The age of factories: the rise and fall of manufacturing in south Wales, 1945–1985

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INTRODUCTION

After the Second World War, central governments[1] used regulatory and incentive mechanisms to steer factories to south Wales to reduce unemployment and increase regional prosperity. Although central government intervention enabled manufacturing to attain a prominent role in south Wales, described by a contemporary observer in 1970 as 'probably the closest to a nationalised region that exist[s] in Britain',[2] the sector's status was short-lived and it declined from the mid-1970s. Despite manufacturing's importance to the economy of south Wales, its rise and fall has been little studied.[3] This chapter addresses this gap by profiling the sector, emphasising the state's role in attracting investment and illustrating the sector's trajectory through case studies of the British Nylon Spinners/ICI Fibres plant at Pontypool and the Enfield Cables/Dunlop Semtex factory at Brynmawr.

The chapter is based on archival data from the UK's National Archives and the Gwent Archives, oral history collected by Women's Archive Wales, as well as contemporary documentation including newspapers and official publications. It argues that the state intervened effectively to force the private sector to create large numbers of manufacturing jobs in south Wales. The new factories created thousands of jobs and helped create some regional prosperity. Most factories would not have located in south Wales without state intervention such as controls on industrial location and the provision of factories. However, many factories were 'branch plants' meaning that ownership and management control

remained outside the region. South Wales depended on state intervention to attract new factories, while existing branch plants were vulnerable to external shocks. These weaknesses meant that the sector was unable to renew itself and was disproportionately impacted by UK-wide economic and political trends from the 1970s onwards. As a result, manufacturing's status as a leading sector in south Wales was short-lived, and state intervention was successful only over a relatively short period of time.

1: THE SCALE AND IMPACT OF MANUFACTURING

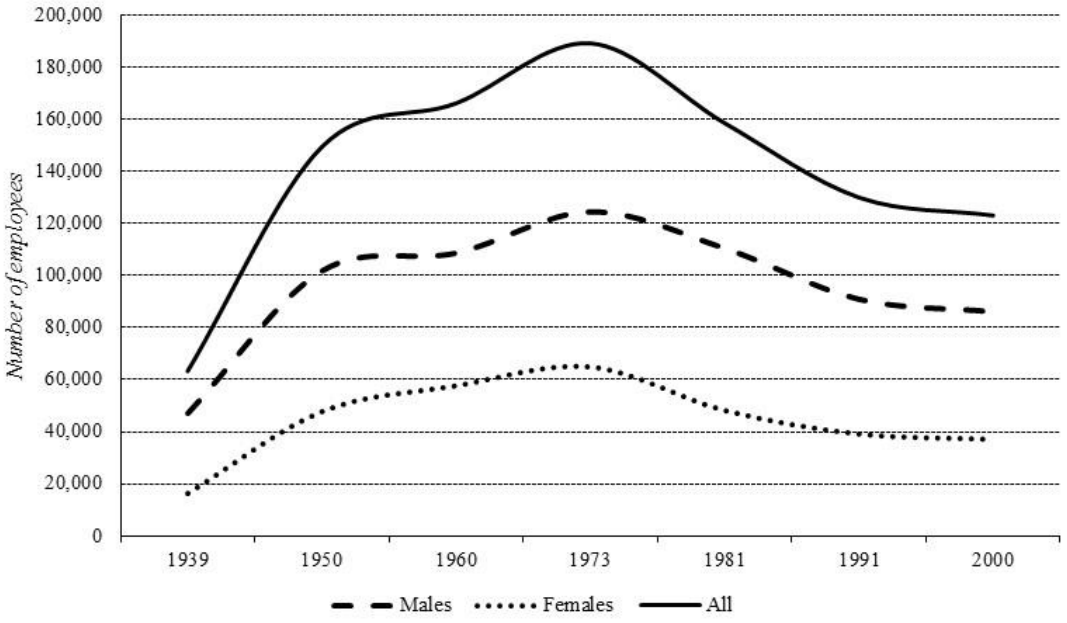
The industrial revolution transformed south Wales from a sparsely populated and largely agricultural region to one dominated by industry, as the population of Glamorgan and Monmouth grew from 116,527 in 1801 to 1,158,007 in 1901.[4] The region was heavily dependent on coal extraction and metal working, both with a largely male workforce. These two activities accounted for 49 per cent of the occupied male workforce in 1901,[5] while many of the remainder worked in linked activities such as transport or within the urban centres that sprang up to serve the new industries. However, the success of coal extraction and metal working did not encourage the development of a manufacturing base but tended instead to crowd out other activity.

The lack of diversification did not matter when demand for basic goods was high, but a collapse in demand after the First World War led to a prolonged slump until the Second World War, which created an urgent requirement for manufacturing capacity. South Wales was an ideal location, given its supply of surplus labour and its distance from areas under the greatest threat of air raids. The advantages prompted central government to direct manufacturing to the region and these new factories helped to virtually eliminate

unemployment. After the war, central governments' determination to ensure greater prosperity throughout the UK's regions and nations enabled a successful state-led drive to attract manufacturing to south Wales.

Graph 1 outlines trends in manufacturing employment in south Wales after 1939. Three phases are apparent: very rapid growth between the outbreak of war and the early 1950s; slower but continuous growth until the early 1970s; and, rapid decline thereafter.

Graph 1: Manufacturing employees in south Wales, 1939 to 2000 (a, b).



Notes:

(a) Data for 1939 includes Carmarthenshire. Data for 1950, 1960 and 1973 includes part of Carmarthenshire. Other data exclude Carmarthenshire.

(b) Excludes coal mining and the bulk of metal manufacture.

