<td>6.1</td>
<td>5.7</td>
</tr>
<tr>
<td>Plasterers</td>
<td>2.8</td>
<td>3.5</td>
</tr>
<tr>
<td>Roofers</td>
<td>3.2</td>
<td>na</td>
</tr>
<tr>
<td>Floorers</td>
<td>1.4</td>
<td>na</td>
</tr>
<tr>
<td>Glaziers</td>
<td>0.5</td>
<td>0.4</td>
</tr>
<tr>
<td>Electricians</td>
<td>9.4</td>
<td>9.9</td>
</tr>
<tr>
<td>Plant Mechanics</td>
<td>1.5</td>
<td>na</td>
</tr>
<tr>
<td>Plumbers</td>
<td>7.7</td>
<td>7.4</td>
</tr>
<tr>
<td>Total Trades*</td>
<td>55.3</td>
<td>50</td>
</tr>
<tr>
<td>Plant Operatives/Labourers</td>
<td>23.8</td>
<td>22.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>


*Note the percentages for the Australian trade occupations do not sum to the subtotal as several occupations are not listed.

The decline in the rate of vocational training in the construction industry over the last two to three decades is an international trend. The literature on this topic
attributes this decline primarily to two major structural changes in the industry: the privatisation of public utilities and the growth of self-employment – with the latter being regarded as the primary influence (ILO 2001:19-21). The extent of these structural changes in the United Kingdom and Australian construction industries is outlined in the following section.

The Reduced Role of Public Sector in Construction

The influence of neoclassical economics and neo-liberal politics throughout much of the developed and developing world from the 1970s substantially reduced the role of the public sector in the economy, and in the construction industry in particular. In the United Kingdom these policies took a variety of forms including a substantial reduction in state construction investment, the privatisation or ‘commodification’ of previously state-produced utilities and services, and the extension of compulsory competitive tendering (Evans 1991: 27). On the demand side, public sector expenditure on construction declined by 40 per cent over the decade from the mid 1970s. ‘State sponsored construction averaged 45 per cent of total volume between 1945 and 1976, when it peaked at 52 per cent of total volume, before falling below 32 per cent in 1985’ (Evans 1991: 28). On the supply side, the sale of public utilities and infrastructure resulted in a large shift of construction capacity and employment to the private sector. Further, in public sector construction contracts, the scope for the private supply of these projects increased as a result of the removal of preferences for direct employment, the non-enforcement of other labour regulations, and the introduction of compulsory competitive tendering. (Evans 1991: 33).

Such policies proved adverse for public and private investment in training for a number of reasons. Compulsory competitive tendering for public sector construction has had the effect that ‘private sector firms which do not train can undercut the costs of the public sector Direct Labour Departments that do train’ (Rainbird 1991: 208). Secondly, the ‘shift away from public sector work has also altered the size and duration of construction projects...the public sector provides
most long-lasting, high value projects...the shorter duration of projects leads to the time horizon of a contractor’s assured future work shrinking dramatically’ (Ball 1988:107-18). One of the major reasons for firms’ reluctance to invest in training is their inability to control or predict their level of output (ILO 2001: 39). This is especially the case for apprentices who require 3-4 years of employment and training before they are qualified (Department of Employment, Training and Youth Affairs 2001: 79). Finally, the reduction on both the demand and supply side of the public sector has accelerated the shift from direct employment of labour to subcontracting and self-employment.

Similar trends are evident in Australia. As a result of privatisation, the introduction of compulsory competitive tendering, and the growth of public-private partnerships there has been a substantial decline in the public sector construction workforce. Between 1984 and 2004 this workforce declined by 81 per cent (ABS Cat. No. 6248.0.55.001). By contrast, the total public sector workforce fell by only 4 per cent over the same period. The public sector share of total expenditure on construction declined from 36 per cent in 1987 to 20 per cent in 2004 (ABS Cat No. 6248.0.55.001). This is a decline of 44 per cent. Although the reduction in the public sector share of total construction output occurred later in Australia it was of a similar magnitude to the decline in the United Kingdom. In the 1980s the Australian public sector accounted for around 15 per cent of all construction apprentices, it now accounts for less than 2 per cent (Toner 1998). There has been no compensating increase by the private sector.

