

Negative effect of the British poor vocational education on its economic development after the Second World War

LI Yong

(Xi'an Jiao Tong University City College, Xi'an Shaanxi 710061, China)

Abstract: England is the oldest nation of industry revolution and the earliest industrialization country in the world. With colonization system breakdown and economic giant, the United States, Germany, Japan etc. rising, today of England had already lost former days of elegant appearance. The disadvantageous vocational education is one of essential factor for England economy decline post-war. After the Second War, the student source of vocational education in England is shortage and its quality is not high; “The comprehensive high school exercises” make the vocational education almost lost exhaustively. The reform measure of variety vocational education in the recent years also did not receive the obvious result. The fall behind and dilatoriness of vocational education make engineering technician and technique worker who are on-the-job near the machine seriously missing, ultimately lead to economic comedown in England. England emphasized literacy education and neglected the occupation education. This is an important reason that resulted in this kind of condition. Under this situation, it caused directly its economy development dilatoriness.

Key words: British vocational education; economy development; negative effect

1. Introduction

For many years, British vocational and technical education has been regarded as inadequate and poor in comparison to competing countries. The deficiencies of the British education system and its failure to support and promote vocational education and training to create “human capital” in the labor force have been seen as a large factor in Britain’s economic decline since the 1900s. The education of an economic workforce can influence its performance in diverse ways ranging from the productivity of its farm and factory workers to the ability of its scientists and engineers to develop and diffuse new technologies to the entrepreneurial and managerial capabilities of its business leadership. While the protean nature of education makes it an attractive candidate for explaining economic performance it also makes it problematic for the historian to pin down its actual role in specific situations. The problems involved can range from controlling for unobservable native ability factors at the individual level to deciding how to enter education in an aggregate production function at the macro level. (Sanderson, 2000)

Vocational and technical education contrasts with liberal education. In economic terminology, liberal education is consumption, worthwhile for its own sake; the student becomes better off, not because of access to employ higher wages permitted by the education, but because of direct benefits conferred. On the other hand, vocational and technical education is unambiguously concerned with investment in human capital, in preparation

LI Yong (1971-), male, graduate student of Pedagogy, assistant researcher, head of Admission Office, Xi'an Jiao Tong University City College; research field: vocational education.

for work. It is a means to an end. In principle, vocational and technical education may be undertaken at any level in industry—management, foreman, craftsman or shop-floor. (Gospel, 1991) Vocational and technical education is broader than “technical education”, being concerned with the supply of professional services, medicine, law, religion, accountancy, among others. However, to keep the scope of the article manageable, the reason that British vocational and technical education turned to be poor, and the reason that the British Poor Vocational Education effects on its economic development after the Second World War will be the principal focus of the present discussion.

2. The Fact of British Economic Development after the Second World War

Well to know, England is the nation that entered the industrialization society at the earliest stage in the world. Since 18th, it had been more than one hundred years that England had been at top of trend of world as the greatest leader identity, alleged “the sun doesn’t fall empire”. But from later 19th, England started to lose the position of economic monopolization gradually. The twentieth century is the hundred years during which mankind makes progress and development, but to England, which mark prosperous economy to decline from vigorous head gradually. If to say, at the beginning of 20 century, the potential of the United States, Germany, Japan and Russia hasn’t been yet developed well, England still remains prestige and does not lose its big country position, so, after experiencing two world wars, especially the Second World War, Britain not only gave up its economic hegemony but also suffered a deep loss of its position of industrial leadership. Its per capita GDP had been overtaken by the United States in 1900, by France and West Germany in 1950 and by Italy in 1960. Between 1950 and 1973 Britain’s GDP grew at average annual rate of 3.0%. This was lower than that of its trading partners. Growth was hampered by chronic balance of payments deficits. A country’s balance of payments is the difference between the money from exports and the cost of imports. A country is running a balance of payments deficit when the total amount of money it spends on imports is more than the total amount of money it gets from exports. The British product exports to occupy a cent sum in the world also down sharply from 9.3% to 25.5%, lower than France, Germany and Japan, the per capita GDP’s increasing is more far away below the several big trade countries (the Table 1). Britain has been running balance of payments deficits for many decades. As a result the British pound has fallen to its lowest level. Britain is no longer able to match the growth rates of other industrialized countries. Then, from one of the strongest industrialization countries in the world and sharing quarter territories of worlds of colonize empire, England eventually turned into a second-class nation that follows the United States. Data manifestation, 1945-1975, the per capita GDP of per year in British was exceeded by France, Germany, Japanese, and Italy. The term “British disease” is now often used to characterize Britain’s economic decline.