Sources: See endnotes[6]

The first phase between 1939 and the early 1950s saw manufacturing employment almost double throughout south Wales.[7] Growth was driven by the war economy: for example, employment in the manufacture of chemicals, paints and oils throughout Wales between 1939 and 1944 increased from 4,000 to 69,000 and in engineering from 11,000 to 48,000 – most in industrial south Wales.[8] Manufacturing became even more diversified after the war and in 1947, central government noted that new factories were producing: 'dairy equipment, carpets, haberdashery, woven blouses, underwear, metal toys, cable sleeves, degreasing plant, brushes, nuts and bolts, tube-making machines, light-weight cycles, upholstery, toy motor cars, cartons, optical goods, piano actions, stud-welding plant, textile printing, springs for road vehicles, and paints'.[9]

The second phase between the early 1950s and early 1970s saw manufacturing employment assume a critical importance to south Wales. It helped to offset the decline of the coal industry, within which employment in south Wales fell from 114,900 in 1946 to 40,300 in 1970.[10] By 1961, Wales was branded a 'land of modern light industry' as huge factories became part of the landscape.[11] As examples, South Wales Switchgear employed 2,000 people in Treforest and Blackwood, Aberdare Cables employed 3,000 people, and 1,500 people worked in the Rover gearbox factory in Cardiff.[12] The dominance of large factories was such that within the statistical sub-regions of 'Industrial South Wales', the proportion of the manufacturing workforce employed in factories of more than 500 people stood at 64.8 per cent (West South Wales), 51 per cent (Central and Eastern Valleys) and 51.7 per cent (Coastal Belt).[13] These large factories often paid relatively high wages, helping to create a more affluent society. By 1968 median manufacturing wages for full-time men in Wales stood at 105.4 per cent of the equivalent for Britain while wages for full-time females stood at 97.4 per cent.[14]

One of the most striking transformations linked to manufacturing was the increased role of women in the workplace. Before the Second World War, women were often restricted to retail and domestic service occupations but wartime necessity meant that they were needed to staff the new factories. While it was sometimes expected that their greater involvement in the workplace was to be temporary, with an official within central government's Board of Trade (BoT) assuming in 1943 that most women would 'wish to return to their normal peace-time occupation of housewives' after the war,[15] women retained their role. As a result, the number of women in insured occupations throughout Wales grew from 219,400 in 1944 to 269,000 in 1958.[16] While the expanding service sector was an important source of jobs, the new manufacturing industries provided opportunities – even if many jobs were low-paid, part-time and semi-skilled. As a result of this growth, women comprised 28 per cent of the labour force in 1961 and 45 per cent by the mid-1970s.[17]

Another trend was the increasingly important role played by foreign direct investment from the 1960s. In 1959 some thirty foreign manufacturing firms existed in Wales, employing around 18,300 people; fifteen years later 127 overseas firms operated 138 manufacturing units, employing nearly 53,000 employees.[18] Overseas investment was overwhelmingly located in industrial south Wales and by 1976, three-quarters of all foreign-owned employment in Wales was in Mid Glamorgan, West Glamorgan and Gwent. The construction of the M4 from the 1960s helped to attract these investors, as locating by a motorway could enable easier accessibility for suppliers and employees, as well as to markets. As a result, 78 of the 112 overseas manufacturing establishments in south Wales by 1976 were located within ten miles of the M4, with the motorway playing an important role within regional economic development.[19]

For the manufacturing sector in south Wales, the third phase covering the period after the mid-1970s was primarily characterised by deindustrialisation, but also by some reconstruction. Rapid growth in the first and second phases had been based on attracting subsidiaries of companies headquartered elsewhere. These 'branch plants' accounted for two-thirds of the increase in manufacturing employment in Wales in the first half of the 1960s,[20] but such plants were more likely to be shut during downturns than those located closer to the company's headquarters and major domestic markets. The consequences of hosting so many branch plants became apparent in the early 1980s when recession proved disastrous, and it lost more manufacturing jobs relative to its population than any other area in Britain.[21]

2: MANUFACTURING AS A STATE-LED DEVELOPMENTAL SOLUTION

Although central government made some efforts through its Commissioner for Special Areas to alleviate economic conditions in south Wales throughout the 1930s, these were small in scale and impact. However, the effectiveness of wartime intervention created a political consensus that central governments should intervene to increase regional prosperity. The drive for intervention was symbolised by Hugh Dalton, Chancellor of the Exchequer, after the Labour Party's 1945 general election victory. He famously promised in 1946 to 'find, with a song in my heart, whatever money is necessary to finance useful and practical proposals for developing these areas', to bring 'them to a condition which they never had in the past, a condition of full and efficient and diversified economic activity'.[22]

Central government intervened through 'regional policy'. Regional policy measures focused on spatial areas defined by central government as needing industrial diversification. These were found throughout the UK where there was a high dependence on heavy industry,

with most of south Wales designated as a 'Development Area' in 1946. While the titles and coverage of these areas changed over time, much of south Wales was always prioritised for intervention. Regional policy measures had three components: regulatory instruments to control industrial location; constructing factories; and, awarding financial support to investing companies. Intervention focused on creating the greatest number of jobs, as opposed to building integrated regional economies or stimulating entrepreneurship. While the degree to which regional policy was implemented varied, it was an important part of the post-war Keynesian consensus between the Labour and Conservative parties on economic management that lasted until the mid-1970s.

Regional policy's most important measure was controls over industrial location, with restrictions emerging by the end of the Second World War. Wartime controls were supplanted in 1947 by the BoT's Industrial Development Certificate (IDC) system. All but the smallest industrial developments throughout the UK had to have a certificate before planning permission could be granted. Certificates were far easier to obtain in Development Areas than in locations such as London. As a result, industrialists planning to open new factories had little choice but to choose areas such as south Wales.

