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**SWP 33/88 MANUFACTURING CLOSURES IN WALES,
1980 - 1984:
A ROUTE TO NEW FIRM FORMATION**

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MANUFACTURING CLOSURES IN WALES, 1980-1984: A ROUTE TO NEW FIRM FORMATION

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The influence of the 'push' factor of employment loss through manufacturing establishment closure on the new firm formation process is explored. Notably, plant-related variable such as size, age, sector, corporate status and ownership type are discussed. Both macro and micro analyses produce results which indicate that establishment closure and employment loss are a major local factor influencing local labour market conditions. Closure is seen as both a 'supply' and a 'demand' factor and any description of an environment must place major emphasis on this variable. The new firm survey results also indicate that a considerable number of founders were 'pushed' into entrepreneurship and the characteristics of the founder's previous employer prior to start-up did have an influence on the formation process and the characteristics of the established new firms.

THE HYPOTHESISED RELATIONSHIP BETWEEN CLOSURE AND NEW FIRM FORMATION

It has recently been argued that the recession of the early 1980s has caused some new businesses to be established which would not have otherwise have done so; their founders have in effect been pushed into business. This paper will explore the influence of the 'push' factor of employment loss through establishment closure on the new firm formation process in Wales. Moreover, the emphasis in this paper will be on plant-related variables (notably, size, age, sector, corporate status and ownership type) and little attention is paid to the establishment's wider environment (for example, labour market characteristics, land availability and accessibility to suppliers and markets). From the first it must be acknowledged that the relationship between closure and new firm formation is likely to be complicated. The closure of individual establishments will result in varying numbers of employees being made redundant, both directly and indirectly, downstream in supply industries. The overall loss of employment will probably affect other aspects of manufacturing industry. Storey and Jones (1987) found a major local factor influencing the rate of new firm formation in Northern England was the rate at which jobs were shed in that locality and the sectors recording higher rates of firm formation appeared to be related to those in which job shedding was high irrespective of the profitability of the sectors.

It can therefore be argued that a factor influencing the likelihood of an individual becoming the founder of a new firm is the availability or otherwise of work locally. It could be expected that those labour markets where major establishment closures and job losses have taken place will have increased numbers of new businesses simply because the supply of potential founders is high. Therefore, a number of businesses could be termed 'formations of the last resort' - not formed from optimism but because of the actual or threatened closure of other avenues of employment. These formations are likely to dominate in an economic recession, where unemployment may have the propensity to 'push' people to start up a business for themselves and when redundancy pay and the availability of cheap secondhand premises and plant (released by defunct businesses) provide the means by which they may do so (Harrison and Hart, 1983, p.1396). This simplistic relation is of course capable of greater elaboration; Cross (1981) specifies a wider range of possible relationships as do Storey and Jones (1987) which in part stimulate the direction of this paper.

An analysis is presented here of manufacturing establishment closures in a comparatively large and important part of the UK, namely Wales. On numerous counts, the magnitude of industrial recession in Wales during the 1980s has been massive. The primary contributor to employment change in Wales during this period has been job loss through establishment closure. Any description of the environment of a local labour market area (LLMA - the area within which the working population habitually seeks employment and where local employers recruit most of their labour) must place major emphasis on this variable. In this paper, Revised (1978) Travel-to-Work Areas (TTWAs) are regarded as reasonable LLMAs. Table 1 shows that 103,574 manufacturing redundancies were reported in Wales over the 1980-1984 period, and 70% of these could be claimed to have occurred through the closure of manufacturing establishments (Factory Inspectorate (1985)). Therefore, the analysis of establishment closures can be claimed to be a major 'component of change' which requires detailed investigation with regard to its potential impact on the new firm founders and 'ecological incubator' environments. The closure of a plant often appears final, and the prospect of re-employment low (Watts and Stafford, 1986, p.206). Rundown of employment, on the other hand, may still hold out the prospect of re-employment and thus reduce the stimulus to set up a business.

Manufacturing establishment closure and employment loss do not appear to be due solely to our accession to the EEC, nor to the consequent weakening of Commonwealth trading links, our peripheral spatial position within the EEC and a decline in world trade. A major reason for the laying-off of labour since 1980 has certainly been a result of financial circumstances and the particular balance of Conservative government policy (Townsend, 1983, p.21). Fothergill and Gudgin (1983, p.144-45) and Worwick (1984, p.225-26) have argued that there a number of contemporary factors leading to the recession in Great Britain in the late 1970s and early 1980s. First, there have been sudden problems to do with changing market environments. Second, problems to do with the dynamic of British manufacturing in general. Inability to cope with both these sets of problems gave rise to a major withdrawal of capital from manufacturing in Britain. Also, the recent debate about the 'Thatcher effect' points to the impact of ending exchange controls since 1980 which has led to new attractiveness of investment in bonds, currency dealing, etc. Low rates of return in British manufacturing in favour of producer services, importing, etc.

Previous studies of establishment closures have explored aspects of significance with regard to plant size, age of plant, industrial structure, organisational type and the influence of ownership type on establishment closure. Moreover, previous research has indicated that failure is rarely related to location directly, but failure does have locational implications. It has been found that the forms of establishment closures vary and it is important to recognise that high mortality rates do not mean a disadvantaged location unless there is additional evidence to prove so. Also, employment loss at the local level by establishment closure does not occur in isolation. It may be the response to a wide range of circumstances, and is often caused by factors not directly connected with the local area or even the immediate region (Cross, 1981, p.128). Moreover, employment decline is not necessarily associated with output decline (Massey and Meegan, 1982, p.18). The processes at work which influence the closure of establishments have direct spatial results through the forces that brought them about are invariably aspatial. Closures make a significant impact on employment change, and establishment closure may influence the number, type and quality of new firms and new firm founders. For example, if 'push' factors appear to be the most important founding motivation, the implication may be drawn that these individuals who do set up on their own might be somewhat reluctant ones, forced into self-employment as the

lesser of two evils, and possibly less dynamic and, in the widest sense of the word, less entrepreneurial. If so, one may expect their failure rates to be higher than those for those cases in which 'pull' factors dominate, this having implications for the attainment of self-sustaining regional economic growth (Harrison and Hart, 1983, p.1409).

DATA SOURCES USED

In the analysis described below data on manufacturing establishment closures in Wales was supplied from the deletions records of the Factory Inspectorate of the Health and Safety Executive (FI) for Wales (but a change of ownership is not regarded as a closure). The FI data does have a number of advantages as well as a number of disadvantages for the study of closures (see Hamilton (1983; 1984, p.58-63) and Beesley and Hamilton (1984, p.218-20). The data supplied by the FI included the name and full address, industrial classification (Minimum List Heading of the 1968 Standard Industrial Classification), date of first inspection (month and year), date of last inspection (month and year) and last recorded employment at each establishment. The ownership type and corporate status of establishments were identified by detailed checking through Who Owns Whom and Companies House Register of Limited Companies. Although every effort was made to categorise establishments thoroughly, the decision to classify businesses as Welsh and independent in the absence of contrary evidence may have lead to missclassification, especially of the smallest businesses, but not on a serious scale. In the present study, the establishment closure data were aggregated into forty TTWAs for Wales. The final step in the construction of the data base involved identifying suitable denominators to allow closure rates to be calculated. Regrettably, the FI registers did not yield the stock of all registered premises in Wales in 1979 and so the above requirements were met by data produced by the Business Statistics Office's (BSO) Business Monitor (1979) and the Welsh Office's Industry Department and the publication Welsh Economic Trends (1983).

RESULTS OF AN ANALYSIS OF FACTORY INSPECTORATE CLOSURE DATA FOR WALES, 1980-1984

(I) Number of Closures and Employment Loss

Job loss due to manufacturing establishment closures in Wales totalled 72,698 between 1980 and 1984 in 2,010 establishments. The temporal variations in the number of closures and employment loss is indicated in Figures 1 and 2. When total employment loss due to closure is expressed as a percentage of 1979 manufacturing employment - 302,298 (BSO, Business Monitor, PA 1003, 1979) - it represents 24% of base year employment. This is markedly higher than those percentages recorded in most previous studies (Table 2). Consequently, establishment closure is a serious occurrence which justifies a detailed investigation with regard to its impact on the new firm formation process. In part the severity of the problem in Wales can be explained by the time scale of the analysis covering the worst recession in the UK since the 1930's.

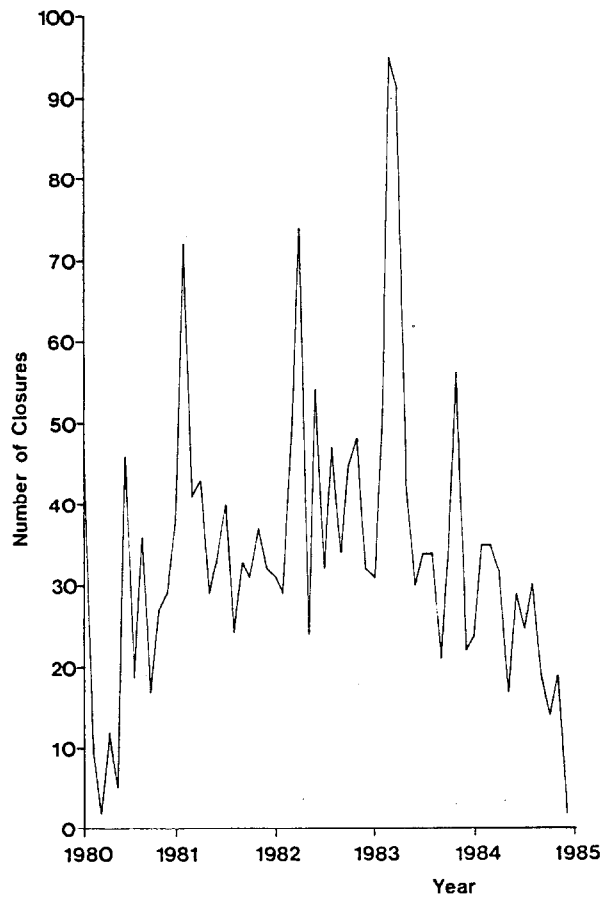
(II) The Size Structure of Closures

Previous research has shown that small establishments regardless of industry are presumed to be the most vulnerable to closure. To investigate the hypothesis that closure is negatively related to establishment size eight employment size groups are used. Figure 3 indeed shows that establishments under 11 employees in size account for 62.02% of all establishment closures. Also, Figure 3 indicates for Wales, that the number of closures falls continuously as establishment size increases. However, Figure 4 shows that employment loss in establishments sized under 100 employees accounts for 23,771 jobs lost (32.70%), in medium sized establishments (100 to 499 employees) 25,528 jobs were lost (32.36%) and in large establishments (500 or more employees) 25,399 jobs were lost (39.94%). Moreover, the twenty-three largest establishments (500 employees or more) had a larger numerical impact on employment loss than 1,510 small establishments (less than 20 employees) which recorded only 8,281 job losses (11.39%).

