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**REGIONAL PRODUCTIVITY DYNAMICS OF
MANUFACTURING IN GREECE**

96 - 10

Konstantinos Melachroinos¹ and Nigel Spence²



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Abstract.

Although employment change captures only one dimension of spatially uneven industrial growth geographers have often tended to treat it as almost the exclusive indicator of regional performance. As a result it is not infrequently the case that this more or less sole focus on employment, although valuable in itself, produces an incomplete and sometimes somewhat distorted view of spatial economic change. The case of regional manufacturing restructuring in Greece during the seventies and the eighties provides an example of the problems that overconcentration on employment change can involve. By jointly examining the evolution of employment together with output and the consequent labour productivity in the regions of Greece the existence of two distinct geographies of uneven industrial expansion proves apparent. The prefectures that gain most in terms of employment are not necessarily those that gain most in terms of output. This observation can be indicative of the establishment of different regimes of accumulation in each region. Although locally focused case studies are probably what is required for a full understanding of the different facets of regional accumulation processes, the parallel examination of these three parameters provides a general idea of the possible different spatial outcomes of manufacturing expansion. It is this latter focus that is the purpose of this paper.

1. Introduction.

Concern in economic geography about regional industrial performance is well established. Since early times economic development in capitalist societies has been related to the emergence of productive activities organised in the form of industries (Storper and Walker 1989). Consequently differentiated regional industrial performance has been related to the emergence of the 'regional problem'. The rise or decline of the industrial base of a region did not only cause inequalities in the levels of social well-being, but was also by itself a demonstration of the "inequality in the degree of attractiveness of a particular area to the dominant form of economic activity" (Massey 1979: 234). Thus, the uneven spatial growth of industry became a measuring rod of regional inequality.

However, the crucial question is how uneven industrial growth can be measured. In the geographical literature the prevailing trend is to measure regional industrial performance in terms of employment (Frost and Spence 1991). The various definitions of de-industrialisation, for example, and the variety of approaches considering industrial decline are characteristic of this inclination of economic geography (Rowthorn 1986; Rhodes 1986). Taking this standpoint, other aspects of industrial change, for example output or labour productivity, are usually treated

according to their relationship with employment. Output increase or decline for example is not often considered as a sign of industrial growth or decline but is usually examined with a view to its consequences upon employment (Rhodes 1986).

This inclination in economic geography can be justified in that changes in employment are usually indicative of changes in other industrial indices (GDP, value added, productivity etc.). Under this logic differences in the distribution of employment imply the existence of proportional differences in the distribution of other indices. However, this is not always the case. Hudson (1986) for example in his study of the industrial decline of the north-east of England claims that de-industrialisation in the form of falling shares of global production and world markets took place for many decades before employment started to decline. The distribution of the manufacturing investments that were undertaken under incentives legislation other than the regional incentives legislation in Greece offers another example. As Labrianidis and Papamichos (1990) have observed, Attiki (Athens) retained its high position among areas attracting major shares of such investment despite the severe employment decline that it faced after the late seventies. Such discrepancies in the evolution of different industrial indices are hardly surprising. Massey (1979) pointed out some time ago that regional problems are not solely problems of geographical distribution but rather the outcome of the interaction between the change in production requirements and existing patterns of geographical inequalities. The different types of inequality or problem region that can emerge as the production conditions change are diverse, since different forms of economic activity have different requirements of production and use the existence of spatial inequality in different ways. Thus, regional manufacturing growth or decline can take different forms (employment and output expansion, or employment decline and output rise, or even although unusually, employment rise and output decline) and these cannot be approached through simple examinations of employment change. Massey (1979 and 1984) is explicit about how different economic forms use space and how the spatial outcomes (expansion of low paid female jobs, or jobless growth) can vary.

One way of exploring such ideas is to use more detailed employment data (disaggregated not only by economic sector but also by sex, occupation, place in the production process, etc.). By analysing these data using the concept of the spatial division of labour a geography of employment is founded that is not based on the simple mapping of employment change. These are far from easy studies to carry out and certainly in the Greek regional case there would be severe data availability problems. Another avenue of enquiry, which avoids the simple mapping of the spatial distribution of industry, is through a combined study of the evolution of employment and the value of output actually produced. This is the approach adopted in this paper. By an examination of the changes taking place in jobs and output it should be possible to

reveal some of the characteristics of the industrial accumulation process at regional level which will help understand differential patterns of local development. To this extent the combination of manufacturing GDP and employment data is rather useful since it reveals the evolution of one major determinant of the trends: the dynamics of productivity.

