



OVERVIEW OF APPRENTICESHIP SYSTEMS AND ISSUES

ILO contribution to the G20 Task Force on Employment

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Foreword

Quality apprenticeships based on robust social dialogue and public-private partnerships help young people overcome the work-inexperience trap that blocks their transition from education to employment.

The ILO has identified key success factors around which quality apprenticeship programmes bridge training to productive and decent work:

Sector-based approaches sustain public-private partnerships and assure the quality of apprenticeship training and the quality of apprentices' employment;

Incorporating entrepreneurship with technical training inspires young people interested in starting their own business someday to choose apprenticeships and raises the social status of vocational training;

Employment services expand young peoples' awareness of apprenticeships and the kinds of jobs they can lead to, work with smaller enterprises to increase apprenticeship placements; and avoid gender stereotyping so that apprenticeships broaden career choices for young women and men;

Combining training with earnings, access to social protection and respect for labour rights, apprenticeships open a first job for young people that can lead to career-long productive employment; and

Combining classroom and workplace training enables employers to match training to their needs.

Better and more broadly available apprenticeships, and other training opportunities, can reduce youth unemployment and poverty when combined with national efforts to spur job growth. This paper reviews current apprenticeship programmes and practices in a limited number of countries. The evidence and lessons drawn from their experience provide both motivation and practical recommendations for making apprenticeship a more attractive and a more efficient pathway to productive and decent jobs for more young people.

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OVERVIEW OF APPRENTICESHIP SYSTEMS AND ISSUES

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Introduction

In May 2012, the G20 Labour and Employment Ministers concluded in Guadalajara, Mexico that countries should: "...Promote, and where necessary, strengthen quality apprenticeships systems..." with a view to fostering "...sharing of experience in the design and implementation of apprenticeships programmes and exploring ways to identify common principles across the G20 countries by facilitating a dialogue among our social partners who have presented us a shared sense of the importance of apprenticeships."

The G20 Leaders Summit in Los Cabos, Mexico, in June 2012 endorsed these orientations.

The B20 Task Force Recommendations at the G20 Los Cabos Summit also called for scaling up "...the number, quality and image of internships and apprenticeships for young people ..." including a cross-G20 internship and apprenticeship exchange scheme.

In June 2012, tripartite constituents at the International Labour Conference's committee on *The youth employment crisis: Time for action*, called on the ILO to engage in the promotion of quality apprenticeships, including in developing countries.

This paper, commissioned by the International Labour Organisation (ILO), examines both informal and regulated apprenticeship and their advantages for the employment prospects of young people, in particular in regulated systems. It then sets out the conditions necessary for the development of apprenticeship, drawing on examples from a number of G20 countries. The roles and responsibilities of the principal agents involved in regulated apprenticeship are examined and the paper ends with conclusions and lessons drawn from the cross-country analysis.

1. Apprenticeships as enablers of smooth School to Work Transitions

The contribution of apprenticeship to jobs and skills has long been appreciated by countries eager to promote growth and ease the transition from full-time education to work for young people. Both France and the UK have around 5 % of 16-24 year olds in apprenticeship and have made strenuous efforts to expand numbers. Currently, however, places offered by employers are not sufficient to meet the huge demand from young people or to have much impact on youth unemployment in these countries – the unemployment rate is currently around 20 % for 15-24 year olds in both countries and higher still in European countries without apprenticeship provision. In countries where a fifth or more of all 16-24 year olds are in apprenticeship - Austria, Germany, Switzerland, the Netherlands and Denmark, youth unemployment is currently much lower. In Turkey unemployment levels of certificated apprentices are believed to be very low. (See Table 2 below.)

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In countries with around one fifth of young people in apprenticeship at any one time, the cumulative effect of apprenticeship participation on the skill levels of any one cohort is substantial. In the dual system countries around two thirds of 30 year olds will have completed an apprenticeship.²

While a positive relationship between apprenticeship and low youth unemployment can be observed over time, it would be misguided to see apprenticeship primarily as a ‘cure’ for high youth unemployment. Apprenticeship is first and foremost about skill development to the benefit of companies, their employees and the wider economy. Apprenticeship can accommodate a wide range of abilities and aptitudes because it accurately reflects the equally wide range of skills required in a modern economy. However, it is not a sufficient solution to improving the labour market transition of young people with poor school achievements or other disadvantages.

2. Definitions of apprenticeship

The ILO defined apprenticeship in its Apprenticeship Recommendation (R60, 1939) as follows :

“... the expression apprenticeship means any system by which an employer undertakes by contract to employ a young person and to train him [or her] or have him [or her] trained systematically for a trade for a period the duration of which has been fixed in advance and in the course of which the apprentice is bound to work in the employer's service.” (Para.1)

This definition incorporates some of the key features of apprenticeship:

- based in the work place supervised by an employer
- intended for young people
- fundamental aim is learning a trade/acquiring a skill
- training is ‘systematic’ ie follows a predefined plan
- governed by a contract between apprentice and employer

In 1962, when the ILO reformulated its definition, in Vocational Training Recommendation (R117, 1962), several new characteristics of apprenticeship were identified. The new definition was

“Systematic long-term training for a recognized occupation taking place substantially within an undertaking or under an independent craftsman should be governed by a written contract of apprenticeship and be subject to established standards.” (Para. X. 46)³

This later definition added new features to those already identified above, namely

² Dual-system’ refers to the fact that planned learning takes place in two locations – the employer’s premises and the vocational school.

³ The most recent ILO recommendation (R195) makes no reference to apprenticeship and focuses on lifelong learning and the upgrading of the skills of those already in the labour force. Young people are mentioned only as a one of a number of groups with nationally identified special needs. The recommendation reflects concern over the increasing vulnerability of the low-skilled in the labour force in the face of skill-biased technological change, particularly in more developed economies. Recently, and in particular since 2007, concern over high levels of youth unemployment has led to much greater interest in apprenticeship.

- training to established standards for a recognised occupation
- long-term training

The 1962 ILO definition makes no reference to young people, in contrast to the 1939 definition. A more recent definition in a paper authored by German, Swiss and British academics again adds more attributes to the definition

“ ‘Apprenticeship’ is taken to denote training programmes that combine vocational education with work-based learning for an intermediate occupational skill (i.e., more than routinised job training), and that are subject to externally imposed training standards, particularly for their workplace component.”⁴

This definition recognises that, in addition to the attributes recognised above, regulated apprenticeship systems normally incorporate

- off the job education and training
- external regulation of training standards both in and outside the workplace

The European Trade Union Confederation (ETUC) Youth Section has published a Charter entitled ‘*Towards quality internships & apprenticeships*’. The Charter draws attention to the recent development of a raft of workplace-based unstructured programmes primarily for young people in addition to apprenticeship. The ETUC Youth Charter is primarily concerned with internships and calls for these to be structured and governed in the same way as apprenticeship.⁵

It may, therefore, be helpful to preface an analysis of how apprenticeship works with a schematic representation of the defining characteristics of regulated apprenticeship compared to informal apprenticeship and workplace based placements such as internships.