(III) Age of Establishment Closure

Figure 1

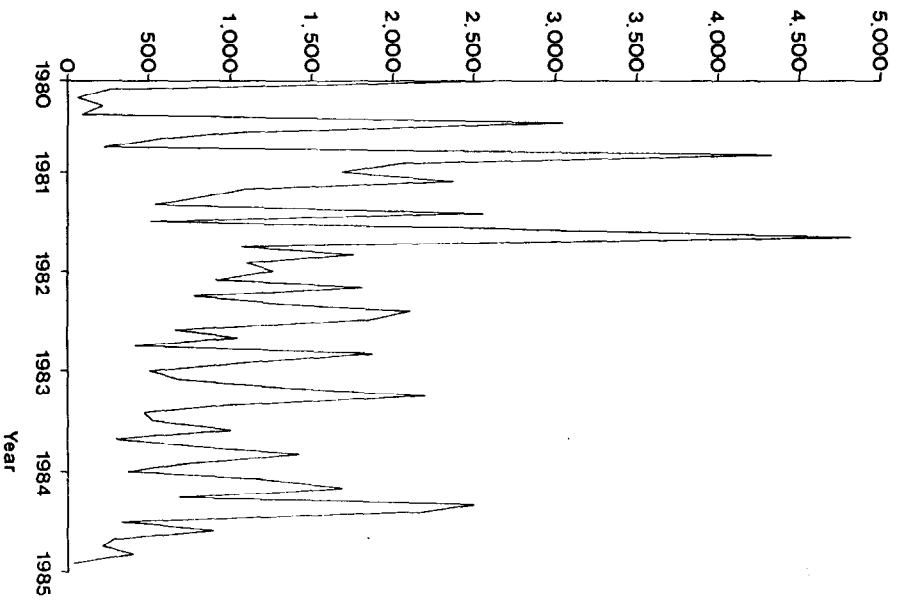
NUMBER OF MANUFACTURING ESTABLISHMENT CLOSURES IN WALES, 1980-1984



Source: F I (1984)

Figure 2

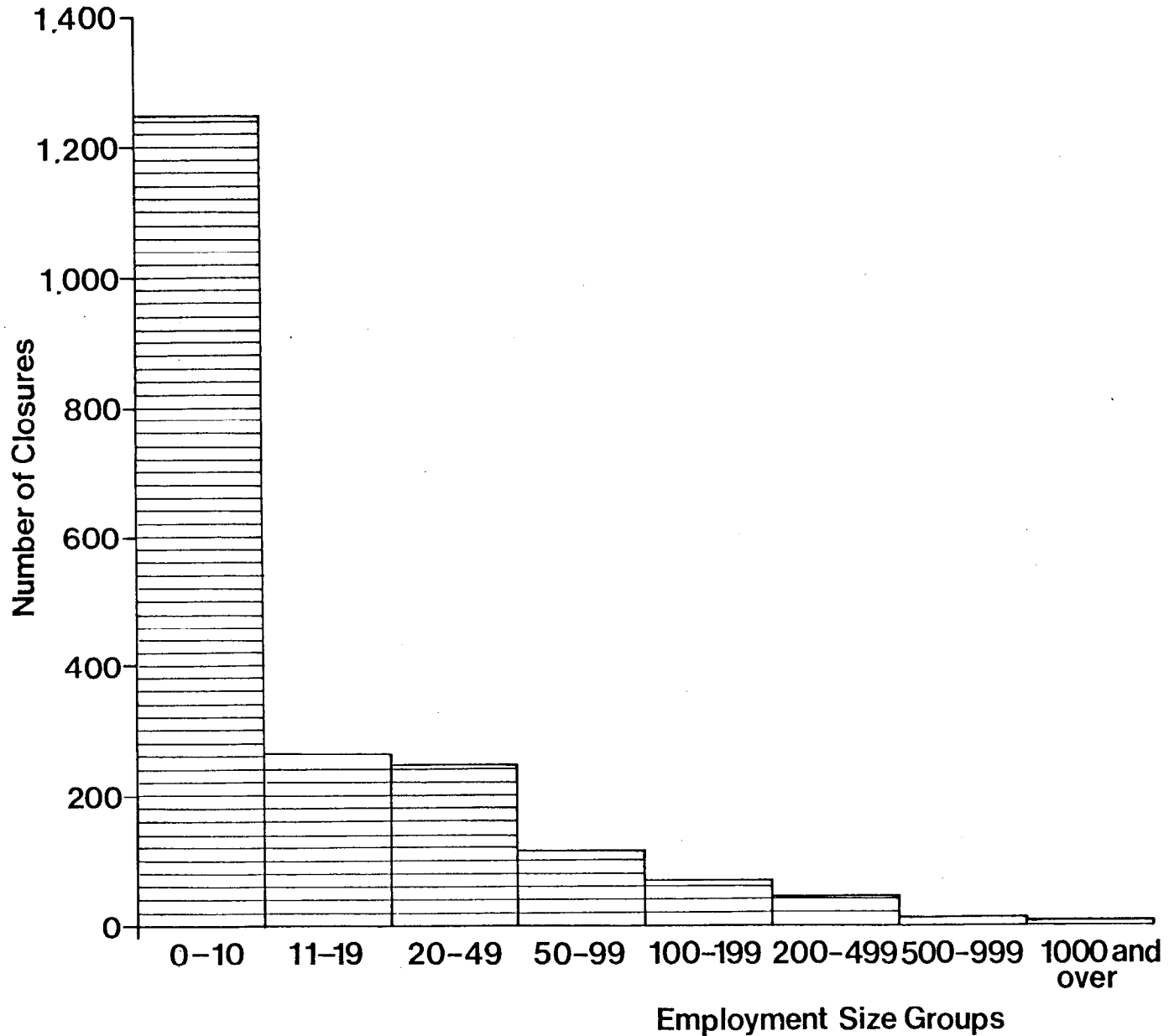
**EMPLOYMENT LOSS IN MANUFACTURING ESTABLISHMENT CLOSURES
IN WALES, 1980-1984**



Source: F I (1984)

Figure 3

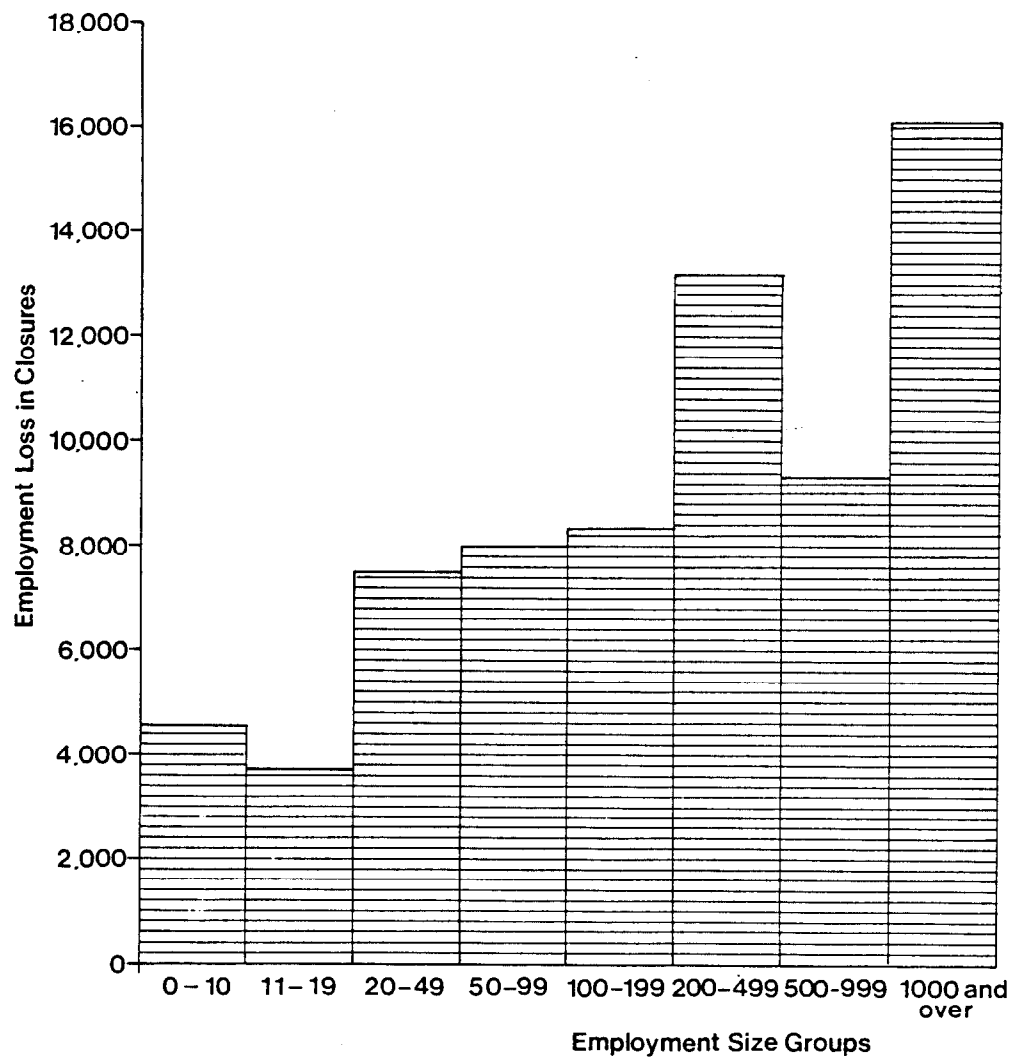
NUMBER OF MANUFACTURING ESTABLISHMENT CLOSURES IN WALES, 1980-1984: EMPLOYMENT SIZE DISTRIBUTION



Source: F I (1984)

Figure 4

EMPLOYMENT LOSS IN MANUFACTURING ESTABLISHMENT CLOSURES IN WALES, 1980-1984: EMPLOYMENT SIZE DISTRIBUTION



Source: F I (1984)

Figure 5 indicates that 66.87% of all establishment closures were in establishments which had operated for less than seven years. After the sixth year the number of establishment closures fell dramatically. In the present study, the peak year for the number of establishment closures was the sixth year of operation when 300 closed, whilst the cohort producing the highest total jobs lost (12,777: 17.58%) was in the fifth year of operation (Figure 6). This may be compared with O'Farrell and Crouchley's (1983, p.419) finding of a fall in closure probabilities after four years in their Irish sample.

