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**Varieties of institutional renewal:
The case of apprenticeship in the US, England, and Australia**

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Varieties of institutional renewal: The case of apprenticeship in the US, England, and Australia

Abstract

This study analyses attempts to renew apprenticeship over the last three decades in three liberal market economies—US, England, and Australia. We conceptualise institutional renewal as entailing both revival, or growth in apprentice starts, *and* extension, or widening its occupational base. The paper contributes to the literature by considering reasons for the attempted renewal and offering an assessment of the outcomes of renewal. It also contributes to research at the intersection of institutional and comparative training literature by developing the concept of institutional renewal and applying it to apprenticeship. It is concluded that in quantitative terms renewal had some success in England and Australia, but the effect of intervention is more uncertain in the US. The paper also identifies a paradox that policies to promote apprenticeships have undermined the quality of training in England and Australia, leading to questions about the sustainability of renewal.

Keywords: Apprenticeship; vocational education and training (VET); liberal market economies; institutional renewal; comparative VET.

Introduction

A distinguishing feature of Liberal Market Economies (LMEs), such as the United States (US), the United Kingdom (UK), and Australia, is their difficulty sustaining institutions which support apprenticeship training systems. Firms in LMEs rely largely on recruiting skilled workers, such as trade, technician, and certain service occupations, from the external labour market and/or training recruits in firm-specific skills on-the-job. By contrast, firms in Coordinated Market Economies (CMEs), such as Germany, rely more on apprenticeships to recruit and train their workforce. The Comparative Capitalisms (CC) literature identifies the presence or absence of apprenticeship as an important factor in explaining differences in macro-economic performance such as productivity and levels of inequality across nations (Hall and Soskice 2001; Toner 2011).

Historically, though, many LMEs had a tradition of apprentice training, which over time became marginalised (Thelen 2004). In some LMEs, we witness attempts to

revive this form of training, in order to tackle skills shortages and gain the economic and social benefits argued to accrue from robust apprenticeship systems. In this paper, we examine apprenticeship renewal attempts in the US, England, and Australia. (Because of differences in apprenticeship systems and data across the jurisdictions of the UK, only England is examined here).

While LMEs share common characteristics, they also differ in important ways, not least in the area of vocational education and training (VET) (Vossiek 2018). In this paper, we employ an historical institutional (HI) approach to compare and contrast major initiatives at apprenticeship renewal in three LMEs over the last three decades. HI, which has informed much of the analysis of VET, draws attention to gradual change in these institutions (Deißinger, Hauschildt, Gonon, and Fischer 2019; Graf 2018; Mahoney and Thelen 2010; Streeck and Thelen 2005; Thelen 2004). Seeking to contribute to this body of work, we conceptualise attempts to renew apprenticeship training as involving two dimensions: (1) attempts to *revive* existing apprenticeships which have undergone a period of decline by growing apprentice numbers; (2) attempts to *extend* apprenticeship to new industries and occupations. Institutional renewal entails a purposeful approach, driven by the state as a dominant actor. We thus join previous attempts to ‘bring the state back’ into the analysis of institutions within and across countries (Culpepper 2003; Jackson and Deeg 2008). Meanwhile, renewal also depends on the active participation of employers and collective actors such as employer associations, unions, and other labour market intermediaries promoting apprentice numbers and sustaining quality. However, the extent to which this has occurred has varied across the LMEs, and we argue that this is a significant factor in explaining differences in the success of renewal.

We contribute to the literature on the intersection of CC, HI, and comparative VET studies in two main ways. First, *empirically*, we trace the attempts to renew apprenticeship in three LMEs, finding that these attempts have been successful to varying degrees. Our comparative study of LMEs complements previous work on the dynamics of VET institutions, which has often focused on CMEs (Graf 2016). Furthermore, whereas much existing research focuses on institutional dynamics in the sense of undermining institutions of VET (Busemeyer and Trampusch 2012), our study involves settings where actors seek to strengthen apprenticeship. Second, *conceptually*, we develop the notion of institutional renewal as involving both revival and extension, and we find that the success of institutional renewal hinges on the ability to synchronise both top-down, meaning government-led, and bottom-up, meaning firm-led, initiatives.

Framing the analysis

Dimensions of apprenticeship renewal

For the purposes of this paper, apprenticeship is defined in terms of (a) core and (b) additional elements. The *core* elements are a combination of concurrent employment with on-the-job and off-the-job training, which involves a set of reciprocal duties and rights between an employer and a trainee. The aim of training is to produce knowledge and skills which have a degree of transferability across employers, rather than being firm-specific. Underpinning this, the content and method of assessment of apprenticeships is often the subject of agreement between an individual employer and/or employer association and a trade union or professional association. On completion, the apprentice obtains a qualification generally recognised by other employers.

In terms of *additional* elements, the arrangement is usually with a young person, though the age of entry varies across the three countries studied. There is usually a formal contract, which may be registered with a third party, often a government agency, which can issue a completion certificate. The knowledge and skills are usually of an intermediate kind, and these qualifications are also frequently the basis for licensing in many occupations.

Building on this definition, we focus our attention on two key dimensions of apprenticeship renewal: revival and extension. Dimension 1 (D1), revival, refers to the growth in quantitative terms of apprentice starts. Dimension 2 (D2), extension, refers to the broadening of occupations and sectors for apprenticeship. While D1 and D2 are related, our analysis confirms that these are analytically distinct dimensions and that separating them offers insights into the relative degree of success of renewal attempts. Importantly, we use this distinction also for theorising a possible paradox in institutional renewal in that extension can undermine revival and thus overall renewal, as it can create excessive complexity and lead to ‘brand confusion.’