Table 1 Principal attributes of apprenticeship compared to informal apprenticeship and other workplace-based arrangements

	Wage	Legislative Frame-work	Work-place based	Programme of learning	On the job training	Off the job training	Formal assessment	Recognised certification	Duration
Traineeship	Maybe	No	Yes	No	Maybe	No	No	No	Variable
Internship	No	No	Yes	No	Maybe	No	No	No	Variable
Informal Apprenticeship	Pocket money or in kind	No	Yes	No	Maybe	No	No	No	Variable
Work-place Learning	Yes	No	Yes	No	Maybe	No	No	No	Variable
Apprenticeship	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Fixed

⁴ Ryan P, K Wagner, S Teuber, U Backes-Gellner (2010) *Trainee Pay in Britain, Germany and Switzerland: Markets and Institutions* SKOPE Research Paper No. 96 July

⁵ <http://www.qualityinternships.eu/>

Informal apprenticeship

Apprenticeship in the informal economy is a widespread phenomenon, including in G20 countries. In order to pass on skills from one generation to the next, poor societies have developed informal apprenticeship systems that are purely workplace-based. A young apprentice learns by way of observation and imitation from an experienced master craftsman, acquires the skills of the trade and is inducted into the culture and networks of the business. Apprenticeship agreements are mostly oral, yet they are embedded in the society's customs, norms and traditions. Countries in mediaeval Europe developed strong apprenticeship systems regulated by crafts associations, the guilds. Today, informal apprenticeship is an extensive training system in countries with large informal economies all over the world, including in South Asia, known as the *ustad-shagird* system. Variations in terms of practices are wide, yet the basic feature remains the same: the training agreement between a young learner and an experienced craftsman to transmit the skills of a trade.

Despite the system's strength of providing skills relevant to local markets, informal apprenticeship has a number of weaknesses. Long working hours, unsafe working conditions, low or no allowances or wages, little or no social protection in case of illness or accident, and strong gender imbalances are among the decent work deficits often found in apprenticeships.

On the one hand, upgrading informal apprenticeship is considered important to address these weaknesses. On the other hand, compared to investing in expanding formal technical education and training, it is a cost-effective way to invest in a country's skills base and enhance employability of youth, since training is integrated into the production process. Improved informal apprenticeship systems can also dynamize local economies by contributing to the diversification of products and services and the innovation, productivity and adaptability of micro and small enterprises.

Regulated apprenticeship

Table 1 shows that, compared to other workplace based programmes, 'formal' apprenticeship is structured and regulated, usually by legislation at national level, is waged, is based in the workplace, based on a contract which specifies duration, programme of learning (including transferable skills) assessment and final certification and the entitlement to off the job learning.

Table 2 shows substantial differences in the scale, duration, age and target groups of regulated apprenticeship in G20 countries. Only one country, the UK has full gender equality in apprenticeship. In some countries women are under-represented because some of the occupations they choose require full-time vocational schooling (Germany) or because their preferred occupations are not offered in apprenticeship (apprenticeship in Ireland is predominantly in construction). Considerable effort has been made in many countries to attract young women to apprenticeship occupations more frequently chosen by young men but, as yet, these efforts have made little impact on gendered choice of occupation.

Australia, Denmark and the UK do not restrict apprenticeship to young people and substantial numbers of apprentices are aged 30 or over. By contrast, Austria, France, Germany Turkey

and Switzerland target apprenticeship on young people under 25. In the US and, to a lesser extent Canada, apprenticeship is a way of up-skilling adults already in work.⁶

Table 2 also shows that in a majority of countries with regulated apprenticeship, service sector and ICT occupations figure among the top three apprenticeship occupations chosen.

The dual-system countries – Austria, Denmark, Germany and Switzerland – have a large apprenticeship offer which helps to satisfy these countries' skill needs although not all who seek an apprenticeship manage to find an employer. The UK and France where apprentice numbers are smaller, are actively seeking to expand the numbers of apprenticeships on offer and to improve standards and quality.

Table 2 Regulated apprenticeship and youth unemployment in selected G20 countries 2011 or recent year⁷

Country	Duration (years)	Business & Services in Top3	Apprentices per 1000 employed	% Female	% < 25	% all aged 16-24	Youth Unemployment 10 yr average(1)
Australia	1-3	Yes	40	34	54	9	11.4
Austria	3-4	Yes	32	34	100	15	7.5
Canada	2-5	No	30	15 ^e	20 ^e	n/a	12.7
China	3-4	n/a	n/a	45	n/a	n/a	n/a
Denmark	3-4	Yes	27	46	65	7	8.2
England (2)	1-3	Yes	20	54	60	6	12.2
France	3-4	No	17	31	97	4	20
Germany	3-3.5	Yes	39	41	92	20	10.9
Italy	3	Yes	24	43	60	n/a	25.8
Indonesia	1-3	No (?)	n/a	42	n/a	n/a	25.9
Ireland	3-4	No	10	2	n/a	n/a	8.4
Switzerland	3-4	Yes	44	42	100	20	6.9
Turkey	2-3	?	n/a	20	90 ^e	n/a	18.4
United States	1-4	No	14	n/a	5 ^e	n/a	11.1
Notes:							
(1)	1999-2008						
(2)	Data for England only except youth unemployment which is for the UK						
e	approximation						

Sources: *The State of Apprenticeship in 2010: Australia, Austria, England, France, Germany, Ireland, Sweden, Switzerland* Report commissioned by the Apprenticeship Ambassadors Network, Centre for Economic Performance, London School of Economics and Political Science Special Report, 2010, and <http://cep.lse.ac.uk/pubs/download/special/cepsp22.pdf>; *Apprenticeship Participation by Age 2009/10: Australia, Austria, England, France, Germany, Switzerland: An Update on 'State of Apprenticeship' September 2010* December 2011 Apprenticeship Ambassadors Network <http://www.apprenticeships.org.uk/~media/AAN/Documents2/AAN-StateofApprenticeship2010Update.ashx>; University of Ballarat, "Possible Futures for the Indian Apprenticeships System," Interim Project Report, forthcoming 2012, case studies on *Canada, Indonesia, Turkey and United States*, World Bank and ILO; UNESCO Institute for Statistics: <http://www.uis.unesco.org/Education/Pages/default.aspx>, retrieved 18.08.2012. <http://www.lavoro.gov.it/NR/rdonlyres/49C26BEA-9E14-408F-A304-B54DD7DE826B/0/XIIRapportodiMonitoraggioApprendistato.pdf>; ILO Statistics for youth unemployment data (1999-2008).