Table 1 The average annual growth rate of GDP comparison between a few main big trade countries in post-war

	1950-1955	1955-1960	1960-1964	1965-1969	1969-1973
England	2.9%	2.5%	3.1%	2.5%	3.0%
France	4.4%	4.8%	6.0%	5.9%	6.1%
Germany	9.1%	6.4%	5.1%	4.6%	4.5%
Japan	7.1%	9.0%	11.7%	10.9%	9.3%
The United States	4.2%	2.4%	4.4%	4.3%	4.4%

2. The British Vocational and Technical Education’s Weakness Is One of the Important Reasons that It’s Economic Decline

It is gradual process that Britain has declined from prosperity. It has different and deep-going reasons of historic, political and international environment and should be a result that all of them act commonly. From history and trace of the process, British vocational education fall down relatively, the student source of vocational and technique education is shortage and its quality is not high. That makes engineering technician and technique worker who are on-job near the machine seriously missing, can not provide adequate skilled workers for economic development, all of this are also one of important reasons that British economy is not prosperity after war.

Why British vocational and technical education turned to be poor? Britain is the oldest industrial country in the world. The Industrial Revolution took place first in this country. A century ago Britain was known as the factory of the world. Many goods were manufactured in Britain and then sold all over in the world. Its standard of living was much higher than that of its European neighbors. At that time, its technical skill in textile, efficient force steam, smelting, craft, hardware, pottery and chemical were the most advanced in the world. As a result of the industrial revolution, Britain was by 1830 the “workshop of the world”; no other country was yet ready to compete with her in industrial production. Towns development rapidly and became the resource of the nation’s wealth. The north of England, until the 18th century a backward region, was the most advanced in Britain. The form of “apprenticeship” education system was the mainstream vocational and technical education and was the most efficient for economic development. However, with time transforming, especially the world economic development, the situation had been changed radically.

2.1. The number of technical school is limited and student source is shortage

First, we can find something out of high occupation education. Since 50’s, the British higher education scale got to be extended quickly, to the 60’s, it is the period that the higher education becomes to develop at a most quick speed in British history. As lessons in the war, the variety of the society and economy of need, fostering applied technique talent and developing the high technique education has to be endorsed and noticed by British government and folks unprecedented. Under this background, until 1972, more than thirty multi-disciplinary institutes had been established. However, the subsequent situation was not optimism as conceived at the beginning. The student source was principal problem to be faced firstly. 1950-1960, percent 64.5 students who graduated from general secondary school had selected science and technical academics. But 60’s, effected by the tradition of valuing the liberal education, science technique profession was subjected to be unfrequented, the most students inclined toward to register for examining the art and social science profession. In 1969, the lately-set up Technique University got empty to lack more than 1500s of quotas. In 60’s, getting empty to lack the quota was most of all belong to science and technique profession. On the other hand, the immediate post-war training agenda concerned only youth issues and demobilization. Follow-up pamphlets to the Butler Education Act (1944) suggested Local Education Authorities should consider extending technical school provision. But there was no requirement to do so in the Act and the expansion was very limited. The few technical schools were eventually swallowed up by the new “comprehensive” schools (see Table 2). (Sanderson, 1994)

Table 2 Distribute of the academics which students studied at multi-disciplinary Institute in 60-70’s, England

	Engineering	Science	The society administration	Language literature	Art
1965-6	43.9%	14%	26%	0.6%	1.6%
1968-9	32.8%	13.2%	34.2%	0.9%	1.5%
1974	20.4%	17.4%	36.9%	15.0%	
1978-9	33.9%		30.4%	20.0%	

Nonetheless, the 1968 Donovan Commission remained critical of deep-rooted restrictive practices governing training. Similarly, the Ministry of Labor maintained that both sides of industry were short-terms. The Institute of Personnel Management observed that in apprenticeship training there was a continuing conflict between standardization and flexibility. There was inadequate liaison with further education. Typically, the quality of training was poor with, for example, little systematic feedback, and the period of apprenticeship lasted too long. (Singer & Macdonald, 1970) Therefore, structure loses coordination between vocational and technical education and general education leads vocational and technical education to develop slowly.

2.2. Quality is not high and can't foster adequate skilled workers, and advanced engineering technician

Science technique profession not only recruits student difficulty, but also the teaching quality is worried. Student source is shortage and the educational quality is not high, which dose not make British government's plan of high technique education attain expectation of result, the problem that advanced engineering technician is inadequate has not been resolve exactly.