In a world where regional prosperity is related to the ability to produce competitive products efficiently, the examination of the dynamics of output per employee can reveal some telling aspects of the basis of industrial growth or decline. Clearly increase employment with parallel decline of output and necessarily productivity is not a sign of industrial strength. This can be linked to the trapping of local manufacturing at low technological levels, or with the absence of local alternative employment opportunities. This is a particular danger for countries like Greece where several traditional industrial sectors are still important, where the proportion of self-employed to the total workforce is high and where the social support networks (family, political clientelism, etc.) have often proved to be a barrier to unemployment.

Clearly such a simple single measure cannot reveal all, or even the most valuable, of the characteristics of regional economic development. The measure itself is not unproblematic and difficulties range from the straightforward such as the meaning and the measurement of output to the complex such as the relationships with levels of capital investment. Furthermore the data analysed here are aggregated and refer only to total manufacturing employment and GDP. However this said, the use of this simple index of performance does allow analysis to proceed beyond the usual, allowing a new view of at least part of the production process.

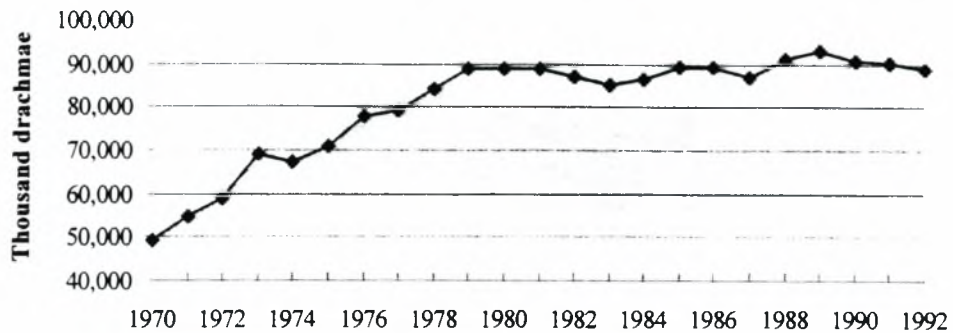
2. The Greek macroeconomic context since 1970.

There can be no doubt that the period since 1970 has seen fluctuating fortunes for manufacturing industry in the economy of Greece. Nationally, the mid sixties until the mid seventies were characterised by rapid development. Not only were growth rates of employment and GDP high but also the period saw the development of new and modern sectors for that time by Greek standards, (electricals chemicals, etc.) and the modernisation of the traditional consumer goods sectors that Greece was specialised in. Investment in the years to 1974 was characterised by the movement of Greek industry towards to the sectors of intermediate and capital goods which were more technologically advanced (Giannitsis 1988).

This period of growth and development was interrupted in 1974. The changes initiated in Greek manufacturing are in fact much deeper than the temporary decrease in output implies (figure 1). Although manufacturing continues to expand in terms of employment and GDP until the end of

the decade, the investment pattern, the market orientation and the leading sectors are subject to important changes. The traditional sectors regain their supremacy and start to expand faster over this period (Giannitsis 1988; Vaitos and Giannitsis 1994).

Figure 1 Greece: manufacturing GDP, 1970-1992 at 1970 prices



Sources: ESYE (National Statistical Service of Greece), and Kavadias, 1993.

The decade of eighties can be described as a period of crisis or, perhaps more accurately, stagnation. The overall increase in employment was small (5.1% between 1978 and 1988) and the increase of GDP insubstantial (1.4% between 1981 and 1991). Manufacturing was no longer the highly productive, job generating sector that it was in the seventies. From 1969 to 1978 manufacturing accounted for half of all new jobs but the period 1970-1981 saw it contributing only one quarter of the increase of the total Greek GDP.

There has, of course, been much variation in these temporal trends viewed regionally. The national trends can be considered as providing the context within which the regional economies have to operate. However the form that a trend will take and its strength in a particular region is the outcome of the social and economic relations developed there.

3. The Evolving Demand for Labour by Greek Manufacturing Firms.

Given what has already been said it is important to examine the period of the seventies and eighties as a set of sub-periods. Unfortunately a proper division into sub-periods according to the changes of the major indices is not totally possible as although annual GDP data is available the same cannot be said for employment data. The detailed employment surveys take place every four or five year and unfortunately that for 1988 is the last available. Therefore the chosen time periods accord to the years that the employment censuses have taken place and are 1969-1978 and 1978-1988. There is no doubt that this periodisation is not perfectly in

phase with the known reality and that the periods themselves are a little too lengthy. Processes that started to take place before the implementation of a employment survey may continue to prevail after and vice versa and some may even start and begin to reverse with a period.