⁶ Argentina and Brazil have established legal provisions to regulate the conclusion of apprenticeship contracts aimed to connect young people with the labour market through combining technical work and practical learning. The scarcity of statistical information may signal that in the Latin American region, formal apprenticeship is not the main mechanism to facilitate young people's first contact with the labour market. <http://www.oitcinterfor.org/jovenes/contratos-aprendizaje>

⁷ This table is not exhaustive but includes those G20 countries for which information on apprenticeship is available and accessible.

3. Why do apprenticeship systems work?

Why does apprenticeship work for employers?

Convincing employers of the benefits of participating in apprenticeship is the most fundamental requirement of a successful apprenticeship system. Employers need

- As little bureaucracy as is compatible with good administration
- Good information and ongoing support from a local organisation/college
- The right set of incentives to balance costs and benefits
- Young, well-motivated applicants with a good level of general education

Business Europe, an employer organisation representing 41 Employer Federations from 35 European countries has listed the following advantages to firms of apprenticeship.

- Companies have their staff trained according to practical requirements;
- Companies and their employees get used to training and integrating “newcomers” and they see the importance of learning;
- Provided that vocational schools are well-equipped, young people can bring to the company the newest know-how from the training institute;
- Employing apprentices is a unique source of recruitment for companies; former apprentices constitute a “pool” of competences for companies or even for a sector;
- Apprentices contribute to production;
- Apprentices contribute to the company with new energy and enthusiasm.⁸

Thus apprenticeship provides firms with young employees who have mastered the skill set necessary for a given role within the firm. In addition, the apprentice has acquired knowledge and transferable skills. He/she has absorbed the culture of the firm and an appreciation of its organisation and operation. Where apprentices are recruited as full-time employees the return from apprenticeship on the firm’s investment is substantial. The case is made below from evidence of a cost-benefit analysis of apprentice training in England.

Training an Apprentice in engineering was relatively expensive compared to other sectors (estimated as £28,762, on average, across the case studies) but such costs must be set against the potential benefits of training. The engineering case studies indicate that the employer’s investment was, on average, paid back in less than three years. More importantly, the evidence points to significant benefits to establishments from investing in Apprenticeships through lower labour turnover, a better fit between the skills possessed by employees and the skills required by the company, and some control over skill-shortages potentially pushing up wage rates. There is also evidence of apprentices bringing innovation into workplaces.⁹

⁸ Business Europe (2012) Creating Opportunities for Youth: How to improve the Quality and Image of Apprenticeships <http://www.busesseurope.eu/Content/default.asp?pageid=568&doid=29967>

⁹ Hasluck C, T Hogarth et al.(2008) ‘The Net Benefit to Employer Investment in Training Institute for Employment Research, University of Warwick http://www.apprenticeships.org.uk/~media/AAN/Documents/Research_1_625.ashx

Why does apprenticeship work for young people?

In many countries the extraordinary richness of the workplace as a learning resource is under-appreciated. Both informal and regulated apprenticeship systems make full use of this resource and can unlock capacities in young people that had not been appreciated or exploited in school.

However, safeguards for young people from exploitation when in apprenticeship are as necessary today as in the past. Despite the system's strength of providing skills relevant to local markets, informal apprenticeship has a number of weaknesses. Sometimes, informal apprenticeship can become exploitative if a master craftsperson breaches the training agreement in failing to impart their skills adequately, thus keeping apprentices dependent on them for too long. And sometimes, "informal apprenticeship" simply masks child labour.

These problems are not always confined to informal apprenticeship. A recent survey undertaken by the European Trade Union Confederation (ETUC) found that in a number of EU countries legislation to protect apprentices is not always enforced or that legislation itself is inadequate.¹⁰

When apprenticeship is managed by the social partners within a legislative framework democratically determined, benefits to young people are considerable. A number of recent studies confirm that a completed apprenticeship greatly increases a young person's chance of being employed.¹¹

One of the principal reasons for relatively smooth school to work transitions in dual system countries is the superior matching of training to labour market demand that results from apprenticeship training being contingent on the offer of a place from employers. In 2010, nearly two thirds (61%) of German apprentices were taken on as full-time employees in their apprentice firm. Matching is clearly not perfect and arises in part because smaller artisan establishments have a much lower propensity to offer employment to apprentices than large firms, hence the overproduction of apprentice trained individuals in some artisan occupations in dual system apprentice countries. However, the transferable skills and general education components of dual system apprenticeship contribute to apprentices' employability on completion and this 'overproduction' can be viewed more positively in the light of research showing that, not only are German apprentices highly mobile after apprenticeship, but that mobility is also associated, in the majority of cases, with higher earnings.¹²

While most regulated apprenticeship systems offer young people much improved employment prospects, not all can be shown to offer higher pay or career prospects in the medium term.¹³ However, in the case of English apprentices and also in the US, it has been shown that a completed apprenticeship is positively associated with higher earnings.

¹⁰ Quality education for quality jobs European Trade Union Confederation (ETUC)
http://www.etuc.org/IMG/pdf/Brochure_ETUC_Youth_EN_4.pdf

¹¹ Summarised in Quintini G., J P Martin et al. (2007) *The Changing Nature of the School to Work Transition Process in OECD Countries* IZA Discussion Paper No. 2582

¹² Euwals R, Winkelmann R (2002) 'Mobility after Apprenticeship – Evidence from Register Data' *Applied Economics Quarterly* Vol. 48 No. 3-4 and Werwatz A (2002) 'Occupational Mobility after Apprenticeship – How Effective is the German Apprenticeship System?' *Applied Economics Quarterly*, Vol. 48 No. 3-4

¹³ Quintini G, Martin J op.cit.

Analysis of apprentice wages in the UK has shown substantial wage returns to young men with a completed apprenticeship both at Advanced (Level 3) and Intermediate (Level 2) Level compared to individuals with the same level of vocational qualification but without apprenticeship. For young women returns are also good but only at the Advanced Level of apprenticeship.¹⁴

Hollenbeck (2011) finds that the returns to apprenticeship training [in the US] far exceed the returns to other types of training, including two-year, community college programs. A broader study of 10 states also documents large and statistically significant earnings gains from participating in apprenticeship (Reed 2011).¹⁵

The main challenge for young people in apprenticeship countries is finding an apprentice place. Wherever apprenticeship is well-regulated and established, applicants outnumber places –in the case of the best companies - by several hundreds to one.