One of the most prominent examples was Hoover's washing machine factory. Having originally intended to locate in the south of England, central government pressure pushed the company to Merthyr Tydfil and it opened a new plant in March 1948. The importance of the large factory to the town and to broader society was recorded in a commemorative book given to the 450 attendees of the opening ceremony, including senior industrialists and politicians travelling from London on a chartered train. Speakers at the ceremony included central government's Minister of Labour and National Service, George Issacs, who said:

'sunshine […] will come into the homes and hearts of the people of this valley when they know that there is work and security instead of poverty and insecurity'. After the speeches, a stage production featured an illuminated image of the factory 'visualised as a beacon of promise in an area once dark and depressed', after which there was an evening of dancing; 'on with the dance, let joy be unconfined'.[23]

While the achievement of full employment throughout the 1950s led to some diminution in the application of regional policy, the election of an interventionist Labour government in 1964 led to intensification. However, subsequent deindustrialisation reduced the effectiveness of the IDC regime. By the end of the 1970s, the number of large factories being opened throughout the UK had fallen from some 1,000 per year to 300, meaning that a 'surplus' of factory jobs in some parts of the UK that could be directed elsewhere did not exist.[24] As a result, the Labour government largely abandoned the use of IDCs in the late 1970s. The certificate system was then suspended by Margaret Thatcher's Conservative government in 1982 before being abolished.

Regional policy's second component was the construction of factories by central government. The war had endowed south Wales with a large stock of industrial floor space, while central government's Wales and Monmouthshire Industrial Estate Corporation (WMIE) embarked on a programme of converting wartime premises and factory construction, totalling 6.5 million sq. ft. (0.6 million sq. m.) across 224 projects by 1946.[25] The availability of modern floor space that could be rented or leased from the WMIE combined with the use of IDCs to enable an influx of industrial activity. While Treforest was the only state-owned industrial estate in south Wales before the war, by 1947 it had been joined by those at Hirwaun, Bridgend and Swansea, where some 7,000 people were employed.[26] By June 1948,

148 companies employing over 24,000 people had established themselves in south Wales in either converted munitions factories or state-owned factories.[27] The IDC system also enabled a boom in the construction of privately financed factories, many of which were vast. By mid-1948, 152 privately financed factories totalling 12.2 million sq. ft. (1.1 million sq. m.) of space were approved for construction, compared to 168 state-financed factories totalling 5.8 million sq. ft. (0.5 million sq. m.).[28] Factory construction largely ceased in the 1950s as central government believed that full employment removed the need for such activity, although some factories were built in the 1960s.

Regional policy's final component was financial support to investing companies. Although support was initially small in scale, the 1960s saw the creation of complex systems of spatially differentiated grants, loans and other incentives in Development Areas throughout the UK. By the later 1960s, virtually every manufacturing company in south Wales was receiving subsidies. This UK-wide system reached its peak after 1972's Industry Act but this level of activity lasted only a few years. Budgetary problems faced by the Labour central government meant that resources were reduced sharply from 1976, while the election of Margaret Thatcher's government in 1979 saw further reductions as part of the new government's desire to reduce levels of state intervention across the economy.

Although central governments withdrew gradually from intervention from the mid-1970s, its creation of the Welsh Office[29] in 1964 enabled some intervention to continue. The most notable Welsh Office intervention was establishing the Welsh Development Agency in 1976.[30] The agency built large numbers of factories in the 1970s and 1980s and made strenuous and successful efforts to attract foreign direct investment to south Wales. Despite success, south Wales was eventually unable to compete with lower-cost overseas locations

and attracting manufacturing ceased to be a primary solution for south Wales's economic problems. [31]

3: BRITISH NYLON SPINNERS/ ICI, PONTYPOOL

Nylon, an artificial fibre, was developed in the late 1930s by the American owned Du Pont Company. By 1939, the patent was licensed to the giant British conglomerate, Imperial Chemical Industries (ICI). However, ICI had little experience in fibre production and needed a development partner. In 1939, it signed a joint venture with Courtaulds, a leading producer of textiles, and British Nylon Spinners (BNS) was established as a jointly owned subsidiary in January 1940.[32] Wartime circumstances made normal development impossible and the new company initially produced small quantities of parachute yarn at sites in Coventry and Suffolk. By 1943 the turning tide of war meant that post-war opportunities could be considered and plans were made for a factory that could manufacture some seven million lb. (3.2 million kg.) of yarn, as opposed to the 300,000 lb. (136,000 kg.) produced in 1942.[33]

The initial plans were to construct the new factory in Oxfordshire and a site was bought in Banbury. However, central government's imposition of location controls stopped development and forced BNS to search for an alternative site. The BoT suggested sites in Development Areas including Lancashire and central Scotland, but BNS rejected these owing to inadequate road infrastructure or water availability. Others, such as a steeply angled site in Abercarn in the Ebbw valley, were unsuitable for a large development.[34] Finally, a large site at Mamhilad, near Pontypool, was selected as it was flat, had room for expansion, good road and rail links and a ready supply of water. While the Ministry of Agriculture would have preferred the factory to have been directed to a more built-up location rather than use

agricultural land, the BoT noted that 'it was necessary to let the firm have the site upon which they have set their minds […] we, as beggars, can't be choosers'.[35] Even at the height of central government intervention in the 1940s, the BoT knew that there was a limit to which it could direct the location of privately run factories. If the location was clearly unsuitable for a large factory, there was a risk that the company would refuse to proceed with any investment as it was the company and not central government that would incur any financial losses arising from an unsuitable location.

The outcome was 'the biggest factory project in the whole Development Area [of south Wales] and probably in any of the areas [throughout the UK]'.[36] Construction of the 958,000 sq. ft. (89,001 sq. m.) plant commenced in 1945. As was always the case with large-scale projects, many construction jobs were created over the short term as the requirement for five million bricks necessitated the reopening of a disused brickworks adjacent to the site.[37] Hampered by shortages of raw materials and labour, as well as by bad weather, construction was delayed and full production was not reached until 1950. By this time, the impressive red brick factory with its large 'spinning tower' (see Plate 1) dominated the surrounding landscape and was a flagship for industrial regeneration. The factory's symbolic importance was reflected in the choice of its architect: Sir Percy Thomas, whose firm was responsible for many most prominent industrial and commercial buildings throughout Wales, including Swansea's Guildhall, Aberystwyth's university campus, and a complex of factories on the Treforest Industrial Estate.[38]

Plate 1: The 'spinning tower' at British Nylon Spinners, Pontypool, 1948.