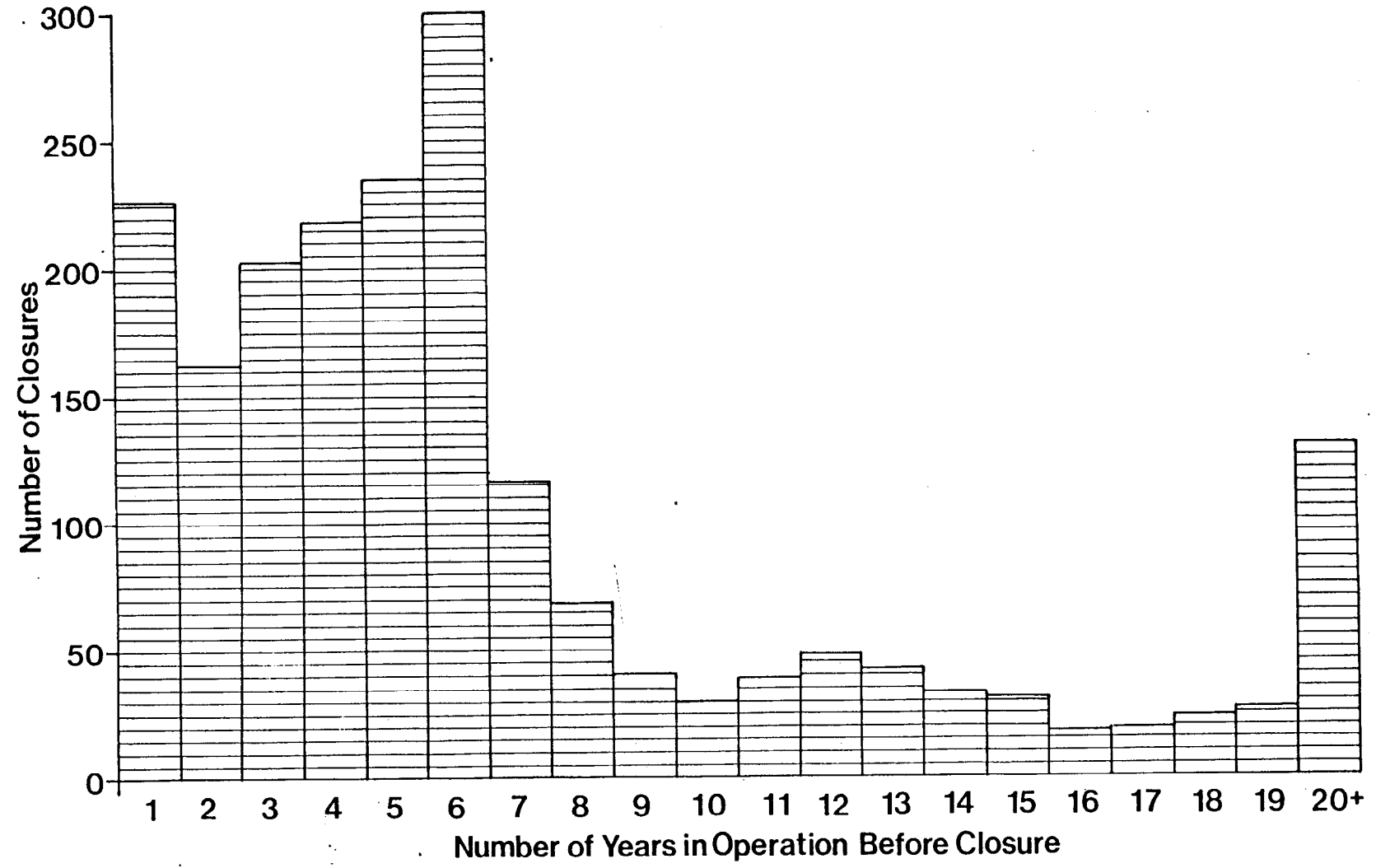
(iv) The Industrial Structure of Closures

Hypotheses derived from neo-classical theory suggest that inter-industry variations in profitability and hence closure is to be expected. Figure 7 shows this has been the case in Wales, with the number of closures ranging from 352 (17.51%) in Timber, Furniture, etc (SIC 17) to only 5 in Coal and Petroleum Product Industries (SIC 4). The sectors most severely affected by closures were the heavy basic industries. In terms of the number of closures 290 (14.42%) were in Mechanical Engineering (SIC 7); 313 (15.57%) in Metal Goods n.e.s. (SIC 12); 169 (8.41%) in Food, Drink and Tobacco (SIC 3); and 166 (8.26%) in Other Manufacturing Industries (SIC 19). Also, the highest levels of manufacturing employment loss were in the following sectors: Metal Manufacture (SIC 6) 16,065 jobs (22.10%); Metal Goods n.e.s. (SIC 12) 9,894 jobs (13.61%); Other Manufacturing Industries (SIC 19) 8,005 jobs (11.01%); Electrical Engineering (SIC 9) 6,649 jobs (9.15%); and Mechanical Engineering (SIC 7) 5,865 jobs (8.07%) (Figure 8): an individual was twice as likely to have lost a manufacturing job from closure in these seven sectors than from the remaining twelve manufacturing groups.

The reason for the high number of closures in the above mentioned sectors may be due to the previously high new firm formation rates in these industries, which may have been easy to enter, but also easy to leave. In fact, many of the entrants 'marching stolidly into the ambush' may not have had sufficient managerial or personal skills to enter an industry and compete successfully. For example, Oxenfeldt (1943) claimed that the individuals who have been redundant or are unemployed are the least likely to form a successful business, and suggests that in most cases they are forced to enter industries where capital requirements are the lowest, since

Figure 5

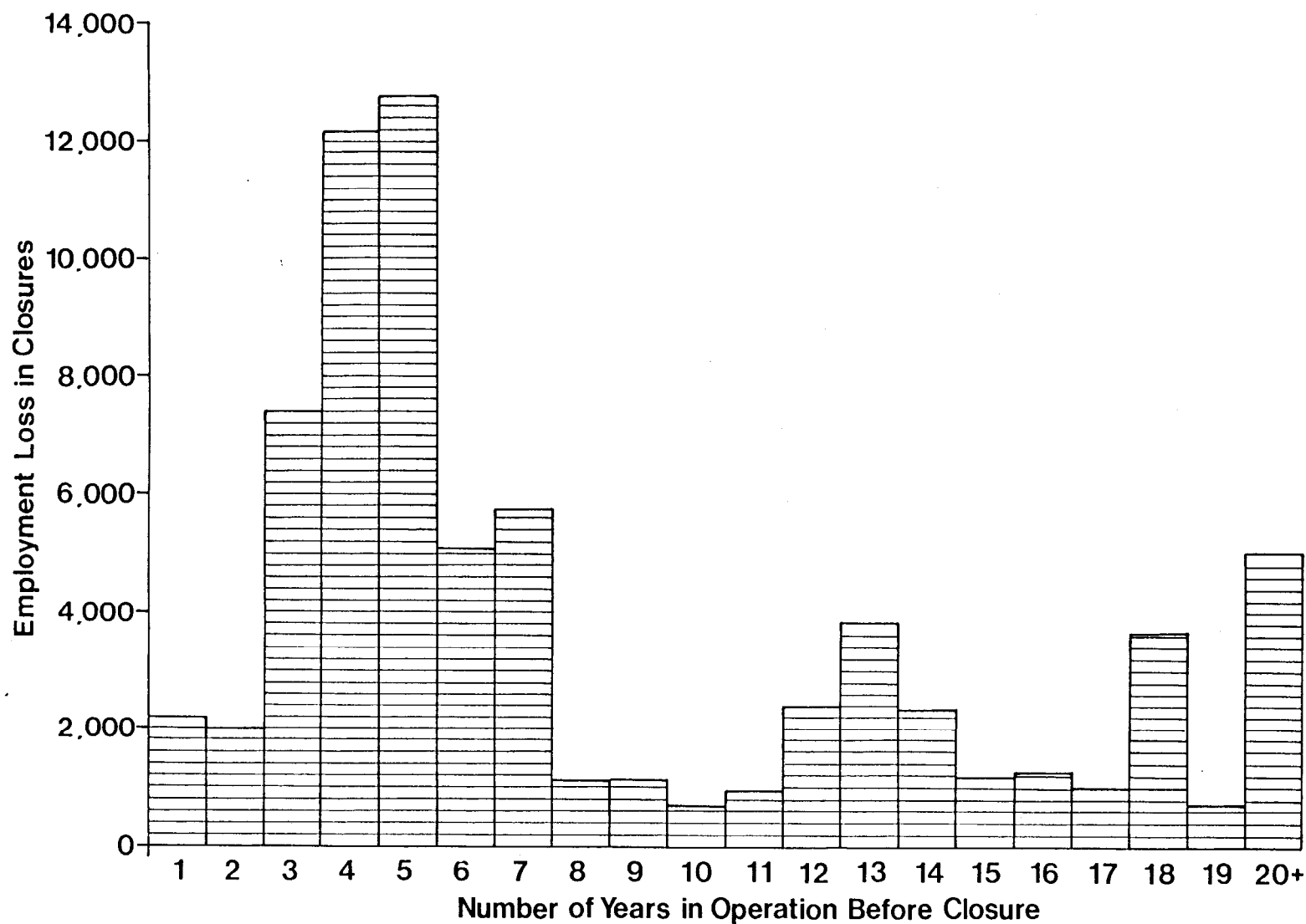
NUMBER OF MANUFACTURING ESTABLISHMENT CLOSURES IN WALES, 1980-1984: NUMBER OF YEARS IN OPERATION BEFORE CLOSURE



Source: F I (1984)

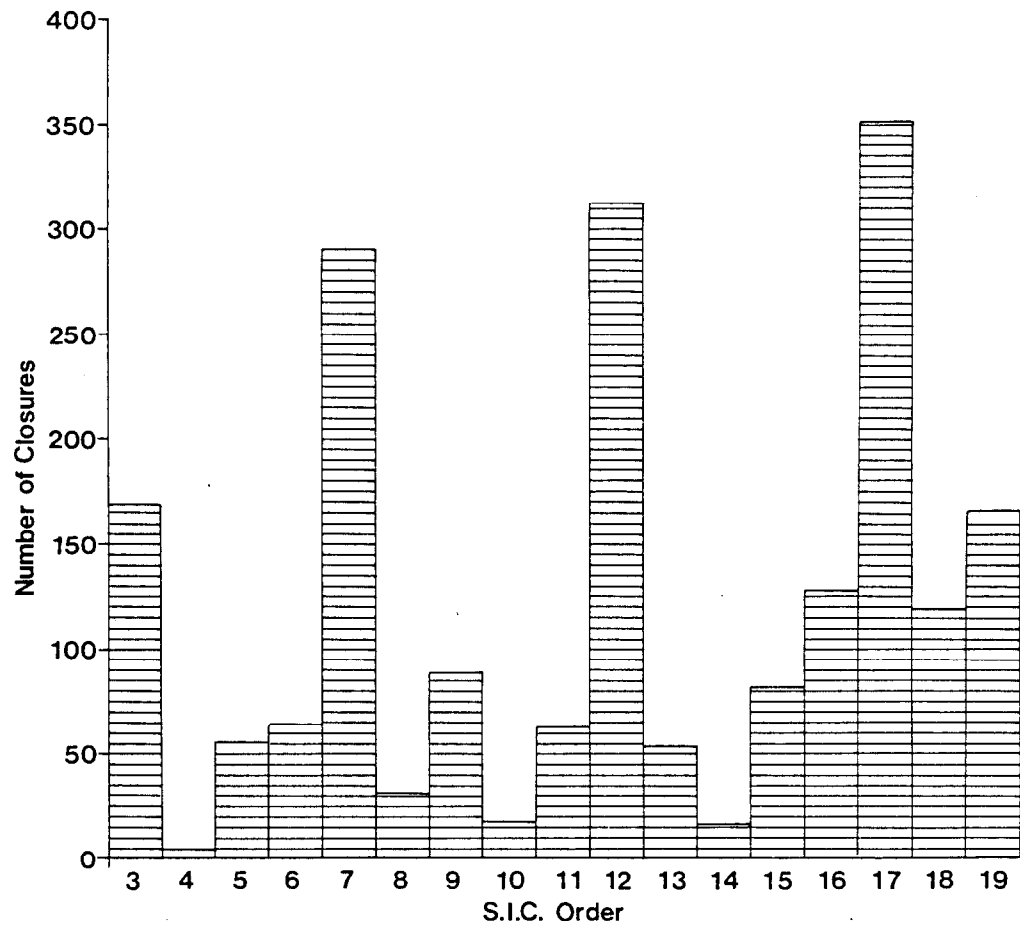
Figure 6

EMPLOYMENT LOSS IN MANUFACTURING ESTABLISHMENT CLOSURES IN WALES, 1980-1984: NUMBER OF YEARS IN OPERATION BEFORE CLOSURE



Source: F I (1984)

