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OF THE LABOUR MARKET**

**JOB CREATION IN SMALL
AND MEDIUM SIZED
ENTERPRISES**

**FEDERAL REPUBLIC OF GERMANY
FRANCE
NETHERLANDS
BELGIUM
LUXEMBOURG**

VOLUME II : MAIN REPORT



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JOB CREATION IN SMALL AND MEDIUM SIZED ENTERPRISES

Federal Republic of Germany

France

Netherlands

Belgium

Luxembourg

VOLUME II

Main Report

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Document

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CHAPTER 5

**JOB GENERATION
IN THE
FEDERAL REPUBLIC OF GERMANY
- A REVIEW -**

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INTRODUCTION

The chapter is in three parts. The first briefly discusses the definition of small, medium and large firms in the Federal Republic of Germany prior to examining employment trends in firms, according to employment size, using official statistical and other aggregate data sources. An appendix notes the sparse available information on the relationship between employment size and output.

Cross-time comparisons using aggregate data are a series of snapshots which cannot capture the continual turnover in employment as firms open, close, expand and contract. A principal concern of job-generation or employment-accounting studies is precisely to trace the fortunes of individual firms over time in order to assess how these four components of employment change affect the stock of jobs. The second part of the report reviews the principal West German job-generation analyses of recent years.

Part 3 summarises the findings and discusses their significance and implications.

Two appendices briefly review (i) employment conditions in small firms and (ii) public assistance to small business.

TRENDS IN FIRM SIZE AND EMPLOYMENT

5.1 FROM OFFICIAL STATISTICAL AND OTHER AGGREGATE DATA SOURCES

There is no generally accepted quantitative definition of small, medium and large firms in the Federal Republic of Germany¹. There is qualitative agreement that small and medium firms (kleine und mittlere Unternehmen) tend to be characterised, in particular, by owner-management: the entrepreneur is the enterprise and vice-versa. But such a definition is of limited use for practical policy and research purposes. Official statistics and public programmes frequently do, of course, classify firms by size, usually in terms of employment and/or turnover, but different and essentially arbitrary thresholds are set for different purposes.

The Institut für Mittelstandsforschung (Institute for Small Firms Research) once proposed a standard firm-size classification (Table 5.1) based on levels of both turnover and employment, and with thresholds varied by sector/branch, but its recommendation was not taken up. It has since suggested a simplified demarcation, without sectoral differentiation (Table 5.2)². On the basis of this classification, West Germany's small and medium firms (excluding agriculture) in 1984 accounted for (Kayser, 1986):

- 99.8 per cent of all businesses registered for turnover tax purposes;
- 51 per cent of taxable turnover;
- 44 percent of gross capital investment;
- 49 per cent of gross domestic product;
- 66 per cent of dependent employment.

¹ Kayser (1986) reviews alternative quantitative definitions of small, medium and large firms.

² A problem of classificatory schemes which employ alternative indicators of employment and turnover is how to allocate firms with employment and turnover levels which would place them in different size classes.

TABLE 5.1

**STANDARD FIRM-SIZE CLASSIFICATION PROPOSED
BY THE INSTITUT FÜR MITTELSTANDSFORSCHUNG**

Sector/ Size	Size Classification By	
	Employment	Turnover
Industry		
small	- 50	- 2
medium	50-499	2-25
large	500 +	25 +
Craft Trades		
small	- 2	- 0.1
medium	3 - 49	0.1 - 2
large	50 +	2 +
Wholesaling		
small	- 9	- 1
medium	10 - 199	1 - 50
large	200 +	50 +
Retailing		
small	- 2	- 0.5
medium	3 - 99	0.5 - 10
large	100 +	10 +
Transport/Communications		
small	- 2	- 0.1
medium	3 - 49	0.1 - 2
large	50 +	2 +
Other Services/Professions		
small	- 2	- 0.1
medium	3 - 49	0.1 - 2
large	50 +	2 +

Source: Thürbach and Menzenwerth (1975)

TABLE 5.2

**SIMPLIFIED FIRM-SIZE CLASSIFICATION PROPOSED BY THE
INSTITUT FÜR MITTELSTANDSFORSCHUNG**

Firm Size	Cut-offs by	
	Employment	Turnover (m. DM)
Small	-49	-1
Medium	50-499	1-100
Large	500+	100+

Source: Kayser (1986)

This report does not adopt any particular definition of the small firm. Being in large measure a review of existing evidence it is necessarily obliged to follow the definitions employed by others. Where possible, however, comparable firm-size classifications have been used.

An additional problem of definition is that the "firm" may be defined in several different ways. The statistical material and studies covered in this survey generally resort to two definitions. The "Unternehmen" is a firm in the sense of the lowest legally independent business unit required by law to keep books; note that in this definition the firm is on a lower level than the unit of ultimate control (which in German would be the Konzern or Muttergesellschaft), so that subsidiary firms and autonomous businesses are confounded. The other definition is the "Betrieb", which corresponds approximately to the British concept of the establishment. Thus the Betrieb is the basic spatial unit of business organisation; although usually on a single site, a Betrieb may group two or more functionally related sets of premises. In this report preference has been given, where a choice exists, to data at the level of the Unternehmen, but some of the reported data have the Betrieb as their unit of observation.

A final problem of definition noted here concerns the specification of employment and employees. Official statistics use three basic definitions. "Total Employees" (Erwerbstätige insgesamt) is the census definition embracing all persons pursuing gainful employment. When reference is to "Total Dependent Employees" (abhängig Beschäftigte), the self-employed (Selbständige) and assisting family members (mithelfende Familienangehörige) are excluded. "Insured Employees" (sozialversicherungspflichtig Beschäftigte) are employees liable to state retirement pension contributions; further excluded under this heading are established civil servants (Beamte) and part-time employees below the insurance threshold of currently DM 410/15 hours per month (there are certain complicating exceptions). "Insured Employees" presently account for roughly 80 per cent of "Total Employees", "Dependent Employees" for roughly 87 per cent. It is further noted in the passing that survey-based studies of job generation vary in the precision with which they record, in particu-

lar, active owners/partners and part-time employees; in certain sectors and small firms this may on occasion constitute a considerable source of measurement error.

5.1.1 THE LONG-RUN TREND IN THE DISTRIBUTION OF EMPLOYMENT BY FIRM SIZE

The most recent reliable and comprehensive data on the distribution of employment by firm size date from as far back as 1970, when the last Census of Business (Arbeitsstättenzählung) was undertaken. Although, in principle, a Census is held approximately every ten years, that due around 1980 will not be held until 1987. It is impossible to piece together an accurate picture of the firm-size distribution of employment in the total economy during the last one and half decades, although some data are available for certain sectors (see below).

Table 5.3 uses figures from the Censuses of 1907, 1925, 1961 and 1970 to give a broad-brush picture of the change in the firm-size distribution of employment in western Germany during the present century. The figures in principle cover all dependent employees in firms (Unternehmen). The 1907 and 1925 figures are adjusted to correspond to the present-day boundaries of the Federal Republic. No doubt many definitional inconsistencies are contained in the data as between the different years, but it would seem nonetheless reasonable to interpret them in terms of a long-term trend.

The table reveals a continuing decline in the employment share of the smallest firms, with less than ten employees, which dropped from 42 per cent at the beginning of the century to almost half that figure by 1970. A declining share, although much more modest, is equally evident for firms in the next two higher size categories, 10-49 and 50-199 employees. The corollary to this decline is a rise in the employment share of firms employing 200 or more. Most marked is the expanding share of firms with 5,000 and more employees, which rose from 7 per cent

TABLE 5.3THE DISTRIBUTION OF EMPLOYMENT BY ESTABLISHMENT SIZE,
1925 AND 1933 - COLUMN PERCENTAGES

Employment	1925	1933
1-4	29.3	39.7
5-9	7.4	7.9
10-49	16.6	14.4
50-199	16.6	14.4
200-999	17.0	15.2
1000+	13.2	8.4

Source: Stockmann et al. (1983)

in 1907 to almost three times that figure by 1970. The rise of the category of largest firms may have been substantially completed in the inter-war years.

Table 5.4 provides a comparison, this time for establishments (Betriebe), of the size distribution of dependent employment in 1925 and 1933. There was a remarkable rise between these years in the employment share of establishments with less than five persons, a development clearly at odds with the long-term trend. The compilers of the data attribute this to a "flight into self-employment" during the Depression years (coupled with the statistical effect of the mass redundancies of the period having been concentrated in the largest establishments - cf. the figures for those with 1,000 and more employees). Whether today's high unemployment has prompted an increase in self-employment and the rate of new-firm formation is discussed below.

Returning to Table 5.3, the post-war figures, when compared to those for the earlier years, suggest a generally frozen size-distribution of employment. Such changes as are observable between 1961 and 1970 do, nonetheless, follow the long-term trend: firms with 200 and more employees marginally increased their share of total employment, while smaller firms made modest relative losses. The following section suggests, however, that there may have been a reversal of this trend since 1970.

5.1.2. THE DISTRIBUTION OF EMPLOYMENT BY FIRM SIZE AND SECTOR SINCE 1961

Table 5.5 shows the distribution of dependent employment by firm size in the manufacturing and service sectors using data from the 1961 and 1970 Censuses. In 1961 over 60 per cent of service employment was in firms with less than 50 employees, as compared with just over a quarter in similar-sized manufacturing firms. The trend between the two years in both sectors, however, reveals a shift away from the smallest firms.

TABLE 5.4

THE DISTRIBUTION OF EMPLOYMENT BY FIRM SIZE, 1907-70 -
COLUMN PERCENTAGES

Employment Size Class	1907	1925	1961	1970
1-9	41.8	33.0	24.4	22.0
10-49	16.0	14.6	16.0	15.9
50-199	15.1	13.9	14.5	14.4
200-999	13.3	14.5	15.5	16.5
1000-4999	6.9	9.3	11.6	12.2
5000+	6.9	14.8	18.8	19.0

Source: Stockmann et al. (1983)

TABLE 5.5

**THE DISTRIBUTION OF EMPLOYMENT BY FIRM SIZE IN
MANUFACTURING AND SERVICES**

Employment Size Class	Manufacturing*		Services**	
	1961	1970	1961	1970
1-9	12.4	9.9	43.0	39.0
10-49	12.7	12.1	17.4	17.5
50-99	7.4	6.9	5.6	5.9
100-199	8.5	8.2	4.7	5.5
200-499	13.0	13.0	5.1	6.3
500+	46.1	50.0	24.2	25.7

Source: PROGNOS (1979) and own calculations

* Excluding utilities, mining and construction

** Retailing, wholesaling, transport and communications, banking and insurance, restaurants and hotels, cleaning and personal hygiene, education and science, publishing, health and veterinary services, legal and business consultancy, and other services provided by firms. The public sector is excluded.

The employment share of manufacturing firms with less than 10 employees declined by some 20 per cent over the decade, that of similar-sized service firms by approximately 10 per cent.

The overall trend towards employment in larger firms may have been broken in recent years. One suggestion to this effect comes from a comparison of the sectoral distribution of total dependent employment in firms in 1974 and 1983. During these nine years, employment in manufacturing declined by 14.2 per cent, while service employment grew by 9.5 per cent. In view of the relative predominance of larger firms in manufacturing, and of smaller firms in services, it may be that the employment share of small firms in the overall economy has increased of late.

Table 5.6 disaggregates the broad sectoral trend to show the branch-specific development in dependent employment between 1974 and 1983. The table features those branches, of a total of 37, in which employment increased or decreased by at least 10 per cent over the nine years. It shows also the percentage of employment in each branch claimed by firms with less than 200 employees on the basis of the 1970 Census results. Immediately striking is that all of the branches showing decline, with the single exception of railways, are manufacturing activities, while all of the growth categories fall under the rubric of services. The branches with the lowest percentages of employment in small firms had among the largest rates of employment decline, while those with the highest percentages had the largest rates of growth. This might further suggest that small firms have increased their share of total employment of late. Here and in the previous paragraph, the implication may be that the employment share of small firms has increased as a consequence of change in the sectoral/branch structure of the economy.

Whether employment growth in services is compensating for employment loss in manufacturing is explored in Table 5.7. The table compares employment change in the two sectors for the sub-periods 1976-80 and 1980-84, periods of relative economic expansion and contraction respectively. In the more favourable climate of the late 1970's, a rise in industrial employment of 100 jobs lagged well behind the 670,000 ad-

TABLE 5.6

PERCENTAGE EMPLOYMENT CHANGE 1974-83 BY BRANCH

Branch	% Employment Change 1974-83	% Employment in Firms with under 200 Employees in 1970
Textiles	-37.7	30.5
Railways	-32.9	0.8
Clothing	-32.1	60.7
Iron and Steel	-30.6	2.2
DP and Office Equipment	-26.2	6.0
Foundries	-25.4	23.3
Minerals, Glass, Ceramics	-24.1	48.7
Leather, Shoes	-23.9	46.5
Metal Goods, Toys, Jewelry	-20.4	48.3
Electrical Engineering	-19.5	12.7
Paper	-17.6	33.5
Construction	-14.0	75.1
Mechanical Engineering	-13.3	27.5
Printing	-10.4	56.8
Science, Art, Publishing	+20.3	50.3*
Non-Profit Organisations	+23.6	n.a.
Hotels, Restaurants	+24.2	94.9*
Other Services	+29.2	n.a.
Health and Veterinary Services	+36.8	96.8*
Legal and Econ. Consultancy Services	+40.9	95.3

Source: ANBA (1984)

* Approximation, owing to incongruent branch classification

ditional jobs generated in the service sector. In the recessionary conditions of the 1980's, however, service employment increased by the much more modest margin of just 15,000 jobs, while industry shed nigh on a million. There is little comfort in these more recent figures for those who look to private services as the source of new employment to replace jobs lost in industry.

Although comprehensive data on the firm-size structure of employment since 1970 are not available, a partial analysis of recent trends in manufacturing is possible. These data similarly suggest that the long-run trend toward large-firm employment may have been broken. Table 8 shows the distribution of manufacturing employment by firm size for various years between 1970 and 1983. The data cover only firms with 20 or more employees³. The figures for 1970 and 1976 are on a somewhat different basis to those for the later years, so that over-time comparisons should be made only within corresponding sub-periods.

Between 1970 and 1976, when the annual average rate of registered unemployment rose from 0.7 to 4.6 per cent, firms employing less than 200 employees increased their share of total manufacturing employment from 21.8 to 22.6 per cent. A similar phenomenon is observable in the deepening recession since 1980 (unemployment rising from 3.8 per cent in 1980 to 9.1 per cent in 1983), when firms with less than 200 employees increased their employment share from 25.1 to 26.0 per cent. By contrast, in the more favourable climate between 1977 and 1980 (unemployment fell from 4.5 to 3.8 per cent), firms with less than 100 employees, but not those in the 100-199 range, experienced a reduction in their share of manufacturing employment. This analysis suggests that increases in the employment share at least of small manufacturing firms involve a significant cyclical component in addition to any secular effects.

³ The data are derived from the "Industriestatistik", which covers the establishments of industrial firms with 20 or more employees. Results are normally reported only for establishments, but the Deutsches Institut für Wirtschaftsforschung is able to aggregate the data to the firm level; this is the source of the figures in Table 5.8.

5.1.3 EMPLOYMENT IN CRAFT (HANDWERK) FIRMS SINCE 1980⁴

A further official statistical source providing some insight into the employment performance of smaller firms is the quarterly sample survey of craft firms. Table 5.9 shows the change in craft employment, broken down by four sectors, between 1980 and 1984, and makes a comparison with the corresponding sectoral employment trends in the economy as a whole. The two right-hand columns of the table show that craft firms are predominantly small: the percentage with 20 or more employees varies between just 3 and 10 per cent in the four sectors, although the few larger firms often account for around a half of total craft employment in their sector.

In every sector, craft employment has evolved more favourably than total employment since 1980: in the three sectors which experienced employment decline, job losses in craft firms were lower than losses overall; in the expanding other-services sector, craft employment growth was higher than the overall increase. These data would again suggest that small firms are currently outperforming large in employment generation.

5.1.4 SELF-EMPLOYMENT SINCE 1971

Self-employed persons (Selbständige) are defined for official statistical purposes in West Germany as those who own or lease, and direct, a business as their predominant source of livelihood. The definition is a restricted one inasmuch as those in dependent employment who run a business "on the side" tend not to be covered.

⁴ The designation Handwerk or craft (or artisan) firms may have an anachronistic ring, but this is an economically and politically significant class of business. They are difficult to define succinctly other than tautologically ("A Handwerk firm is a firm registered in the Register of Handwerk Firms"). Roughly, they are firms providing goods and services of a semi-standard or personalised kind and are usually (required by law to be) directed by a master craftsman (Handwerksmeister). Not the least reason for treating them apart here is that official statistics frequently cover them separately.

TABLE 5.7

**EMPLOYMENT CHANGE IN INDUSTRY AND SERVICES,
1976-80 AND 1980-84**

Sector/Branch	Employment Change (in thousands)	
	1976-80	1980-84
Industry (excl. Construction)	+97	-993
Services	+667	+15
- Retailing/Wholesaling	+115	-203
- Transport/Communications	+7	-43
- Banking/Insurance	+60	+22
- Other Services	+485	+239

Source: Ermann (1984); ANBA (annual)

TABLE 5.8

**DISTRIBUTION OF EMPLOYMENT BY FIRM SIZE IN
MANUFACTURING, 1970-83**

Employment Size Class	1970	1976	1977	1980	1983
20-49	5.6	5.8	7.7	7.3	7.8
50-99	6.9	7.3	8.2	8.1	8.2
100-199	9.3	9.5	9.6	9.7	10.0
200-499	15.5	15.4	14.9	14.8	14.8
500-999	11.2	10.9	10.7	10.8	10.3
1000+	51.6	51.1	49.0	49.2	48.9
Total (000s)	8396.5	7199.5	7346.7	7462.7	6709.1

Source: Bade (1985)

TABLE 5.9**EMPLOYMENT CHANGE 1980-84 IN CRAFT FIRMS AND IN THE TOTAL ECONOMY BY SECTOR**

Sector	Craft Employment			Total Employment			(a)	(b)
	1980	1984	Change (%)	1980	1984	Change (%)		
Manufacturing	1450	1364	-6.1	9860	8867	-10.1	4.5	31.9
Construction	1637	1502	-8.3	1773	1597	-9.9	10.2	49.7
Commerce	226	223	-1.3	3305	3102	-6.1	7.6	46.9
Other Services	611	642	+5.1	6951	7169	+3.1	2.9	53.1

(a) Percentage of Craft Firms with 20 or more employees

(b) Percentage of Craft Employment in Firms with 20 or More Employees

Sources: Statistisches Bundesamt (1979)
Bundesministerium für Arbeit (1984)

Table 5.10 shows in the number of self-employed persons, excluding those in agricultural self-employment, in each year since 1971. Between then and 1976 the number declined from 1.87 to 1.81, thereafter rising again to 1.87 million by 1984. During the same period, the population in employment, excluding agriculture and assisting family members, declined by 2.6 per cent, so that the relative share of self-employment increased from 7.7 per cent in 1971 to 7.9 per cent in 1984; the increase has in fact come during the last two years, 1983 and 1984.

Although such a measure of the "rate of self-employment" (Selbständigenquote) can be found in many West German studies, it is open to the criticism that the denominator takes no account of those out of work. Table 5.10 accordingly includes an estimate of the size of the labour force (population in employment plus the registered unemployed) in each year. On this basis, the rate of self-employment has not changed significantly: the absolute trend is unexceptional inasmuch as it has tended to shadow the changing size of the labour force

Figure 5.1 plots the number of self-employed in each year since 1964 and the annual average rate of registered unemployment. If the expectation is that self-employment tends to rise with unemployment, the data for these 20 years would seem to provide only partial confirmation. The recession of 1966-67 was accompanied by a rise in self-employment, that of 1973-75 was not (self-employment in fact declined as unemployment rose), and the stark rise in the percentage seeking work since 1980 has been matched by a rather less steep increase in the number of those in business on their own account.

These data should not, of course, be interpreted as implying that actual or anticipated unemployment does not predispose people to enter business. The figures measure the stock of self-employed persons in each year. Rising unemployment may increase entry into self-employment, but counter-vailing exit by the pre-existing self-employed may result in little or no change in the size of the stock. Survey-based evidence suggesting that unemployment does have a significant bearing on entry into self-employment will be presented shortly (cf. 1985).

TABLE 5.10

SELF-EMPLOYMENT 1971-1984

Year	Self-employed ¹ (000s)	Employed ² Population % (000s)	Labour ³ Force % (000s)
1971	1872	24196 7.7	27002 6.9
1972	1873	24244 7.7	26990 6.9
1973	1863	24519 7.6	27195 6.9
1974	1848	24252 7.6	27147 6.8
1975	1822	23606 7.7	26884 6.8
1976	1806	23519 7.7	26651 6.8
1977	1816	23615 7.7	26577 6.8
1978	1819	23847 7.6	26692 6.8
1979	1845	24261 7.6	26915 6.9
1980	1848	24591 7.5	27191 6.8
1981	1836	24435 7.5	27373 6.7
1982	1857	24007 7.7	27465 6.8
1983	1860	23617 7.9	27486 6.8
1984	1868	23561 7.9	27439 6.8

¹ Excluding the agricultural self-employed

² Excluding agricultural self-employed and assisting family members

³ Employed population as previously defined plus the annual average number of registered unemployed

Source: Clemens et al. (1986) Bundesministerium für Arbeit
(annual)

FIGURE 5.1

TRENDS IN SELF-EMPLOYMENT
AND UNEMPLOYMENT 1964-84

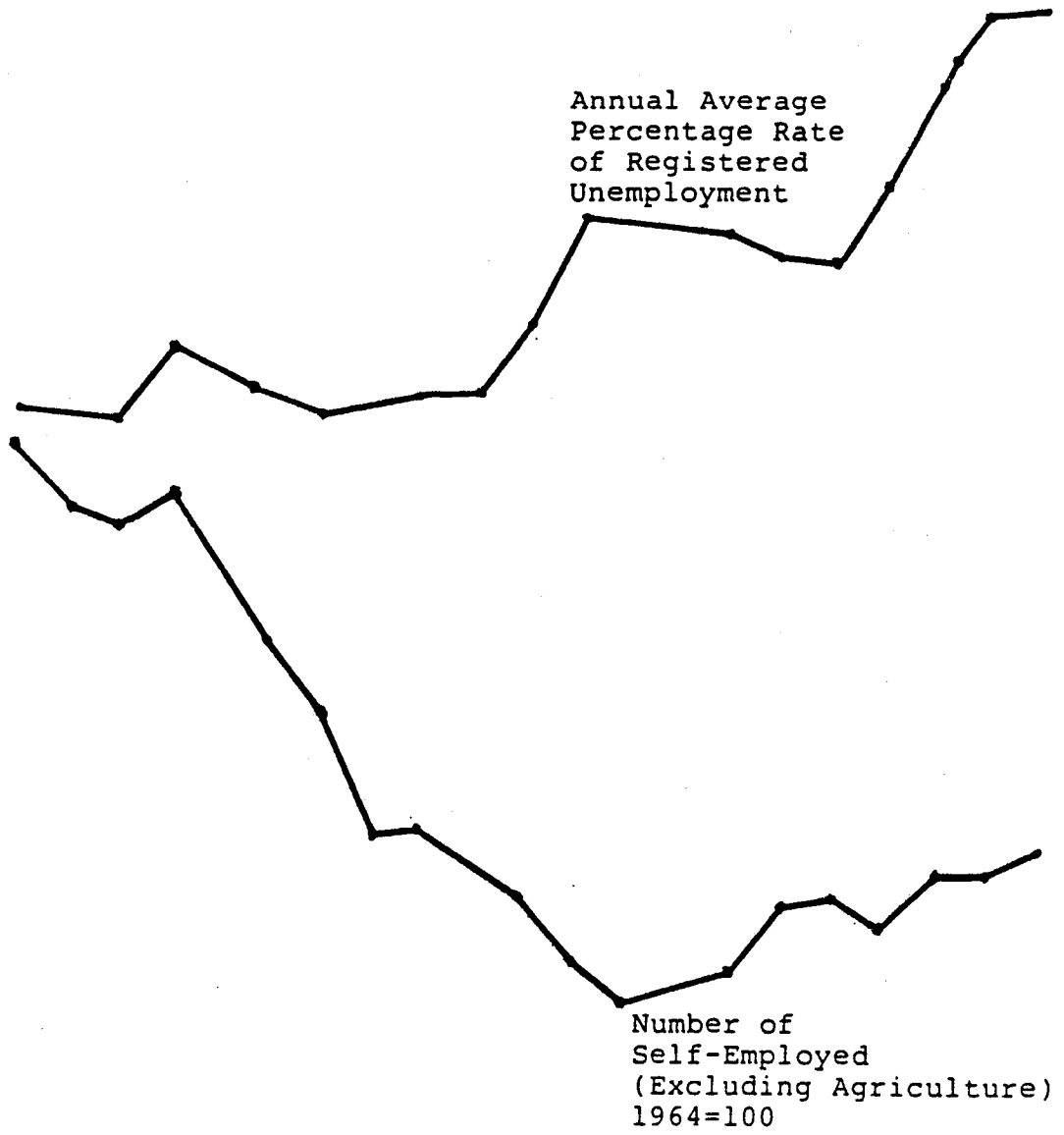


TABLE 5.11

SELF-EMPLOYMENT BY SECTOR, 1980-84

Year	Self-Employed (000s)	Employed Population (000s)	% ²	Labour Force ¹ (000s)	% ²
Manufacturing					
1980	565	11550	4.9	11844	4.8
1984	550	10389	5.3	11142	4.9
Change (%)	-2.7	-10.1		-5.9	
Wholesaling, Retailing, Transport, Communications					
1980	623	4745	13.1	4884	12.8
1984	625	4514	13.8	4836	12.9
Change (%)	0.0	-4.9		0.0	
Other Services					
1980	660	8296	8.0	8439	7.8
1984	693	8658	8.0	8960	7.7
Change (%)	+5.0	+4.4		+6.1	

¹ Defined as in Table 10, whereby the unemployed are allocated to sector on the basis of the last job held.

² Self-employment as a percentage of total employment in the respective category.

Source: Clemens et al. (1986)

Table 5.11 disaggregates the trend in self-employment since 1980 by three broad sectors. The overall increase since the turn of the decade has been due to a five per cent rise in self-employment in "other services", the number in the transport and communications sector having remained more or less unchanged, while self-employment in industry has declined by 2.7 per cent. Thus services appear as the motor of growing self-employment. In another, relative sense, however, the growth in self-employment may be attributed to the change in industrial self-employment (-2.7%), which was significantly lower than the rate of decline in total industrial employment (-10.1% or -5.9%, depending on the denominator used); in transport and communications and in other services, self-employment has evolved more nearly in line with overall employment in the respective sector. The industrial self-employed have weathered the current recession rather better than might have been expected and in this sense account for much of the rise in self-employment since 1980.

5.1.5 THE STOCK OF FIRMS AND RATES OF ENTRY AND EXIT

No official statistical series in West Germany permits an analysis of short-run changes in the stock of firms⁵. This section reports results from an analysis by Clemens et al. (1986), who used membership data of the Chambers of Industry and Commerce (Industrie- und Handelskammer) and of the Chambers of Craft Trades (Handwerkskammer) to estimate the size of the stock of firms in each year between 1971 and 1985⁶,

⁵ This is in principle possible on the basis of turnover tax returns (Umsatzsteuerstatistik), but the published data are not suitably disaggregated.

⁶ The membership data for the two kinds of cameral organisation were adjusted to take account of the roughly 20 per cent of craft firms which are simultaneously members of a Chamber of Industry and Commerce, and were supplemented by an estimate for those firms which are a member of neither organisation.

and business registration records (Gewerbemeldungen) to estimate the numbers of firms entering and leaving the stock annually between 1973 and 1984⁷.

The stock of firms was estimated to have grown from 2.02 million in 1971 to 2.37 million in 1985, representing an annual average rate of increase of 1.1 per cent (Table 5.12). The trend over the years was far from uniform, however, as the graph accompanying the table shows. Between 1971 and 1979 the stock of firms tended to decline (by 2.2 per cent over the eight years); since 1979, by contrast, it has increased dramatically, by nigh on 20 per cent in just six years.

Figure 5.2 plots the evolution of the size of the firm stock over the fourteen years since 1971 and compares it with the size of the labour force (population in employment plus the registered unemployed) and the annual average rate of unemployment in each year. The stock would appear to have evolved unspectacularly during the 1970's, moving broadly in parallel with the labour force. That trend was clearly broken in 1979/80, since when the population of firms has grown rather in line with the rise in unemployment. Unlike the earlier figures for self-employment, this would suggest that rising unemployment has increased the rate of new business formation.

⁷ With certain qualifications, every legally independent West German business conducted for profit is required to register when first founded; to re-register consequent upon a change of, in particular, location, ownership or nature of the business, and to deregister when it ceases to exist. A principal qualification is that agricultural businesses and certain professions - notably lawyers and medical practitioners in private practice - are exempted from this requirement.

Because business registrations, which are made locally, are not collated nationally, Clemens et al. extrapolated a national figure for the number of firms entering and leaving the stock each year. Their method is clearly subject to error, but the resulting estimates may reliably reflect trends. In brief, they sampled at random and scrutinised individual registration records in Northrhine-Westfalia in order to estimate for each year the percentage of all registrations and de-registrations which were genuine start-ups and closures. The resulting percentages were then applied to the total number of registrations and de-registrations in other states in order to estimate national totals for firms entering and leaving the stock.

Table 5.13 and the accompanying graph show the evolution of firm births and deaths in relation to the total stock for each year between 1973 and 1984. Between 1973 and 1975 deaths outnumbered births. Since then, there has been a surplus of births over deaths. Viewing the overall period, the ups and downs in births and deaths during the 1970's appear trivial in comparison to the volatility of the 1980's. Since 1979 births have soared; since 1980 so, too, have deaths. Because the surplus of births over deaths has increased by only a small margin, the stock of firms has grown but modestly in comparison.

If, therefore, rising unemployment encourages the formation of many new firms, it is no less true that many existing businesses simultaneously disappear. Whether the eclipsed enterprises were ones recently founded (because perhaps firms started "out of necessity" by the unemployed or by those fearing redundancy tend to be built on less solid managerial and financial foundations) and/or were displaced by new businesses entering the stock are highly relevant questions, but ones to which these data can provide no answers.

TABLE 5.12

THE STOCK OF FIRMS, 1971-1985
(000s)

1971	2024	1972	2018	1973	2006	1974	2022
1975	2017	1976	1988	1977	1964	1978	2002
1979	1964	1980	2025	1981	2087	1982	2151
1983	2223	1984	2308	1985	2371		

Source: Clemens et al. (1986)

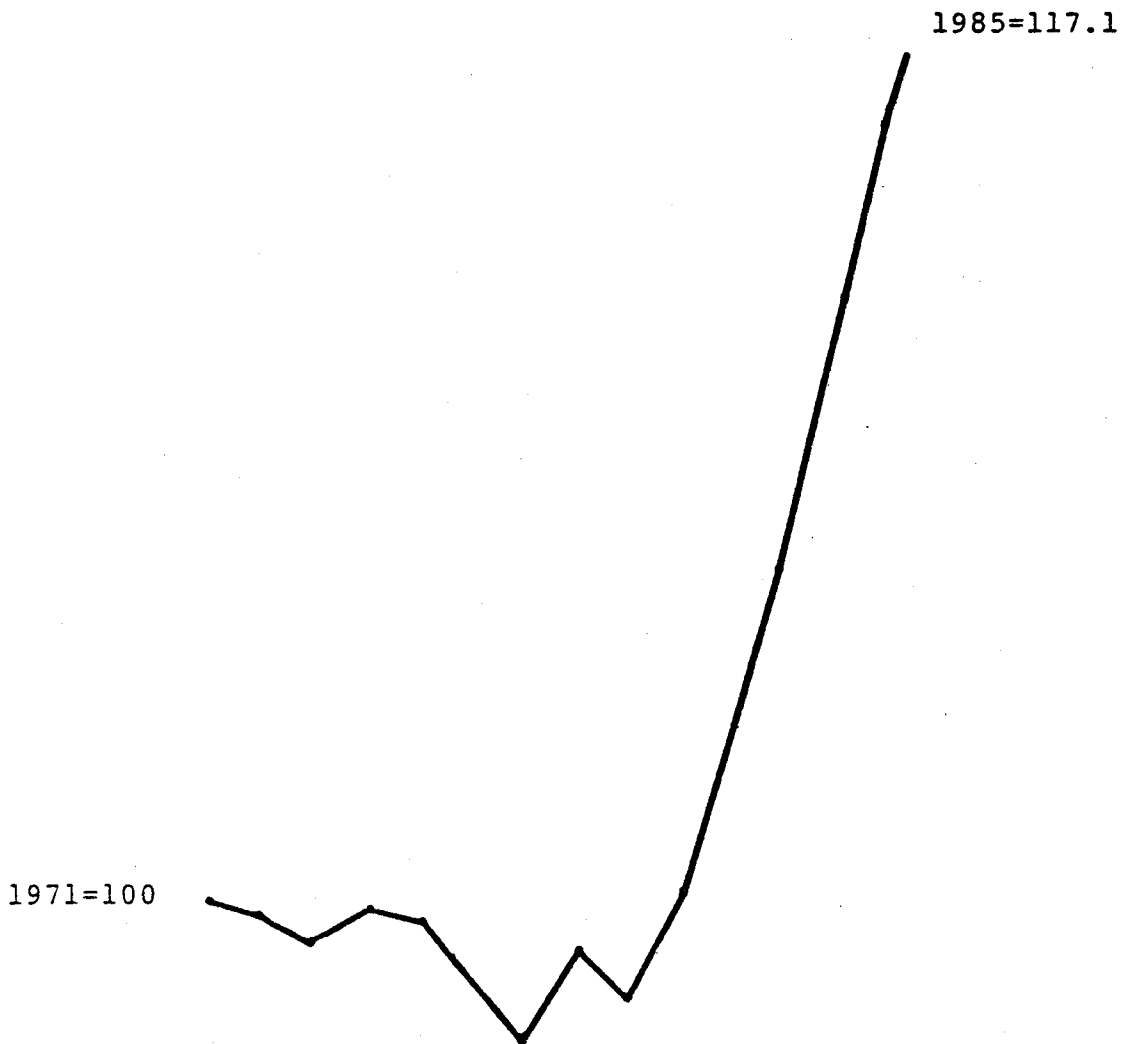


FIGURE 5.2

TRENDS IN THE STOCK OF FIRMS, UNEMPLOYMENT AND
THE SIZE OF THE LABOUR FORCE, 1971-84

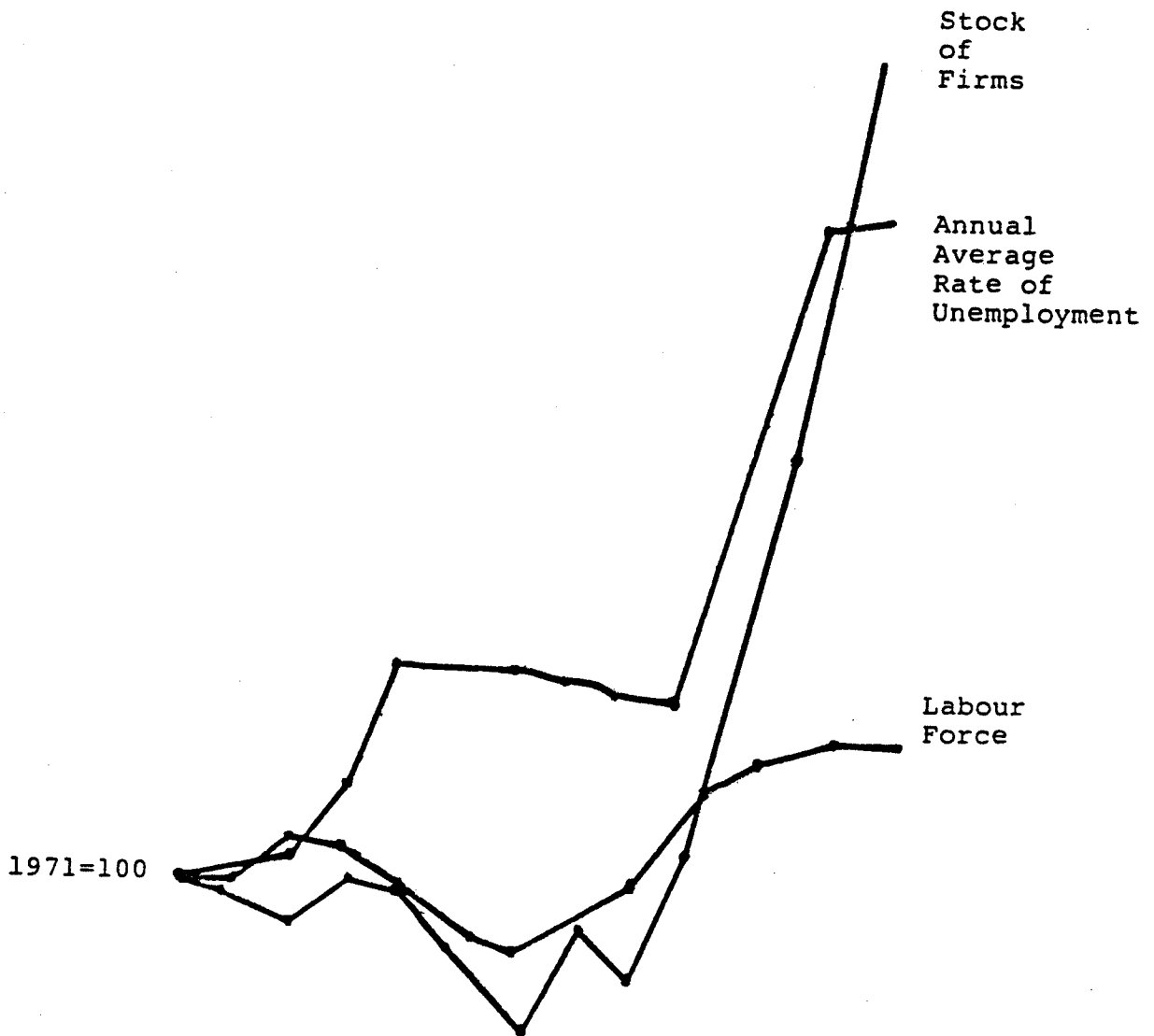
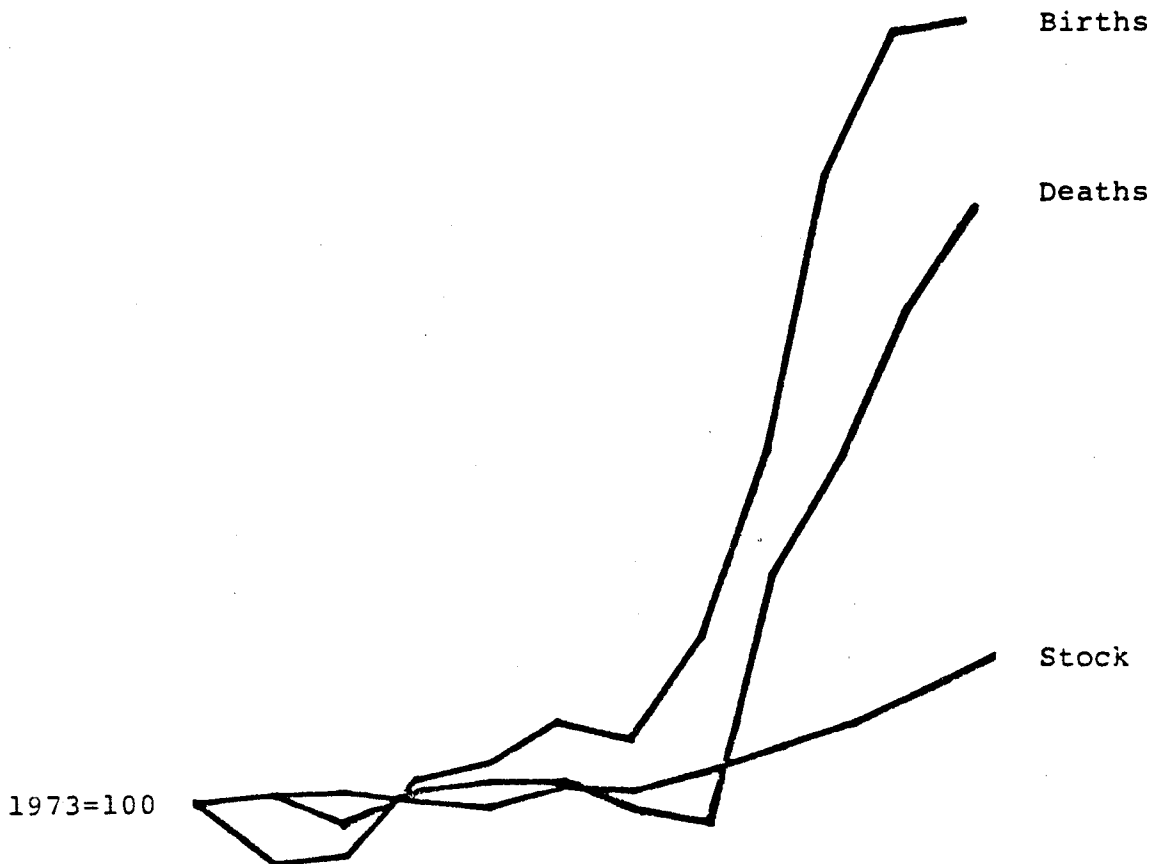


TABLE 5.13

THE STOCK OF FIRMS, ENTRIES AND EXITS,
1973-84
(000s)

Year	Stock	Entries	Exits
1973	2006	148	144
1974	2022	135	146
1975	2017	137	139
1976	1988	152	147
1977	1964	154	147
1978	2002	162	145
1979	1978	156	138
1980	2025	178	135
1981	2087	215	184
1982	2151	270	207
1983	2223	297	235
1984	2308	298	254

Source: Clemens et al. (1986)



5.2

A REVIEW OF RECENT JOB-GENERATION STUDIES

This part of the report reviews findings from six recent job-generation studies in West Germany. The review is selective in two senses. First, two recent studies are not covered. The ABT study on "The Employment Potential of Small and Medium Firms in the Federal Republic of Germany" undertaken for the Statistical Office of the European Community (cf. Steinle, 1984 for a summary presentation of the principal results) has been excluded because of doubts about the representativeness of its data and the appropriateness of some of its methodological procedures (cf. the criticisms raised by Mendius et al., 1985, and the response thereto by Steinle, 1985). Bock's study of "Differences in the Employment Behaviour of Small and Large Firms" (Bock, 1985) has been excluded because he covers only (manufacturing) firms with at least 100 employees, thus ignoring truly small firms.

The survey is also selective inasmuch as coverage of each study has been limited to its principal findings and to ones which complement those of other studies by addressing different questions or by suggesting different answers to the same questions. The six selected studies are treated in turn. A summary discussion of what they tell about the job-generation behaviour of small and medium firms in West Germany concludes the report.

5.2.1 WEITZEL (1986)

This study of "The Employment Effects of New Firms" was commissioned by the Federal Ministry for Economic Affairs. It is based on a postal survey of a sample of new firms first founded in 1981 or 1983 in selected sectors and regions of West Germany.

In the industrial, wholesaling/retailing and service (excluding the professions) sectors, the sample was drawn from business registrations (Gewerbemeldungen) in eight Chamber of Commerce regions (Kassel, Offenbach, Münster, Wuppertal/Solingen/Reimscheid, Essen/Mülheim/Oberhausen, Koblenz, Augsburg/Schwaben, and Munich/Oberbayern). In the craft (Handwerk) sector the sample was drawn from business registration records in seven Chamber of Craft Trade regions (Hannover, Hildesheim, Kassel, Dortmund, Koblenz, Schwaben, Oberbayern). Certain professions were also surveyed (lawyers and medical practitioners in private practice), which findings are not covered here, however. The variety of regions covered presumably ensures that the results are free of dramatic regional bias. It is to be stressed that certain branches within the selected sectors in which it was assumed that few dependent jobs tend to be created, e.g. taxi businesses or insurance agencies working on a commission basis, were excluded from the survey; thus, as Weitzel himself admits, the results in terms of jobs created will tend to be positively biased. As a final caveat, it is noted that although a total of 2,482 firms were surveyed, the numbers in certain analytical categories are sufficiently small as to bid caution in generalising the results.

A first finding stresses that just over 25 per cent of newly registered firms are not genuinely new start-ups but the continuation of an existing business, i.e. take-overs. This estimate was made on the basis of a corresponding control item in the survey questionnaire. It would seem to tally reasonably well with an estimate for Northrhine-Westfalia by Clemens et al. (1986), who found the percentage of new businesses (including legally independent subsidiaries) among all registrations to number 72.7 per cent in the five years 1980-84. The number of takeovers varied from sector to sector, as Table 5.14 shows; it was highest in the hotel and restaurant trades, where over one half of all notionally new businesses were in fact the continuation of an existing enterprise. Weitzel stresses this finding because he believes that take-overs tend to secure existing employment rather than generate new jobs.

TABLE 5.14

**NEW BUSINESS REGISTRATIONS CLASSIFIED TO
START-UPS AND TAKEOVERS BY SECTOR**

Sector	Total Registrations n	.....of which			
		Start-ups		Takeovers	
		n	%	n	%
Industry	128	98	76.7	30	23.3
Craft Trades	1051	747	71.1	304	28.9
Retailing	480	346	72.1	134	27.9
Wholesaling	118	96	81.4	22	18.6
Commission Agents	158	143	90.5	15	9.5
Hotels, Restaurants	135	63	46.7	72	53.3
Other Services	411	363	88.3	48	11.7

Source: Weitzel (1986) and own calculations

A second finding is that almost a quarter of the new start-ups (i.e. excluding takeovers) were not their founders' sole source of livelihood. Again there is sectoral variation (Table 5.15); new start-ups are a supplementary source of livelihood particularly in retailing and "other services" as well as among commission agents⁸. Weitzel suggests that, at least initially, little additional employment will tend to be generated by such businesses, their prime function being to stabilise their founders' personal economic circumstances.

Taking account of both of these factors, overall just some 58 per cent of notionally new businesses are genuine start-ups providing the founders' sole source of livelihood; the range is from 45 per cent in retailing to 71 per cent in manufacturing.

Before turning to the employment effects of new start-ups, it is interesting to note the evidence turned up by Weitzel on the role of actual or anticipated unemployment as a motive for setting up in business. Respondents were asked whether they were previously unemployed or, if in dependent employment, whether they judged their previous job to have been secure. Table 5.16 shows that of those setting up in business in 1981, 9.0 per cent were previously unemployed and a further 32.3 per cent considered their previous job insecure. The corresponding figures for 1983 start-ups are 17.6 and 43.3 per cent respectively. Adding the two figures for each year suggests that actual or anticipated unemployment may have at least partially motivated 41.3 per cent of 1981 business founders and 61.0 per cent of those in 1983. The increase in the percentages between the two years should be seen against a rise in the annual average rate of registered unemployment from 5.5 to 9.1 per cent between the two years.

Table 5.17 presents data on the jobs created in the new start-ups founded in 1981. In most sectors, between 60 and 70 per cent of businesses started without any employees. The figure for all sectors was

⁸ Commission agents are those who trade goods or services on commission, i.e. that which is traded never enters their ownership. Examples are estate agents and insurance brokers.

TABLE 5.15

START-UPS CLASSIFIED TO SOLE OR SUPPLEMENTARY
SOURCE OF LIVELIHOOD BY SECTOR

Sector	Start-ups	of which			
		Sole		Supple- mentary	
		Source of Livelihood			
	n	n	%	n	%
Industry	98	91	92.9	7	7.1
Craft Trades	747	658	88.1	89	11.9
Retailing	346	216	62.4	130	37.6
Wholesaling	96	81	84.4	15	15.6
Commission Agents	143	108	75.5	35	24.5
Other Services	363	288	79.3	75	20.7
All Sectors ¹	1793	1442	80.4	351	19.6

¹ Hotels and restaurants are excluded from the table.

Source: Weitzel (1986), and own calculations

TABLE 5.16

**FOUNDERS OF START-UPS CLASSIFIED AS TO
WHETHER PREVIOUSLY UNEMPLOYED OR JUDGING
PREVIOUS EMPLOYMENT INSECURE**

Sector	Percentage of Founders Previously Unemployed		In Insecure Job	
	1981	1983	1981	1983
	Industry	5.6	9.3	33.3	42.0
Craft Trades	10.8	24.0	34.3	50.0
Retailing	6.8	13.9	33.7	38.3
Wholesaling	10.0	2.1	37.1	40.9
Commission Agents	7.1	16.0	36.5	37.5
Other Services	8.9	14.2	24.6	36.4
All Sectors	9.0	17.6	32.3	43.4

Source: Weitzel (1986) and own calculations

**NUMBER OF EMPLOYEES IN NEW FIRMS (FOUNDED 1981) BY SECTOR
AND YEAR SINCE BIRTH**

Sector	Starts with Following Numbers of									
	Assisting Family Members			Dependent Employees				Apprentices		
	0	1	2+	0	1	2-3	4+	0	1	2+
Industry										
1. Year	52.8	41.7	5.6	36.1	22.2	25.0	16.7	97.2	2.8	-
2. Year	52.8	41.7	5.6	11.1	19.4	30.6	38.9	91.7	8.3	-
3. Year	47.2	47.2	5.6	8.3	11.1	36.1	44.4	86.1	11.1	2.8
4. Year	44.4	44.4	11.1	8.3	5.6	19.4	66.7	75.0	19.4	5.6
Craft Trades										
1. Year	54.9	40.3	4.7	66.8	12.6	13.0	7.5	82.2	13.4	4.3
2. Year	49.8	45.5	4.7	49.8	17.8	19.0	13.4	74.3	14.2	11.5
3. Year	51.0	44.3	4.7	41.1	16.6	22.1	20.2	65.2	15.0	19.8
4. Year	51.0	43.9	5.1	38.7	16.6	21.3	23.3	62.1	17.0	20.9
Retailing										
1. Year	57.9	33.9	8.3	66.9	16.5	11.6	5.0	95.9	4.1	-
2. Year	54.5	37.2	8.3	62.8	17.4	14.0	5.8	88.4	9.1	2.5
3. Year	52.9	37.2	9.9	57.9	16.5	19.8	5.8	86.8	9.1	4.1
4. Year	54.5	34.7	10.7	55.4	15.7	19.0	9.9	84.3	11.6	4.1
Wholesaling										
1. Year	55.0	37.5	7.5	67.5	20.0	7.5	5.0	97.5	2.5	-
2. Year	50.0	40.0	10.0	50.0	25.0	15.0	10.0	92.5	5.0	2.5
3. Year	47.5	42.5	10.0	42.5	12.5	22.5	22.5	87.5	10.0	2.5
4. Year	42.5	45.0	12.5	40.0	7.5	22.5	30.0	85.0	12.5	2.5
Commission Agents										
1. Year	60.7	35.7	3.6	85.7	10.7	1.8	1.8	100	-	-
2. Year	58.9	35.7	5.4	82.1	8.9	7.1	1.8	100	-	-
3. Year	55.4	41.1	3.6	82.1	7.1	8.9	1.8	100	-	-
4. Year	51.8	44.6	3.6	82.1	8.9	7.1	1.8	100	-	-
Other Services										
1. Year	62.9	34.1	2.9	72.9	12.9	8.8	5.3	98.2	1.2	0.6
2. Year	60.0	35.9	4.1	67.6	12.9	10.6	8.8	95.9	2.4	1.8
3. Year	58.2	35.3	6.5	65.3	12.9	10.0	11.8	93.5	4.1	2.4
4. Year	59.4	33.5	7.1	60.0	17.1	8.2	14.7	92.4	3.5	4.1
All Sectors										
1. Year	57.8	37.1	5.0	68.3	14.2	11.1	6.4	91.9	6.4	1.8
2. Year	54.1	40.2	5.6	57.2	16.3	15.4	11.1	86.4	8.3	5.3
3. Year	53.1	40.5	6.4	51.9	14.3	18.3	15.4	81.5	9.5	9.0
4. Year	53.0	39.8	7.2	49.1	14.8	16.4	19.7	78.8	11.1	10.1

Source: Weitzel (1986)

TABLE 5.17

68.3 per cent and the extremes were manufacturing (36.1 per cent began without any employees) and commission agents (72.9%). By the end of the fourth year of existence, two-thirds of manufacturing businesses had four or more employees, compared with 30 per cent of wholesaling firms, nigh on a quarter of craft firms, and 15 per cent of businesses in "other services".