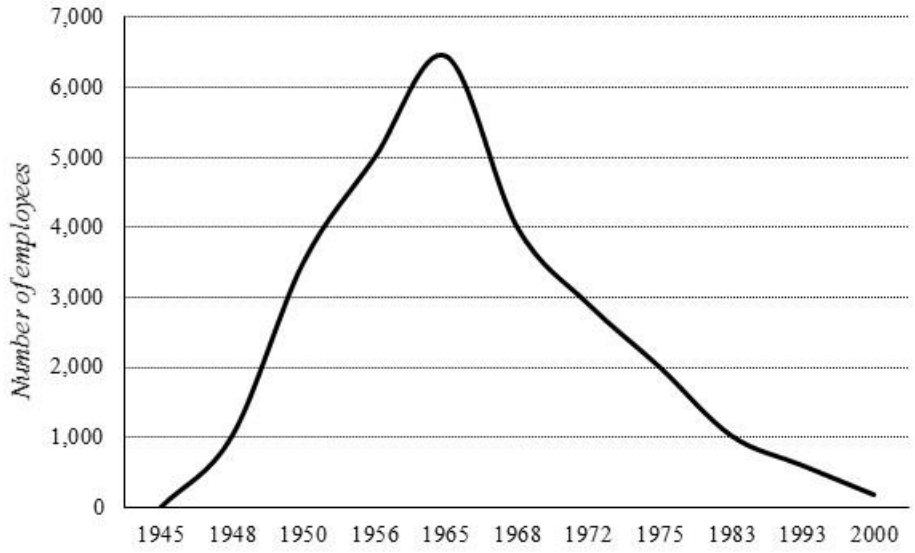
Source: From the collections of the National Monuments Record of Wales: © Crown Copyright: Percy Thomas Archive

The 1950s and early 1960s were boom times for the factory, spurred by BNS's patent-protected domestic monopoly on Nylon production, with its uses including socks, hosiery, ropes and filters. As the consumer society expanded, so too did national and international demand for BNS's output, as synthetic fibres captured some 30 per cent of the western European textile market by the 1960s compared to a negligible level in 1945.[39] By 1956, *The Economist* noted that BNS was 'only barely able keep up with demand',[40] even though the company's production grew continuously throughout the 1950s and early 1960s,[41] while Pontypool was its largest manufacturing facility. Expansions at Pontypool were frequent

given the scale of demand, with the first occurring as early as 1951 when the BoT granted an IDC for a 176,320 sq. ft. (16,372 sq. m) extension.[42]

The commercial success of BNS was reflected in the remarkable increase in employment at Pontypool. Even before full production was reached, some 2,000 people were employed by mid-1949.[43] Ma, employment then trebled to exceed 6,000 by the early 1960s (see Graph 2) and the plant became the largest peacetime factory ever seen in Wales. While most employees were production operatives, many had higher-level positions. These included managers as well as the 400 research staff in the plant's in-house research and development function.[44] Everything about the factory was on a huge scale, often creating direct and indirect employment across a range of services and supplies. This included employment linked to the 963,000 meals served each year in its canteen by 1962,[45] while its purpose-built staff club was of a sufficient size to host concerts from leading bands and shifts competed to see which could host the most successful events. A former employee recalled 'six hundred or so in the clubhouse to watch the latest stars of the sixties – Lulu, Billy J Kramer, The Dave Clark Five, and Freddie and the Dreamers to mention but a few'.[46]

Graph 2: Numbers employed at BNS/ICI Pontypool, 1949 – 2000 (a).



Note:

(a) Includes the ICI activities transferred to Du Pont in 1993.

Sources: See endnotes.[47]

As was often the case in post-war factories, many posts were filled by women, who accounted for one-fifth of staff in the early 1950s.[48] While women may have been able to enter the industrial labour market in greater numbers, barriers remained. A former employee recalled that 'the majority of the people there' in the late 1950s and 1960s 'were men, on the actual factory floor. They didn't like women working shifts in those days. They didn't like women working nights.'[49] Prejudices were illustrated in 1958, when BNS managers told the local branch of the Transport and General Workers' Union that they intended to react to a fall in sales by deactivating some production areas, with reductions to hours worked only applying to women. The branch responded by passing a motion proposing that union policy on employment security be extended to 'single women, widows and married women with proven family responsibilities'.[50] However, wider opinion on the shop floor was strongly opposed, and complaints were made that the meeting at which this motion had been passed

was unconstitutional due to a lack of notice. The complaint was upheld by branch officials and the motion was struck out. A new motion was passed instead, proposing that if hours needed to be reduced, management should immediately dismiss married women whose husbands worked before considering reductions elsewhere.[51] Fortunately for female employees, management refused with this episode mirroring difficulties faced by women throughout the UK's manufacturing sector.[52]

While BNS was headquartered in Pontypool, it was still a branch factory in that ownership and control lay elsewhere with the London-based boards of Courtaulds and ICI. By the mid-1960s, worsening relationships between the two firms caused Courtaulds to sell its holdings; BNS was renamed as ICI Fibres in 1965. The business was profitable and its future seemed assured. A further 750 jobs were created in the same year while the plant was strengthened further by its production of a new geotextile called 'Terram', developed in-house at its research and development facility.[53] However, these developments marked the high-water mark of the factory, which now entered a decline even more dramatic than its rise.