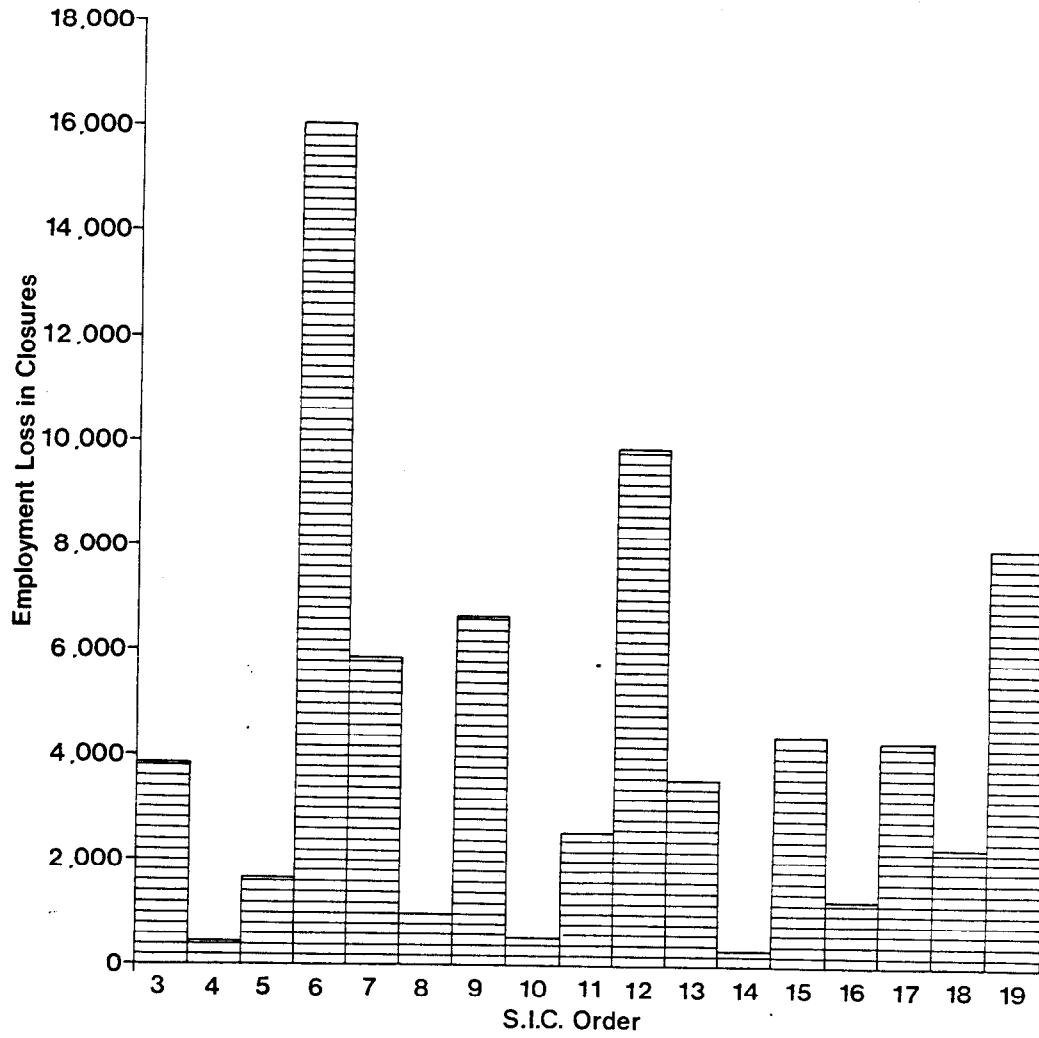
Figure 7

**NUMBER OF MANUFACTURING ESTABLISHMENT CLOSURES IN WALES,
1980-1984: INDUSTRIAL DISTRIBUTION**

Source: F I (1984)

Figure 8

EMPLOYMENT LOSS IN MANUFACTURING ESTABLISHMENT CLOSURES IN WALES, 1980-1984: INDUSTRIAL DISTRIBUTION



Source: F I (1984)

the financial institutions are unlikely to lend to an unemployed individual without a job or experience of running a business. The institutions may also lend to certain types of individuals and not to others.

(v) The Corporate Structure and Ownership Type of Closures

In the new firm literature it is generally assumed that locally owned manufacturing establishments provide more suitable incubator environments for potential new firm founders quite apart from a lower propensity to close (Cross, 1981, p.121). In this section the distinction between locally and non-locally owned closures will be made. The impact of closure on local labour market multipliers between local and non-local closures can not be ignored, and may have an influence on the new firm formation rates in particular TTWAs. Establishment closure affects different numbers of people in different labour markets and this could have important implications on whether or not a potential founder who has been 'pushed' towards entrepreneurship starts a new business or not. Moreover, it must be remembered, that the new firm literature claims that certain easy-entry industries (which happen to be locally-controlled) spawn more new businesses than traditional heavy industrial sectors (mainly externally-controlled) such as chemicals, steel manufacture, heavy engineering and shipbuilding. Therefore, the closure of traditional heavy industrial establishments in certain TTWAs could release people who do not have the right skills to start a business on their own. This is because their employment background does not prepare or allow them to set up imitative ventures. Finally, the closure of a large employer in a TTWA would also reduce the potential market size that a new firm could plan to subcontract to. Consequently, the closure of a large establishment in a plant-dominated labour market may have a detrimental impact on the subsequent new firm formation rate in that TTWA. Therefore, as indicated above there are a plethora of possible causal relationships between closure-ownership type and new firm formation which can be postulated to both promote and retard enterprise creation.

In the present study six types of corporate status groups are defined - not identified, Welsh non-international, Welsh international, rest-of-UK branch, rest-of-UK international and overseas-controlled. An international establishment is defined as any company with established branches abroad. As such it includes companies with Welsh and UK parents who may be able to

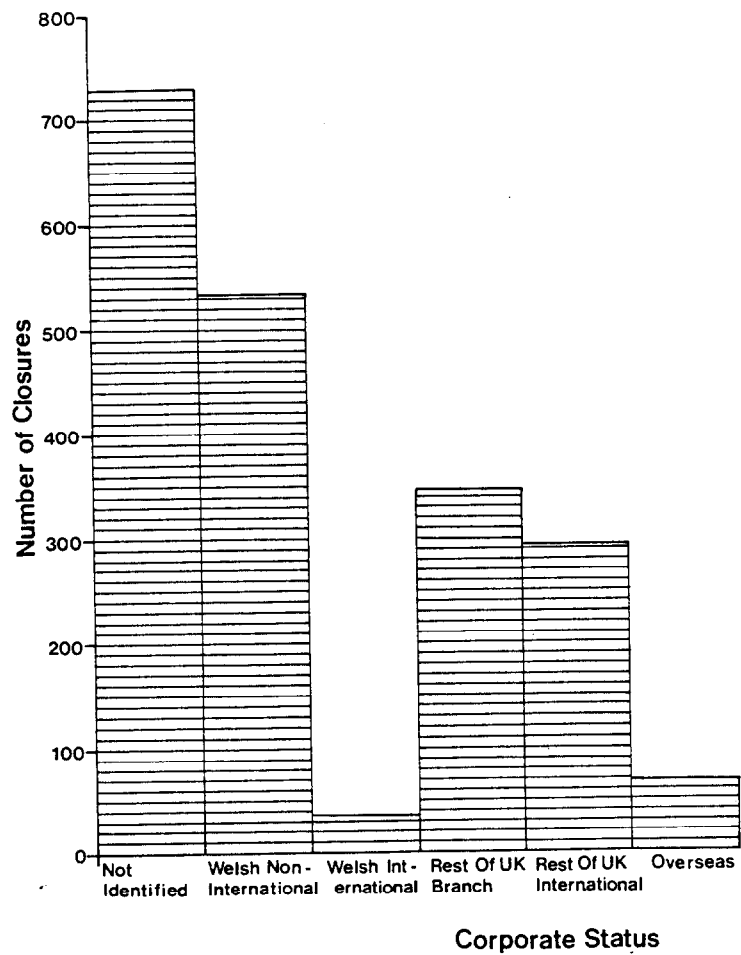
operate transfer pricing systems to the detriment of a local economy in the same way as overseas-owned multinational establishments are assumed to (Hillier, 1985, p.123). From Figure 9, it is apparent that the vast majority of establishment closures were locally-controlled establishments. In fact, 1,264 (62.89%) establishment closures could be regarded as Welsh non-international closures (this is a result of the not identified and indigenous categories being combined). In all, 1,611 (80.15%) establishments could be regarded as indigenous ones. Moreover, 641 (31.89%) closures were UK-controlled branches and a further 69 closures (3.43%) were overseas-controlled establishments.

In terms of employment loss (Figure 10) only 13,983 (19.23%) jobs were lost in the combined category of not identified and Welsh non-international closures, with a further 4,963 jobs (6.83%) being lost in Welsh-international establishments. Conversely, the majority of employment loss was due to closure in rest-of-UK international branches, (32,904 jobs: 45.26%), and rest-of-UK branches (10,439 jobs: 14.36%). Finally, 10,409 jobs were lost in overseas-controlled establishments.

Townsend and Peck (1985a, p.81 and p.67) have argued, that there is a need for research to focus "on the analysis of corporations" because "the analysis of redundancies within major corporations has obvious policy implications. If, as is implied above, these corporations are the driving force behind major changes in manufacturing employment levels, then policy formulation must be based on a consideration of their activities". In the remainder of this section, the pattern of decline in named corporations will be discussed with regard to their impact on potential new firm founders being 'pushed' into entrepreneurship in labour markets which have suffered from enormous decline. Table 3 indicates that 25,866 jobs (35.58%) were lost in the ten leading employment losers through closures in Wales and not surprisingly, the list is headed by GKN, BSC, Courtaulds and Dunlop: major international businesses (with the exception of Duport) which have rationalised their patterns of production for a number of years, as indicated in previous redundancy studies (Townsend and Peck, 1985b, p.176). The table stresses the importance of the impact of corporate decisions when it is revealed that two corporations alone accounted for 11,652 jobs lost (16.03%) in Wales in twenty-five establishments (1.24% of all establishment closures). Unfortunately, it has not been possible to explore in detail the reasons for these

Figure 9

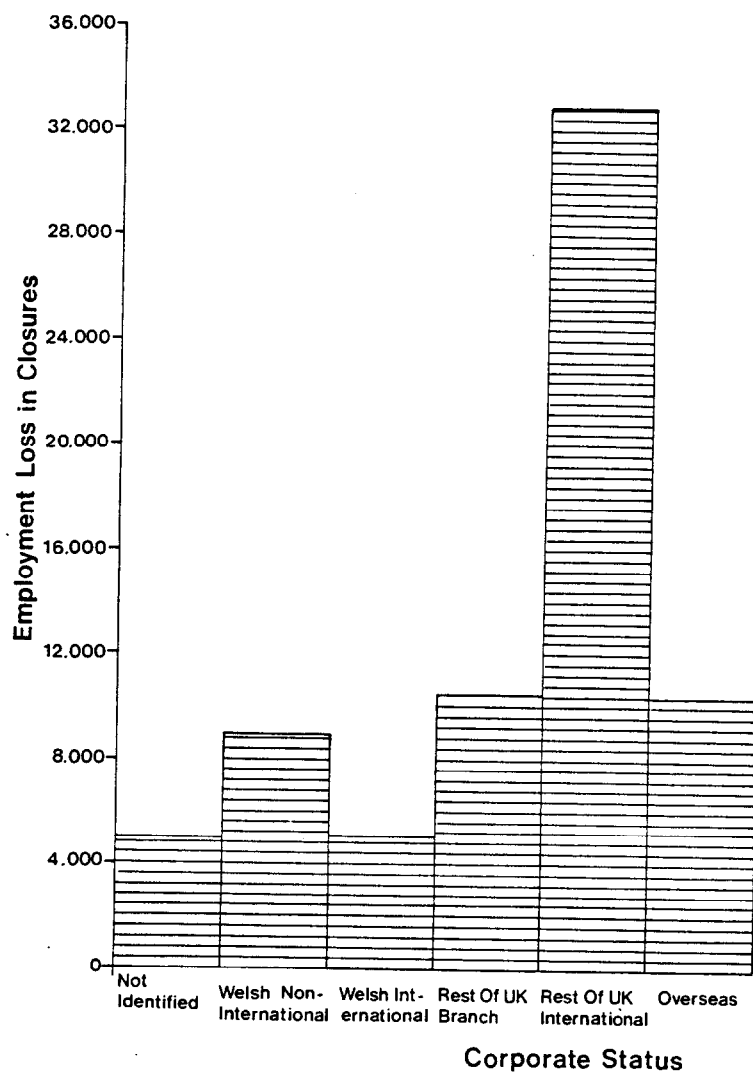
NUMBER OF MANUFACTURING ESTABLISHMENT CLOSURES IN WALES, 1980-1984: CORPORATE STATUS



Source: F I (1984)

Figure 10

EMPLOYMENT LOSS IN MANUFACTURING ESTABLISHMENT CLOSURES IN WALES, 1980-1984: CORPORATE STATUS



Source: FI (1984)

corporate closures but Table 3 indicates the detrimental impact that large scale closures by individual private and public corporations can have on individual TTWAs. Large scale closure can also 'push' vast numbers of people out of employment who may have not gained the necessary experience or skills to set up a new business of their own, It follows that different parts of Wales have had different sorts of closure experience.