The overall conclusion of the study is that the employment effect, particularly the net effect, of new start-ups is modest. Over all sectors, approximately one job in addition to that of the founder was created by each new firm on average by the end of the first year. Even recognising that in some sectors employment tended to expand significantly in the subsequent one to three years, Weitzel sees no reason to modify his conclusion of modest employment gains. He stresses not only his having selected sectors and branches with probably a relatively high propensity to generate employment but also, and more fundamentally, his inability to take account of: (i) jobs lost by new firms which closed within the period; (ii) the magnitude of employment displacement effects by new firms on existing enterprises, and (iii) ignorance of whether the jobs previously occupied by those who left dependent employment to start up in business were refilled or rationalised away. He also stresses that relatively few firms create significant numbers of jobs in the short run. The craft sector, for example, accounted for the largest percentage of jobs created, but 90 per cent of those jobs were in just 20 per cent of the new firms. Finally, Weitzel argues that most of the new manufacturing businesses, which individually were the most likely to expand employment in the years following start-up, were engaged in activities of kinds likely to be put out by large firms, e.g. repair, assembly and printing work. If this is true, any greater propensity of small firms to generate jobs may simply reflect a redistribution of economic activity and employment from large firms to small, with the implication of no net employment gain and that large firms are the source of corresponding small-firm growth.

5.2.2 EWERS, FRITSCH AND KLEINE (1983); EWERS (1984); FRITSCH (1984)

This analysis was undertaken as part of a study of "Training-oriented Regional-Policy Strategies with Special Reference to Small and Medium Firms" commissioned by the Federal Ministry for Regional Planning and Construction (Bundesministerium für Raumordnung, Bauwesen und Städtebau). Several sources were employed to estimate the job-generation performance of firms according to employment-size categories. This review limits itself to two of the authors' analyses based on relatively large and sectorally broad samples of firms.

These two analyses used the records of the Kreditanstalt für Wiederaufbau, a publicly owned financial institution one of the functions of which is to administer a variety of public programmes providing financial assistance to firms. The first analysis relates to 127,289 legally independent firms (Unternehmen) which received assistance from the Kreditanstalt within the context of its regional-development and two supplementary soft-loan programmes (the MI and MII programmes) during the period 1974-83. These programmes in principle cover all sectors of the economy except agriculture and the professions. Within this constraint, the large sample size may suggest broadly representative coverage, although no specific test was made by the authors. Several additional caveats would seem appropriate. First, the conditions of award attaching to these programmes probably biased coverage against the largest firms; in the late 1970's, for example, regional-development awards were generally available only to small and medium firms with up to 200 employees and/or annual turnover not exceeding DM 50 million, although these limits were not strictly interpreted (cf. Allen et al., 1979); the supplementary programmes were available to a wider circle of firms, with annual turnover not exceeding DM 200 million (cf. Zeitschrift für gesamte Kreditwesen, 1980). Second, it may be that public assistance tends to be sought disproportionately by the more expansion-minded firms, which would give the results a positive bias. Third, there may be a bias against relatively labour-intensive firms, since assistance is provided to help finance capital investment (including rationalisation in-

A further caveat relates to the fact that firm's employment performance was measured in relation to their present employment at the time of application and anticipated future employment upon completion of the projected investment. The second datum, of course, is essentially hypothetical. The researchers claim, however, that individual checks by the Kreditanstalt on the basis on new applications made by firms at a later date tend to show high overall correspondence between numbers of jobs projected and actually created, with divergence in either direction for individual firms. It should perhaps also be noted that the intended jobs may have been generated over variously long periods, depending upon how rapidly firms completed their projected investment. A final caveat is that the findings relate to a population of survivor firms: nothing is known about jobs lost during the period as a consequence of firm closures, nor could start-ups be separately identified.

Table 5.18 summarises the principal results⁹. The percentage of firms expecting to generate additional jobs generally declines with increasing size, from 74 per cent of those with less than 10 employees at the time of their application to 38 per cent of those with 1,000 or more. Almost a quarter (23.3%) of the projected new jobs were to be created by firms with less than 10 employees and over 70 per cent (71.1%) by such with less than 100.

Ewers et al. do not show how many employees were grouped in each size category of firm at the time of application, which might serve as a yard-stick for assessing whether particular size classes made a disproportionate contribution to the overall rise in employment. An admittedly crude approximation is to use the firm-size distribution of employment in firms, excluding agriculture, on the basis of the 1970 census. This is shown in the table. Firms with less than 10 employees appear to have made a modestly greater contribution to expanded employment than might have been expected. The most striking positive disproportion is

⁹ The table shows a net increase in employment of 444,041. Aggregate data for dependent employment excluding the public sector show it to have declined by 4.2 per cent between June 1974 and June 1983. This suggests that the data are indeed subject to positive bias.

TABLE 5.18

ANTICIPATED EMPLOYMENT DEVELOPMENT OF ASSISTED FIRMS,
1974-83

Employment Size Class	n Additional Jobs Firm	% Firms Anticipating Additional Jobs	% Share of Additional Jobs	% Share of 1970 (Census) Employment
1-9	1.7	73.6	23.3	21.9
10-19	2.8	74.3	14.9	15.9
20-49	4.1	68.8	19.2	7.1
50-9	6.1	61.4	13.7	7.3
100-199	7.7	52.1	10.8	9.9
200-499	9.8	43.3	9.8	37.9
500-999	15.7	41.2	5.0	
1000+	24.0	37.6	3.2	
All Firms	3.5	69.4	100	100

Source: Fritsch, 1984; PROGNOSES 1979 and own calculations

for firms in the 10-49 employee category, which accounted for 34.1 per cent of the new jobs but for only 15.9 per cent of 1970 employment in firms. Positive disproportions, of declining relative size, are also evident for firms in the 50-99 and 100-199 categories. Negatively striking is that firms with 500 and more employees accounted for 37.9 of 1970 employment but for just 8.2 per cent of additional jobs. The analysis by Ewers et al., bearing in mind the several caveats introduced earlier, in particular the restriction to survivor firms, would indeed suggest that smaller firms make a disproportionately large contribution to job creation.

In an appendix to their report Ewers et al. disaggregate their results for the industrial and service sectors. These are reproduced in Table 5.19, to which again has been added the 1970 firm-size distribution of employment. Service firms of all sizes were generally more likely to expand employment than similar-sized industrial firms; the exception by a modest margin are firms in the 1-9 employee category. Striking is that large service firms had a much greater propensity to expand than large industrial enterprises: whereas less than 40 per cent of industrial firms with 500 and more employees expected to create additional employment, around 65 per cent of similar-sized service firms anticipated expansion. Around one-third of the new service jobs were to come from firms with less than 10 employees. The 1970 employment figures suggest, however, that this may be unexceptional, since almost 35 per cent of 1970 service employment in firms was in enterprises of this size. Disproportionately high contributions to expanded service employment were to be expected from firms with between 10 and 50 employees initially, and to a lesser extent from those in the 50-99 category. In the manufacturing sector, by contrast, all size categories up to 200 employees would appear to have been planning a disproportionately large expansion of their labour force, most strikingly firms in the 10-49 size category.

The second analysis reported by Ewers et al. again uses the records of the Kreditanstalt für Wiederaufbau, this time with the difference that a cohort of firms was fashioned by selecting enterprises which had

ANTICIPATED DEVELOPMENT OF ASSISTED FIRMS CLASSIFIED TO INDUSTRY OR SERVICES, 1974-82

Industry					
Employment Size Class	n Firms	n Additional Jobs per Firm	% Firms Anticipating Additional Jobs	% Share of Additional Jobs	% Share of 1970 (Census) Employment
1-9	22,601	2.0	75.8	17.1	9.5
10-19	11,603	3.0	73.4	13.6	
20-49	11,190	4.4	67.4	18.9	9.5
50-99	6,373	6.2	59.4	15.3	6.7
100-199	4,447	7.5	49.6	12.8	7.9
200-499	3,494	9.3	41.5	12.5	12.5
500-999	1,141	14.4	39.7	6.3	
1,000+	496	18.4	35.7	3.5	51.8
All firms	61,311	4.2	67.3	100	100

TABLE 5.19

Services					
Employment Size Class	n Firms	n Additional Jobs per Firm	% Firms Anticipating Additional Jobs	% Share of Additional Jobs	% Share of 1970 (Census) Employment
1-9	30,156	1.6	74.4	33.2	34.9
10-19	8,859	2.8	77.3	16.8	
20-49	7,060	4.1	73.3	19.9	20.4
50-99	2,581	6.5	68.3	11.4	7.5
100-199	1,153	9.4	64.5	7.4	6.7
200-499	549	14.7	58.7	5.5	7.1
500-999	131	33.1	64.9	3.0	
1000+	39	103.1	66.7	2.7	23.4
All firms	50,528	2.9	74.0	100	100

Source: Ewers et al. (1983) and own calculations

made an application for assistance in each of 1974 and 1981. In this instance, therefore, comparisons could be made between actual employment in two years. The cohort contains 888 firms, as before survivor firms only. The reduced sample size makes the question of the representativeness of the data rather more acute; again, no details are provided. Table 5.20 provides the results of this analysis, again supplemented by the 1970 firm-size distribution of employment.

The authors report a growth rate for each size class of firm, which is highest for the smallest firms, with less than 10 employees in 1974 (+137.4%); growth rates decline with increasing firm size, and are negative for firms with 500 and more employees in the initial year. Such percentage rates of growth can, of course, give a misleading impression of the magnitude of change because of the base effect in calculation: when a firm with a labour force of five adds one new employee, its total employment increases by 20 per cent; a firm with 100 employees would need to add 20 to its workforce in order to match this performance.

The firm-size distribution of the jobs created diverges somewhat from that found in the earlier analysis (Table 5.18). Here, firms with more than 500 employees shed labour, and those with upwards of 200 employees account for just 2.7 per cent of the additional employment; in other words, 97 in 100 of the new jobs were the due of firms with less than 200 employees. Comparing shares of new with shares of 1970 employment suggests that the smallest firms, with less than 10 employees, generated fewer additional jobs than might have been expected; the relatively most significant contributors of additional employment were firms with 10-49 employees in 1974, which accounted for 40.5 per cent of the expansion in employment but just 15.9 per cent of the 1970 stock of jobs.

EMPLOYMENT CHANGE BY FIRM SIZE, 1974-81

Employment Size Class	n Firms	Average % Employment Change	n Additional Jobs per Firm	% Share of Additional Jobs	% Share of 1970 (Census) Employment
1-9	183	137,4	6,9	16,3	21.9
10-19	134	52,5	7,1	12,2	
20-49	159	44,0	13,8	28,3	15.9
50-99	114	21,4	14,4	21,1	7.1
100-199	115	9,4	13,1	19,5	7.3
200-499	119	0,6	1,7	2,7	9.9
500-999	43	-10,7	-73,4	-	
1000+	21	-4,7	-94,4	-	37.9
All firms	888	1,9	3,0	100	100

TABLE 5.20

Source: Fritsch (1984)

5.2.3 HULL (1985)

This analysis is based on a survey of 458 small independent manufacturing firms in four localities of northern West Germany. The four localities are not considered representative of the country as a whole, but were selected to represent different types of local economy within the urban hierarchy, so that the likelihood of cross regional bias is presumably reduced. The study is limited to firms with 10-200 employees at the time of the survey; thus both very small and larger firms are not covered, although certain adjustments were made to the original data in order to better coverage of firms with less than 10 employees and of new firms. The 458 surveyed firms can be considered broadly representative of the target firms. The analysis pertains to survivor firms only.

The most interesting results from this study concern the contribution of young and new firms, as opposed to small firms generally, to job generation. Table 5.21 shows that firms founded during the period of study accounted for 7.1 per cent of all jobs in the surveyed firms in 1980 and for 46.5 per cent of the overall net increase in employment.

The importance of firms' age as opposed to their size as a predictor of employment growth was underlined by a multi-variate regression analysis, which generated the estimates shown in Table 5.22 employment growth for firms of varying initial size and age. Younger firms, especially those less than five years of age, tend to grow more rapidly than older firms of the same size. The general suggestion is that it is more the youth of small firms than their size which "makes" them grow.

5.2.4 HUNSDIEK (1986)

Hunsdiek, too, examines the effect of age on firms' employment performance. He also estimates the employment effects of firm births and deaths.

COMPONENTS OF EMPLOYMENT CHANGE BY FIRM SIZE IN 1974

Locality	Size in 1974 (Employees)	Jobs in 1974	+ (-Jobs (Lost	+ Jobs Gained	= Net Change ^a) =	Jobs in 1980
All Sites		100	+ (-11.8	+ 24.6	= +12.8)	= 112.8 ^b
	0			32.3	46.5	7.1
	1-19	16.8	8.1	24.5	29.7	19.4
	20-49	22.1	17.5	24.9	23.7	23.2
	50-99	26.4	24.9	12.0	0.1	23.4
	100-199	24.0	22.3	6.2	negative	20.1
	200+	10.8	27.2		negative	6.7

TABLE 5.21

Source: Hull (1985)

TABLE 5.22

PREDICTED 1980 EMPLOYMENT SIZE FOR FIRMS OF SELECTED
AGE AND SIZE IN 1974

Number of Employees in 1974	Firms with Less than 100 Employees, and Aged as Follows, in 1974			Firms with 100 or More Employees, and Aged 10 Years or More, in 1974
	0-4 Years	5-9 Years	10+ Years	
0	7			
5	21	12		
10	34	17	16	
20		27	25	
50		57	52	
100			95	111
200				158

Source: Hull (1985)

His analysis of the effect of age on employment relates to a sample of 925 firms with less than 500 employees in the Rhineland-Palatinate (Rheinland-Pfalz). Employment performance was measured in relation to whether each firm was intending to expand, reduce or leave unchanged the size of its labour force in the near future; the data thus have a certain hypothetical quality. Hunsdiek split his sample into firms younger/older than six years of age, and disaggregated the data by sector. The results are shown in Table 5.23. His principal conclusion is that young firms in all sectors bar retailing/wholesaling were markedly more likely to expand than older firms. Young firms in "other services" were generally the most likely to expand (70%), followed by craft and industrial firms (57 and 59%, respectively).

Hunsdiek's analysis of the employment effects of firm births and deaths is based on a sample of business registration records for North-rhine-Westfalia in the years 1981-84. He isolates new independent firms (births) from other registrations and complete closures (deaths) from other de-registrations¹⁰. The sample appears not unproblematic, however, inasmuch as only 10 per cent, on average, of de-registering firms in fact answered the question in the official form asking for details of the number of employees affected. No information is provided about the percentage of registering firms which answered the corresponding question about the number of jobs expected to be created upon start-up, but Hunsdiek indicates that it too was small. What bias might be implied by such low response is impossible to estimate.

Table 5.24 summarises results from Hunsdiek's analysis, and includes a graphical disaggregation (he does not provide raw data; the n's may be small in some cases) by sector of the number of jobs associated with births and deaths in each year. The figures, which are median values for dependent employees only, would suggest that the average birth in every year tended to generate more employment than was lost as a consequence of the average death.

¹⁰ His analysis appears to have been undertaken in the context of that by Clemens et al. - see above.

ANTICIPATED EMPLOYMENT CHANGE BY AGE OF FIRM AND SECTOR

Age of Firm	Sector	Percent Firms Anticipating						Missing Data	n Firms
		Increase		Decrease		No Change			
		%	n	%	n	%	n		
Up to 5 Years	Industry	59,3 ^{a)}	16	7,4	2	33,3	9	4	31
	Wholesaling/ Retailing	47,4	9	10,5	2	42,1	8	0	19
	Craft Trades	57,1	16	14,3	4	28,5	8	2	30
	Services	69,6	16	4,3	1	26,1	6	0	23
	All Sectors	59,2	58	9,2	9	31,6	31	6	104
6 Years and more	Industry	35,8	95	31,3	83	32,8	87	50	315
	Wholesaling/ Retailing	44,8	90	22,9	46	32,3	65	24	225
	Craft Trades	38,7	70	23,8	43	37,6	68	19	200
	Services	44,7	34	18,4	14	36,8	28	10	86
	All Sectors	40,1	290	25,7	186	34,3	248	105	829

Source: Hunsdiek (1986)

TABLE 5.23

TABLE 5.24MEDIAN EMPLOYMENT GAIN/LOSS ASSOCIATED WITH FIRM
OPENINGS/CLOSURES, 1981-84

Year	Openings (n)	Closures (n)
1981	2.2 (379)	1.9 (168)
1982	1.8 (382)	1.6 (229)
1983	2.0 (428)	1.7 (219)
1984	2.0 (284)	1.9 (76)

Source: Hunsdiek (1986)

From this, and from the fact that the number of births exceeded that of deaths each year, Hunsdiek concludes that one need not deplore the fact of dying firms, since the volume of replacement employment significantly exceeds that lost. On the contrary, the fact of dying firms may be welcomed as evidence of the vitality of the economy. Whether his data fully justify this interpretation is open to some question. The jobs recorded in conjunction with deaths were those extant shortly before ultimate closure; the jobs possibly shed previously during a run-down before actual closure may have been substantial. By similar token, however, the employment totals for births understate the jobs which they create in the months and years after start-up¹¹.

5.2.5 DAHREMÖLLER (1985)

This study, although limited to manufacturing establishments in Northrhine-Westfalia, is of considerable importance because it is the only published German analysis which, under certain assumptions, permits an estimate of job losses due to closures in addition to the employment effects of openings and in-situ expansion/contraction.

The study uses data specially compiled by the Northrhine-Westfalian Statistical Office which cover most manufacturing establishments in the state extant at the beginning and/or end of the period 1978-84. The data were obtained by merging individual-level records from two official statistical series. The "Industriestatistik" series covers all establishments, irrespective of size, of industrial firms with 20 or more employees as well as the industrial establishments with 20 or more employees of non-industrial firms (i.e. of firms whose predominant activity is in another sector); coverage extends to craft firms fulfilling these criteria. The second series, the "Kleinbetriebserhebung", covers the industrial establishments of industrial firms with less than 20 em-

¹¹ Dahremöller (1985:14-15) suggests from an analysis of the employment effects of manufacturing births and deaths in Northrhine-Westfalia in 1978-84 that on average more jobs are lost by closures in the run-up to liquidation than are created by births in the stabilisation phase after opening.

ployees as well as the industrial establishments with less than 20 employees of non-industrial firms; in this case, craft firms are not included. Coverage is not total, therefore, because smaller craft firms escape the statistical net.

Curiously, Dahremöller makes little of the information contained in the data about job losses through closure and gains from openings. His main analysis is of jobs lost and gained by establishments extant throughout the time period, i.e. of employment expansion and decline in survivor establishments. The findings are shown in Table 5.25. They fit the by now familiar pattern. The class of smallest establishments, with less than 10 employees in 1978, was the only one to expand employment, by 15 per cent. All other size classes show negative net change, and the extent of job loss increases with establishment size. The largest establishments, with upwards of 499 employees shed 14 per cent of their labour force over the six years.

The reason why Dahremöller makes little of the information about jobs associated with openings and closures is no doubt that the data strictly relate to broader phenomena. The figures for "closures" are in fact a compositum of four separate effects:

- deaths proper in the sense of establishments which ceased to exist;
- establishments which exited from the population because of a change in location which took them outside of Northrhine-Westfalia;
- establishments which exited from the population because of a change in economic activity which took them or their firm outside of the industrial sector;
- craft firms and establishments which exited from the population because they dropped below the qualification threshold of 20 employees. This effect is limited to craft firms and establishments, since industrial firms and establishments falling below the threshold would exit from the Industriestatistik but enter the Kleinbetriebserhebung.

TABLE 5.25

**EMPLOYMENT CHANGE BY ESTABLISHMENT
SIZE IN NORTHRHINE-WESTFALIAN
MANUFACTURING INDUSTRY, 1978-84
- SURVIVOR ESTABLISHMENTS -**

	Per cent 1978 Employment	Employment Change absolute	Change %
1-9	1.3	+3,621	+14.8
10-19	1.9	-64	-0.2
20-49	6.4	-803	-0.6
50-99	8.3	-4,412	-2.7
100-499	28.7	-36,335	-6.5
500+	53.3	-144,134	-13.9
All Firms	100	-182,125	-9.4

Source: Dahremöller (1985)

The data on "openings" reflect four analogous effects:

- births proper in the sense of establishments which had not previously existed;
- establishments new to Northrhine-Westfalia by transfer from elsewhere;
- establishments new to manufacturing by a change of activity;
- craft firms and establishments new to the population as a consequence of having topped the 20-employee threshold so as to qualify for coverage by the Industriestatistik.

Clearly, only the first of the four effects in each instance is relevant for estimating the impact of establishment births and deaths on employment. It will be argued, however, that the other three effects are likely to have been of no or little practical significance, making it reasonable to interpret the data as indicating the effects of births and deaths per se. The data are first interpreted on this basis, and the arguments justifying the interpretation then presented.

Table 5.26 shows how the 1978 stock of employment in each establishment size class had changed by 1984, taking account of closures and the net change in employment among the establishments which survived the period. The bottom row gives the magnitude of these components for the total population: of the 2,141,611 jobs extant in 1978, 9.3 per cent were lost as the consequence of establishment deaths and a further 8.5 per cent because the balance of employment change among surviving establishments was negative. This yields a 1984 employment figure equal to 82.2 per cent of the 1978 total. Adding in the 109,825 jobs in new establishments increases the 1984 total to 87.3 per cent of that in 1978. The new jobs in new establishments equal 5.9 per cent of total 1984 employment (and correspond to 5.1 per cent of the 1978 total).

The table shows that the absolute magnitude of job losses increased with establishment size. But this is hardly exceptional, since larger establishments grouped larger numbers of employees. Important is the relative number of 1978 jobs lost by establishments of different size

**EMPLOYMENT CHANGE BY ESTABLISHMENT SIZE IN NORTHRHINE-WESTFALIAN
MANUFACTURING INDUSTRY 1978-84**

	Employment 1978	Closures	In-situ Change		Employment 1984
1-9 abs.	36,975	-12,545	+3,621		28,051
%	100	-33.9	+9.8	(-24.1)	75.9
10-19 abs.	50,050	-13,531	-64		36,445
%	100	-27.0	-0.1	(-27.1)	72.8
20-49 abs.	160,213	-35,198	-803		124,212
%	100	-22.0	-0.5	(-22.5)	77.5
50-99 abs.	194,010	-32,673	-4,412		156,925
%	100	-16.8	-2.3	(-19.1)	80.9
100-499 abs.	635,608	-77,412	-36,335		521,861
%	100	-12.2	-5.7	(-17.9)	82.1
500+ abs.	1,064,755	-28,115	-144,134		892,506
%	100	-2.6	-13.5	(-16.1)	83.8
All Firms abs.	2,141,611	-199,474	-182,127		1,760,000
%		-9.3	-8.5	(-17.8)	(82.2)
				Openings	109,825
					(5.1)
				Total 1984 Employment	1,869,825
					(87.3)

TABLE 5.26

Source: Dahremöller (1985: Table 1) and own calculations

Thus interpreted the results are very striking. The column showing 1984 employment in each size category expressed as a percentage of the corresponding 1978 total makes plain that total employment decline was greater among smaller establishments. The category of establishments with less than 10 employees in 1978 had shed 24 per cent of its initial employment by 1984 compared with the 16 per cent for establishments with 500 or more. In employment terms, it is large rather than small establishments which have come through this generally recessionary period best.

This conclusion stands in marked contrast to what tends to be inferred from survivor analyses, the typical finding of which is that small firms (establishments) expand employment while large units shed jobs. Dahremöller's data document important size-specific differences in the propensity to job loss as a consequence of closure, something which survivor analyses ignore. The figures for in-situ change confirm the typical conclusion of survivor analyses: establishments with less than 10 employees in 1978 are the only ones to show net growth in employment (+9.8%); for the other size classes rates of job loss increase with increasing establishment size. The figures for job losses as a consequence of closure reveal a reverse pattern, however. It is the smallest establishments which record the largest relative jobs losses. Over a third of the 1978 jobs in establishments with less than 10 employees disappeared as a consequence of closure. The percentage decreases with increasing establishment size, so that those with 500 and more employees in the starting year shed just 2.6 per cent of their 1978 employment through closure. Although smaller establishments which do survive tend to perform better than large, they fail to compensate the job losses among smaller establishments which close; among those with less than 10 employees in 1978, for example, the expanded employment in survivors replaced less than one in three of the jobs lost through closure.

There remains the question of possible bias in this interpretation of Dahremöller's data because the figures for births and deaths contain other real and statistical kinds of entry to and exit from the establishment population.

Taking, first, the case of firms and establishments which entered/left the population as the consequence of a change to/from an industrial activity, it seems rather unlikely that many undertake such a radical change to the nature of their business. Dahremöller provides data showing the amount of 1978 employment affected by a change of activity between sub-sectors within manufacturing. These figures, given in Table 5.27 suggest a negligible effect. On the assumption that change between sectors is even less likely than change within, significant bias from this source can reasonably be discounted.

The second issue concerns the incidence of transfers into and out of Northrhine-Westfalia during the period. Specific data are not available. However, figures for the Federal Republic as a whole show that just 53 industrial establishments transferred across local government boundaries in 1978, having 2,295 employees at their new location. The corresponding figures for 1979 were 36 establishments and 2,859 employees. The long-run trend since the beginning of the 1970's has been downwards, and all the indications are that the current recession has tended to depress the incidence of transfers still further. Recognising that the cited figures are for the country as a whole and for inter-local transfers, many of which presumably occur within a state, it seems reasonable to consider this source of bias similarly insignificant.¹²

The final source of possible bias concerns craft establishments and firms which entered or left the population by crossing the 20-employee threshold. Those having topped the threshold inflate the figure for "openings", and those falling below it that for "closures". The available data allow no direct estimate of the magnitude of bias. Dahremöller himself believes it to be small; he speaks of his expectation that further, more detailed analysis will demonstrate this, and at various places in his commentary he interprets the data for entries and exits as indicating births and deaths.

¹² The figures in this paragraph are taken from Bundesministerium für Arbeit und Sozialordnung (1981).

TABLE 5.27

**EMPLOYMENT ASSOCIATED WITH ESTABLISHMENT
TRANSFERS BETWEEN BRANCHES IN
NORTHRHINE-WESTFALIAN
MANUFACTURING INDUSTRY, 1978-84**

Branch	Per cent	
	1978 Employment Associated with Transfers from	1984 to
Capital Goods	0.6	1.2
Food, Tobacco, Drink	0.2	0.0
Base and Producer Goods	1.5	1.8
Consumer Goods	2.5	1.4
All Branches	1.2	1.4

Source: Dahremöller (1985: Table 3) and own calculations

A rough estimate of the scale of bias would seem possible on the basis of the following assumptions:

- the probability that a craft firm or establishment exits from the population as a consequence of falling below the threshold of 20 employees is equal to the probability that an establishment remaining in the population and having more than 20 employees in 1978 fell below that figure by 1984. Since craft firms and establishments tend to be small, the size categories 20-49 and 50-99 employees in 1978 are taken as reference. Dahremöller's data (cf. his Table 1) show that of the 3,871 and 2,260 surviving establishments in these categories, 624 and 34 had fallen to below 20 employees by 1984, or 16.1 and 1.5 per cent respectively;
- in the absence of data on the size distribution of craft firms in Northrhine-Westfalia, recourse is made to national data, it being assumed that the Northrhine-Westfalian distribution approximates to the national distribution. Data from the 1977 census of craft firms show that in March of that year there were 8,012 craft production firms with 20-49 employees and 2,224 with 50 or more employees. Northrhine-Westfalia accounted for 24.0 per cent of all craft production firms in West Germany. Scaling down the national figures accordingly yields Northrhine-Westfalian totals of 1,925 and 534 in the respective size categories.
- applying the figures of 16.1 and 1.5 per cent estimated earlier suggests that 312 and 8 firms respectively fell below the threshold;
- the average craft production firm in the 20-49 size class had 28.8 employees according to the 1977 census, the average firm in the 50+ category 97.9 employees.
- it can then be calculated that the 310 and 8 Northrhine-Westfalian craft firms estimated to have fallen below the threshold grouped 8,943 and 784 employees respectively, or 9,727 in sum.

These assumptions and estimates suggest that something approaching 10,000 jobs may falsely have been recorded as employment lost due to closures. It is not possible to allocate them between the 1978 size categories; they presumably apply in particular to the 20-49 and 50-99 categories, but to some degree also to the 1-9 and 10-19 size classes inasmuch as these too may contain establishments of firms with 20 and more employees in 1978 which disappeared from the population because the parent firm fell below the threshold size. The estimated 10,000 "phan-

tom" job losses from closures represent 14.3 per cent of the recorded employment loss in the 20-99 employment size class and 10.4 per cent of the loss recorded for establishments with 1-99 employees.

All of this suggests that in the lower size categories the job losses associated with deaths in Table 5.26 tend to be over-estimated and those for employment change in-situ under-estimated. It seems unlikely, however, that the conclusion drawn earlier from the table is to be doubted. Even making a generous allowance for the "phantom" job losses in the lower size classes, it is probably still correct that larger establishments have come through the period at least as well as smaller.

There remains the question of the extent of bias in the estimation of the number of jobs generated by new firms, since the corresponding figure contains some employment due to craft firms and establishments having topped the 20-employee threshold during the time period. Dahremöller himself proffers an estimate of this effect, based on the fact that many of these "phantom" births probably occurred in 1979/80, by which time returns to the 1977 census of craft firms had been processed and those firms in fact having more than 20 employees but not known to do so and hence not covered by the Industriestatistik in 1978 and 1979 could then be identified and drawn into the statistical net. This is how he explains a sudden jump at the turn of the decade in the number of new jobs from start-ups (1978-79: 23,252; 1979-80: 32,571; 1980-81: 23,833). He assumes that 8,000 to 9,000 jobs allocated to openings are a consequence of this statistical artefact. In its turn, this would suggest that the contribution of new firms to 1984 employment is nearer 5.4 than the 5.9 per cent suggested by the uncorrected data.

Dahremöller's study is of considerable importance. Recognising its restriction to manufacturing establishments in Northrhine-Westfalia, in a period characterised by a brief economic upswing during the first two years and by a deepening recession thereafter, it rather doubts the ability of smaller business to generate significant replacement employment to compensate jobs lost in larger establishments. While it confirms that smaller establishments which do survive generate more jobs

than larger, it makes no less clear that their probability of survival is much less. In consequence, the overall contribution of larger establishments to employment provision appears to be at least as great as that of smaller; the relatively larger number of jobs which they shed through contraction they make up for by a higher probability of survival and hence of employment retention.

5.2.6 ECKART, VON EINEM AND STAHL

These three authors are undertaking a study of job generation in West Germany using the records of a credit-rating agency, Verein Creditreform, as their data source. Such data are prone to many inaccuracies and other weaknesses, as have been signalled, for example, by Storey and Johnson (1985) in their review of the work by Gallagher and Stewart (1984, 1985) based on UK Dun and Bradstreet data, and by Storey (1983) in his critique of the Birch (1979, 1981) study using Dun and Bradstreet records in the US. It should be stressed that Eckart et al. are themselves critical of the quality of credit-rating agency data for the purposes of job-generation research (cf. Eckart et al., 1986a) and are hence presumably cautious in the use which they make of their data.

The researchers have made some preliminary results from the pilot phase of their work available for the purposes of this report. The pilot study is limited to the Frankfurt and Ruhr regions. Coverage extends to all sectors of the private economy and is for the period 1975-83. The data in principle allow account to be taken of all of the basic components of employment change: openings, closures, and in-situ employment change (expansion/contraction). The sample numbers 1,623 firms (Unternehmen) in 1975, rising to 2,089 in 1983.

A comparison of 1975 employment in their 1,623 firms with the results of the 1970 Census of Business suggests that the sample is not entirely representative. It would appear to underrepresent firms in the 1-49 category (which account for 22.3 per cent of employment in the sample but for 34.0 per cent in the census) and to overrepresent all

other size categories. In sectoral respect, employment in banking and insurance is heavily overrepresented (by 20.8 to 3.1 per cent) as a consequence of two large banks with 7,900 employees being included in the sample; in consequence, the manufacturing sector is heavily underrepresented (by 34.4 to 50.6 per cent).

Table 5.28 shows the employment development of the sampled firms by employment size in 1975. The jobs created in firms first founded during the period are recorded separately at the foot of the table. The table shows that job losses due to closures and contractions (the categories are unfortunately not disaggregated in the available tabulations) were fractionally less than the gains from in-situ expansion, so that the 1975 stock of firms marginally increased its total employment by 1.3 percentage points. Adding in the jobs created by new firms, which correspond to 11.7 per cent of 1975 employment, shows total employment in 1980 to be 13.0 percentage points higher than in the initial year. This is a surprising result inasmuch as figures for the nation as a whole suggest that total employment declined during this period. Nationally, between June, 1974 (note, not 1975) and the same month in 1983, employment in the sectors covered by the study fell by 4.2 per cent. The 13 percentage point increase found by Eckart et al. may reflect regional peculiarities; it may also be the consequence of having overrepresented the banking and insurance sector, and of underrepresenting manufacturing, which would be consistent with the results broken down by sector to be provided shortly¹³.

¹³ Eckart et al. have since published some of the data presented here (Eckart et al., 1986b), and confirm the disparity between total employment change in the sample and in the economy at large in their two regions by citing employment figures for the corresponding labour administration districts (Arbeitsamtsbezirke) which show total employment to have declined by 0.2% in Frankfurt and by 6.6% in the Ruhr. They then speculate that this may be due to:

- the inclusion of unidentified deceased firms in the Creditreform records;
- the restriction of official figures to dependent employees, whereas the Creditreform data include owners and partners active in firms;
- the exclusion from official figures but inclusion in the Creditreform data ; part time employees.

**EMPLOYMENT CHANGE BY FIRM SIZE
IN DORTMUND AND FRANKFURT, 1975-80**

Employment Size Class	n Firms 1975	n Jobs 1975	Per cent Employment (1975)		Employment as % 1975
			Lost/ Closure/ Contraction	Gained Through Expansion	
1-20	1,408	6,835	-27.7	+63.9	136.2
21-50	101	3,085	-28.2	+2.5	74.3
51-100	58	4,215	-32.3	+8.7	76.4
101-500	47	9,473	-27.3	+15.2	87.9
501+	9	20,944	-6.6	+11.6	105.0
All Firms	1,623	44,605	-18.2	+19.5	101.3
					Employment in Openings (% 1975) 11.7
					Total 1980 Employment as % 1975 113.0

TABLE .5.28

Source: Unpublished material kindly supplied by Eckart, von Einem and Stahl.

Rates of job loss were broadly similar, at around 29 per cent, for all size classes of firm bar the largest; those with over 500 employees shed less than 7 per cent. By contrast, there are striking differences in the relative numbers of jobs generated through in-situ expansion. Expanding firms in the 1-20 employee category are outstanding for having added jobs amounting to 64 per cent of 1975 employment in this size class. There is, however, no regular relationship between firm size and employment expansion; expanding firms with upwards of 100 employees added relatively more jobs than firms in the size class 21-100. The net balance from closures/contraction and expansion shows small firms, with 20 or fewer employees in 1975, to have increased employment by 36.2 per cent. By contrast, the firms in the next three higher size classes shed jobs on balance. Those in the largest size class, however, with upwards of 500 employees, were able to expand employment owing, in particular, to their unusually low rate of job loss from closure/contraction.

Table 5.29 shows jobs lost and gained by sector. The differences between the sectors are marked. The rate of job loss was highest in manufacturing, construction and retailing/wholesaling, varying between 25 and 30 per cent. By contrast, virtually no jobs were shed in the banking and insurance sector, very few in transport and communications and relatively few in "other services". Manufacturing firms accounted for 56.2 per cent of the lost jobs (but only 34.4% of total 1975 employment) and retailing/wholesaling firms for 21.9 per cent (13.4% of 1975 employment).

In-situ expansion was above average in construction, retailing/wholesaling, banking and insurance and "other services". 25.5 per cent of the expanded employment came from banking and insurance firms (with 20.8% of 1975 employment) and 25 per cent from manufacturing firms (34.4% of 1975 employment).

New firms contributed most jobs in the retailing/wholesaling and "other services" sectors, adding employment equivalent to 28.6 and 29.5 per cent of the 1975 job total in each sector respectively. Although

EMPLOYMENT CHANGE BY SECTOR IN DORTMUND AND FRANKFURT, 1975-80

Sector	Firms 1975	Jobs 1975		Gross Job Losses Closure/Contraction			Openings			Expansion		Net Employment Change			
		n	%	n	%		n	%	n	%	n	%			
Agriculture & Forestry	29	375	0.8	-	83	22.2	+	7	1.9	+	40	10.8	-	36	10.0
Manufacturing Industry	354	15,352	34.4	-	4,553	29.7	+	1,167	7.6	+	2,191	14.3	-	1,095	7.1
Construction	194	2,834	6.4	-	699	24.7	+	309	10.9	+	642	22.7	+	252	8.9
Retailing/ Wholesaling	590	5,959	13.4	-	1,774	29.8	+	1,701	28.6	+	1,456	24.4	+	1,383	23.2
Transport & Communications	57	3,826	8.6	-	203	5.3	+	227	5.9	+	305	8.0	+	329	8.6
Banking & Insurance	39	9,279	20.8	-	59	0.6	+	125	1.4	+	2,209	23.8	+	2,276	24.5
Other Services	351	5,685	12.8	-	717	12.6	+	1,678	29.5	+	1,651	29.0	+	2,612	45.9
All Sectors	1,623	44,571	100.0	-	8,089	18.1		5,215	11.7	+	8,658	19.4		5,784	13.0

TABLE 5.29

Source: Unpublished material kindly supplied by Eckart, von Einem and Stahl.

new manufacturing firms created few jobs relative to total manufacturing employment in 1975, they nonetheless contributed 22.4 per cent of all new jobs from start-ups.

Overall, more jobs were lost than gained in manufacturing, so that employment in this sector declined by 7.1 percentage points. All other sectors, bar agriculture, recorded employment gains. "Other services" grew strongest (+45.9%), due to relatively low losses as well as high gains from both births and expansion. In banking and insurance, the one quarter increase in employment came almost fully from in-situ expansion; the firm population in this sector appears highly stable, so that employment change is nearly all in-situ change. In retailing and wholesaling, a similar one-quarter increase in jobs came from a similarly high rate of expansion together with a high rate of new-firm employment creation; the gains were partially depleted by one of the highest rates of job loss. This would appear to be the sector with the most volatile employment pattern.

5.3

CONCLUSIONS

The aggregate evidence, although often speculative, presented in Part 1 of this report would indicate that the employment share of small German firms has risen during the last decade or so. There is similarly evidence of an increase in the surplus of new firms over business closures since the turn of the decade. Both of these developments may be taken to suggest an increased role of Germany's small firms in employment provision.

The micro-level job-generation studies reviewed in the second part of the report lend some but not unambiguous support to this view. When the employment fortunes of extant firms, i.e. ignoring openings and closures, are traced, a general picture emerges of expansion in the categories of smaller firms giving way to stagnation and contraction in larger-size classes. Surviving smaller firms have a greater propensity to expand than larger, and tend to expand by a relatively greater margin (but recall the base effect in relation to such percentages). It is difficult to pinpoint the most expansive size category, because the several studies vary considerably in their sectoral, temporal and spatial coverage as well as in their accounting conventions. All agree that it is firms with less than 50 employees which constitute the category of greatest relative growth, and some suggest that it is those in the 1-9 or 1-19 range which expand most.

Sectorally disaggregated investigations (Ewers et al.; Eckart et al.) suggest that the pattern is not uniform. Service firms of all sizes appear more likely to expand than manufacturing firms, and those with 50 or more employees (cf. Ewers et al.) tend to expand by a greater margin than their manufacturing counterparts. Moreover, both Hull and Hunsdiek indicate that it may be young rather than small firms per se which grow most. Hunsdiek's data show that 60 per cent of firms less than six years of age expected to expand, compared with 40 per cent of

older firms. Hull's findings show that growth rates among small firms less than five years old were roughly double those of older firms. If youth is important, new firms in particular may be expected to contribute significantly to employment creation.

The three studies with data on the jobs generated by firm births all suggest similar conclusions. Hull's data show that the independent manufacturing firms founded during a six-year period in four localities accounted for 7 per cent of total employment in those firms at the end of the period; Dahremöller's findings indicate 6 per cent in relation to Northrhine-Westfalian manufacturing establishments over six years; Eckart et al. suggest 10 per cent over eight years in all sectors in two regions. Hunsdiek and Weitzel are agreed that the average new firm tends to generate some two jobs in the first year, that of the founder plus one other. Hunsdiek's material suggests that the figure is nearer three for industrial and craft firms, and between one and two in other sectors. Weitzel's data confirm that industrial firms tend to generate the most jobs: by the end of the fourth year two-thirds of them had four or more employees. However, industrial start-ups account for just 5 per cent of all new firms, craft firms for a further roughly 40 per cent. There is also some suggestion that the distribution of new jobs from start-ups is heavily skewed in the sense that a relatively small number of strongly expanding firms account for a majority of the total employment gain from this source.

Weitzel makes the important caveat that, like the other cited researchers, he can say nothing about how many new firms fail in the short run; this is one factor suggesting that the net employment effect from start-ups may be significantly less than that suggested by the preferred figures. He also makes the important observation that approaching a quarter of all newly registered firms are in fact the continuation of an existing business, and that nigh on a further quarter are part-time businesses in the sense of not providing their founder's sole source of livelihood. Little additional employment is presumably to be expected of firms in both of these categories, at least in the short run.

Rather more sober conclusions about the employment contribution of small firms seem appropriate once account is taken of job losses due to business closures. Dahremöller's findings suggest that small businesses are much more likely to close than large, and that their aggregate job losses are much higher. Whereas, for example, just 5 per cent of his manufacturing establishments with 500 and more employees closed, those with a workforce of less than ten experienced a closure rate of 38 per cent. The jobs lost amounted to a mere 3 per cent of initial total employment in the 500+ size class, but to 32 per cent in the small-firm category. Once the employment losses due to closures are netted out, small firms as a category appear to perform no better than large; expressing total employment in a size class at the end of the period as a percentage of the total at the beginning suggests that employment in large establishments has held up at least as well as in small. Admittedly, these results apply only to Northrhine-Westfalia's declining manufacturing sector (and to establishments), but they nonetheless highlight the inherent and fundamental weakness of survivor studies to take due account of the potentially very significant employment effects of business closures. One measure of this, again from Dahremöller's material, is that 31 per cent of 1984's establishments were new since 1978, accounting for 6 per cent of 1984 jobs. This positive employment effect survivor studies capture. What they ignore is the negative fact of 27 per cent of 1978 establishments having eclipsed by 1984 with the loss of 9 per cent of 1978 employment.

Having thus summarised the findings from the reviewed data and studies, and introduced some caveats as to their interpretation, several further issues pertaining to their significance should be raised. First, it is important to be clear that new and small firms are not adding jobs in anything like sufficient number to compensate the contraction in large-firm employment; nonetheless, the jobs which they do generate serve at least to palliate in some degree large-firm decline. Here, too, however, caution is bid, for where existing jobs are lost is often not where new jobs are created. This is as true sectorally as it is spatially; redundant steel-workers in the Ruhr are unlikely to find employment in the Bavarian aerospace industry.

A further general point of some significance is that the recent spate of job-generation studies and their findings are sometimes received as if suggesting that the detected pattern of employment gains among small firms and losses among large is fundamentally different from that which obtained in the (recent) past. This is far from certain, however. It may simply reflect size-related differences in employment behaviour which a life-cycle view of the firm would lead one to expect as normal: it is perhaps unsurprising that old firms, being mature, have a propensity to stagnation and decline, and that new firms tend to grow in the freshness of their youth. And because mature firms are often large, and because new firms usually begin from scratch, it is then unexceptional that the category of smallest firms should add jobs while the largest shed labour. Job-generation studies have yet to be undertaken which calibrate size-specific employment trends against a life-cycle prediction of what might be considered normal¹⁴.

A life-cycle perspective further alerts one to several potential ambiguities in the findings of job-generation studies. For example, closures among firms with, say, 20-49 employees initially may include both larger mature firms having now finally eclipsed after a perhaps long period of attrition as well as quite new firms which expanded all too rapidly on shaky foundations. Similarly, employment stagnation or

¹⁴ Reviewers of this paper have read this paragraph as if I were suggesting that there is a secular life-cycle of the firm independent of trends in market demand, product innovation, process technology and so on. Irrespective of the fact that I think there may be something of such an affect allied to the life-cycle of the individual entrepreneur - the initial drive to create a successful firm often gives way to maintaining a steady course once the business has become established; the well documented problems of inter-generational succession in family-owned business also fit this argument well - that is not my point. I am simply wanting to warn against confusing a new kind of evidence with a new underlying trend.

The results of the new micro-based job-generation studies do not necessarily indicate that a new age of the small firm has dawned, as sometimes appears to be inferred. That conclusion could only be justified on the basis of comparable micro-level evidence for earlier periods by showing that small firms have increased their employment contribution of late - hence the argument at the end of the paragraph about "calibrating" size-specific employment trends. But comparable evidence for earlier periods is generally lacking.

decline among firms in the 200-499 category may confound the mature firm having entered a downward trajectory en route to ultimate collapse and the successful enterprise currently rationalising its product range and production methods prior to a new phase of growth. Here are initial reasons to doubt whether employment size, certainly as the sole explanatory (classificatory) variable, has any inherent meaning, and whether job-generation studies so designed offer anything other than a (frequently incomplete) quantitative description of how more fundamental but unspecified factors affect employment performance. Future research would do well to proceed from an explicit theoretical focus in order to explore the relationship between firm-level employment change and such presumably fundamental factors as the product strategies, innovation behaviour, investment performance, production processes and management organisation of individual enterprises.

Another doubt about the significance of the findings of job-generation studies concerns the extent to which any size-related differences in employment performance reflect cyclical influences. Evidence reviewed in Part I suggests that small firms are more likely to maintain jobs in a downswing, large firms to trim back employment. Similar findings were made in an earlier aggregate-data analysis, not discussed above, of West German manufacturing employment in the growth years 1968-71 and the slack years 1972-75 (Gruhler, 1979), which indicated that under conditions of growth larger establishments expand employment by a greater amount than statistically expected, whereas smaller ones perform below expectation; in the slack years, by contrast, smaller establishments shed fewer jobs than expected, larger ones more.

The reasons for such cyclical differences in the employment behaviour of firms of different size may be several. To the extent that large firms are producers of standardised (consumer) goods, their output and hence employment may be unusually sensitive to cyclical fluctuations in demand. Moreover, while in large firms incremental adjustments to the size of the work-force are readily made, in small firms essential skills are often provided by just one or a few individuals, making a marginal correction difficult or impossible. Research also suggests

that the financial reserves and general capital base of large firms are significantly greater than of small enterprises, making it more likely that the former can weather a longer downswing; the latter would seem more prone to go under completely when trading conditions are slow to improve. None of the recent German job-generation studies, nor indeed any of those for other countries known to the author, control for cyclical effects. One is bound to ask whether any superior employment performance of small firms observed during the recessionary conditions of the last half decade or more will not, at least in some degree, "disappear" when economic conditions improve.

A further set of considerations of relevance when appraising the significance of the findings of job-generation studies may be subsumed under the heading of structural effects. One such effect is the oft cited shift in demand away from manufactures towards services, or towards mixed goods with a higher service content. Given that smaller firms are relatively more numerous in the service sector than in manufacturing, it would not be surprising that the small-firm share in total employment should increase. However, Ewers et al. show that large service firms are more likely to expand than similarly large manufacturing firms, and the aggregate evidence in Part I from the 1961 and 1970 Censuses of Business indicate that large firms are taking greater hold in the service sector. It may therefore be that expansion in service-related demand is tending increasingly to favour large-firm employment.

An additional structural effect which may be of considerable importance concerns the extent and significance of functional specialisation and interdependence as between large firms and small. It is generally accepted that producer services are a growth sector in the mature western economies. To the extent that these services tend to be provided by small firms, their growth would support the hypothesis of increased small-firm employment. However, it must be recognised that employment growth among such small firms may simply mirror a corresponding decline among large, as the consequence of activity and employment having been redistributed away from the latter to the former. Indeed, if large firms are tending to contract out activities previously under-

taken internally, because they can be performed more efficiently by specialised firms on the outside, the net employment effect may even be negative as a consequence of productivity gains and consequent rationalisation. Much the same can be said of the wider phenomenon of sub-contracting and other more or less stable forms of input-output relations between firms of different size. In all circumstances where the fortunes of small firms depend on those of (large) final producers it is difficult to imagine how the former can flourish when the latter cut back their input needs.

Allied to the question of functional specialisation and interdependence between firms of different size is that of ownership patterns between large firms and small. If there is a growing trend towards the externalisation of activity from large firms to small, there may be a similar trend towards decentralisation in the sense that large firms increasingly create autonomous units for performing specific tasks. Legally independent firms, often small, which are in fact wholly or majority-owned by other (large) firms are seemingly often not identified as such in job-generation studies. There is, unfortunately, no clear evidence on the extent of such decentralisation and its trend in West Germany. One indication is given by Bade (1983), who found the 32 largest German manufacturing firms to have over 1,000 legally independent subsidiaries, and that their number had grown by almost 50 per cent between 1971 and 1983. If there is a significant trend, it would similarly obscure, while undetected, the large-firm origins of corresponding small-firm growth¹⁵.

The evidence suggesting that actual and potential unemployment is an important factor underlying the rise in the number of new business start-ups since 1980 prompts a further caveat. It must be feared that many businesses thus founded "out of necessity" may be built on insecure foundations. Many may fold very quickly, which is perhaps reflected by the equally sharp rise in business closures since the turn of the decade. Others may close once the general economic and employment outlook

¹⁵ The apparent recent increase in franchising similarly belongs to the category of new- and small-firm growth induced by large firms.

improves, their founders preferring the relative security of dependent employment to the risks of running their own business. The suspicion must also be that the overwhelming majority of the new firms being created are in well established areas of business, suggesting that displacement effects may be high, which again may be reflected by the parallel rise in closures. The optimistic hope, of course, is that among the many new enterprises are the growth firms of tomorrow. The naively optimistic interpretation of the small-firm/large-firm disparity in job-generation studies is that the declining large firms are the smoke-stack industries of yesteryear, the expanding small firms the sun-rise activities of the new age. Nothing could be further from the truth, of course. The evidence is thin, but best estimates for West Germany (Krist, 1985) would suggest that no more than 2-3 per cent of the new manufacturing firms founded each year can be considered technologically based (technologieorientiert), although there is some suggestion that their relative number is rising (Kulicke, 1986). Empirical studies suggest that such firms have a higher chance of survival than more traditional businesses, but few even of them are likely to grow to significant size in the short to medium term (admitting that their up- and down-stream employment effects, which may be negative as well as positive, are virtually impossible to estimate realistically even ex post) (Kulicke, 1986).

The sole argument to have been advanced of late to suggest a perhaps enduring shift towards small firms is their supposed greater flexibility relative to mature large firms in responding to emergent and limited-volume demand for new and "customised" goods and services. The hypothesis appears all the more attractive inasmuch as recent developments in manufacturing and service-production technology facilitating "flexible specialisation" (Piore and Sabel, 1984) may promise small firms new competitive potential. One simple but fundamental doubt, however, is that nothing suggests why large firms should not avail themselves of the same advantages. The impressionistic evidence is indeed that some large firms are decentralising command structures and introducing the new technology in, as it were, simulation of small-firm flexibility. may be that new and small firms are better able to open

up new markets, but nothing says that those markets must stay their preserve, whether because the pioneers themselves grow large (cf. the much cited example of Apple Computers) or because established large firms enter and conquer those markets (cf. IBM's response to Apple's success with personal computers).

The overall conclusion of this report is that new and small firms are contributing significantly to employment (re)generation in West Germany. It is, however, unclear to what extent this reflects: the normal demographic process from business start-up through maturity to closure; cyclical influences which will pall as economic conditions improve; sectoral effects associated with increasing demand for services, which may however increasingly favour large firms no less than small; developments encouraging the transfer of functions from within large firms to small units on the outside - all of which would suggest that large rather than small firms are the real sources of at least some small-firm growth. None of this is to challenge the important roles of new and small firms as sources of competition and innovation, and as creators of wealth and employment, in modern capitalist economies; it is, however, to warn against any too blinkered appraisal of their importance as a result of viewing them in isolation from the wider economic system and process.