Decline was caused by changes within the synthetic fibres market. Throughout much of the 1950s and 1960s, BNS had a monopoly position of the UK's production of Nylon and was protected from overseas competition by import tariffs. Despite this seemingly secure position ICI Fibres encountered difficulties from the late 1960s. First, its patents expired, enabling competitors, ironically including Courtaulds, to enter the market. Second, the UK's accession to the European Economic Community (EEC) in 1974 saw the gradual removal of tariffs within the EEC.[54] Finally, overseas competitors such as those from South Korea were increasingly active. The impact on the UK's synthetic textiles industry was devastating. While production of synthetic fibres in the UK grew throughout the 1950s and 1960s, output

in the 1970s fell sharply and ICI Fibres became heavily loss-making. Overall, employment in the UK's synthetic textiles industry collapsed by 77 per cent between 1975 and 1985, although new technology meant that productivity more than doubled.[55]

Employment at ICI Fibres' Pontypool plant followed a similar trajectory. Job losses were constant throughout the 1970s and even where investment took place, it focused on productivity. For example, an investment programme and the loss of 600 jobs were announced simultaneously in 1972, with staff pointing out that that 'very few jobs' would be created by the investment as new processes were 'highly capital intensive at the expense of labour'.[56] A former employee remarked that many redundancies were linked to 'automation. The shop floor got computerised and so it didn't need the extra person in the office looking after the books, or sample taking.'[57] Throughout the decade, the factory was gradually denuded of staffing and expertise with, for example, research and development being moved to Yorkshire in 1972. In 1977, *The Economist* noted that ICI Fibres had 'trimmed' almost a third of its workforce over the past two years while heavy financial losses were continuing.[58] Employees at Pontypool were by now expressing 'deep concern' as to job security and the future of the plant,[59] an understandable reaction given that employment in the factory had dropped by 65 per cent from its 1966 peak. The plant continued to shed jobs at an alarming rate, with 450 being lost in 1979, 260 in 1980 and 350 in 1981.[60] Symbolically but inevitably, the factory's famous social club was sold in 1983 and later demolished.

Difficulties continued after 1985 with, for example, company records from 1993 noting that the 'fibres business is suffering from very difficult trading conditions'.[61] Productivity gains continued, but competing with companies based in locations with far cheaper operating costs remained difficult. In 1992, Du Pont, the original inventor of Nylon,

acquired ICI Fibres's Nylon business and closed the Pontypool plant's production lines in the following year with the loss of 400 jobs, stating that 'despite the Pontypool Nylon Plant's impressive record of continuous improvement in quality and production […] production can no longer be justified'. The immediate cause of closure was excess capacity within Du Pont, with Pontypool being vulnerable as its capacity was less than half that of the company's main European plant in Germany.[62] The latter was more able to exploit economies of scale while the UK's increasingly lax employment legislation meant that it was easier for Du Pont to carry out redundancies in Pontypool than at factories elsewhere in Europe. After the end of Nylon production, some 180 employees remained at the Pontypool complex. Most produced polyester for Du Pont with the remainder producing Terram for an eponymous company. However, another takeover, this time by the Turkish company Sabanchi, led to all activity ceasing after 2000. By this time the huge complex was mostly deserted, acting a monument to industrial decline only forty years after its construction as a symbol of the new industry designed to secure the region's employment base.

4: ENFIELD CABLES/DUNLOP SEMTEX, BRYNMAWR

In 1945 Brynmawr was a small town of perhaps 6,000 inhabitants situated at a height of some 1,500 feet (457 metres), at the point where the uplands of the Brecon Beacons met the south Wales valleys. In common with its neighbours, the town was built to service the coal industry and became infamous during the inter-war period for its high unemployment, with 74 per cent of insured males being unemployed in 1934.[63] Some relief efforts were made by the Society of Friends, whose organisation of outdoor public works and development of small scale industries manufacturing tweed, boots and furniture created a limited number of jobs, known as the 'Brynmawr experiment'.[64] While these pre-war attempts to create

employment created few jobs and could not solve the town's economic problems, they were to combine with central government's aim of increasing regional prosperity to create a bold attempt to inject large-scale manufacturing into the area: the Brynmawr rubber factory.

In May 1945 the Managing Director of London-based Enfield Cables announced at a meeting with the BoT in Cardiff that his company wanted to develop a rubber products factory in Brynmawr to 'alleviate the anticipated unemployment in the area'.[65] This was very unusual in that companies did not normally choose to locate in such areas, with the entire apparatus of regional policy having to be deployed to force them to do. The reason behind Enfield Cables' keenness to locate in Brynmawr relate to its director, Lord James Forrester. He had spent time in Brynmawr in the early 1930s as part of the 'Brynmawr experiment' and was a member of the Industrial Welfare Society, formed to encourage industrialists to improve working conditions. He became the director of Enfield Cables in 1939 and had little contact with Brynmawr throughout the war, but his idealism had been fired and he was determined to return. By 1945 his commercial experience combined with his interest in welfare, architecture and Brynmawr to enable an idea to germinate. He was to locate a factory in the town, but commercial considerations were secondary. The factory would instead repair Brynmawr's social fabric by creating 1,000 jobs in a building that Lord Forrester intended to be an 'outstanding factory in an out-of-the way place'.[66]

No ordinary brick factory would suffice and Lord Forrester hired an untested team of young architects with engineering support provided by Ove Arup, founder of the eponymous engineering consultancy. Unusually for factory construction at the time, engineering and architecture fused during the design process to create a distinctive building of some 275,000 sq. ft. (25,458 sq. m.) that was characterised by clean lines. For example, its nine large

concrete domes pierced with circular windows created a spacious and bright working environment. Individual touches abounded, ranging from canteen facilities that were not grade-divided, to an unusual spiral staircase that accessed the boiler house. The staircase lacked a stabilising pillar, normally a vital structural component. It had been designed after Lord Forrester had seen a staircase in Switzerland apparently constructed without a pillar. He described it to Ove Arup who produced a design as instructed, although Lord Forrester later realised that the original staircase had, unsurprisingly, a stabilising pillar.[67] The company's philanthropic ideals and its pride in the new factory were apparent in 1949 when it organised a one-day tour for London-based industrialists. They were invited 'to study the establishment of new industry in a Development Area [...] to show something of what one industrial concern, coming from the more prosperous areas of Britain, is trying to do towards the rehabilitation of this forgotten corner of Wales'.[68]