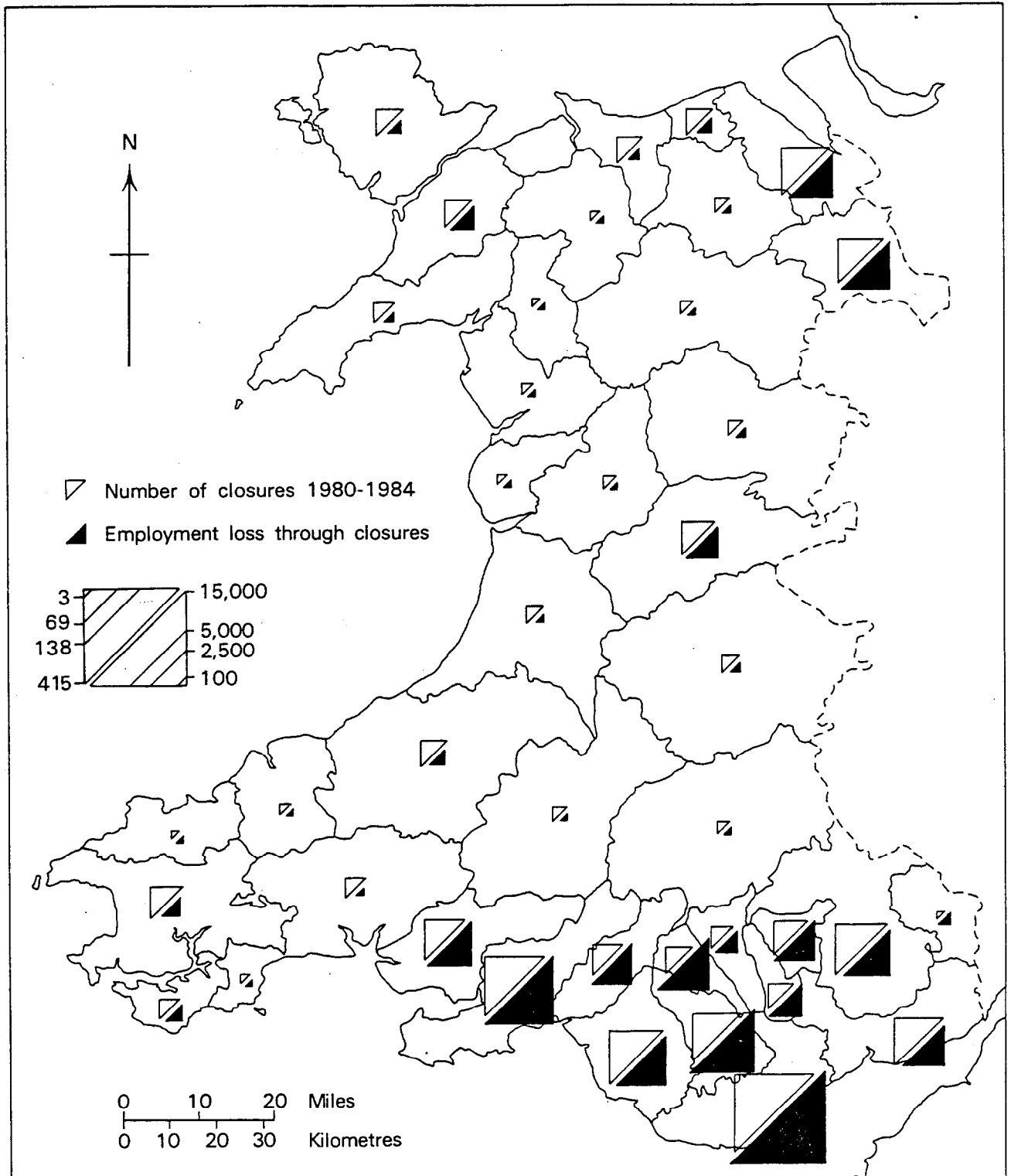
(vi) The Spatial Distribution of Closures

Location theory and the ecological clustering of variables suggest some spatial variation in establishment closures within Wales is to be expected. A basic issue is whether the level of establishment closure in different TTWAs can have a significant impact on the rate of new firm formation. Figure 11 shows that the vast majority of closures and employment loss was concentrated in a number of urban and traditional industrial TTWAs in north-east Wales (Shotton and Wrexham) and south Wales (Aberdare, Bargoed, Cardiff, Ebbw Vale, Llanelli, Merthyr Tydfil, Neath, Newport, Pontypool, Pontypridd, Port Talbot and Swansea). It could also be argued that through the impact of establishment closure certain urban areas may have developed into 'stagnation' or even 'contraction' poles (Rabey, 1977). In fact, the above mentioned TTWAs recorded 1,524 closures (75.82%) of which 207 closures were in north-east Wales and 1,317 closures were in south Wales; 65,837 jobs were lost (90.56%) - 7,141 jobs in north-east Wales and 58,696 jobs in south Wales. Figure 11 is designed to allow the impact of different plant sizes involved in closure to be appreciated by scaling the closure information around the average value of employment loss per closure (36.1 jobs lost per closure). TTWAs in which closures involved above-average sizes of plant can be exemplified in Cardiff, and most clearly in Aberdare. Conversely, Milford Haven exemplifies a TTWA in which large numbers of small plants closed. Figure 11 also shows that the mainly rural, less-industrialised TTWAs in north, mid and west Wales had relatively large numbers of closures, and occasionally considerable amounts of employment loss.

It would be misleading to suggest at this stage that the impact of closures did not have a significant impact on the rural less-industrialised TTWAs. In Figure 12a closure rates based on 1978 manufacturing employment stock data for individual TTWAs have been calculated (Welsh

Figure 11

MANUFACTURING PLANT CLOSURES IN WALES,
1980 - 1984, BY TTWA s

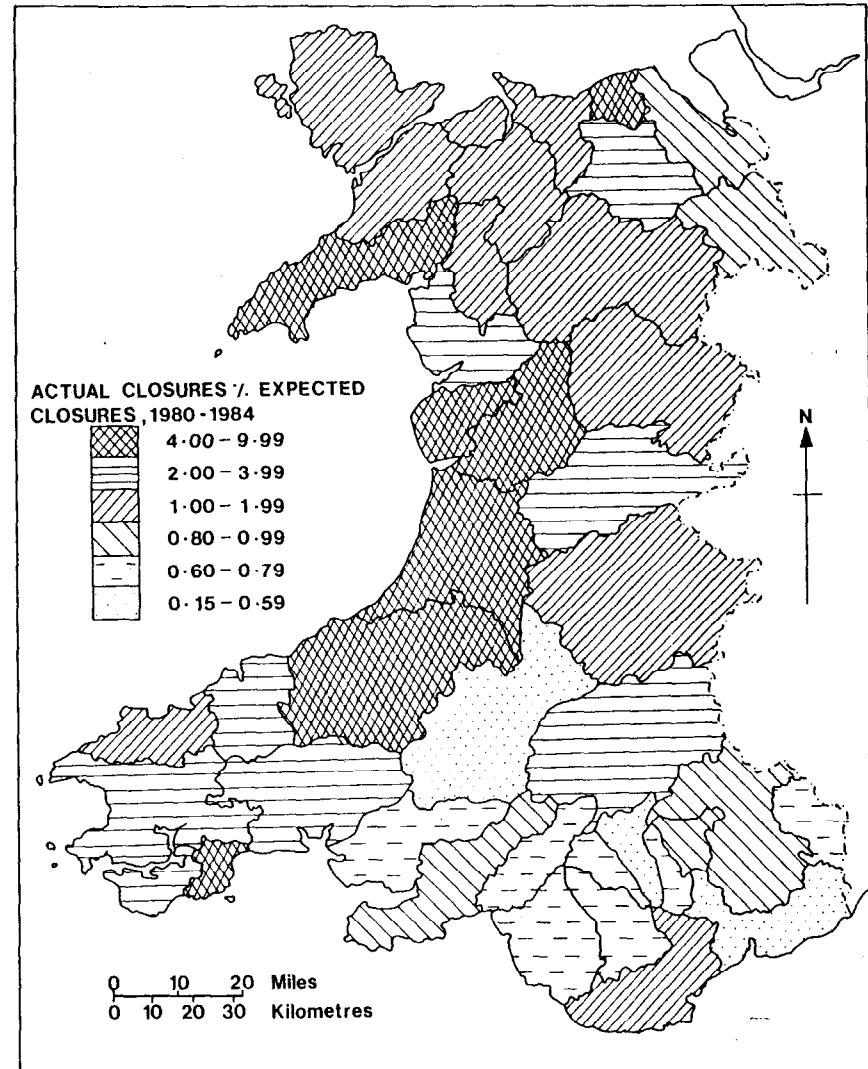
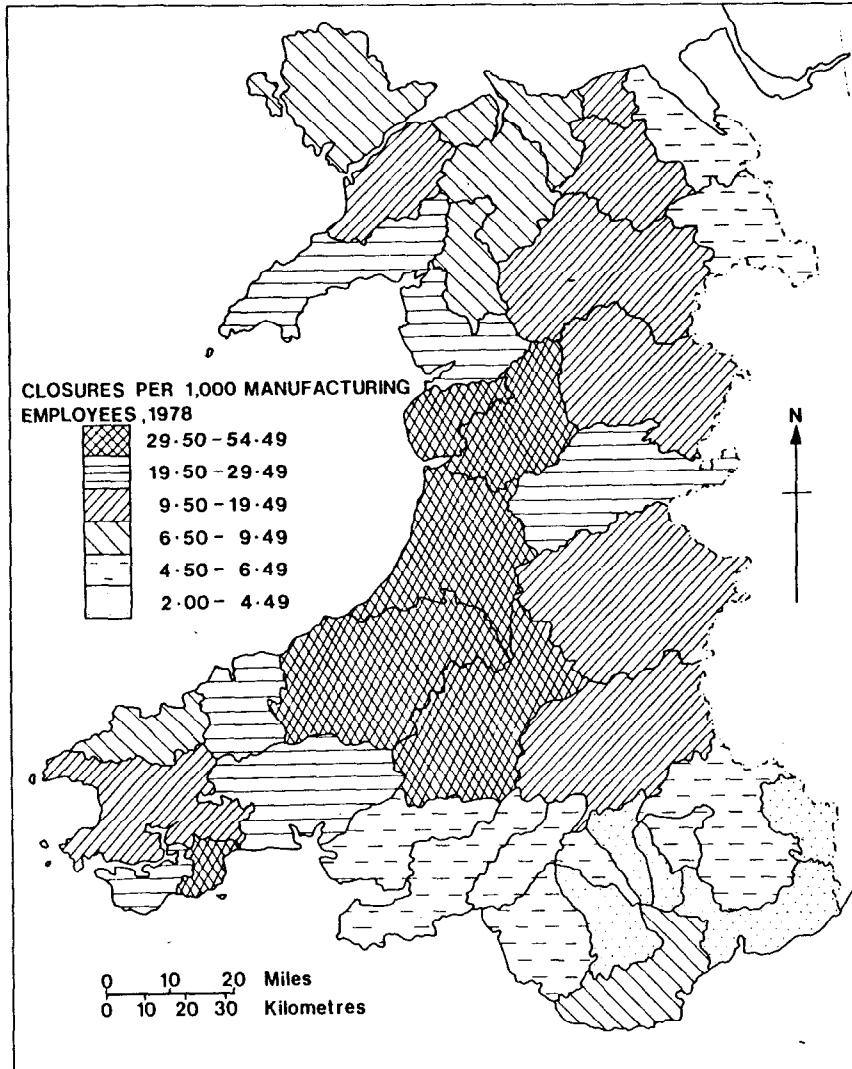