(Changing) VET institutions in CMEs and LMEs

The literature on comparative VET has established how countries differ in their skill formation systems. Drawing on CC literature (Hall and Soskice 2001), a useful distinction is made between CMEs and LMEs. CMEs often involve collective skill formation systems (Busemeyer and Trampusch 2012; Emmenegger, Graf, and Trampusch 2019), building on ‘corporatist’ type governance systems, which help reduce poaching (Mohrenweiser, Zwick, and Backes-Gellner 2019) and facilitate the creation of industry-specific skills along occupations. In contrast, LMEs have difficulty building or sustaining similar institutional support infrastructures (Busemeyer and Vossiek 2016). As a result, in the US for example, VET typically

takes a much less structured / non-apprentice form and is centred on on-the-job training, complemented by courses in technical or community colleges (American Association of Community Colleges 2019).

However, the HI literature also concedes that the LME and CME typologies are ideal types and in reality elements of each institutional form can be found across and within nations (Schneiberg 2007). Thus, highly esteemed apprenticeship programmes have existed in LME nations (Gospel 1994; Thelen 2004), indeed, in the UK going back to medieval times and being relatively strong into the 1960s. Furthermore, both LMEs and CMEs have been subject to neoliberal public policy and economic reform, which have undermined corporatist institutions in CMEs (Marsden 2015). More broadly, institutions of VET have been studied as settings exhibiting considerable institutional dynamics and change, both over long stretches of time (Thelen 2004) and more recently (Graf 2016, 2018; Thelen and Busemeyer 2012). In this paper, we are interested in exploring the implications of these neoliberal reforms for apprenticeship renewal in the three LMEs we study.

Neoliberalism is a disputed concept as it covers a broad variety of phenomena (Boas and Gans-Morse 2009). We use it pragmatically focusing on those aspects which have been argued to affect the foundations and delivery of apprenticeship. Neoliberalism entails policies and practices aimed at expanding the role of markets in the economy and reducing the role of the state. More concretely, it is associated with increased privatisation, deregulation, competition, and reduction of corporatist type intermediation in the labour market (Cahill and Konings 2017; Crouch 2011; Harvey 2005). We will show how these policies shape institutional renewal in our three cases.

Methods

Research design

To study attempts to renew apprenticeship in the US, England, and Australia, we employ a historical-comparative approach (see Graf 2016). Historical comparative studies have strengths in mapping how institutions emerge, survive, evolve, or decline over long periods of time (Thelen 2004). Our study of LMEs complements previous work, which has often compared (the dynamics in) VET systems of different CMEs (Busemeyer and Trampusch 2012; Graf 2016; Pilz 2012).

The US, England, and Australia were selected as critical or revealing cases (Yin 2009), providing a ‘most-similar / most-different’ research design (Seawright and Gerring 2008). Whilst all three share characteristics consistent with the LME typology, quantitative indicators also suggest marked differences across our country cases. Correspondingly, one observer notes: ‘Apprenticeships make up 3.7 per cent of the employed population in Australia, 1.8 per cent in England, but only about 0.2 per cent in the US’ (Lerman 2016, 373). Our aim in this paper is to shed further light on these differences, as well as advance our understanding of the underlying reasons for varying outcomes over time.

Data collection and analysis

The paper covers the development of apprenticeships in the three countries, from the early 1990s to the present. Data is derived from national statistical agencies; reports of government regulators established to provide support for apprenticeship and monitor performance; policy documents from employer associations and unions; and academic evaluations. Since an explicit goal of renewal has been to expand not only the number but also the extent of apprenticeship, we use quantitative and qualitative data on these as the measures of ‘success’ in renewal attempts. More specifically, we traced the development of apprenticeship along the two key dimensions outlined above: revival (D1) and extension (D2). Loosely following the example of Graf (2016), we make

explicit our findings along these two dimensions in the ‘interim assessment’ sections of each of our country case studies and we summarise our comparative findings in a table in the Discussion.

We identified two distinct periods of renewal in our historical data. These periods serve as units of analysis for our study. As will be described below, institutional renewal occurred in the US and England in the early / mid 1990s and the early / mid 2010s. A similar periodization is absent in Australia, which exhibited a more continuous process of renewal. As intended with comparative case studies (Seawright and Gerring 2008), this difference enables us to theorise by identifying distinct institutional renewal pathways: intermittent (US), escalating-but-switching (England/UK), and continuous (Australia).

The country case studies

The US

The situation before the early 1990s

Apprenticeship in the US was an important source of skilled labour into the 1920s, but subsequently declined. In the wake of World War I, firms experienced skills shortages, in particular after the Immigration Act of 1924, which limited immigration and capped the pool of available skills. Hansen (1997) and Thelen (2004) argue that this created incentives for firms to invest in mass-production technology, making them less reliant on skilled employees. As a result, apprentice-type skill investments became less important and firms adjusted their production systems to accommodate firm-specific on-the-job upgrade training.

The passage of the National Apprenticeship Act in 1937, although intended to improve the quality of training and working conditions for apprentices, in the long run also contributed to marginalisation of apprenticeship. It fostered union membership as

a prerequisite for taking part in an apprenticeship programme, provoking employer hostility and reducing the pool of potential apprentices (Jacoby 1991). By the early 1990s, apprentice numbers hovered around 0.25 per cent of the working population (Gospel 1994).

Aside from apprenticeship, alternative pathways into trade occupations in the US include 2-year technical and community colleges (American Association of Community Colleges 2019). However, this training has a high non-completion rate and large numbers of students leave programmes without credentials (Center for American Progress 2009, 20). In addition, in-company training represents a significant proportion of VET in the US and this provides much occupational training and certification for workers (UNESCO-UNEVOC 2014, 10). However, quality is highly variable and there are limitations to the recognition of such training by other firms. Furthermore, small and medium-sized enterprises typically lack the resources to offer comprehensive internal training, limiting their ability to train.

