



Dual vocational education and training in the service society

► The dual system of vocational education and training in Germany is frequently accused of failing to have achieved the leap into the knowledge and service society and of remaining too rigidly aligned to the production sector.

The present paper uses the results of empirical analyses conducted by the Federal Institute for Vocational Education and Training (BIBB) as a basis for investigating whether the structures of the dual systems are, in fact, still operating in accordance with their historical origins. The results provide evidence that the increasing significance of the service sector initially brought about an attendant weakening of in-company training, although dual training has now made significant strides in developing in line with the service society. Work still remains to be done in respect of the more knowledge oriented service occupations. Of particular importance here is not to narrow down the debate to the competitive aspect of higher education.

Since the 1980's the service sector has been taking on a dominant role in terms of the proportion of employment in Germany. The development towards a service society¹ is associated with the move towards a knowledge society² in which knowledge becomes a strategic resource for the generation of economic performance. The change in employee structure inevitably brings in its wake the issue of the effects exerted on skills requirements in the workplace and the demands placed on the educational and vocational education and training system.

The dual system of vocational education and training, which has its historical origins in industry and in commercial and technical occupations in particular, is often accused of continuing to align itself to these traditional structures.³ The argument is that the emergence of a service and knowledge society has tended to bring about an increase in the importance of systematic theoretical knowledge and a decrease in the significance accorded to know-how or implicit knowledge,⁴ the assertion being that the fact that vocational education and training within the dual system "is continuing to lose ground against higher general education and academically based education"⁵ by dint of its integration into the work process.

The Federal Institute for Vocational Education and Training (BIBB) has conducted a series of empirical analyses to investigate the extent to which the structures of the dual system still actually correlate with their historical origins or to

¹ The French economist Jean Fourastié used this term in 1949 to describe societies in which a predominant proportion of employees work in the tertiary sector. Fourastié, J.: *Die große Hoffnung des zwanzigsten Jahrhunderts*, Cologne 1954

² Cf. BELL, D.: *Die nachindustrielle Gesellschaft*, Frankfurt/Main 1985. For more recent debate cf. e.g. HEIDENREICH, M.: *Die Debatte um die Wissensgesellschaft*. In: BÜSCHEN, S.; SCHULZ-HOFFNER, I. (Eds.): *Wissenschaft in der Wissensgesellschaft*, Opladen 2003

³ BAETHGE, M.; SOLGA, H.; WIECK, M.: *Berufsbildung im Umbruch. Signale eines überfälligen Aufbruchs. Gutachten zur beruflichen Bildung in Deutschland im Auftrag der Friedrich-Ebert-Stiftung*, Berlin 2007

⁴ *ibid* p. 73

⁵ *ibid* p. 74



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discover how far a process of adaptation to the increased significance of the service sector has become established.⁶

When considering the service sector, a general distinction needs to be drawn between a perspective based on branches of trade and industry and a perspective based on occupations or occupational groups. Training for service sector occupations certainly occurs in manufacturing industry and viceversa. These two differentiations need to be clearly delineated when making statements on vocational training. BIBB has investigated both economically related and occupationally related structures and developments.

No adverse effects as a result of structural change since the 1990's

TROLTSCH has conducted a branches of trade and industry related observation to investigate the correlations between the structures and developments within the employment system and the provision of in-company training places for the service sector.⁷ This analysis is based on the statistics on employees and companies issued by the Federal Employment Agency and differentiates between phases of development from 1980 to 1998 and from 1999 to 2004. The analysis of the first of these periods initially shows a significant decline in the number of people employed in manufacturing industry at the end of the 1990's compared to 1980, whereas a clear increase was recorded in the tertiary sector. During the period forming the object of investigation, the primary and secondary sectors suffered a reduction in jobs of 1.9 million compared to an increase of 3 million for those working in the service sector. Manufacturing industry saw a sharp decline in the number of trainees, the fall here being significantly greater than the decrease in the number of employees. Despite the positive development in employment within the service sector, there was also an adverse movement in the number of trainees, albeit to a significantly more moderate extent than was the case in manufacturing. As a result, in-company training has been significantly weakened with an attendant fall in the training quota. A similar development applies in respect of the number of companies providing training and general participation in training by companies. In overall terms, 440,000 training opportunities for young people were lost during the period forming the object of investigation. We may, therefore, observe that the tertiarisation of the economy during this phase of development was accompanied by a significant restriction in company training activities.