Source: F I (1984)

Figures 12 (a) and 12 (b)

MANUFACTURING ESTABLISHMENT CLOSURE RATES IN WALES, 1980-1984

MANUFACTURING ESTABLISHMENT CLOSURES IN WALES, 1980-1984: ACTUAL CLOSURES / EXPECTED CLOSURES



Source: F I (1984) and Welsh Office (1983)

Office, 1983, Appendix vi). From Figure 12a it is most apparent that the highest closure rates were recorded in rural central Wales and in TTWAs which had small manufacturing employment stocks in 1978. High closure rates were also recorded in Barmouth and Caernarfon in north-west Wales, in Tenby, Pembroke Dock and Milford Haven in west Wales, and in Cardiff in south Wales. Setting 'actual' rates against each TTWAs share markedly above average expected closure rates were recorded in the rural and tourist TTWAs of Aberystwyth, Lampeter, Machynlleth, Pwllheli, Rhyl, Tenby and Tywyn (Figure 12b). This 'expectation' is simply based on each TTWA's share of the total manufacturing employment in 1978. Moreover, twenty-six TTWAs had more closures than expected but TTWAs such as Aberdare and Newport had fewer closures than expected. With regard to employment loss Figure 13a shows that very high employment loss rates were recorded in the following TTWAs: Aberdare, Newtown and Pembroke Dock. Each of these TTWAs suffered from the closure of one or more large establishment. Relatively high employment loss rates were also recorded in Cardiff, Machynlleth, Monmouth, Neath and Swansea. Conversely, very low employment loss rates, not surprisingly, were recorded in Blaenau Ffestiniog, Cardigan, Fishguard and Llanrwst. Figure 13b shows the fifteen TTWAs which recorded higher levels of employment loss than expected, with Aberdare, Cardiff, Lampeter, Machynlleth and Pembroke Dock having markedly higher employment loss rates than expected. In contrast, TTWAs recording markedly lower than expected employment loss rates were Blaenau Ffestiniog, Cardigan, Llandudno and Llanrwst.

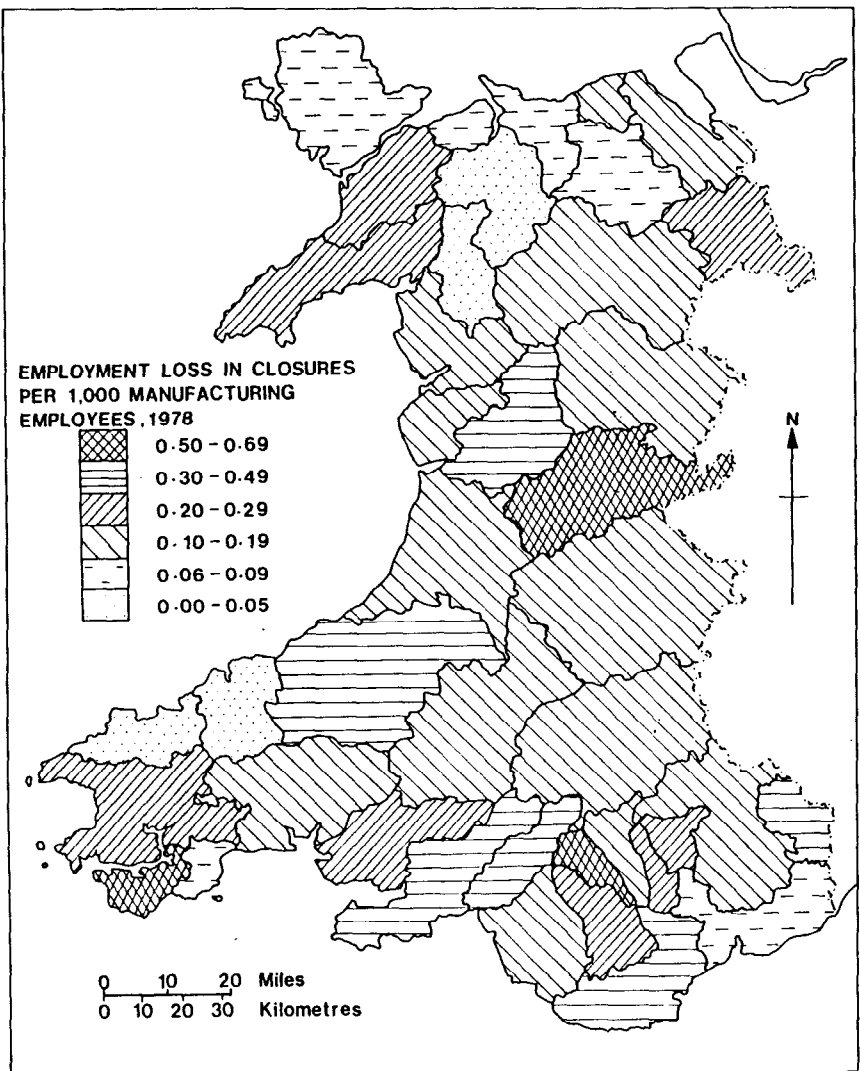
NEW MANUFACTURING FIRM FORMATION IN WALES

Data Collected

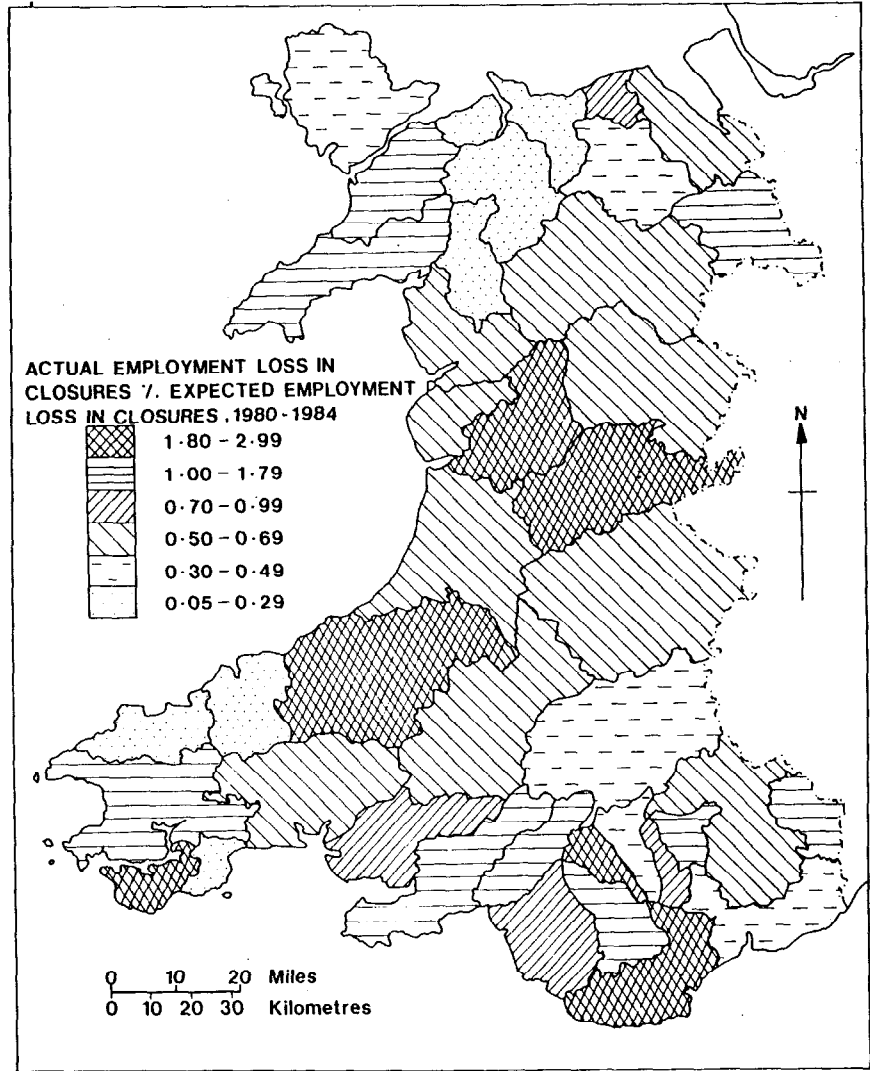
Unfortunately, the FI were unable to provide data on the birth of new firms due to confidentiality constraints associated with the 1947 Statistics of Trade Act. Consequently, it was not possible to compare 'births' and 'deaths' from this source. However, comparable though different data were available from the Industry Department of the Welsh Office, Cardiff. In order to meet the conditions of the Statistics of Trade Act the 'new manufacturing enterprises without origin'

Figures 13(a) and 13(b)

EMPLOYMENT LOSS IN MANUFACTURING ESTABLISHMENT CLOSURES IN WALES, 1980-1984 PER MANUFACTURING EMPLOYEES (1978)



EMPLOYMENT LOSS IN MANUFACTURING ESTABLISHMENT CLOSURES IN WALES, 1980-1984: ACTUAL EMPLOYMENT LOSS / EXPECTED EMPLOYMENT LOSS



Sources: F I (1984) and Welsh Office (1983)

(ENMWO) data supplied by the Welsh Office was aggregated to a coarser spatial framework consisting of sixteen TTWAs and TTWA aggregations. The recording of a surviving ENMWO with at least eleven employees at some stage since its birth between 1st January 1979 and 31st December 1983 was regarded as equivalent to the formation of a new manufacturing firm.

Macro-Level Statistical Results

The 224 ENMWO identified provided only 2.1% of Wales's total manufacturing employment, or 4,460 jobs in 1983. In contrast, the closure data provided by the Welsh Office indicated that 430 establishments closed and 38,965 jobs were lost in Wales, over the 1979 to 1983 period. Figures 14 and 15 indicate that establishment closures and employment loss were concentrated in industrial south Wales. For example, in Llanelli and Swansea 7,380 jobs were lost in closures whilst the formation of ENMWO over the same period had only created 205 jobs.