The analysis will begin with a brief examination of the employment trends in the regions of Greece as located in figure 2. Almost all the Greek literature in industrial geography is based on employment data (usually disaggregated to the two digit SIC categories). What is usually stated is that regardless the decline of the employment growth rates in the eighties (and the stagnation of GDP at the national level) there is considerable change in the location of employment. It is claimed that a process of neo-industrialisation is taking place in certain northern prefectures (Thessaloniki, Drama, Kavala, Kilkis, Pella, Pieria, Chalkidiki, Xanthi and Rodopi) at the same time as other areas are coming face to face with de-industrialisation (Komninos 1994). Such findings had led some to include northern Greece amongst those areas that, at the international level, have secured significant rounds of economic growth as an outcome of the interaction of their flexible production base with effective marketing organisations (Scott and Storper 1992; Hadjimichalis 1994). Shift-share analyses with employment data have shown that the emergence of certain areas during the seventies and early eighties was due to manufacturing sectors abandoning certain areas (including Attiki after 1978) and showing a preference for central regions (Kafkalas 1992). This mobility in regional employment trends is apparent from a simple view in the change in manufacturing employment across the Greek prefectures given in table 1.

The period of the sharpest change in employment is the period 1969-1978 when employment in manufacturing expands by some one third amounting to almost 170,000 new jobs. But absolute gains were not evenly distributed over the regions. Five prefectures (Attiki, Thessaloniki, Viotia, Evia and Larissa) account for more than 71% of the growth and, most important, Attiki alone makes up around 44%. In reality employment growth was occurring almost everywhere (only in 12 prefectures was there decline) but substantial gains (more than 3,000 employees) were restricted to those places having a relatively significant manufacturing base or a location proximate to Attiki or Thessaloniki. Pella, Imathia, Kastoria, Magnissia, Achaia, and Fthiotida belong to this group. In prefectures where manufacturing employment declines, the losses in absolute terms are not significant, perhaps with the exception of Lesvos. The picture does not change much if the relative manufacturing employment growth rates are examined. From the prefectures with a substantial industrial base Viotia shows the highest growth rate followed by Fthiotida, Imathia, Pella, Evia, Larissa and Kastoria. Of areas exhibiting significant job gains, Thessaloniki and Magnissia have growth rates higher than

the national average, while the reverse is the case for Attiki and Achaia. The sharpest declines in relative terms takes place in island areas and in prefectures with a limited industrial base.

Figure 2. Map of Greece (Numbers indicate Prefecture names as in Table 1)



Mapping the changes indicates that in this first period employment grows faster in the prefectures around Attiki (Korinthia, Viotia, Evia, and Fthiotida), in and around Thessaloniki (Pieria, Pella, Imathia, Kilkis, Serres and Chalkidiki), in Ipiros (with the exception of Arta), in Thessaly (with the exception of Karditsa) and in Eastern Makedonia-Thraki (with the exception of Rodopi and Kavala). In contrast in Attiki, Kriti, Peloponissos (with the exception of Korinthia), Western Makedonia (with the exception of Kastoria) and Western Greece employment growth is lower than the national average. Finally, employment declines in the Ionian Islands, Northern Aegean Islands and Southern Aegean Islands showing that this period of rapid increase in manufacturing employment does not entail benefits for all.

Table 1 Change in manufacturing employment per prefecture (Nomos), 1969-1988.