Why apprenticeship is good for governments

What are the challenges facing governments and business wishing to expand apprenticeships and why is this so challenging? Apprenticeship is one of the oldest social institutions but ‘modern’ apprenticeship has ambitious aims - to enhance general education and to develop technical knowledge and skill to internationally competitive standards. Its implementation in complex modern labour markets requires high levels of trust and cooperative behaviour between public authorities, employers and the young person.

Why do we need the involvement of public authorities – usually state or national governments - in what was, for centuries – and still is, in informal apprenticeship, a private arrangement between parents and employers? For well over a century now, governments in apprenticeship countries such as Austria, Germany and Switzerland have sought to rebalance the potentially unequal relationship between employer and apprentice by legislation which gives the apprentice a legal status and the right to acquire general transferable education and skills alongside more firm-specific skills in apprenticeship. Having insisted on this right, government also pays for this component of apprenticeship thereby becoming a major player in the apprenticeship bargain.

In countries with well-established apprenticeship, the institution of apprenticeship is hardly contested between the political parties. Instead, a growing cross-party consensus can be detected that apprenticeship is desirable and should be supported by public funds.

The current severe difficulties experienced by young people entering the labour market has helped to develop this consensus since all available evidence shows higher employment probabilities for young people with completed apprenticeship. Democratically elected governments will be under pressure to promote measures such as apprenticeship which provide good employment prospects for young people.

¹⁴ McIntosh S (2007) *A Cost-Benefit Analysis of Apprenticeships and Other Vocational* Department for Education and Science Research Report # 834

¹⁵ Lerman R I, ‘United States Case Study,’ in “*Possible Futures for the Indian Apprenticeships System.*” Interim Project Report, forthcoming 2012, World Bank and ILO.

But apprenticeships benefit society and the economy by much more than just improving employment prospects for young people, important though that is. Apprenticeships match the supply of skills with demand from employers much more efficiently than is possible with a system of school-based full-time vocational education. They develop high level skills identified by employers as necessary for growth and increased productivity. To the extent that skills developed in apprenticeship promote higher value-added economic activity they are good for growth and for general welfare. The higher earnings associated with higher productivity provide higher tax take which governments can use for health, education and other general welfare measures.

Market failure in skills provision

Because apprenticeship develops general knowledge and transferable skills, skills learned in apprenticeship are highly transferable between different employers. There is, therefore, always the possibility that the employer's investment in training may be lost to a competitor who recruits already skilled workers, the well-known 'poaching' problem. When the cost is borne by one agent and the benefit acquired by another, a classic incentive problem prevails. Both employers then substitute recruitment for training as a source of skills, with adverse effects on the supply of skills upon which both depend. This gives rise to a classic case of market failure which requires institutional measures to correct.

Correcting market failure

Market failure can be corrected in three main ways. A first approach in a deregulated labour market is to leave employers to determine the content of their apprenticeship programmes. Training can then be tailored to the specific requirements of the sponsoring employer, increasing its hold over its ex-apprentices. This is currently the case in countries like Bangladesh and India. This 'solution' is however unattractive. Apprenticeship becomes just another form of job training, with its wider educational and occupational potential undeveloped. This type of apprenticeship is unlikely to develop high skills and high value-added for the company concerned.

The collective funding approach

A second approach involves collective funding. All employers who stand to benefit from skills developed by apprentice firms contribute to a common fund from which the expenses of those who provide training are reimbursed, in whole or part, thereby rebalancing incentives from recruitment towards training.

In Denmark all employers, both public and private, pay an amount into a fund called the employers' reimbursement scheme regardless of whether or not they provide training placements. In 2012, all employers are obliged to pay an annual contribution of DKK 2 921 (EUR 393) per full-time employee. These funds are then allocated to the places of work taking in apprentices so they do not bear the cost of training alone. These employers receive wage reimbursement during apprentices' periods of college-based training

In France firms pay an apprenticeship tax which is set at 0.05 % of the salaries for firms with < 250 employees and 0.06% for firms with > 250 employees. Exemption from the tax is conditional on firms training a specified number of apprentices.

The collective organisational strategy

A third approach looks to collective organisation and peer pressure. Employer collectives - such as employers' associations, trade associations and Chambers of Commerce - are given powers to influence individual employers to provide apprenticeships. If such policies are not to fall back on ineffective exhortation, employers' groups must be able to alter the incentives facing individual firms.

In Germany, membership of the local Chamber of Commerce is obligatory for employers over a certain size. In addition, employers are encouraged to join Employers' Associations, for example, by 'extension rules', under which they are required to follow the terms of the collective agreements (e.g. on trainee pay) negotiated at sectoral level by those associations.

4. How to make apprenticeship systems work?

Apprenticeship operates within the wider context of cultural traditions and aspirations of individuals and the complexity of labour market regulation. Straight transplantation of institutions from one cultural context to another without regard to these factors has long been condemned as naïve and likely to be unsuccessful. However, policy which identifies more universal characteristics underpinning successful systems, for example, incentives to participation, management of equity issues, overcoming market failure, can provide a valuable guide to policy makers seeking to build or expand a viable apprenticeship offer.

Legal basis - a clear and enforceable formulation of rights and responsibilities of the apprenticeship partners

In modern economies apprenticeship is normally regulated by law. A standard format relieves firms of the burden of individually negotiating each contract and provides each party with a clear statement of rights and responsibilities with redress for failure to observe the apprenticeship contract.

In Germany the 1969 Vocational Training Act specifies the length of apprentice training and the examinations to be carried out by chambers of commerce to test workplace learning, and obliges employers to release apprentices to undergo these tests. It requires employer and sector representatives to draw up a specification of workplace learning for every recognised apprentice occupation, with the proviso that the framework promotes transferable skills and knowledge within an occupational context. The Act places vocational training in the hands of firms and chambers and thus emphasises the principle of employer responsibility for content while defining the basic framework guaranteeing mutual rights and obligations of employers and apprentices.¹⁶

In addition to Germany, a further six European countries – Austria, Denmark, Ireland, the Netherlands, Switzerland and the UK – regulate apprenticeship through an Act of Parliament.

While legislation is necessary for high quality apprenticeship provision, the most effective legislation safeguards rights and responsibilities of the main partners while leaving questions

¹⁶ Ryan P (2000) 'The Attributes and Institutional Requirements of Apprenticeship: Evidence from Smaller EU Countries' *International Journal of Training and Development*, January 2000, 4(1), pp 42-65.

of apprenticeship content, assessment and certification to be agreed between employer and employee representatives. Legislation should...

- recognise the unique status of the apprentice as learner and secure the right to high-quality training with strong transferable elements;
- set out the right of apprentices to a training allowance commensurate with their productive contribution net of training costs;
- set a minimum duration for the apprenticeship and secure provision for career progression;
- exempt young apprentices from minimum wage legislation and set a separate minimum wage for young apprentices.

Legislation should be coherent and aim for a simple but effective framework.