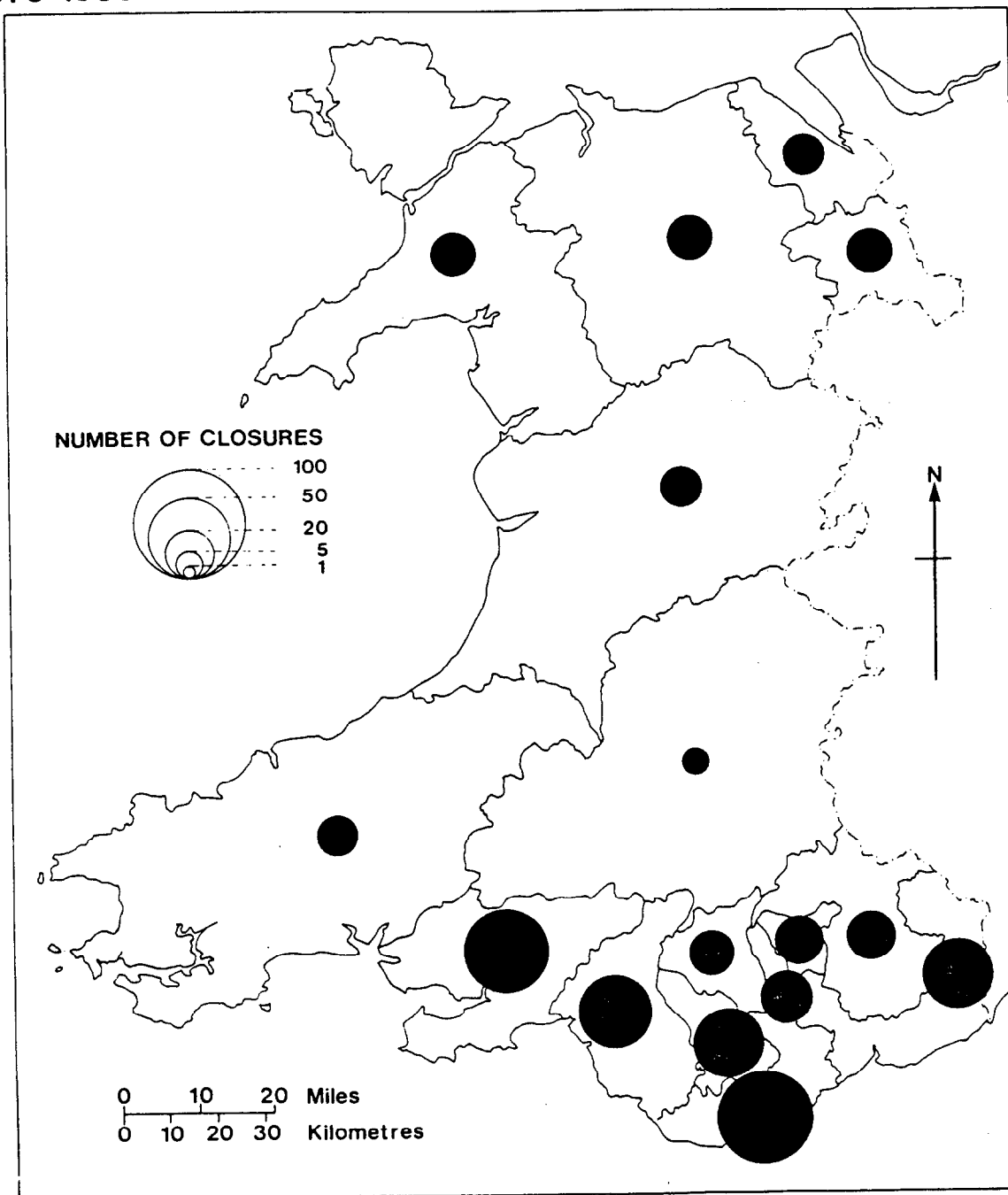
On the basis of the Welsh Office data it was possible to test the strength and direction of association between new firm formation rates and establishment closures and employment loss. Table 4 indicates that there is a strong positive association between the number of closures and the resultant new firm formation rate. The relationship with employment loss is positive but not very strong using the presented surrogate variables.

Micro-Level Statistical Results

The importance of the 'push' factor of manufacturing establishment closures on the new firm formation process in selected 'ecological incubator' environments (Westhead, 1988) was explored through an analysis of survey results gathered during a personal survey in 1986 of 269 new independent manufacturing firms which had been established between 1979 (1st January) and 1985 (31st December) in eighteen contrasting TTWAs. Of the 269 founders interviewed the major motivation to start the business was to exploit a perceived market opportunity (31.6%), closely followed by the 'push factor' of being forced into entrepreneurship (26.8%). This result is lower than that found for Nottingham (47% by Binks and Jennings (1986, p.6)) but larger than that found for Cleveland (20% by Storey (1982, p.112)). The disparity in levels is probably in part a consequence of the impact of the recession in the surveyed TTWAs. Moreover, in the present

Figure 14

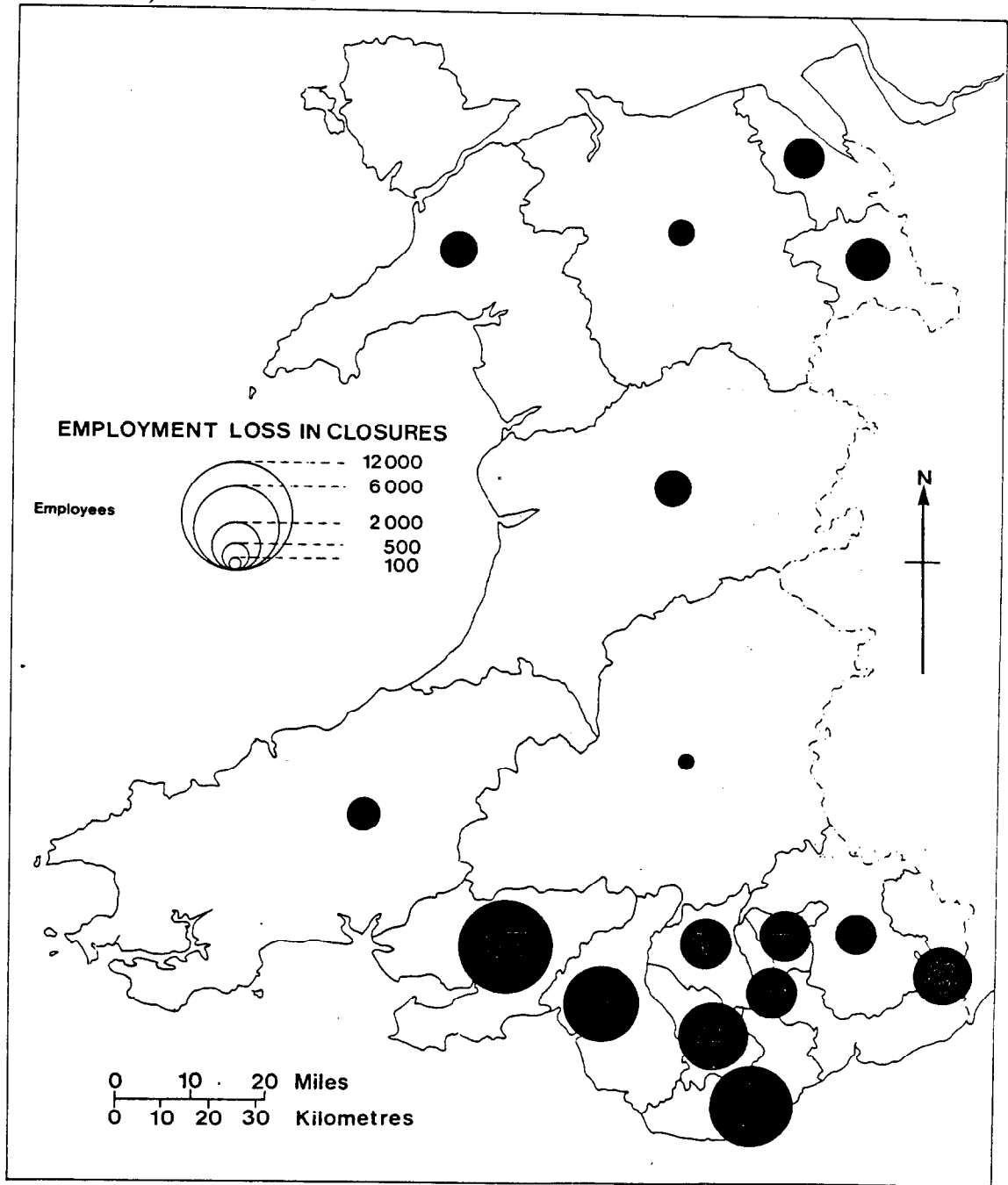
NUMBER OF MANUFACTURING ESTABLISHMENT CLOSURES IN WALES, 1979-1983



Source: Welsh Office Industry Department (1985)

Figure 15

EMPLOYMENT LOSS IN MANUFACTURING ESTABLISHMENT CLOSURES IN WALES, 1979-1983



Source: Welsh Office Industry Department (1985)

study it was found that the main individual reason indicated by new firm founders for leaving their last employer was the 'push-factor' of redundancy, closure and take-over (25.7%). This was followed by the more positive intentions of 18.6% of founders whose main motivation was the desire to set up a business of their own. Also, unemployment acted as a powerful influence on new firm formation and a number of firms were founded with the prime intention of maintaining the entrepreneur in work. Just prior to start up 77 founders (28.6%) stated they had been unemployed. In contrast, Storey (1982, p.118) in Cleveland found that 17 new manufacturing firm founders (50%) were unemployed immediately prior to starting their businesses.