APPENDIX I: FIRM SIZE AND OUTPUT

Data on the contribution of firms to output according to employment-size classes are available only for the manufacturing sector in the restricted definition of the Industriestatistik, i.e. for firms with 20 or more employees. Table AI.1 shows shares in total manufacturing employment and in output measured in terms of turnover (Umsatz). Turnover is, of course, a poor measure of output since it includes changes in the value of stocks as well as payments of certain product-specific taxes (e.g. on tobacco and alcohol). Because of a change in firm coverage between 1976 and 1977, comparisons should be made only between the corresponding pairs of years.

Shares in employment and output were more nearly in line with one another in 1970 than in subsequent years. Small firms' share in output has declined. Whereas firms with less than 200 employees increased their employment share from 21.8 to 22.6 per cent between 1970 and 1976, their share in output fell from 19.4 to 19.0 in the same period. Similarly, between 1977 and 1983 their employment share rose by half a percentage point while their share of output fell by roughly the same amount. At the other end of the scale, a disparity of 3.9 percentage points in 1970 between the employment and output shares of firms with 1,000 and more employees had almost doubled by 1983.

Data on shares in gross output, i.e. turnover adjusted for change in the value of stocks plus self-produced plant and equipment, by employment-size class are available for 1977 and 1983 (Table AI.2). The distributions mirror closely those for turnover in the corresponding years, suggesting that the trends in the latter may approximate well to those for output proper. The table also provides an estimate of value added, i.e. gross output adjusted for bought-in goods and services, per employee for each size class in 1983 together with the change since 1977. Larger firms show higher value added per employee than small, the

figure for those in the 1000-employee and more category being half as high again as that for the smallest firms. The change since 1977 reveals no clear trend in relation to firm size.

TABLE AI.1: FIRMS SIZE AND SHARES IN MANUFACTURING EMPLOYMENT (E) AND OUTPUT (O), 1970-83 - COLUMN PERCENTAGES

Employment Size Class	1970		1976		1977		1983	
	E	O	E	O	E	O	E	O
20-49	5.6	5.1	5.8	4.8	7.7	6.0	7.8	5.7
50-99	6.9	6.0	7.3	6.1	8.2	6.7	8.2	6.2
100-199	9.3	8.3	9.5	8.1	9.6	8.3	10.0	8.5
200-499	15.5	14.6	15.4	14.0	14.9	13.4	14.8	13.3
500-999	11.2	10.6	10.9	10.4	10.7	10.5	10.3	9.8
1000+	51.6	55.5	51.1	56.6	49.0	55.1	48.9	56.6
000's	8,397		7,200		7,347		6,709	
DM billions		558.6		888.8		949.6		1294.1

Source: Bade (1986: Tables 1 and 2)

TABLE AI.2: FIRM SIZE, SHARES IN GROSS OUTPUT
AND VALUE ADDED PER EMPLOYEE IN
MANUFACTURING INDUSTRY, 1977-83

Employment Size Class	Shares in Gross Output		Value Added per Employee	
	1977	1983	1983 (DM thous.)	% Change since 1977
20-49	5.9	5.7	51.3	+36.8
50-99	6.7	6.4	54.2	+40.8
100-199	8.3	8.5	55.4	+32.9
200-499	13.4	13.2	60.7	+39.2
500-999	10.4	9.9	65.9	+39.3
1000+	55.3	56.3	76.8	+37.9

Source: Bade (1986: Table 4) and own calculations

APPENDIX II: FIRM SIZE AND EMPLOYMENT CONDITIONS

Most of the available German job-generation studies say nothing about the sorts of jobs being created in new and small firms. Weitzel (1986) has some information on assisting family members and apprentices in new firms (cf. Table 17) and Hunsdiek (1986) makes passing reference to differences between his younger and older firms with respect to the hiring and laying off of blue-collar workers, skilled workers, white-collar workers and apprentices.

In view of the policy importance being attached in some countries to new jobs in business start-ups and existing small firms as an antidote to unemployment, there is an evident need to know more about, for example:

- whether such new jobs directly provide work for the unemployed, or whether the labour markets in which new and small firms are active are "segmented" ones such that the unemployed have little or no access;
- the extent to which jobs in new and small firms are remunerated at lower rates than jobs in larger firms, many policy-makers believing that small firms should pay less so that the unemployed can price themselves back into work;
- whether the jobs being created are more or less skilled - to the extent that specialised skills are being sought, how does this reduce the chances of the predominantly unskilled unemployed to find work; do labour-market mismatches between the skills sought and those available result in bottlenecks which impede the maximum expansion of firms;
- the extent to which jobs are being provided for problem groups in the labour market, such as unskilled female workers, unemployed school-leavers, members of ethnic minorities, the handicapped;
- in the light of the aggregate evidence for several countries about the rise of part-time employment, notably for women, whether increasing small-firm employment is explained by this trend.

To answer these questions in a valid and reliable way would require *inter alia* information about the jobs being generated by new and small firms at the margin. It is precisely this sort of evidence which is still lacking in job-generation studies.

The appendix provides some indication of firm-size characteristics of employment conditions by briefly reviewing evidence in respect of the stock of jobs in small firms and large. The review limits itself to remuneration levels, employee skill levels, the provision of apprenticeship training, and the incidence of part-time employment. It draws heavily on the compilation of material made by Weimer (1983).

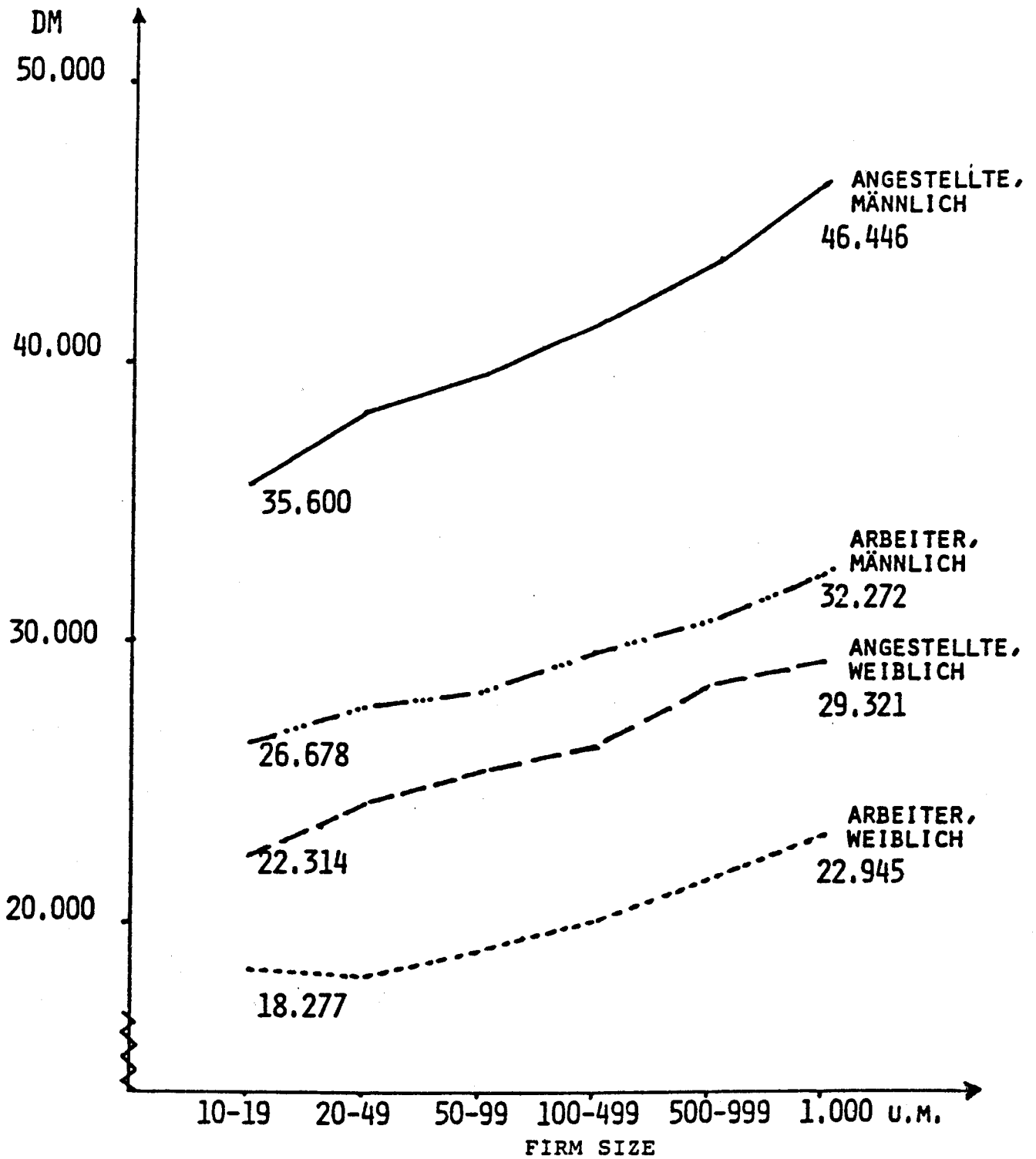
EMPLOYEE REMUNERATION

Diagramme AII.1 shows the average gross annual remuneration paid to full-time employees in firms in 1978, broken down by firm size, and employee's status and sex. The general pattern is clear: average remuneration increases with firm size, and the pattern holds for all of the sub-categories. The available data provide no clear insight into why these patterns should be; it is impossible to control for actual hours worked and qualification levels in firms of different size, for example, as well as for the effects of shift and piece work. It would appear generally not to be the case that collective wage agreements provide for lower rates of pay in smaller firms (although collectively agreed rates do vary between sectors, and small firms predominate in some sectors and large firms in others). By contrast, it would appear to be clear that fringe benefits (supplementary pensions, holiday allowances, annual bonuses, etc.) are usually more generous in large firms than small.

FIRM SIZE AND SKILL LEVELS

Table AII.1 distinguishes skilled (Facharbeiter), semi-skilled (angelernte Arbeiter) and unskilled workers (ungelernte Arbeiter) in manufacturing industry and shows the percentages of each found in establish-

DIAGRAMME AII.1: ANNUAL GROSS REMUNERATION BY FIRM SIZE



Source: Weimer (1983)

TABLE AII.1: BLUE-COLLAR WORKERS BY SKILL LEVELS AND FIRM SIZE
IN INDUSTRY, 1978

Firm Size (n employees) n
workers of which (row percentages)
(n employees) (in 000) skilled semi-skilled unskilled

a. Males

10-19	235	76	14	10
20-49	417	71	18	11
50-99	343	69	20	11
100-499	842	64	25	11
500-999	349	61	29	10
1000 u.m.	1.517	60	32	8
Totals	3.703	64	26	10

b. Females

10-19	20	23	41	36
20-49	66	13	50	37
50-99	66	7	47	47
100-499	242	6	44	50
500-999	103	4	42	54
1000 u.m.	285	5	42	53
Totals	782	7	44	50

Taken from: Weimer (1983: 82, 85)

ments of different size in 1978. As many as 64 per cent of male workers are skilled. Whereas the unskilled account for roughly 10 per cent of workers in all size classes, the percentage of skilled workers decreases with establishment size, while that of the semi-skilled increases. Among women, the percentage of skilled workers is markedly lower (7 per cent as compared with 64 per cent for males), and similarly decreases with establishment size. 50 per cent of female labour is unskilled, with a tendency to increase with establishment size. Thus, in general, small firms have the highest skill levels.

Additional evidence suggests, however, that these differences reflect sectoral characteristics and types of production (varying from skill-intensive, customised production to mass manufacture of standardised goods) rather than differences between small and large firms per se. It would appear that in firms with one-off and small-batch production - often small firms - the requisite flexibility encourages employment of skilled workers able and willing to perform several different tasks, often with minimum supervision.

Technical change would appear to be having a differentiated impact on skill levels in small firms. Where products can be standardised and production processes (further) automated or shortened by increased input of semi-finished goods, certain skills are likely to be less sought by small firms. At the same time, however, the skill requirements of the many more specialised small firms seem likely to increase. The introduction of new technology into small and medium firms has been little researched compared with large firms. Although studies of the diffusion of particular process innovations frequently show larger firms to be the more innovative, the results can be misleading inasmuch as they tend to overlook the fact that many smaller firms often already have high levels of technical expertise. There is some suggestion that the adoption of new process technology in small firms may be hindered by their inability to provide the necessary training to their current work-force and by the difficulty of finding suitably qualified workers on the external labour market.

SMALL FIRMS AND APPRENTICESHIP TRAINING

In comparison with other Community countries, West Germany has been unusually successful in containing unemployment among the young. In 1984, for example, the annual average rate of unemployment among those less than 25 years of age was 10 per cent in West Germany, but 18 per cent in Ireland, 26 per cent in France and 34 per cent in Italy (Maier, 1986). At least part of the explanation for this relative success is generally attributed to the well developed system of apprenticeship training in Germany.

Small firms make a major contribution to the training of apprentices. Table AII.2 shows the distributions of total employment and of apprentices in various sectors of the economy. In industry, firms with less than 200 employees account for some 25 per cent of all employees but for over 35 per cent of all apprentices. The disproportion is still more marked in the other sectors. 56 per cent of the apprentices in construction and 67 per cent of those in wholesaling and retailing are to be found in firms with less than 50 employees. In the craft trades sector firms with less than 20 employees train over 70 per cent of apprentices.

The reasons why small firms train disproportionately large numbers of apprentices are many and cannot be examined here in detail. An important factor are no doubt the relatively modest allowances paid to apprentices, which suggests that the costs of training can often be fully amortised by firms during the course of an apprenticeship because by the second or third year the trainee can be put to productive employment. Thus firms may be motivated to train young people in excess of their own probable short- to medium-term needs. Small firms, in particular, do "overtrain". Table AII.3 shows that the percentage of apprentices subsequently employed in the enterprise where they were trained rises with firm size; less than half are retained in firms with fewer than 5 employees, but more than three-quarters in those employing a thousand or more. Although these figures no doubt also reflect the choice by many trainees to leave their firm in order to seek more attractive employment

TABLE AII.2: EMPLOYMENT AND APPRENTICESHIPS BY FIRM SIZE

Number of Employees	Firm in %	Employees in %	Training Contracts	Number of Training Contracts	
				In Each Firm	For Every 100
Industry					
1 - 49	47.1	7.2	13.8	1.23	3.83
50 - 199	37.7	17.4	22.2	2.48	2.39
200 - 499	9.6	14.2	20.2	8.85	2.88
500 - 999	3.2	10.5	12.9	17.25	2.15
1000 and up	2.4	50.7	30.9	54.67	1.23
Construction Industry Proper					
1 - 49	64.2	26.9	55.8	3.08	10.07
50 - 199	31.3	37.4	30.3	30.43	3.94
200 - 499	3.6	14.6	9.4	9.13	3.17
500 - up	0.9	21.1	4.5	18.55	1.03
Trade					
1 - 5	78.0	23.7	9.7	0.04	1.59
6 - 19	17.5	22.4	35.0	0.58	6.12
20 - 49	3.0	12.1	22.3	2.13	7.20
50 and up	1.5	41.8	33.0	6.40	3.08
Crafts					
1 - 4	56.7	16.6	19.6	0.18	7.76
5 - 9	25.7	21.3	27.3	0.54	8.42
10 - 19	11.2	18.8	24.0	1.10	8.37
20 and up	6.4	43.3	29.1	2.33	4.42

SOURCE: Ifo-Institut fuer Wirtschaftsforschung, 1984a, "Stellung und Entwicklung der kleinen und mittleren Unternehmen in Bayern - Aktualisierung des Ifo-Berichts von 1982," Prepared for the Bavarian State Ministry for Economics and Transportation, Munich; various statistics from the Federal Statistical Office (Statisches Bundesamt); data from the Ifo-Institut, 1983.

elsewhere upon completion, the evidence nonetheless suggests that larger firms are more likely to offer their trainees the option to remain (Maier et al., 1986:34). As a final comment, it may be that the German apprenticeship system has, at least to some degree, postponed rather than avoided the problems of youth unemployment experienced by other countries. In 1984 some 14 per cent of those who finished their apprenticeship training found no subsequent job; in 1982 the figure was just 8 per cent (Maier, 1986:34).

FIRM-SIZE AND PART-TIME EMPLOYMENT

The data in this section are drawn from Büchtemann and Schupp (1986).

In mid-1984 something over three million or 15 per cent of all dependent employees in West Germany had a part-time job (defined as a regular working week of less than 36 hours). In the two decades since 1960 the number of part-time workers is estimated to have grown over four-fold. Between 1970 and 1984, when total dependent employment increased by just 5 per cent, part-time employment grew by 40 per cent.

Part-time workers are overwhelmingly women. A precise estimate is difficult, but it can be assumed that women currently account for over 90 per cent of all part-time workers. Two separate survey-based estimates for 1984 put the number of female employees holding part-time jobs at between 33 and 39 per cent of all women workers, as compared with just two per cent for men.

The disproportionate rise in female employment between 1970 and 1984 (total dependent employment +5%; female dependent employment +16.4%) was in large measure due to increasing part-time work: 70 per cent of the 1.25 million net increase in female employment between the two years is accounted for by part-timers.

TABLE AII.3: PERCENTAGE OF 1977 GRADUATES OF SECONDARY GENERAL EDUCATION WHO HAD COMPLETED VOCATIONAL TRAINING BY 1980 AND WHO WERE EMPLOYED IN THAT YEAR IN THE FIRM IN WHICH THEY HAD TRAINED

Company Characteristics	Percentage of Skilled Workers Who Were Still Employed at the Firm in Which They Were Trained (Retention Rate)		
	Total	Male	Female
All skilled labor	62	68	56
Number of employees in the firm			
1	37	54	21
2 - 4	49	57	44
5 - 9	57	67	50
10 - 49	63	70	56
50 - 99	66	67	66
100 - 499	72	75	70
500 - 999	73	75	72
1,000	78	77	78
Economic sector of the firm providing training			
Agriculture	45	50	(33)
Free lance	48	-	48
Trade	62	70	60
Handicrafts	62	67	51
Public Service	69	68	70
Industry	72	76	66

SOURCE: H. Stegmann and H. Kraft, 1983, "Vom Ausbildungs- zum Arbeitsvertrag. Uebernahmeangebot, beabsichtigter Betriebswechsel sowie tatsaechliches Uebergangsverhalten nach Abschluss der beruflichen Berufsausbildung." MittAB 3 (1983): 235-251.

TABLE AII.4: FEMALE PART-TIME EMPLOYEES BY FIRM SIZE -
COLUMN PERCENTAGES

Firm Size (employees)	(all (female (employees)	part-time	regular/ marginal part-time	normal working week (ex overtime) in hours		
				1-14	15-19	20-34
1-19	(30.5)	40.5	51.4	41.3	50.0	33.8
20-199	(28.0)	25.4	29.1	36.5	26.2	25.2
200-1999	(19.9)	16.6	6.8	10.1	9.2	20.7
2000+	(21.7)	17.5	12.8	12.1	14.6	20.3

Source: Büchtemann and Schupp (1986: Table 5, Part 11)

Survey evidence for 1984 shows:

- the service sector to account for 78 and 71 per cent respectively of female part-time and full-time workers. Thirty per cent of full-time female employees, 43 per cent of part-time women workers, and 56 per cent of female part-timers describing their job as irregular or marginal were employed in the following service branches: wholesaling/retailing, hotels/catering, laundering/personal hygiene/cleaning staff, miscellaneous services, private households.
- 43% of all female employees to be in unskilled or semi-skilled blue-collar jobs or in simple clerical jobs, as against 61% of women with a regular part-time job and 75% of those with irregular or marginal part-time employment.
- of the women employees having completed a recognised vocational qualification, 35% of those in full-time work were not employed in a job for which they had trained, as compared with 48% of regular part-timers and 62% of irregular and marginal part-timers.
- whereas 60% of full-time female employees had a formal vocational or educational qualification, this was true of 45% of regular part-timers and 27% of irregular or marginal part-time workers.
- 23% of full-time female employees consider their job to require no formal qualification or only brief on-the-job training, as compared with 44% of part-timers and 60% of irregular and marginal part-time workers.

Survey evidence for 1984 further shows that female part-time employment is concentrated in smaller firms (the small n for part-time male workers precluded analysing their firm-size distribution). Table AII.4 shows that whereas 24 per cent of full-time female workers were employed in firms with less than 20 employees, over 40 per cent of female part-timers were to be found in such firms. The table also shows that those female part-time workers describing their jobs as irregular or marginal as well as those working 1-14 or 15-19 hours per week were similarly heavily concentrated in firms with less than 20 employees. Büchtemann and Schupp conclude that small firms are increasingly recruiting part-time employees on short working weeks or with irregular periods of work in order to increase the flexibility of their work force and to keep labour costs down. They also suggest that future expansion of part-time work is most likely to occur among small firms.

APPENDIX III: PUBLIC ASSISTANCE TO SMALL FIRMS

A brief but comprehensive description of the public assistance accorded to small firms in West Germany is not easily provided because of the need to take account not only of the programmes administered by the federal government but also of those operated by the eleven state governments. The following review attempts a synopsis of recent trends in programme design, and outlines the characteristics of major programmes selected primarily on the basis of their relatively high levels of uptake/expenditure. It draws heavily on the compilation of small-firm programmes recently published by Hennicke and de Pay (1986).

Since the end of the 1970's aid to small firms has increased significantly. A quantitative measure of its growth is difficult, because programmes offering different forms of assistance are not readily reduced to some comparable denominator of value. Moreover, different programmes adopt different definitions of the small firm. One indication of the growth in assistance is that between 1982 and 1984 alone the value of concessionary loans, the most favoured policy instrument, made available to firms (including the professions) defined as small by the federal and state governments increased by 30 per cent, from 6.03 to 7.85 billion DM.

West Germany's small-firm programmes are here discussed under three headings. Since the late 1970's programmes to support the creation of **new firms** have increased markedly, a response to the decline in the number of new firms founded each year up until the mid-1970's. Noteworthy innovations include a long-term loan programme intended to reinforce the capital base of small firms as well as a scheme designed to encourage potential entrepreneurs to accumulate savings over a period of years prior to starting their business.

Regional-policy assistance has similarly been extended in scope at both the federal and state levels in order to provide greater support to small firms. This development recognises the contribution of small firms to employment provision in relatively disadvantaged regions. A policy

trend in the same vein has been the mushrooming of technology and start-up centres at the local-government level, often with financial assistance from the respective state government; in the last few years 50-60 such centres have been opened or are currently under construction.

Finally, research and development assistance has been re-oriented away from support for specific R&D projects towards aid for development activities in general. The old system of project-specific aid particularly favoured large firms; the new arrangements are intended to lend greater support to new and existing small firms.

ASSISTANCE TO NEW FIRMS

The principal federal programme offering financial assistance in support of new firms is the ERP-Existenzgründungsprogramm. ERP stands for European Recovery Programme; funds left over from the post-WWII Marshall Plan are used to finance a variety of public programmes aimed at improving the structure of the Germany economy. Aid in this programme takes the form of a soft loan up to a maximum value of DM 300,000; a further DM 300,000 may be awarded for additional investment in the subsequent three years. Awards are capital-investment-related and are available for the creation or purchase of a business. Recipients must be less than 50 years of age; coverage extends to the whole of the industrial and service sectors excluding the professions (to whom other programmes are available). Loans run for 10 years, the first two being free of capital repayment; interest rates are slightly below market levels. In 1984, 15,958 loans and DM 807 million of assistance were awarded.

A second and particularly innovative federal scheme is the Eigenkapitalhilfeprogramm introduced in 1979. The aim is to strengthen the financial base of new firms. The founder must provide at least 12 per cent of the capital required for founding his or her business (take-over of an existing business is also eligible), and can then obtain a long-term subsidised loan to raise this percentage to 40. Award of the loan

is not conditional on material securities, solely on the personal guarantee of the founder. It is for this reason that the loan has the character of own capital, making it possible for the founder to apply for additional funds from other sources. Assistance can be combined with the ERP programme described above and usually with programmes operated by the state governments. The maximum award is DM 300,000. The loan runs for 20 years, the first ten being free of capital repayment. Interest repayment begins in the third year only; it rises from, currently, 2 per cent in the third year to 3 per cent in the fourth, reaching the full rate of 5 per cent in the fifth (and subsequent) years. The programme requires that applicants be suitably qualified and not older than 50 years of age. In 1984, 9,835 loans and DM 466.59 million of assistance were awarded. Unless renewed, the programme will expire in 1987.

A novel programme, introduced in August 1985, is the Ansparförderung scheme which pays a bonus to those who open a special savings account with a bank to accumulate capital for starting their own business. The bonus takes the form of a non-repayable grant equal to 20 per cent of the sum saved, but not more than DM 10,000. The qualifying savings period may not be less than three years and not more than ten. This programme appears to be extremely popular. Within a week of the scheme having been announced, some 12,000 applications had been made to the banks. Part of its attraction is no doubt that the banks themselves offer a bonus to supplement their usual rate of interest on ordinary savings accounts. An advantage of the scheme is thought to be that it may encourage those wishing to start a business to reflect on their specific plans over a period of years. A possible disadvantage suggested by some critics is that by the time of eventual start-up the original business idea may have lost plausibility.

In addition to these federal programmes, each of the states operates one or more programmes targetted at new firms, both first-time start-ups as well as takeovers of existing businesses (Northrhine-Westfalia also assists spatial relocation). Most state programmes, like the federal schemes, also make assistance available for subsequent invest-

ment during the first years following a business start. The usual period is three years, but just one in Schleswig-Holstein and eight in Northrhine-Westfalia. All state programmes cover the "traditional" sectors of industry, craft trades and wholesaling/retailing, and most (seven) also extend aid to all or most of the remaining service sector. Assistance usually takes the form of a loan subsidy, although Berlin, Schleswig-Holstein and the Saar also provide non-repayable grants. The loan subsidies sometimes take the form of a loan at a preferential rate of interest (Baden-Württemberg, Bavaria, Lower Saxony, Northrhine-Westfalia and the Saar), sometimes of an interest subsidy on a loan obtained from a bank (Hamburg, Hessen, Rheinland-Palatinate, Schleswig-Holstein). Where loan capital is extended, the maximum loan is usually DM 300,000 (but DM 150,000 in the Saar and DM 600,000 in Schleswig-Holstein). Schemes tend to require that the founder of a business supply a minimum of investment funds from own sources. This minimum is often not quantified (but Schleswig-Holstein stipulates an own share of at least 10 per cent). Most state schemes allow cumulation of their assistance with the federal ERP and the Eigenkapitalhilfe programmes. As a result, high levels of total subsidy can be reached, although there are often rules requiring that an adequate percentage of total investment should come from private (i.e. the founder's own and bank) sources.

Given the instrumental variety of the state programmes, a succinct quantification of their importance is difficult. It is estimated, however, that their awards in the form of soft loans in 1984 numbered 15,008 to a total value of DM 857.1 million.

In addition to the above schemes providing direct financial assistance to new firms, there are additional programmes to support equity participation in small firms and to encourage new firms to make use of consultants.

The federal government provides loans at preferential interest to refinance equity positions taken by private investment funds in small and medium firms. Among the states, the governments of Baden-Württemberg, Bavaria, Northrhine-Westfalia and the Saar operate similar schemes

to refinance equity taken by investment funds which they each sponsor in their respective state. The federal, Northrhine-Westfalian and Saar schemes do not apply to start-ups.

Consultancy services to small firms are supported by a range of federal, state and joint federal/state programmes. The federal government has two schemes subsidising consultancy to the founders of new businesses, one prior to (Existenzgründungsberatung) and one immediately following (Existenzaufbauberatung) start-up. The schemes apply to all sectors of the economy and subsidies may amount to 60 per cent of costs up to a maximum of DM 2,500 and DM 3,000 respectively. The schemes jointly sponsored by the federal and state governments cover the industrial and craft trade sectors, and again distinguish Gründungs- and Aufbauberatung. In the case of industry, consultancy advice given by the Rationalisierungskuratorium der deutschen Wirtschaft is subsidised at a rate of 75 per cent of a daily consultancy rate of 520 DM, plus the consultant's travel costs, for a maximum of 5 (Gründung) and 15 (Aufbau) days. In the case of craft firms, a subsidy is paid to the regional Chambers of Craft Trades providing such advice to firms. Several of the states have similar schemes of their own. Particular mention may be made of Baden-Württemberg, which offers assistance on up to fifty days of advice during the first five to six years after start-up.

Figures for 1984 show that the federal government awards in respect of consultancy for start-ups numbered 2,774 for a total of 9,914 consultant-days. Awards for post-start consultancy numbered 1,622 in respect of 7,864 consultant days.

REGIONAL-DEVELOPMENT ASSISTANCE

Policies to promote regional economic development in West Germany are the constitutional preserve of the states (Bundesländer). In order to contain the problem of the states bidding against one another in the subsidies which they offer to attract mobile investment, a joint federal-state regional development programme, Gemeinschaftsaufgabe "Verbes-

serung der regionalen Wirtschaftsstruktur" (GRW), was put in place. This programme regulates assisted areas, eligible establishments and types of investment and subsidy values.

In 1984, a total of 2,965 GRW awards were made. Total expenditure was DM 1.646 billion in relation to eligible investments amounting to DM 11.371. Cumulated data for the period 1972-84 show that 84 per cent of the successful applications for assistance were made by establishments with less than 50 employees; they accounted for one-third of the total assisted investment by value and for a similar percentage of the total value of awards.

Assistance is available on capital investment in connection with new start-ups, spatial transfer, take-overs, extensions and rationalisation. In the past, assistance was predominantly reserved for manufacturing activities as a consequence of restricting eligibility to establishments which sell the majority of their goods or services outside of the immediate region. This rule was implemented by means of a so-called "positive list" stipulating those branches in which the regional-export criterion could be judged typically to be met; all firms in the stipulated branches were then assumed to meet the criterion. The rules have since been relaxed by, firstly, admitting a larger number of service activities to the positive list, and, second, by allowing establishments not in the listed branches to demonstrate individually that they meet the export criterion. These changes can be expected to make GRW assistance further accessible to small firms.

It may be noted that the hitherto exclusively capital-related character of GRW assistance has also been relaxed by the introduction of an additional subsidy in respect of jobs created as part of an assisted capital investment which are deemed to be of "significance for the innovative capacity of the establishment".

Assistance comes in the form of non-repayable grants. A basic award (Investitionszulage) of between 8.75 and 10 per cent, according to location, can be topped up - and in most cases is - by a supplementary grant

(Investitionszuschuß) such that a maximum subsidy of 15 to 25 per cent, according to location and also to project type, of eligible capital investment may be attained. The additional subsidy for "innovative jobs" noted in the preceding paragraph adds DM 15,000 - 25,000 per such job. Awards are limited to a maximum of DM 200,000 per job created/retained.

The joint federal-state GRW programme is supplemented by a purely federal programme, the ERP Regional Programme (ERP-Regionalprogramm). This is in large measure a counterpart to the GRW scheme. The assisted areas and types of investment are broadly identical; the difference is that aid is reserved specifically for small and medium-sized establishments not able to fulfil the regional-export criterion of the GRW programme. Assistance is in the form of loans. In 1984, 10,674 awards were made to a total value of DM 1.08 billion in respect of eligible investments amounting to DM 2.85 billion. The maximum value of a loan is DM 300,00. Interest rates tend to be below market rates. Loans have a duration of up to ten years, the first two years being free of capital payment.

The joint federal-state GRW programme has not prevented the individual state governments from operating their own regional-development programmes. Most in fact do. They typically confine these own programmes to areas outside of the GRW assisted regions and set maximum award values which tend not to exceed those available in the GRW zones. In some states, however, the whole of their territories not qualifying for GRW aid are designated for their own regional-development programmes, and aid is even extended to establishments in the GRW zones which do not qualify for that assistance (e.g. Schleswig-Holstein, Lower Saxony).

The kinds of eligible investment are by and large those specified in the GRW programme. The regional-export criterion is not, however, everywhere applied (e.g. in Bavaria and Baden-Württemberg).

Awards typically come in the form of non-repayable grants, although some states alternatively offer loans of equivalent subsidy value in lieu (Northrhine-Westfalia, Bavaria, Baden-Württemberg). Maximum subsidy

values vary from state to state, but are generally in the range 7.5 - 10 per cent of eligible investment. Data on the total value of awards made under the state regional-development programmes are sparse. One estimate suggests that in 1983 they totalled DM 468 million or roughly 28 per cent of the total value of GRW awards and virtually 43 per cent of the value of ERP awards. An estimate from another source puts the volume of assisted investment in 1984 at DM 1.045 billion.

RESEARCH AND DEVELOPMENT ASSISTANCE

The last several years have witnessed a shift in West Germany from direct to indirect support for research and development (R&D) activities in firms. Direct support refers to assistance for specific R&D projects, indirect assistance refers to non-directed aid for R&D activities. This shift in emphasis is understood as lending greater support to market-led R&D activity. It is expected to benefit small and medium firms, in particular; one of the major criticisms of direct R&D support was that it favoured a small number of very large firms undertakings major projects.

Some indication of the extent of the change in orientation is given by the the facts that:

- federal R&D support of indirect kinds increased from DM 0.8 to 1.5 billion between 1982 and 1985;
- the ratio of direct to indirect assistance fell from 4.6:1 to 2:1 in the same period, and
- the share of total federal R&D assistance taken by small and medium firms increased from 26 to 31 per cent over these three years.

A description of public assistance for firms' R&D activities in West Germany is again confronted with the fact of both federal and state government programmes. Two federal programmes of particular relevance for small and new firms have been singled out for special mention.

The R&D Personnel Subsidy (FuE-Personalkostenzuschußprogramm) merits attention as a direct subsidy on labour costs which amounts to a running subvention. The popularity of this programme is documented by the fact of 10,185 applications in 1984. In its original form, the programme offered a subsidy on the labour costs of personnel engaged, in full or in part, on R&D work in firms. Eligible firms are currently those with turnover of up to DM 50 million p.a. or less than 500 employees. Awards are not linked to R&D work in specific areas of technology. They are made as non-repayable grants of a value equivalent to 40 per cent of the total sum of gross wages expended on R&D personnel in the previous year (pro rata for those only partly engaged in such work). The maximum award is DM 800.000.

Since 1985 a second component has been introduced, which makes further awards in respect of newly hired R&D personnel. Larger firms may qualify for the extended scheme (up to DM 200 million turnover p.a./ 1,000 employees) and awards amount to 55 per cent of the gross wages of the additional personnel, with the proviso that they be hired for a minimum of 15 months.

As noted, there was a total of 10,185 applications in 1984. Total expenditure amounted to DM 401 million. Awards are limited to a maximum of six years. An analysis of the applications made in 1984 shows that a quarter of the applicant firms had less than 20 employees, 51 per cent less than 50 employees, and 72 per cent less than 100 employees. These categories accounted for 12.5, 33 and 55 per cent of the eligible R&D wage costs, respectively.

The other federal programme noted here is the Pilot Programme for Technology Based New Firms (Modellversuch technologieorientierte Unternehmensgründung), which ran until the end of 1985. The programme was available to new firms with up to 10 employees, the aim being to provide support for firms launched on the basis of a new technical development. Awards were made in the form of non-repayable grants amounting to 90 per cent of the development costs associated with establishing the initial concept, 75 per cent of the costs of subsequent R&D work, and 80 per

cent of expenditures for tooling-up and market launch. Grants could amount to a maximum of DM 900,000; in addition, bank loans totalling a maximum of DM 1.75 million could be secured by guarantees. The interest in the programme is indicated by the fact that the DM 13.5 million allocated to it for 1984 was increased to DM 52 million for 1985.

These are but two of a wide range of federal programmes. There are, in addition, special capital allowances (FuE-Investitionszulage) in respect of capital assets acquired for R&D purposes, generally amounting to 20 per cent of purchase costs up to a maximum of DM 500,000, thereafter 7.5%; R&D Depreciation Allowances (FuE-Sonderabschreibungen) for the purchase and extension of R&D capital equipment allowing write-down over four years of 40 per cent of the purchase value of fixed assets, with lower rates for movables used only partly for R&D purposes; grants of between 30 and 40 per cent, depending on firm size, in respect of R&D contracts placed with outside laboratories (Auftragsforschung); grants in respect of R&D personnel sent to recognised research establishments for up to three years, the grants amounting to DM 45,000, DM 40,000 and DM 35,000 in the first, second and third years respectively. The latter scheme is restricted to specified "key technologies" such as micro-electronics, robotics and biotechnology.

In further addition are several programmes specifically targeted at key technologies, e.g. sensor technologies in micro-electronic applications, miniaturisation. Mention should also be made of federal programmes providing a subsidy on consultancy advice sought by firms. These include a programme in complement to that for technology based new firms described early. The counterpart consultancy programme effectively makes expenditures for consultancy services provided by specified research centres an eligible item of expenditure within the context of the main programme.

These federal programmes are supplemented by a host of programmes operated by the individual states. These defy easy summary. A characteristic perhaps worth emphasising, however, is that whereas the federal government, as noted, has tended to draw back from project-specific

awards during the last few years, the state governments are generally still heavily committed to supporting such specific activities. Most programmes are intended specifically for small and medium firms, an upper limit of 500 employees sometimes being specified as a condition for eligibility. Awards are usually in the form of non-repayable grants, but some states offer loans and some even repayable grants. Awards often run to 50 per cent of project costs in the development phase, rates being lower for the launch and market penetration phase.

The state governments are especially active in supporting technology transfer activities. Most have established networks of higher-educational and research centres available to provide technical assistance in particular to small and medium firms. In addition, most offer subsidies in respect of the services of commercial consultants, which may amount to three-quarters of costs, especially for small firms.

REFERENCES

- Allen, K.J. et al. (1979)**, Regional Incentives in the European Community - A comparative Study, Commission of the European Communities, Studies, Regional Policy Series No. 15, Brussels.
- ANBA (annual)**, "Arbeitsstatistik (year) - Jahreszahlen", Sondernummer, Amtliche Nachrichten der Bundesanstalt für Arbeit.
- ANBA (1984)**, "Die sozialversicherungspflichtig Beschäftigten von 1974 bis 1983", in: Amtliche Nachrichten der Bundesanstalt für Arbeit, Nr. 8, pp. 1101-1118.
- Bade, F.J. (1983)**, "Large Corporations and Regional Development", in: Regional Studies, Vol. 17, No. 5, pp. 315-326.
- Bade, F.J. (1986)** "Die wachstumspolitische Bedeutung kleiner und mittlerer Unternehmen", in: Fritsch, M., Hull, C. and Derenbach, R., Arbeitsplatzdynamik und Regionalentwicklung: Beiträge zur beschäftigungspolitischen Bedeutung von Klein- und Großunternehmen, Sigma, Berlin, forthcoming.
- Birch, D.L. (1979)**, The Job Generation Process, Program on Neighborhood and Regional Change, Massachusetts Institute of Technology, Cambridge, Massachusetts, U.S.A.
- Birch, D.L. (1981)**, "Who creates jobs?", in: The Public Interest, No. 65, pp. 3-14.
- Bock, K. (1986)** "Unterschiede im Beschäftigungsverhalten zwischen kleinen und großen Unternehmen", in: Fritsch, M., Hull, C. and Derenbach, R., Arbeitsplatzdynamik und Regionalentwicklung: Beiträge zur beschäftigungspolitischen Bedeutung von Klein- und Großunternehmen, Sigma, Berlin, forthcoming.
- Büchtemann, C.F., J. Schupp (1986)**, Sozio-ökonomie der Teilzeitbeschäftigung in der Bundesrepublik Deutschland, MS, Research Unit Labour Market Policy, Wissenschaftszentrum Berlin für Sozialforschung, Berlin.
- Bundesministerium für Arbeit (annual)**, Statistisches Taschenbuch (year) - Arbeits- und Sozialstatistik, Bonn.
- Bundesministerium für Arbeit und Sozialordnung (1981)**, Die Standortwahl der Betriebe in der Bundesrepublik Deutschland und Berlin (West) - neuerrichtete, verlagerte und stillgelegte Betriebe in den Jahren 1978 und 1979, Bonn.
- Clemens, R., Friede C. with Dahremöller, A. (1986)**, Existenzgründungen in der Bundesrepublik Deutschland - Grundlagen einer Existenzgründungsstatistik, Schriften zur Mittelstandsforschung, Nr. 8NF, Poeschel, Stuttgart.

- Dahremöller, A.** (1985), Der Beitrag mittelständischer Unternehmen zur Beschäftigung und zum Wachstum unter Berücksichtigung der Unternehmensfluktuation - Zwischenbericht, ifm-Materialien, Nr. 32, Institut für Mittelstandsforschung, Bonn.
- Eckart, W., v. Einem, E., Stahl, K.** (1986a), "Dynamik der Arbeitsplatzentwicklung: Eine kritische Betrachtung der empirischen Forschung in den Vereinigten Staaten", in: Fritsch, M., Hull, C. and Derenbach, R., Arbeitsplatzdynamik und Regionalentwicklung: Beiträge zur beschäftigungspolitischen Bedeutung von Klein- und Großunternehmen, Sigma, Berlin, forthcoming.
- Eckart, W., v. Einem, E., Stahl, K.** (1986b), "Arbeitsplatzdynamik im Süd-Nord-Gefälle, in: Raumforschung und Raumordnung, Nr. 2/3, 1986, pp. 74-78.
- Ermann, K.** (1984), Arbeitsmarktstatistische Zahlen in Zeitreihenform - Jahreszahlen für die Bundesrepublik Deutschland - Ausgabe 1984, Beiträge zur Arbeitsmarkt- und Berufsforschung, BeitrAB 3.1, Institut für Arbeitsmarkt- und Berufsforschung der Bundesanstalt für Arbeit, Nuremberg.
- Ewers, H.J., Fritsch, M and Kleine, J.** (1983), Bildungs- und Qualifikationsorientierte Strategien der Regionalförderung unter besonderer Berücksichtigung kleiner und mittlerer Unternehmen, MS, Berlin.
- Ewers, H.J.** (1984), "Kleine und mittlere Unternehmen als Ansatzpunkt einer beschäftigungsorientierten Strukturpolitik", in: Ewers, H.J. and Schuster, H., Probleme der Ordnungs- und Strukturpolitik: Festschrift für H.St. Seidenfus, Vandenhoeck und Ruprecht, Göttingen, pp. 88-111.
- Fritsch, M.** (1984), "Die Arbeitsplatzentwicklung in kleinen und mittleren Betrieben bzw. Unternehmen", in: Informationen zur Raumentwicklung, Heft 9, pp. 921-935.
- Gallagher, C.C. and Stewart, H.** (1984, revised 1985) Jobs and the Business Life Cycle in the U.K., Research Report No. 2, Department of Industrial Management, University of Newcastle upon Tyne.
- Gielow, G.** (1986) "Unterschiede im Innovationsverhalten zwischen kleinen und großen Unternehmen", in: Fritsch, M., Hull, C. and Derenbach, R., Arbeitsplatzdynamik und Regionalentwicklung: Beiträge zur beschäftigungspolitischen Bedeutung von Klein- und Großunternehmen, Sigma, Berlin, forthcoming.
- Gruhler, W.** (1979), Unternehmensgröße und Beschäftigung in der Industrie, Deutscher Instituts-Verlag, Cologne.
- Hull, C.J.** (1985), "Job Generation among Independent West German Manufacturing Firms 1974-80 - Evidence from Four Regions", in: Environment and Planning C: Government and Policy, vol. 3, pp. 215-234.

- Hennicke, M., D. de Pay (1986)**, Zum Förderungssystem für kleine und mittlere Unternehmen, Schriften zur Mittelstandsforschung, Nr. 12NF, Poeschel, Stuttgart.
- Hunsdiek, D. (1986)**, "Beschäftigungspolitische Wirkungen von Unternehmensgründungen und -aufgaben", in: Fritsch, M., Hull, C. and Derenbach, R., Arbeitsplatzdynamik und Regionalentwicklung: Beiträge zur beschäftigungspolitischen Bedeutung von Klein- und Großunternehmen, Sigma, Berlin, forthcoming.
- Kayser, G. (1986)**, "Definitive Ansätze zur Klärung des Begriffs 'kleine und mittlere Unternehmen'", in: Bundesminister für Wirtschaft, Unternehmensgrößenstatistik 1985 - Daten und Fakten, Studienreihe 50, Bonn.
- Krist, H. (1985)**, Neue Strategien in der Technologiepolitik: Lokale und regionale Initiativen zur Förderung technologie-orientierter neuer und junger Unternehmen, Institut für Systemtechnik und Innovationsforschung, Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V., Karlsruhe.
- Kulicke, M. (1986)**, "Die mögliche beschäftigungspolitische Bedeutung technologieorientierter Unternehmensgründungen", in: Fritsch, M., Hull, C. and Derenbach, R., Arbeitsplatzdynamik und Regionalentwicklung: Beiträge zur beschäftigungspolitischen Bedeutung von Klein- und Großunternehmen, Sigma, Berlin, forthcoming.
- Maier, H.E. et al. (1986)**, Place de l'Artisanat dans l'Insertion Professionnelle des Jeunes, Report to the Commission of the European Communities, Research Unit Labour Market Policy, Wissenschaftszentrum Berlin für Sozialforschung, Berlin.
- Mendius, H.G., Sengenberger, W., Weimer, S. (1985)**, "Anmerkungen zu: Wolfgang J. Steinle: 'Der Beitrag kleinerer und mittlerer Unternehmen zur Beschäftigungsentwicklung'", in: Mitteilungen aus der Arbeitsmarkt- und Berufsforschung, 18. Jg., Nr. 1, pp. 153-154.
- Piore, M.J., Sabel, C.F. (1984)**, The Second Industrial Divide: Possibilities for Prosperity, New York, Basic Books.
- PROGNOS (1979)**, Analyse und Prognose der Unternehmensgrößenstruktur, PROGNOS, Basel, 1979.
- Statistisches Bundesamt/Handwerk (year)**, Beschäftigte und Umsatz im Handwerk, Fachserie 4, Reihe 7.1, Kohlhammer, Stuttgart und Mainz, quarterly.
- Statistisches Bundesamt/Jahrbuch (year)**, Statistisches Jahrbuch (year) für die Bundesrepublik Deutschland, Kohlhammer, Stuttgart und Mainz, annual.
- Steinle, W.J. (1984)**, "Der Beitrag kleinerer und mittlerer Unternehmen zur Beschäftigungsentwicklung", in: Mitteilungen aus der Arbeitsmarkt- und Berufsforschung, 17. Jahrgang, Nr. 2.

- Steinle, W.J. (1985), "Replik zu H.G. Mendius, W. Sengenberger, S. Weimer", in: Mitteilungen aus der Arbeitsmarkt- und Berufsforschung, 18. Jahrgang, Nr. 1, pp. 155-157.
- Stockmann, R., Dahm, G. and Zeifang, K. (1983), "Konzentration und Reorganisation von Unternehmen und Betrieben. Empirische Analysen zur Entwicklung der nichtlandwirtschaftlichen Arbeitsstätten und Unternehmen in Deutschland, 1875-1970", in: Haller, M. and Müller, W., Beschäftigungssystem im gesellschaftlichen Wandel, Campus, Frankfurt/New York, pp. 97-177.
- Storey, D.J. (1983), "Job Accounts and Firm Size", in: Area, Vol. 15, No. 3, pp. 231-237.
- Storey, D.J. and Johnson, S. (1985), Job Generation in Britain: A Review of Recent Studies, Centre for Urban and Regional Development Studies, University of Newcastle upon Tyne, MS.
- Thürbach, R.P. and Menzenwerth, H.H. (1975), Die Entwicklung der Unternehmensgrößen in der Bundesrepublik Deutschland von 1962 bis 1972, Beiträge zur Mittelstandsforschung, Heft 4, Göttingen.
- Weimer, S. (1983), Arbeitsbedingungen in Klein- und Mittelbetrieben, Rationalisierungskuratorium der Deutschen Wirtschaft, Eschborn.
- Weitzel, G. (1986), Beschäftigungswirkungen von Existenzgründungen, Ifo-Studien zu Handels- und Dienstleistungsfragen 28, Ifo-Institut für Wirtschaftsforschung e.V., Munich.
- Zeitschrift für das gesamte Kreditwesen (1980), Die Finanzierungshilfen des Bundes und der Länder an die gewerbliche Wirtschaft, Sondernummer.

CHAPTER 6JOB CREATION IN SMALL AND MEDIUM-SIZED FIRMS : FRANCE

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Interest in job creation, in firm creation, as well as in changes in the size distribution of firms and its influence on employment has been fairly recent.

During the period of the "glorious 30s" economic research studies of the production system mainly concentrated on the study of the methods of production, of investment, of productivity and output in relation to the scale of production.

The medium-sized, and then the large, enterprise seemed at that time to be the norm, even the ideal, arising from the transformation of the productive system; the inescapable concentration of manufacturing activities within large enterprises seemed to leave less and less room for the Small and Medium-Sized Enterprise (SME). However, in practice a significant growth of small craft and commercial enterprises and small and medium-sized industrial enterprises has occurred. In contrast to theoretical predictions, the standardisation of mass production, and economies of scale which should lead enterprises to continually increase in size, in fact creates a 'market' for the qualities of flexibility, adaptability, innovative capacity inherent within Small and Medium-Sized Enterprises. The last ten years has thus been characterised by a slowing down of job creation in large establishments, compensated by the development of the SME specialising in one-off products, small production runs, processing, exports, services to individuals and enterprises.

Thus, "the crisis period will be marked by an original phenomenon of job losses attributable to large enterprises associated with the multiplication and dynamism of small units, notably with less than 10 employees, which seems to tie up with an analogous phenomenon which has already been brought

to light by the major depression of the 30's" [MIR, Note No.26].

This change in industrial concentration which has characterised the evolution of the production system from the 1970s to 1980s requires careful analysis. The evolution of Small and Medium-Sized Enterprises and its economic and social manifestations require understanding and explanation. Of particular interest is the question of the types of jobs created by the SMEs along with the nature of skills required, the salary levels, male/female ratios, the working conditions and the types of contract.

Ideally a full description of the jobs created has to be provided, their generation, their job description (with skill and qualification information), their development and change, their disappearance. Unfortunately such "jobs" are not analysed in statistical databases, so we must turn to more qualitative descriptions in order to understand the mechanisms for the creation of jobs in general and in the SME in particular : the difficulty is that there are many data sources providing increasingly detailed information on the numbers of jobs, but few which describe the movement of jobs.

Existing analysis has succeeded in throwing interesting light on many aspects of job creation. Nevertheless information necessary to adequately explain the generation, transformation and disappearance of jobs in relation to sector, investment, new technology, type of enterprise, location, etc. does not exist.

The result of this statistical problem (which also reflects conceptual weaknesses) is that the following discussion will not be fully coherent since it has to draw upon a large number of very different sources.

6.1 Definition of Enterprise Size

Both conceptual and statistical problems present themselves in any discussion of the notions of 'the enterprise' and 'size'.

6.1.1 Notion of enterprise, establishment and sources

Even though an enterprise was defined in a relatively clear and general way in 1969 by the Statistical Office for the European Community as "a judicial organisation, with a separate balance-sheet, under the authority of a director set up in order to exercise in one or several places one or numerous productive activities for goods and services", the translation of this statistical concept in an economic study poses several problems.

In effect, according to statistical sources, we use information either at the level of the establishment or at the level of the enterprise (in other words, establishments of the same enterprise are included in the enterprise regardless of their activities or location).

The SIRENE system, the official list of enterprises and establishments, aims, in theory, to identify enterprises and the establishments which depend on them.

This list is not without its drawbacks, however, in relation to economic research due to alterations in the registrations and because of double entries : there is in fact an artificial multiplication of establishments : "establishments have been registered which only have a fiscal existence since they represent collected taxes/revenue and not local activities; thus the location of a business in the name of someone who manages it gives rise to two registrations : one under the manager's name, and similarly, under that of the enterprise, all of which has no clear economic significance" [Lang and Thelot (1985)].

Much interest is being shown in the next SIRENE II which is based on a new definition of the Economic Establishment ETEC. Other sources retain the notion of the employer establishment like UNEDIC, URSSAF and ESE¹ which does not help the identification of establishments without employees but since it provides systematic statistics it permits an approach to be made in the direction of certain phenomena like the role of the SME.