Trade union representatives in Indonesia emphasise that in relation to apprenticeship ‘what needs to be addressed in this instance is actually not the fact that there isn’t enough legislation, but, quite the contrary, that there is too much of it’.¹⁷

The fundamental role of the social partners

International experience shows that, once legal safeguards are in place, employer engagement and constructive dialogue with employee representatives is the most fundamental condition for a successful apprenticeship system. Apprenticeship is strongest in countries where both employer and employee representative organisations wholeheartedly support and promote apprenticeship and the conditions necessary for its success. Ongoing social dialogue is the necessary prerequisite for this commitment.

Business Europe recently published recommendations to employers for improving apprenticeship. The main recommendation was

‘Take part in the governance of dual learning apprenticeship systems and contribute to the design of curricula and their adaptation over time’.¹⁸

Employers are the key to apprenticeship opportunities and the most important players in the apprenticeship arena. Based on their assessment of present and future skill needs they recruit a young person and both then freely enter into a contract which sets out respective rights and responsibilities. Both young people and employers will be encouraged to engage with apprenticeship if the right incentives and safeguards are in place.

Employee organisations/trade unions play an important role in helping to ensure that apprentices’ rights in law are safeguarded. In many countries they contribute to the management of successful apprenticeship systems. Their principal interest is the protection of the interests of all employees, including apprentices.

¹⁷ Serrière, N. ‘Indonesia Case Study’ in “Possible Futures for the Indian Apprenticeships System: Canada, Indonesia, Turkey and United States,” Interim Project Report, forthcoming 2012, World Bank and ILO .

¹⁸ Business Europe op.cit <http://www.buinessurope.eu/Content/default.asp?pageid=568&docid=29967>

An apprenticeship contract enforceable in law is a fundamental condition of the protection of apprentices' interests. In most apprentice countries this contract provides apprentices with a special 'trainee' or 'learner' status which emphasises their dual role in the workplace both as learner and worker. Apprentices also enjoy the full protection of health and safety at work legislation as appropriate for their age. A trial period of several weeks is often incorporated to allow either the apprentice or the employer to end the contract without penalty if either party so wishes. After this trial period, as long as the apprentice fulfils the requirements of the apprenticeship contract and while the business remains solvent, the contract cannot be terminated prematurely by the employer. Following the completion of the apprenticeship, both apprentice and employer are normally free to decide whether to agree to enter into an employment relationship.

Trade unions play a significant role in the [US] apprenticeship system. Not only do some unions work with employers to organize programs, but union representatives play a significant role in the governance of State [and Federal] apprenticeship agencies.¹⁹

Existing employees and apprentices suffer when apprentices are used as full substitutes for those already employed since this can lead to downward pressure on employees' wages. Apprentices are equally disadvantaged by such practices since they fail to acquire a broad range of skills and may be dismissed altogether at the end of the apprenticeship.

In most established apprenticeship systems the danger of exploitation of apprentice labour has been lessened by regulation and legislation - often promoted and sponsored by employee organisations. Individual employers may, nevertheless, fail to observe such regulation. In these cases union/employee representatives on the spot can help to identify and rectify these failures and insist that the apprentice's rights be respected.

Employee organisations/trade unions can play an important part in representing the apprentice's interest in acquiring transferable and general skills in addition to occupational and firm-specific skills in the course of the apprenticeship. Historically, German trade unions have pressed for longer apprenticeship periods and the phasing out of the shorter two-year apprenticeship. They have also defended the general education and transferable elements of the apprenticeship programmes against employer pressure to increase occupational and company-specific skills.

In Spain the social partners are involved in the National General Council of Vocational Training and the Advisory Committee for Vocational Training and in Italy the social partners were recently (end of 2011) involved in the reform of apprenticeships. The trade unions from these countries also report that the crisis has altered the conditions under which apprenticeships are implemented: in Spain, difficult labour market prospects have pushed young people to stay longer in education. In Portugal, recent reform of apprenticeships included apprentices in the social security system but reduced financial assistance. In Italy, companies use apprenticeship contracts less frequently; when they are used, it is often because of their lower cost.²⁰

¹⁹ Lerman R I, 'United States Case Study' in *Possible Futures for the Indian Apprenticeships System: Canada, Indonesia, Turkey and United States*, Interim Project Report, forthcoming 2012, World Bank and ILO.

²⁰ ETUC (2012) *Quality Education for Quality Jobs*
http://www.etuc.org/IMG/pdf/Brochure_ETUC_Youth_EN_4.pdf

It is in the apprentice's interest to gain a final certification of the apprenticeship which is nationally recognised in the occupation trained for. Employers might consider this a low priority since a nationally recognised qualification increases the likelihood that the investment in the apprentice might be lost if the qualified apprentice leaves for another company. Employee organisations/trade unions can press for nationally recognised certification to be awarded on successful completion of apprenticeship.

Together with employer representatives employee representatives can play an important role in designing apprenticeship content which serves the interests of both parties – employers and apprentices and which includes general, transferable skills and education.

In Denmark, union and employer representatives sit on the boards of vocational schools that provide off the job training for apprentices and appoint the school Director.²¹ In the Netherlands a central Council of the social partners works with representatives of VET colleges to develop qualifications that are required outcomes for apprentices and for full-time VET learners.²²

Genuine employer engagement is not secured simply through employer representation on official bodies set up by government. Many countries with relatively under-developed apprenticeship systems – for example, France, Italy and the UK require employer representation on bodies that regulate apprenticeship. However, successful employer engagement, as found in, for example, Switzerland, needs commitment of time and resources at all levels of apprenticeship management.

In a recent OECD survey of employer engagement with apprenticeship it was found that Swiss employers had a direct influence on every aspect of apprenticeship – curriculum content, recruitment, qualifications and assessment.²³

One of the strengths of apprenticeship in Turkey is that social partners are actively involved in decision-making. The Turkish Confederation of Tradesmen and Craftsmen (TESK) supports apprenticeship through funding, organizing training and awarding certificates.²⁴

Through their contribution to the planning of apprentice programmes, firms can ensure that the programme develops the generic skills required for the work processes of their own organisations. In that way firms are locked into training to a high standard since, once apprentices become full-time employees, the profitability of the firm will depend on the quality of their skills.