	NOMOS/PERIOD	ABSOLUTE CHANGE		RELATIVE CHANGE (PERCENT)	
		1969-1978	1978-1988	1969-1978	1978-1988
1	EVROS	1277	1625	36.8	34.2
2	RODOPI	375	1349	15.2	47.5
3	XANTHI	2258	2682	112.4	62.9
4	DRAMA	2689	3130	94.2	56.5
5	KAVALA	1106	3226	15.9	40.1
6	SERRES	2400	1935	40.9	23.4
7	THESSALONIKI	23604	24036	39.8	29.0
8	CHALKIDIKI	762	576	53.6	26.4
9	KILKIS	2196	2281	144.0	61.3
10	PELLA	3481	4052	87.7	54.4
11	IMATHIA	4725	1943	87.8	19.2
12	PIERIA	989	2853	41.5	84.5
13	FLORINA	89	13	8.0	1.1
14	KOZANI	537	2412	9.1	37.6
15	KASTORIA	3558	-152	66.6	-1.7
16	GREVENA	90	-16	11.4	-1.8
17	IOANNINA	1737	762	44.6	13.5
18	ARTA	74	76	3.8	3.8
19	THESPROTIA	270	560	44.6	64.0
20	PREVEZA	569	243	45.4	13.3
21	LARISSA	6105	2440	70.8	16.6
22	MAGNISSIA	4618	-176	45.4	-1.2
23	TRIKALA	1374	757	39.2	15.5
24	KARDITSA	-153	655	-4.6	20.6
25	KERKYRA	254	-388	8.1	-11.4
26	LEFKADA	-198	39	-30.6	8.7
27	KEFALONIA	-132	82	-17.6	13.3
28	ZAKYNTHOS	-187	287	-19.5	37.2
29	ETOLIA AND AKARNANIA	1463	-249	31.7	-4.1
30	ACHAIA	4694	67	28.6	0.3
31	HLEIA	68	285	1.5	6.2
32	FTHIOTIDA	3891	-50	83.9	-0.6
33	EVRIANIA	-2	204	-0.5	47.4
34	FOKIDA	-240	333	-23.3	42.0
35	VIOTIA	8822	3465	128.2	22.1
36	EVIA	6594	212	80.6	1.4
37	ATTIKI	76068	-29990	30.2	-9.1
38	KORINTHIA	2255	337	38.7	4.2
39	ARGOLIDA	1344	-357	29.0	-6.0
40	ARCADIA	168	328	6.8	12.5
41	MESSINIA	1171	-337	19.3	-4.7
42	LACONIA	-294	-156	-12.1	-7.3
43	LESVOS	-1176	-246	-24.4	-6.8
44	CHIOS	-260	123	-15.5	8.7
45	SAMOS	-182	-6	-12.7	-0.5
46	KYCLADES	-374	1316	-11.5	45.9
47	DODEKANISSOS	76	-67	1.7	-1.5
48	CHANIA	1291	-420	32.3	-7.9
49	RETHIMNO	248	607	17.0	35.6
50	IRAKLIO	135	1508	1.5	16.5
51	LASITHI	-257	144	-12.6	8.1
	TOTAL GREECE	169970	34333	33.9	5.1

Source: ESYE.

The second period 1978-1988 is a period of stagnation. The expansion of employment in manufacturing nationally is rather small (around 34,000 new jobs which is equivalent to only about 5.1% of the total employment in 1978). The phenomenal stagnation nationally, however, does not mean an absence of change at regional level. On the contrary, the trends during this period tend to be much more diverse than in the past. While in only fourteen prefectures does employment decline, in fact Attiki loses around 30,000 jobs, this primarily to the benefit mainly of the smaller industrial centres and the northern prefectures. The prefectures that gain most in absolute terms are Thessaloniki (24,000), Pella, Viotia, Kavala, Drama, Pieria, Xanthi, Larissa, Kozani and Kilkis. Although many northern areas are represented in this list this does not mean that the trends are universal there. Kastoria suffered employment decline during this period despite previous substantial gains. From the remaining major industrial centres, only Viotia and Larissa show significant absolute gains in employment. With the exception of Attiki, the employment losses recorded in the thirteen prefectures are rather modest. It is clear that the pattern of employment decline does not change significantly in comparison with the previous period, but it is also true to say that the prefectures that show the highest employment losses during these years are not the exactly the same as those suffering declines previously. In relative terms Pieria, Thesprotia, Xanthi, Kilkis, Drama and Pella show high growth rates occasionally only on a small base. Of the major industrial centres of the country Thessaloniki, Kavala, Imathia, Kozani, Larissa and Viotia show higher than national growth rates, while Achaia, Evia, Korinthia and Magnissia show very low or even negative growth rates. The highest employment decline in relative terms which is also significant in terms of actual job numbers is in Attiki (-9.1%).

Mapping change again it is clear that employment has expanded fastest in the northern regions of the country. The prefectures of Eastern Makedonia-Thraki and Central Makedonia show the highest rates of growth, with some internal variation of course. However, the growth rates are generally lower than in the previous period. The prefectures of Ipiros, Thessaly, Central Greece, Southern Aegean and Kriti follow in terms of the scale of employment growth rates, but again there are major industrial centres within these regions that face decline (Evia in Central Greece, or Magnissia in Thessaly). Finally, in Attiki, the prefectures of Western Makedonia, Peloponissos, Ionian Islands and Northern Aegean Islands employment is stagnant or undergoing decline.

The main conclusion that derives from the above analysis is that what happens nationally does not necessarily happen regionally. In every period there are many regional deviations from the national trends which in some cases, but not always, can be explained by the fact that in many areas manufacturing employment is rather small and an isolated event of say a factory closure

can be significant. The history and the special characteristics of the socio-economic structure of every region seem to matter.