However, whatever the source, it is practically impossible to distinguish the enterprise which is part of a group and the autonomous enterprise. Ideally, it would be useful to quantify the effect of the multiplication of small and medium-sized units of production which has resulted from the breaking up or merging of large companies. Unfortunately, due to the lack of sufficiently precise observations of the phenomenon, it is difficult to measure the effect on jobs attributed to Small and Medium-Sized Enterprises as a result of this process.

The rebirth of the SME should not however obscure the complementary role of the groups, although their respective roles cannot be isolated.

6.1.2 Definition of Size

Finally, the notion of "employee", used as a criterion for measuring size not only varies from one source to another but is also heavily tainted with ambiguities : depending on the area of activity, the production techniques, the intensity of capital, enterprises of very different "dimensions" can have the same employee total. It is clear, however, that in the absence of other indicators, the size criterion will be number of employees despite the drawbacks of this index. Furthermore since payment of fiscal, social, health and welfare duties increase at the threshold levels of 10, 11, 50 and 100 employees there may be a reluctance on the part of enterprise to cross these boundaries [Lang and Thelot (1983): Lavallee (1986)]. Finally it may be unwise to place technical thresholds applicable to each sector in a prominent position since we must also take into account the specialist nature of the sources.

An important distinction has to be made between industrial, non-craft enterprises with 10 or more employees, and craft enterprises (whose total workforce can only rise to 15 employees in exceptional circumstances or under certain conditions). The craft enterprises are registered in the Trade/Craft List kept by the Chamber of Trade whereas the other commercial and industrial enterprises are currently registered

in the Centre for Enterprises' Normalities based in the Chamber of Commerce.

Using the dimensional criterion of 9 employees, it is necessary to add different legal thresholds which impose progressively additional 'burdens' upon the enterprise :

10 employees : 1.1% tax on salaries for professional training, 0.90% tax on salaries for accommodation construction.

11 employees : A staff representative who can also be a trade union representative.

25 employees : Canteen or luncheon vouchers.

50 employees : Staff Association; Health, Safety and Security Committee (the number of delegates and representatives will increase with 75 employees and also with 100).

100 employees: Parental leave of 2 years without suspension of employment contract.

200 employees: Leave for sabbaticals, training and enterprise creation.

In practice therefore, the existence of these thresholds and the resultant legal obligations exert an influence on the choice of size. "This influence is assigned more importance by the distribution curve for the size of employing units which shows an "abnormally" high frequency below, and an "abnormally" low frequency above, each characteristic size according to its obligations. It should not be deducted from this statement that the removal of legal obligations would lead ipso facto to the restoration of a "normal" distribution thus leading to the creation of jobs" [Lavalley (1986)].

Finally, it is necessary to emphasise that the value of time-series research depends on the procedures for careful data maintenance. Unfortunately updating of files is too infrequent with this being particularly true for data on the closure of establishments. Data on employment may also be patchy, so reducing the rigour of the approach and leading to weak interpretations only.

Finally we emphasize that time series data relating to the distribution of employees by enterprise size can for some categories be misleading. For example the relative growth of the SME sector may be the result of the growth of units which have originated from a smaller size, or of restructuring and the cutting of jobs in units which had originally been larger. Simple time series data will not distinguish these trends. Within any given class, the average employee size of employing establishments will also be subjected over time to different trends in the number of employers and the number of employees. Nonetheless, static measures of employment distribution by size over time still constitute an important indicator of the creation and destruction of jobs within a given size category of enterprise/establishment.

6.2 Job generation by enterprise size, sector and region

In this section we will principally be concerned with the statistical data from the Computer System of Enterprise and Establishment Lists (SIRENE), created in 1973 by the National Institute for Statistics and Economic Research. We will also present results from other sources such as UNEDIC which provide a richer understanding of job creation.

6.2.1 Retrospective study into the size distribution of enterprises

Before the setting up of SIRENE, INSEE managed a card-index of manufacturing units known as the Industrial and Commercial Establishment Index. Whilst coverage was generally satisfactory the index was weak in identifying the movement of plants from one location to another and in its coverage of closures. Nonetheless, it is helpful to reproduce the INSEE analysis of changes during the period of rapid economic growth in the 1950's in order to highlight the contrast with the 1970's [Guesnier (1970)].

The almost continuous increase in concentration between 1954 and 1966, which affected the industrial sector as much as the buildings and public works sector (c.f. Tables 6.1 and 6.2), is clear. In the industrial sector there was an increase in the number of all size groups of establishments with 50 or more employees throughout the whole of the 12 year period with the exception of a decline in the number of establishments with more than 1000 workers during the last period. In contrast the number of establishments with less than 10 employees continuously decreased with the exception of establishments between 3 and 5 workers which increased during 1962 and 1966.

The growth of the Building and Public Works sector is a little different. The development of small enterprises was maintained because of a strong growth in the demand for building work (rural renovations, urban expansion) but their overall concentration remains constant despite some upsets in the period 1958- 1962.

The log-normal representation (Figures 6.1 and 6.2) of the distribution of enterprises according to their size over different periods (54, 58, 62, 66), for which INSEE had published a statistical index, illustrates perfectly the behaviour of the enterprises and the prevalent logic in the economic system. A growth in enterprise size seems to be a positive factor associated with increased productivity and profit. Research into the results of an industrial survey carried out in France in 1963 confirmed this hypothesis in a startling way; productivity appeared to be a growing consequence of size. Similar results were obtained in an industrial survey of manufacturing industries carried out in 1962 in the USA (Table 6.3). Concentration and re-grouping of the means of production thus seemed to characterise the production system at that time. The fact that within some sectors these did not apply (e.g. some departments having decreasing profits and profitability in the large sized enterprises) and the more general idea that every economic and social phenomenon is inclined to follow a logistical (S-curve) rather than the exponential were not considered important.

Table 6.1

Evaluation of the distribution of Establishments
according to size bands in 1954, 1958, 1962, 1966
and distribution of employees in 1966

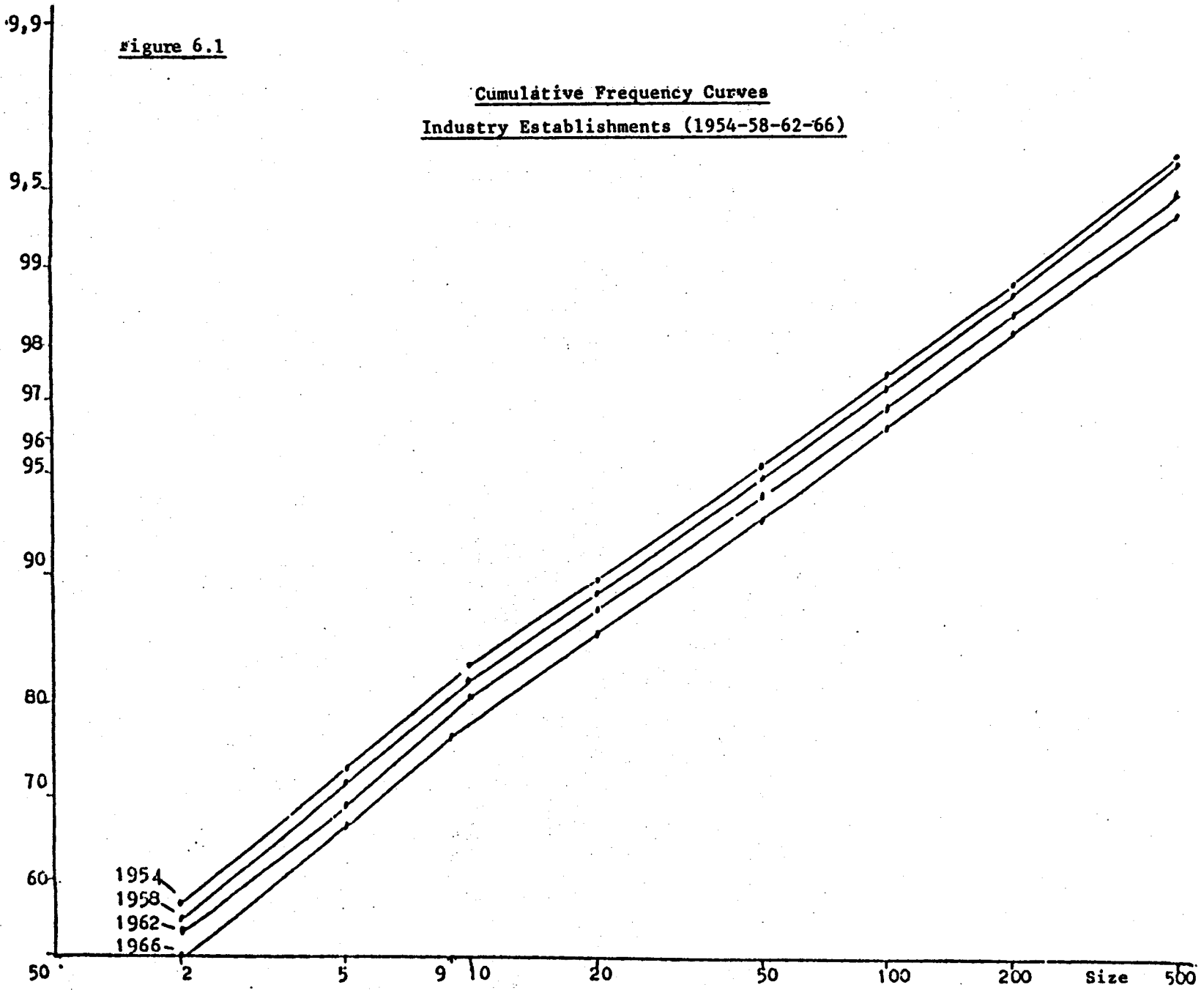
Industrial Sector (without B.T.P.)

Size Bands	Establishments								Employees	
	1954		1958		1962		1966		1966	
	Total	Cumulative Frequency	Total	Cumulative Frequency	Total	Cumulative Frequency	Total	Cumulative Frequency	Total	Cumulative Frequency
1 and 2	184 493	57,0	177 054	56,0	152 985	54,0	131 304	49,4	173 417	3,2
3 - 5	53 935	73,7	51 274	72,2	43 922	69,5	48 183	67,5	180 689	6,6
6 - 10	31 397	83,4	30 684	81,9	30 009	80,1	24 960	76,9	181 996	10,0
11 - 20	20 922	89,8	21 201	88,6	20 233	87,3	23 002	85,5	312 472	15,8
21 - 50	18 780	95,6	20 169	95,0	19 612	94,2	21 080	93,4	654 209	28,0
51 - 100	6 472	97,6	7 320	97,3	7 605	96,9	8 145	96,5	563 967	38,5
101 - 200	3 903	98,6	4 308	98,7	4 472	98,4	4 819	98,3	675 395	51,1
201 - 500	2 475	99,6	2 753	99,6	2 889	99,5	3 057	99,4	926 049	68,4
501 - 1000	783	99,8	862	99,8	874	99,8	951	99,8	643 627	80,4
1001 - 2000	332	99,9	341	99,9	364	99,9	311	99,9	423 626	88,3
2001 +	139	100,0	158	100,0	159	100,0	152	100,0	626 820	100,0
Total	323 631	-	316 124	-	233 121	-	265 964	-	5 362 267	-

Table 6.2

Evolution of the distribution of Establishments
according to size bands in 1954, 1958, 1962, 1966
and distribution of employees in 1966
Buildings and Public Works Sector

Bands	Establishments								Employees	
	1954		1958		1962		1966		1966	
	Total	Cumulative Frequency	Total	Cumulative Frequency	Total	Cumulative Frequency	Total	Cumulative Frequency	Total	Cumulative Frequency
1 and 2	76 715	61,1	87 539	62,5	90 274	61,3	99 246	57,5	127 850	8,7
3 - 5	20 163	77,2	21 961	78,2	22 752	76,8	31 238	75,6	117 326	16,7
6 - 10	111 513	86,3	12 634	87,2	14 576	86,7	15 597	84,7	113 231	24,4
11 - 20	7 354	92,2	7 931	92,9	8 642	92,6	12 158	9,17	162 571	35,4
21 - 50	6 421	97,3	6 412	97,5	6 855	97,2	9 028	97,0	272 449	54,0
51 - 100	2 045	98,9	2 149	99,0	2 495	98,9	3 081	98,7	210 600	68,3
101 - 200	957	99,7	935	99,7	1 078	99,7	1 440	99,6	195 483	81,6
201 - 500	337	99,9	394	100,0	439	99,9	635	99,9	183 884	94,1
501 - 1 000	57	100,0	46	100,0	54	100,0	95	100,0	61 677	98,3
1 000 - 2 000	7	100,0	7	100,0	7	100,0	18	100,0	23 813	100,0
2 001 +	1	100,0	-	-	-	-	-	-	-	-
Total	125 570	-	140 008	-	147 172	-	172 536	-	1 468 884	-



99,9

Figure 6.2

Cumulative Frequency Curves

Building and Public Works Establishments (1956 - 62-64-66)

99,5

99

98

97

96

95

90

80

70

60

1956
1962
1964
1966

50

2

5

9

10

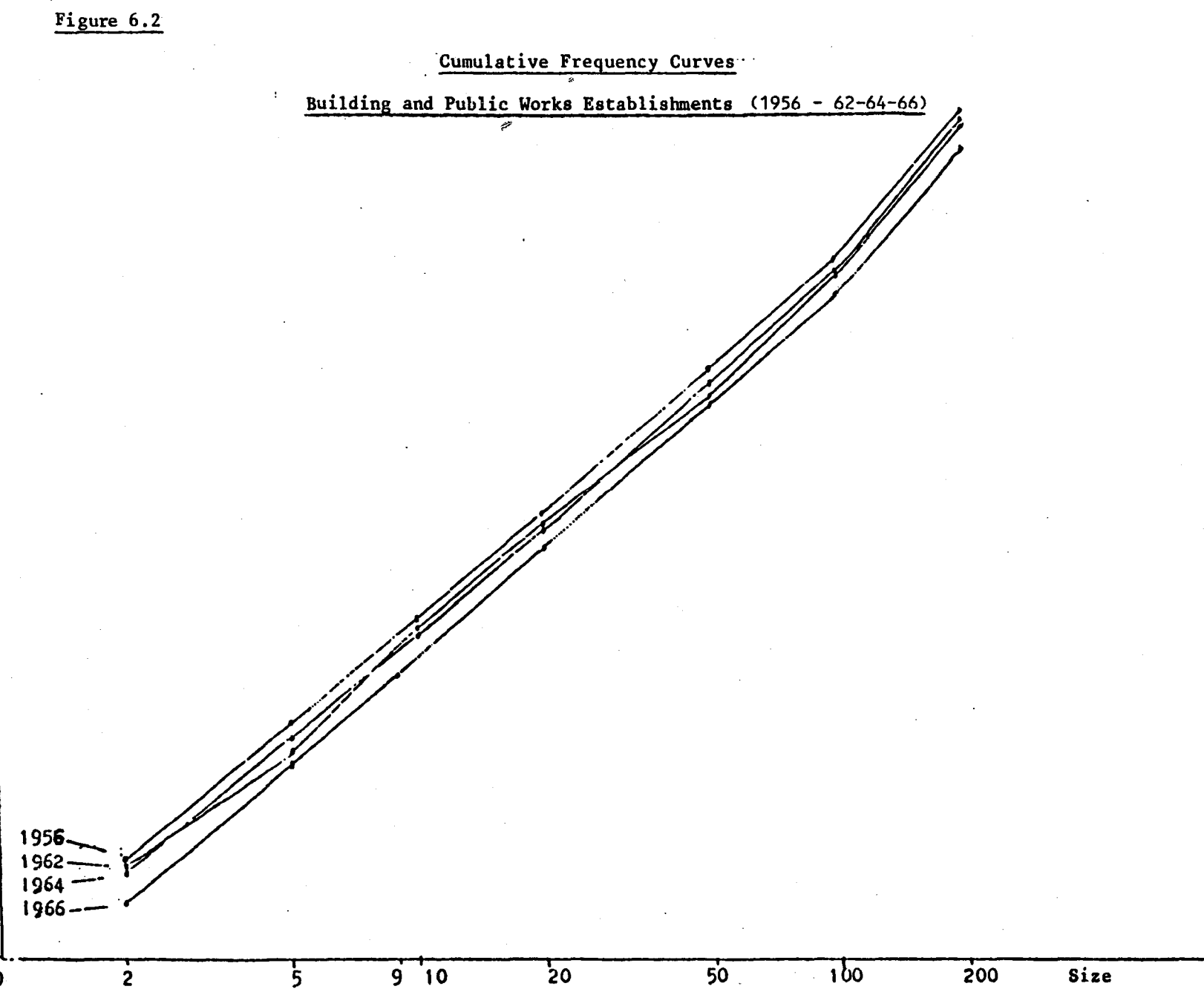
20

50

100

200

Size



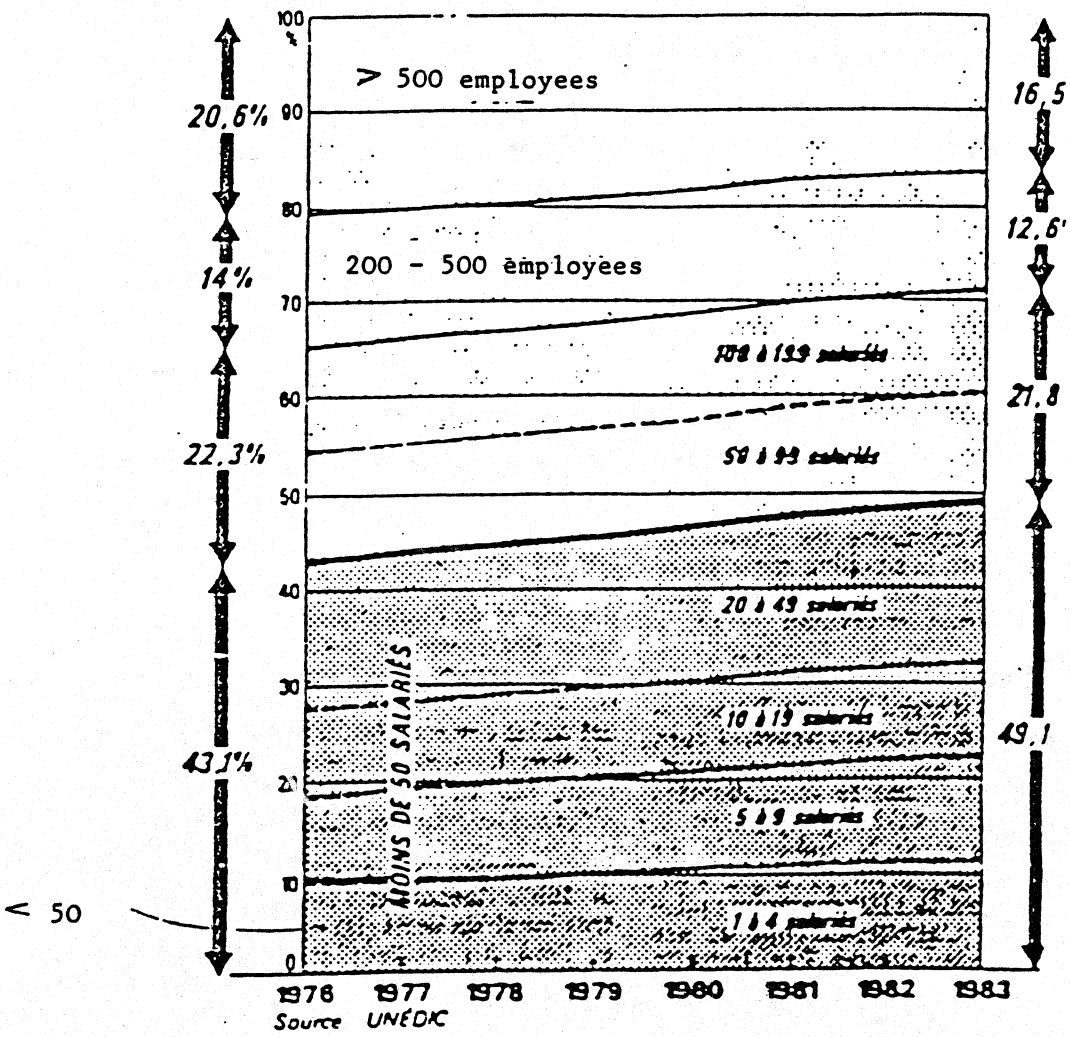
In this way the rapid economic growth which followed the post-war period of reconstruction produced a size distribution of enterprises characterised by the concentration within large, to the detriment of medium-sized and particularly small enterprises. The more irregular growth of establishment employment in the intermediate size classes raised an important question : does the medium-sized enterprise have a technical and economic justification or is it simply a transitional category with some increasing and others decreasing? This question remained largely unanswered during the 1950's and 1960's, but it is, once again today, relevant, in terms of new job creation.

6.2.2 Recent changes in the size distribution of enterprises and their employees

During the 1970's the growth in concentration reverses. It is difficult to accurately pinpoint the date of the shift because it coincides with the major re-organisation of the indices. The Industrial and Commercial Establishment Index, which was providing less and less useful statistics, was replaced by SIRENE in 1973. Moreover, in 1976-1977 the Nomenclature of Economic Activities was replaced by the statistics which separated enterprises and employees according to industrial sector or service sector (tertiary).

An initial illustration of the change in the distribution of wage-earning jobs by size is given in Figure 6.3 which shows the development between 1976 and 1983 for all employers affiliated to UNEDIC.

According to the evidence, the proportion of small enterprises with less than 50 employees in total employment highlighted by the UNEDIC database increased at a uniform pace throughout the whole period. The relative decline in the proportion of employers with 50-200 employees (22.3% to 21.8% between 1976 and 1983) invites a search for changes around the 100 employee threshold since this separates the medium-sized from large enterprises. It also enables us to establish whether there is a specific turbulence zone in each sector since the behaviour of



in Le Monde 16 octobre 1984, A. LEBAUPE.

Figure 6.3 : Evolution of employee distribution according to establishment size

enterprises moving into these size categories could be a focus for job creation in future years. For these reasons in Section 6.4 we present the process of enterprise population transformation with particular reference to the frequency of changes in size.

To provide an in-depth analysis of the changes in establishment and employee size distribution we will use the SIRENE statistical work (c.f. Annexe Tables 1 and 2, 1980 and 1986, NAP 15) and UNEDIC statistics (Tables 3-4 and 5-6 which show a more detailed analysis of the sectors in NAP 40 for 1980 and 1984).

Both sources provide similar conclusions but we would prefer to deepen the analysis by using the UNEDIC series. However, the sectoral coverage of SIRENE is more extensive; UNEDIC for example does not cover the areas of administrative tertiary sector, non-commercial service industries nor agricultural co-operatives.

Tables 6.4 and 6.5 which cover the full range of activities show the total number of employees is declining rapidly (-12.9% in SIRENE, -4.1% in UNEDIC) and in both cases the fall seems to be in establishments with more than 100 workers (-22.5% and -10.9% respectively). This clear statement emphasises the important role of the SME in the maintenance of jobs. However, if the proportion of jobs in the SME sector (less than 100 employees) rises, i.e. 49.6% to 55.1% according to SIRENE and from 58.0% to 60.9% according to UNEDIC between 1980 and 1985 and if each of the classes has a growing weight in total employment, the number of employees will continue to grow in the small sizes (less than 9 employees). The variation, even though it is weak, was even positive for the 10-19 class between 1980 and 1984. The minor variations in each source's results do not reflect significant contradictions and are more likely to be associated with the differences in areas covered, in the time period or in the way the indices have been managed. The phenomenon of concentration in the large establishments/enterprise therefore seems to have ceased, with new jobs increasingly found in the SME. This means that the structure and operation of the labour market has also changed

Table 6.3

Variation of productivity in step with size in France and the USA

France 1983 Industry Survey		
Enterprise size by Salary Band	Value Added per person in employment 1 000 F.	Productive Investment per employed person
0 - 9	12,6	1,2
10 - 19	17,5	2,8
20 - 49	17,6	2,1
50 - 99	17,8	2,2
100 - 199	18,4	2,4
200 - 499	19,9	2,8
500 - 999	20,8	3,3
1 000 +	28,6	5,5
Average/ Median	20,8	3,2

United States 1983 Industrial Survey for manufacturing industries	
Enterprise size by Salary Band	Value Added per person in employment U.S.
1 - 4	10,389
5 - 9	9,540
10 - 19	9,542
20 - 49	9,622
50 - 99	9,957
100 - 249	10,574
250 - 499	11,171
500 - 999	12,601
1 000 - 2 500	14,248
plus 2 500	14,431

Source : J-P. NIOCHE (1969) Taille des établissements industriels dans sept pays développés.
Collection de l'I.N.S.E.E. E₁ - p.108.

Table 6.4 Number of employees and number of establishments by size,
all activities in 1980 - 86

	1 - 5	6 - 9	10 - 19	20 - 49	50 - 99	100 +	TOTAL
1980 Employees	2 050 363	1 056 962	1 393 011	2 356 277	1 753 860	8 772 923	17 383 396
Establishments	1 014 207	145 203	102 920	76 479	25 233	23 657	1 387 699
1986 Employees	2 054 525	1 072 111	1 363 859	2 212 581	1 629 011	6 800 750	15 132 837
Establishments	1 020 214	146 637	101 436	72 032	23 496	20 370	1 384 185
%							
1980 Employees	11,8	6,1	8,0	13,6	10,1	50,4	100
1986 Employees	13,6	7,1	9,0	14,6	10,8	44,9	100
1980 Average size	2,02	7,28	13,5	30,8	69,5	370,8	12,526
1986 Average size	2,01	7,31	13,4	30,7	69,3	333,8	10,932
80-86	+ 4 162	+ 15 149	- 29 152	- 143 696	- 124 849	-1 972 113	-2 250 559
	+ 0,2 %	+ 1,4 %	- 2,1 %	- 6,1 %	- 7,1 %	- 22,5 %	- 12,9 %

Source SIRENE

Table 6.5 Number of employees and number of establishments by size,
all activities in 1980 - 1984

		1 - 4	5 - 9	10 - 19	20 - 49	50 - 99	100 +	TOTAL
1980	Employees	1 405 324	1 350 810	1 259 278	2 210 352	1 482 774	5 597 592	13 306 130
	Establishments	710 327	204 651	92 911	71 583	21 281	18 225	1 118 978
1984	Employees	1 475 379	1 439 740	1 276 679	2 172 413	1 415 055	4 985 807	12 765 073
	Establishments	742 113	218 036	94 408	70 564	20 406	16 866	1 162 983
	%							
1980	Employees	10,56	10,15	9,46	16,61	11,14	42,06	100
1984	Establishments	11,56	11,28	10,00	17,01	11,09	39,06	100
1980	Employees	1,98	6,60	13,55	30,88	69,68	307,14	11,89
1984	Establishments	1,99	6,60	13,52	30,79	69,34	295,61	10,98
80-84	Average size	+ 70 055	+ 88 930	+ 17 401	- 37 939	- 67 719	-611 785	- 541 057
	Average size	+ 4,98 %	+ 6,6 %	+ 1,4 %	- 1,7 %	- 4,6 %	- 10,9 %	- 4,1 %

since the kinds of jobs offered by the SME appear to differ significantly from those available in its larger counterparts.

The tables also show a decrease in the average number of employees per establishment. This fell from 12.5 to 10.9 according to SIRENE and from 11.9 to 10.9 according to UNEDIC, with the fall being mainly in establishments employing 100+ employees. In the size classes below 100 employees, the average size also falls, but only very slightly. Smaller establishments tend to have unchanged employment. This suggests that changes in employment in the small firm sector take place through changes in the number of businesses. On the other hand, large enterprises have responded to reduced demand for labour by cutting employees rather than reducing the number of firms.

The decrease in the average size of establishments with more than 100 employees, although not of the same importance in the two sources, is spectacular. This fall is likely to reflect technical changes as well as hostility to labour per se. It is therefore important to determine how this reduction in manpower (as a result of a reduction in activities or due to technological change) affects the distribution of existing jobs according to level of qualification and vacant jobs (c.f. Section 6.5.2.2).

For medium sized enterprises, the reduction in the average size reflects contradictory developments viz: a decline in employment between 1980 and 1984 in establishments in the 50-99 and 20-49 employee size group and an increase in the smaller establishments. This clearly indicates the need for more research to analyse factors affecting the hiring policy of firms and whether it is linked to factors other than size. Without necessarily questioning the role of the SME, the exact contribution of size could be isolated so as to refine our knowledge of the factors influencing job creation.

Finally, in the smallest size of enterprises, the average size (with some slight contradictions between the results provided by the two sources) is growing slightly or remaining stable. Here the influence of

size thresholds which may discourage employers from crossing them and which may lead to an abnormally high representation of enterprises in the upper limit of the class size, here, requires investigation.

In summary, research into job generation according to size shows the increasing role played by the SME in employment and the corresponding decline in employment in enterprises with 100+ employees. Jobs are increasing only in establishments with less than 20 workers coupled with an increase in the number of employer establishments. On the other hand the 20-49 class is losing employees and employer establishments, although increasing its proportion of total employment. The slight differences between the SIRENE and the UNEDIC data sources mainly reflect differences in areas covered.

6.2.3 Development by Sector

Tables A1 and A2 (source SIRENE) and A3 and A4 (source UNEDIC)* shows that the growth of tertiary activities has compensated for the decline of the secondary sector; one important exception concerns agricultural and food industries which are increasing their employee totals. On the other hand, the commerce sector in the tertiary sector has recorded a slight reduction in manpower (less than 0.2%).

Nevertheless some disparities manifest themselves at different levels of disaggregation. Tables 6.7 and 6.8 and Figure 6.3, which cover employment in the 1976-83 period, clearly shows the decrease in employment in the industrial sector and the increase in the tertiary sector. The exceptions to this development are not numerous, yet certain sectors of industrial activity have experienced a remarkable increase, such as bakeries, armament, meat industry, whereas in the tertiary sector there are some sectors experiencing large decline, eg. non-food trade (non-sedentary). Clearly there are major sectors of job creation in the tertiary sector particularly in services. The tables

* In the Annexe.

Table 6.7

Job Creation Sectors

Sectors which recorded the largest increases between 1976 and 1983

Sectors which have increased their manpower by more than a quarter between 1976 and 1983

Sectors which recorded the largest increases between 1976 and 1983			Sectors which have increased their manpower by more than a quarter between 1976 and 1983		
	Increases	%		Increases	%
Study Assistance Activities	+ 125,817	+ 20.9	Recreational Services	+ 22,052	+ 145.7
Large Area Trade	+ 95,647	+ 134.8	Large Area Trade	+ 95,647	+ 134.8
Hotels, Cafes, Restaurants	+ 90,505	+ 24.9	Social Action	+ 41,558	+ 111.9
Health	+ 85,574	+ 34.4	Research	+ 4,507	+ 110.1
Social Action**	+ 59,976	+ 87.0	Social Action**	+ 59,976	+ 87.0
Diverse Services*	+ 58,945	+ 22.2	Teaching	+ 11,277	+ 62.8
Diverse Services**	+ 51,047	+ 46.4	Domestic Service**	+ 11,787	+ 59.0
Specialised non-food commerce*	+ 47,728	+ 7.0	Diverse Services**	+ 51,047	+ 46.4
Social Action	+ 41,558	+ 111.9	Office Equipment	+ 14,576	+ 35.3
Road Transport	+ 34,138	+ 13.7	Diverse Servicing	+ 4,872	+ 29.5
Bakeries	+ 32,381	+ 28.9	Bakeries	+ 32,381	+ 28.9
Commercial car servicing	+ 31,453	+ 9.9	Private Armament Industry	+ 1,375	+ 28.9
			Meat Industry	+ 16,321	+ 27.5

* Commercial Services

** Non-Commercial Services

Source : Le Monde, 16 October 1984, A Lebaube.

Table 6.8

Sectors affected by job losses

Sectors which have recorded the largest losses between 1976 & 1983

Sectors which have lost more than one quarter of their manpower between 1976 and 1983

	Losses	%		Losses	%
Buildings, engineering	- 300,262	- 18.3	Iron Extraction	- 5,913	- 61.7
Textiles	- 103,645	- 28.3	Synthetic fibres	- 12,472	- 61.4
Car assembly	- 79,924	- 15.0	Non-ferrous extraction	- 1,609	- 37.0
Clothing	- 63,158	- 21.8	Iron Works	- 60,670	- 36.4
Iron Works	- 60,670	- 36.4	Inland Waterways	- 1,127	- 35.1
Metal Works	- 45,886	- 11.1'	Textiles	- 103,645	- 28.3
Industrial Equipment	- 41,626	- 15.2	Machine-tools	- 21,462	- 27.5
Construction & Ceramic material	- 38,959	- 20.2	Shipbuilding	- 15,657	- 25.8
Paper - Cardboard	- 28,544	- 20.0	Leather Industry	- 11,393	- 25.0
Basic Chemicals	- 28,434	- 18.7			
Non-specialised, non-food commerce	- 27,117	- 24.3			
Foundry	- 24,493	- 24.0			
Machine tools	- 21,462	- 27.5			

Source : Le Monde, 16 October 1984, A. Lebaube.

show the disparities in the evolution of sectors which have recorded the largest absolute and relative variations in total manpower figures. The classifications obtained in this way lead to an investigation into the nature and depth of the restructuring as well as into the process of change.

Furthermore the future of some industries, which have shed more than one quarter of their labour in recent years, is called into question. The metallurgy industry lost more than 100,000 jobs between 1976 and 1983 and the textile and clothing industries 63,000 which is nearly 22% of its 1976 manpower figure. The largest loss in absolute terms has been in Buildings and Civil Engineering. The particularly unfavourable conditions in the construction industry make the sector a 'special case'. However even the loss of 300,000 jobs does not place it amongst those sectors which have lost more than 25% of their workforce; the proportionate decline is only -18.3%.

Amongst the sectors experiencing job creation new research activities and services are perhaps making the largest increases, but we must also include traditional activities, such as the hotel industry, restaurants, or commercial activities which themselves are experiencing major restructuring. This is especially true of the concentration of service activities in the large urban areas, which may be linked to the development of new high technology industries.

The composition of industrial and tertiary activities has for some years been undergoing fundamental transformations which have placed new jobs in some unexpected sectors. This has occupational and spatial consequences, so influencing migration patterns. Sectors of job creation are not necessarily in the same location as those suffering job losses; the result are changes in regional space.

6.2.4 Employment evolution by region

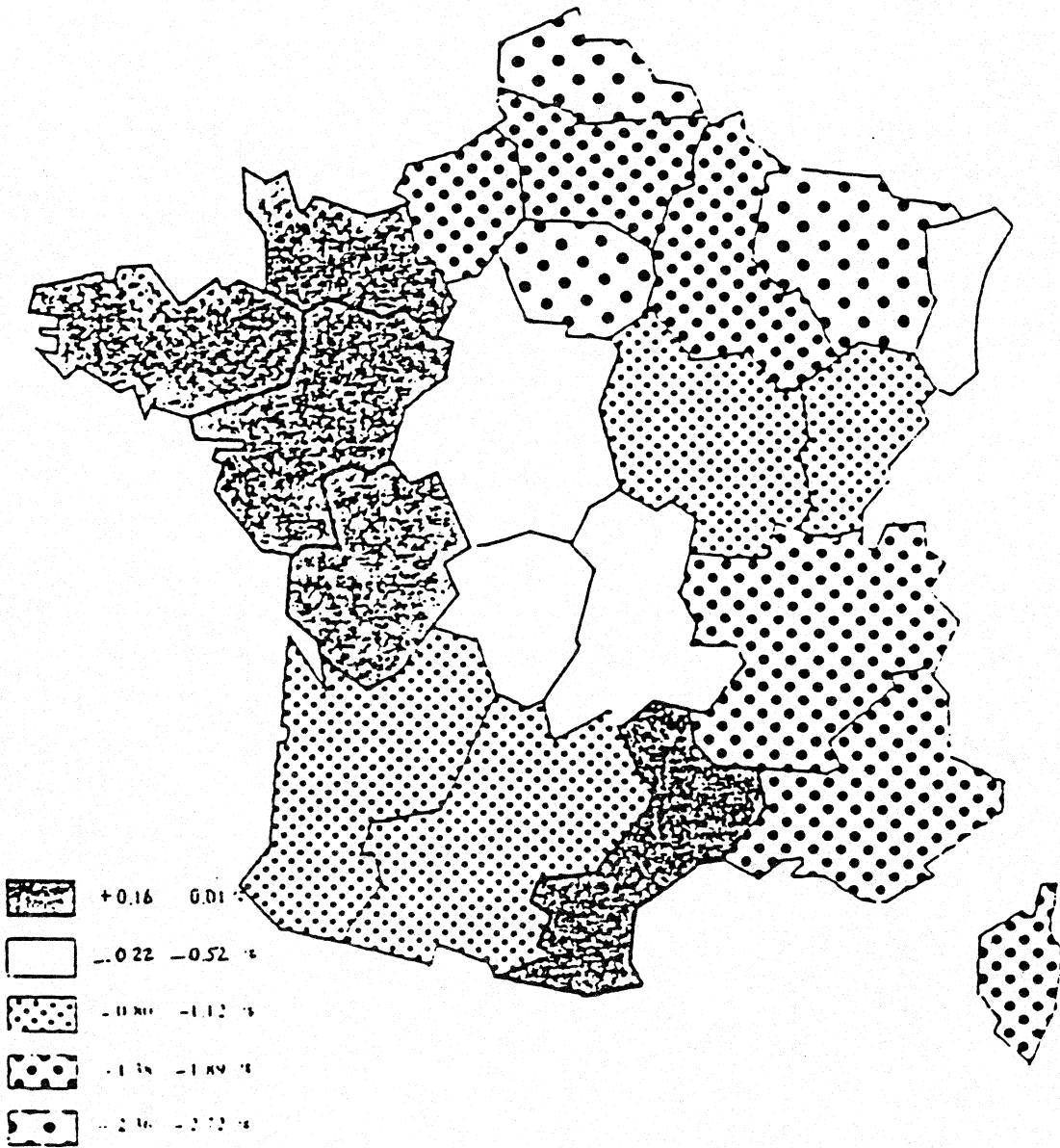
The traditional view of the economic countryside of France being cut into the industrial North and East, characterised by a large growth

rate; and the rural and agricultural West and South, characterised by a smaller growth in employment, has been completely transformed. The decline of the industrial sector and the growth of the tertiary sector has had major regional consequences. The result is a new spatial distribution of employment and job creation which has deeply changed migration patterns and the unemployment map.

The regions of the West and South-West, which have been characterised by a slight growth or stability in industrial employment have recorded the largest increases in tertiary employment. This growth of the tertiary sector, also coincides with stability of industrial employment in the regions of the West. This, in turn, reflects the spatial re-deployment of activities towards less favoured regions which has resulted in a number of activities experiencing rapid growth, e.g. car, mechanical, electricity, electronics. The decentralisation of workshops from the Paris region into the regions of the West has resulted in employment opportunities for a workforce which is no longer able to find employment in agriculture. These relatively unskilled jobs, created by the decentralisation of establishments, are mainly in industrial sectors which have already been affected by restructuring and where further change is possible. The disturbing but perhaps inevitable fact is that government appears more interested in the regions undergoing major restructuring such as Lorraine where unemployment rates are high, rather than in the regions of the West where unemployment is just starting to become apparent.

Finally in Table 6.9, on analysis of the regions with the major changes in job creation over recent years suggests the presence of a 'sun-belt' in the regions of the South which seems to promote enterprise progression and a wage-earning workforce. It is reasonable that the role of the surrounding areas on enterprise and job creation should be taken into account. These developments are reinforced by the economic interventions of the local and regional authorities (c.f. Section 6.6). Tables 6.10 and 6.11 illustrate new regional developments in employment change, with formerly prosperous regions experiencing large losses.

Annual Growth Rates in Industrial Employment 1975-1980



Cette carte fournit le résultat brut en matière industrielle pour la période de crise : 4 régions seulement ont une croissance non négative : ce sont les régions de l'Ouest et le Languedoc. 8 régions ont un taux de décroissance supérieur à 1,38 % par an : elles sont toutes situées dans la moitié Est-Sud Est du pays.

Source : L. Turpin, *art. cit.*

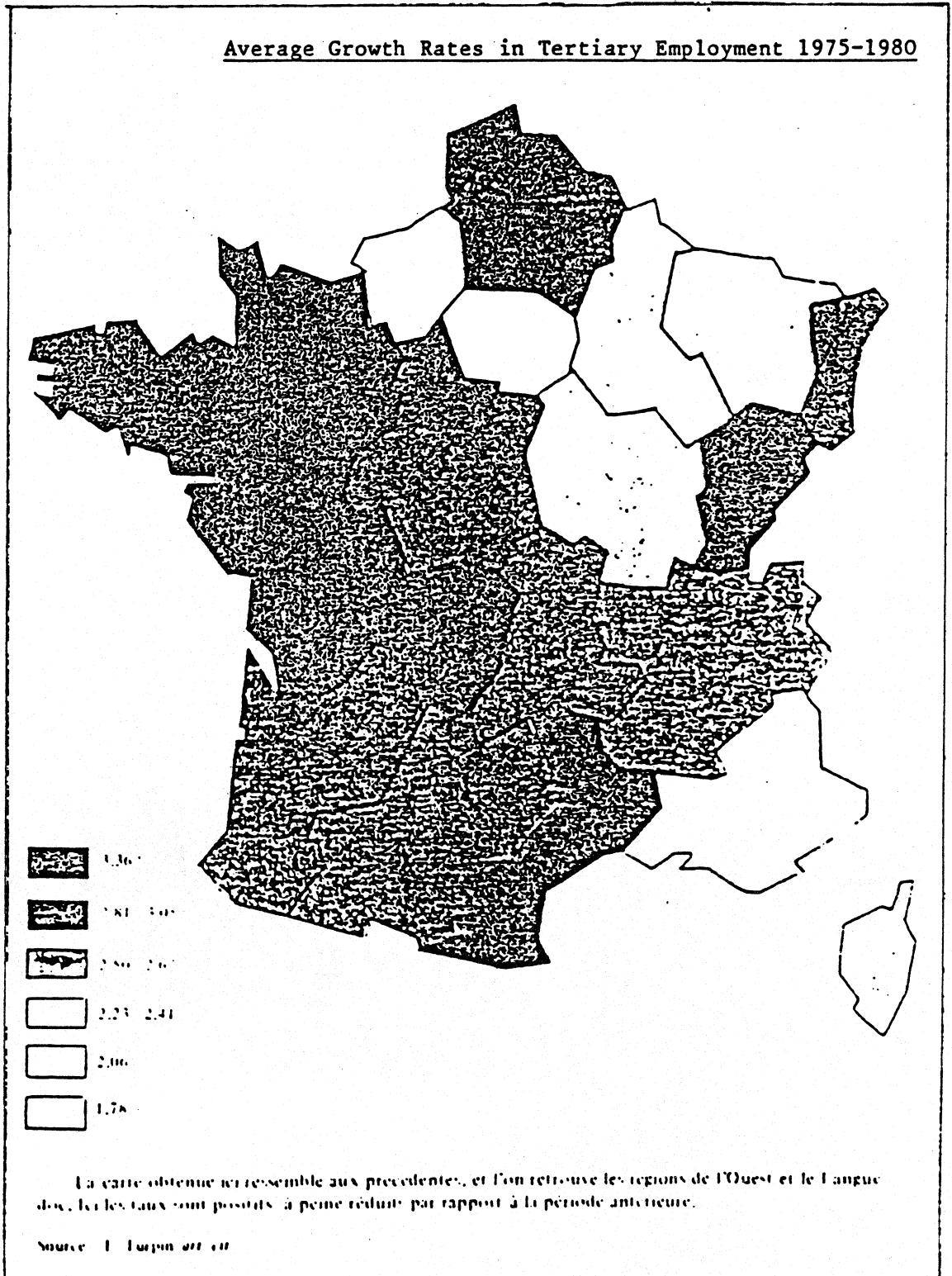


Table 6.9 - Evolution of Industrial employment in the regions from 1974 to 1981

		Régions		
		Low industrial level (15-19% of total employment)	Medium industrial level (20 - 29%)	High Industrial level (30-40%)
Evolution of Industrial employment	Growth or slight decrease (- 3 % à + 4 %)	Languedoc-Roussillon Bretagne	Pays de Loire Limousin Centre Poitou-Charentes	Alsace
	Average decrease (- 4 % à - 11 %)	Provence - Alpes - Côte d'Azur - Corse	Basse - Normandie Midi - Pyrénées Auvergne Aquitaine Bourgogne	Haute-Normandie
	High decrease (- 12 % à -18 %)		Ile de France	Franche-Comté Champagne-Ardenne Rhône-Alpes Picardie Nord-Pas-de-Calais Lorraine

Source : Cf. p XVI, Traits fondamentaux du système industriel français. L'Industrie et les Régions en 1981. M.I.R. Service d'Etude des stratégies et des statistiques industrielles. n° 31.

Table 6.10 Comparisons of the number of PMI establishments (50-499 people) and of large enterprises (500+) in the regions 1974 - 1981

% Variations Régions	Variation in the number of establish- ments 50-499	500+
Ile de France	+ 2,5	- 14,9
Champagne - Ardenne	- 3,3	- 31,8
Picardie	- 1,2	- 48,3
Basse - Normandie	+ 13,6	- 12,5
Haute - Normandie	- 4,2	- 29,0
Centre	+ 21,0	- 22,3
Nord-Pas-de-Calais	+ 1,4	- 29,3
Bourgogne	+ 11,3	- 16,7
Lorraine	+ 8,2	- 24,5
Alsace	+ 4,1	- 23,2
Franche - Comté	- 1,2	- 31,4
Pays de la Loire	+ 28,6	+ 1,4
Bretagne	+ 29,4	- 6,3
Poitou - Charentes	+ 7,4	- 6,1
Aquitaine	- 0,7	- 4,6
Midi - Pyrénées	+ 4,8	+ 6,1
Limousin	+ 11,1	- 7,7
Rhône - Alpes	+ 1,7	- 18,6
Auvergne	+ 7,8	- 3,0
Languedoc - Roussillon	+ 4,9	+ 21,0
Provence-Alpes-Côte d'Azur-Corse	+ 13,7	+ 2,5

Source : EAE (établissements producteurs et non producteurs)

Source : Cf. p XXVI, Traits fondamentaux du système industriel français. L'Industrie et les Régions en 1981. M.I.R. Service d'Etude des stratégies et des statistiques industrielles. n° 31.

Table 6.11

Regional Evolution of number of employees

Source UNEDIC

	1975	1976	1977	1978	1979	1980	1981	1982	1983
E01 NB EMPLOYEURS ASSEDIC									
REGION 11 ILE DE FRANCE	213432	216642	219967	220269	224322	225312	22A712	228565	228269
REGION 21 CHAMPAGNE-ARDEENNE	22510	22960	22914	23224	23534	24137	24522	24634	24702
REGION 22 PICARDIE	26986	27087	27015	26591	26970	2A277	2A710	28991	28907
REGION 23 HAUT-NORMANDIE	28957	29363	29302	30173	31131	31592	31852	31762	32113
REGION 24 CENTRE	41224	42195	42437	43631	43908	45561	46276	46355	46802
REGION 25 BASSE-NORMANDIE	26750	25252	25639	26007	26514	26429	26664	27039	27276
REGION 26 BOURGOGNE	24124	29015	29130	29854	30690	31435	31690	31812	32046
REGION 31 NORD-PAS DE CALAIS	56249	57499	58676	60359	61858	62922	63029	63481	63555
REGION 41 LORRAINE	36113	36855	37357	37799	38443	38812	38985	38800	3A827
REGION 42 ALSACE	25666	25837	25538	26878	30103	30936	31779	32445	32636
REGION 43 FRANCHE-COMTE	18023	18268	18236	18445	19264	19406	19501	19608	19644
REGION 52 PAYS DE LA LOIRE	55877	57238	57696	59114	60114	62038	62567	61315	63677
REGION 53 BRETAGNE	43548	44791	44174	46489	47568	47099	50415	51052	52364
REGION 54 POITOU-CHARENTE	2A856	29265	29696	31101	31295	31438	30832	30611	30649
REGION 72 AQUITAINE	50121	50502	50797	51600	52943	56166	59003	59398	60861
REGION 73 MIDI-PYRENEES	43917	44999	44777	46099	48935	49612	50112	51565	51780
REGION 74 LIMOUSIN	14111	14529	14798	15041	15257	15319	15571	15735	15904
REGION 82 RHONE-ALPES	99124	102155	103461	107367	109944	112344	116515	118913	121222
REGION 83 AUVERGNE	25401	25707	26313	26802	27624	28113	28443	2A877	28807
REGION 91 LANGUEDOC-ROUSSILLON	34228	36036	36468	38376	39491	40342	41470	41625	42018
REGION 93 PROV-ALP-COTE D AZUR	87777	90204	93396	96443	100812	105262	105807	106949	106514
REGION 94 CORSE	3424	3439	3556	3714	3944	4426	4767	5154	4737
FRANCE ENTIERE	1010418	1029838	1041343	1065376	1096664	1116978	1137242	1144666	1153400

6.2.5 Synthesis

Analyses of employment change by establishment size, sector and region show significant differences, with small establishment, tertiary sectors and southern regions performing best. This is, however, an incomplete picture and so we need to identify the fundamental reasons underlying the creation and disappearance of jobs.

6.3 Contributions of Different Types of Enterprise to Job Creation

A study of employment change should examine the respective contribution of existing enterprises and new enterprises to employment growth. It is evident that both components of employment change can be the result of complementary economic policies, not linked necessarily, and that there is a lot of interest in attempting to measure both components of job creation. Similarly for employment losses, it is important to be able to separate that which is due to the shutdown of enterprises from that which is due to a reduction in employment (which can, moreover, lead to a change in class size) amongst existing enterprises.

The data used here [Kochanski and Mainier (1986)] are the result of an initial original attempt to examine employment change in individual establishments over a period of time, using the UNEDIC source. To emphasise both the considerable interest in the approach and its limitations further work will use the methodology discussed in Section 6.4 to provide a detailed and complete analysis of the different types of enterprise to job creation.

6.3.1 Study of Employment Variation by Sector and Size, 1980- 1984

We shall not comment in detail on the UNEDIC tables reproduced in the Annexe. Instead we will highlight the performance of certain sizes of establishment which are of particular interest :

- with regard to high or low concentration
- with regard to the type or activity and conjuncture
- with regard to the type of restructuring which is taking place

The industrial sectors : Intermediate Goods (B.I.), Equipment Goods (B.E.) and Consumer Goods (B.C.) which, between 1980 and 1984, lost 1,022,305 (22%) of their manpower, experienced restructuring similar to that of the general model discussed above. These sectors demonstrate the proportion (albeit very different) of jobs in the establishments with 100+ employees shift from 65.8% to 62.3% (B.I.), 78.5% to 69.0% (B.E.) and 51.9% to 49.2% (B.C.). Only establishments with less than 10 employees experienced a growth in manpower in all three sectors, whereas establishments with between 10 and 49 employees although witnessing a decrease in absolute value (more significant proportionately in the 20-49 category) increased their share of total employment.

The situation in the intermediate sizes seems to have changed little. Establishments with 10-19 and 20-49 employees between 1980 and 1984 have had a tendency to decline in employment. The average size of employers is decreasing in all cases except the 20-49 category in the B.C. sector. Conversely, the firms in the 50-99 category would have created employment had they not closed or moved into a smaller size category - their average size increased between 1980 and 1984 with the exception again of the B.C. sector.

The Agriculture and Food Industries sector (IAA) is relatively concentrated since employees in establishments of 100+ represent 44% of the total jobs created in the size categories 100-199 and 200-499. This sector has however experienced a slight lowering of its total share of 100+ employees to 43.2%. This has occurred because of growth in establishments with between 5 and 9 employees and with between 10 and 19 employees; the former created nearly 6,000 jobs and the latter more than 4,000.

Nevertheless comparisons between sectors are different because of the differential impact of technical change which appears as a reconversion in the heavy industries and as a process of modernisation accompanied by growth in the IAA.

To complete this study we have chosen within the tertiary sector, the Commercial sector which employment remained fairly stable throughout the period and Marketing Services, where there has been a clear net gain.

In 1980 these two sectors are less concentrated than the industry as a whole : 20.8% and 22.9% in establishments of 100+ respectively. Concentration declines in the sector at a similar rate between 1980 and 1986. Employment is most frequently found in the most common or best represented sizes which are the establishments with between 1-4 and 20-49 each of which provide approximately 20% of all jobs. Establishments with between 5 and 9 employees provide a similar percentage for the Commercial Sector, but only 15% in the Marketing Services Sector. An examination of changes between 1980 and 1984 shows that in the commercial sector categories 1-4 and 5-9 are responsible for a growth of 27,126 jobs although the total is slightly decreasing (-3,500 employees). In contrast, all the other size categories are in decline at an absolute level and in proportional terms with the notable exception of category 200-499 which created more than 9,000 jobs and increased its share from 8.2% to 8.7% of the whole commercial sector.