The essential transmission mechanism from grass roots to national negotiations on apprentice programmes is well-supported and genuinely representative Sector and Regional Employer Organisations. Only if employers are prepared to devote time and resources to developing training programmes at every level – from that of the individual firm to national level – can

²¹ Bosch G and J Charest 'Vocational training and the labour market in liberal and coordinated economies' *Industrial Relations Journal* 39:5 428-447

²² Westerhuis A 'The Meaning of Competence' in Brockmann et al (2011) *Knowledge, Skills and Competence in the European Labour Market* Routledge, London

²³ OECD (2009) *Learning for Jobs: OECD Reviews of Vocational Education and Training: Switzerland* <http://www.oecd.org/education/highereducationandadultlearning/42578681.pdf>

²⁴ Ünluhisarçıklı, Ö. 'Turkey Case Study' in "Possible Futures for the Indian Apprenticeships System: Canada, Indonesia, Turkey and United States, Interim Project Report, forthcoming 2012, World Bank and ILO.

programmes be developed which promote skills that can enhance firms' productivity. Firms also need the space to exercise flexibility with regard to training programmes, adding additional elements, and adapting programmes to fit with their work organisation.

The role of government

Governments should not seek to micro-manage apprenticeship. The example of the UK shows that this can lead to the exclusion of employers from important decisions and an overload of form-filling and bureaucratic controls in order to comply with government regulations.²⁵

The English apprenticeship model marginalised the employer contribution to apprenticeships and stripped employers of their traditional role as transmitter of skills and knowledge. The funding model incentivised providers and employers to minimise the apprenticeship duration – in 2006 for apprentices at all levels the average stay was just over one year. Costs to employers of taking on young (16-18) inexperienced apprentices were correspondingly high since the first year of an apprenticeship is inevitably a time of low productivity and high training costs.²⁶

The role of central government should be that of a facilitator and regulator, ensuring that social partners act in the interests of the general good.

‘while organized employers are the crucial actors with respect to the survival of strong plant based training, the state plays a critical role in facilitating coordination among them’.²⁷

The [German] Federal government makes the overwhelming majority of decisions on vocational training only after union and employers' representatives of the BIBB [Federal Institute of Vocational Training] have given their consent. The participation of the social partners at the Federal level is based on the consensus principle. This shapes the activities of the Federal Institute to such an extent that the role of the state is frequently reduced to a notary function.²⁸

Institutional support for apprenticeship

All partners in apprenticeship – firms, apprentices and the public authorities need assurance that the quality and standards required by the apprenticeship programme are respected and achieved.

In a number of apprentice countries institutional support is provided by an organisation that provides labour market intelligence on changing skill needs, collects and monitors statistical

²⁵ Learning and Skills Improvement Service (2011) *Simplifying End-to-end Apprenticeship Processes for Employers* <http://www.lsis.org.uk/Services/Publications/Documents/LSIS2011-05-SimplifyingApprenticeshipProcesses.pdf>

²⁶ Steedman H (2011) ‘Challenges and Change: Apprenticeships in German-speaking Europe’ in Dolphin T and T Lanning (eds) *Rethinking Apprenticeships* Institute for Public Policy Research (IPPR) London

²⁷ Culpepper P D and K Thelen (2008) ‘Institutions and the Collective Actors in the Provision of Training: Historical and Cross-National Comparisons’ in Mayer K U and H Solga (eds) *Skill Formation: Interdisciplinary and Cross-National Perspectives* CUP, Cambridge

²⁸ Streeck W et al (1987) *The role of the social partners in vocational training and further training in the Federal Republic of Germany* CEDEFOP, Berlin

information and provides support to employers' organisations updating or devising new training programmes. This support provides early warning of problems and challenges arising in apprenticeship provision and advises government on intervention where required.

The definition of apprenticeship requires that much of the training is provided in the workplace. The quality of workplace training depends on the quality of the trainers based in the apprenticeship firm. Workplace trainers themselves need training for this role and most apprentice countries provide national certification and training programmes that can be accessed part-time while in employment.

The formal inspection regime used in schools and colleges is not appropriate for apprenticeship, although more informal visits by administering authorities can help to iron out quality problems. This means that assessment of outcomes of apprenticeship becomes a vital method of ascertaining the quality of the training provided during apprenticeship. This is not the case in all apprenticeship countries.

National assessment and certification of apprenticeship outcomes in Indonesia and India is not compulsory 'this means that there is no way to determine whether apprentices are achieving qualification level competencies through their apprenticeship'.

If widely recognised across the national territory, apprenticeship certification promotes mobility and skills matching.

Effectively, there is not so much a national apprenticeship system in Canada as 13 provincial and territorial apprenticeship systems...The Interprovincial Standards Red Seal Program provides the national overlay of these systems, developing occupational standards to be used in common by all provinces and territories.²⁹

Assessment needs to be objective, reliable, and externally set and administered. However, it should not be so onerous as to distort the training within the firm. The assessment arrangements in Denmark, illustrate the way in which flexibility to adapt to the needs of different occupations/trades can be combined with reliability and validity leading to labour market recognition of skill level. These arrangements are similar to those found in other dual system countries –Germany, Austria and Switzerland.

The final examination [in the Danish apprenticeship system] varies from programme to programme. In some cases it consists entirely of a college-based examination; in others it comprises a combination of a college-based examination and a journeyman's test (*svendep prøve*); in others only the journeyman's test conducted by local trade committees. A combination is, however, most common assessing both project based practical assignments and a theoretical examination, either oral, written or both. The relevant local trade committee nominates external examiners. Generally, two external examiners assess individual students in cooperation with the teacher. The content of examinations is developed by the training college in consultation with trade committees. After passing the journeyman's certificate, the graduate acquires a qualification at skilled-worker level and is able to enter the labour market.³⁰

²⁹ Miller. L. 'Canada Case Study' in *Possible Futures for the Indian Apprenticeships System: Canada, Indonesia, Turkey and United States*, "Interim Project Report, forthcoming 2012, World Bank and ILO.

³⁰ CEDEFOP (2012) *Vocational Education and Training in Denmark* Luxembourg

Promotion, administration and oversight of apprenticeship

Apprenticeship works best where the functions of promotion, administration and oversight are carried out by a single body rather than by a number of different bodies. A model where responsibility for these functions is located at local level works has the advantage of closeness to participating firms – the most important players in apprenticeship provision.

In Germany, Chambers of Commerce at local level provide business intelligence and advice as well as being responsible for finding and advising new apprentice employers, liaising with current apprentice employers, administering apprentice contracts and examinations. In Denmark and the Netherlands these functions are carried out by publicly-funded Vocational Colleges. In France, Vocational Colleges (Centres de Formation d'Apprentis) are publicly-funded but provided and run by sector-based employer organisations. These colleges are the first point of call for apprentices and employers but assessment is managed at regional and national level.

Excessive rigidity and burdensome administrative requirements can deter firms from offering apprenticeships.