The second conclusion is that there exists an uneven distribution of employment gains. Employment seems to expand at higher rates in the northern prefectures of the country (Eastern Makedonia-Thraki and Central Makedonia), while in the islands (Northern Aegean and Ionian Islands) it declines. The prefectures of Central Greece, Thessaly and Ipiros follow with rates higher than the national average, while Attiki, Western Makedonia, Peloponnisos, Kriti, and the Southern Aegean Islands show rates lower than those for the nation. Two provisos have to be made. First, the final outcome for the whole period 1969-1988 in the majority of cases is positive and the changes do not greatly alter the overall spatial distribution of employment. In 1988, Attiki continues to be the dominant region for manufacturing but with a lower share (42.2% instead of 50.2% in 1969). The share of Thessaloniki, the second prefecture, in 1988 was only 15.2%. Second, the areas that show the higher gains or losses do vary over time. Summarising the employment change analysis, it is clear that during the early period of the high industrial development, Attiki and some of the major and smaller industrial centres of the country (Thessaloniki, Viotia, Evia, Larissa, Achaia, Imathia etc.) were favoured more while employment declined in the island regions. The pattern changes in the years of stagnation 1978-1988, when some of the northern Greece prefectures are favoured at the expense of Attiki and some of the southern and island prefectures. During the last period it is the turn of the other major industrial centres (Evia, Achaia, Magnissia and Kastoria) to show employment decline while the prefectures of Central Makedonia and Eastern Makedonia-Thraki have benefited from the limited employment expansion.

3. The Evolving Value of the Product of Greek Manufacturing Enterprises.

A broader view of the industrial accumulation process is afforded by the availability of information on the value of manufacturing output per annum. Nationally, the period of the sharpest increase in manufacturing GDP was the period 1970-1978 when output increased from 49,266 to 84,340 million drachmae (1970 prices). The growth rate of GDP at 71.2% is more than double that of the employment growth (33.9%) over the period 1969-1978. This overall difference in growth rates is not the only important dimension between employment and GDP expansion. The regional distribution of the manufacturing output gains is somewhat more widespread than the distribution of employment gains. All the prefectures (with the exception of Fthiotida) experience output expansion during this period. The biggest absolute gains are recorded in Attiki (13,849 million drachmae increase). Thessaloniki and Viotia exhibit the next

highest absolute gains in GDP while Magnissia, Achaia, Evia, Korinthia, Larissa and Imathia follow. The prefectures that gain the most substantial number of employees during the period 1969-1978 do not coincide completely with the prefectures that show the most substantial increases in output. Korinthia, for example, gains more in terms of output than in employment, while Kastoria or Fthiotida which had gained more than Korinthia in employment show rather poor GDP performance. In addition from table 2 it is clear that the prefectures suffering losses or stagnation in employment terms do not necessarily underperform in GDP terms. Iraklio, for example, shows output gains much bigger than those of Xanthi, Drama or Kilkis, even though its employment expansion is insubstantial in comparison. The only prefecture that shows GDP decline during this period was Fthiotida which was in fact included in the group of prefectures with substantial employment gains. The conclusion must be that employment expansion alone misses much about the dynamics of industrial development -areas that losing jobs can gain more in terms of output than those generating them.

The picture is not much changed by examining relative changes in GDP. Output seems to expand faster in many of the prefectures that managed to secure substantial absolute gains in GDP. It is, however, clear that GDP growth rates are higher in smaller industrial centres than in Attiki or Thessaloniki, but sometimes these are founded on small manufacturing bases. This last mentioned point does not apply to Xanthi, Korinthia, Magnissia, Kilkis, Pella, Drama, Imathia, Viotia, and Evia where high growth rates are to be found. In the principal centres of Thessaloniki and Achaia the growth rates are slightly higher than the national, while Attiki somewhat underperforms the nation in this respect. Everywhere (with the exception of Fthiotida) the growth rates of employment are lower than the growth rates of GDP. However, it has to be emphasised that high regional employment gains do not coincide with the leading centres for GDP. The expansion of manufacturing in areas like Korinthia or Magnissia seems to be related mainly to output growth, while industrial development in places like Kastoria or Larissa is mainly employment based. It is quite possible different 'regimes' of manufacturing development, oriented towards either labour or capital intensive activities, to be established in different regions.

The geography of the uneven output growth does not seem to be radically different from that of employment. The main difference is that areas that gain more in employment terms are not necessarily those that gain more in GDP. The expansion of GDP in the Pelloponissos (with the exception of Korinthia), Kriti, Northern and Southern Aegean Islands, Ionian Islands, Western Greece and Attiki is generally lower or equal to the national average.