Marketing services employment increased in all size categories, except in the SME 50-99 where manpower decreased by 4,000 employees - the category percentage moved from 12.3% to 11.4% although the number of employing establishments only decreased by 9 units. Thus existing establishments reduced their employment with the average size shifting from 69.8 to 69.0 employees.

Analysis of the behaviour of SME's showed, over and above the general increase in SME employment, considerable variability between the sectors. This suggests that net changes could reflect different rates of job creation on the part of existing enterprises or new enterprises;

and rates of job losses by existing enterprises or enterprises which shut down completely.

6.3.2 Contribution to employment change by enterprise creations and dissolutions

The research carried out by J. Kochanski and M. Madinier using the UNEDIC source material relates to 1984. It brings together statistical data presented earlier to determine the effects on employment of the birth, death and in-situ change in establishments. The mode of accounting, component by component, is the essential building block for determining changes in net employment. The results are illustrated in Tables 6.12 and 6.13.

The fundamental changes in each component can be attributed to the stocks and then compared item by item. In global terms the basic variation in jobs created in 1984 is 10% from the starting point : 5.14% created in existing establishments and 4.86% in newly created establishments. Thus nearly one half of new jobs are in the newly created establishments.

The basic variation in jobs lost is higher than those created : it is -11.74%: 6.46% in existing establishments and 5.28% due to closures. It is obvious therefore that manpower has been cut.

The sectoral variability in these different rates throws new light on the evolution of employment as well as confirming the statements made above. Existing establishments are higher creators of employment than new establishments in the IAA, B.C. and the entire tertiary sector. However, the Marketing Services in the latter have created new jobs at a rate of more than 6%.

The B.I. and B.E. sectors have created more employment in new establishments. The Building and Civil Engineering sector has

Table 6.12 Evolution of employees and establishments between 1/1/84 and 31/12/84

	Number of establishments at 1/1/84	Salaried Manpower at 1/1/84	Number of establishments with increased manpower totals	Positive variation in existing establishment manpower totals	Establishment creations	Creations in salaried manpower	Number of establishments with decreased manpower totals	Negative variation in existing establishment manpower totals	Establishment closures	Cutbacks in salaried manpower	No. of establishments at 31/12/84	Salaried Manpower at 31/12/84
NAP 14												
01 Agriculture Forestry, Fisheries	1491	14084	236	604	163	710	216	-558	239	-1278	1415	13570
02 IAA	44169	500778	9620	25309	4202	21405	8640	-26611	3321	-23800	44050	497081
03 Energy	1393	66778	310	1604	108	1500	409	-2673	74	-1269	1427	65940
04 B.I. Industries	35573	1346706	9370	39734	3049	50842	11060	-82567	3362	-63503	35260	1290818
05 B.E. Industries	30285	1677608	8494	56976	3279	60774	8743	-106148	3106	-71660	30458	1616274
06 B.C. Industries	54508	1280528	13575	57756	5613	52431	14578	-76421	6313	-73255	53888	1240131
07 Building Civil Engineering	155526	1343409	28303	72053	16433	82520	35983	-124519	21478	-117021	150481	1253337
08 Trade	292285	2188511	52246	126978	30347	125155	57956	-150497	32830	-126831	290302	2163333
09 Transport Telecomms	32337	502027	8663	26591	3305	22412	7260	-27534	3089	-23760	32553	499981
10 Marketing Services	408351	2793468	71160	196036	50396	174474	67604	-188557	45396	-155179	413351	2819619
11 Insurance Credit	22191	520256	5802	22942	1251	9374	4453	-19241	936	-8386	22520	525508
12 Non Marketing Services	73342	759715	13315	41690	9908	26381	10681	-34848	6723	-18951	76527	773769
13 Unknown	2043	6056	180	561	310	3309	166	-314	540	-1554	2413	8061
99 Total	1153574	12909924	221274	668845	129478	631295	227749	-840488	128407	-686447	1154645	12767422

Source : Non published works of Kochanski and Madinier

Table 6.13

Research into the respective contribution of created, closed and
existing establishments

		Positive variations in manpower due to existing establishments		Positive variations in manpower due to created establishments		Negative variations in manpower due to closures		Negative variations in manpower due to existing establishments	
IAA	500 778	25 309	5,1 %	21 405	4,3 %	- 23 800	4,7 %	- 26 611	5,3 %
Energy	66 778	1 604	2,4 %	1 500	2,2 %	- 1 269	1,9 %	- 2 673	4,0 %
B.I. Industries	1 246 706	39 724	2,9 %	50 042	3,8 %	- 65 503	5,3 %	- 82 567	6,1 %
B.E. Industries	1 677 608	56 976	3,4 %	60 774	3,6 %	- 71 660	4,3 %	- 106 148	6,3 %
B.C. Industries	1 280 528	57 756	4,5 %	52 431	4,1 %	- 73 255	5,7 %	- 76 421	5,96 %
Building Public Works	1 343 409	72 053	5,4 %	82 520	6,1 %	- 117 021	8,7 %	- 124 519	9,3 %
Trade - Telecomms	2 188 511	126 978	5,8 %	125 155	5,7 %	- 126 831	5,8 %	- 150 497	6,9 %
Transport - Telecomms	502 027	26 591	5,3 %	22 412	4,46 %	- 23 760	4,7 %	- 27 534	5,5 %
Marketing Services	2 793 468	196 036	7,0 %	174 474	6,2 %	- 155 179	5,5 %	- 188 557	6,7 %
Insurance Credit	520 256	22 942	4,4 %	9 374	1,8 %	- 8 386	1,6 %	- 19 241	3,7 %
Non Marketing Services	759 715	41 698	5,5 %	26 381	3,5 %	- 18 951	2,5 %	- 34 848	4,6 %
TOTAL	12 999 924	668 845	5,14 %	631 295	4,86 %	- 686 447	5,28 %	- 840 488	6,46 %

53

Source :

Non published works by Kochanski & Madinier

experienced proportionately more rapid changes characteristic of the construction market.

Comparing existing establishments which have created jobs with those which have cut jobs highlights the specific role of establishments in the industrial sector which are undergoing restructuring and decreasing employment. This process is also occurring in the Commercial, Transport and Telecommunications sectors, but for very different reasons.

The lessons from this research are therefore already very pertinent even though it takes a year for the calculations to be made. This work is very promising and it is certain that the establishment of similar results for each size category is indispensable in characterising the role of the SME.

6.4. Study of Job Creation induced by changes in size

To extend the analysis of the contribution of enterprise changes to the creation and disappearance of jobs, and in anticipation of the results for the whole of France which will be published by KOCHANSKI - MADINIER, we will propose an analytical method.

Ideally it is desirable to conduct an analysis of the demography of enterprises or units of production through a detailed examination of the births, deaths and changes in size. In this way we would aim to show the mechanism for change in the size distribution of employment units, to determine whether a relatively stable law of evolution exists and to use those laws for simulation purposes. The work of SIRENE by INSEE in 1973 aimed to provide such a tool for an examination of the demography of enterprises. Although some results were presented on business births, SIRENE did not consider the tool to be adequate for the study of enterprise demography. This meant having to rely upon more fragmentary works in order to study the behaviour of the enterprise population and its consequences in terms of employment [Callies and Devilliers (1986)].

We now present, as an example, data designed to provide a more complete understanding of enterprise demography, their size and growth trajectory and the respective effects on employment. Enterprise size seems to be a determining factor in the evolution of employment. The example is contained in two time-series analyses produced from original statistical sources provided by the Institute of Regional Economy at the University of Poitiers (Associate Unit of CNRS 952). It consists of a Database which follows the evolution of employment in the Limousin and Poitou - Charentes region at an individual level and which thus permits an in-depth analysis of changes in the population of establishments. [Guesnier and Lavallee (1986)].

6.4.1 Analysis of the size transition matrix from one size to another and the effect on employment

The size distribution of enterprises and its evolution over time is the result of a complex process involving a range of technical, economic and institutional factors (eg legal thresholds). If this distribution constitutes a rigid structure, then the evolution of employment depends directly upon it. It is important to highlight the laws which are influencing that distribution and for these, in turn, to highlight the dynamic processes which affect the distribution of enterprise size.

Hence it is appropriate to analyse the movement of enterprises from one size to another over different time periods in order to examine past behaviour. From this, conclusions on the potential for change in the enterprise population can be drawn. If a link could be established between the behaviour of enterprises in relation to choice of size and environment conditions, it might be possible to estimate the employment consequences arising from changes in the size distribution of employment. It might also be possible to simulate the effects of environmental changes. Conclusions from this for both overall economic policy and particularly for estimating the effect of subsidies designed to promote enterprise and job creation could be drawn. In fact aid

might be given to enterprises in return for growth outside their current size band.

The database, which is a historical record of size, enterprise by enterprise, is used to construct tables showing the transition of firms from one size to another, and which ultimately contain the information presented in Table 6.14. The evidence showing the frequency of movement between the sizes, as well as creations, closures and variations in employment which these changes induce, allows one to visualise and measure the components of job creation not only by identifying the contribution of openings and closures of establishments (cf KOCHANSKI and MADINIER in their study of these openings according to size - which is an advantage) but by identifying the contribution of enterprises belonging to each size category.

Due to the length of time covered by the indices (1962-1984) the number of potential results is considerable. We have similarly chosen a long interval (1972-1984) rather than one single annual period in the knowledge that all the combinations are possible (movement from t to $t+1$ or from t to $t+3$ etc or t to $t+20$) and the fact that we are only concerned with the industrial sector [Guesnier (1986)].

Two tables have been produced: one contains the frequency of movement of establishments from one size to another, births and deaths between 1972 and 1984. The other table contains, by compartment, the employment with each category facilitating an identification of the contribution of each type of enterprise to employment change (Tables 6.15 and 6.16).

The first table (Table 6.15), for example, illustrates that between 1972 and 1984 all size categories with more than 50 employees were net losers of establishments: 367 in 1972 to 320 in 1984. There were only 78 openings to compensate for the 116 closures and, in addition to several changes between these four sizes (78 increasing their size; 38 decreasing it), 42 establishments moved from a smaller size and 14 moved into smaller sizes (less than 50 employees).

Table 6.14 - State of Enterprise population in t to its state in t+n

← Characteristics of the state in t+n →

	Closures	Size categories	Row Totals
Creations		Creation Row	Total Creations
Size Categories	Closure Columns	diagonal of stagnation	Distribution by size category in t
		Transition Compartment into a small size category	
Column Totals	Total Closures	Distribution by size category in t + n	

Table 6.15 - Transition Table - Industry Total

	0	1	2	3	4 & 5	6 -9	10 -19	20 -49	50 -99	100 -199	200 -499	500 +	Total
1	673	229	178	127	172	238	169	170	45	16	72	5	2034
2	356	43	25	8	9	5	5	1	1			1	453
3	180	24	17	13	21	3	3	1					262
4	128	11	15	17	10	8	3	2					194
5	130	6	9	10	27	19	15	5					221
6	134	3	9	4	27	42	35	12	2	1			273
7	113	2	1	2	7	37	63	50	4				279
8	113	1	1	2	1	6	29	118	30	2	1		306
9	55						2	35	44	22	2		160
10	38	1				1		9	19	34	7	1	110
11	15		1					1	4	11	31	5	64
12	4							1			4	16	20
13	1943	320	256	187	274	361	324	404	149	86	57	28	4389

Source : Fichier I.E.R. - UNEDIC

Table 6.16- Influence on salaried manpower

	1	2	3	4 & 5	6 -9	10 -19	20 -49	50 -99	100 -199	200 -499	500 +	Total	
	229	356	341	762	1732	2316	5412	3186	2153	4001	3595	4123	1
356-		25	16	31	32	56		52			773	629	2
360-	24-		13	47	13	34	21					256-	3
384-	22-	15-		15	28	34	56					278-	4
572-	19-	21-	12-	1-	61	123	136					305-	5
977-	19-	42-	34-	75-	10-	165	291	139	164			407-	6
1517-	20-	15-	14-	66-	215-	29	692	169				967-	7
3775-	43-	23-	44-	26-	150-	393-	130	884	262	182		2996-	8
3817-						81-	892-	113	882	347		3438-	9
5301-	142-				101-		819-	760-	20	739	465	5899-	10
4336-		439-					197-	1119-	1377-	223-	1010	6681-	11
7736-							513-			777-	2799-	1825-	12
9131-	50-	174-	306	687	1390	2284	4317	2664	2104	4269	3044	8300-	13

Source : ASSEDIC - I.E.R. Poitiers.

In the second table one can see that small in-situ establishments experienced an increase in employment: 10 - 19: 29 employees; 20 - 49: 130 employees; 50 - 99: 113 employees, and 100-199: 20 employees. On the other hand larger establishments experienced job losses: -223 and -2799.

It can be seen that jobs created in the 500+ category, on average 3,044, are made up of 3,595 in new establishments, 2,248 establishments in the smaller sizes which have moved into the category, while existing establishments in the category have reduced their manpower by 2,799. This provides a clear picture of employment variations. To complete the picture, it is worth noting that in the 500+ category establishments which have decreased in size lost 1,290 jobs and establishments subjected to closures were responsible for the loss of 7,736 jobs (openings only contributed 3,595 jobs).

It would be possible to analyse similarly all the rows and columns of the table to demonstrate the role of SME's in job creation. In order to avoid too specific a commentary on one Region (Poitou - Charentes) we will concentrate on the following three points:

1. that the opening - closure balance is only positive for sizes 4-5, 6-9, 10-19 and 29-49, underlining the role of the SME in the creation of employment during the last decade in the region's industry;
2. that in 1984 many employing establishments in categories 50-99 and 29-49 which came from larger sizes reduced their manpower from 1879 and 2411 employees respectively over the period. However their current manpower in 1984 constitutes a net contribution attributable to categories 20-49 and 50-99;
3. that category 20-49 benefited by 5412 new jobs in establishment openings and 1186 jobs were created in a wider sense by establishments which moved into category 20-49. (Category 50-99 experienced births of 3186 and 1244 firms respectively).

This analysis, which should be pursued by studying matrices for shorter periods in the tertiary sector or in more detailed sectors (refer to Annex Tables 7 and 8 which put forward matrices for the movement of Poitou - Charentes from industry 72-75, 75-78, 78-81, 81-84), has already showed that the creation of jobs examined uniquely from the point of view of net balances in stock variations from one period to another is unable to reveal the origins of employment and the contribution of enterprises of different sizes.

In conclusion we suggest that, subject to certain caveats, an attempt should be made to construct a transitional matrix for the whole of France, using the Annual Enterprise Survey which is limited to enterprises with 10+ employees in the industrial and tertiary activities in the areas already discussed. Of particular interest would be an examination of enterprises during the critical period 1981-83. Finally it should be noted that row 0 and column 0 do not necessarily correspond to real openings or closures (belonging to the field of the survey is what counts). A study in relative values ignoring this row 0 and column 0 as well as the total row and column illustrates well the involvement of the SME. The row illustrates what became of the enterprises in 1981 and the column, the starting-point for enterprises of a given category in 1983 (Tables 6.17 and 6.18).

6.4.2. Enterprise behaviour concerning size choice

The research of J LAVALLEE (1986) departs from the statement established in preceding studies that the duties of a judicial and trade union nature imposed on enterprises and on their establishments by virtue of their manpower size has an influence on their choice of size. Evidence of this influence is thought to be provided by the size distribution curve for employment units which shows an "abnormally" high frequency before, and an "abnormally" low frequency after, a certain size corresponding with these duties. The mistake however is to infer that the rise in judicial duties leads ipso facto to the establishment of a

Transition Table of Enterprises with their 1981 manpower size to that in 1983

All Activities. Annual Enterprise Surveys.

		1983 Size												
		0	1	2	3	4 & 5	6 & 9	10 - 19	20 - 49	50 - 99	100 - 199	200 - 499	500 +	Total
1981 Size	0		518	454	370	548	649	2794	2826	809	494	301	118	9881
	1	662	637	133	53	30	24	15	16	4	2	3	-	1579
	2	515	161	553	145	70	31	23	11	6	2	-	-	1514
	3	442	52	151	439	193	51	23	9	3	1	-	-	1370
	4 & 5	704	48	88	226	979	386	52	39	6	1	-	-	1529
	6 - 9	815	28	31	38	301	1405	325	48	6	1	1	-	2999
	10 - 19	3644	16	25	17	68	327	7193	887	18	9	1	1	12206
	20 - 49	3417	21	19	15	48	65	1219	9651	492	16	2	1	14966
	50 - 99	1182	6	5	7	6	13	43	602	3485	270	11	1	5631
	100 - 199	696	2	.	2	1	2	7	30	362	2562	164	4	3832
	200 - 499	411	1	-	-	-	4	3	10	21	287	1985	62	2784
	500 +	144	-	.	.	-	1	-	-	2	9	124	1046	1322
	Total	12632	1490	1459	1312	2244	2958	11703	14129	5214	5654	2592	1233	60620

Source : Annual Enterprise Surveys 1981, 1982, 1983.

Table showing the effect on manpower of the transition of enterprises from their 1981 size to their 1983 size

All Activities Annual Enterprise Survey

		1983 Size												
		0	1	2	3	4 & 5	6-9	10-19	20-49	50-99	100-199	200-499	500 +	Total
1981 Size	0		+ 518	+ 308	- 1110	+ 2426	+ 4773	+ 39154	- 85230	+ 55733	+ 68507	+ 31348	+ 113453	+ 46357
	1	- 662	.	+ 133	- 106	+ 103	+ 152	+ 204	+ 453	- 252	+ 263	+ 1040	.	+ 2063
	2	- 1030	- 164	.	+ 145	+ 160	- 158	+ 285	- 274	+ 363	+ 289	.	.	+ 483
	3	- 1326	- 104	- 151	.	+ 250	+ 202	+ 321	+ 211	+ 200	+ 161	.	.	- 236
	4 & 5	- 3163	- 155	- 205	- 296	- 70	+ 720	+ 436	+ 956	+ 336	+ 166	.	.	- 1275
	6 - 9	- 5980	- 169	- 156	- 148	- 621	+ 19	+ 1318	- 1070	+ 380	+ 137	+ 285	.	- 3862
	10 - 19	- 49949	- 212	- 281	- 201	- 571	- 1172	- 1604	+ 6046	+ 1022	+ 352	+ 458	- 509	- 44973
	20 - 49	- 164969	- 599	- 536	- 388	- 1136	- 1415	- 9373	- 2239	+ 8141	+ 1256	+ 409	+ 1149	- 10370
	50 - 99	- 82827	- 337	- 340	- 622	- 337	- 757	- 2207	- 10054	- 1753	- 7484	+ 2585	+ 545	- 88419
	100 - 199	- 57076	- 365	.	- 305	- 103	- 278	- 840	- 2869	- 10258	- 5750	+ 9742	- 2582	- 10534
	200 - 499	- 126259	- 435	.	.	.	- 1140	- 739	- 2853	- 3953	- 18735	- 16705	+ 7667	- 163231
	500 +	- 142047	.	.	.	.	- 1257	.	.	- 1512	- 7641	- 18150	- 62618	- 213025
	Total	- 615257	- 2019	- 628	- 359	+ 101	+ 5	+ 26369	+ 76874	+ 49005	+ 67035	+ 70580	+ 83177	- 26472

Source : Annual Enterprise Surveys 1981, 1982, 1983.

"normal" distribution (a distribution which would in fact be log-normal).

However the "normal distribution of employment units does not provide a complete explanation. We have preferred to develop our arguments using the behaviour of employers as a starting point.

Our managers and the employers' federation prefer this approach and the "statistics" are clear: all employers with 9 employees guarantee to create 1, 2, even 3 more new jobs as soon as the judicial obligation is abolished. In order to leave the domain of the guessing-game, our research concentrated on past behaviour and we have preferred to analyse the real employment behaviour of employers.

Our method consists of examining employment units (enterprises or establishments) and taking note of their manpower year by year. Thus knowing the size of one unit at a time, T , we refer to its behaviour as: size acquired in time $T + n$; $T + n$ are expressed at 31/12 each year. Our studies have shown very clearly that the units located in the sizes smaller than those subject to the judicial obligations thresholds behave differently to the others. A similar situation is evident for those units located in the size categories immediately above the thresholds.

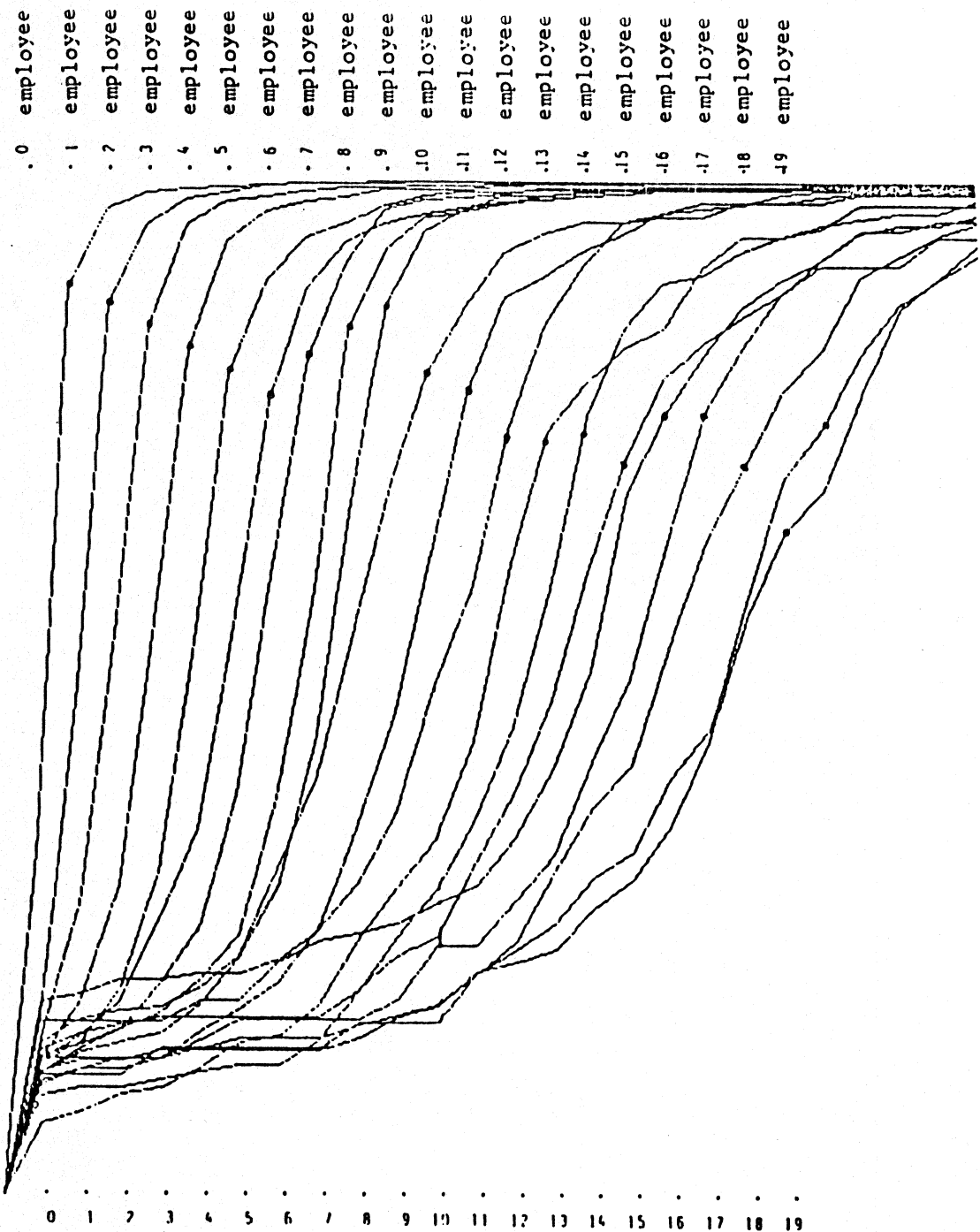
We thus confirm that the judicial thresholds do have a non-negligible influence on the growth of enterprises or establishments. This can be seen in several ways: the units in the smaller sizes "brake" their growth in order to avoid reaching or passing the critical size; units which reach the critical size express their "regret" when they have to lose the employee who led them there.

Figure 6.4 shows employment units from two French regions: Limousin and Poitou - Charentes in 1980 and 1982. We have chosen establishments from industry and construction in regions where small-sized enterprises are over-represented in relation to the national distribution. We have studied the employers in relation to their employment size in 1980: 1, 2, 3 20 employees. For each size, we have shown the cumulative

Figure 6.4 - Cumulative probabilities of an employer being subject to closure, reduction, remaining stable or growth in relation to its 1980 size and subsequent 1982 size

1981 Size	Growth probability
1 employee	11,0
2 employees	12,5
3 employees	14,7
4 employees	16,9
5 employees	19,3
6 employees	22,2
7 employees	17,7
8 employees	15,2
9 employees	12,3
10 employees	19,2
11 employees	21,1
12 employees	24,6
13 employees	25,0
14 employees	23,3
15 employees	27,2
16 employees	23,1
17 employees	23,0
18 employees	28,2
19 employees	34,8

Growth probabilities
 Cumulative probabilities
 - stagnation
 - reduction
 - cutback of employment



percentage of units which have closed, and had reached 1, 2 320 employees at the end of 2 years (1982). To provide better clarification, the graph has been enlarged to show the growth probability of the unit and data represented in the table opposite.

Units containing 10 employees have a strong probability of re-descending below that size and those with 11 employees are likely to revert to 9 employees: this is the "regret" effect of having reached one of the thresholds. It is also worth noting however that there is an equally strong probability of enterprises with 16 employees closing and units of 17 employees returning to below 10.

There appears to be a certain relationship between size and growth probability. This is not a linear relationship and is explained by the statement that it is easier for a unit of 20 employees to create an extra job than for an establishment with only one employee to double in size. In this way it can be affirmed that there is an abnormality in the behaviour of employers of between 6 and 12 employees. The restraint on growth upsets the probability growth function of 7-9 employees. "Regret" plays its part for 10 and 11 employee sizes and the probability function reverts to a "normal" curve for units of 12 employees.

The floodlight influence focused in the behaviour of enterprises of less than 20 employees which originated with the study of enterprise manpower behaviour could be realised equally on an All France scale by extending the works of KOCHANSKI and MADINIER in the same way that the transition matrices were established. In both cases it is merely a case of identifying the real behaviours using individual trajectories in order to show as clearly as possible the transformation of the enterprise population and its consequences in terms of job creation/dissolution.

There only remains a full diagnosis to be made of the contribution of the SME regarding employment creation. This will necessitate a detailed examination of the preceding analyses in different dimensions: temporal, sectoral and spatial and prescribing the use of a very large amount of data before being able to proceed to a new synthesis.

6.5 Characteristics of Created Jobs

We have seen in Section 6.5 that employment creation in the SME constitutes the main source of job creation in the last decade. In this section we investigate the type of jobs created as well as considering questions on rigidity/flexibility.

There does not exist, to our knowledge, any in-depth study of the generation of jobs in conjunction with investment, activity, type of market; in other words, an analysis of the demand for labour linked with an examination of the actual jobs themselves and employee promotion plans. This would presuppose an analysis of recruitment procedures and management techniques practiced by the enterprises. These would be of considerable interest in such a study which would be primarily concerned with the relationship between the internal and external mobility of the job so as to formulate appropriate employment and training policies. In the absence of such a study the results of several studies will be presented.

The first study [Choeffel, Garnier and Reynaud-Creyssant (1985)] was carried out on an employee sample drawn from the Annual Salary Return (DAS) and subsequently using statistical indicators for the whole of France drawn from different sources. The study aimed to clarify the principal issues of the recent evolution of employment in order to attempt to characterise job creation.

6.5.1 Research into the characteristics of employment using a DAS sample

The authors P CHOEFFEL et al. (1985), used observations drawn from a panel of employees originally constructed from statistical work of the DAS, obligatory annual returns by enterprises. The 4 per cent sample, involved 149,000 employees who worked full-time for the whole year in 1976 and 1980 and who were employed between these two dates in the same enterprise without having experienced significant employment

interruptions (eg redundancies) as verified by the employer. Results drawn from this longitudinal study permit estimates of permanent employment with regard to new recruitment and the calculation of several ratios by sector and by size: turnover rates, permanence rates, survival rates (Tables 6.19 and 6.20).

The 1976-1980 period, which serves as a reference point for the research, is characterised by a very high level of labour market activity. According to the DAS source the net change in manpower employed between 1/1/76 and 31/12/80 was in the region of +550,000 (ie + 4%); total changes caused by recruitments and job cuts rose to around 35 million (7 per year) for an average employed work force of 12.5 million as listed in the DAS, thus giving a turnover rate over 5 years of 2.8.

The authors propose the following explanations for the turnover rate and instability:

"An examination of turnover rates, can be misleading if one does not take into account the incidence of change in the employed workforce. In fact, the same turnover rate can have very different effects upon the employees themselves, depending on whether the firm uses a - last in, last out - or a - last in, first out approach to hirings and firings. For example, a turnover rate of 2 over 5 years would mean that, using the last in, last out approach, the labour force would be renewed completely twice over the period, ie all jobs would last for 2.5 years. Conversely using the last in first out approach, it is possible that half of the labour force was completely replaced four times over the same period, while the other half remained stable. To measure the size of the stable labour force over the 1976-1980 period, we define: "permanent manpower rate" as equal to the total number of days worked by permanent workers divided by the total number of working days. This would yield a value of 0 in the last in, first out approach and 0.5 in the last in, last out. Thus 35% of all work in the 1976-1980 period was in "permanent jobs".

Table 6.19

- Sub-categorisation of large sectors of activity (full-time employment)

Sectors of Activity	Manpower growth rates 1/1/76 - 31/12/80	Turnover rate	Permanent Rate (2)	Survival Rate at 31/12/80		Proportion of job cuts from 1980 (Proportion in periods of active employment to 31/12/80)		Relative starting salary in (3)
				Periods of Active employment on 1/1/76	Periods of employment starting in 1976	Periods of active employment on 1/1/76	Periods of employment starting in 1980	
Agricultural and Food Industries	+ 3%	2,6	0,35	0,36	0,08	8%	63%	0,71
						(35%)	(27%)	
Energy	+12%	1,3	0,42	0,46	0,25	17%	57%	0,96
						(41%)	(18%)	
Intermediate Goods	- 7%	1,4	0,43	0,43	0,14	16%	52%	0,83
						(45%)	(18%)	
Equipment Goods	- 7%	1,2	0,45	0,45	0,17	20%	45%	0,84
						(48%)	(18%)	
Consumer Goods	- 7%	1,6	0,39	0,38	0,14	15%	50%	0,83
						(40%)	(21%)	
Public Building Works	- 6%	2,7	0,28	0,28	0,07	8%	55%	0,78
						(29%)	(31%)	
Commerce	+ 6%	2,7	0,31	0,32	0,09	8%	61%	0,72
						(30%)	(30%)	
Transport	+ 7%	2,7	0,31	0,35	0,09	8%	62%	0,64
						(32%)	(25%)	
Marketing Services	+27%	4,6	0,26	0,31	0,05	4%	73%	0,68
						(25%)	(34%)	
Location, Credit, Insurance, Financial Organisations	+ 4%	1,7	0,47	0,48	0,12	10%	66%	0,76
						(46%)	(22%)	
Non-Marketing Services	+12%	2,7	0,30	0,42	0,08	7%	75%	0,74
						(37%)	(26%)	
Total	+ 4%	2,8	0,35	0,36	0,09	9%	62%	0,75
						(36%)	(26%)	

Turnover rate (1) = $\frac{\text{total no. of recruits} + \text{total no. of job cuts}}{\text{Average manpower}}$

(2) Permanence rate = $\frac{\text{Cumulative length of active periods of employment without interruption from 1/1/76 to 31/12/80}}{\text{Cumulative length of all periods of employment}}$

(3) Relative starting salary = $\frac{\text{Average salary in 1980 for periods of employment starting in 1980}}{\text{Average salary in 1980 for periods of active employment without interruption from 1/1/76 to 31/12/80}}$

Table 6.20 - Sub-categorisation by enterprise size (Industry only)
 (periods of full-time employment)

Enterprise size	Manpower growth rate 1/1/76 - 31/12/80	Turnover Rate	Permanence Rate	Survival Rate at 31/12/80		Proportion of job cuts which commenced in 1980	
				Periods of Active employment on 1/1/76	Periods of Employment starting in 1976	Periods of active employment on 1/1/76	Periods of employment starting in 1980
≤ 5	+ 14%	3,3	0,20	0,21	0,06	4% (19%)	62% (41%)
6 to 19	+ 11%	2,7	0,28	0,28	0,07	6% (25%)	61% (35%)
20 - 99	+ 5%	2,1	0,35	0,33	0,09	7% (32%)	62% (28%)
100 - 499	+ 2%	1,4	0,42	0,38	0,11	10% (37%)	61% (24%)
500 - 1999	+ 4%	1,2	0,46	0,43	0,12	12% (41%)	60% (21%)
≥ 2000	+ 1%	0,95	0,48	0,46	0,12	17% (46%)	56% (17%)
Total	+ 4%	2,3	0,35	0,36	0,09	9% (36%)	26% (62%)

"This illustrates that the jobs which contribute most to change are short-term ones and with these contributing more modestly to total employment. Periods of employment lasting less than 2 years in total represent 70% of turnover but only 13% of the total number of days worked over the 1976-80 period".

The short-term nature of jobs suggested by these results leads to the need for an in-depth investigation into the precarious and unstable nature of new jobs. "More than half of the jobs which begin each year are terminated before the end of the same year. 91% of the employment periods which began during 1976 were finished before 31/12/80, whereas 64% of jobs in 1/1/76 had ended before 31/12/80. A similar phenomenon can be found in an examination of the distribution according to age of the employment periods which ended during 1980: 62% of them began in 1980 and only 9% were in existence on 1/1/76.

The Authors' comments are unambiguous as far as created jobs are concerned. The latter are both more unstable than more established jobs, and seem to be less well paid. The average salary of a new job in 1980 is only equivalent to 75% of the average salary paid for an existing job in 1980.

"...the most stable jobs are also the best paid. Thus it is stated that employees who have held their jobs throughout the year represent 73% of the total number of working days and 77% of the salary bill (at a time when the 1980 turnover rate was 0.46)."

We will return to the subject of remuneration later, for the moment we will examine more closely the very interesting results contained in tables 6.19 and 6.20 by sector and, more especially, by size, in our study of job creation.

The analysis by sector shows in detail that which the job generation studies only hinted at. The first column of the table confirms both the sectoral contribution to employment creation and demonstrates the role

of the different ratios. The turnover rate is very high in the Marketing Services and even higher than average in the non-Marketing Services and Commerces. It is clearly lower in the financial services as well as in the manufacture of industrial goods. Even though the large relative variations in manpower seems to lead to a large turnover rate and consequently a low permanence rate, it is necessary to stress the specific nature of the energy sector and of the insurance-financial sector. These latter are two exceptions which can be explained by recruitment carried out at given levels of qualifications for certain posts which are endowed with greater stability. Finally the Intermediate Goods, Equipment Goods and Consumer Goods industries perform unusually since they have had a much higher than average survival rate on 31/12/80 of jobs existing on 1/1/76 even though they lost a significant proportion of their jobs.

It would seem that the collective bargaining process has succeeded in protecting long-serving employees in the declining sectors where there has been a drastic reduction in employee in-take without really generating 'at risk' jobs as in other sectors, since the turnover rate has remained very small in these sectors. This suggests the need for a deeper investigation into the variability of this rate according to establishment size, since the SME's have created jobs in the industrial sector.

The analysis by size of the job characteristics in the industrial sector confirms, in the first instance, that the turnover rate decreases with increasing establishment size. These differences between different size groups in the functioning of the labour market have in reality increased. In fact, it can be seen that the survival rate of permanent jobs increases in a continuous way with size of enterprise. In the very large size categories it reaches 0.46 for jobs which were in existence in 1976 despite manpower reductions. However it does seem that even in the SME in the industrial sector the growth of jobs is less reliant on permanent jobs. In the third stage of the argument we noted that the rate of employment cutbacks in 1980 of jobs which were in existence on 1/1/76 increases with size from 4% to 17%. This indicates the large

resistance on the part of the SME but, in contrast, employment cutbacks decreased with size for jobs which began in 1980 (62% to 56%). The difference is indeed small but it reinforces the final argument about the precarious nature of the jobs created by the SME.

6.5.2. Examination of the characteristic indicators of created jobs

Several types of studies provide information on the kind of employment created. These range from the statistical work limited to one source to syntheses on specific phenomena [Dossiers Statistiques du Travail et de l'Emploi (1985); Collections INSEE (nd); Pavageau (1986)]. We have chosen some important elements from each.

6.5.2.1 Remuneration

Firstly, the 1981 results from the 3-yearly survey into the cost of manpower show the SME bear a direct percentage cost (of the total costs) which is higher than average for all firms. This cost decreases with size in all areas of activity, except for Buildings and Civil Engineering. There is therefore a handicap or cost barrier which harms recruitment in the SME (Table 6.21).

This has been confirmed by the 1968-76 growth of salary differences (Table 6.22). The result is a new dispersion according to size: in 1976 the ratio was 100 to 161.4, whereas in 1968 it was 100 to 182.3.

It should also be noted however that, combined with the stability of established jobs, salaries paid by enterprises move clearly in line with size and reach a difference of 61.4% between the average salary paid by enterprises employing between 1 and 5 employees and that paid by enterprises of 2000+. The profile of the average salary however does not represent a continuous growth. After a clear progression to 10-19, there is a levelling off which continues to the 500 threshold, followed

Table 6.21 - Direct cost in % terms of total costs for all employees according to activity (ACT) and size

	10	49	50	199	200	499	1000	TOTAL
Manufacturing Industries		72.3		71.7		70.9		69.9
Building & Civil Engineering		69.8		69.6		69.7		69.8
Industries & Building		71.5		71.3		70.8		69.9
Wholesale & Retail Trade								
Credit Insurance		73.2		72.6		72.2		72.4
Institutions		69.6		69.0		67.3		66.0
Services		68.4		67.8		66.8		67.8
		72.9		71.9		69.7		67.6
Total of Activities		71.9		71.4		70.0		69.9

Table 6.22 - Evolution of differences in salary between 1968 & 1976 according to enterprise size

Source : INSEE - IIAS

Enterprise size	1968	1976	1976 Average salary
			1968 Average salary
1 - 5 employees	100.0	100.0	2.77
6 - 9 employees ..	128.4	125.0	2.70
10 - 19 employees ..	141.2	130.7	2.56
20 - 49 employees ..	146.9	135.3	2.55
50 - 99 employees ..	147.4	133.3	2.50
100 - 499 employees ..	145.9	134.4	2.55
500 - 1 999 employees ..	160.7	144.2	2.49
> 2 (000) employees ..	182.3	161.4	2.45

by a recovery which will even go as far as 166.1 for the 5000+ category (not detailed in the table).

It is likely that the influence of size does not completely explain this disparity and, at the same time, this change since salary is also a function of occupational structure and of qualifications.

6.5.2.2 Qualifications

It is difficult to link job creation and required qualifications, because the qualification level at recruitment stage is not fixed and there is no clear connection between job qualifications and training level. However, certain characteristics and trends illustrate the changes currently experienced by the SME sector.

The Employment Structure Survey (carried out in firms of 10 employees+) and reproduced as Table 6.23, shows that between 1976 and 1983 there was a significant reduction in the proportion of unskilled workers: 23.33 to 17.03; of skilled workers: 28.10 to 26.76; and even in production control: 3.98 to 3.75. This transformation could be characterised by an increase in the qualification level of all jobs. In fact, it reflects job losses in the industrial sector whereas the increase in the number of unskilled white collar employees (6.23 to 7.43) underlines the poorer conditions of the new jobs.

The analysis of establishment size confirms this point. The proportion of skilled manual workers and production technicians in the 500+ category in growing manpower reductions have disproportionately affected the unskilled. The growing proportion of unskilled white collar employees in all size categories except the largest may suggest that the jobs created in the tertiary sector lead to a de-skilling of the employed labour force. However this is paralleled by the growth of skilled white collar employees. This suggests the need for further sectoral disaggregation.

Table 6.23 - Distribution of Employees by Activity, Employment
and establishment size

		11 - 49	50 - 199	200 - 499	500 +	TOTAL
1975 All Activities	Production Engineers	1,04	1,45	1,80	2,64	1,80
	Service Staff	7,81	5,66	4,70	4,32	5,54
	Production Technicians	2,47	3,24	4,21	7,70	4,65
	Service Technicians	4,60	4,14	3,34	3,03	3,74
	Production Control	3,15	4,04	4,16	4,40	3,98
	Skilled Manual Workers	28,09	29,12	28,56	26,96	28,10
	Unskilled Manual Workers	18,16	22,72	25,72	26,11	23,33
	Service Personnel	2,15	2,56	2,87	3,56	2,84
	Skilled White Collar employees	23,72	19,11	18,14	16,24	19,06
	Unskilled White Collar employees	7,69	6,97	6,14	4,59	6,23
	Diverse professions	1,06	0,92	0,31	0,40	0,67
	Total	100,00	100,00	100,00	100,00	100,00
1983 All Activities	Production Engineers	1,24	1,70	2,21	3,53	2,12
	Service Staff	9,30	7,40	6,35	5,89	7,36
	Production Technicians	2,64	3,48	4,93	10,01	5,13
	Service Technicians	5,43	5,15	5,23	3,88	4,93
	Production Control	2,86	3,92	3,80	4,48	3,75
	Skilled Manual Workers	26,50	26,73	26,32	27,40	26,76
	Unskilled Manual Workers	12,78	17,67	19,53	19,14	17,03
	Service Personnel	2,76	3,23	3,41	3,73	3,26
	Skilled White Collar employees	25,97	20,95	20,27	16,94	21,21
	Unskilled White Collar employees	8,92	8,46	7,42	4,59	7,43
	Diverse professions	1,54	1,25	0,48	0,36	0,97
	Total	100,00	100,00	100,00	100,00	100,00

Source : Enquetes sur la structure des Emplois.

6.5.2.3 Part-time work

The growth of part-time working [Combault (1984)] constitutes a new dimension in the creation of jobs about which very little is known. The increase of this category of employment throughout all activities seems fairly modest in the last ten years. The proportion of part-time employees has increased from 3.7% to 5.5% (Table 6.24) but it should be said that these 5.5% represent a significant body of workers. Moreover this growth of almost 2% between 1975 & 1984 illustrates the structural change in the type of work offered as well as of the behaviour of workers. The size distribution is significant in 1975 with the proportion of part-time jobs being inversely proportionate to size. However, the proportion of part time jobs has increased most rapidly between 1975 and 1984 in the 500+ category. Table 6.25 shows clearly that part time work tends to be undertaken by females.

Disaggregation by establishment size (Table 6.26) of the 5.5% of part-time employees in 1984 shows a concentration within the SME sector regardless of gender or socio-professional class. It is likely that the creation of jobs in the SME contains a large proportion of part-time jobs for women. This trend towards part-time working, often achieved by maintaining the same person in the same job, therefore means that a new part-time job does not reflect the creation of a job but rather the loss of half a job.

Table 6.24 - Proportion of part-time employees according to establishment size

Enterprise size	10 . 49 employees	50 . 199 employees	200 . 499 employees	500 employees	Total
31 décembre 1975	6,4	3,7	3,1	1,5	3,7
31 décembre 1976	6,5	4,1	3,9	1,6	4,0
31 décembre 1977	6,4	3,9	3,7	2,1	4,0
31 décembre 1978	6,3	4,0	3,5	2,1	4,0
31 décembre 1979	6,6	3,9	4,0	2,5	4,2
31 décembre 1980	6,8	4,2	4,0	2,5	4,4
31 décembre 1981	7,0	4,5	4,5	2,9	4,7
31 décembre 1982	7,2	5,0	5,0	3,3	5,1
31 décembre 1983	7,3	5,1	4,6	3,6	5,1
31 mars 1984	7,2	5,2	4,8	3,8	5,2
30 juin 1984	7,4	5,5	5,1	3,9	6,5
30 septembre 1984	7,2	5,5	5,1	3,9	5,4
31 décembre 1984	7,5	5,5	5,2	4,0	5,5

Source : Source : Survey of Activity and Conditions of Employment of the Labour Force

Table 6.25 - Proportion of part-time employees according to sex and professional category

	Manual workers			employees			Total workers		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
31 décembre 1975	2.0	6.5	3.2	2.6	6.4	4.3	2.3	6.5	3.7
31 décembre 1976	2.0	6.1	3.1	2.9	7.3	4.9	2.5	7.1	4.0
31 décembre 1977	2.0	6.6	3.2	2.7	7.3	4.7	2.2	7.4	4.0
31 décembre 1978	1.8	6.8	3.1	2.7	7.6	4.8	2.1	7.6	4.0
31 décembre 1979	1.8	6.9	3.1	2.9	8.5	5.3	2.2	8.2	4.2
31 décembre 1980	1.9	7.2	3.2	2.8	9.0	5.6	2.2	8.5	4.4
31 décembre 1981	2.0	7.7	3.4	2.7	10.0	6.0	2.3	9.3	4.7
31 décembre 1982	1.7	8.5	3.4	3.1	11.4	6.8	2.3	10.5	5.1
31 décembre 1983	1.7	8.9	3.5	2.9	11.7	6.8	2.2	10.9	5.1
31 mars 1984	1.7	9.1	3.5	2.9	11.8	6.8	2.2	11.1	5.2
30 juin 1984	1.8	9.5	3.7	3.0	12.5	7.3	2.3	11.5	5.5
30 septembre 1984	1.8	9.3	3.6	2.9	12.4	7.2	2.2	11.5	5.4
31 décembre 1984	1.6	9.6	3.6	3.1	12.8	7.4	2.2	11.8	5.5

Source : Source : Survey of Activity and Conditions of Employment of the Labour Force

Table 6.26 - Proportion of part-time employees according to establishment sizes sex and professional category of employees on 31 December 1984

Establishment size	Manual Workers			Employees			Total workers		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
10-49	1.9	14.5	4.8	4.8	16.0	10.3	3.0	15.7	7.5
50-199	1.7	9.1	3.8	3.6	12.3	7.5	2.4	10.9	5.5
200-499	1.7	7.6	3.6	2.6	13.1	7.1	2.0	10.4	5.2
500	1.2	7.8	2.5	1.6	9.5	4.9	1.5	9.6	4.0
.....	1.6	9.6	3.6	3.1	12.8	7.4	2.2	11.8	5.5

Source : Source : Survey of Activity and Conditions of Employment of the Labour Force

6.5.2.4 The Nature of the Jobs Created

The new jobs currently being created are increasingly precarious, particularly those which are filled by young people [Pavageau (1986)]. Firstly, there has been a deterioration in employment conditions as reflected in the rise in Fixed Term Contracts, [Depardieu and Lâuche (1985)] and shown below.

	<u>1983</u>	<u>1984</u>
% of recruits under a Fixed Term Contract	50.4	58.4
% of recruits under an open-ended Contract	34.5	28.1

The jobs created are therefore increasingly precarious as reflected in Table 6.27. A growing percentage of unemployed people are affected by precarious job cuts, whereas resignations are rare. One must, however, adjust for the mobility characteristics which particularly affect young people. One can see in Tables 6.28 and 6.29 that employee turnover in the SME is much higher than in the large enterprises. This suggests that more rigorous selection procedures in the large enterprises minimise the risk of selecting inappropriate workers.

Table 6.30 shows that the 'risky' jobs are mainly those in the SME, ie those with less than 50 employees of whom 75% utilise Job/Training Contracts and Job Adjustment Contracts. The underlying trend is, however, less clear because of two recent youth employment initiatives which have led to considerable growth in the proportion of young workers in small enterprises (from 39.2% of trainees undergoing skills training to 47.5% between the 1982-83 and 1983-84 campaigns [Amat and Affichard (1985)]).

In concluding this analysis of the risky job market in relation to the behaviour of the SME, we indicate in Table 6.31 [Tonnere (1986)] that

Table 6.27- Circumstances for employment search according to sex
PSERE unemployed workers from 1975 to 1985 (in % terms)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Men (total 100%)											
End of risk job	4,8	5,8	6,1	10,3	10,3	12,8	14,3	22,0	23,6	21,9	21,3
Redundancy	50,4	53,8	48,7	52,1	54,1	47,6	50,5	42,4	38,5	40,2	40,6
Resignation	16,9	13,0	13,6	12,5	11,7	14,2	12,4	7,8	8,1	5,7	6,1
End of study or of national service	15,8	19,4	19,9	16,2	17,1	17,0	15,5	16,7	17,5	18,7	18,5
Finished work or never worked	6,0	4,9	6,2	5,0	3,3	5,6	5,0	5,2	4,7	4,1	4,0
Other	6,0	3,1	5,4	3,9	3,4	2,8	2,4	6,0	7,6	9,4	9,5
Women (total 100%)											
End of risk job	7,8	8,2	9,0	11,7	15,2	15,4	17,3	21,9	23,3	24,2	22,5
Redundancy	27,9	29,1	27,1	29,0	28,4	29,2	30,2	26,1	25,8	22,8	23,4
Resignation	18,5	15,9	16,5	15,9	16,8	14,2	14,0	11,0	8,4	7,9	7,6
End of study or of national service	16,0	18,7	18,8	18,3	17,1	19,4	16,9	17,8	17,7	17,6	17,5
Finished work or never worked	26,9	26,0	26,0	23,0	20,4	20,7	19,9	19,5	17,7	19,0	20,0
Other	2,9	2,1	2,6	2,2	2,2	1,2	1,6	3,7	7,1	8,5	9,0

Starting from 1982, results set up with the help of data on sex and age from the last census.

From 1982 to "end of occasional work" were added and other items :
 "end of interim mission" and "end of fixed-term contract"

Source : Survey of Activity and Conditions of Employment of the Labour Force

Table 6.28 - Distribution of stable and mobile young people according to enterprise size

Enterprise size	Mobile (more than one employer)		Stable (only one employer)
	First Job	Job March 80	
1 - 9 employees	30,2	20,6	18,8
10 - 49 employees	29,6	27,4	23,8
50 - 999 employees	30,6	35,7	36,6
1000 employees +	9,6	17,6	20,7
Total	100,0	100,0	100,0

Source : F. Amat, Cereq op. cit. p.45.

Table 6.29 - Mobility rate per enterprise size

Enterprise size	Men	Women
1 - 9 employees	71	57
10 - 49 employees	55	49
50 - 999 employees	49	41
1000 employees +	31	33

(1) Mobility Rate $\frac{\text{No. of leavers from one enterprise of size } x}{\text{No. of job posts in one enterprise of size } x}$

Source : F. Amat, cereq op. cit. p.45

Table 6.30

Three-quarters of the recruits under CEF or CEA are undertaken by establishment of less than 50 employees with a % of nearly 50% for establishment of 0 - 10 employees. Thus one can determine a more concentrated distribution than the preceding year in the small establishments, fairly close to that stated 2 years previously.

In % terms

No. of employees +	1981-82	1982-83	1983-84
0 - 10 employees	51.2	44.6	47.1
11 - 49 employees	25.2	26.0	28.7
50 - 199 employees	12.8	14.5	13.6
200 employees +	10.8	14.7	10.6
..... Total	100.0	100.0	100.0

Source : Les contenus emploi formation per Georges Guasco. In Bilan de l'emploi. Dossiers Statistiques du travail et de l'emploi 12 - 13 September 1985.