[In Indonesia] It is for the smaller, and often informal companies, that the apprenticeship system, by managing to be both confusing and over-rigid, is failing to deliver its potential. A better system should recognise that a lot of skills acquisition is taking place at much lower level of production and find ways to recognise and upgrade the skills acquired by often low educated youth in small production units, so that these people may then have a chance to improve on their employment prospects.³¹

[In Canada] Many of the provincial governments reformed their apprenticeship systems from around the mid-90s to 2005, including revision of their statutory framework. Reform was focussed on making apprenticeship policies industry-driven, and shifted responsibility away from legislative regulation towards control by sectoral committees composed of employer and labour associations. Sharpe and Gibson (2005) claim that the increased flexibility and improved content in apprenticeship programs arising from these changes has led to greater employer participation.³²

The role of Vocational Colleges

Practically all apprenticeship programmes require the apprentice to spend part of his/her time learning away from the workplace. This is normally provided in publicly-funded Vocational Colleges although it is increasingly possible for the technical and knowledge elements of apprenticeship training to be provided in the workplace using electronic media. In Australia in addition to publicly-funded Vocational Colleges, private training providers provide off the job training for apprentices and are paid from public funds.

The use of publicly-funded Vocational Colleges for off the job training provides economies of scale, bringing together apprentices from a large number of work places and allowing different specialised learning programmes to be provided according to the needs of different occupations and sectors. However, large, publicly-funded colleges are sometimes unable to

³¹ Serriere, N. 'Indonesia Case Study,' in "Possible Futures for the Indian Apprenticeships System: Canada, Indonesia, Turkey and United States", Interim Project Report, forthcoming 2012, World Bank and ILO

³² Miller L (op.cit.)

respond rapidly enough to technological change in the areas where they teach and the occupational experience of teachers themselves may be outdated. Private providers can respond more rapidly to changes and employ staff more flexibly. However, it has proved difficult in the UK and Australia to ensure the quality of private provider provision.

Ensuring the relevance of college-based learning to work-based training is a difficult challenge. Even if they are training for the same occupation, the sequencing of apprentices' workplace training will differ depending on the way in which the individual firm is organised. It is, therefore, rarely possible for off-the-job learning in a collective setting to correspond to workplace learning. Workplace trainers can play an important role by liaising with colleges and helping to link theory and practice.

It is important that employers have the opportunity to provide input to the technical and knowledge components of apprenticeship programmes to ensure that these are relevant and up to date.

Finance

For employers to participate, apprenticeship needs to offer a cost-effective way of developing skilled employees familiar with the firm/organisation. The young person needs an assurance that acceptance of a (lower) apprentice wage will be compensated by the chance to acquire a recognised occupational qualification and status. The way in which apprenticeship is financed will determine whether or not apprenticeship provides the incentives needed to encourage employers and young people to participate.

The financing of apprenticeship is both complex and vitally important for its viability. In the first place, apprenticeship is costly. Those who benefit from training –employers, apprentices and the wider society - should contribute correspondingly, for reasons of both fairness and efficiency. The case on efficiency grounds is a matter of incentives: when investment in apprenticeship leads to a commensurate reward, an incentive to undertake training is present. If cost sharing reflects benefit-sharing then the outcome will be a sufficient supply of places and a corresponding demand from young people.

A number of apprentice countries, including France, Turkey and the UK, fix a minimum apprentice wage which is a fixed proportion of the adult employee minimum wage and which increases with age. In Germany the social partners aim to agree an apprentice wage (trainee allowance) which approximates to a third of the adult wage for the sector and increases with age. In Denmark the apprentice wage starts out at 40 % of the adult wage and increases to 50%. However, Danish employers are compensated for wages paid when apprentices are in off-the-job training.

Just as the benefits of apprenticeship are shared by firms, apprentices and society, so the costs should also be shared. The apprentice can expect to gain, in terms of expected future earnings and career prospects. The sponsoring employer gains a larger subsequent supply of skilled labour, according to the willingness of the apprentice to stay after training. Other employers also gain, to the extent that ex-apprentices leave to join them. The taxpayer and the wider economy also gain, since a greater supply of skilled labour increases productivity through more rapid innovation leading to lower product prices, as well as through the development of a more educated and knowledgeable society.

These wider social and economic benefits justify a major public contribution to the costs of apprenticeship. This most frequently takes the form of college-based courses provided free of charge to employers for recognised apprenticeships.

In continental European apprenticeship systems, for example, in Austria, Denmark, France, Germany and the Netherlands, the costs of the part-time vocational education courses that are built into apprenticeship programmes are met from public fund. In Australia government funds both public and private providers of apprentice training. In the US, with some exceptions, sponsors [employers] receive no public funding for the work-based learning or classroom-based components of apprenticeship.

If the public benefits of apprenticeship are judged greater still, then government should contribute to the costs of the work-based training as well.

Problems arise when the anticipated benefits to either party become small and uncertain and when costs remain high and certain. A young person may not accept a place when more skilled work offers few advantages over less skilled work. Similarly, the employer may not offer a place when costs are disproportionately large relative to benefits. Getting cost-sharing right in apprenticeship is, therefore, fundamental to securing a good supply of apprentice places and sufficient demand from young people.

The experience of countries with well-established apprenticeship shows that the ideal cost-sharing equilibrium is highly sensitive to changes in the wider economy. Flexibility of response from the social partners and vigilance from national authorities is needed to restore the desired equilibrium. In recent years, and often in cyclical downturns, governments have made payments directly to employers to incentivise them to offer an apprenticeship for the first time or to take an additional apprentice over and above their skill needs.

In Austria, where employer offers of apprentice places have been insufficient, payments are made for each additional apprentice place over the previous year or for firms which return to apprentice training after a break. In Germany, the government has promoted changes in training regulations which have helped firms to reduce training costs. These allow greater flexibility in the translation of training programmes into firms' training activities. This and other measures allowing greater flexibility have enabled firms to earn greater benefit from apprentices' productive work.

Apprentices contribute to the cost of their training by accepting lower pay relative to skilled workers in their sector and relative to what they could have earned in full-time employment without training. If apprentice pay is pushed close to that of the skilled employee, then employers may stop offering apprenticeship altogether.

In Great Britain the pay of apprentices roughly doubled, relative to that of other employees, during the period 1930-70, shifting training costs steadily towards employers. The Industrial Training Boards simultaneously raised training standards, and with them total training costs, from the mid-1960s onwards. Employers thus bore a rising share of a rising total cost; with the result that apprentice places dried up.³³

³³ Steedman H, Gospel H and P Ryan *Apprenticeship: A Strategy for Growth* Centre for Economic Performance, London School of Economics and Political Science
<http://cep.lse.ac.uk/pubs/download/special/apprenticeship.pdf>

A minimum level of apprentice pay is frequently set by government although firms are free to pay above that level if they so choose. In successful apprenticeship the apprenticeship duration allows the employer to recoup some of the training costs as the apprentice gains more skills and becomes more productive.