Subsequently, despite major obstacles, during our study period, two attempts at institutional renewal are observed.

The first government renewal attempt

Renewal commenced under the first Clinton administration (1993-1997) prompted by growing national disquiet at an apparent decline in US economic competitiveness with unflattering comparisons with Germany (and its apprenticeship system) and Japan (with its internal labour market training) (Krugman 1990). In 1993, Clinton (1993, 7) declared: ‘My administration will establish a national apprenticeship programme, like those in Europe, to encourage non-college-bound students to stay in school, take challenging courses, move into the work force, and then get two years of further training on the job in cooperation with institutions like community colleges.’

This objective translated into the School-to-Work Opportunities Act (1994), which provided funds to states to create apprenticeship-type programmes. This was complemented by the National Skills Standards Act (1994), intended to build a national skills standard system by creating a National Standards Board composed of representatives from both employers and employees. Its purpose was to establish broad industry and occupational training standards, with CME countries serving as templates.

However, observers concluded these initiatives largely failed to establish such standards, in part because employers did not cooperate collectively (Bosch and Charest 2010, 19). Following the second Clinton administration, in 2002, Congress refused to extend the relevant legislation, citing limited support across a number of important employer stakeholders. Moreover, the programme encountered strong political opposition, based on the notion that even its mild provisions represented too much government interference (Bailey and Berg 2010, 281). Unions were also hesitant about extending youth apprenticeship, fearing they might lose control over existing apprenticeship (including adult apprenticeship) programmes (Lerman 2012, 11). Lerman (2012, 15) concludes that what we identify as first government-led renewal attempt, extending from the mid-1990s to the early 2000s, was a failure in terms of exerting a serious impact on the training of young people.

During this time period, there were also decentralised attempts to revive apprenticeships, running in parallel with, but independent of, the Clinton initiatives. Often, these were local and sectoral initiatives (Parker and Rogers 1999). For example, an ambitious attempt was the Wisconsin Regional Training Partnership, founded in 1992. This was a training consortium covering local firms and governed by an executive council made up of an equal number of business, labour, and public

sector representatives. However, over time the partnership faded as employers found their apprentice graduates poached by competing non-training firms (Rogers and Parker 1996). The Partnership still exists today, but it has broadened its focus away from apprenticeship (Baccaro, Doellgast, Edwards, and Whitford 2018).

Thus, the first phase of the institutional renewal attempt involved a significant top-down and some bottom-up led initiatives. However, both had limited success.

The second government renewal attempt

Following the global financial crisis (GFC) from 2008, the US government again sought to modernise the manufacturing base, including reform of workforce training. (On the link between VET and manufacturing, see Snell (2019).) A key policy response to the GFC was to ‘rebalance’ the economy from over-dependence on financial services to a more diversified industrial base. Improving workforce skills was a central strategy, with President Obama asking the nation to join in a ‘national commitment’ to train 2 million Americans with skills of an apprentice kind (The White House 2012). In 2015, the Department of Labor offered \$175 million for 46 public-private partnerships to expand apprenticeships. An additional \$90 million in the 2016 budget was included for ApprenticeshipUSA in grants administered through the same Department (US Department of Labor nda). States and local or regional partnerships were eligible to apply for this funding. Sectors targeted included manufacturing, but also non-traditional areas such as information and communications technology (ICT) and health care (Lerman 2016), suggesting a new emphasis on extension as defined above. Furthermore, the Obama administration created a number of other initiatives, such as a yearly National Apprenticeship Week to promote apprenticeships (The White House 2015). However, it should be noted that

the amounts committed to renewal were small, in particular in international comparison.

The new Trump administration has continued federal government interest in apprenticeship training. For example, one early Executive Order stated: ‘It shall be the policy of the Federal Government to provide more affordable pathways to secure, high paying jobs by promoting apprenticeships ..., while easing the regulatory burden on such programmes and reducing or eliminating taxpayer support for ineffective workforce development programmes’ (The White House 2017). An important factor behind this initiative has been strong economic growth leading to historically low rates of unemployment and skill shortages. The Order also aims at ‘expanding the number of apprenticeships in sectors that do not currently have sufficient apprenticeship opportunities’ (The White House 2017), signalling institutional extension. A task force was established, which developed plans to achieve the objectives, with \$200 million set aside for this purpose (US Department of Labor 2017). In 2018, this task force submitted its report recommending the diffusion of ‘Industry-Recognised Apprenticeships,’ stating that ‘substantial change must begin with industry-led partnerships playing the pivotal role of creating, managing, and certifying apprenticeship programmes’ (US Department of Labor 2018, 19). This suggests a shift away from the role of unions towards strengthening employers, and it also opens up a market for third-party certifiers who can act as standards recognition entities (SREs). In pursuit of these objectives, Trump created a National Council for the American Worker (The White House 2018). Here, one stated objective is better to align top-down programmes with bottom-up industry needs. In relation to institutional extension, it is noteworthy that the Department of Labor has also created a ‘Non-

traditional Occupations and Women in Apprenticeship' grant to promote apprenticeship in new areas and include a greater share of women.

In terms of local initiatives, one driving force from the bottom-up has been multinational firms from Europe (Fortwengel and Jackson 2016), including Germany (Pilz and Li 2019). Other large organisations, including some in the service sector, have stressed intermediate level skill gaps as a core issue and advocated apprenticeship as part of the solution (e.g. Brookings 2018; JPMorgan Chase 2017). As such, unlike in the first phase, where top-down and bottom-up initiatives were largely decoupled, in the second phase they appear to be more tightly aligned.