Table 2 Change in manufacturing GDP per prefecture, 1970-1988.

NOMOS/PERIOD	ABSOLUTE CHANGE IN MILLION DRS (1970 PRICES)		RELATIVE CHANGE (PERCENT)	
	1970-1978	1978-1988	1970-1978	1978-1988
EVROS	220	12	89.7	2.6
RODOPI	84	99	62.8	45.6
XANTHI	299	559	226.7	129.7
DRAMA	255	234	148.2	54.8
KAVALA	321	367	57.6	41.7
SERRES	370	-38	86.0	-4.8
THESSALONIKI	4,905	2,119	82.2	19.5
CHALKIDIKI	130	-2	107.4	-0.8
KILKIS	193	391	166.5	126.5
PELLA	494	567	163.4	71.3
IMATHIA	841	440	144.3	30.9
PIERIA	149	103	105.8	35.6
FLORINA	83	-60	90.3	-34.2
KOZANI	386	-63	69.6	-6.7
KASTORIA	91	-61	25.2	13.6
GREVENA	46	-54	73.6	-50.1
IOANNINA	355	-169	111.0	-25.1
ARTA	117	-33	109.8	-14.9
THESPROTIA	51	89	90.6	83.3
PREVEZA	51	115	51.5	76.7
LARISSA	955	372	108.6	20.3
MAGNISSIA	1,579	533	178.0	21.6
TRIKALA	181	-27	66.0	-5.9
KARDITSA	134	-38	61.0	-10.8
KERKYRA	135	-165	57.3	-44.7
LEFKADA	27	-65	42.8	-72.6
KEFALONIA	26	-42	45.2	-49.9
ZAKYNTHOS	18	145	30.1	186.2
ETOLIA AND AKARNANIA	256	-81	70.2	-13.1
ACHAIA	1,365	331	74.8	10.4
HLEIA	171	-39	48.2	-7.4
FTHIOTIDA	-263	598	-16.3	44.2
EVRYTANIA	87	53	334.2	46.6
FOKIDA	26	-28	26.4	-22.8
VIOTIA	3,077	-204	143.9	-3.9
EVIA	1,134	1,230	141.6	63.6
ATTIKI	13,849	-763	55.8	-2.0
KORINTHIA	1,128	922	205.1	54.9
ARGOLIDA	181	65	47.9	11.7
ARCADIA	143	-105	79.8	-32.6
MESSINIA	248	0	54.0	0.0
LACONIA	49	-57	31.4	-27.8
LESVOS	105	-178	30.1	-39.2
CHIOS	18	-38	15.1	-27.6
SAMOS	38	-1	39.6	-0.9
KYCLADES	192	20	70.3	4.2
DODEKANISSOS	110	-89	32.3	-19.7
CHANIA	162	-75	54.0	-16.1
RETHIMNO	69	-77	60.3	-41.5
IRAKLIO	395	65	70.9	6.8
LASITHI	38	-9	33.9	-6.2
TOTAL GREECE	35,074	6,866	71.2	8.1

Source: ESYE.



In Ipiros, Thessaly, Western Makedonia and Eastern Makedonia-Thraki the situation is more complex and mixed. Finally in Central Greece (with the exception of Fokida and Fthiotida which lose about the 16% of manufacturing GDP) and Central Makedonia the growth rates are significantly above the national. There is no doubt that GDP seems to increase faster in the prefectures that surround Attiki, Thessaloniki and the neighbouring prefectures of Larissa and Magnissia.

The following period 1978-1988 is characterised by a much slower growth of manufacturing GDP, an increase of 6.866 million drachmae amounting to only an 8.1% increase nationally. These marginally positive trends at the national level do not ensure ubiquitous positive trends at regional level however. Output expanded in only 23 prefectures, was stagnant in one (Messinia), while in the remaining 27 areas actual declines were recorded. Thessaloniki was the major winner in absolute terms (2,119 million drachmae), followed by Evia, Korinthia, Fthiotida, Pella, Xanthi, and Magnissia. These absolute gains during this period are inevitably much lower than those of the previous period. In contrast the most severe decline in absolute terms take place in Attiki, Viotia, Lesvos, Ioannina, and Kerkyra. Again it is not difficult to discern a difference between the geographies of the uneven output and employment performance. Viotia or Ioannina, for example, have employment gains during this period but experience output decline, while in places like Magnissia or Fthiotida the opposite trends are recorded.