6 For more detailed information on the individual results cf. the papers published in WALDEN, G. (Ed.): *Qualifikationsentwicklung im Dienstleistungsbereich – Herausforderungen für das duale System der Berufsbildung*, BIBB (Ed.), Bielefeld 2007

7 TROLTSCH, K.: *Der Stellenwert des tertiären Wirtschaftssektors für das duale Berufsbildungssystem*. In: WALDEN, G. (Ed.): pp. 51-97

The climax of this development was reached during the late 1980's, the process largely having come to a halt by the start of the 1990's.⁸ Although in-company training continued to decline during the period from 1999 to 2004, the falls were significantly lower than those which took place in employment. A considerable proportion of the further restrictions which occurred in in-company training was due to the construction industry and occasioned by general economic development. By way of contrast, the tertiary sector saw an increase in the number of trainees which even exceeded the growth in the number of employees which had already taken place. Relative participation in training by companies has not declined further, and has indeed even exhibited a slight increase in recent years. The overall conclusion is that no further adverse effects have been exerted on in-company training as a result of structural change since the 1990's.

Significant growth in dual VET in service occupations

Employment statistical data shows us that the main focus of the dual system today is clearly on the service sector rather than on manufacturing industry as was previously the case. Around two thirds of all trainees complete their training in the service sector.⁹ By way of comparison, the supply of training places available in the private service sector and public or non-profit sector in 1980 was only 38 percent and 11 percent respectively.

An analysis conducted by UHLY sheds light on the significance of the service sector for an occupationally related consideration of the dual system.¹⁰ The changes in dual training occupations during the period from 1995 to 2005 formed the object of investigation. The results show that there has been a significant shift towards service occupations. Around 57 percent of all training contracts, for example, are now concluded in service occupations. A further reason for this development is the fact that a series of new service sector occupations have been developed and have enjoyed acceptance over the course of recent years. Nevertheless, production oriented occupations remain signifi-

8 Cf. also TROLTSCH, K.: *Der Stellenwert des tertiären Wirtschaftssektors für das duale Berufsbildungssystem*. In: WALDEN, G. (Ed.): pp. 51-97

9 The 2004 training figures for West Germany (not including Berlin) showed that 54.6% of trainees underwent training in the private tertiary sector and that 9.6% entered training in the public or non-profit sector. Cf. TROLTSCH, K.: *Der Stellenwert ...* p. 64

10 UHLY, A.: *Der berufsstrukturelle Wandel im dualen System der Berufsausbildung – Empirische Befunde auf Basis der Berufsbildungsstatistik des Statistischen Bundesamtes* [Occupation structural change in the dual system of vocational education and training – empirical findings on the basis of the vocational education and training statistics of the Federal Statistical Office]. In: WALDEN, G. (Ed.): pp. 209-257

cantly overrepresented within the dual system of vocational education and training compared to the proportion of employees working in these occupations.

If a distinction is drawn between primary and (the more knowledge oriented) secondary occupations, the main focus of the dual system is clearly on primary service sector occupations (47% of all trainees). Secondary service occupations are significantly underrepresented (9% of all trainees, production oriented occupations 44%).¹¹

Do white collar replace blue collar workers?