While the press were delighted, with the *Architectural Review* noting that Enfield and the WMIE had created 'not only a good factory but an idea for a factory',[69] and a model of the factory was exhibited at the Festival of Britain in 1951, its construction exposed the shortcomings of Lord Forrester's idealistic approach. The WMIE's records are a litany of annoyance at the project's cost and complexity, noting in 1948 that 'this scheme is becoming more of a nightmare every day!' and bemoaning the 'incredible happenings'.[70] One such 'happening' was Lord Forrester's attempts to have the east elevation constructed from expensive glass bricks for what the WMIE diplomatically described as 'psychological and artistic reasons.'[71] He was eventually persuaded to accept large expanses of normal glazing, with a BoT official wearily arguing that 'windows are probably essential, but does he need such large windows?'[72] Enfield was given a long lease on the factory, whose cost was initially estimated as £455,000 but had doubled to £800,000 by the time of its completion,

some three times the normal cost for a factory of its size.[73] The WMIE described this excess cost as 'social expenditure',[74] acceptable given central government's policy of using all measures to push manufacturing industries to locations where more jobs were most needed.

The factory opened in 1951 with 428 staff, 40 per cent of whom were female,[75] reflecting how the post-war influx of manufacturing created opportunities for women in an area where opportunities had been limited before the war. However, if the gap between what the BoT wryly described as Lord Forrester's 'fertile imagination'[76] and commercial reality was apparent during the construction process, it was even more obvious once the factory opened in autumn of 1951. It had been designed and equipped to produce rubber goods, but orders were in short supply. Philanthropic ideals had obscured commercial reality to the extent that the management of Enfield Cables had given little consideration as to what the factory was going to produce. The BoT noted retrospectively in 1952 that there was 'little evidence that the firm themselves had any clear ideas, apart from a general desire to produce rubber articles'.[77] The factory's chief production officer later remarked that 'no one knew anything about plastics and rubber, they didn't intend to make money [...] you had to use manpower – even if you designed a machine, it wasn't used'.[78] After a few months of operation, the factory's precarious finances were causing deep concern within the plant's parent company. While Lord Forrester was assiduously using his contact book to find work for the factory, financial losses could not be sustained by Enfield Cables. Its Board of Directors voted to cease subsidising its Brynmawr operation in May 1952, less than a year after production commenced.

However, having spent so much money on what the BoT recognised as a 'symbol of the Development Area policy',[79] the government was determined to find an alternative tenant.

Discreet approaches were made to several firms before Dunlop Rubber Company's Semtex Division purchased the lease, with a relieved BoT noting that the new tenants were 'determined to go to town in a big way [...] we can all feel a good deal happier about the ultimate use of the factory than we did under its previous ownership'.[80] Dunlop Rubber Company specialized in tyre manufacture and it was firmly established as one of the UK's leading multinational companies. The factory's role now changed from a grand experiment in industrial welfare to a normal branch factory operation. While Enfield Cables had struggled to produce marketable goods, Dunlop was initially to have no such difficulties. The factory specialised in producing vinyl and rubber floor coverings (one of which was named Semtex), with demand created by the post-war expansion of the welfare state and new schools, hospitals and universities. Dunlop's Brynmawr factory expanded after 1957 and employment grew to 860. By 1964 demand for flooring products was 'booming',[81] spurring Dunlop to purchase the factory from the WMIE. The company funded and constructed an extension to the plant, and well over 1,000 people were employed on site by the mid-1960s.

Despite optimism, expansion coincided with a change in fortunes from the mid-1960s. New machinery enabled hard-wearing carpets to be produced, often overseas, at a cost equivalent to vinyl flooring. Buyers increasingly chose these warmer carpets over the somewhat utilitarian vinyl or rubber alternatives. The factory attempted to diversify, producing carpet underlay and patterned 'vinlay' floor tiles, but the decline in its main market proved impossible to offset and the plant was loss making by the late 1970s. At the same time, its parent company was imperilled by the near-collapse of car manufacturing in the UK and the inefficiency of its tyre plants relative to overseas competitors. As a result, the once mighty Dunlop Rubber Company was struggling to survive as its UK employment fell from 43,000 people in 1978 to 22,000 by the early 1980s.[82]

Dunlop's urgent need to stem losses throughout its operations coincided with depressed trading conditions, and 430 redundancies were announced at Brynmawr in 1980. In late 1981, a further round of redundancies was announced, followed by an industrial dispute accompanied by workforce demands for the job losses to be withdrawn. The dispute developed into a six-week occupation of the factory in December 1981 and January 1982, enlivened on Christmas Day by what the *Western Mail* described as 'dozens of Santa Clauses in civvies' bearing 'gifts of food and bottles of Christmas spirit' for the workers in occupation.[83] However, Christmas spirit was in short supply within Dunlop's central management, who noted in early January that the plant was losing £60,000 of turnover a day and that the remaining staff should not 'wait forever to make up their mind' about returning to work.[84] Within days, the management had lost patience and closed the plant with the loss of 600 jobs, arguing that 'recent events have undermined the whole basis of its Brynmawr operation and that [there was] no alternative but to close it completely'.[85] In reality, while the plant may have been able to continue, large-scale investment would have been needed to ensure competitiveness against overseas producers. In the end, the factory was overwhelmed by the urgent need of the parent company to immediately staunch losses to remain solvent.

Although the factory's unique architecture (see Plate 2) gifted it a strange and prolonged afterlife, being Grade 2* listed in 1986, finding viable alternative uses for such a large and distinct building proved impossible. The empty factory was eventually demolished after much controversy and its site is now occupied by a supermarket although the boiler house remains, albeit in a state of advanced dereliction.

Plate 2: Enfield Cables/ Dunlop Semtex, Brynmawr, production area after the plant's closure.

Source: © Crown copyright: Royal Commission on the Ancient and Historical Monuments of Wales

5: CONCLUSION

While the trajectories of BNS/ ICI Fibres and Dunlop Semtex have their unique elements, they illustrate trends that characterised the rise and fall of manufacturing in south Wales throughout the post-war era. First, they provided large volumes of relatively well-paid employment, including new opportunities for women to join the waged workforce. Second, the role of government was crucial. Even in the case of the Brynmawr factory whose initial owner, Enfield Cables, was unusually keen to locate in one of the most economically underperforming areas of south Wales, the government played an important role.