Table 6.3 Evolution of the number of requests for authorisation of redundancies which have been authorised and of the average number of redundant employees according to establishment size - 1984

No. of employees in establishment	1982			1983			1984			% evolution 1983-1984	
	Av. No. of Redun.		Ests.	Av. No. of Redun.		Ests.	Av. No. of Redun.		Ests.		
	Emps.	emps.		Emps.	Emps.		Emps.	emps.			
One employee											
Number	17 223	16 099	1.0	18 257	17 032	1.0	20 541	19 126	1.0	- 12.5	- 12.3
%	17.7	5.1		17.7	4.7		16.5	4.5			
2 - 9 employees											
Number	46 890	84 018	1.8	51 897	94 259	1.8	59 960	106 308	1.8	- 15.5	- 12.8
%	48.2	26.6		48.9	25.7		48.3	24.8			
10 - 49 employees											
Number	21 663	95 146	4.4	24 664	110 878	4.5	28 541	124 306	4.4	- 15.6	- 12.1
%	22.3	30.1		23.2	30.3		23.0	28.9			
< 50 employees											
Number	85 796	195 265	2.3	94 838	222 169	2.3	109 042	245 740	2.3	- 15.0	- 12.4
%	88.2	61.8		89.3	60.7		87.8	58.2			
50 - 199 employees											
Number	7 459	59 139	7.9	7 876	74 291	9.4	10 236	92 405	9.0	- 30.0	- 24.4
%	7.7	18.7		7.4	20.3		8.2	21.5			
200 - 499 employees											
Number	2 562	26 011	10.9	2 358	35 621	15.1	3 095	41 036	13.3	- 31.3	- 15.2
%	2.6	8.8		2.2	9.7		2.5	9.6			
500+ employees											
Number	1 435	33 758	23.5	1 096	34 092	31.1	1 800	46 205	25.7	- 64.2	- 35.5
%	1.5	10.7		1.0	9.3		1.4	10.6			
50+ employees											
Number	11 456	120 908	10.6	11 330	144 004	12.7	15 131	179 646	11.9	- 33.5	- 24.8
%	11.8	38.2		10.7	39.3		12.2	41.8			
TOTAL											
Number	97 252	316 173	3.2	106 168	366 173	3.4	124 173	429 386	3.5	- 17.0	- 17.3
%	100.0	100.0		100.0	100.0		100.0	100.0			

Source : DOSSIERS STATISTIQUES du travail et de l'Emploi
in 21 June 1986.

the necessity for economic cutbacks increased greatly between 1982 and 1984, but if all sizes of enterprise are included in this trend, the enterprises with less than 50 employees are clearly less affected. It is unfortunate that this table does not show the situation on either side of the 100 employee threshold since it is in the 50-199 category that the change is greatest.

6.5.2.5 Synthesis

Major gender differences appear in the creation of new jobs. Increased female activity rates together with an increase in the proportion of new jobs being created in SME's has meant that females are increasingly occupying jobs which are part time, lower paid and with poorer contracts of employment.

6.6 Economic interventionist policies in favour of enterprise and employment creation

Since 1955 France has operated a policy aimed at "stimulating the recovery of regions experiencing under-employment and insufficient economic development" [Colloque Bormio (1986)].

6.6.1 Evolution of the kinds of aid

Initially the Special Equipment Subsidy was not related to employment, but over the years this has been changed. In 1959 special conversion zones were created and in 1961 public aid was directed towards the regions of the West. In 1964 there was an expansion of the aid fund for regional development. In 1964 also, the Industrial Development Subsidy was set up. Firms were required to create at least 30 jobs in order to qualify for this subsidy. The Industrial Adaptation Subsidy which was set up at this time involved the subsidisation of retraining programmes which must apply to at least 20 workers, and in 1966, 30. In 1972 the

Regional Development Subsidy replaced its predecessors and placed the emphasis on the regions of the West: 60% of new job creations had to be located in the West. This resulted in the transfer of at least 100 jobs out of the Paris region. 1972 witnessed the setting up of the Subsidy for the location of tertiary activities. In 1976 a reform was introduced to lower the thresholds of the Regional Development Subsidy: recipients of aid were required to create at least 10 jobs rather than 30. In 1982 the National and Regional Land Distribution Subsidy replaced its predecessors and was aimed at assisting the creation or saving of establishments from closure by encouraging the creation or maintenance of at least 20 jobs. In 1982 the Regional Employment Subsidy was created (PRE) and also the Regional Subsidy for the Creation of Enterprises (PRCE) which emphasized the intervention of the regional authorities which, in 1977, already had the responsibility for allocating the Regional Subsidy for the Creation of Industrial Enterprises (PRCEI). In 1983 a subsidy for job creation in the craft enterprises was set up. 14,000 subsidies were granted in 1983. Among the enterprises which benefited (employing 25,382 employees) 8,956 obtained one subsidy; 1,755, two subsidies; and 257, more than three subsidies. For more than one third of the enterprises (35.5%) the subsidy allowed the firm to take on its first employee. 4,728 new jobs were created in subsidised firms which had not employed any staff up until that point [Vilalard (1984)].

The systems for allocation of regional subsidies varied enormously according to the Regions but overall the majority of the Regions put the aid policies into practice up until 1985. From this date onwards, two regions, Picardy and Centre began to call into question the decision to give aid in the form of subsidies and replaced it by other means. Currently several regions, of which Poitou-Charentes is an example, have followed this trend and propose introducing other more direct forms of repayable advances (paid into current accounts). The regional distribution of economic aid for enterprise and employment creation is shown in Table 6.32, and Table 6.33 illustrates the number of enterprise creations by region. It is not easy to establish the effect of the different aids. However, we propose to make some judgements based on

Table 6.32

	No. of Subsidies	77-79 subs PRCEI Jobs fore-cast	Rise	Ann. Av. PRCE 80 - 82	Intervention Budget in 000s of francs	Rising subsidies PRE/PRCE
Ile de France	160	1769	8000	8507	3 464 543	11 974
Champagne-Ardennes	35	396	1760	3415	302 250	19 984
Picardie	32	558	1690	1063	500 344	Replaced by part-icipative loans
Haute Normandie	82	1683	4100	2912	317 092	8 846
Centre	51	530	2670	2520	390 000	Replaced by part-icipative loans
Nord-Pas de Calais	36	679	1800	3500	1 021 546	21 120
Lorraine	55	1092	4040	3887	459 013	22 366
Alsace	25	332	1410	1827	442 989	4 987
Franche Comté	34	623	1450	2203	297 538	7 798
Basse Normandie	63	864	4030	2515	228 658	6 029
Pays de Loire	104	2031	8020	6340	579 350	15 514
Bretagne	82	2174	6120	5310	627 800	30 009
Limousin	2	432	1700	1073	237 628	25 516
Auvergne	40	971	2600	1970	363 457	25 025
Poitou-Charentes	63	904	5040	2533	391 958	11 993
Aquitaine	64	1345	4940	3621	711 950	24 634
Midi Pyrénées	54	911	4160	4373	566 582	37 000
Bourgogne	58	1304	2930	2961	384 139	1 824
Rhône-Alpes	185	2021	10780	6116	1 032 148	31 969
Languedoc-Roussillon	46	670	3650	2388	489 790	25 011
Provence-Côte d'Azur	48	588	2430	3368	1 181 500	17 722
Corse	5	39	400	105		
FRANCE	1344	21977	82300	72508		

Source :

Table 6.33 - Enterprise creations by Region - all activities

	1980	1981	1982	1983	1984	% 1984
1. Ile-de-France	18142	19721	20172	20829	24154	27.3
2. Champagne-Ardenne ..	1378	1355	1331	1343	1350	1.5
3. Picardie	1641	1706	1584	1716	1872	2.1
4. Haute-Normandie	1372	1774	1343	1371	1660	1.8
5. Centre	2093	2524	2138	2455	2458	2.8
6. Nord	3357	3720	3480	3965	3713	4.2
7. Lorraine	2151	2201	2001	2137	2172	2.5
8. Alsace	1402	1468	1331	1495	1753	2.0
9. Franche-Comté	1043	1189	1080	1142	1194	1.3
10. Basse-Normandie	1726	1731	1848	1839	2111	2.4
11. Pays-de-la-Loire	3141	3275	3528	3576	3942	4.5
12. Bretagne	2756	3005	3256	3362	3272	3.7
13. Limousin	774	765	779	721	704	0.8
14. Auvergne	1392	1299	1388	1353	1478	1.7
15. Poitou-Charentes	2413	2498	2498	2404	2799	3.2
16. Aquitaine	3829	4101	4149	4307	4635	5.2
17. Midi-Pyrénées	3325	3352	3445	3377	3654	4.1
18. Bourgogne	1616	1662	1604	1700	1679	1.9
19. Rhône-Alpes	6816	7442	7415	7748	8077	9.1
20. Languedoc-Roussillon ..	4255	4496	4688	4914	5320	6.0
21. Provence-Côte d'Azur ..	8177	8717	9077	8974	9704	11.0
22. Corse	752	646	662	651	698	0.8
TOTAL	73551	78647	78797	81379	88479	100

Source :

several studies which have tried to evaluate the impact of these initiatives.

6.6.2 Usefulness of Aid

Several studies have attempted to evaluate the usefulness of aid [Ministere de L'Industry et de la Recherche (No.29); Kergoat and Gillouard (1984); Gillouard (1985); Charvet (1986); Guesnier (1986)]. We aim to summarise the main points.

Firstly, it can be stated that public funds have had a real effect on the reduction of regional differences. Between 1955 and 1975 the positive effects of regional development strategies involved more than 3,000 decentralisations which led to the creation of approximately 400,000 industrial jobs outside of the Paris region [Aydalet (1980)].

From 1974 to 1980 private undertakings forecast the creation of around 200,000 jobs. Although only a proportion of these jobs materialised, it is worth noting that these projects represented 4.5% of the country's industrial manpower.

In the Pays de la Loire, which is a much aided region, about 22,000 jobs were forecast in subsidised projects, ie 10% of industrial manpower. These figures can be compared with the 58,000 net industrial jobs created in that region from 1974 to 1980 [Etude SESSI, op cit].

The regional development initiatives have thus been quite successful. This is confirmed by the following analysis of a constant sample of aided enterprises which shows that aided enterprises increase their employment more rapidly than non assisted. The net difference between the two is 6.6%.

	Aided Enterprises in 1976 Constant Sample	Total No of enterprises 1976 to 1980
1976 Employed Manpower	208,878	4,384,500
% Change 1976-1980	+2.8%	-3.8%

The results are confirmed by J KERGOAT AND A GILLOUARD (1984) who analyse the effects of subsidies on the creation of jobs in the Brittany Region. An econometric study carried out by A GILLOUARD (1985) also shows that it is the subsidy which positively influences the decision making process of the enterprise's chief executive when studying his finances.

This is further confirmed by the study by E CHARVET (1986) on the Big South-West where a regional structural analysis is presented. In stating the efficacy of aid, he notes an important development: "of aid to the location of activities, the subsidy becomes an aid to the development of regional industrial potential and to the stimulation of local dynamism" [Charvet (1986)].

The current author has demonstrated in an econometric study [Giraud and Guesnier (1986)] linking enterprise creations (CR) and subsidies for the creation of enterprises (PRCE) that the elasticity is not negligible:

$$\text{Lg (CR)} = - 1.74 + 0.75 \text{ lg PRCE}$$

(2.31) (4.65)

PRCE cumulative subsidies rising over 3 years

No. of observations = 22

$$R^2 = 0.71$$

To conclude, it appears that state subsidies alone are not exclusively responsible for economic development and that regions which provide a complete strategy of assistance to enterprises, to the SME and other job creators obtain the best results. In this context several regions have recently devoted resources to the creation of nursery enterprises and of management shops, so favouring the creation of more solid enterprises.

Despite the research effort, however, we are not able to assess the extent to which the aid has helped reduce unemployment. An evaluation was attempted for the period 1981-1983 but it was made clear that the different policies to reduce unemployment had very diverse effects and so it would be imprudent to categorise measures or interventions (c.f. Table 6.34) to indicate their effectiveness in leading to employment creation..

CONCLUSION

Analyses of employment change by establishment size, sector and region show significant differences with small establishments, the tertiary sector and Southern Regions performing best.

Major questions are, however, raised over the type of employment created. It is noted that many jobs are part-time, primarily for women and for very young workers; employment contracts are shorter with more rapid turnover and labour and wage rates lower.

Public policy in France, particularly at a Regional level, seems to have been effective in terms of job creation but the relationship between employment creation and reductions in unemployment has become increasingly confused. Studies which relate the new jobs being created in France to unemployment have not been undertaken.

Table 4-34 : Sub-categorisation of the annual evolution of unemployment
spanned over the period 1981-1983

Variations for the annual average (in 000s of people)

	<u>1981</u>	<u>1982</u>	<u>1983</u>
(1) <u>"Active" employment policies:</u>			
(a) Public jobs (including PTT, hospitals, GEN and local initiative jobs) (**)	- 26	- 86	- 50
(b) Length of work (outside of administration, PTT, hospitals and GEN)	-	- 25	-
(c) Other econometric policy strategies (81-82 retuning devaluation of March 83 and compulsory plan)	- 10	- 40	- 10
(d) Effects induced by specific employment policies	- 3	- 4	-
(e) Aid to unemployed enterprise creators	- 8	- 13	- 10
(f) Measures aimed at favouring the recruitment of young people (apprenticeship, exemption from social fees, job training and job adjustment contracts).....	- 28	- 24	- 20
TOTAL	- 75	- 192	- 100
(2) <u>Training policy</u> (instruction courses for young people and national education schemes)	- 8	+ 5	- 20
(3) <u>Funding policy for the workforce</u>			
(a) Fund guarantees, redundancies and resignations (GRL and GRD)	- 57	- 64	- 40
(b) FNE and social agreement for the iron industry	- 14	- 20	- 20
(c) Solidarity contracts	-	- 10	- 90
(d) Retirement at 60	-	-	- 70
TOTAL	- 71	- 94	- 170
(4) <u>More immediate measures</u>			
(a) Partial unemployment	- 7	+ 5	- 20
(b) Long-term unemployed	-	- 15	- 45
(5) <u>Overall impact of measures on unemployment</u>	- 161	- 291	- 340

(*) The figures are for consideration as orders of magnitude and not as exact evaluations

(**) including induced effects GEN: Large national enterprises

SOURCE : Colin, Elbaum and Fonteneau (1984)

Notes

1. UNEDIC : Union Nationale pour L'Emploi dans L'Industries et la
Commerce.

URSSAF : Union pour le Recouvrement des cotisations de la Securite
Social et d l'Allocations Familiales.

ESE : Enquete sur la Structure des Emplois

- ANNEXES -

Tableau 1

Number of establishments and employees by industry and establishment size, 1980

REPARTITION DES ETABLISSEMENTS ACTIFS ET DE LEURS SALAIRES PAR ACTIVITE(NAPIS) ET TAILLE DE L ETABLISSEMENT AU 1 01 80

FRANCE ENTIERE

	00		01 A 05		06 A 09		10 A 19		20 A 49	
	N. ETAB.	N. SAL.	N. ETAB.	N. SAL.	N. ETAB.	N. SAL.	N. ETAB.	N. SAL.	N. ETAB.	N. SAL.
NON PENSEICHE	21507.		3540.	7433.	567.	4124.	527.	6939.	379.	10212.
01. AGRI. SYL. PECHE	72190.		22277.	45374.	2760.	19047.	1764.	23175.	1060.	31579.
02. IAA	29756.		76843.	76627.	4742.	34173.	2690.	36502.	2262.	70993.
03. PROD ET DIST ENERGIE	2225.		3570.	6629.	472.	3490.	738.	10259.	635.	20149.
04. IND BIENS INTERMEDIA	25016.		18724.	44317.	6138.	48442.	6236.	86214.	6173.	195916.
05. IND BIENS EQUIPEMENT	21774.		16333.	36426.	4022.	24657.	4097.	56114.	4575.	145543.
06. IND BIENS CONS COUP	72809.		39008.	84621.	8973.	66161.	8719.	113873.	8119.	256912.
07. BAT. GENIE CIV ET ACP	211482.		177567.	282044.	20892.	152318.	14063.	189342.	10370.	318100.
08. COMMERCE	422235.		267736.	538213.	35449.	256773.	22568.	301475.	17691.	411565.
09. TRANSPORT, TELECOM	57274.		23061.	49604.	5240.	30673.	4618.	62729.	3867.	119363.
10. SERVICES MARCHANDS	577166.		346338.	658491.	37840.	274657.	23904.	317665.	15461.	471016.
11. LOC. CREDIT BAIL IMA	59744.		5249.	9709.	726.	5114.	297.	7942.	459.	14579.
12. ASSURANCES	2590.		1822.	3700.	359.	2911.	392.	5365.	366.	11664.
13. OPC FINANCIERS	8074.		8134.	21060.	2442.	17770.	2388.	32001.	1430.	42892.
14. SERVICES NON MARCHAN	80785.		37731.	186672.	14469.	105121.	9975.	133638.	7638.	235079.
15. REP DIP ETR. OPC INT	168.		226.	443.	60.	434.	62.	778.	25.	712.
TOTAL.	1660661.		1014207.	2050363.	145203.	1056962.	102920.	1303011.	76470.	2356277.

Source : SIRENE

Tableau 1 Suite

REPARTITION DES ETABLISSEMENTS ACTIFS ET DE LEURS SALAIRES PAR ACTIVITE (NAPIS) ET TAILLE DE L'ETABLISSEMENT AU 1.01.80

FRANCE ENTIERE

	50 A 99		100 A 199		200 A 499		500 A 999		1000-1999	
	N. ETAB.	N. SAL.	N. ETAB.	N. SAL.	N. ETAB.	N. SAL.	N. ETAB.	N. SAL.	N. ETAB.	N. SAL.
NON DENSEIGNE	117	7049	69	9510	32	9724	12	7189	4	6674
AGRI. SIL. PECHE	221	14008	70	9466	29	7648	2	1104		
16A	312	63759	548	76591	749	103800	72	47667	23	29933
03. PROD ET DIST ENERGIE	305	21802	194	27114	144	43447	65	46121	34	49640
IND BIENS INTERMEDIA	2209	155810	1377	193990	953	295323	320	220234	103	142815
85. IND BIENS EQUIPEMENT	1939	129772	1207	168543	908	314657	395	274297	190	260367
86. IND BIENS COMS COUR	3083	217068	1784	248660	1026	308533	213	143031	53	69603
07. BAT. GENIE CIV ET AGC	2996	207699	1352	184662	620	182426	104	69819	39	49425
09. COMMERCE	3141	215096	1255	173754	523	160670	90	54275	21	20071
09. TRANSPORT, TELECOM	1256	97900	633	50689	473	129504	106	73006	61	85632
10. SERVICES MARCHANDS	4729	326994	2056	279062	997	294799	299	205958	115	153249
11. LOC. CREDIT BAIL IMM	106	14155	105	14912	49	12932	7	4333	2	2562
12. ASSURANCES	144	10097	97	13448	72	2326	35	23601	7	9214
13. ORG. FINANCIERS	507	34643	273	38689	219	68482	91	62400	19	23826
14. SERVICES NON MARCHAND	3591	246252	1770	246415	1139	338006	200	198029	93	133954
15. DEP DIP ETR. ORG INT	12	803	4	520	3	905	1	672	2	3100
TOTAL.	25237	1757960	12797	1774430	7616	2207240	2092	1433292	766	1038754

Source : SIRENE

Tableau I Fin

FRANCE ENTIERE

PARTITION DES ETABLISSEMENTS ACTIFS ET DE LEURS SALAIRES PAR ACTIVITE (NAPIS) ET TAILLE DE L'ETABLISSEMENT AU 1.01.90

	2000-9999		5000-9999		10000 ET.		TOTAL	
	N. ETAB.	M. SAL.	N. ETAB.	M. SAL.	N. ETAB.	M. SAL.	N. ETAB.	M. SAL.
NON BENEFICIAIRE	4.	10655.	.	.	.	.	.	.
AGE: S/L. PECHE	.	.	.	.	1.	74030.	1.	26791.
160	3.	7060.	.	.	1.	33731.	10077.	154299.
03. PROD ET DIST ENERGIE	21.	57964.	2.	11820.	.	.	77201.	186612.
04. IND BIENS INTERMEDIA	47.	13371.	7.	53631.	.	.	9405.	549005.
05. IND BIENS EQUIPEMENT	92.	224764.	19.	127080.	2.	23790.	69105.	1590751.
06. IND BIENS CONS COUP	5.	15816.	1.	5371.	10.	170160.	53561.	1376990.
07. MAT. GENIE CIV ET ACB	6.	15100.	2.	11113.	.	.	147363.	1524924.
08. COMMERCE	12.	35960.	1.	5003.	3.	11110.	39597.	172353.
09. TRANSPORT. TELECOM	30.	81393.	5.	33099.	3.	173203.	767743.	2355666.
10. SERVICES MARCHANDS	40.	122902.	17.	97917.	4.	145533.	92616.	1000704.
11. LOC. CREDIT IMM	1.	2403.	.	.	2.	70640.	1000000.	7262731.
12. ASSURANCES	3.	7976.	.	.	2.	160240.	66182.	250061.
13. OPG FINANCIERS	7.	7976.	.	.	.	.	5927.	109446.
14. SERVICES NON MARCHAND	11.	31565.	3.	20113.	.	.	23531.	391441.
15. REF DIP ETP. OPG INT	77.	104522.	7.	44975.	2.	31221.	207525.	1992493.
TOTAL.	702.	954737.	60.	401620.	29.	992950.	3040760.	17707396.

Source : SIRENE

Number of establishments and employees by industry and establishment size, 1986

Tableau 11

REPARTITION DES ETABLISSEMENTS ACTIFS ET DE LEURS SALARIES PAR ACTIVITE (NAP15) ET TAILLE DE L ETABLISSEMENT AU 1/01/86

Franç ENTIERE

	00		01 A 05		06 A 09		10 A 19		20 A 49									
	N. ETAB	N. SAL	N. ETAB	N. SAL	N. ETAB	N. SAL	N. ETAB	N. SAL	N. ETAB	N. SAL								
NON RENSEIGNE	579		124	284	30	220	31	398	19	619								
01. AGRI, SYL, PECHE	139		250	79	24	190	16	21	9	28								
02. IAA	23		37	7	3	6	3	4	2	3								
03. PROD ET DIST ENERGIE	75		102	50	6	7	7	8	5	6								
04. IND BIENS INTERMEDIA	21		17	6	6	7	6	8	5	18								
05. IND BIENS EQUIPEMENT	21		18	7	6	7	7	8	5	6								
06. IND BIENS CONS COUR	67		80	31	14	17	14	16	11	10								
07. BAT, GENIE CIV ET AGR	18		27	11	3	4	4	5	3	4								
08. COMMERCE	37		46	18	3	4	4	5	3	4								
09. TRANSPORT, TELECOM	74		90	35	12	15	12	14	9	11								
10. SERVICES MARCHANDS	65		72	21	4	5	5	6	4	5								
11. LOC, CREDIT BAIL IMM	40		48	19	6	8	7	8	5	6								
12. ASSURANCES	3		4	1	1	1	1	1	1	1								
13. ORG FINANCIERS	10		13	5	3	4	4	5	3	4								
14. SERVICES NON MARCHAN	22		29	11	8	10	8	10	6	8								
15. REP DIP ETR, ORG INT	1		1	1	1	1	1	1	1	1								
TOTAL.	189	3279	1020	214	205	4525	146	637	107	2111	101	436	136	3859	72	032	221	2581

Source : SIRENE

Tableau II Suite

REPARTITION DES ETABLISSEMENTS ACTIFS ET DE LEURS SALAIRES PAR ACTIVITE(MAPIS) ET TAILLE DE L ETABLISSEMENT AU 1/01/86

FRANCE ENTIERE

	50 A 99	100 A 199	200 A 499	500 A 999	1000-1999
	N.ETAB	N.ETAB	N.ETAB	N.ETAB	N.ETAB
	N.SAL	N.SAL	N.SAL	N.SAL	N.SAL
001. MON RENSEIGNEMENT	1	1	1	1	1
002. AGRICULTURE, PÊCHE	1	1	1	1	1
003. ENERGIE	1	1	1	1	1
004. INDUSTRIES	1	1	1	1	1
005. COMMERCE	1	1	1	1	1
006. TRANSPORT	1	1	1	1	1
007. SERVICES	1	1	1	1	1
008. LOCATIONS	1	1	1	1	1
009. ASSURANCES	1	1	1	1	1
010. ORGANISATIONS	1	1	1	1	1
011. SERVICES FINANCIERS	1	1	1	1	1
012. SERVICES COMMERCIAUX	1	1	1	1	1
013. REPARATION, ENTRETIEN	1	1	1	1	1
TOTAL.	23496	1629011	11366	1569755	6498
			1674	1150792	557
					756853

Source : SIRENE

SECTEURS D'ACTIVITÉS ÉCONOMIQUES (nomenclature NAP)	1 à 4 SALARIÉS		5 à 9 SALARIÉS		10 à 19 SALARIÉS		20 à 49 SALARIÉS		50 à 99 SALARIÉS		100 à 199 SALARIÉS		200 à 499 SALARIÉS		500 SALARIÉS et +		ENSEMBLE	
	Valeur absolue	%	Valeur absolue	%	Valeur absolue	%	Valeur absolue	%	Valeur absolue	%	Valeur absolue	%	Valeur absolue	%	Valeur absolue	%		Valeur absolue
Secteur primaire (01 à 03)																		
• Agriculture, sylviculture, pêche	700	48,8	352	24,4	230	16,0	111	7,7	31	2,2	10	0,7	5	0,3	2	0,1	1.441	
Secteur industriel (04 à 35)	174.536	53,3	68.000	20,1	34.407	10,5	31.095	9,5	10.395	3,2	5.884	1,8	3.727	1,1	1.503	0,5	327.547	
• Industrie agricole et alimentaire (35 à 42)	28.784	65,0	8.425	19,3	2.676	6,1	2.114	4,8	773	1,8	464	1,1	287	0,7	78	0,2	43.801	
• Industrie des biens intermédiaires	10.805	30,2	8.014	22,4	5.988	16,7	6.098	17,0	2.187	6,1	1.383	3,9	933	2,6	405	1,1	35.813	
- Industrie des métaux (09 à 13, 20, 21)	5.572	30,2	4.270	23,1	3.157	17,1	3.166	17,1	1.077	5,8	600	3,3	430	2,3	195	1,1	18.487	
- Chimie, caout., plast., matér., (14 à 17, 43, 50, 52, 53)	5.233	30,2	3.744	21,6	2.831	16,3	2.932	16,9	1.110	6,4	783	4,5	503	2,9	210	1,2	17.348	
• Industrie des biens d'équipement	9.879	34,1	5.759	20,3	4.054	14,3	4.487	15,8	1.740	6,1	1.092	3,8	944	3,3	646	2,3	28.401	
- Construction mécanique (22 à 25, 34)	6.335	37,4	3.598	21,2	2.412	14,2	2.583	15,2	971	5,7	553	3,3	371	2,2	128	0,8	18.951	
- Construction électrique (27 à 30)	2.310	29,2	1.563	19,8	1.203	15,2	1.344	17,0	499	6,3	354	4,5	357	4,5	277	3,5	7.907	
- Construction automobile (31)	663	27,9	364	15,3	290	12,2	402	16,9	193	8,1	136	5,7	165	7,0	163	6,9	2.378	
- Construction navale, aéron., armement (26, 32, 33)	371	31,8	234	20,0	149	12,8	158	13,5	77	6,6	49	4,2	51	4,4	78	6,7	1.187	
• Industrie des biens de consommation																		
- courants	22.701	41,5	11.292	20,6	7.328	13,4	7.685	14,1	2.791	5,1	1.717	3,1	1.002	1,8	232	0,4	54.748	
- Parachimie, pharmacie (18, 19)	745	24,9	532	17,7	491	16,4	524	17,5	260	8,7	205	6,8	181	6,0	81	2,0	2.998	
- Textiles, habillement (44, 47)	6.610	36,7	3.550	19,7	2.451	13,6	2.954	16,4	1.158	6,4	770	4,3	447	2,5	80	0,4	18.020	
- Cuir, chaussures (45, 46)	1.038	33,9	508	16,6	424	13,8	559	18,2	272	8,9	150	4,9	93	3,0	20	0,7	3.064	
- Imprimerie (51)	4.908	41,9	2.985	25,5	1.683	14,2	1.444	12,3	369	3,2	175	1,5	123	1,1	38	0,3	11.705	
- Bois aménagement (48, 49)	6.751	51,8	2.481	19,0	1.484	11,4	1.476	11,3	466	3,6	266	2,0	95	0,7	20	0,2	13.039	
- Industries diverses (54)	2.649	44,7	1.236	20,9	815	13,8	728	12,3	266	4,5	151	2,5	63	1,1	13	0,2	5.921	
• Bâtiment (55)	102.105	62,4	32.264	19,7	14.180	8,7	10.450	6,4	2.798	1,7	1.185	0,7	524	0,3	118	0,1	163.802	
Secteur tertiaire (56 à 98)	529.978	67,8	137.430	17,5	58.073	7,4	40.209	5,1	10.851	1,4	4.533	0,6	2.023	0,3	574	0,1	783.673	
• Commerces	189.441	65,8	56.293	19,6	22.442	7,8	14.421	5,0	3.191	1,1	1.278	0,5	598	0,2	119	0,0	287.783	
- Commerce de gros (57 à 60)	32.315	42,5	19.491	25,7	11.996	15,8	9.180	12,1	2.014	2,6	684	0,9	208	0,3	44	0,1	75.932	
- Commerce de détail alimentaire (61, 62)	53.794	77,4	8.700	12,5	3.399	4,9	2.255	3,2	667	1,0	347	0,5	249	0,4	42	0,1	69.453	
- Commerce de détail non alimentaire (63, 64)	103.332	72,6	28.102	19,7	7.047	4,9	2.986	2,1	510	0,4	247	0,2	141	0,1	33	0,0	142.398	
• Transports et télécommunications (65 à 75)	15.082	47,4	7.249	22,8	4.230	13,3	3.615	11,4	1.004	3,2	428	1,3	164	0,5	48	0,1	31.820	
• Services marchands	271.785	71,7	60.474	18,0	23.373	6,2	15.862	4,2	4.681	1,2	1.928	0,5	716	0,2	178	0,0	378.993	
- Réparation et commerce automobile (65)	29.899	64,3	9.410	20,2	3.694	7,9	2.544	5,5	690	1,5	228	0,5	37	0,1	2	0,0	48.504	
- Hôtels, cafés, restaurants (67)	63.836	74,1	14.236	16,5	5.104	5,9	2.442	2,9	364	0,4	102	0,1	49	0,1	12	0,0	86.145	
- Études, conseils, prestations de services (77)	34.827	53,3	18.285	24,9	6.879	10,5	4.803	7,3	1.596	2,4	687	1,1	252	0,4	52	0,1	85.381	
- Santé (84)	49.835	83,8	4.192	7,1	1.803	3,0	2.087	3,5	940	1,6	438	0,7	145	0,2	58	0,1	59.496	
- Services divers (58, 66, 76, 78 à 80, 82, 83, 85 à 87)	93.388	76,9	18.351	13,5	5.893	4,8	3.986	3,3	1.091	0,9	471	0,4	233	0,2	54	0,0	121.467	
• Assurances, Organ. financiers, Local. Immob. (81, 88, 89)	9.194	43,6	5.208	24,7	3.089	14,7	2.054	9,7	737	3,5	410	2,0	256	1,2	126	0,6	21.074	
• Services non marchands (90 à 98)	44.476	69,5	8.206	12,8	4.939	7,7	4.257	6,8	1.238	1,9	493	0,8	289	0,5	105	0,2	64.003	
Divers	5.113	80,9	889	13,8	201	3,2	128	2,0	4	0,1	2	0,0					8.317	
Total	710.327	63,5	204.651	18,3	92.911	8,3	71.543	6,4	21.281	1,8	10.431	0,9	5.755	0,5	2.079	0,2	1.118.978	

Source : UNEDIC

Number of establishments by industry sector and establishment size, 1980
Nombre d'établissements par branche d'activités et selon la taille au 31.12.1980.

SECTEURS D'ACTIVITÉS ÉCONOMIQUES (nomenclature NAP)	1 à 4 SALARIÉS		5 à 9 SALARIÉS		10 à 19 SALARIÉS		20 à 49 SALARIÉS		50 à 99 SALARIÉS		100 à 199 SALARIÉS		200 à 499 SALARIÉS		500 SALARIÉS et +		ENSEMBLE
	Valeur absolue	%	Valeur absolue	%	Valeur absolue	%	Valeur absolue	%	Valeur absolue	%	Valeur absolue	%	Valeur absolue	%	Valeur absolue	%	
Secteur primaire (01 à 03)																	
• Agriculture, sylviculture, pêche	1.432	8,5	2.417	14,4	2.998	17,8	3.201	19,0	2.198	12,8	1.410	8,4	1.478	8,8	1.734	10,3	16.822
Secteur industriel (04 à 55)	367.468	5,4	439.947	8,5	470.508	8,9	978.828	14,5	730.812	10,8	820.828	12,1	1.127.884	16,7	1.832.837	27,1	8.768.412
• Industrie agricole et alimentaire (35 à 42)	82.288	12,8	54.362	11,2	35.786	7,3	66.508	13,8	54.175	11,1	65.509	13,5	83.700	17,2	64.538	13,3	488.848
• Industrie des biens intermédiaires	25.082	1,7	55.093	3,7	83.288	5,8	193.458	12,9	153.357	10,3	194.947	13,0	288.469	19,3	500.116	33,5	1.493.788
- Chimie, caout., plast., matér., (14 à 17, 43, 50, 52, 53)	12.929	1,8	29.348	4,0	43.930	6,0	99.970	13,7	75.410	10,4	84.390	11,6	134.538	18,5	247.867	34,0	728.382
• Industrie des biens d'équipement	12.153	1,6	25.745	3,4	39.336	5,1	93.486	12,2	77.947	10,2	110.557	14,4	153.931	20,1	252.249	33,0	785.404
- Construction mécanique (22 à 25, 34)	22.054	1,2	38.979	2,2	55.909	3,1	143.786	8,1	123.317	8,9	153.335	8,8	298.473	16,7	948.536	53,2	1.784.369
- Construction électrique (27 à 30)	14.174	2,8	24.264	4,5	33.223	6,2	82.393	15,3	68.579	12,8	77.573	14,5	114.207	21,3	122.193	22,8	536.606
- Construction automobile (31)	5.586	1,0	10.590	1,8	16.664	2,9	42.853	7,4	35.480	6,1	49.653	8,5	112.870	19,4	308.970	52,9	580.666
- Construction navale, aéron., armement (28, 32, 33)	1.494	0,3	2.533	0,5	4.023	0,8	13.414	2,7	13.644	2,7	18.908	3,8	54.744	10,9	393.371	78,3	502.131
• Industrie des biens de consommation courants	800	0,5	1.592	1,0	1.999	1,2	5.126	3,1	5.814	3,4	7.201	4,3	16.652	10,1	128.002	78,4	184.986
- Parachimie, pharmacie (18, 19)	48.992	3,5	78.382	5,5	101.408	7,3	244.682	17,6	198.447	14,2	237.824	17,1	294.488	21,1	190.372	13,7	1.392.573
- Textiles, habillement (44, 47)	1.780	1,0	3.627	1,9	6.887	3,6	18.844	8,9	18.393	9,7	28.760	15,2	55.863	29,6	56.784	30,1	188.898
- Cuir, chaussures (45, 46)	14.300	2,6	24.143	4,4	34.159	6,2	95.079	17,2	82.563	14,9	107.521	19,4	131.504	23,8	83.335	11,5	552.804
- Imprimerie (51)	2.264	2,0	3.438	3,0	6.041	5,3	18.391	16,1	19.818	17,4	20.824	18,2	26.450	23,2	18.846	14,8	114.070
- Bois aménagement (48, 49)	11.291	5,3	20.180	9,4	22.800	10,7	44.925	21,0	28.180	12,2	24.048	11,3	35.842	16,8	28.475	13,3	213.741
- Industries diverses (54)	13.876	6,5	18.695	8,0	20.302	9,7	46.630	22,2	32.783	15,6	36.135	17,2	27.025	12,9	16.582	7,9	209.828
• Bâtiment (55)	5.681	5,0	8.301	7,3	11.237	9,9	22.813	20,1	18.710	16,5	20.536	18,1	17.784	15,7	8.370	7,4	113.432
Secteur tertiaire (58 à 98)	208.104	13,5	213.492	13,8	191.263	12,4	322.161	20,9	194.137	12,6	183.530	10,8	151.554	9,8	98.806	6,4	1.543.047
• Commerces	1.027.204	15,8	902.759	13,9	783.158	12,1	1.224.585	18,8	748.828	11,5	820.823	9,8	597.908	9,2	592.858	9,1	6.498.118
- Commerce de gros (57 à 60)	388.378	18,0	387.979	17,0	301.967	14,0	433.817	20,1	217.873	10,1	178.372	8,1	178.142	8,2	97.389	4,5	2.181.897
- Commerce de détail alimentaire (61, 62)	74.458	7,7	132.025	13,6	163.955	16,9	278.484	28,8	137.818	14,2	92.827	9,6	58.149	6,0	30.434	3,2	967.950
- Commerce de détail non alimentaire (63, 64)	98.861	21,0	56.115	11,9	45.786	9,7	68.618	14,5	45.954	9,7	48.485	10,3	76.583	16,2	31.790	6,7	472.172
• Transports et télécommunications (68 à 75)	215.059	29,8	179.839	24,9	92.226	12,8	86.715	12,0	34.301	4,7	35.060	4,9	43.430	6,0	35.145	4,9	721.775
• Services marchands	31.959	6,5	49.341	10,1	58.374	12,0	111.320	22,8	70.075	14,4	59.042	12,1	48.788	10,0	59.142	12,1	488.021
- Réparation et commerce automobile (85)	512.952	19,3	398.385	14,9	313.741	11,8	486.845	18,3	328.824	12,3	261.329	9,8	206.373	7,8	155.792	5,8	2.680.241
- Hôtels, cafés, restaurants (67)	63.274	18,5	61.227	17,9	49.350	14,4	78.603	23,0	47.863	14,0	30.280	8,8	10.311	3,0	1.244	0,4	342.152
- Études, conseils, prestations de services (77)	118.801	28,8	92.839	22,5	67.171	16,3	72.460	17,5	24.639	6,0	13.763	3,3	14.588	3,5	8.572	2,1	412.833
- Santé (84)	76.485	10,2	108.672	14,5	93.167	12,4	146.540	19,6	111.721	14,9	92.939	12,4	72.188	9,6	47.475	6,4	749.185
- Services divers (58, 66, 78, 79 à 80, 82, 83, 85 à 87)	83.032	19,8	27.317	6,5	24.788	5,9	48.589	16,4	66.565	15,9	59.529	14,2	43.643	10,4	45.697	10,9	419.160
• Assurances, Organ. financiers, Locat. immob. (81, 88, 89)	171.360	23,2	106.330	14,4	79.265	10,8	120.653	16,4	76.036	10,3	64.818	8,8	65.645	8,9	52.804	7,2	738.911
• Services non marchands (90 à 98)	20.803	4,1	34.411	8,8	41.555	8,3	62.295	12,4	51.208	10,2	58.559	11,3	77.138	15,4	157.942	31,5	501.911
Divers	73.112	10,8	54.643	8,0	87.521	9,8	130.308	19,0	83.848	12,2	87.521	9,8	87.485	12,7	122.611	17,9	887.049
Divers	9.220	42,3	5.887	28,1	2.815	12,0	3.740	17,2	278	1,3	237	1,1	0,0	0,0	0,0	0,0	21.777
Total	1.408.324	10,8	1.350.810	10,2	1.259.278	9,5	2.210.352	16,8	1.482.774	11,1	1.443.299	10,8	1.727.068	13,0	2.427.227	18,2	13.308.130

Source : UNEDIC

TABLEAU DE PASSAGE - TOTAL INDUSTRIE POITOU-CHARENTES

1972-75

	0	1	2	3	4 à 5	6 à 9	10 à 19	20 à 49	50 à 99	100 à 199	200 à 499.500	+ Total
1	1660	99	69	36	46	37	32	38	10	6		12034
2	216	159	50	10	10	5	1	1			1	453
3	74	41	87	33	21	4	2					262
4	40	15	31	54	29	15	4	1				194
5	34	9	10	32	71	53	10	1	1			221
6	32	1	0	3	34	123	58	3				273
7	42			2	2	22	160	49	2			279
8	18	1			1	4	39	208	32	2	1	306
9	9				3	1	1	22	111	12	1	140
10	7							5	22	67	8	110
11	3								1	4	53	768
12											3	2629
13	2145	325	251	175	222	264	307	328	179	91	67	354389

1975-78

1	1553	198	105	39	60	66	54	45	11	3	1	12145
2	97	153	45	18	9	1	2					325
3	57	45	93	32	15	7	2					251
4	33	12	41	51	28	5	4	1				175
5	30	7	2	32	92	46	0	3	1			222
6	34	3	3	4	36	114	61	5				264
7	25			2	6	40	180	53	1			307
8	33	1		1		2	25	234	32			328
9	21			1	1	1		27	110	17	1	179
10	9		1				1		16	52	12	91
11	2	1								10	52	57
12											4	3135
13	1894	420	290	180	256	286	338	368	171	82	70	344389

1978-81

1	1350	154	60	55	59	76	63	49	11	3	4	1494
2	194	144	59	15	6	1		1				420
3	88	54	85	41	14	6	2					290
4	35	10	36	55	29	13		2				190
5	54	3	17	33	90	51	6	2				256
6	63	1	4	6	37	123	47	5				256
7	53	1	1		5	44	171	63				338
8	46		1	1		6	31	257	26			368
9	22							20	119	9	1	171
10	8			1				1	13	55	4	82
11	2					1			2	11	54	70
12	1						1				2	3034
13	1926	367	263	207	240	321	321	400	171	78	65	304389

1981-84

1	1353	124	77	50	71	105	59	58	14	7	6	21926
2	169	132	40	14	7	5						367
3	42	43	49	31	12	6		1				263
4	52	10	36	57	39	10	3					207
5	58	5	11	26	98	32	8	2				240
6	64	4	2	7	41	146	54	3				321
7	63			2	5	54	156	39	2			321
8	57	1	1			3	42	268	27	1		400
9	26				1		2	31	99	12		171
10	6	1							7	62	2	78
11	10		1					2		4	44	65
12	3										5	2230
13	1943	320	256	187	274	361	324	404	149	86	57	284389

Impact on Employment

	99	138	104	205	274	439	1258	647	888		713	4704	1
216-		50	20	32	27	9	20			304		246	2
148-	41-		33	48	19	20						69-	3
120-	30-	31-		40	63	35	10					3-	4
144-	29-	23-	32-	5-	123	65	17	89				51	5
100-	5-	14-	12-	4A-	16	233	5A					126-	6
553-			23-	14-	95-	40	451	7A				100-	7
593-	30-			23-	62-	347-	230	452	14A	190		356	8
651-				203-	62-	35-	343-	286	336	15A		514-	9
757-							452-	419-	41	33A	492	1157-	10
573-								190-	276-	247	1597	695	11
										27A-	146	132-	12
4350-	45-	116	47	22-	313	460	1299	1143	1137	350	2938	4016	13
	19A	210	117	303	465	757	1300	412	394	284	790	5639	1
97-		45	36	31	6	21						42	2
114-	45-		32	33	39	30						25-	3
94-	24-	41-		41	19	39	24					41-	4
131-	23-	5-	40-	1	108	84	65	77				136	5
244-	15-	15-	16-	80-	8	259	95					18-	6
334-			24-	5A-	153-	79	528	53				91	7
107A-	31-		34-		47-	220-	220	656				533-	8
1463-			47-	85-	7A-		600-	264	51A	12A		1363-	9
1257-		151-				99-		524-	10	90A		1206-	10
471-	213-								673-	103-	406	1144-	11
										145A-	450-	1004-	12
5501-	153-	43	24	146	357	942	1631	1348	297	337-	430	326-	13
	154	120	165	257	573	960	1474	691	35A	1350		5996	1
191-		59	30	20	6		14					35-	2
175-	54-		41	33	27	20						109-	3
105-	20-	36-		39	48		50					14-	4
235-	10-	39-	41-	7-	112	50	37					134-	5
453-	5-	23-	22-	77-	34	159	116					271-	6
722-	14-	12-		20-	142-	99	526					334-	7
1345-		29-	22-		96-	253-	166	553				925-	8
1543-							402-	175-	200	263		1648-	9
1062-			97-				144-	420-	77-	171		1629-	10
692-					393-			364-	739-	544-		2752-	11
709-						77A-				22A-	2432-	4147-	12
7237-	51	41	54	236	129	166	1852	365	239-	1012	2432-	6002-	13
	124	154	150	317	767	820	1824	967	894	2054	1413	9484	1
160-		40	28	24	30							47-	2
164-	43-		31	29	25		21					101-	3
156-	20-	36-		51	34	34						93-	4
251-	17-	25-	34-	3	65	63	38					159-	5
481-	25-	11-	27-	92-	9-	209	42					394-	6
887-			15-	43-	216-	16	359	81				705-	7
1988-	29-	22-			75-	261-	46-	550	69			1742-	8
1946-				47-		7A-	677-	53	301			2394-	9
770-	161-							125-	305-	176		1185-	10
2973-		232-					600-		299-	62A-	602	4020-	11
2903-										545-	1294-	4632-	12
238A-	171-	133-	133	242	621	303	921	1525	670	1057	731	598A-	13

Source : ASSEDIC

References

- AMAT F. et AFFICHARD J. - Articles parus dans Formation-Emploi, n° 9 Janvier-Mars 1985.
- AYDALOT Ph. - Une évaluation critique de l'Aménagement du Territoire. Décembre 1980.
- AYDALOT Ph. - Atlas économiques des régions françaises. Economica 1982.
- BENARROCH F. et ESPINASSE J.M - Caractéristiques et modes d'embauches. Travail et Emploi. Janvier-Mars 1982 n° 11.
- CAILLIES J-M et DEVILLIERS M. - Démographie des entreprises. Premiers résultats. I.N.S.E.E. n° 54 - Février 1986.
- CHARVET E. - Aides au développement régional et localisations industrielles dans le grand Sud-Ouest - 1982. R.E.R.U. 1986 n° 2.
- CHOEFFEL P., GARNIER O., B. REYNAUD CREYSSANT - Logiques des marchés externes et internes, aspects structureaux, aspects dynamiques. Journées d'études. 3-4 octobre 1985 sur le thème structures du Marché du Travail et Politiques d'emploi.
- COLIN J-F, ELBAUM M., FONTENEAU A. - Chômage et politique de l'emploi, 1981-1983, Observatoire Français des conjonctures économiques, Communication présentée au colloque international de l'Association d'Econométrie Appliquée. 1e et 2 mars 1984. Université de Dijon.
- Collections I.N.S.E.E. - Série M 113. Etude sur les salariés. Source DAS.
- Colloque Bormio - 5,6 juin 1986. L'efficacité économique des aides au développement régional.
- COMBRAULE Pl. - Le travail à temps partiel en 1984. Dossiers statistiques du travail et de l'emploi. Septembre 1984.

- DEPARDIEU et LAUCHE MC. - Déclaration des mouvements de main-d'oeuvre. Economie et Statistiques n° 178. Juin 1985.
- Dossiers Statistiques du Travail et de l'Emploi
- n° 12. Septembre 1985. Bilan de l'Emploi 1984.
- GILLOUARD A. - Les primes régionales à la création d'entreprises et d'emploi. Mesure et analyse de leur effet incitatif. Atelier Collectivités Locales et leur environnement économique. M.R.T. 28-29 novembre 1985.
- GIRAUD R. et GUESNIER B. - Détermination sectorielle et régionale de la démographie des entreprises. Colloque d'économétrie. Lyon, mars 1986.
- GUESNIER B. - La distribution des entreprises selon leur taille. Thèse Poitiers 1970.
- GUESNIER B. et LAVALLEE J. - Distribution par taille des entreprises, choix, changement de taille et incidence sur l'emploi. Colloque Nantes, mai 1986 "Comportement et structures économiques face au défi de l'emploi
- KERGOAT J. et GILLOUARD A. - Les interventions économiques des Régions. L'exemple de la P.R.C.E. - C.R.E.F.E. Université de Rennes 1984.
- KOCHANSKI et MADINIER - Etude sur la création d'entreprise et l'évolution de l'emploi. Documents provisoires. Mai 1986.
- LANG G. et TELOT C. - Taille des établissements et effets de seuil. Economie et Statistiques n° 173 - Janvier 1985.
- LAVALLEE J. - Les effets sur l'emploi des seuils juridiques concernant la taille des entreprises. I.E.R. Janvier 1986.
- LAVALLEE J. - Choix de taille, seuils juridiques et emploi des établissements industriels. Poitiers, mai 1986.
- LEBAUDE A. - Le monde du 16 octobre 1984. Une proportion grandissante de salariés dans les activités de services.
- M.I.R. - Service d'Etude des stratégies et des statistiques industrielles.
- La concentration dans l'industrie de 1974 à 1980, n° 26.
- L'industrie et les Régions en 1981, n° 31.
- Aides régionales et structures industrielles, 7 années de primes de développement régional (1974-1980) n° 29.

PAVAGEAU C.

- L'entrée dans la vie active. Formation, chômage et emploi des jeunes. Thèse, Poitiers 1986.

TONNERE M.

- 1984 de très nombreux recours aux licenciements économiques. Dossiers statistiques du Travail et de l'Emploi. n° 21. Juin 1986.

VILALARD J.

- La prime à la création d'emploi dans les entreprises artisanales. Année 1983. Dossiers Statistiques du Travail et de l'Emploi n° 9, novembre 1984.

CHAPTER 7

SMALL FIRM POLICIES

AND

JOB GENERATION

IN THE NETHERLANDS

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7. SMALL FIRM POLICIES AND JOB GENERATION IN THE NETHERLANDS*

7.1. Introduction

Similar to many other countries in the Western world, Dutch policy makers on various levels of government, after the publication in 1979 of 'The Job Generation Process' by David BIRCH, have discovered the economic potentials of the small firm sector. In the same year, BIRCH's findings were introduced to an audience of Dutch business and government leaders, gathered in a meeting by Royal Dutch Shell in The Hague. The re-orientation towards small and medium sized enterprises (SME's) has also been induced by the debate on re-industrialization among leaders of the government, businesses and unions, and academics. The very influential advisory committee to the national government, chaired by ex-Shell chairman Wagner (and thus popularly called 'the Wagner Commission'), in her 1981 report, suggested to make an extra effort for stimulating the development and application of new technologies in so-called 'promising' industrial sectors.

Research on new firms, the SME-sector, innovations in small firms, the regional profiles of promising sectors, and similar subjects has been intensified in the first half of the 1980s.

In an early study at the Institute of Economic Geography it was shown that new firms were important, even in stagnating sectors (JANSEN, HILGERSOM & VAN DER VEN, 1979). However, research has been considerably hampered by the lack of suitable data in The Netherlands. Only the Chambers of Commerce are able to provide a complete overview of all establishments. Since the mid-seventies, the registers of all Dutch Chambers of Commerce have been fed into a central computerised Databank, thus facilitating research. Time and again, however, it has become clear that these data are not entirely accurate and reliable, particularly with regard to the data on small firms. Careful investigations on a

* I would like to thank Professor Dr J.G. Lambooy for his comments on an earlier version of this report.

local level show large discrepancies between the register and the real world with regard to industrial sector (ISIC code), size (number of employees), and date of birth of the firms concerned. Often it even was found that registered firms were not (or no longer) operational.

Considering the fact that in The Netherlands the Databank is the best there is, it then may be clear that statistical analysis of small firms on the establishment level is rather difficult indeed. Therefore, in general, time-consuming analysis of basic data is required, before even being able to begin the research proper, or else some uncertainty should be taken for granted. Better non-establishment based data on small firms, in particular data concerning employment and historical developments, may often be found at the National Bureau of Statistics (CBS). And finally it should be mentioned that in The Netherlands small firms are defined as ranging from one to nine employees, with medium-sized firms employing from 10 to 99 people.

The next sections will deal with SME's in The Netherlands (7.2), small firms and job creation (7.3), regional aspects (7.4), employment characteristics of SME's (7.5), an overview of SME policies in The Netherlands (7.6), and finally (7.7) some concluding remarks. Due to the limited amount of space, only a selection of major research findings can be given.

7.2. SME's in The Netherlands

Eighty per cent of all enterprises in The Netherlands are small firms, whereas almost all businesses (98%) belong to the SME-group. In 1970, slightly over 350,000 non-agricultural small and medium sized firms existed; this number has grown to 449,000 in 1985. These firms account for about 60 per cent of non-agricultural, non-government employment (c.q. 1.6 million full-time jobs), and for 32 per cent of the national income (D.Fl. 89 billion in 1985).