The ratio between those trained in-company and those who have undergone higher education may initially be viewed from a competition or substitution aspect. A complementary correlation may, however, also be identified, as demonstrated by TROLTSCH¹² and HALL¹³. Troltsch arrives at the result that a higher proportion of more highly qualified workers within a company may exert positive effects on the readiness of the companies to provide training. A direct comparison between companies in the tertiary sector which provide training and which do not provide training shows a higher proportion of more highly qualified employees in the companies which do provide training. A growth in the number of employees who have completed higher education is also frequently associated with corresponding increases in skilled workers who have been trained in-company. Hall's analysis ascertains that the field of employment represented by secondary services is an area in which persons with intermediate vocational qualifications have been able to gain an employment boost rather than merely remaining a domain for those who have completed academic education. Around one in three of those who have completed intermediate vocational qualifications is working in the field of the expanding secondary service occupations. Between 1996 and 2004, this sector experienced an increase in employees both in number of persons with a University of Applied Sciences degree or other higher education degree and the number of persons with intermediate vocational qualifications, the growth figures being 13.1 percent and 9.9 percent respectively.

Development towards a service society

We may state that dual training has clearly developed in the direction of the service society over the course of the past decades, although this development has taken place in a delayed manner and after the system had already lost ground in terms of quantitative significance. It has not proved possible to compensate for the loss of traditional jobs in manufacturing, a process which began in the 1980's, by additional jobs in the service sector. The decline in relative participation in training by companies came, however, to an end by the mid 1990's at the latest.

Evidence of further weakening of the dual system has been absent since the mid 1990's. The main reason for the ongoing and continual decline in in-company training provision, at least until the year 2005, is the generally negative development in employment. By way of contrast, an increase in the number of trainees in the service sector was even achieved. For a considerable period of time now the majority of trainees has been undergoing training in the service sector rather than in manufacturing industry.

There has also been a significant decline in the traditionally strong commercial and technical characteristics of the dual system at the occupational level. There has been a strong increase in the number of newly concluded contracts in the service occupations since the mid 1990's. The figure of such contracts as a proportion of all newly concluded contracts has also significantly risen, reaching just under 57 percent by 2005. The creation of a series of new service sector occupations has undoubtedly exerted an impact on this development.¹⁴ Although the dual system has become part of the service and knowledge society to this extent, the main focus of dual training is on the primary service occupations. Despite the growth in dual training, this is an area where much remains to be done in respect of the more knowledge oriented service occupations.

Views must not be narrowed as to only consider the aspect of competition in respect of the development in employment of persons with an intermediate level of qualification and those who have completed higher education. Areas in which a growing number of higher education graduates are involved bring fields of activity for workers with an intermediate level of qualification in their wake. The number of unskilled workers remains high and constitutes potential for growth or stability within the intermediate level of qualification, even if this would bring about an attendant rise in the number of higher education graduates.

11 Cf. UHLY p. 221. Alternatively, since the figure has now also been included: Unterscheidung zwischen primären und sekundären Dienstleistungsberufen in Anlehnung an KUPKA/BIERSACK (IAB), see UHLY pp. 224

12 TROLTSCH, K.: Auswirkungen betrieblicher Qualifikationsstrukturen und am Qualifikationsbedarf orientierter Rekrutierungsstrategien auf das Bildungsangebot im Dienstleistungssektor. In WALDEN, G.: pp. 99-123

13 HALL, A.: Tätigkeiten, berufliche Anforderungen und Qualifikationsniveaus in Dienstleistungsberufen [Activities, occupational requirements and skills levels in service occupations]. In: WALDEN, G.: pp. 153-208

14 Cf. SCHÖNGEN, K.; WESTHOFF, G.: Ausbildung in jungen Dienstleistungsbranchen – empirische Ergebnisse und ihre Weiterentwicklung im Modelversuchsprogramm „Flexibilitätsspielräume“. In: WALDEN, G.: pp. 125-142