Construction costs for the Brynmawr factory to be leased by Enfield Cables were met by central government's WMIE, while the BoT played a key role in attracting Dunlop to purchase the lease after Enfield's failure. State intervention is also apparent with BNS as regional policy instruments forced them to invest in a Development Area, while their factory was also built by the WMIE. The extent to which the trauma of the 1930s was still a recent memory meant that the cost to the state of building factories was little questioned by contemporaries, given the scale of the employment benefits obtained by the local workforce. Third, both factories reflect the extent to which the industrial economy of south Wales was integrated into that of the UK. Ownership and ultimate control rested outside of Wales, as did the economic determinants of their rise and decline. Finally, their presence was short-lived. Enfield Cables/Dunlop Semtex only lasted some thirty years and although BNS/ICI Fibres reached its 50th anniversary in 1996, it was a fraction of its former size, with the decline of both factories mirroring broader trends of deindustrialisation in south Wales and the UK.

The determination of post-war central governments to restructure the industrial economy of south Wales was executed successfully, but only over the short-term. State intervention helped to offset the impact of declining employment within the coal industry, but a relative over-dependence on coal was replaced with a similar emphasis on manufacturing branch plants. While this did not matter when the UK's manufacturing sector was growing, its presence in south Wales was overwhelmed by rapid deindustrialisation from the 1960s, even if the sector did not disappear as did the deep coal mining industry.

Given the short-lived nature of some manufacturing plants, it is tempting to conclude that the policy was mistaken and that governments should have instead attempted to build up indigenous momentum. However, the reality is more nuanced. Historic over-dependence on

the coal industry, limited levels of commercial entrepreneurship and the rapid rundown of wartime industries combined to create a requirement for large numbers of jobs to be created quickly. The only realistic source of such jobs was manufacturing attracted from elsewhere. If central government had focussed instead on indigenous development, then the full employment of the 1950s and 1960s would almost certainly not have happened. Creating greater volumes of home-grown business through state action was, and remains, very difficult. Finally, deindustrialisation was on a scale that few observers predicted, as demonstrated by the investment plans pursued by both BNS and Dunlop Semtex in the mid-1960s.

While regional policy was effective over the short-term, it did little to secure a long-term economic base for south Wales. In many respects, it simply swapped one type of dependence on externally-focused economic investment for another, perpetuating the inability of the economy to renew itself without large-scale assistance. The cycle of ebbing and flowing waves of external investment that had long characterised the economy of south Wales continued in the 1970s and beyond, eventually leading to dislocation and disappointment.

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[1] 'Central Government' in this chapter refers to the UK-wide government based in London.

[2] Graham Humphreys, *Industrial Britain – South Wales* (Newton Abbott: David and Charles, 1973), p. 64.

[3] For contemporary studies of manufacturing, see Humphreys, *Industrial Britain – South Wales* and Brinley Thomas (ed), *The Welsh Economy: Studies in Expansion,* (Cardiff: University of Wales Press, 1962)

[4] John Williams, *Digest of Welsh Historical Statistics, Volume 1* (Cardiff: Welsh Office, 1985), pp 17, 20.

[5] Williams, *Digest of Welsh Historical Statistics, Volume 1*, pp. 113, 115.

[6] Fully consistent sectoral labour market time series data are not available at sub-Wales level. Graphed data are not strictly comparable over time given methodological variation. They are primarily derived from: **1939**, D. A. Thomas, 'War and the Economy: The South Wales Experience', in Colin Baber and L. J. Williams (eds), *Modern South Wales: Essays in Economic History* (Cardiff: University of Wales Press, 1986), pp. 251–77 (pp. 270–1); **1950, 1960**, Humphreys, *Industrial Britain – South Wales*, p. 44; **1973**, Welsh Office, *Welsh Economic Trends No. 2*, 1975 (Cardiff: Welsh Office, 1975), p. 14; **1981**, Welsh Office, *Welsh Economic Trends No. 10*, 1986 (Cardiff: Welsh Office, 1986), p. 19; **1991**, Welsh Office, *Welsh Economic Trends No. 16*, 1995 (Cardiff: Welsh Office, 1995), pp. 104, 106, 108, 109; **2001**, STATS WALES [online] https://statswales.gov.wales/Catalogue [accessed on 23 April 2017].

[7] Thomas, 'War and the Economy', p. 271. Carmarthenshire included in these data; Humphreys, *Industrial Britain – South Wales*, p. 44.

[8] Thomas, *The Welsh Economy*, p. 31.

[9] *Wales and Monmouthshire, Report of Government Action for the Year Ended 30th June 1949* (Cmd. 7820) (London: HMSO, 1949), p. 17.

[10] Williams, *Digest of Welsh Historical Statistics, Volume 1*, p. 308.

[11] Development Corporation of Wales, *Wales: Land of Industrial Opportunity* (Cardiff: Development Corporation of Wales, 1962), p. 5.

[12] Humphreys, *Industrial Britain – South Wales*, pp. 131, 133.

[13] *Welsh Economic Trends No. 2*, 1975 (Cardiff: Welsh Office, 1975), p. 36.

[14] Department of Employment and Productivity, *New Earnings Survey, 1968*, (London: HMSO, 1968), pp. 42, 44, 100.

[15] The National Archives (hereafter TNA), BT 64/3129, *Note by Board of Trade*, 3 August, 1943.

[16] Thomas, *The Welsh Economy*, p. 42.

[17] John Davies, 'Wales in the Nineteen Sixties', *Llafur: The Journal of the Society for the Study of Welsh Labour History*, 4/4 (1987), 79.

[18] Glyn Davies and Ian Thomas, *Overseas Investment in Wales: The Welcome Invasion* (Swansea: C. Davies, 1976), pp. 10, 21, 23.