- Figure 1 about here -

Interim assessment

Figure 1 shows an increase of 65 per cent in apprentice starts in the US over the whole period 1998 to 2017—years for which we have comparable data. There is obviously a cyclical element, but still in the two periods we identify, under the Clinton (1993-2001) and Obama (2009-2017) administrations, there were substantial increases. Therefore, with regards to D1 of institutional renewal, we find that revival has been low in period I and moderate in period II. With regards to D2, extension, we unfortunately are not able to distinguish traditional trade and non-trade apprenticeships, as we can for England and Australia, however, it would appear from Department of Labor figures that extension into new sectors and occupations has been limited.

England

The situation before the early 1990s

England has an old tradition of apprenticeship. However, from the early 1960s, there were growing concerns about apprentice training in terms of numbers and content. In

1964 the Industrial Training Act was passed, which introduced a compulsory levy on employers to fund training, with firms which trained receiving a rebate. In addition, under this corporatist-type initiative (with a national-level government agency and tripartite industry-level boards), important reforms occurred in apprenticeship design, notably a reduction in the duration of apprenticeships and extension of time-off for college attendance.

Despite these improvements, apprenticeship continued to come under pressure and numbers fell from the late 1960s onwards. Crucially, with the exception of the levy, apprenticeship in the UK was essentially voluntarist, with minimal legal support in terms of requirements for employers to train and with little regulation of content, enforcement, and licensing. With the election of the Thatcher Conservative government in 1979, policy turned against apprenticeships—the administration seeing them as backward, restrictive, and too union oriented. Informed by neoliberal ideas, the government abolished the levy system and reverted to a more market-based approach (Central Policy Review Staff 1980). Other policies further undermined employer capacity and/or incentives to train. Privatisation of large public utilities changed their focus from long-term investment in apprenticeships to more short-term profit maximisation. This was compounded by the decline of traditional manufacturing. Concurrently, slow economic growth and higher unemployment reduced apprentice intake. Finally, neoliberal industrial relations policies reduced union membership and industry bargaining.

The first government renewal attempt

By the early 1990s, training regained greater saliency due to skill shortages and rising youth unemployment. In 1994, the Conservative government, under new leadership, initiated a major change in policy and introduced the so-called ‘Modern

Apprenticeship' (MA) (Department for Trade and Industry 1994). The initiative entailed the following. First, MA covered both traditional apprentices and, drawing on earlier schemes to address youth unemployment, a new category of 'trainee,' a type of 'sub apprentice' in both traditional trades and new service occupations. Second, all sectors had to draw up training standards and assessment 'frameworks,' under the aegis of a new national-level agency and new industry-level training organisations and skills councils. Third, a new pedagogy involving 'competency-based training' (CBT) was applied. CBT gave priority to assessment of practical performance on-the-job and downplayed curricula and theory. Fourth, a new system of national vocational qualifications (NVQs) was introduced, though overlapping with traditional qualifications. For apprenticeship, the level of qualification was set at 3 or 4 (intermediate level above school leaving), but sometimes, as in construction and services, it could be attained at a lower level 2 (or semi-skilled). For a time, English, Mathematics, and occupation-specific technical knowledge testing were an optional extra, but later were mandated. Finally, government funding was made available for off-the-job training (though sometimes surreptitiously used as a wage subsidy). Over time, such funding increased due to rapid growth in traineeships, especially in services, pressure from industry for subsidies, and political pressure to ensure the success of MA.

A key influence on the design and implementation of this renewal attempt was neoliberal policy thinking (Cahill and Konings 2017; Crouch 2011). For example, the new system was explicitly intended to be 'employer led' with little involvement of unions or colleges in content and administration. However, in practice, actual company participation was often low, partly due to the complexity of the system and continuing voluntarism. Ironically, government remained dominant in terms of system

design and operation (Gospel and Fuller 1998). Further, delivery of government funded off-the-job training was now subject to competition between public and for-profit providers, aiming for greater flexibility, customisation to firm needs, and lower costs.

The new system received bipartisan political support. In terms of quantity, apprenticeship was sustained in traditional sectors and grew significantly in new sectors—indicating institutional extension. In terms of quality, where sectors demanded maintenance of standards due to real industry need, e.g. electrical work, this was maintained; in sectors where corners could be cut, e.g. construction, this occurred. In sectors relatively new to apprenticeship, such as retail and hospitality, CBT frameworks often resulted in low standards. Further, competition between technical colleges and private training providers and cost cutting frequently lowered training quality (Leitch 2006; Richard 2012; Ryan, Gospel, and Lewis 2007; Wolf 2011).

After the millennium, governments and employers continued to reform the system. This included adding ‘advanced’ apprenticeships at levels 4 and above; people aged over 24 years became eligible for funding; and, due to quality concerns, standards for curricula, practical testing, and college attendance were elaborated. However, most apprenticeships had now become dependent on public funding via private training providers, employer involvement was weak, and quality remained a serious problem in many industries, especially those new to apprenticeship.

The second government renewal attempt

From the mid / late 2000s, a number of factors produced a major new renewal attempt. These included persistent concerns about social integration, rising income inequality, falling social mobility, skills shortages, and low productivity. Moreover, as

in the US, the GFC exposed the problems of over-dependence on finance. A sound vocational skills base was deemed essential to achieve greater industrial diversification and a more robust economy.

Effective spring 2017, a new system has been introduced based on an Apprentice Levy and administered by a new government agency (Department for Education 2016). This is an emerging policy shift, but some broad features are clear. The levy is set at 0.5% of payroll for all employers with an annual pay bill of more than £3million. It is expected to raise around £3bn per year with an ambitious target of 3 million apprentice starts by 2020. Training must be to new approved standards and last at least 12 months, with 20 per cent of the time spent off-the-job in college. Apprentices can be any age and include new and existing staff. Qualification levels have also been extended upwards to level 7 (graduate and post-graduate apprenticeships). Thus, apprenticeships may cover lawyers and architects (echoing an apprentice tradition in these professions) and also 'sandwich' degrees (where employed students spent time off-the-job at university).