5. Recent challenges faced by apprenticeships

Because apprenticeship is so deeply embedded in the real economy, the relationship between the supply of apprentice places and demand from young people is highly sensitive to economic and technological change and to global competitive pressures on firms.

Ideally, within a given legislative framework provided by government, apprentices and employers agree a mutually acceptable apprentice wage and apprenticeship duration, so that both bear the costs of training and both capture a share of the returns. Apprenticeship can thus be seen to depend on achieving an equilibrium resting on the three partners in the process – apprentices, employers and government.

But in the real world, and particularly in the last two decades, the pressures of globalisation, and the growth of the knowledge economy have threatened the stability of the equilibrium between employers, the apprentice and the government that makes apprenticeship work.

In the last two decades in Germany, Austria and also Denmark, many young people with basic school-leaving qualifications who, in the past found apprentice places relatively easily, have failed to find places. Employers now discriminate much more than in the past in favour of apprentices with good or very good school achievements. Many less-qualified young people have had to accept a period of remedial education after compulsory school and the age of entering apprenticeship has risen. School days have been lengthened and schooling restructured to address the problems of the less-qualified.

Short-term targeted government subsidies have been used to compensate companies for the additional cost of taking ‘hard to place’ apprentices. Government and employers have struck a new bargain whereby leading employers and employer organisations pledge to provide increased numbers of apprentice places but some training regulations are relaxed to lower employers’ costs.

The difficult adjustment of apprenticeship in regulated apprenticeship countries has been costly for all the partners. Employers have had to fend off the threat of government intervention in their management of apprenticeship by increasing their cooperation with the public authorities. Young people have been forced to upgrade their qualifications or face a long wait for a place. Government has invested in schooling, pre-apprenticeship and short-term subsidy to employers to take on more apprentices. Nevertheless a new equilibrium appears to have been achieved without fundamentally compromising the leading role of the social partners in the apprenticeship system.

6. Conclusions and lessons learnt

Paths to the gradual upgrading of informal apprenticeships

In many G20 countries, informal and/or regulated apprenticeship functions in at least one sector of the economy and often in more than one. Apprenticeship in these countries may have only some of the characteristics of a mature apprenticeship system (see Table 1 above).

Nevertheless, if informal apprenticeship has brand recognition among employers, parents and young people, it can prove to be a useful platform from which to expand provision.

Compared to investing in expanding formal technical education and training, upgrading informal apprenticeship to incorporate reliable assessment and recognized certification is a cost-effective way to invest in a country's skills base and enhance the employability of youth.

Well-designed approaches aim to overcome weaknesses in the system step by step. Upgrading an informally organized system requires time, pilot testing, close monitoring, and evaluation that allows for lessons learned to be fed back into policy and reflected in the adjustment of approaches. Judicious timing of the various stages of intervention, and selection of the best combination of elements, are of critical importance.

Expanding regulated apprenticeships

The example of Ireland shows that a high quality well-regulated apprenticeship offer can be quickly put in place when the social partners in an important sector of the economy recognise the need. This was the case of the construction sector in Ireland where apprenticeship expanded rapidly after the introduction of a standards-based apprenticeship system in 1991.

Australia has recently greatly expanded apprenticeship numbers. This has been in part the result of increased flexibility in the definition of apprenticeship. Alongside 'traditional' apprenticeship in the artisan trades and crafts, what were previously known as traineeships have been renamed 'apprenticeships'. On average these traineeships offer more flexibility than traditional apprenticeships, have a shorter duration and standards aimed for can be at a lower level.³⁴

Unfortunately, the bursting of the housing bubble in Ireland led to a sharp fall in construction apprenticeship and the system had failed to diversify into sectors less affected by cyclical factors, for example, health and education. This specialisation also disadvantaged young women. Nevertheless, those apprentices in Ireland who had received a high quality training were well-placed to take skilled work in other EU countries.

Young women's choice of apprenticeship occupations have remained focussed primarily on business and service sector occupations despite campaigns to attract them to predominantly male occupations. A diversified apprenticeship offer should respect women's choices and provide high quality training for service sector occupations such as health and child care – frequently preferred by young women.

An appropriate regulatory frameworks for apprenticeship

Regulation of the apprenticeship contract by national law can be an important step in strengthening apprenticeship. However, consultation with the social partners and TVET education authorities should precede legislation. Legislation needs to heed the law of Occam's razor and aim for as little complexity as is compatible with the legislative aim.

³⁴ OECD (2008) *Learning for Jobs Country Note: Australia*

The most basic function of a legal framework for apprenticeship is to define the parameters within which firms may legitimately operate apprenticeship contracts. It needs to clearly specify the status, rights and obligations of apprentices and employers. The legal framework removes uncertainty both for the employer and for the apprentice as to whether the contract they have entered into will be respected and upheld in law. Removing uncertainty lowers the transaction costs of apprenticeship both for employers and for apprentices.

Employers' associations and trade unions play key roles

The experience of many countries currently developing apprenticeship demonstrates that strong, regional and/or sector-based employer associations need to be developed alongside apprenticeship provision. Collective action by employers to define the occupational skills content of apprenticeship and to influence the knowledge elements creates value both for employer and apprentice. The employer acquires relevant skills and the apprentice acquires a qualification with a real labour market value.

If the apprentice is assured - through officially recognised certification - of an outcome that will bring increased earnings, employment and career possibilities he/she is more likely to accept a lower wage for the duration of the apprenticeship. This in turn helps employers to achieve a sustainable balance between apprenticeship costs and benefits. The status of apprenticeship will rise and attract well-qualified applicants.

Trade unions play a vital role in achieving this balance by negotiating apprentice pay levels below those of fully-skilled workers while at the same time insisting on high quality training with substantial elements of transferable skills and knowledge.

National recognition of apprenticeship certification

The examples of many countries demonstrate that national recognition of apprenticeship certification greatly enhances the value of the qualification. However, over-rigid national skill specification can inhibit the development of apprenticeship in its early stages. Recognition within a region or sector of economic activity can provide the flexibility needed for apprenticeship to flourish and grow.

The facilitator role of government

Government, either at national or regional level has an important role to play in the development of apprenticeship. Essentially, government needs to play the role of facilitator, bringing together the social partners and the education constituency, and promoting an efficient flow of information to all the parties involved. Government acts in the public interest by encouraging employers and apprentices to invest in skills. Government must then, evaluate and adjust the incentives to both parties to participate in apprenticeship when economic and/or social change affects the cost/benefit equilibrium that promotes the optimal level of skill production through apprenticeship. Subsidies from public funds to employers/ and or apprentices can help to reduce the uncertainty that surrounds the apprenticeship contract for both parties. These have proved to be necessary in times of cyclical downturns in the economy when the supply of apprentice places is reduced.