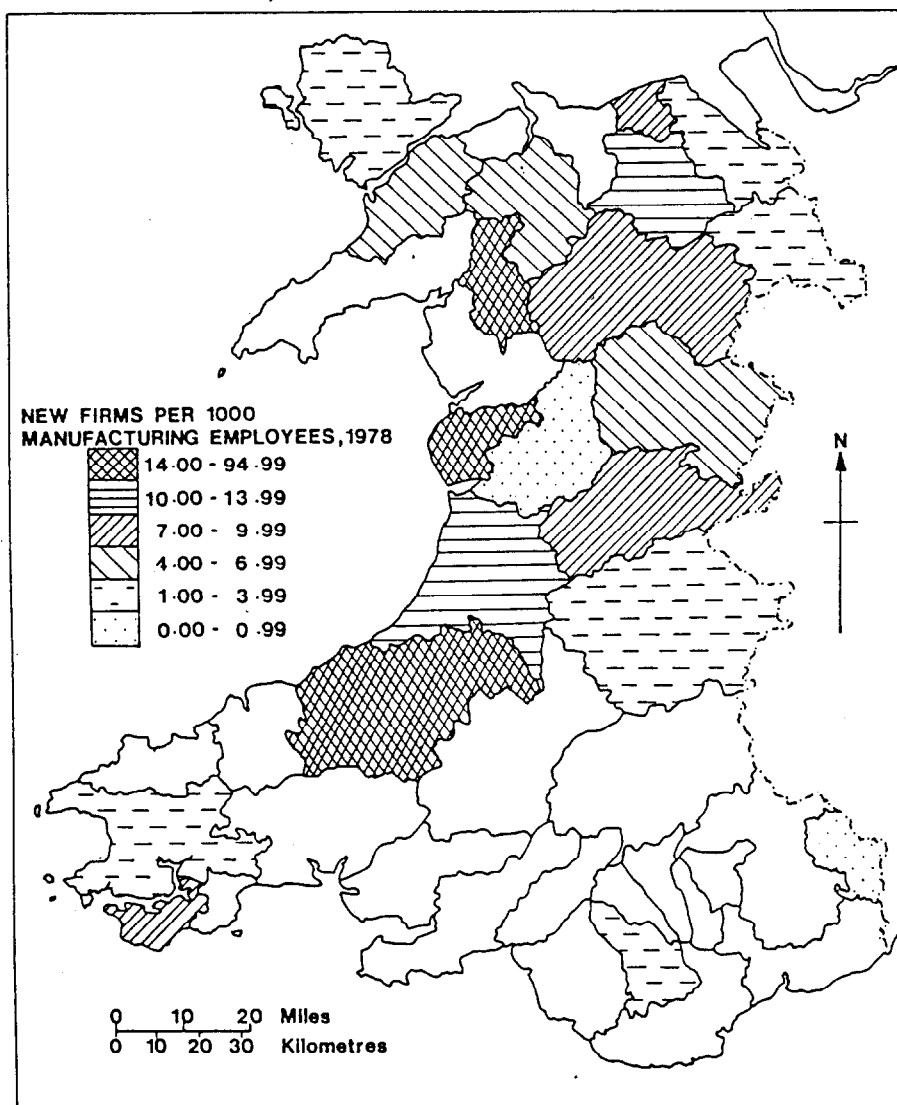
In terms of the characteristics of the founders' last employer or 'incubator organisation' it was found that 102 founders (or 45.3% when excluding 44 founders in the 'not known' category) were last employed in establishments with less than 25 employees in size. Only 12.4% of founders were employed in establishments greater than 500 employees in size. Fifty-five percent of founders were employed with their last employer for five years or less and only 24.6% of founders had stayed with their last employer for ten years or more. Within manufacturing the leading industries in which founders had previously worked prior to start up were Mechanical Engineering (SIC 7); Timber, Furniture, et c (SIC 17); Vehicles (SIC 11); Electrical Engineering (SIC 9); Bricks, Pottery, Glass, Cement, etc (SIC 16) and Metal Goods n.e.s. (SIC 12). The last employers of 42 founders (15.6%) were in the easy entry industries (SIC's 17, 18 and 19) hypothesised by this researcher and only 22 founders (8.2%) came from the hypothesised heavy industries (SIC's 4, 5, 6 and 10). Also, 98 founders (36.4%) established businesses in the same manufacturing orders as their last employment position (or 98 out of the 175 founders (56%) who had last worked in a manufacturing establishment). The industrial sectors recording the highest levels of entry were Timber, Furniture, etc (SIC 17); Other Manufacturing Industries (SIC 19); Metal Goods n.e.s. (SIC 12); Bricks, Pottery, Glass, Cement, etc (SIC 16); and Mechanical Engineering (SIC 7). In fact, 111 new firms (41.3%) were founded in the hypothesised easy entry sectors in contrast to only 14 new firms in the hypothesised heavy industry sectors. Moreover, in terms of the corporate status of the last manufacturing employer it was found that 49.1% had worked in 'local' establishments and 23.4% had worked in international and foreign establishments. Finally,

as Figure 16 indicates, as was found in the data provided by the Welsh Office, the rural TTWAs recorded the highest rates of new firm formation.

CONCLUSION

The methodological aim of this paper has been to take an important, and supposedly simple phenomenon (manufacturing establishment closures and consequent employment loss) in order to disentangle some of the complexity and to throw some light on its role on the new firm formation process in Wales. Through a series of aggregate tables and figures, a dramatic level of employment loss in Wales due to establishment closure has been discussed. In aggregate it seems that a TTWAs industrial structure, its plant size structure, the age of its plants and various aspects of establishment corporate status and ownership type may all influence manufacturing establishment closure rates. The macro and micro analyses have produced significant results which indicate that establishment closure and employment loss were empirically associated with new firm formation. Moreover, the shedding of labour has been shown to have been a major local factor influencing local labour market conditions which influenced the formation rate in a number of TTWAs. The new firm survey has indicated that the characteristics of the founder's previous employer prior to start up did have an influence on the formation process and the characteristics of the subsequently established new firms. For example, it is shown that founders had entered industries in which they had previous occupational work experience. The massive employment loss in heavy industries (for example, in the following survey TTWAs: Holyhead, Milford Haven, Pembroke Dock, Pontypridd, Shotton and Wrexham) did impede new firm formation because the majority of the people leaving these industries had not acquired the necessary training, skills and range of contacts in order to start a business in a depressed local labour market area. Conversely, it was found that individuals who had last worked in small locally-controlled firms engaged in easy entry industries (or craft or jobbing activities) had set up new firms. The decision to found a new independent business was aided not only by their previous work experience and acquired skills but by their decision to enter industries which had low to minimal barriers to entry in terms of finance and equipment.

Figure 16

**NEW MANUFACTURING FIRM FORMATION RATES IN SURVEY
TTWAs IN WALES, 1979-1985**

Sources: New Firm Survey (1986) and Welsh Office (1983)

It can therefore be concluded that this study has placed the impact of manufacturing establishment closure on the new firm formation process on a sound empirical base. But due to the complexity of the formation process it must be stated that closure (which can be seen as both a 'supply' and 'demand' factor) is only one influence on this process. The results and descriptions presented above have, however, identified a major process which has influenced 'environmental' conditions at a TTWA level in Wales. Consequently, it has been shown that any description of an environment must place major emphasis on this variable.

The results from this study indicate that a number of firms will close within the first five years of production. However, at the present time there appears to be a large number of people prepared to take their place. In terms of public policy assistance to new firms, Mason (1984) has suggested that it must be directed towards encouraging those few firms which have the ability to expand and by so doing create jobs locally. Storey (1983) has claimed that the objective of small business policy should be to increase net employment locally by avoiding the 'losers' and picking the 'winners' which have good growth prospects and the ability to sell a large proportion of their production to non-local markets. In Wales a major step towards improving the situation of new firms has been due to the activities of the Welsh Development Agency and Mid Wales Development in providing equity, capital, loans, training, advice and premises. Also, local development agencies (such as Antur Teifi) have been formed in order to promote local indigenous development. The situation has been further improved by the introduction of the Loan Guarantee Scheme by the present government,

Unfortunately, the results of the present study indicate in the short-term that new firms are not the panacea for all Wales's problems. In fact, the 269 new firms surveyed had created only 2,070 jobs. Placed in the context of the decision of a single corporation, Guest, Keen and Nettlefolds PLC (in which 6,348 jobs were lost as indicated in Table 3) it is clear that the net employment impact of new firms in the short-term is minimal. Moreover, this paper has shown that there is an urgent need for policy aimed particularly at the large firm sector (Healey and Clark, 1984, p.315) as well as indicated by the sheer scale of employment loss in closures. Healey (1984, p.21) has argued that there is a need for policies designed to prevent major job losses and to encourage areas of growth potential. The most relevant context is the need for changes in

national economic policies which affect the viability of large-scale employers. However, in the long-term the transition to 'sunshine' industry in Wales with a modest level of employment creation, and increased innovation and efficiency in the Principality may be aided by the formation and development of new enterprises.

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Table 1 A Comparison Between Manufacturing Employment Loss in Redundancies and Establishment Closures in Wales, 1980-1984

Type	Year					Total
	1980 (b)	1981 (b)	1982 (b)	1983 (b)	1984 (c)	
Redundancies in establishments with > 10 employees (a)	43,217	26,056	16,863	10,599	6,839	103,574
Employment loss in closures	16,295	20,705	14,321	10,922	10,455	72,698
% total employment loss in closures	37.71	79.46	84.93	103.05	152.87	70.19

Notes: (a) The Employment Protection Act requires the Secretary of State for Employment to be notified when an employer intends either to make 10 or more workers redundant within a period of 30 days or less; or intends to make 100 employees redundant over a period of 90 days or less. Redundancies on a small scale are therefore omitted.
 (b) 1968 (Revised) Standard Industrial Classification.
 (c) 1980 (Revised) Standard Industrial Classification.

Sources: Welsh Office, Welsh Economic Trends, Various Issues, Cardiff and the Deletions Records of the Factory Inspectorate, Cardiff, 1984

Table 2 National Comparison of Manufacturing Establishment Closures

Author	Study area	Time period	Number of closures	Employment loss in closures	Employment loss in closures as a % of base year manufacturing employment	Base year manufacturing employment
Gudgin (1978)	East Midlands	1948-76		134,244	28	479,800
Robinson and Storey (1981)	Cleveland	1965-76	113	9,955	9	114,524
Dennis (1978)	Greater London	1966-74		283,800	22	1,290,000
Gripaos (1977)	South-East London	1966-74	231	39,000		
Lloyd (1979)	Outer Merseyside	1966-75		13,513	14	96,523
Dicken and Lloyd (1978)	Inner Merseyside	1966-75		9,130	12	76,087
Dicken and Lloyd (1978)	Inner Manchester	1966-75		45,761	50	91,523
Cross (1981)	Scotland	1968-77	1,126	82,719	12	708,858
Blackwell et al., (1983)	Ireland	1973-80		33,756	16	217,292
O'Farrell and Crouchley (1983)	Ireland	1973-81	718	44,780	20	227,967
Stone et al., (1985)	Sunderland	1973-83	80	12,523	30	41,221
Healey and Clark (1983)	Coventry	1974-82	248	13,506	12	115,317
Healey (1984a)	Warwick	1974-82	85	3,199	16	19,534
Green and Foley (1984)	West Yorkshire	1975-81		22,506		
Hamilton (1983)	Scotland	1977-79	1,856	65,164		
Hillier (1985)	Bristol	1977-82	173	15,409		
Brunt (1984)	Greater Cork Area	1980-84	16	2,749	17	16,501
Present study	Wales	1979-83	430	38,965		
Present study	Wales	1980-84	2,010	72,698	24	302,298

Table 3 The Leading Ten Job Losers In Closures In Wales, 1980-1984

Rank	Corporation	Reported losses	Main products	Number of establishments	Number of TTWAs
1	Guest, Keen & Nettlefolds PLC	6,348	Vehicle parts	15	5
N 2	British Steel Corporation	5,304	Steel	10	6
3	Duport PLC	2,848	Iron and steel	5	2
4	AB Electronics Products Group PLC	2,300	Electronic components and systems	1	1
5	Courtaulds PLC	2,207	Textiles	7	3
F 6	Textron Inc, USA	1,900	Consumer and industrial products	6	1
7	Dunlop Holdings PLC, London	1,373	Rubber goods	8	6
F 8	Inco Ltd, Toronto, Canada	1,302	Nickel	1	1
9	Hawker Siddley Group PLC	1,166	Mechanical and electrical engineering and metals	6	6
10	The Mettoy Co. Ltd	1,118	Toys and games	4	3

Notes: N = Nationalised group owned by the British government
F = Foreign owned corporation.

Sources: Deletions Records of the Factory Inspectorate, Cardiff, 1984 and Who Owns Whom, 1985.

Table 4 Correlation Coefficients between New Firm Formation Rates (1979-1983) and Selected Closure Variables (n = 16)

Independent variables	Pearson correlation coefficient R ²	Adjusted R ²	t-value
Number of manufacturing establishment closures per 1,000 manufacturing employees (1978), 1979-1983	0.69	0.47	3.55 *
Number of manufacturing establishment closures per 1,000 manufacturing employees (1978), 1980-1984	0.75	0.56	4.25 **
Employment loss in closures as a percentage of 1978 manufacturing employees, 1979-1983	0.14	0.02	
Employment loss in closures as a percentage of 1978 manufacturing employees, 1990-1984	0.14	0.02	

Notes: * Significant at $p \leq 0.01$.
** Significant at $p \leq 0.001$.

Sources: Deletions Records of the Factory Inspectorate, Cardiff, 1984 and the Industry Department, Welsh Office, Cardiff, 1985.