Output growth rates reveal a similar story. Ignoring those place having extremely low manufacturing bases, Xanthi, Kilkis, Pella, Evia, Korinthia, and Drama show the high relative expansion of output. Even then the smaller size of industry in Xanthi, Kilkis and Pella make the changes sharper than in Korinthia, Evia or Magnissia. Again the prefectures where the fastest employment expansion do not coincide with the higher GDP increases. In Pieria and Kyclades, for example, high employment growth rates are not accompanied by proportional increases in GDP rates, while in some of the major industrial centres (Korinthia, Magnissia and Evia) the opposite trends are recorded. The sharpest decline in output takes place mainly in the less industrialised island areas. In Attiki the relative output decline is much lower (-2%) than the employment decline (-9.1%).

A patchwork pattern of growth and decline is the outcome of the above with most regions exhibiting a variety of output performance. In Eastern Makedonia-Thraki output grows at high rates in all the prefectures, with the exception of Evros. In Central Makedonia the situation is not much different. The situation is more complicated in Central Greece. Thessaly, Ipiros, and Peloponissos seem to be fairly evenly divided among prefectures showing substantial growth

and others severe decline. More homogeneous are the trends in Western Makedonia, Attiki, Kriti, Southern and the Northern Aegean Islands where the output either declines or increases insignificantly in all the prefectures. In the Ionian Islands there is only one exception to rather sharp negative trends (Zakynthos), while in Western Greece, Achaia is the only area generating output growth.

By comparing individual regional performance in employment and output during the different periods it is clear that in the majority of cases they do not match. Industrial growth or decline seems to be a process having different manifestations. In different prefectures different 'regimes of accumulation' seem to have been established, their strength or weakness reflected not only in the way that the prefectures are affected by overall changes but also by the duration of the processes operating. Social and economic processes are played out over space and can result in regional disparities. But such disparities should be thought of not just in terms of the spatial impact of such processes but also in terms of the way in which they influence those socioeconomic processes (Massey 1984). The point however, is to what extent the changes that take place in one region can affect the trends elsewhere. In order to approach this question it is essential to understand the nature and strength of the regime of accumulation established in the region. One important aspect of the regime is certainly regional productivity and this will be examined next.

4. Regional Productivity Dynamics

Economists define productivity as real output per unit of input and they use it in order to measure the relative efficiency of an economy or sector. Productivity increases play a significant role in economic growth since factors of production usually expand slowly, so high rates of output expansion can be achieved only through their most efficient use. In the Greek context, especially, there are indications that the unsatisfactory performance of manufacturing in the eighties can be linked with falling rates of productivity growth (Georganta et al 1994).

The measurement of productivity growth is not straightforward and is the subject of a substantial literature (Diewert 1992). This is especially the case when the joint effects of factor inputs are to be taken into account and this where notions of total factor productivity have proved helpful.(Vagionis and Spence 1994). Neither is it easy to measure the productivity of separate input factors of production and it must be said that the comprehensive measurement of regional labour productivity is beyond the intentions of this paper. In stead this paper uses the simple measure of GDP per employee as a proxy of labour productivity and examines the evolution of regional differences in this respect. In this context two question arise.

The first is a broad issue and has to do with the treatment of labour productivity in a regional context. Usually labour productivity growth is taken as an inevitable development that under certain circumstances (slow growth of output and high increase in labour supply) leads to employment decline and the rise of unemployment. In other words they treat labour productivity growth as a constraint that can be surpassed only through the dominant expansion of output (see for example Rhodes 1986). The approach here is different. Basically labour productivity growth is not considered as something that must occur but more as a sign of the dynamism of the regional economic system. It makes more sense to view the increase of labour (and capital) productivity as a goal for regions to achieve than an inevitable event. In the final analysis the most efficient use of the factors of production is perhaps the most important element of output expansion.

The second issue is just what exactly the index of GDP per employee can reveal in a regional context. High rates of GDP per employee may demonstrate the existence of modern, highly productive sectors, while low rates point to the prevalence of low technology, unproductive activities. It must be kept in mind that GDP is not a perfect measure of the value of real output and differences in GDP levels may be the outcome of differences in the regional prices of goods or services (Dunford 1994). The available data are not converted into any form of purchasing power standard. Moreover, in an era of potential increases in part-time working the simple division of output per employee is also problematic. The employment data provided by the Greek National Statistical Service (ESYE) do, however, refer to average annual employment and to some extent, and certainly as regards seasonal part time working, this reduces the problem. In addition in the Greek context where artisan production and self-employment are important low output per employee is highly possible to be the outcome of the increased participation of family members or the lack of employment opportunities in more profitable activities. In other words, output per employee leaves much unrevealed about the competitiveness of sectors in different regions but it can throw some light in the accumulation processes operating.