- Figure 2 about here -

Interim assessment

Figure 2 shows a massive increase in the order of 400 per cent in apprentice starts over the period from 1996 to 2017, signalling significant revival (D1), in particular in period II. However, it should be noted that some of the growth comes from a change in the definition of apprenticeship. Most of the increase has come from the extension (D2) to non-trade apprenticeships, in particular in period II. This also contributed all the marked volatility. Trade apprenticeships have steadily increased (and this despite a decline in the manufacturing sector), but subject to cyclical fluctuations, especially after the GFC.

However, under the levy, there has been a fall in both trade and non-trade apprenticeship, illustrating stalled renewal in terms of both D1 and D2. This is attributed by many to the complexity of the new system and hostility by employers to what many see as an undue government intervention, while others welcome this development, interpreting it as leading to the eradication of low-quality apprenticeships. Throughout the second period there are continuing questions about quality, especially in new areas. As a result, uptake from businesses is low, and we see low coupling between the top-down government initiatives and bottom-up training investments. There are also concerns under the new levy that funds are being used to finance existing staff on degrees and higher qualifications which had not been initially envisaged (Chartered Institute for Personnel and Development 2017; Institute for Fiscal Studies 2017, National Audit Office 2016). In conclusion, England has seen a long-term search for renewal, with broadly escalating government intervention, but also significant switches in policy (see also Hogarth, Gambin, and Hasluck 2012).

Australia

The situation before the early 1990s

In Australia, apprenticeship remains the principal means of training for entry into craft occupations. The broad architecture of the system was instituted under the Apprentices Act 1901 (Ray 2001).

Apprenticeships have long been regulated by industrial relations laws such as industry-based ‘awards,’ which specify occupations subject to apprenticeship, their wages, and off-the-job college attendance. Generally, firm-level ‘enterprise agreements’ mirror industry awards. Thus, employers and unions have been central to the design and operation of the system. Off-the-job training for apprenticeships has traditionally been delivered through a well-resourced system of public Technical and

Further Education (TAFE) colleges. Detailed curricula and learning materials were produced by TAFE specialists following consultation with industry associations and unions. Broad-based craft skills were needed in firms where, unlike in the US, the smaller scale of output did not permit the same degree of mass production and labour specialisation. A critical support has also been government-sanctioned occupational licensing whereby possession of an approved qualification is mandatory to work in many occupations.

The early 1990s crisis in apprenticeship

From the late 1980s, apprenticeship came under challenge from various sources. Structural changes in the economy lowered employers' capacity and incentive to take on apprentices. Many of these were caused by neoliberal economic policies, inspired by those occurring in the UK, including privatisation of government utilities (previously major employers of apprentices) and subjecting government-funded services to competitive tendering. Simultaneously, 'shareholder value' ideas came in from the US and UK, under which management incentives are tied to maximising profitability for shareholders. This led to corporate downsizing, increased use of outsourcing, and a reduction in training as where financial returns are longer term (Toner 2003). Compounding this, in 1991-92, a severe economic downturn saw unemployment rise to unprecedented levels of 11 per cent and apprenticeship starts collapsed by one third (NCVER 2016, Table 4).

Between 1974 and 1992, the annual training rate (total employed apprentices as a proportion of total trade employment) averaged 13 per cent. From 1993 to 2003, this fell to 10 per cent (Group Training Australia 2005, 12). The total number of apprentices in-training did not recover until 2005 (NCVER 2016, Table 1). After 1993, the economy entered a long period of growth, but the training rate did not

respond. The combined effect of structural change, recession, and subsequent high employment growth resulted in severe skills shortages (Reserve Bank of Australia 2005, 8-9). The GFC spurred government to see VET as a means of broadening the economic base.

Continuous renewal

In contrast to the US and England, Australia experienced a single and extended period of apprenticeship renewal from the mid/late 1990s onwards. As had traditionally been the case, government looked to the UK for policy inspiration. The UK model, outlined above, though excluding the levy, was largely replicated in Australia. These policies, which have seen fewer changes than in England, were explicitly intended to re-invigorate the system, but paradoxically also undermined important supports. Nevertheless, the policies introduced some innovations, which increased the attraction of apprenticeships for some employers and employees.

Following the UK, the core neoliberal ideas animating apprenticeship and broader VET reform were the following: the system should be employer-led, with reduced union and TAFE input and priority given to flexibility in training content, delivery, assessment, duration, and customising off-the-job training to the needs of individual workplaces. Previous age restrictions, which required commencing apprentices to be under 21, were removed. By 2016, adult apprentices, defined as those 25 years or older, comprised 28 per cent of all apprentices (Hargreaves et al. 2016, i). Due to the demand for more advanced technical skills in the workplace, and in part emulating English experience, 'higher' apprenticeships were also introduced, notably in manufacturing, offering qualifications at a Diploma level (just below degree level), which permits entry into university (AIGroup 2018). Finally, competition between public and private providers for access to public funds is

promoted (Atkinson and Stanwick 2016; Hargreaves et al. 2016; Knight 2012). In sum, the changes were consistent with a deregulation agenda, though ironically, the result was high levels of state funding and direction. Government's role changed from more or less monopoly provision of off-the-job college training to expanded regulation and monitoring of publicly-funded, but increasingly privately-delivered, training. In response to rising concern at poor quality, primarily in private for-profit training organisations, regulation was intensified (NCVER 2016; Parliament of Australia 2015).

Again emulating the UK, 'traineeships' were introduced, extending the apprentice model to new industries and occupations, generally at lower qualification levels and with a shorter training duration (Kirby 1985). Most traineeships were in lesser skilled service sector roles, such as office administration, retail, and catering, but also construction labourers (Knight 2012, i). In the early 1990s, traineeships experienced a major surge in numbers, following an extension of government-provided subsidies which, combined with low mandated wages, greatly increased their attraction to employers.