Technical education of the workforce between the world wars deteriorated or at least did not improve. Absolute numbers of skilled workers changed little between 1911 and 1951. (Matthews, Feinstein, & Odling-Smee, 1982, p.109) From 1911 to 1931 the ratio of skilled to total manual workers fell—the combined impact of war and unemployment not offset by special government schemes. Official anxiety about the small number of apprentices and a shortage of skilled labor crystallized in 1927 with the “interrupted apprenticeship scheme”. (Sheldrake & Vickerstaff, 1987) Ex-servicemen participants were paid what they would have received and had training not been interrupted while they were apprenticed; about 100,000 passed through the scheme.

A government initiative in 1921 introduced the Ordinary and Higher National Certificate qualifications but numbers of workers with technical qualifications remained few compared with those in the great boom after 1945. (see Table 3)

Table 3 Percentage of England and W. Germany labor force hold occupation qualifications certificate

	The university level (%)	Medium class level (%)	No certificate (%)
England 1974-1978	3.3	28.7	68.0
W. Germany 1978	3.5	60.8	37.7

3. The Lack of the Well-trained Engineering Technician and Skilled Labor Force Is Hard to Realize the Economic Competition Powerful.

3.1 Vocational and technical education improves labor force's intellectual level

Industry has ceased to be essentially an empirical, rule-of-thumb procedure, handed down by custom. Its technique is now technological, that is to say, based upon machinery resulting from discoveries in mathematics, physics, chemistry, bacteriology, etc. The economic revolution has stimulated science by setting problems for solution, by producing greater intellectual respect for mechanical appliances. And industry received back payment from science with compound interest. As a consequence, industrial occupations have infinitely greater intellectual content and infinitely larger cultural possibilities than they used to possess. The demand for such education as well acquaint workers with the scientific and social bases and bearings of their pursuits becomes imperative, since those who are without it inevitably sink to the role of appendages to the machines they operate. Under the old regime all workers in a craft were approximately equals in their knowledge and outlook. Personal knowledge and

ingenuity were developed within at least a narrow range, because work was done with tools under the direct command of the worker. Now the operator has to adjust himself to his machine, instead of his tool to his own purposes. While the intellectual possibilities of industry have multiplied, industrial conditions tend to make industry, for great masses, less of an educative resource than it was in the days of hand production for local markets. The burden of realizing the intellectual possibilities inhering in work is thus thrown back on the school.

3.2. Economic competition is human ability's competition and human capital is the most important

“Probably the most important and the most original development in the economics of education in the past 30 years have been the idea that concept of physical capital as embodied in tools, machines, and other productive equipment can be extended to include human capital as well”. (Schultz, 1961) “Physical capital is created by changes in persons that bring about skills and capabilities that make them able to act in new ways.” (Coleman, 1988) Consistent with a shortfall in vocational education, a very large ‘human capital’ effect explains differences in relative US-British productivity among industries in the mid/late 1930s. (Broadberry & Crafts, 1992) American industrial productivity was massively higher than that in Britain and the USA made minimal use of apprentices. A 1% rise in relative US/British human capital across industries was associated with roughly a 1% higher relative productivity. If Britain had invested more human capital in any particular industry, the productivity lag behind the USA would have been reduced. Steve Broadberry (1997) contends that this result stems from the USA adopting mass production techniques in contrast to the “craft production” of British industry. Mass production did not need the skills supposedly imparted by apprenticeship but only required unskilled labor. The greater US human capital was in the managerial and supervisory levels and in research. Yet for human capital to have such a strong aggregate effect it is likely to have been rather more pervasive. Greater human capital more plausibly allowed larger throughput processes and more productive technologies in the USA.

3.3 Skilled labor force is shortage and its level is not high

Indirect evidence continued to suggest inadequacies of vocational and technical education in manufacturing industry. The contribution of human capital to the US/British labor productivity gap was even greater in 1950 than it had been in the 1930s. (Broadberry & Crafts, 1996) In 1910 the USA had employed almost twice as many engineers as a percentage of the labor force and in 1950, after Britain's wartime expansion of engineering, the USA still utilized one and a half as many. (Peck, 1968, p.452) If Britain's concentration upon apprentices and non-professional technicians instead of professional engineers by comparison with the USA was simply a rational response to skill scarcities, relative wages of the two types of skilled labor would have been radically different in the two economies, but they were not. US experience suggests that more professional engineers and fewer non-professional technicians would have raised productivity.