[19] Davies and Thomas, *Overseas Investment*, pp. 11, 53; Martin Johnes, 'M4 to Wales – and Prosper! The history of a Motorway', *Historical Research*, 87/237 (2014), 556-73 (561).

[20] Commission on the Constitution, *Research Paper 8, Survey of the Welsh Economy* (London: HMSO, 1975), p. 56.

[21] Joe England, *The Wales TUC: Devolution and Industrial Politics* (Cardiff: University of Wales Press, 2004), p. 83.

[22] *Hansard, HC Deb 09 April 1946, Vol.421 c.1808.*

[23] *The Official Opening of the Hoover Factory at Pentrebach, Merthyr Tydfil*, 12 October 1948 (Hoover, 1948), pp. 41, 56, 58.

[24] Paul Balchin, *Regional Policy in Britain – the North South Divide* (London: Chapman, 1987), p. 67.

[25] Geoffrey Percival, *The Government's Industrial Estates in Wales 1936–1975* (Treforest: WDA, 1978), p. 55.

[26] Percival, *The Government's Industrial Estates in Wales*, Appendix.

[27] *Statement on the Distribution of Industry in Relation to Development Areas* (Cmd. 7540) (London: HMSO, 1948), Appendix 8.

[28] *Wales and Monmouthshire, Report of Government Action for the Year Ended 30th June 1948* (Cmd. 7532) (London: HMSO, 1948), p. 17.

[29] An administratively devolved department of central government responsible for some aspects of government activity in Wales. Based in Cardiff and headed by a cabinet-level Secretary of State for Wales, its initial responsibilities were modest but gradually expanded over time.

[30] Leon Gooberman and Trevor Boyns, 'The Welsh Development Agency: activities and impact, 1976 to 2006', in Louise Miskell and Steven Gray (eds) *New Perspectives on Welsh Industrial History* (Cardiff: University of Wales Press, 2019).

[31] Gooberman and Boyns, 'The Welsh Development Agency'.

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[33] D. C. Coleman, *Courtaulds, An Economic and Social History, Vol III, Crisis and Change, 1940–1965* (Oxford: Clarendon Press, 1980), p. 78.

[34] Arthur Elliot, *History of British Nylon Spinners* (Abertillery: Old Bakehouse Publications, 2010), p. 8.

[35] TNA, HLG 79/1488, *BoT Note*, 10 April 1945.

[36] Monmouthshire County Council, *Industrial Monmouthshire: Official County Guide, 4th edition (London: Monmouthshire County Council*, n.d. [after 1952 and before 1955]), p. 34.

[37] Elliot, *History of British Nylon Spinners*, p. 15.

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[39] Richard Shaw and Paul Simpson, 'Synthetic Fibres' in Peter Johnson (ed) *The Structure of British Industry*, (London: Unwin Hyman, 1988), pp. 119–39 (120).

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[41] D. C. Coleman, *Courtaulds, An Economic and Social History,* pp. 79, 179.

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[43] *Government Action, 1949* (Cmd. 7820) (London: HMSO, 1949), p. 18

[44] Elliot, *History of British Nylon Spinners*, p. 102.

[45] Elliot, *History of British Nylon Spinners*, p. 120.

[46] *The Pontypool Site, 1948–1998, The First Fifty Years*, (Pontypool: Du Pont, 1998), p. 11.

[47] Consistent time-series not available. These derived from; **1948, 1950**, TNA, HLG 79/1488, *BoT Note* (undated); **1956**, Elliot, *History of British Nylon Spinners,* p. 33. **1964, 1965**, *Pontypool Site, The First Fifty Years*, pp, 9, 12. **1966**, Welsh Office, *Wales*, 1966 (Cardiff: Welsh Office, 1966), p. 14; **1968**, *The Times*, 1 March 1968; **1972**, following redundancies referenced in *Hansard*, 27 July 1971 and *The Times*, 7 November 1972, **1975**, The Times, 10 March 1975; **1983**, Gwent Archives (hereafter GA), D4211/2/2, Weekly Staff Numbers; **1993**, GA, D4211/2/4, Weekly Staff Numbers, **2000**, Following earlier closure of Nylon production with loss of 400 jobs.

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[52] Sara Boston, *Women Workers and the Trade Unions* (London: Lawrence and Wishart, 2015), pp. 246–65.

[53] *Pontypool Site, The First Fifty Years*, p. 12.

[54] Shaw and Simpson, 'Synthetic Fibres', p. 123.

[55] Shaw and Simpson, 'Synthetic Fibres', pp. 134–5.

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[57] Women's Archive Wales, 'Voices from the Factory Floor', Interview with Audrey Grey, 22 April 2014, p. 14. [online] http://www.factorywomensvoices.wales/uploads/VSE050.2.pdf [accessed on 5 September 2016].

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[62] GA, D4211.5.3, *Closure of Nylon Operations*, *Pontypool.* October 1993.

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[69] *The Architectural Review,* 'Brynmawr', May 1952.

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[72] TNA, 177/1138, Letter from BoT to WMIE 30 August 1949.

[73] Perry, *Built for a Better Future*, pp. 47–8; TNA, BT 177/1133. *BoT Internal Memorandum*, 20 May 1952.

[74] TNA, BT 177/1133. *BoT Internal Memorandum*, 20 May 1952.

[75] TNA, BT 177/1133. *BoT Note*, 20 May 1952.

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[77] TNA, BT 177/1133. *BoT Internal Memorandum*, 15 May 1952.

[78] Perry, *Built for a Better Future*, p. 56.

[79] TNA, BT 177/1133. *BoT Internal Memorandum*, 20 May 1952.

[80] TNA, BT 177/1133. *Letter from WMIE to BoT*, 26 February 1955.

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[84] *Western Mail,* 'Dunlop Hold Sit-In Talks', 5 January 1981.

[85] *Hansard, HC Deb 28 January 1982 vol 16 c402W.*