Finally, there are two additional components to renewal in Australia: government funding for pre-apprenticeship programmes and Group Training Organisations (GTOs). Pre-apprenticeship programmes offer a combination of training and work experience, typically over a period of 3-6 months, to those considering an apprenticeship. The main objectives are to lower the high non-completion rate by allowing prospective apprentices to assess their aptitude and to raise the number of apprentice positions by improving the quality of applicants. Evaluations find that these objectives are largely met (Group Training Australia 2012). GTOs are bottom-up initiatives, which existed prior to the 1990s, but received

increased government funding in the early 1990s recession and subsequent period of high economic growth and skills shortages. They are not-for-profit entities, often linked to employer associations and / or unions, and have either an occupation or regional focus. They operate as a form of labour hire as they directly employ the apprentice and hire them out to 'host' employers. They redress a number of collective action problems known to inhibit employer uptake, especially for smaller employers. For example, GTOs have expertise in selection and recruitment, reduce administrative costs, and lower the risk of adverse apprentice selection by host employers (Toner et al. 2004). As such, they help overcome structural disadvantages of small and medium-sized enterprises in VET. By the mid-2000s, GTOs employed 17 per cent of all apprentices, but due to later government funding cuts, this fell to around 12 per cent (NCVER 2017).

Rapid growth in traineeship numbers led to a large increase in government subsidies and concern about the quality of training outcomes. Evaluations suggest that the effect of traineeships was often to substitute lower-skilled unregulated employment for regulated, albeit cheaper workers, for whom a job rather than training was a key priority. Further, traineeship qualifications were not valued highly in the labour market, as measured by the minimal wage premiums for those who completed training (Cully 2006). Subsequently, government restricted subsidy eligibility to traineeship occupations recognised as being in shortage. As a result, trainee commencements collapsed between 2012 and 2017 (Figure 3).

- Figure 3 about here -

Interim assessment

After decades of growth and stability, the Australian apprenticeship system faced a major challenge in the 1990s. Despite this, confidence in, and support for, the

apprenticeship model from government, employers, and labour remained solid. Aggregate real government funding for VET increased over the period, from A\$4.8bn to around A\$6.9bn (Noonan 2016). In quantitative terms, renewal was a success (D1), as annual apprentice starts surged from 60,000 in 1995 to 377,000 in 2012, as illustrated in Figure 3. As in England, extension of apprentice-type training to new service sector occupations through traineeships was the major contributor to growth, accounting for over 80 per cent of the increase (D2). Revival in traditional apprenticeships also occurred with starts increasing by 128 per cent up to 2012. However, due to escalating government expenditures and concern at declining quality, government tightened funding eligibility and this led to a collapse in trainee commencements. Traditional apprentice starts also fell after 2012, but by a much smaller proportion and reflected a downturn in the resource sector and slowing economy. Overall, the continuous renewal process in Australia involved high degrees of revival (D1) and moderate extension (D2).

Discussion

In this paper, we have developed and applied the concept of institutional renewal as a particular kind of institutional change process (Mahoney and Thelen 2010; Streeck and Thelen 2005). Empirically, we have traced why and how the three LMEs we study—the US, England, and Australia—sought to revive and extend the marginalised institution of apprenticeship. We conceptualise renewal as entailing both revival, or expanding the number of formerly declining starts in traditional occupations, *and* extension, or incorporating new occupations and sectors into the apprenticeship model. The case studies illustrate how renewal involved purposeful institutional change attempts with government as the key actor in these otherwise market-driven liberal economies. This offers further support to calls to ‘bring the state back’ in

institutional and comparative research (Culpepper 2003; Jackson and Deeg 2008), not least in LMEs, including in the domain of vocational training (Trampusch 2014).

In all three cases, governments expressed common motivations for their respective renewal attempts. This included addressing skills shortages and a desire to rebalance the economy by revamping the manufacturing base. Apprenticeship were also widely seen as a key vehicle to tackle youth unemployment, improve labour market participation, and address broader challenges such as rising income inequality and a shrinking middle class.

Our findings reveal contrasting outcomes of institutional renewal, summarised in Table 1, where we map the success of attempts at institutional renewal over time and across the two key dimensions: revival (D1), and extension (D2).

- Table 1 about here -

Our comparative study reveals different renewal pathways. The US exhibits a discontinuous or intermittent renewal pathway with periods of progress, regress, and swings in enrolments over the period. There were repeated attempts at renewal, but also an absence of sustained bipartisan political support or widespread bottom-up employer participation. Our study thus echoes the observation made by Barabasch and Rauner (2010, 1), who establish that VET “has never taken hold in the United States as it has in Europe and more specifically in the German-speaking countries.” By comparison, England exhibits an escalating-but-switching renewal pathway with an intensifying interventionist role of the state, culminating most recently in an ambitious plan for revival in numbers and extension to new fields, underpinned by the re-introduction of an employer levy. Australia demonstrates a more continuous renewal pathway, featuring consistent bipartisan political support and employer participation.