**Reduced Firm Size and the Growth of Self-Employment**

the second, and most important, factor accounting for the decline in UK and Australian construction training rate is the intensification of subcontracting. It has resulted in a reduction in average firm size and an increase in self-employment.

The growth of outsourcing and subcontracting in global construction markets occurred for a number of reasons. First, beginning in the 1970s, the international
mobility of capital accelerated and increased the level of competition in the construction industry. Built structures cannot be traded internationally as the service they provide is location specific, nevertheless, as a larger share of construction output was funded and supplied by private global capital markets this increased the pressure to cut costs and equalise the rate of return on construction investments in diverse locations (ILO 2001: 25). Secondly, larger construction firms shifted their primary activity away from undertaking actual construction work with their own directly employed labour to co-ordinating the construction process; and towards developing, financing and marketing construction projects (ILO 2001: 19; Winch 1998: 19). Thirdly, the declining role of the public sector as a provider of construction services affected the firm size distribution of the industry, as public sector business units are much larger on average than private sector units. Finally, there are considerable advantages in the subcontracting system for construction firms. The highly cyclical nature of industry output and the short duration of many construction projects creates a demand for numerical flexibility in the use of labour. The sequential nature of production involves discrete skill sets at different stages provided by a large range of distinct occupations (Productivity Commission 2001: 3-4). Firms that engage subcontractors can reduce their total labour costs by 20-30 per cent through non-payment of on-costs such as superannuation, workers’ compensation, sick pay and holiday pay (Evans 1991: 35; Toner 2000). For subcontractors there are tax advantages in shifting to self-employment and greater autonomy.

The growth of subcontracting has resulted in a highly fragmented United Kingdom construction industry. In 1998, 90 per cent of employing firms had 10 or fewer employees (CITB 1999:14-15). The proportion of self-employed in the total United Kingdom construction workforce increased from 23 per cent in 1977 to 45 per cent in 1996 (Winch 1998: 533).
Similar trends occurred in Australia. In 1978 19 per cent of all persons in the industry were self-employed; by 2001 it was 36 per cent. The growing reluctance of construction firms to employ workers directly is reflected in the dramatic decline in firm size in the construction industry, which fell from an average of 4.1 persons per firm in the late 1980s to 2.5 persons in the late 1990s (Toner 2000: 293).

The growth of small firms and of sub-contracting, and an increase in self-employment have acted as barriers to employers’ investment in training. Firstly, small firms have a much lower propensity to invest in training. Secondly, the growth of sub-contracting and small specialist firms impedes the continuation of the traditional apprenticeship system due to the narrowing or fragmentation of work skills undertaken within these firms. Thirdly, increased dependence on labour only subcontractors reduces a firm’s investment in trainee or apprentice training. In 2002 a UK study found that only 22 per cent of firms who reported that the number of subcontractors engaged exceeded the number of employees had apprentices or trainees. However, 54 per cent of firms who reported the number of employees exceeds the number of subcontractors had apprentices or trainees (CITB and Department for Education and Skills 2003:5).

Finally, in a highly competitive industry, self-employed or very small firms simply do not have the spare capacity to divert an experienced operative from production to training (Winch 1998: 539).

The construction industry in the United Kingdom and Australia has experienced similar structural changes in terms of a reduced role for the public sector and large increase in self-employment and non-standard working arrangements. These are conventionally held to explain the collapse of apprentice training in the United Kingdom.
Explaining the Survival of the Apprenticeship System in Australian Construction Industry

The broader literature on the institutional foundations of apprenticeship systems suggests that there are important differences in the organisation of labour, employers and the training system between Australia and the United Kingdom. It could be argued that, in the case of Australia, these differences have moderated the effect of structural changes on the construction industry. The important differences that may account of the survival of apprenticeship in the Australian construction industry are discussed below.

Collective Training Agreements

Multi-employer co-ordination of training is essential to ensure that training meets industry needs, and that it results in widely recognised and acceptable qualifications. It is also necessary for the creation of occupational labour markets with an agreed minimum standard of remuneration and well-established career paths. For a person considering an apprenticeship, such arrangements are essential if they are to make an informed assessment of the likely return on their investment in training. From an employer’s point of view, they are necessary to ensure that they attract suitable quality applicants for training positions. Multiemployer co-ordination is also required to overcome ‘poaching’ and reduce the possibility of wage inflation driven by skill shortages.