Even though the school-leaving age had been raised (to 15) in 1947, the small numbers completing British secondary school education in the 1950s limited the opportunities to implement this option. In 1961, 12% of 17-year-olds attended school full time compared with 75% for the USA in 1960. Complementarities between secondary schooling and VET then contributed to an undersupply of professional engineers and skilled personnel. As a consequence, in the mid-1950s Britain employed the lowest proportion of technically qualified staff in the metals, food and electrical industries among seven. Organization for Economic Cooperation and Development countries surveyed. (Peck, 1968, p.459) This position was exacerbated by basic research and aviation probably accounting for one-quarter of the deployment of Britain's technical manpower. Britain produced more science and technology graduates than Germany (or France or Italy). (Edgerton, 1996, p.54) However, more relevant for vocational and technical education, this is not true of “technology-only” graduates. In 1954-55, 55% more

graduated in France and 22% more in West Germany.

4. Conclusion

In these years, some respects, such as the decline of apprenticeship almost to extinction, may differ from earlier periods; the shortfall in human capital formation seems to be part and parcel of a bigger picture of British VET history. With the pervasion of market forces and international competition from the later nineteenth century if not earlier, market failures in this field became serious but were not remedied by state action. Investment in human capital, either the quantity or the quality, is an obvious possible contributor to the slippage in GDP productivity (Broadberry, 1997, ch.6). From the later 1970s the Government therefore entered the direct provision of vocational and technical education for younger people. Although it may not be true, the view underpinning the British style of vocational and technical education is entirely reasonable.

The curved road that England vocational education in some development aspects had walked made it lose the advantage position during international violently economic competitions after The Second World War. This kind of precept deserves us to draw lessons from.

References:

- Broadberry, S. N. & Crafts, N. F. R. (1992). Britain's productivity gap in the 1930s: Some neglected factors. *Journal of Economic History*, 52(3), 531-558.
- (1996). British economic policy and industrial performance in the early post war period. *Business History*, 38(4), 65-91.
- Broadberry, S. N. (forthcoming). Human capital and skills In: Floud, R. & Johnson, P. (Eds.), *The economic history of Britain*. Cambridge: Cambridge University Press.
- (1997). *The productivity race: British manufacturing in international perspective 1850-1990*. Cambridge: Cambridge University Press.
- Cassis, Y. (1997). *Big business: The European experience in the twentieth century*. Oxford University Press.
- Coleman, James. (1988). Social capital in the creation of human capital. *American Journal of Sociology Supplement*, 94.
- Curtis, S. J. (1967). *History of education in Great Britain*. (7th ed.). London: University Tutorial Press.
- Davies, S.W. & Caves, R. E. (1987). *Britain's productivity gap*. Cambridge: Cambridge University Press.
- Dolton, P. J., Makepeace, G. H., & Gannon, B. M. (2001). The earnings and employment effects of young people's vocational training in Britain. *The Manchester School*, 69.
- Edgerton, D. (1996). *Science technology and the British industrial "decline" 1870-1970*. Cambridge: Cambridge University Press.
- Gospel, H. (1991). Industrial Training and technological innovation: An introduction. In: Gospel, H. (Ed.), *Industrial training and technological innovation*. London: Routledge.
- James Foreman-Peck. (2004). Spontaneous disorder? A very short history of British vocational education and training. *Policy Futures in Education*, 2 (1) 1563-1973.
- Matthews, R. C. O., Feinstein, C. H., & Odling-Smee, J. C. (1982). *British economic growth 1856-1973*. Oxford: Oxford University Press, 109.
- Peck, M. J. (1968). Science and technology. In: Caves, R. E. (Ed.), *Britain's economic prospects*. London: George Allen & Unwin.
- Sanderson, Michael. (2000). *Education and economic decline in Britain, 1870 to the 1990s*. EH.NET.
- (1994). *The missing stratum: Technical school education in England 1900-1990*. London: Athlone Press.
- Schultz, Theodore W. (1961). Investment in human capital. *American Economic Review*, 51 (1), 1-17.
- Sheldrake, J. & Vickerstaff, S. A. (1987). *The history of industrial training in Britain*. Aldershot: Avebury.
- Singer, E. J. & Macdonald, I. D. (1970). *Is apprenticeship outdated?* London: Institute of Personnel Management.
- 余志远. 英语国家概况[M]. 北京: 外语教学与研究出版社出版, 1996.
- 王明达. 英国职业教育发展历程给我们的启示——“英国中等职业教育发展研究”读后[J]. 中国职业技术教育, 2005 (12): 223.
- 翟海魂. 英国中等职业教育发展研究[M]. 高等教育出版社, 2005.

(Edited by ZHANG Dong-ling and ZHOU Qun-ying)