Our analysis identifies a number of paradoxes in LME apprenticeship renewal, most clearly evident in the English and Australian case studies. A central push factor for renewal was the precipitous decline in apprentice starts from the 1980s, itself an unanticipated outcome of neoliberal economic policies—including privatisation of public utilities, shifts to more decentralised industrial relations systems, and financial deregulation leading to increased competition, corporate downsizing, and a focus on shareholder returns. Paradoxically, while neoliberal economic policies were a major cause of the problem, neoliberal public policy principles also informed the renewal attempts. These principles are evident, for example, in the priority given to flexibility as opposed to standardisation in training content, duration, and assessment, and the priority given to competition between publicly funded training providers intended to maximise choice and lower costs. But, flexibility and competition, whilst improving performance in some areas, also resulted in a widespread decline in quality in England (Finegold, Wagner, and Mason 2000, 497) and Australia (Australian Department of Education 2016; Toner 2014). This has led to declining confidence among employers, unions, and government in the capacity of the VET system to deliver the necessary quantity and quality of skills (Australian Council of Trade Unions 2012; National Audit Office 2016; Parliament of Australia 2015; Wolf 2011). This could constrain the scale and scope of renewal into the future. Indeed, we suggest that institutional renewal entails a paradoxical challenge in that significant extension may lead to instability of the institution to be renewed, as stakeholders become confused about the properties of the particular institution. For example, the proposal to give SREs considerable discretion in setting standards and certifying apprenticeship programmes in the US is likely to lead to an even starker multitude of programme features, making it difficult to create a shared understanding of what constitutes an apprenticeship.

Future work could explore further the precise relationship between the two dimensions of institutional renewal discussed here, revival and extension, and uncover under what conditions they are mutually reinforcing or undermining.

This brings us to mapping additional avenues for future research. Here, future work could explore renewal pathways in other LMEs (Vossiek 2018). For example, apprenticeship is similarly marginalised in Canada (Lehmann, Taylor, and Wright 2014); previous work suggests that New Zealand actually has a history of a collective skill formation system (Trampusch 2014); and also Ireland has undergone significant policy reforms in its VET system (Heraty, Morley, and McCarthy 2000). Considering these other LME cases might reveal distinct renewal pathways or contrasting outcomes to the present study. Future studies could also explore institutional renewal in CMEs, some of which have experienced institutional decay in their apprenticeship systems (Ryan 2012). For example, Nicklich and Fortwengel (2017) show how the extension of apprenticeship to a new sector, security services, has largely failed in the context of Germany. Comparing institutional renewal attempts in CMEs with those observed here in LMEs would make for an intriguing comparative exercise. Finally, there is the question as to whether the concept of ‘institutional renewal,’ as developed here, can be applied to analyse domains other than apprenticeship. We suggest that institutional renewal constitutes a meaningful addition to the portfolio of concepts describing different kinds of institutional change (Micelotta, Lounsbury, and Greenwood 2017), and that it thus can inform our understanding of institutional dynamics in various domains, including possibly pensions and employment relations. We therefore encourage future work to leverage institutional renewal as a concept to unpack purposeful change attempts over time across different countries and institutions.

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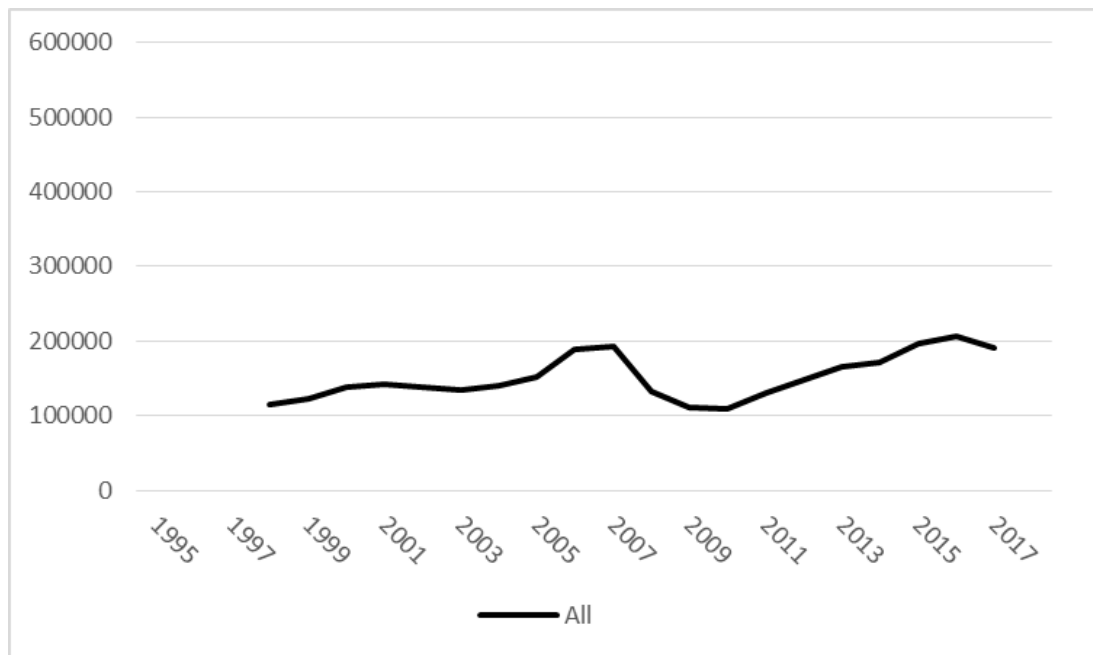
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Figure 1. US Apprentice Starts.



Note: In all graphs, the vertical axis is set at 600,000 to convey similar proportions for the three countries. The horizontal axis has a starting point 1994 for data availability reasons.

Figure 2. England Apprentice Starts.