It has been argued that, among United Kingdom construction employers, there has been a ‘failure to develop strong, representative institutions, [they have an] ambivalence towards the state and preference for preserving the autonomy of their own voluntary associations…adherence to collective agreements by individual firms was weak, and their associations lacked cohesion and disciplinary authority’ (Evans 1991: 31). In turn, this reflects a broader ‘decentralised character of collective bargaining in the UK’ (Evans 1991: 27).
The organisation of labour

Strong employee representation is also essential to offset the inherent firm specific training bias of employers. Again it has been argued that in the United Kingdom ‘Construction unions, in fact, are on the whole weak and marginal. Like the employers, unions have been institutionally fragmented by competition and internal divisions, and express a similar ambivalence towards more detailed state regulation of the industry’ (Evans 1991: 31). A rough estimate is that only 9 per cent of the United Kingdom’s construction workforce is unionised.

A somewhat different picture emerges in Australia where unionisation rates are 25 per cent. Moreover, as Elsa Underhill (2003) has explained, despite attempts to decentralise the industrial relations system in Australia, a coherent national system has been retained through pattern bargaining. Further, by providing a range of services to the self-employed, the CFMEU and the specialist trade-based unions have adapted to changed employment relations in the industry.

In the United Kingdom by contrast, a failure to develop a consensus led to fragmented training that suited the short-term interests of employers. From the 1980s the training system was adjusted to meet short-term skill gaps and not longer-term skill formation. This is evident in the phenomenal growth of NVQII level qualifications, typically training of 1-2 years duration, which can be provided fully on the job. ‘Employers indulged substitution of informal, on-the-job, narrow skill acquisition for broader craft-training and, not surprisingly, younger workers responded by foregoing apprenticeships or quitting before completion’ (Evans 1991: 37).

Secondly, in the United Kingdom, public training funds were opened up to competitive tender from the 1970s. The ‘training market’ thus created enabled the entry of a multiplicity of private off-the-job training providers with greatly varying quality levels. The payment of incentives for these providers was based
largely on students successfully completing courses and, as a result, it created a powerful lobby group that had an interest in shortening the duration of training. The great variation in quality standards also reduced the demand by employers for qualified persons, and the incentive for individuals to undertake training.

In Australia, by contrast, the public TAFE sector supplies around 95 per cent of all apprentice training in the construction industry. It is arguable that TAFE teachers and administrators have a self-interest in supporting traditional training as the continuity of their jobs depends on funding for longer duration training. TAFE teachers also have a strong ideological commitment to the apprenticeship system. It is also important to note that surveys of employers reveal a high level of satisfaction with the quality of TAFE training. One might also add that the development of Training Packages over the last decade has led to a more nationally consistent content in training delivery.

Thirdly, the system of occupational licensing provides strong support for the training status quo. This system, which is administered by the states, requires a demonstration of competency as a condition for issuing a licence to work in certain occupations, for example, builder, plumber and electrician. The demonstration typically requires the completion of an apprenticeship. The occupational licensing system explains in part why the share of qualified persons in building, electrical and plumbing occupations in Australia is around 50 per cent higher than in the United Kingdom.

In Australia, Group Training Companies employ 21 per cent of total construction apprentices. Employing apprentices and then hiring them out to firms spreads the costs and risk of taking on apprentices across a very wide range of firms. In the United Kingdom, group training arrangements are extensive but have a much smaller impact as they do not directly employ apprentices but offer a recruitment, selection and training only.
Conclusion

Gospel has suggested that, compared to its collapse in the United Kingdom, the survival of the apprenticeship system in Australia, reflects the self-interest of employers and a broad range of institutional supports that have been largely abolished in the United Kingdom (Gospel 1994:56). The difficulty with this functionalist argument is in explaining why it was in the rational self-interest of employers in Australia to support the apprenticeship system but not so for their counterparts in the United Kingdom.

The problems for product quality, productivity, innovation, skills shortages and rising labour costs arising from the collapse of the apprenticeship system in the United Kingdom have been noted for three decades. An alternative to this functionalist argument is that the UK construction firms supported a labour market strategy that brought about the collapse of the apprenticeship system, and that this may well reflect the power of ideology over self-interest.
References