Table 7.1 gives an overview of the development of the small firms sector in recent decades. Most small firms are in retail trade, business services, wholesale and manufacturing. The total number of firms has increased dramatically, but only in the smallest size group (of between

1 and 9 employees). Between 1963 and 1974, the largest increase occurred in trade, hotels and restaurants, transportation, banking and insurances (comparable data for this period on the other component of the commercial services - the business services - are lacking), whereas the manufacturing and construction industries declined (VIJVERBERG, 1979, pp.41, 43). In particular in manufacturing, relatively many large firms exist, and due to the structural transformation of society, only the share of SME's has increased during recent decades. Although the comparability between the 1963 and 1974 figures on the one hand, and the 1985 figures on the other hand, is not without drawbacks, it may be clear that over the entire period the commercial services sector has grown most substantially in terms of the number of firms. Employment data are more accurate, however.

Table 7.1. Number of firms*, with share of size classes, 1963-1985

Sector	Year	Employment (in per cents)			Sum
		1-9 empl.	10-99 empl.	over 100 empl.	
Manufacturing	1963	65	31	5	44,234
	1974	69	26	4	39,763
	1985	65	30	5	25,756
Construction	1963	68	30	2	30,671
	1974	74	24	2	28,747
	1985	76	22	1	25,534
Trade	1963	85	14	-	66,508
	1974	87	12	-	79,795
	1985	88	12	-	95,051
Transportation**	1963	73	23	4	3,560
	1974	80	18	2	3,823
	1985	75	24	2	10,277
Commercial services***	1963	79	17	4	3,825
	1974	72	25	4	4,334
	1985	83	16	2	25,915
SUM	1963	75	23	2	149,004
	1974	80	19	2	156,644
	1985	82	17	2	182,533

* Excluding other services, government, et cetera; firms with 'zero'-employment; and self-employed.

** 1963, 1974: excluding communication.

*** 1963, 1974: excluding business services.

Source: 1963, 1974: VIJVERBERG, 1979;

1985: National Bureau of Statistics (CBS).

Careful analysis of basic statistics by the Economic Institute for SME's (EIM) has resulted in an overview of employment changes in the small firms sector between 1960 and 1980 (BOL et al., 1982). In 1980, a total of 3,247,000 people were employed in the private sector, 1,868,000 (or 57.7%) of whom in small and medium sized firms. The self-employed and similar groups accounted for 383,000 jobs, and therefore about 1.5 million people work in small firms proper.

In 1960, the total employment in the private sector and in SME's was lower than this figure (see Table 7.2). Whereas employment in manufacturing and in the transportation sector decreased, most expansion was in trade and other services. Some increase in employment occurred in the construction sector, particularly in the SME's. On the other hand, in the overall expanding trades small firms have lost employment. A further breakdown by sectors would show even larger differences between sectors. In other words: generally, some growing (declining) sectors contain declining (growing) firms.

Table 7.2. Employment per sector and per size class, 1960, 1980, x 1,000

Sector	Year	Size class		All SME's	100+ empl.	Sum
		1-9 empl.	10-99 empl.			
Manufacturing	1960	186	328	514	751	1,265
	1980	110	279	389	641	1,030
Construction	1960	136	144	280	112	392
	1980	119	210	329	118	447
Trade	1960	512	208	720	137	858
	1980	443	310	753	231	984
Transportation	1960	59	43	102	99	201
	1980	47	67	115	68	183
Banks, insurances, business services	1960	44	55	99	78	177
	1980	97	104	201	268	469
Misc. services	1960	44	21	65	22	87
	1980	48	33	81	52	133
SUM	1960	980	800	1,780	1,200	2,980
	1980	864	1,003	1,868	1,379	3,247

Source: BOL et al., 1982, pp.32, 42 (adapted).

However, on the whole 267,000 new jobs have been added, corresponding with a 9 per cent increase. Small firms in 1980 had 116,000 jobs less (-11.8%) than in 1960, and medium sized firms increased their employment

by 204,000 (+25.5%), resulting in an expansion of the SME sector with 88,000 jobs over a period of twenty years. Two thirds of net new jobs were created by large firms (an increase of 179,000, or 14.9%). These findings suggest that the small firms sector did not account for most new employment in The Netherlands during recent decades. It may be added that most employment growth in this period occurred in government and non-profit sectors of the economy, which sectors have not been included in this table.

The issue could be extended further by dividing the period into the prosperous 1960s, and the more stagnant 1970s (Table 7.3). This reveals that all jobs have been created between 1960 and 1970, and that the 1970-1980 period in fact shows a net loss of 3,000 jobs! Between 1960 and 1970, small firms lost most jobs - which, however, was more than compensated by job gains in the other size classes. In the second decade considered, the pattern was reversed, with an employment growth for small firms, and a decline for large firms. Only medium-sized firms showed consistent growth, which finding supports the results of a study by LAMBOUY (1979) of the medium-sized firms in Amsterdam. Research by VAN DER TUIN (1982, p.1229), covering the 1970-1980 period, resulted in similar findings, although he found a turning point in 1978, after which the large firms size class started to expand once again. Therefore, it is justified to conclude that the pattern of job creation/job loss per size group is rather diverse, and certainly is not consistent over time. Furthermore, net job creation certainly is not dominated by small firms, although medium sized firms did show stable records of employment growth.

Table 7.3. Employment changes per size class, 1960-1980 (x 1,000)

Period	Employment		Sum of SME's	100+ empl.	Sum
	1-9 empl.	10-99 empl.			
1960 - 1970	-153	+193	+40	+230	+270
1970 - 1980	+ 37	+ 11	+48	- 51	- 3
SUM	-116	+204	+88	+179	+267

Source: BØL et al., 1982, p.54 (adapted).

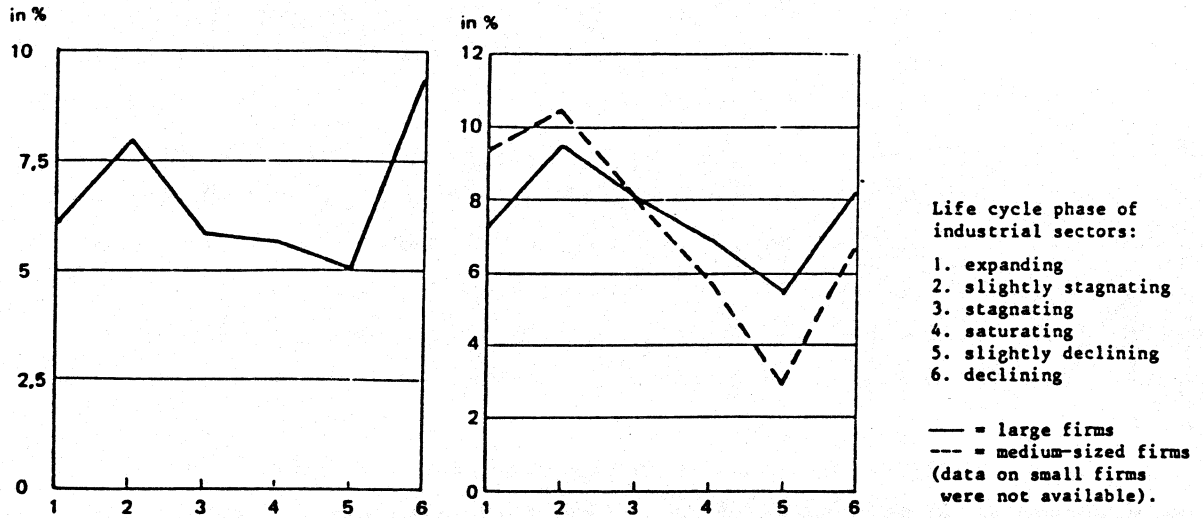
An interesting element applies to the shift from self-employed to the employee status (BØL, 1982). Since 1960, the number of self-employed and employed family members has decreased with 328,000 or 46.1%. The number of employees thus increased with 596,000 (328,000 + 267,000), or 26.3%.

Well over half of these net new employees have only part-time jobs, and an astonishing 95.5% of the net new jobs in large firms are part-time jobs. The average labour time per year therefore has diminished considerably, resulting in a more moderate expansion of the labour volume, when compared to the increase in the number of jobs.

If we now return to the issue of sectoral differences in the changing role of small firms, a few thoughts may be given to the research findings of WEBBINK (1985), who investigated the small firm/large firm breakdown in about 90 three-digit manufacturing sectors. The performances of these sectors during a fairly short period of time (1978-1981) have been used to classify them into six groups. These six groups were based on the life cycle phase of each industrial sector, i.e. expanding, slightly stagnating, stagnating, saturating, slightly declining, and declining. Of course, a period of three years is too short a time for measuring structural tendencies. In fact, WEBBINK adds that an analysis of the 1981-1983 period gives somewhat different results. Although this probably is the weakest point of the research, it may be assumed that the following relations will hardly be affected.

Of course, a general relationship exists between the life cycle stage and the number of firms or the employment performances. On an average, small firms did better than large firms, in particular in slightly stagnating and in declining sectors. In expanding sectors, on the other hand, jobs are added by large firms, with an employment decrease in small firms. WEBBINK has also related net firm births to the life cycle stages of sectors (cf. Figure 7.1a). A reverse relationship would be expected, but has in fact not been found. Here again, slightly stagnating and especially declining sectors show the highest figures, thus indicating that firm formation is related to other factors than sector development (alone). It is peculiar that also an indicator for innovation shows peaks in these two stages (Figure 7.1b). Her general conclusions therefore read that small and medium sized enterprises are very important factors in the industrial structure, also because they can be innovators especially in the less expansive parts of the economy (WEBBINK, 1985, p.169).

Figure 7.1a. Net new firms Figure 7.1b. Score on innovation indicator



Source: WEBBINK, 1985, p.70. Source: WEBBINK, 1985, p.152.

7.3. Small firms and job creation

The foregoing gives rise to considerable doubt with regard to the job generation potential of small firms in The Netherlands. Indeed, an international comparative study by HUISMAN et al. (1980) indicated a relatively weak position of the small firms sector, when compared to that in the US, in Japan or even in the UK. Recent studies have provided more details on the job generation process in small and/or new firms in The Netherlands. Due to the limitations of the reliability of the data, which we have referred to earlier, research based on establishments is a time-consuming process. Probably the most comprehensive study (although not covering every part of the country) has been carried out by WEVER (1984a). He investigated the number of newly registered firms at 17 (of the 38) offices of the districts of the Chambers of Commerce, in three years (1970, 1975, and 1980), and then followed the life cycle of these cohorts of new firms.

In 1970, 8,891 new firms were established, growing to 11,256 in 1975, and 14,585 in 1980. When these figures are corrected for population changes, a considerable increase of 59% during one decade still remains. The number of new firms per 10,000 inhabitants averages 18.3, growing from 14.1 (1970) to 17.9 (1975) and 22.4 (1980). The considerable deviations from these averages in individual districts will be dealt

with later on. Although the more recent figures are more likely to contain some errors, it may be concluded that the formation of firms in the recent past has become more important in The Netherlands.

Most of these new firms are in services: 31.9% in retail, 21.1% in business services, and 15.4% in wholesale trade. A mere 9.3% of all firm formations are in manufacturing, with 8.9% in construction (WEVER, 1984a, p.59). Over time, minor changes may be observed, with an increase of the share of new firms in business services, at the cost of firms in retail trade. This sectoral pattern of new firms closely resembles the existing sectoral breakdown in the area studied.

In order to be able to assess the importance of the start-ups for the economy, it is necessary to also look at the other side of the coin: how many new firms survive after their infant years? It is well known that the failure rate among young firms is relatively high. The annual report of a major Dutch bank (NMB, 1980) mentioned a survival rate of 85 per cent after the first year, 45 per cent after six years, and only two out of every five new firms after the first decade.

Compared with these figures, WEVER found a (slightly) higher survival rate, which remained largely similar for each cohort of new firms. During the first two years of their existence, the yearly failure rates are the highest: about a quarter of all new start-ups disappear within that period. Thereafter, a gradually diminishing group of surviving firms remains: 57 per cent after five years, 42 per cent after ten years.

Between industrial sectors, survival rates do not differ greatly, with the exception of business services, which group has a somewhat better survival performance than is shown in the other sectors. It is interesting to note that, in terms of survival rates, new branch plants do worse than regionally based initiatives.

For reasons that have already been mentioned, it is much more difficult to assess the number of jobs involved in the formation of new firms. The project of WEVER only could use the 1983 employment figures of the firms still surviving after 13, 8, or 3 years. A total of only 80,000 jobs were created, which is a poor result, when compared to the number of new firms created (34,000; but many of these not surviving through 1983). WEVER found that surviving firms created an average of about four jobs

in five years, and of 6 jobs after 10 years. These results closely resembled the findings of a questionnaire among new firms (DE JONG, 1984, p.132), indicating an average size of 1.4 employed at the start, growing to about 6 jobs in ten years time. Finally, remarkable differences are to be found in this respect between sectors. New manufacturing and construction firms are typically much larger than the average new firm, whereas new retail shops provide a smaller number of jobs. Similarly, a new branch plant contributes twice as many jobs as does the average new independent local firm.

Summing up these results, we may conclude that the employment contribution of new firms in The Netherlands is rather limited. A real assessment would, of course, compare this figure with other components of employment change, like for instance expansions and contractions, as well as job losses due to closures of firms. However, these comprehensive data analyses are not available in a Dutch context. Nevertheless, Table 7.3 showed the lack of (consistent) net employment increase in the smallest size class, thus further suggesting a limited role of new firms in direct job creation in the economy.

7.4. The location of new firms in The Netherlands

Several years ago, in 1980 to be precise, a large Dutch bank (the 'Nederlandse Middenstands Bank N.V.') in its annual report published a map of The Netherlands, which provided an overview of the areas with more (or less) openings of new firms, when compared with the whole of the country. From this map it could be concluded that the 'Halfway Zone' (consisting of the provinces bordering on the Rimcity) showed an over-representation, whereas the peripheral regions showed an under-representation of firm formations.

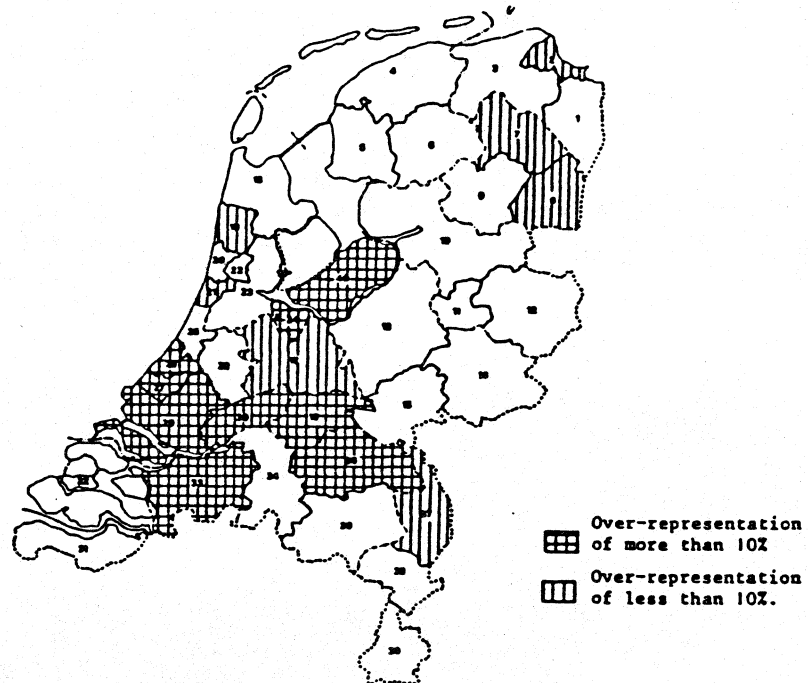
However, several questions still remained to be answered. For instance, one might ask which pattern would appear if we were to differentiate for industrial sectors. Furthermore, for two reasons it remains to be seen to what extent the picture drawn is determined by service industries: (1) in general, a large part of the mutations are being realized by retail- and other service establishments, and (2) it is highly probable that these activities have followed the shift of the population to the

suburbs and the 'Halfway Zone'. Also, the spatial division used does not provide information about the controversy between urban and rural areas in this respect. And lastly, firm size was not taken into account, let alone the organisational status of the firm.

Nevertheless, these data have proved to be very valuable, in particular as incentives for further research. Based on the computerized data on the numbers of business establishments of the Dutch Chambers of Commerce, DE JONG (1984) investigated the regional pattern of the firm formation process in The Netherlands. A total of about 16,000 business establishments in a selected number of manufacturing industries (viz. printing, metallurgy, machinery, electronics and instruments) have been classified. The enormous dynamics of the economy may be illustrated by the fact that almost 40 per cent of the firms that were in existence in 1983, had been established since 1975 and therefore may be considered to be rather young.

Figure 7.2 presents the COROP-regions in the Netherlands (COROP stands for the 40 standard regional classification units) with the highest firm formation rates. The regions with an over-representation are concentrated in the Southern wing of the Rimcity (Rotterdam, COROP 29; and The Hague, COROP 26) and in the Halfway-zone. This picture is rather similar to the results of the NMB-project. However, unlike the NMB, our selection of industries excluded service activities. Moreover, a comparison of Figure 7.2 and the areas with an increase of the population does not result in a correlation. Therefore, an over-representation of new firms in a region does not seem to be directly related to an increase of demand and service needs.

Figure 7.2. COROP-regions in The Netherlands with an over-representation, when compared to the total population, of firms that have been registered since 1975 (selected sectors)

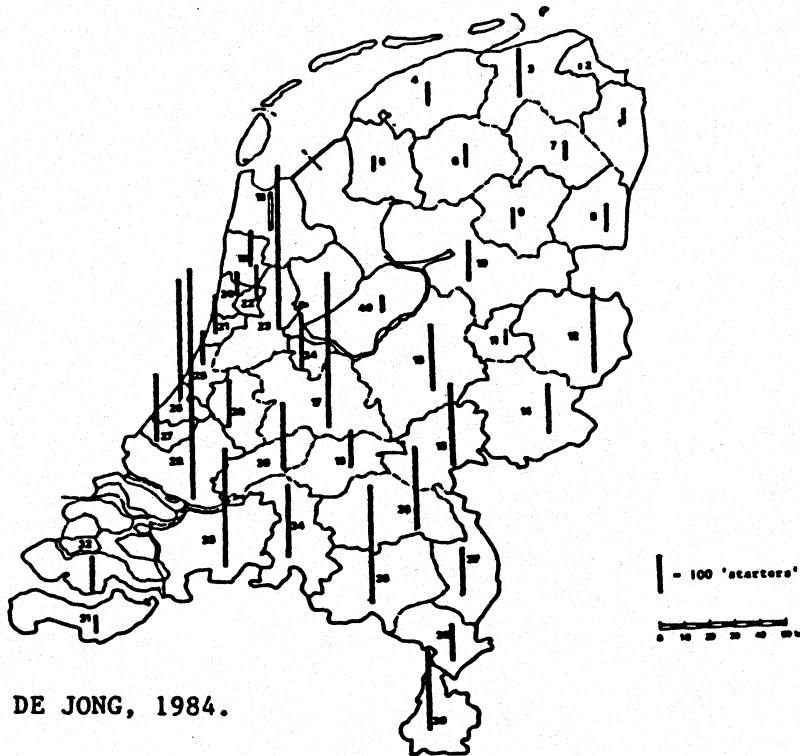


Source: DE JONG, 1984.

There is a possibility that an over-representation of new firms at a moment t_1 in a region is merely a reflexion of an under-representation at the moment t_0 . This possibility has to be rejected, however, since the proportion of new firms to the labour force in a region gives results which are similar to those shown in Figure 7.2. In other words: the regions with a high proportion of new firms are not merely catching up from a backward position.

Now, if we turn to absolute numbers (Figure 7.3), it will immediately become clear that most new establishments are to be found in the Rimcity regions (Amsterdam, Rotterdam, The Hague and Utrecht), to be followed by the intermediate zone (the province of Brabant, parts of Gelderland, and South-Limburg and Twente). The four major agglomerations together house 43.7 per cent of the total number of firms and even 45 per cent of the amount of firms established since 1975. The Rimcity as a whole also contains the highest percentage of surviving young firms, with the 'halfway zone' in a good second place, followed at some distance by the periphery (Table 7.4).

Figure 7.3. Firms registered after 1975, per COROP-region (selected sectors).



Source: DE JONG, 1984.

Table 7.4. Share of enterprises established after 1975 (selected manufacturing industries) per municipality as a percentage of total enterprises existing in the Rimcity, the 'halfway zone', and the periphery in 1982

	Rimcity		Halfway		Periphery		Total*	
	No.	in %	No.	in %	No.	in %	No.	in %
Rural municipalities	201	43.0	197	35.2	239	31.0	640	35.5
Urbanized rural municipalities	868	41.9	899	41.3	487	35.5	2,277	40.3
Small cities	209	42.1	239	35.9	231	36.0	686	37.8
Medium-sized cities	414	36.6	252	38.0	278	35.5	954	36.8
Big cities	1,119	37.6	374	36.9	189	38.5	1,689	37.6
Total	2,811	39.4	1,961	38.6	1,424	35.1	6,246	38.2

*Some 50 firms could not be classified.

Source: DE JONG, 1984, p.25.

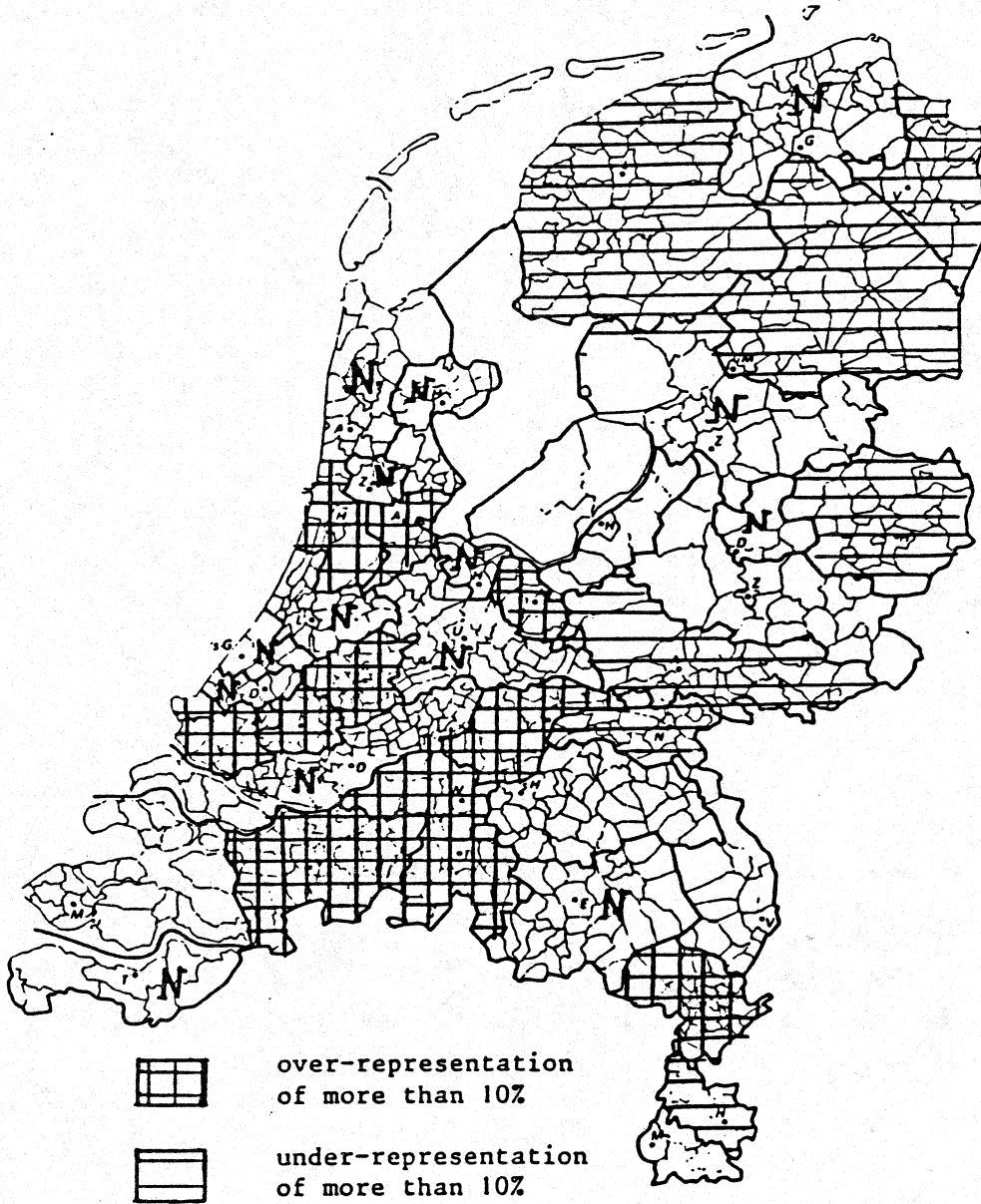
It might be interesting to relate firm formation rates to city size, since often the large cities are considered to be major 'incubators' for new firms. Table 7.4 has shown that within the Rimcity, most of the newly established firms were located in the big cities, although the differences are extremely small.

Relatively speaking, the suburban communities (especially the 'urbanized rural municipalities') within the Rimcity and the 'halfway zone' are an increasingly important location for new firms. Therefore, incubation (at the general level of the sectors researched) no longer is confined to within the boundaries of the large cities, but should be considered in relation to the (sub-)urbanization of large parts of the Netherlands. Taking into account the rather small differences as shown in table 7.4, we should stress this last statement, although the peripheral regions, particularly those in the North East, show smaller formation rates.

Research by WEVER has provided further information on the location of new firms in The Netherlands. Some major results are shown in Figure 7.4, in which an overview is provided of regions with an over-representation of new firms in the years mentioned. On average, 18.2 new firms have been established per 10,000 inhabitants in the entire population, so regions with figures of at least 20.0 are considered to have more than their share, whereas regions with less than 16.4 new firms per 10,000 inhabitants are considered to be underrepresented.

This proves that there is a considerable regional variation of new firms, when measured this way. In fact, the regions with the highest and lowest figures differ from the Amersfoort district (26.6) and the province of Frisia (10.8). In general, Figure 7.4 shows a clear over-representation of the Rimcity regions and for most of the intermediate zone. The top regions are - after Amersfoort - Amsterdam, Waalwijk, and Gouda, the last two being located in the intermediate zone and in 'the

Figure 7.4. Regions with over- and under-representations of new firm openings per 10,000 inhabitants



N = not available (excluded from the research project).

Source: based on WEVER, 1984b, p.469; BLEUMINK et al., 1985, p.16.

green heart' of the Rincity, respectively. On the other hand, in particular the Northern provinces are worst off.

WEVER also investigated the regional pattern of firm closures, thus being able to reach the net-effect of openings (as has been represented in Figure 7.4) and closures per year. This resulted in a similar regional pattern, with over- and under-representation in virtually the same regions. However, the major difference is the higher number of 'deaths' in the big cities, leading to more moderate net results for Amsterdam and Rotterdam. The four regions with the highest figures are now Waalwijk, Amersfoort, Gouda and Tiel, invariably situated in the intermediate zone and the 'green heart'. Thus, overall, "the 'winners' definitely are to be found in the intermediate zone" (WEVER, 1986, p.63). This conclusion is in line with the other findings presented before. Moreover, WEVER also found better results for the smaller municipalities, thus supporting the suburbanisation hypothesis as has been put forward earlier.

In order to get a deeper understanding of the firm formation process in the Netherlands, it is necessary to break down results to a more detailed level of investigation. This may be done in two ways, i.e. through a sectoral and through a geographical breakdown. Many studies have dealt with these issues, but they go beyond the scope of this concise description of the Dutch situation. Nevertheless, we would like to mention here a study which provides an indication of job creation potentials in small and large, new and old firms.

In the Amsterdam region, the computer sector has been investigated (DE JONG & LAMBOUY, 1985, 1986). This sector, which in 1984 consisted of approximately 325 firms, is very young and dynamic. Over 90 per cent of these firms have been founded since 1970, with the most significant increase after 1980: two thirds of the still existing firms were established since then. However, the firms which have been founded in the period 1980-1984, created only 3 per cent (!) of the 1984 employment in the entire sector, whereas 21 older firms, established before 1970, in 1984 had 55 per cent of the jobs. So, once again, the creation of jobs by new (small) firms appears to be rather limited. And furthermore, employment creation in the entire computer business in the region is limited indeed, when compared to more traditional sectors of the economy.

7.5. Employment characteristics of SME's

Quite some information is available on the employment characteristics in small firms as opposed to those in large firms, but rather less data can be found on the types of new jobs created in the private sector. A study by the Dutch Economic Institute for Small and Medium Sized Firms (VAN GINNEKEN, 1985) provides us with an extensive overview of the job characteristics in small, medium-sized, and large firms, mostly based on data for the situation between 1975 and 1983.

On an average, employees in small firms have lower levels of educational background, in particular in vocational training and technical education. Crafts type jobs are more dominant than are administrative or specialist tasks. On the other hand, large firms tend to provide more formal 'on-the-job' training and other forms of additional education for their employees. These firms typically have internal labour markets and tend to keep their personnel. Small firms have higher labour turnover rates and the average period of employment is shorter. The typical job in small firms is more varied than those in large firms; and furthermore unskilled labour is underrepresented in small and medium sized enterprises. Foreign employees (especially those from countries around the Mediterranean Sea), who often are unskilled labourers, therefore also are underrepresented in small firms. The same goes for batch work - these factors being inter-related and connected to large-scale operations.

Small firms employ many young people, in particular the unmarried singles. On the other hand, most wage-earning heads of families have jobs in large firms. A specifically important category among employees of small firms is the group of 'fellow workers', in particular members of the family (the wife, children), who work for the small business owner (often the husband or the father), without a formal labour contract. This group consists of about 75,000 people, on a total of 1.7 million jobs in SME's, including 280,000 self-employed and business owners.

A general breakdown by gender reveals that more women are employed in small and medium sized firms (29 per cent of all jobs), when compared to large firms (26 per cent). However, an interesting difference may be

noted between the large share of women employed in small firms (37 per cent) and the very moderate share of women employed in medium sized enterprises (only 24 per cent). However, these differences in female employment shares are much more profound when industrial sectors are compared - ranging from 4 per cent in construction, to 65 per cent in other non-public services. Taking this into account, the difference between small and large firms is overruled, with the exception of manufacturing, where small firms have twice the share of female employment (26%) when compared to large firms (13%), and business services with a 46% share of women in small firms, as opposed to only a share of 34% for women in large firms.

Traditionally, a disproportionately large part of students leaving school were absorbed by small and medium sized enterprises. However, the economic recession of 1979-1983 has severely affected the labour market outlook for young people in particular, because during that period the number of jobs created was insufficient to absorb the new supply. Furthermore, many new entry-level jobs were only part-time jobs, as has been revealed before by the overview of employment changes. Although - relatively speaking - more part-time jobs exist in small businesses, this could entirely be explained by the industrial composition of the small firm sector (retail trade and restaurants), where part-time labour is over-represented.

VAN GINNEKEN provides us with a closer examination with regard to the characteristics of new jobs created in a fairly short period of time, i.c. between 1980 and 1981. During this period, 250,000 people have entered new jobs, 40 per cent of whom were absorbed by the non-private sector. Of the remaining 153,000 new employees, 63 per cent went to small and medium sized businesses, which sector thus took more than its fair share. Over half of these new employees had just left school or came directly from some other kind of educational institution.

It is significant to note that large firms took up more school-leavers than did small firms, thus challenging the traditional function of the small firm sector in this respect.

A further 21% did not have employment during the previous year, 15% had worked in the family household, and 11% had served military duties before entering the labour market.

During the same period, 320,000 people left their employment, either from the private sector (234,000) or from the public sector (86,000). Thus, the weak performance of the private sector resulted in a net decrease of employment. Once again, small and medium sized firms contributed the better part (64%) of the resignations. Almost half of them (49%) became unemployed, with 23% returning to the household (at least partly remaining underemployed). People who left small firms had an even larger chance of becoming unemployed.

Shifts of people between firms indicated that more people went from a large to a small firm (33,000), than the other way around (29,000), and therefore - at least in this year - small firms do not seem to provide training positions for people who are eventually to be absorbed by large firms.

Finally, the intake by small firms is relatively heavily characterized by young people, women, and less educated people, whereas the employees who are mobile between firms, are dominantly young and well-educated.

Although the information on the types of new jobs created per sé is most difficult to get, an interpretation of the findings presented above may result in the following summary.

Most of the jobs newly created are filled by young people (VAN GINNEKEN mentioned a 60 per cent share for those under 23 years of age, and a full 80 per cent for those under 30 years of age), in particular school-leavers (almost 50 per cent). Furthermore, women are over-represented (with 44 per cent of new jobs, when compared to 27 per cent of the existing employment in the private sector).

Maybe surprisingly so, new employees do not seem to be less qualified when compared with the existing labour force - even to the contrary, and there is no indication for de-skilling in general. Finally, new jobs tend to be part-time jobs, rather than full-time ones. Even with a net decreasing amount of employment, part-time labour has not ceased to increase.

7.6. SME-policies in The Netherlands - an overview

Policies with regard to the small firm sector traditionally have been well established in The Netherlands, and could therefore be characterized by an abundance of measures, instruments, et cetera, as well as by

a rather complex and rooted institutional framework. However, in recent years the Dutch government has reinforced and restructured their policies with regard to small firms, as a reaction to the increased awareness of the importance of small and medium-sized firms in economic life. The starting points with regard to the re-orientation of small firm policies were described in a 'white paper' published in 1982.

In 1985, a final version of the so-called 'Plan van Aanpak' (Strategic Plan) for small firm policies was published, announcing the restructuring of the framework of organisations and institutions dealing with small firms, which probably is the most dramatic measure taken. Furthermore, a simplification and a reduction of grants and other instruments has been implemented. Special efforts have been developed with regard to new firms; in two 'white papers', published in 1982 and 1984 respectively, specific start-up policies have been initiated and described. These reports discuss the major aspects that are involved in the setting-up of a business, including support, advice, and guidance services, legislative issues, training, provision of premises and accommodation, fiscal and social insurance issues, and financial aspects. The 'white papers' announced both policy changes and some new measures with regard to new firm formation.

In this section, some major aspects of new firm policies in The Netherlands will be described, including small firm policies in general, because these also are at stake here. First we will deal with the basic orientation of the 'Strategic Plan' and the 'white papers' on start-up policies. The institutional framework will be described, to be followed next by the main measures within this policy area. As will be mentioned further on, in several cases bodies other than the (central) government have initiated policies addressing small and/or new firms. We will end with a few words on the evaluation and assessment of these policies.

Based on several policy documents, the basic background of SME policies in The Netherlands may be formulated as follows:

- (1) the entrepreneur is responsible for the management of his business;
- (2) government should act where necessary, but with much reservedness;
- (3) whenever feasible, decentralisation should be strived for; and
- (4) efficiency should greatly be enhanced.

Small firms may be reached and be affected by two types of policies, i.e. by (a) general policies which also affect small and medium-sized businesses (like for instance income-, price-, fiscal, social, or urban policies), and (b) functional policies, specifically directed towards the SME sector.

Here we will deal with the second type of policies only. Almost by definition, these policies are detailed and deeply intruding in their scope. In order to be able to diminish that problem as much as possible, without abandoning altogether the idea of specific small firm policies, policy makers are trying (1) to concentrate on the intermediary role of the government, (2) to improve the possibilities for one-stop shopping on the regional level, (3) to emphasize on subsidizing business assistance only when there is a proven demand from the part of the small firm, rather than subsidizing advisory bodies as such, and (4) to decentralize the implementation of policies ('privatization').

Various organisations, some of which subsidized, are operating in The Netherlands, providing support, advice, and guidance to those who want to set up a small or a medium-sized business. They all have their own historical backgrounds and their own specific responsibilities. Besides, there have been a considerable number of local and regional initiatives of varying types, focused on giving guidance to 'starters'. The situation looks somewhat fragmented and confusing for both established companies and start-ups. One of the problems is that of mutual referrals, which results in potential customers often having the feeling that they are being driven from pillar to post.

The policy of the Dutch government in this field is to create a more structured support at the regional level for people planning to start a business. However, this does not mean that the government intends to prescribe a blueprint or a uniform model for the way in which to shape support, advice, and guidance in the regions. The main point rather is that there should be an initial contact address in the region, readily accessible, whereby an overlap of activities is avoided.

Two regional institutions exist, which (have come to) play an initiating role in co-ordinating support at the regional level, i.e. the Chambers of Commerce, and the RDK's (regional service centres for small firms). Especially the latter organisations have an increased role in servicing start-ups, and have in fact been given additional resources as well as a

new name: RIMK's (regional institute for medium-sized and small firms). The 22 RIMK's are accommodated at offices of the Chambers of Commerce, in order to enhance accessibility. They will have the main co-ordinating and intermediating role viz-à-viz the small firms and new entrepreneurs in particular. These centres are almost entirely subsidized by the Ministry of Economic Affairs. After an initial assessment of a business plan, if necessary the centre's staff will refer entrepreneurs to the right (often private) consultant.

A CIMK (co-ordinating institute for medium sized and small firms) - new style, also heavily subsidized by the central government, co-ordinates the RIMK's and provides additional services. Two other national organisations, both also subsidized by the national government, traditionally have a considerable role in assisting small businesses, i.e. the employers organisations KNOV and NCOV (the first a neutral, the latter a Christian organisation). It is important to stress the fact that none of the organisations mentioned above are allowed to use their subsidies for consultancy purposes, as they used to do until recently. All consultancy should be done through the market place, sometimes assisted by a single subsidy measure which covers part of the costs for the entrepreneur (the demand approach).

A few other organisations should be mentioned also, which either cover specific targets groups, or specific problem areas. An example of the first group is the MeMO-organisation (which is no longer subsidized), which assists businesses or start-ups in the alternative economy. Furthermore, TNO (the Dutch organization for applied research) has certain facilities for small firms, and the RND (the national industrial support service) has an important task in providing initial technical-economic advice to manufacturing firms. The RND has eleven regional offices.

After initial talks with, and assisted by, the organisations mentioned above, individual entrepreneurs may make use of the 'subsidy scheme for management consultancy'. Under this revised scheme, financial aid may be allotted directly to companies involved, instead of to the consulting firms. The scheme covers 40 per cent of the costs of outside consultancy with regard to general and functional management. Within the framework of the scheme, a specific grant is especially aimed at introducing new automation techniques to small and medium sized companies. Also within the scheme, a 60 per cent subsidy is available for management support

and feasibility studies for new products, for new innovative firms only (which means that these firms may not be older than three years). The general idea is that by channelling aid directly to the companies, they will be better ensured of receiving the right kind of advice, serving their purposes.

A traditional instrument within the framework of the policies for small firms was streamlined last year. Under this 'credit guarantee scheme', banks may provide loans to small and medium-sized firms, which loans are for 40 to 100 per cent guaranteed by the government. Under the revised regime, banks may extend bigger loans without direct government approval. However, the guaranteed assets of the borrower must now equal at least 10 per cent of the total of the balance sheet, whereas in the previous scheme this percentage was put at 5. This stepped-up requirement has met with some criticism, and in fact several banks have reacted by initiating additional targeted funding schemes for certain operations requiring more capital (see below).

In 1984, an innovation stimulation programme (INSTIR) was introduced, covering up to 55 per cent of the labour costs for research and development. This measure replaced an increasingly popular contract research instrument, which attracted especially many small firms. First results indicate that only 19 per cent of the total sum of the INSTIR funds has been consumed by small firms (whereas under the contract research scheme this was 35%), and 55 per cent was consumed by all SME's (as opposed to 72% under the contract research scheme) (VROLIJK, 1986, p.509).

Manufacturing firms can apply for a 'Technisch Ontwikkelings Krediet' (technical development loan), which covers a maximum of 60 per cent of the development costs for new products. Within the innovation process, this instrument covers the stage after the initial research phase, for which phase the INSTIR is intended. The total amount of money involved here is rather substantial (D.Fl. 163 million in 1985; down from D.Fl. 192 million in 1984), whereas the loans extended range from D.Fl. 13.4 million to D.Fl. 30,000,-. Although most applications come from 'small' firms, large firms (with over 500 employees) received two thirds of the total funds in 1985 (Economisch Dagblad, 24 June 1986).

Another stimulation measure has been initiated in May 1986. This 'Onderzoeksprogramma Midden- en Kleinbedrijf' (OMK; Research programme for SME's) is an experimental programme aimed at stimulating 'scientific' research in 'high tech' small firms. Small firms may receive a subsidy of up to 50 per cent for feasibility studies; a total of D.Fl. 4.7 million is available for this purpose. Although the OMK is said to have been inspired by the SBIR in the United States, it definitely seems to be a different measure altogether. In fact, an SBIR-type of instrument is as yet lacking in The Netherlands.

In the beginning of the 1980s, venture capital was almost non-existent in The Netherlands. In 1981, a state guaranteed venture capital scheme was introduced, spurring the start and growth of about thirty venture capital funds. Under this scheme, the government covers 50 per cent of a venture's eventual losses over five years. In addition, several banks have introduced special funds for participating in business ventures. Furthermore, a parallel market at the Amsterdam Stock Exchange was established in 1982, with about 45 funds quoted in June of 1986. To-date there are no special personal capital gains tax exemptions to boost private investment in business ventures.

Since 1965, a special government scheme for the self-employed provides assistance to established entrepreneurs who temporarily are faced with difficulties in earning a personal income sufficient to cover their costs of living. This is a social programme, under the responsibility of the Ministry of Social Affairs and Employment. This scheme has been extended in 1985 to include assistance to long-term unemployed who want to start up a business on their own (cf. the British 'Enterprise Allowance Scheme'). Under this extended programme, a new entrepreneur either can apply for a loan of up to D.Fl. 25,000.-, or he may receive an income support during the first six (or at the most 18) months of the business formation. The viability of the business plan has to be checked and approved by the local authorities, who in turn usually call upon the RIMK for advice.

The Ministry of Social Affairs and Employment also introduced an Experimental start-up facility scheme for female enterprises. This scheme provides loans of up to D.Fl. 50,000.- to women who want to start a business, but are not eligible for the normal assistance available for

entrepreneurs. In this way, it is tried in particular to stimulate re-entry of women into the labour market, after their having spend time in the household.

In many industrial sectors, Dutch legislation prescribes new entrepreneurs to meet certain requirements with regard to formal knowledge and skills. As a result of this act, a comprehensive system of training opportunities for budding entrepreneurs has come into existence. In addition, many targetted courses and training programmes, geared toward entrepreneurship training, have been introduced during the past few years. To give just a few examples: CIMK, in co-operation with "De Baak" (an institute of the employers organisations which has been set up for training purposes), is running a training course which is partly subsidized by the Ministry of Economic Affairs. Furthermore, several Business Schools and Universities have given more attention to small business courses. The organisation of large employers - VNO - is running a highly successful programme, called "Word je eigen werkgever" (Become your own employer), in most of its regional organisations. The Open University-type TELEAC organisation has broadcasted several courses on starting a business on television.

Many local initiatives have been taken to stimulate small firms and/or new entrepreneurship. The 'Atlas of local initiatives in the Netherlands', which is published yearly, gives an overview of incubator space, advisory organisations, start-up training programme's, et cetera. From the fact that this guide now counts over 1,000 pages, it may be concluded that, within the framework of this chapter, it is impossible to describe all initiatives even in a concise way. Therefore, only a few major examples will be mentioned here. However, it is important to realize that most local initiatives are geared towards stimulation of employment in small businesses, and the mere fact that this happens on a broad and localized scale means an important divergence from previous periods, when economic policy was considered to be exclusively a national domain.

Almost every city and town in The Netherlands has established a so-called 'Bedrijfsverzamelgebouw' - a new or reconverted building which accommodates many small workshops and provides more or less extensive

facilities for the tenants. The Business Technology Centre (BTC) is an example of this approach, providing incubator space for start-ups from the universities. The first European BTC (the concept for which has been developed by the US Control Data Corporation) was established at the Twente Technical University, with (financial) aid of the AMRO-Bank and of the provincial development agency. Leiden has recently developed a (bio-technology) Science Park on University premises, which had a successful first year. Furthermore, Job Creation is now operating in several places, after an initial joint project of this British organisation with the Dutch electronics giant Philips in The Hague.

The Dutch universities and many technical schools have established so-called 'Transferpoints', with the purpose of sharing (technical) information and scientific research with small and medium-sized firms in the region. Furthermore, the three technical universities in the country each have a micro-electronics centre, which might be considered as transferpoints for information technology. Both these forms of technology transfers are subsidized by the national government.

7.7. Policy conclusions

Since small firm policies in The Netherlands recently have been changed rather drastically, and since most new-firm policies have only just been introduced, an assessment of the effectiveness has to be based on scattered information and on evaluations of former policy situations. Furthermore, in an overview like this it simply is impossible to evaluate all individual aspects, ranging from the institutional framework to specific measures. Therefore, we will limit ourselves here to a few brief statements.

When discussing measures like the INSTIR and the technical development loan, it has been mentioned that the bulk of the funds goes to larger firms. Indeed, an evaluatory study on the effects of government policies aimed at stimulating innovations by small firms active in environmental technologies (DE JONG & VAN DER VEN, 1986) highlighted many difficulties for small firms to get (financial) assistance from the government, which are due largely to their small scale. Similarly, research by KOK et al. (1984, p.54) indicated that small and medium-sized enterprises hardly tend to use - or even to be aware of - direct government assistance of one kind or another.

One of the major problems concerns the lack of time, willingness, and expertise of entrepreneurs to become involved in - often complicated - bureaucratic procedures attached to support measures - if they are aware of existing possibilities at all. In that respect, the frequent changes of measures and opportunities are often criticized. The philosophy of Dutch small business policies in recent years might therefore be beneficial to overcome some basic problems, in particular by simplifying and decentralizing the policy framework. Nevertheless, it does look as if generic measures, in particular in the area of fiscal laws, are under-utilized when the stimulation of new business ventures is concerned.

The decentralization of SME policies has taken two distinct forms. As has been indicated before, local initiatives have a growing importance viz-à-viz the national government. This is indeed a recent change, since municipalities formerly had no jurisdiction in the economic field whatsoever. Due to a 1963 regulation, lower tier governments even were explicitly excluded from the economic policy arena. Under the pressures of the economic crisis, local authorities are now taking the initiative by way of counseling and advisory functions, by setting up firm creation programmes, and by providing business premises. Especially in the last mentioned field, an interesting matching occurs with urban renewal policies, thus allowing the use of part of the (on average substantial) funds for economic stimulation purposes. Especially because of the fact that physical planning as well as social and environmental powers are strong in The Netherlands, the use of these measures for economic policy objectives at the local level is very interesting indeed.

Secondly, a devolution of direct national government powers has taken place towards the private sector. Particularly policy implementation, within nationally defined conditions, is left to private advisory firms and banks. The 'Nederlandse Middenstands Bank' (NMB; Dutch Tradesmen's Bank) traditionally had a special charter to assist and finance small and medium sized firms. The NMB was established in 1927 with participation of the Dutch government, in order to serve the needs of small shopkeepers, and the Bank acquired considerable specialized know-how with regard to this sector of the economy. Until recently, this Bank monopolized the execution of the Credit Guarantee Scheme. However, this favourable position had to be abolished under the new small business policies. This decision has increased the awareness of the other large

commercial banks, as well as of the competition, for the SME-market in this respect. However, there may also be some drawbacks, due to the less 'protected' treatment of SME's by the NMB. But, like the other recent policy shifts, the change is still too new to make a proper evaluation possible at this point of time.

A final comment should be made with regard to the non-existence of procurement policies targeted towards small firms. Most of the equipment and material bought by (semi-)government bodies throughout The Netherlands, are handled by the centralized 'Rijks Inkoop Bureau' (RIB; State Purchasing Agency). This agency handles very large quantities and thus is in a position to make favourable deals; therefore it often is felt to be detrimental to the position of small and medium sized suppliers. The new government (which was initiated in the summer of 1986) has announced that the RIB will be closed - or at least be privatized - in the near future. Many small firm employers organizations have heralded this step, because they feel that now SME's will get a better chance on the government supply markets. Although this probably will be true, it may very well be that an explicit small business oriented procurement policy by the RIB agency will have even more positive results on the SME market position. More in general, a Small Business Act-type of procurement policy might well be more important than most of the other stimulation measures which now are available to SME's in The Netherlands.

7.8. Research questions

Evidence so far has indicated that small and medium-sized enterprises do not dominate the job generation process in The Netherlands, to say the least. Although on the whole this sector did show a better performance in this respect than did large firms, this appears to be due mainly to the medium-sized size class, as opposed to the smallest firms. Moreover, job creation by large firms proved to be important during certain time periods, and finally it should be remembered that during recent decades only the public sector has provided a net increase of employment. However, the data base and the research to-date on the components of employment change are insufficient, and it should be recommended to try and fill this gap through comprehensive research on the job generation process in The Netherlands. In particular, efforts should be made to

include the analysis of the most recent time period, in which signs of recovery may be noted and in which period the public sector no longer expanded.

Two other research questions to be put forward are related to the above. In the first place, job generation and new entrepreneurship in this era cannot be thoroughly investigated without taking into account the links with the informal economy (cf. LAMBOUY & RENOY, 1986). Secondly, it may well be the case that the recent growth of interest for entrepreneurship will have a more lasting impact on the economy, in terms of a changing mentality viz-à-viz private enterprise. Cultural differences (among other things) may often be a factor in the explanation of differences in firm formation between countries (most notably so between Europe and the USA) and regions, as has also been indicated by WEVER. Therefore, it will be necessary to study the (long term) influence of the rise of entrepreneurship and of the changing attitudes on socio-economic life, more in particular in terms of the creation of (different types of) jobs.

Job creation may be analysed by distinguishing between sectors, between regions, or between size classes. However, in order to be able to get an understanding of the role of small and/or new firms in structural economic change, it is necessary to shift research efforts to focus on the relationships between small and large firms, and to those between firms within and beyond economic sectors. Evidence so far indicates that, in the emerging economic structures, networks between firms will increasingly become important.

Geographical research on firm formation has long been dominated by a rather limited set of concepts related to the incubator hypothesis. In particular the older neighbourhoods in the inner cities have traditionally been stressed. However, we have found that firm formation in The Netherlands generally is a widely spread phenomenon, taking place throughout the urbanized parts of the country, including the (attractive) suburban zones. Provided that incubation is interpreted in a broader perspective, among other things with respect to the relevant geographical scale, the role of external (geographical) factors in our opinion remains very important for understanding the process of new firm formation and job generation.

Literature

- BLEUMINK, P.H.M., G.B. DE GROOT, J. BILDERBEEK & E. WEVER (1985), *Nieuwe ondernemingen en regio (New enterprises and the region)*. Nijmegen.
- BOL, A., A.NIJSSEN, G. REGTER & F. VAN ROSSUM (1982), *Werkgelegenheid en arbeidsvolume in het midden- en kleinbedrijf (Employment and labour volume in medium- and small sized enterprises) 1960-1980*. Den Haag: EIM.
- GINNEKEN, C.C.P.M. VAN (1985), *Wie werken in het midden- en kleinbedrijf? Een vergelijking tussen de kenmerken van de beroepsbevolking in het midden- en kleinbedrijf en die in het grootbedrijf (Who are working in SME's? A comparison between the characteristics of the labour force in SME's and that in large enterprises)*. Zoetermeer: EIM.
- HUISMAN, D., A.A.C. KETELAARS, A. DE BOER & G. BANNOCK (1980), *Nieuwe economische activiteit (New economic activities)*. Amsterdam: Indivers Research/ Rotterdam: SKIM.
- JANSEN, A.C.M., J.A.M. HILGERSOM & N.J. VAN DER VEN (1979), *Succes en mislukking in de lederwarenindustrie (Success and failure in the leather industry)*. In: *Intermediair*, Nr.3 (19 januari).
- JONG, M.W. DE (1984), *Ruimtelijke dynamiek van het midden- en kleinbedrijf; het lokatiepatroon van kleine industriële ondernemingen in de Noordvleugel van de Randstad (The spatial dynamics of SME's; the locational pattern of small industrial enterprises within the Northern wing of the Rimcity)*. Amsterdam: Economisch Geografisch Instituut University of Amsterdam.
- JONG, M.W. DE & J.G. LAMBOUY (1985), *De informatica-sector centraal; perspectieven voor de Amsterdamse binnenstad (Focus on the information sector; perspectives for the inner city of Amsterdam)*. Amsterdam: Economisch Geografisch Instituut University of Amsterdam.
- JONG, M.W. DE & J.G. LAMBOUY (1986), *Urban dynamics and the new firm; the position of Amsterdam in the Northern Rimcity*. In: D. KEEBLE & E. WEVER (eds), *New firms and area development in the EC*. London: Croom Helm.
- JONG, M.W. DE & N.J. VAN DER VEN (1986), *Environmental innovations in small firms; scope for improvement of public policies*. The Hague: Ministry of Housing, Physical Planning and Environment.
- KOK, J.A.A.M., G.J.D. OFFERMAN & P.H. PELLENBARG (1984), *Innovatieve bedrijven in Nederland (Innovative enterprises in The Netherlands)*. Groningen: Geografisch Instituut Rijksuniversiteit Groningen, Sociaal-Geografische Reeks nr.32.
- LAMBOUY, J.G. (1979), *Het Amsterdamse middenbedrijf in beweging (Dynamics of medium-sized firms in Amsterdam)*. Amsterdam: RAEC-Bank.