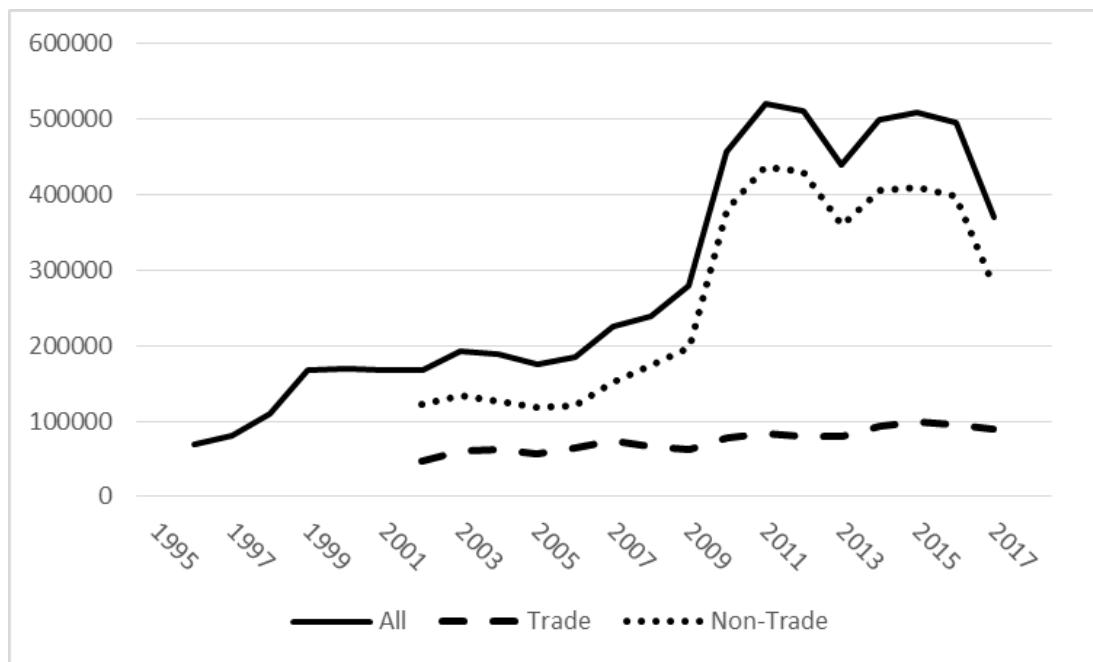


Figure 3. Australia Apprentice Starts.

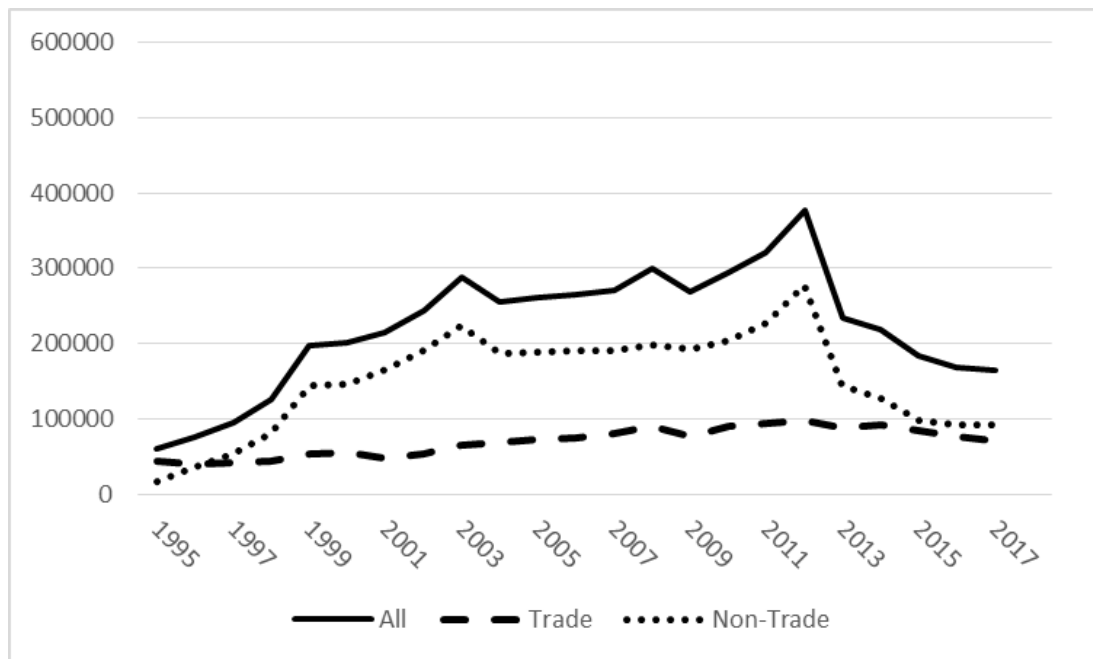


Table 1. Comparison of Renewal Success Over Time and Across Dimensions

	US		England		Australia
	Period I	Period II	Period I	Period II	Continuous Period
Revival (D1)	Low	Moderate	Moderate	High	High
Extension (D2)	Low	Low	Moderate	High	Moderate

APPENDIX

Data sources and notes on the statistics

For US apprentice starts, we use https://www.doleta.gov/OA/data_statistics.cfm. Note that for the US, we include only apprenticeships registered with federal or state authorities. There is an unknown, but probably smaller, number of unregistered apprentices. We include US armed forces apprenticeships in our numbers.

Apprenticeships outside the traditional trades are small in number and not reported separately.

For England (it was not possible to obtain consistent UK figures which would include Wales, Scotland, and Northern Ireland), we use data derived from the Department for Education (<https://www.gov.uk/government/statistical-data-sets/fe-data-library-apprenticeships>). Note that we break out engineering, manufacturing, and construction. This therefore excludes some traditional apprentice trades such as hairdressing, chefs, and bakers; on the other hand, it may also include some non-apprentice trainees. At various points, 2001-2003 and 2010-2012, changes were made in how data was collected and this affected some of the upward trend in the mid-2000s (<https://www.gov.uk/government/statistical-data-sets/fe-data-library-apprenticeships#apprenticeship-starts-and-achievements>).

For Australia, we use NCVER, Historical Time Series of Apprenticeships and Traineeships in Australia (<https://www.ncver.edu.au/research-and-statistics/data/all-data/historical-time-series-tables>). Note we use the official break out of trade apprenticeships.