Table: Qualification levels according to occupational fields 1996 to 2004

Production occupations	1996	2000	2004	Absolute terms	In %
No vocational education and training	1,895,700	1,655,500	1,336,300	-559,400	-29.5
Completed apprenticeship, trade and technical school	7,144,000	6,688,600	6,011,800	-1,133,000	-15.9
University (of Applied Sciences) qualification	150,100	144,600	150,700	600	0.4
Primary service occupations	1996	2000	2004	Absolute terms	In %
No vocational education and training	2,497,000	2,453,200	2,345,200	-152,700	-6.1
Completed apprenticeship, trade and technical school	9,222,600	9,401,700	9,179,200	-43,400	-0.5
University (of Applied Sciences) qualification	722,700	686,300	853,700	131,000	18.1
Secondary service occupations	1996	2000	2004	Absolute terms	In %
No vocational education and training	607,700	593,900	593,000	-14,700	-2.4
Completed apprenticeship, trade and technical school	5,409,000	8,895,100	5,946,200	537,200	9.9
University (of Applied Sciences) qualification	4,092,200	4,208,100	4,629,900	537,700	13.1
All occupations	1996	2000	2004	Absolute terms	In %
No vocational education and training	5,001,300	4,702,600	4,274,500	-726,800	-14.5
Completed apprenticeship, trade and technical school	21,776,400	21,985,400	31,137,200	-639,200	-2.9
University (of Applied Sciences) qualification	4,965,000	5,039,000	5,634,300	66,900	13.5

Taken from: HALL, A.: Tätigkeiten, berufliche Anforderungen und Qualifikationsniveaus in Dienstleistungsberufen. In Walden, G.: p. 190

Source: Microcensus Scientific Usefiles 1996, 2000, 2004; calculations from BIBB
Employed persons not including trainees in private households at their main place of residence

The impact of the fundamental changes in the higher education area occasioned by the broad introduction of Bachelor courses of study is likely to be of significance for the further development of the dual system in the service sector. Development structure here will certainly be subject to vocational education and training policy rather than being inevitable.

Concluding remarks

In overall terms, a series of fundamental research issues and practical structural tasks emerge from the results of the analyses conducted by BIBB:

- Models involving the linking and cooperation of dual training with the higher education sector should be further developed and established on a broader foundation. Within this context, permeability from the dual system to the higher education sector also needs to be further improved. The assumption is that considerable impetus in this area will be generated by the debate surrounding the introduction of a European and National Qualifications Framework.

- The question of the perception of service activity within an intermediate qualifications segment delineated from the area of those who have completed higher education requires fundamental clarification.¹⁵ The weighting of experience driven and school oriented learning processes is also something which needs to be explored within this context. This is linked to the issue of what requirements for vocationalism will exist in the service sector in future.
- As far as the tailoring of service sector occupations is concerned, questions relating to the spectrum of qualification levels to be covered by training occupations need to be addressed. A further issue needing to be tackled within this regard is the future role service sector occupations will be able to adopt in terms of segments of activity tending to feature reduced skills.
- A further problematic aspect is the fact that service occupations are frequently differentiated from production oriented occupations by being accorded equivalence with commercial occupations. This is an area where there is a need for clearer definition of the terms “service activity” and “service occupation” and for further appropriate structuring criteria.¹⁶
- In terms of content, questions as to the tailoring of occupations within the service sector will continue to emerge to a heightened extent. Another aspect requiring clarification in this regard is whether it is possible to identify core elements and core curricula for individual areas of activity and whether it is possible to combine mono occupations to form occupations with differentiated profiles. A debate on the modernisation of the vocational education and training system analogous to such debate as the present discussion on the construction of training modules needs to be instigated for this purpose.

The future of the dual system within the service sector will, in the same way as the development of the system as a whole, ultimately also depend on the extent to which it succeeds in covering the demand of young people for in-company training. Although a consideration of the demand side has not been undertaken here, the considerable quantitative deficits in in-company training places over the course of recent years have been common knowledge. For this reason, one of the major tasks of vocational education and training policy over the course of the coming years will be to achieve fundamental improvements in this area. ■

15 Cf. here DIETZEN, A: *Ausgewählte Schwerpunkte der soziologischen Arbeits- und Qualifikationsforschung im Dienstleistungsbereich*. In: WALDEN, G.: pp. 19-50

16 Cf. BRÖTZ, R.; PAULINI-SCHLOTTAU, H.; TRAPPMANN-WEBERS, B.: *Stand und Perspektiven kaufmännisch-betriebswirtschaftlicher Dienstleistungsberufe*. In: WALDEN, G.: pp. 259-289