- LAMBOOY, J.G. & P.H. RENOY (1986), The informal economy; a survey of national and regional dimensions. Brussels: Commission of the European Communities/FAST (forthcoming).
- NEDERLANDSE MIDDENSTANDS BANK (NMB) (1980), Jaarverslag (Annual Report). Amsterdam.
- TUIN, J. VAN DER (1982), Plaats en toekomst van het midden- en kleinbedrijf (Position and future of SME's). In: Economisch Statistische Berichten, 17-11, pp.1228-1233.
- VROLIJK, H.W. (1986), Contractresearch in de Nederlandse industrie (Contract research in Dutch manufacturing industries). In: Economisch Statistische Berichten, 21-5, pp.504-509.
- VIJVERBERG, C.H.T. (1979), Kleinschalige werkgelegenheid (Small scale employment). Den Haag: NEI/Ministry of Social Affairs.
- WEBBINK, A.H. (1985), Groot en klein in de industrie; een onderzoek naar de grootte-structuur in de Nederlandse industrie (Large and small in manufacturing industries; a research into the size structure of Dutch manufacturing industry). Zoetermeer: EIM.
- WEVER, E. (1984a), Nieuwe ondernemingen in Nederland (New firms in The Netherlands). Assen: Van Gorcum.
- WEVER, E. (1984b), Nieuwe bedrijven in Nederland (New enterprises in The Netherlands). In: Economisch Statistische Berichten, 16-5, pp.468-472.

CHAPTER 8

SME's AND EMPLOYMENT IN BELGIUM

by

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Introduction

This chapter addresses the issue of the employment in Small and Medium-sized enterprises (SME's) in Belgium and Luxemburg.¹ It is organized in three sections.

The first presents a quantitative analysis of employment in SME's. Three different parts can be distinguished : a global outline, a sectoral and a regional picture. The analysis will be based on data collected by the Government Service for Social Security and covers the period 1980-1984.

Based on an investigation of existing studies on employment in SME's, we will, in the second section, consider the qualitative aspects of employment in SMEs. Here our starting-point can be summarized as follows : to what extent do SME's consider job creation as one of their objectives? Secondly to what extent do SME's really guarantee the creation of new jobs?

In the third section, attention will be concentrated on the numerous national, regional or local measures which directly or indirectly either stimulate or impede the birth of new SME's and the growth of existing ones.

1 The changes in employment in Luxemburg will be discussed in Annex 1

8.1 Quantitative Approach

In Belgium, there are several data sources for employment in SME's. At the national level, statistics of the Government Service for Social Security are provided. Regional Data are provided both by the Government Service for Social Security, by the Economic Commissions of the Third Industrial Revolution in Flanders. The Regional Development Societies also provide information on a provincial base. Several other information sources such as the Chambers of Commerce and Industry, the Intercommunales and the Municipalities provide identical information on a local level.

Of the prime data sources available, the most reliable and extensive is the Government Service for Social Security, with most studies on employment in SME's being based on these statistics (2). This data source disaggregates employment by sector of activity, by size of the firm and by sex and quality of employees. Whilst its coverage is good, it also has key disadvantages. In the first instance, the provided statistical information covers the private sector only.

Secondly, growth of SME-employment can only be quantified by looking at net changes. For these reasons the following equations show how we have to interpret net employment change between 1980 and 1984.

$$E_{i,t} = E_{i,t-1} + \Delta E_{i,t-1}$$

$$\text{where: } \Delta E_{i,t-1} = \underbrace{\Delta E_{i,t-1}^{i,t}}_{\text{INTERNAL CHANGE}} + \underbrace{\sum_{j \neq i} E_{j,t-1}^{i,t}}_{\text{INFLOW } i} - \underbrace{\sum_{j \neq i} E_{i,t-1}^{j,t}}_{\text{OUTFLOW } i}$$

EXTERNAL CHANGE

E = employment

ΔE = change in employment

i and j = indicate the dimension

t-1 and t = indicate the time period

Subsequent analysis will be based on the statistics provided by the Government Service for Social Security.

8.1.2 Evolution of employment in SME's

Prior to this discussion, it is important to be clear on the definition of a SME. In Belgium, each firm employing less than 100 employees is considered as a SME. The remainder of this section will concentrate on an overview of the employment in SME's between 1980 and 1984.

8.1.2.1 Global outline

The distribution of employment by size of enterprise is given in Table 8.1. It is clear that a continuous drop occurred in private sector employment for both SME's and for larger firms. Nevertheless those firms with less than 5 employees present a very different picture, experiencing a continuous increase in employment. In 1980, the SME's generated 45.17% of the jobs in the private sector, with this rising to 45.98% in 1984. This increase needs some further investigation. As can be seen from Table 8.1 the firms employing less than 9 employees were responsible for this higher share.

This overall picture of the distribution of employment by size of firm suggests the small-scale business plays a very important role in employment generation. Special attention should be paid to what we want to call the Net Job Evolution Rate, this is the ratio of the change in employment in a particular period ($\Delta E_{i,t}$) to the total employment in the foregoing period ($E_{i,t-1}$). Table 8.2 shows the evolution of the Net Job Evolution Rate by size of firm. These figures indicate that the drop that occurred in the employment in the bigger companies was much bigger than the one that occurred in the employment of SME's.

We also show the growth of the average employment by enterprise size in Table 8.3.

TABLE 8.1. : Employment by dimension of the firm

Dimension	1980		1981		1982		1983		1984	
	Absolute Figure	Per-cent	Absolute Figure	Per-cent	Absolute Figure	Per-cent	Absolute Figure	Per-cent	Absolute Figure	Per cent
Less than 5 employees	191 146	9,07	191 741	9,47	192 316	9,76	193 474	10,00	194 988	10,13
5 to 9 employees	143 191	6,79	138 657	6,85	135 950	6,90	136 140	7,03	135 744	7,06
10 to 19 employees	166 935	7,92	160 879	7,95	157 624	8,00	154 409	7,98	151 293	7,86
20 to 49 employees	264 419	12,54	251 902	12,44	247 316	12,56	244 309	12,62	243 979	12,68
50 to 99 employees	186 338	8,84	176 795	8,73	167 404	8,50	159 582	8,24	158 487	8,24
Total SME's	952 029	45,17	919 974	45,45	900 610	45,72	887 914	45,88	884 491	45,98
100 and more employees	1 155 826	54,83	1 104 282	54,55	1 069 074	54,28	1 047 527	54,12	1 039 356	54,02
TOTAL	2 107 855	100,00	2 024 256	100,00	1 969 684	100,00	1 935 441	100,00	1 923 847	100,00

Source : Government Service for Social Security

TABLE 8.2 : Employment Change by size of firm (in %)

Dimension	1980 - 1981	1981 - 1982	1982 - 1983	1983 - 1984
Less than 5 employees	+ 0,31	+ 0,30	+ 0,60	+ 0,78
5 to 9 employees	- 3,17	- 1,95	+ 0,14	- 0,29
10 to 19 employees	- 3,63	- 2,02	- 2,04	- 2,02
20 to 99 employees	- 4,73	- 1,82	- 1,22	- 0,14
50 to 99 employees	- 5,12	- 5,31	- 4,67	- 0,69
Total SME's	- 3,36	- 2,10	- 1,41	- 0,39
100 and more employees	- 4,46	- 3,19	- 2,02	- 0,78
TOTAL	- 3,97	- 2,69	- 1,74	- 0,60

Source : Government Service for Social Security

TABLE 8.3 : AVERAGE EMPLOYMENT BY ENTERPRISE

Dimension	1980	1984
Less than 5 employees	1.77	1.74
5 to 9 employees	6.51	6.51
10 to 19 employees	13.52	13.53
20 to 49 employees	30.79	30.86
50 to 99 employees	70.32	71.04
Total SME's	6.18	5.73
100 and more employees	428,40	258.36
TOTAL	13.46	12.27

Average employment per SME similar in 1980 and 1984. Within the different size-categories, firms employing less than 5 employees experienced a slight decline but firms with between 5 and 99 employees increased their average employment.

The data base enables us to look separately at the employment of white-collar and blue-collar workers. The key summary results are shown in Table 8.4. The most important findings relates to the proportional distribution of the total employment by quality of the employees. For both SME's and the bigger firms, we notice a continuous increase in the relative importance of the white-collar workers between 1980 and 1984. So far as the SME's are concerned, this increase is mainly dominated by medium size firms (10-99 employees). It is however, the largest firms

TABLE 8.4 : Employment by dimension of the firm and by quality of the employees

Dimension	1980				1981				1982				1983				1984			
	White-collar workers		Blue-collar workers		White-collar workers		Blue-collar workers		White-collar workers		Blue-collar workers		White-collar workers		Blue-collar workers		White-collar workers		Blue-collar workers	
	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent
Less than 5 employees	68983	36,09	122163	63,91	69576	36,29	122163	63,71	70241	36,52	122075	63,48	70681	36,53	122793	63,47	72783	37,33	122205	62,67
5 to 9 employees	51302	35,83	91889	64,17	50579	36,48	88078	63,52	50030	36,80	85920	63,20	50684	37,23	85456	62,77	50780	37,41	84964	62,59
10 to 19 employees	61269	36,70	105666	63,30	61222	38,05	99657	61,95	60197	38,19	97427	61,81	59995	38,85	94414	61,15	59718	39,47	91575	60,53
20 to 49 employees	100618	38,05	163801	61,95	98745	39,20	153157	60,80	98342	39,76	148974	60,24	98430	40,29	145879	59,71	99722	40,87	144257	59,13
50 to 99 employees	73171	39,27	113167	60,73	72420	40,96	104375	59,04	69878	41,74	97526	58,26	67915	42,56	91667	57,44	66912	42,22	91575	57,78
Total SME's	355343	37,32	596686	62,68	352544	38,32	567430	61,68	348688	38,72	551922	61,28	347705	39,16	540209	60,84	349915	39,56	534576	60,44
100 and more employees	484043	41,88	671783	58,12	478460	43,33	625822	56,67	471587	44,11	597487	55,89	469255	44,80	578272	55,20	472279	47,36	567077	54,56
TOTAL	839386	39,82	1268469	60,18	831004	41,05	1193252	58,95	820275	41,65	1149409	58,35	816960	42,21	1118481	57,79	822194	42,74	1101651	57,26

Source: Government Service for Social Security

TABLE 8.5. : Employment evolution by dimension of the firm and by quality of the employees (in %)

Dimension	1980 - 1981		1981 - 1982		1982 - 1983		1983 - 1984	
	White-collar workers	Blue-collar workers	White-collar workers	Blue-collar workers	White-collar workers	Blue-collar workers	White-collar workers	Blue-collar workers
Less than 5 employees	+ 0,86	+ 0,00	+ 0,95	- 0,07	+ 0,63	+ 0,59	+ 2,97	- 0,48
5 to 9 employees	- 1,41	- 4,15	- 1,09	- 2,45	+ 1,31	- 0,54	+ 0,19	- 0,58
10 to 19 employees	- 0,08	- 5,69	- 1,67	- 2,24	- 0,34	- 3,09	- 0,46	- 3,01
20 to 49 employees	- 1,86	- 6,50	- 0,41	- 2,73	+ 0,09	- 2,08	+ 1,31	- 1,11
50 to 99 employees	- 1,03	- 7,77	- 3,51	- 6,56	- 2,81	- 6,01	- 1,48	- 0,10
TOTAL SME's	- 0,79	- 4,90	- 1,09	- 2,73	- 0,28	- 2,12	+ 0,64	- 1,04
100 and more employees	- 1,15	- 6,84	- 1,44	- 4,53	- 0,49	- 3,22	+ 0,64	- 1,94
TOTAL	- 1,00	- 5,93	- 1,29	- 3,67	- 0,40	- 2,69	+ 0,64	- 1,50

Source : Government Service for Social Security

TABLE 8.6 : Employment by dimension of the firm and by sex of the employees

Dimension	1980				1981				1982				1983				1984			
	Men		Women		Men		Women		Men		Women		Men		Women		Men		Women	
	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent
Less than 5 employees	115139	60,24	76007	39,76	113788	59,34	77953	40,66	112715	58,61	79601	41,39	113019	58,41	80461	41,59	112321	57,60	82667	42,40
5 to 9 employees	96722	67,55	46469	32,45	92607	66,79	46050	33,21	90033	66,23	45917	33,77	89438	65,70	46702	34,30	89080	65,62	46664	34,38
10 to 19 employees	114252	68,44	52683	31,56	108469	67,42	52410	32,58	105407	66,87	52217	33,13	102977	66,69	51432	33,31	100607	66,50	50686	33,50
20 to 49 employees	178626	67,55	85793	32,45	168849	67,03	83053	32,97	164675	66,58	82641	33,42	160674	65,77	83635	24,23	159383	65,33	84596	34,67
50 to 99 employees	126523	67,90	59815	32,10	119710	67,71	57085	32,29	112327	67,10	55077	32,90	106170	66,53	53412	33,47	105850	66,79	52637	33,21
Total SME's	631262	66,31	320767	33,69	603423	65,59	316551	34,41	585157	64,97	315453	35,03	572274	64,45	315642	35,55	567241	64,13	317250	35,87
100 and more employees	826955	71,55	328871	28,45	783877	70,99	320405	29,01	754244	70,55	314830	29,45	734053	70,07	313474	29,93	721999	69,47	317357	30,53
TOTAL.	1458217	69,18	649638	30,82	1387300	68,53	636956	31,47	1339401	68,00	630283	32,00	1306325	67,49	629116	32,51	1289240	67,01	634607	32,99

Source: Government Service for Social Security

TABLE 8.7 : Employment Change by size of firm and by employment gender (in %)

Dimension	1980 - 1981		1981 - 1982		1982 - 1983		1983 - 1984	
	Men	Women	Men	Women	Men	Women	Men	Women
Less than 5 employees	- 1,17	+ 2,56	- 0,94	+ 2,11	+ 0,26	+ 1,08	- 0,61	+ 2,74
5 to 9 employees	- 4,25	- 0,90	- 2,78	- 0,29	- 0,66	+ 1,71	- 0,40	- 0,08
10 to 19 employees	- 5,06	- 0,52	- 2,82	- 0,37	- 2,31	- 1,50	- 2,30	- 1,45
20 to 49 employees	- 5,47	- 3,19	- 2,47	- 0,50	- 2,43	+ 1,20	- 0,80	+ 1,15
50 to 99 employees	- 5,38	- 4,56	- 6,17	- 3,52	- 5,48	- 3,02	- 0,30	- 1,45
TOTAL SME's	- 4,41	- 1,31	- 3,03	- 0,35	- 2,20	- 0,06	- 0,88	+ 0,51
100 and more employees	- 5,21	- 2,57	- 3,78	- 1,74	- 2,68	- 0,43	- 1,64	+ 1,24
TOTAL	- 4,86	- 1,95	- 3,45	- 1,05	- 2,47	- 0,19	- 1,31	+ 0,87

Source: Government Service for Social Security

TABLE 8.8. : Employment by dimension of the firm and by sector of activity

1. AGRICULTURE

Dimension	1980		1981		1982		1983		1984	
	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent
Less than 5 employees	5224	45,85	5102	46,18	5080	45,89	5160	45,59	5199	44,38
5 to 9 employees	2513	22,06	2493	22,57	2564	23,16	2710	23,94	2830	24,33
10 to 19 employees	1730	15,18	1616	14,62	1676	15,14	1806	15,95	1870	16,12
20 to 49 employees	1644	14,43	1713	15,51	1680	15,18	1513	13,37	1521	13,10
50 to 99 employees	282	2,48	124	1,12	70	0,63	130	1,15	190	1,64
TOTAL SME's	11393	100,00	11048	100,00	11070	100,00	11319	100,00	11610	100,00
100 and more employees	-	-	-	-	-	-	-	-	-	-
TOTAL	11393	100,00	11048	100,00	11070	100,00	11319	100,00	11610	100,00

2. MANUFACTURING

Dimension	1980		1981		1982		1983		1984	
	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent
Less than 5 employees	24358	2,65	24070	2,76	23654	2,82	23377	2,85	23709	2,83
5 to 9 employees	26170	2,85	25817	2,96	24958	2,98	25006	3,05	24398	3,01
10 to 19 employees	42631	4,64	40241	4,62	39452	4,71	38263	4,67	37001	4,52
20 to 49 employees	89328	9,73	84501	9,70	81995	9,78	81919	10,00	82426	10,08
50 to 99 employees	75038	8,17	71303	8,18	68752	8,20	65636	8,01	66679	8,14
TOTAL SME's	257525	28,05	245932	28,22	238811	28,49	234201	28,59	234213	28,93
100 and more employees	660487	71,95	625531	71,78	599468	71,51	585057	71,41	575450	71,07
TOTAL	918012	100,00	871463	100,00	838279	100,00	819258	100,00	809663	100,00

3. CONSTRUCTION

Dimension	1980		1981		1982		1983		1984	
	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent
Less than 5 employees	29515	12,23	28686	13,53	27746	14,63	26923	15,75	20474	13,51
5 to 9 employees	28832	11,95	25748	12,14	23132	12,19	22529	13,18	21658	14,26
10 to 19 employees	30817	12,77	27055	12,76	24207	12,76	22508	13,17	21253	14,03
20 to 49 employees	44415	18,41	38934	18,36	36129	19,05	32897	19,25	30312	19,09
50 to 99 employees	29531	12,24	25923	12,23	20936	11,04	17687	10,34	16116	10,68
TOTAL SME's	163110	67,60	146346	69,02	132150	69,67	122544	71,71	109813	72,30
100 and more employees	78185	32,40	65702	30,98	57537	30,33	48356	28,29	41034	27,20
TOTAL	241295	100,00	212048	100,00	189687	100,00	170900	100,00	150847	100,00

4. TRADE

Dimension	1980		1981		1982		1983		1984	
	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent
Less than 5 employees	78285	18,58	79769	19,27	81276	19,74	82960	20,40	83694	20,36
5 to 9 employees	52460	12,45	51740	12,50	52617	12,78	52567	12,92	53212	12,95
10 to 19 employees	53016	12,58	52491	12,68	52091	12,65	51783	12,73	51317	12,49
20 to 49 employees	67464	16,01	65384	15,79	65407	15,88	64453	15,85	64465	15,69
50 to 99 employees	34706	8,24	32855	7,94	30083	7,30	28919	7,11	27790	6,76
TOTAL SME's	285931	67,85	282239	68,18	281474	68,35	280682	69,01	280478	67,76
100 and more employees	135455	32,15	131745	31,82	130355	31,65	126052	30,99	133477	32,24
TOTAL	421386	100,00	413984	100,00	411829	100,00	406734	100,00	413955	100,00

5. SERVICES

Dimension	1980		1981		1982		1983		1984	
	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Per. cont.
Less than 5 employees	53764	10,44	54114	10,48	54560	10,52	55054	10,44	55912	10,46
5 to 9 employees	33216	6,45	32859	6,36	32679	6,30	33328	6,32	33646	6,29
10 to 19 employees	38741	7,53	39476	7,64	40198	7,75	40049	7,60	39852	7,45
20 to 49 employees	61568	11,96	61370	11,88	62105	11,97	63527	12,05	65255	12,20
50 to 99 employees	46781	9,09	46590	9,02	47563	9,17	47210	8,95	47712	8,92
TOTAL SME's	234070	45,47	234409	45,39	237105	45,70	239168	45,36	242377	45,44
100 and more employees	280699	54,53	282034	54,61	281714	54,30	288062	54,64	295395	54,52
TOTAL	514769	100,00	516443	100,00	518819	100,00	527230	100,00	537772	100,00

Source; Government Service for Social Security

(100 and more employees) which experience a much higher increase in the relative importance of the white-collar workers, namely 5.48%.

Table 8.5 displays the Net Job Evolution Rate according to employee quality. It appears broadly true that growth favours white, rather than blue collar workers.

Table 8.6 shows that the vast majority of the jobs were taken up by male workers, but women increased their share of jobs from 30.82% in 1980 to 32.99% in 1984. Furthermore smaller firms were much more likely to employ females with 42% of jobs in firms with less than 5 employees being female compared with only 30.53 in larger firms.

Table 8.7 estimates the Net Job Evolution Rate by gender of the employees. It also demonstrates the more rapid employment growth for female workers compared with male workers.

8.1.2.2 Sectoral Analysis

Table 8.8 shows the distribution of employment by sector of activity. It clearly demonstrates that there exist high intersectoral differences for SME employment. Between 1980 and 1984 SME's were responsible for 100% of employment in the agricultural sector, about 28% in the manufacturing sector, roughly two thirds of the jobs in the construction and trade sector and more or less 45% in the service activities. From this table we can also infer there is a considerable variation in employment between firms of different size. In general firms employing between 20 and 49 workers was the major employing group in the manufacturing, the construction and the service activities. In agricultural and the trade sector firms employing less than 5 workers are dominant.

As Table 8.9 indicates, approximately 14% of private sector employment is in SME's in the trade sector, approximately 12% in manufacturing and in services. This is followed by 6% in construction of 0.5% in

agriculture. In total therefore SME's provide about 45% of all private sector employment.

8.1.2.3 Regional Analysis

Since 1980 there has been considerable attention given to regional differences in Belgium. The Government Service for Social Security provides employment at a regional level but the regional statistics differ in two main ways from the data used in the remainder of this text. First, the regional statistics cover both private and public sector employment. Second, the regional statistics use 'establishment' as their unit of account whereas the national data is based on enterprises. Despite these definitional differences we have tried to provide a comparable regional picture by estimating regional private employment (Table 8.10 and Table 8.11).

The following model was developed:

For each region:

$$S_i \text{ (EST)} = E_i \text{ (EST)} / TO \xrightarrow{?} \tilde{E}_i \text{ (ENT)}$$

$$S_i \text{ (ENT)} = \tilde{E}_i \text{ (ENT)} / TO \longrightarrow \tilde{E}_i \text{ (ENT)} = TO \times S_i \text{ (ENT)} \\ \parallel \\ \# \text{ ENT}_i / N$$

$S_i \text{ (EST)}$ = share of total private employment of dimension i
(basic unit : establishment)

$S_i \text{ (ENT)}$ = share of total private employment of dimension i
(basic unit : enterprise)

$E_i \text{ (EST)}$ = private employment in dimension i (basic unit :
establishment)

$\tilde{E}_i \text{ (ENT)}$ = estimated private employment in dimension i (basic unit :
enterprise)

TO = total private employment

$\# \text{ ENT}_i$ = number of enterprises of dimension i

N = total number of enterprises

Table 8.10 records the total employment (both private and public sector) by establishment size and by region. From these figures it follows that the Flemish small establishments play the most important role as job providers (around 47%). The share of small establishments in total employment is lowest in Brussels. There, small establishments account only for around 36% of total employment. As far as employment in small establishments is concerned, the distribution over the different size-categories is very similar. Establishments employing between 20 and 49 employees exhibited the highest share of total employment in all three regions. Very small establishments (employing less than 19 employees) provide a relatively small proportion of jobs.

Table 8.11 summarises the regional structure of total employment (both public and private sector). These figures indicate that the largest number of existing jobs in small establishments could be found in Flanders (around 25%). Wallonia accounts for 12.70% followed by Brussels (7%).

In total, more than half of total employment in Belgium is situated in Flanders. Approximately 28% of total employment is in Wallonia, followed by Brussels (19%).

TABLE 8.9 : Sectoral analysis of total private sector employment

Dimension	1980	1981	1982	1983	1984
AGRICULTURE					
SME'S	0,55	0,54	0,56	0,58	0,60
Larger firms	-	-	-	-	-
Total	0,55	0,54	0,56	0,58	0,60
MANUFACTURING					
SME's	12,23	12,14	12,12	12,10	12,17
Larger firms	31,33	30,90	30,43	30,23	29,92
Total	43,56	43,04	42,55	42,33	42,09
CONSTRUCTION					
SME's	7,74	7,22	6,71	6,33	5,71
Larger firms	3,72	3,25	2,92	2,50	2,13
Total	11,46	10,47	9,63	8,83	7,84
TRADE					
SME's	13,57	13,94	14,29	14,50	14,58
Larger firms	6,43	6,51	6,63	6,52	6,94
Total	20,00	20,45	20,92	21,02	21,52
SERVICES					
SME's	11,10	11,58	12,04	12,36	12,60
Larger firms	13,33	13,92	14,30	14,88	15,35
Total	24,43	25,50	26,34	27,24	27,95
TOTAL	100,00	100,00	100,00	100,00	100,00

Source : Government Service for Social Security

TABLE 8.10. : Total employment (private and public sector) by dimension of the establishment and by region

1. FLANDERS

Dimension	1980		1981		1982		1983		1984	
	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent
Less than 5 employees	127934	8,18	128227	8,40	128652	8,55	129451	8,70	130475	8,66
5 to 9 employees	102611	6,56	100566	6,59	99289	6,60	99229	6,67	100012	6,64
10 to 19 employees	127713	8,17	125292	8,21	123561	8,22	119898	8,06	119024	7,90
20 to 49 employees	215087	13,76	205022	13,43	203216	13,51	199392	13,42	198581	13,18
50 to 99 employees	172684	11,04	170178	11,14	164870	10,96	159798	10,74	156441	10,39
SMALL ESTABLISHMENTS	746029	47,71	729285	47,77	719588	47,84	707768	47,59	704533	46,77
100 and more employees	817559	52,29	797692	52,23	784386	52,16	779591	52,41	801777	53,23
TOTAL	1563588	100,00	1526977	100,00	1503974	100,00	1487359	100,00	1506310	100,00

2. WALLONIA

Dimension	1980		1981		1982		1983		1984	
	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent
Less than 5 employees	72091	8,58	72216	8,90	71916	8,99	71196	9,14	70805	9,20
5 to 9 employees	54306	6,46	52489	6,47	51366	6,42	50705	6,51	50707	6,59
10 to 19 employees	65869	7,84	63381	7,81	61458	7,68	60221	7,73	57161	7,42
20 to 49 employees	107084	12,74	103322	12,74	101755	12,72	97727	12,55	94098	12,22
50 to 99 employees	83166	9,90	80711	9,95	79375	9,93	75570	9,70	73851	9,59
SMALL ESTABLISHMENTS	382516	45,52	372119	45,87	365870	45,74	355419	45,63	346622	45,02
100 and more employees	457723	54,48	439143	54,13	434081	54,26	423566	54,37	423324	54,98
TOTAL	840239	100,00	811262	100,00	799951	100,00	778985	100,00	769946	100,00

3. BRUSSELS

Dimension	1980		1981		1982		1983		1984	
	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent
Less than 5 employees	35296	6,04	34732	6,09	34718	6,19	34225	6,23	34218	6,27
5 to 9 employees	27683	4,73	27286	4,78	26931	4,80	27068	4,92	26803	4,91
10 to 19 employees	37312	6,38	35914	6,30	35062	6,25	34435	6,26	33693	6,17
20 to 49 employees	60274	10,31	58071	10,18	56869	10,12	55988	10,18	55463	10,15
50 to 99 employees	51588	8,82	50774	8,90	47341	8,44	47407	8,63	47165	8,64
SMALL ESTABLISHMENTS	212153	36,28	206777	36,25	200921	35,80	199123	36,22	197342	36,14
100 and more employees	372605	63,72	363476	63,75	360285	64,20	350673	63,78	348746	63,86
TOTAL	584758	100,00	570253	100,00	561206	100,00	549796	100,00	546088	100,00

Source : Government Service for Social Security

TABLE 8.11. : Regional picture of the total employment (private and public sector) (based on establishments) in %.

Dimension	1980	1981	1982	1983	1984
FLANDERS					
Small establishments	24,96	25,07	25,11	25,13	24,96
Large establishments	27,36	27,43	27,38	27,68	28,41
Total	52,32	52,50	52,49	52,81	53,37
WALLONIA					
Small establishments	12,80	12,79	12,77	12,62	12,28
Large establishments	15,31	15,10	15,15	15,04	15,00
Total	28,11	27,89	27,92	27,66	27,28
BRUSSELS					
Small establishments	7,10	7,11	7,01	7,07	6,99
Large establishments	12,47	12,50	12,58	12,46	12,36
Total	19,57	19,61	19,59	19,53	19,35
TOTAL	100,00	100,00	100,00	100,00	100,00

Source: Government Service for Social Security

8.2 Qualitative Approach

8.2.1 Introduction

To what extent do SME's consider job creation as one of their objectives? A Flemish study (4) carried out in 1985 through interviews with 117 entrepreneurs in the food-, clothing- and electrical manufacturing specifically looked at the importance of job creation as one of the employers objectives. 11% of respondents considered job creation as their most important aim.

Local employment initiatives are also becoming increasingly important in Belgium, particularly in those regions experiencing high unemployment and/or shortage of employment because of structural change (16). The objective of policy in this matter, however, is the provision of economical viable jobs, rather than any form of employment.

8.2.2 Self-employment

Currently there is considerable attention being placed upon entrepreneurship in Belgium, with several studies having recently been undertaken. New firm formation rates reflect the socio-economic profile of a particular locality, such that a favourable general momentum and a stimulating environment can be of decisive importance (6). Factor endowments and availability of infrastructural components seems to be necessary but not sufficient conditions for the emergence of new firms. Education, technical physical, legal and financial infrastructures also need to be available.

The study by Donckels R., Bert C and Dupont B. (7) examines these matters. It was based on an examination of the inscription forms of the Trade Register. Initially, not all openings were included and the authors only investigated six legal districts. The research is also limited to the new inscriptions into the Trade Registers conducted

during 1984. Nevertheless looking at the number of new firms, the authors found 7710 new inscriptions, divided into 6665 sole proprietorships and 1045 corporations. However, this study provides no information concerning the professional background of the new entrepreneurs and so it is not possible to examine the hypothesis that entrepreneurship is an escape from unemployment. A survey of 400 new Belgian entrepreneurs which created their enterprise between 1974 and 1985 was conducted in 1985 (1). This study, however, does provide information about this hypothesis. Table 8.12 clearly shows that about 7% of the Belgian entrepreneurs were unemployed in the period immediately prior to starting their business.

According to the Belgian study (1), Table 8.13 reveals the motivations acknowledged by the 400 new entrepreneurs. In general, the need to secure oneself a stable job comes in third position, behind the desire for personal independence and job satisfaction.

Another Flemish study (15), conducted in 1983 through interviews with 201 entrepreneurs, demonstrates the motivations most frequently quoted were: job dissatisfaction and an aversion to work in paid salaried employment.

8.2.3 SME's as job generators

Three recent studies provide information on the extent to which SME's are responsible for new job creation. All three studies demonstrate that SME's are playing an important role in job generation. The Flemish study on Strategic Problems of SME's (4), suggests that entrepreneurs were strongly orientated towards job creation. In 1980, an average of 21 people were hired per firm. In 1983, this figure amounted to 24 people per firm.

Another Flemish study (11) investigated in detail employment projections in SME's. It asked entrepreneurs themselves about expected changes in employment. Table 8.14 summarises the answers of the 210 entrepreneurs.

TABLE 8.12. : Professional background of the new entrepreneurs (in %)

Professional background	Weighted average for Belgium	Weighted average per region	
		Dutch speaking region	French speaking region
Independent / Self-employed	13	12	14
Helper of an independent	14	18	10
Employed in private industry	48	47	48
Public / civil servant	6	4	8
Student	7	9	5
Professional	-	-	1
Part-time unemployed	-	1	-
<u>Unemployed</u>	<u>7</u>	<u>5</u>	<u>8</u>
Housewife / Without job	2	1	3
Other	3	3	3
Total	100	100	100

Source: BRAGARD L., DONCKELS R., MICHEL P., DEMARCHE M.P., DUPONT B., Research Program on Entrepreneurship and Innovation : New Entrepreneurship (Summary first year's report), 1985.

TABLE 8.13 : Motivations and personal objectives of the new
entrepreneurs (in %)

Motivations and personal objectives	Weighted average for Belgium	Weighted average per region	
		Dutch speaking region	French speaking region
Personal independence	30	33	28
Financial independence	2	-	4
Self-achievement	11	9	12
Job satisfaction	20	20	19
Perform better than other entrepreneurs	4	2	6
Start & develop a family business	4	4	3
Keep family traditions	1	-	2
Income	3	2	4
Play an important part in society	-	1	-
Be influential	-	-	-
Life style	1	2	-
Social status	-	-	-
Human relations	4	3	6
Manufacture quality products	9	15	2
<u>Secure myself a stable job</u>	<u>11</u>	<u>9</u>	<u>14</u>
Total	100	100	100

Source: BRAGARD L., DONCKELS R., MICHEL P., DEMARCHE M.P.,
 DUPONT B., Research Program on Entrepreneurship and
 Innovation : New Entrepreneurship (Summary first
 year's report), 1985.

TABLE 8.14: Prospects towards the evolution of the staff (in %)

Dimension	Reduction	Maintenance	Expansion	No idea	Total
No employees	-	65,91	9,09	25,00	100,00
1 to 4 employees	15,38	46,16	21,54	16,92	100,00
5 to 9 employees	12,50	57,14	16,07	14,29	100,00
10 to 19 employees	6,90	62,07	13,79	17,24	100,00
20 to 49 employees	31,25	43,75	18,75	6,25	100,00
Average	11,43	55,24	16,19	17,14	100,00

Source: NN., KMO in het arrondissement Leuven, Deel II: KMO bedrijfsleiders aan het woord, Vorringscentrum CMO Leuven, 1982.

The table shows that only 11.43% out of 210 entrepreneurs expected a reduction of their staff, with the highest proportion of those expecting a decline having between 20 and 49 employees. About 9% of entrepreneurs operating alone intended to hire personnel but those firms currently employing between 1 and 4 employees were the most likely to indicate an expansion of employment. Employment projections were especially favourable in the following sectors:

- services and rental activities: only 5% of the inquired entrepreneurs expected a reduction of their staff; while 30% suggested an expansion;
- wholesale and recuperation: reduction (8.70%) and expansion (30.43%);
- other manufacturing industries: reduction (0%) and expansion (20%).

The least favourable projections were in the construction sector (reduction: 24.44%, expansion: 15.56%) and the repair activities (reductions: 6.67%, expansion: 0%).

Finally research is conducted twice a year by Heller-Generale Factoring (14). This study surveys whether entrepreneurs intend to reduce or expand staff.

Data for April 1986, shows that 22.8% out of 228 surveyed entrepreneurs intended to expand employment. These entrepreneurs were situated primarily in northern Belgium and generally employ between 20 and 49 workers. In aggregate these studies suggest the external environment will be highly favourably oriented towards SME's. This is reflected in a study conducted by the Economist Intelligence Unit (13). It examined the extent to which the external environment was favourably oriented towards the development of SME's. The role of these different variables of the external environment for Belgium is summarised in Table 8.16.

This table shows that Belgium has top ranking on the provision of premises and third position regarding favourable employment legislation. Even so the majority of small and medium sized entrepreneurs complained

about their relations with the government. This is partly attributable to an information- and communication gap (5), to bridge which a number of agencies, whose function is to assist entrepreneurs, have been set up in Belgium in recent years (3).

TABLE 8.15 : Entrepreneurs intention to reduce or expand

85 407

staff (in %)

Entrepreneurs intention	April 1985	October 1985	April 1986
Strong increase	3,5	0,9	1,2
Increase	15,5	22,0	21,6
Maintenance	69,0	65,6	64,6
Reduction	9,5	8,8	8,6
Strong reduction	1,0	1,3	1,3

Source: NN., Analyse van de situatieschets bij kleine en middelgrote ondernemingen, Heller-Generale Factoring N.V., Brussel, 1986.

TABLE 8.16 : Ranking of SME-environment factors for Belgium

Variables	Ranking for Belgium
Labour market and -regulations	3
Premises	1
Taxation	10
Capital- and credit quarantees	3
Specifical legislation and organisation	6
Economic activity	10
Global	6

Source: NN., The European climate for small business - A ten country study, The Economist Intelligence Unit Ltd, London, 1983.

8.3 Measures taken by Public Authorities

8.3.1 Introduction

In Belgium small-scale business has attracted considerable recent interest. This interest has taken the form of a number of measures introduced by the national government. Numerous new initiatives have also been undertaken by the regional, the provincial and the local government. Furthermore many financial institutions, employer organisations and researchers have also become increasingly involved with assisting small firms.

This involvement is expressed through the provision of a wide range of brochures and booklets on setting up one's own firm and important sources of advice and assistance (3) (8) (9) (10) (12) (17) (18) (19).

Support for small business development can be classified into different categories (8), namely:

- support for business start-up;
- support for business growth and development (including job creation, new products, new markets, new investments, innovation, R & D, exports, ...);
- support for existing small businesses in difficulty.

We shall only describe the support for business start-ups and the support for the growth and development of SME's.

8.3.2 Support for business start-up

8.3.2.1 Most important measures to support business start-up

- Interest subsidy (soft loans)
- Capital grant
- Starting subsidy

This measure can be detailed as follows: an unemployed person who has the intention to start an independent job may get a loan of up to 500000 BF with a favourable interest rate (4% or 5%) for a period of 10 and 15 years.

- Assistance from the Guarantee Fund
This Fund guarantees the repayment of loans granted to independent workers who present sufficient personal guarantees.
- Regional, provincial or communal aids: e.g. business centres, ...
- Provision of advice: e.g. by The Regional Development Centre, financial institutions, employer organisations, ...
- Initiatives with respect to education and training for entrepreneurship. In this regard, the Institution for Permanent Education of the Middle-Class plays a very important role.

8.3.2.2 The take-up of assistance

Several findings on the take-up emerge from the new Belgian study of entrepreneurship (1). First, 22% of the entrepreneurs have requested and received start-up business assistance, although practically all entrepreneurs who received this claimed they would have created their business without assistance. The most frequently requested and received types of public assistance were the interest subsidy (18%), followed by the starting subsidy (10%) and fiscal assistance (6%)... The study shows that there is a long lag before public assistance is provided. Finally the most important reason why entrepreneurs did not apply for

start-up business assistance was either that these were not necessary or their ignorance of the availability of such schemes (5).

8.3.3 Support for business growth and development

8.3.3.1 Most important measures to facilitate growth and development

- Premium for engaging a first employee
Each entrepreneur who wants to engage a first employee can receive one or more grants.
- Premium for engaging a disabled person
- Premium for additional employment
Companies employing less than 15 persons can be granted one or more grants for each additional job..
- Provision of advice
- Regional, provincial or communal aids
- Extension of the benefit period for interest rate subsidy for companies which increase their exports by 20% during a period of 12 consecutive months after obtaining credit.
- Grants designed to facilitate the training of personnel for foreign trade
- Award of 1000000 BF to the Flemish company employing less than 250 persons which has conceived, or used in production a high technology product or process.

8.3.3.2 The take-up of assistance for business growth and development

The new Belgian entrepreneurship study (11) also provided information on the take-up of assistance to promote the growth and development of existing SME's. The most frequently requested are enumerated in Table 8.17.

TABLE 8.17 : SME's receiving assistance for business growth
and development (in %)

Different aids for business growth and development	
Interest subsidy	37,62
Aid from the Guarantee Fund	14,29
Reduction of social dues for SME's	14,29
Premium for engaging unemployed people	6,19
Premium for engaging a first employee	9,52
Fiscal aids	10,95

Source: NN., KMO in het arrondissement Leuven, Deel II: KMO
bedrijfsleiders aan het woord, Vormingscentrum CMO
Leuven, 1982.

These figures clearly show that the most popular form of assistance is the interest subsidy (37.62%). Nevertheless a considerable number of small and medium sized entrepreneurs also request assistance for job creation within their own company.

ANNEX 1EMPLOYMENT IN THE MANUFACTURING SECTOR IN LUXEMBURGA.1 Introduction

This section will analyse changes in employment in Luxemburg over the period 1978-1982. Each year, the Central Service for Statistics and Economic Research (STATEC) conduct data on added value. Whilst this is a very important initiative, the results are subject to some caveats. First, it covers the manufacturing industry (including construction) only. No information is available on agriculture, trade and services. Second, the data-base does not include firms with less than 20 employees. Finally, the available information is not categorised by size of firm, so it is not possible to explicitly examine the contribution of SME's.

Despite its shortcomings, our overview of the employment in Luxemburg is based on this data.

A.2 Statistical information

Table A1 and Table A2 provide data on total employment in manufacturing firms 1978-82. Since 1979 the employment in Luxemburg has fallen continuously although there are marked differences between the sectors.

In 1978 industrial employment in Luxemburg was concentrated in the following sub-sectors: winning and manufacturing of non-energetic minerals and derived products - chemical industry (approx. 47%), followed by construction (approx. 19%) and other manufacturing (approx. 17%). The share of the sub-sector energy and water-supply was only approx. 2.5%. Within the other manufacturing sub-sector the largest number of existing jobs were in the chemical manufacturing, followed by food - beverage and tobacco.

The data-base provides an opportunity to decompose the global employment into the employment of the blue-collar workers (Table A3 and Table A4) and the employment of the white-collar workers (Table A5 and Table A6). From Table A3 and Table A4 it is clear that changes in the employment of blue-collar workers paralleled changes in total employment, confirming the results obtained for Belgium. However Table A5 and Table A6 shows a slight increase in white-collar employment since 1979, followed by a drop of 3.5% in 1982. Nevertheless it is clear that white collar employment has fallen less sharply than blue collar employment.

TABLE A1 : Employment by industry

Industry	1978		1979		1980		1981		1982	
	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent
Energy and water supply	1283	2,53	1332	2,62	1338	2,63	1255	2,49	1253	2,65
Winning and manufacturing of non-energetic minerals and derived products - chemical industry	25462	50,23	24211	47,58	23476	46,23	22946	45,57	21519	45,57
Manufacturing of metals - Fine mechanical and optical industry	6619	13,06	6649	13,07	6846	13,48	6824	13,55	6351	13,45
Other manufacturing	8562	16,89	8688	17,07	8824	17,38	8799	17,48	8619	18,25
Food-Beverage-Tobacco	2209	4,36	2236	4,39	2333	4,59	2364	4,70	2360	5,00
Textile-Leather-Clothing	823	1,62	837	1,64	744	1,46	788	1,57	614	1,30
Paper	1170	2,31	1189	2,34	1253	2,47	1219	2,42	1260	2,67
Chemicals	4034	7,96	4110	8,08	4227	8,33	4179	8,30	4187	8,87
Residual	326	0,64	316	0,62	267	0,53	249	0,49	198	0,41
Construction	8764	17,29	10003	19,66	10301	20,28	10527	20,90	9484	20,08
TOTAL	50690	100,00	50883	100,00	50785	100,00	50351	100,00	47226	100,00

Source: Central Service for Statistics and Economic Research

TABLE A2 : Employment evolution by industry (in %)

Industry	1978 - 1979	1979 - 1980	1980 - 1981	1981 - 1982
Energy and water-supply	+ 3,82	+ 0,45	- 6,20	- 0,02
Winning and manufacturing of non-energetic minerals and derived products - chemical industry	- 4,91	- 3,04	- 2,26	- 6,22
Manufacturing of metals - Fine mechanical and optical industry	+ 0,45	+ 2,96	- 0,32	- 6,93
Other manufacturing	+ 1,47	+ 1,57	- 0,28	- 2,05
Food-Beverage-Tobacco	+ 1,22	+ 4,34	+ 1,33	- 0,17
Textile-Leather-Clothing	+ 1,70	- 11,11	+ 5,91	- 22,08
Paper	+ 1,62	+ 5,38	- 2,71	+ 3,36
Chemicals	+ 1,88	+ 2,85	- 1,14	+ 0,19
Residual	- 3,06	- 15,51	- 6,74	- 20,48
Construction	+ 14,14	+ 2,98	+ 2,19	- 9,91
TOTAL	+ 0,38	- 0,19	- 0,85	- 6,21

Source: Central Service for Statistics and Economic Research

TABLE A3 : Employment of the blue-collar workers by industry

Industry	1978		1979		1980		1981		1982	
	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent
Energy and water supply	674	1,65	702	1,71	697	1,70	605	1,50	613	1,63
Winning and manufacturing of non-energetic minerals and derived products - chemical industry	20693	50,76	19685	47,96	18922	46,24	18456	45,68	17236	45,82
Manufacturing of metals - Fine mechanical and optical industry	4881	11,97	4957	12,07	5137	12,55	5084	12,58	4721	12,55
Other manufacturing	6708	16,46	6767	16,48	6865	16,78	6791	16,81	6636	17,64
Food-Beverage-Tobacco	1710	4,19	1744	4,25	1812	4,43	1839	4,55	1842	4,90
Textile-Leather-Clothing	685	1,68	696	1,70	612	1,50	649	1,61	494	1,31
Paper	872	2,14	877	2,14	892	2,18	834	2,06	859	2,28
Chemicals	3158	7,76	3175	7,72	3322	8,12	3257	8,06	3276	8,71
Residual	283	0,69	275	0,67	227	0,55	212	0,53	165	0,44
Construction	7808	19,16	8942	21,78	9296	22,73	9467	23,43	8413	22,36
TOTAL	40764	100,00	41053	100,00	40917	100,00	40403	100,00	37619	100,00

Source; Central Service for Statistics and Economic Research

TABLE A4 : Employment evolution by industry: blue-collar workers
(in %)

Industry	1978		1979		1980		1981		1982	
	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent	Absolute figure	Percent
Energy and water supply	609	6,14	630	6,41	641	6,50	650	6,53	640	6,66
Winning and manufacturing of non-energetic minerals and derived products - chemical industry	4769	48,05	4526	46,04	4554	46,15	4490	45,13	4283	44,58
Manufacturing of metals - Fine mechanical and optical industry	1738	17,51	1692	17,22	1709	17,32	1740	17,49	1630	16,97
Other manufacturing	1854	18,68	1921	19,54	1959	19,85	2008	20,18	1983	20,64
Food-Beverage-Tobacco	499	5,03	492	5,01	521	5,28	525	5,28	518	5,39
Textile-Leather-Clothing	138	1,39	141	1,43	132	1,34	139	1,40	120	1,26
Paper	298	3,00	312	3,17	361	3,66	385	3,86	401	4,17
Chemicals	876	8,83	935	9,51	905	9,17	922	9,27	911	9,48
Residual	43	0,43	41	0,42	40	0,40	37	0,37	33	0,34
Construction	956	9,62	1061	10,79	1005	10,18	1060	10,67	1071	11,15
TOTAL	9926	100,00	9830	100,00	9868	100,00	9948	100,00	9607	100,00

Source: Central Service for Statistic and Economic Research.

TABLE A5 : Employment of the white-collar workers by industry

Industry	1978 - 1979	1979 - 1980	1980 - 1981	1981 - 1982
Energy and water-supply	+ 4,15	- 0,71	- 13,20	+ 1,32
Winning and manufacturing of non-energetic minerals and derived products - chemical industry	- 4,87	- 3,88	- 2,46	- 6,61
Manufacturing of metals - Fine mechanical and optical industry	+ 1,56	+ 3,63	- 1,03	- 7,14
Other manufacturing	+ 0,88	+ 1,45	- 1,08	- 2,28
Food-Beverage-Tobacco	+ 1,99	+ 3,90	+ 1,49	+ 0,16
Textile-Leather-Clothing	+ 1,61	- 12,07	+ 6,05	- 23,88
Paper	+ 0,57	+ 1,71	- 6,50	+ 2,99
Chemicals	+ 0,54	+ 4,63	- 1,96	+ 0,58
Residual	- 2,83	- 17,45	- 6,61	- 22,17
Construction	+ 14,52	+ 3,96	+ 1,84	- 11,13
TOTAL	+ 0,71	- 0,33	- 1,26	- 6,89

Source: Central Service for Statistics and Economic Research

TABLE A6 : Employment evolution by industry white-collar workers (in %)

Industry	1978 - 1979	1979 - 1980	1980 - 1981	1981 - 1982
Energy and water-supply	+ 3,45	+ 1,75	+ 1,40	- 1,54
Winning and manufacturing of non-energetic minerals and derived products - chemical industry	- 5,09	+ 0,62	- 1,43	- 4,61
Manufacturing of metals - Fine mechanical and optical industry	- 2,64	+ 1,00	+ 1,81	- 6,32
Other manufacturing	+ 3,61	+ 1,98	+ 2,50	- 1,25
Food-Beverage-Tobacco	- 1,40	+ 5,89	+ 0,77	- 1,33
Textile-Leather-Clothing	+ 2,17	- 6,38	+ 5,30	- 13,67
Paper	+ 4,70	+ 15,71	+ 6,65	+ 4,16
Chemicals	+ 6,74	- 3,21	+ 1,88	- 1,19
Residual	- 4,65	- 2,44	- 7,50	- 10,81
Construction	+ 10,98	- 5,28	+ 5,47	+ 1,04
TOTAL	- 0,97	+ 0,39	+ 0,81	- 3,43

Source: Central Service for Statistics and Economic Research

R E F E R E N C E S

- (1) BRAGARD L., DONCKELS R., MICHEL P., DEMARCHE M.P., DUPONT B., Research Program on Entrepreneurship and Innovation : New Entrepreneurship (Summary first year's report), 1985.
- (2) DONCKELS R., KMO's en werkverschaffing. Referaat op C.V.P.- colloquium "Werkgelegenheidsbeleid: een uitdaging met toekomst", Gent, 1 maart 1985.
- (3) DONCKELS R., Je eigen zaak - KMO- en middenstandsgids voor Vlaanderen, Lannoo, Tielt, 1985.
- (4) DONCKELS R., KONING C., VAN DER WILDE J.P.I., Strategische oriëntatie in de kleinindustrie in Nederland en België, 1986.
- (5) DONCKELS R., DEGADT J., SME's and public authorities: on the information and communication gap, International Small Business Journal, Vol. 3, nr. 3, 1985, pp. 11 - 30.
- (6) DONCKELS R., BERT C., New firms in the local economy: the case of Belgium, in KEEBLE D., WEVER E. (Eds.), New firms and regional developoment in Europe, Croom Helm, London, 1986, pp. 124 - 140.
- (7) DONCKELS R., BERT C., DUPONT B., Nieuw ondernemerschap in Vlaanderen: nataliteit en mortaliteit. Pilotstudie op basis van zes arrondissementen, 1986.
- (8) HASKIN G., GIBB A., HUBERT T., A guide to small firm assistance in Europe, Gower, Aldershot, 1986.
- (9) NN., Voor eigen rekening. Beginnen met een eigen zaak, Algemene Spaar- en Lijfrentekas, 1984.
- (10) NN., Starten voor eigen rekening - praktische gids, Bank Brussel Lambert, 1980.

- (11) NN., KMO in het arrondissement Leuven, Deel II: KMO bedrijfsleiders aan het woord, Vormingscentrum CMO Leuven, 1982.
- (12) NN., Wegwijzer voor overheidssteun aan ondernemingen, Fabrimetal, 1984.
- (13) NN., The European Climate for small business - A ten country study, The Economist Intelligence Unit Ltd, London, 1983.
- (14) NN., Analyse van de situatieschets bij kleine- en middelgrote ondernemingen, Heller Generale Factoring N.V., Brussel, 1986.
- (15) NN., Profiel van de geslaagde ondernemer in de KMO, Studie III, Instituut voor Voortdurende Vorming van de Middenstand, Brussel, 1983.
- (16) NN., Lokale werkgelegenheidsinitiatieven in Vlaanderen, Koning Boudewijnstichting, Brussel, 1985.
- (17) NN., Met een gerust gemoed naar een zelfstandig beroep, Kredietbank, 1985.
- (18) NN., Wegwijs met het N.C.M.V., Nationaal Christelijk Middenstandsverbond, 1984.
- (19) NN., Yademecum KMO & Middenstand, V.Z.W. Streekontwikkeling Noord-Limburg, 1984.

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