Table 3 contains data on the evolution of output per employee in Greek prefectures. This measure of GDP per employee in Greek manufacturing increases considerably between 1970-1988. In simple constant price terms output of 98.2 thousand drachmae per employee in 1970 grows to 129.2 thousand in 1988. The trends, however, are not positive for the whole period and nor are they everywhere the same. Some prefectures record productivity decreases over the period - Kastoria, Grevena, Ioannina, Trikala, Kerkyra, Lefkada, Kefalonia, Fthiotida, Fokida, Viotia, Chios and Rethimno.

Table 3 GDP per employee in manufacturing and ranking of the prefectures, 1970, 1978 and 1988.

PREFECTURES/PERIOD	GDP PER EMPLOYEE THOUSAND DRS (1970 PRICES)			RANK		
	1970*	1978	1988	1970*	1978	1988
EVROS	70.5	97.9	74.8	37	37	40
RODOPI	54.0	76.3	75.3	51	50	38
XANTHI	65.7	101.1	142.6	42	35	10
DRAMA	60.3	77.0	76.2	46	49	37
KAVALA	80.3	109.2	110.5	20	27	20
SERRES	73.2	96.7	74.6	34	39	41
THESSALONIKI	100.7	131.2	121.5	6	14	15
CHALKIDIKI	85.2	114.9	90.3	15	23	29
KILKIS	76.1	83.1	116.7	30	47	17
PELLA	76.1	106.8	118.5	29	31	16
IMATHIA	108.4	141.0	154.7	4	12	9
PIERIA	59.1	86.0	63.2	48	45	46
FLORINA	83.2	146.5	95.3	17	11	26
KOZANI	94.3	146.6	99.4	12	10	24
KASTORIA	67.6	50.8	44.6	40	51	51
GREVENA	78.5	122.3	62.1	25	19	47
IOANNINA	82.1	119.8	79.1	18	21	35
ARTA	55.0	111.1	91.2	50	26	28
THESPROTIA	92.6	122.0	136.3	13	20	11
PREVEZA	79.1	82.3	128.3	21	48	13
LARISSA	101.9	124.5	128.5	5	17	12
MAGNISSIA	87.2	166.7	205.2	14	5	7
TRIKALA	78.5	93.6	76.2	24	42	36
KARDITSA	66.1	111.5	82.4	41	25	31
KERKYRA	74.5	108.4	67.7	33	28	44
LEFKADA	97.2	199.9	50.3	9	4	49
KEFALONIA	77.3	136.3	60.2	27	13	48
ZAKYNTHOS	62.6	101.2	211.1	44	34	6
ETOLIA AND AKARNANIA	79.0	102.1	92.5	22	33	27
ACHAIA	111.1	151.0	166.1	3	9	8
HLEIA	78.3	114.4	99.7	26	24	23
FTHIOTIDA	348.4	158.7	230.2	1	7	4
EVKITANIA	60.2	262.5	261.0	47	2	3
FOKIDA	95.0	156.5	85.0	10	8	30
VIOTIA	310.6	332.0	261.4	2	1	2
EVIA	98.0	131.0	211.2	8	15	5
ATTIKI	98.6	118.0	127.3	7	22	14
KORINTHIA	94.4	207.6	308.8	11	3	1
ARGOLIDA	81.6	93.6	111.2	19	43	19
ARCADIA	72.8	122.5	73.4	35	18	43
MESSINIA	75.7	97.7	102.5	31	38	22
LACONIA	64.3	96.1	74.9	43	40	39
LESVOS	72.5	124.9	81.4	36	16	32
CHIOS	70.2	95.6	63.7	38	41	45
SAMOS	67.7	108.2	107.8	39	29	21
KYCLADES	84.2	162.0	115.8	16	6	18
DODEKANISSOS	76.3	99.3	80.9	28	36	33
CHANIA	75.3	87.6	79.9	32	44	34
RETHIMNO	78.9	108.1	46.6	23	30	50
IRAKLIO	62.0	104.4	95.6	45	32	25
LASITHI	55.4	84.8	73.6	49	46	42
TOTAL GREECE	98.2	125.6	129.2			
Standard Deviation	50.8	46.5	58.8			

* The employment data refer to 1969 and the GDP data to 1970.

Source: ESYE.

In some cases such productivity decline takes place at the same time as manufacturing is expanding considerably in terms of employment or even output (Kastoria, Ioannina, Trikala, Fthiotida, Viotia). Furthermore there are obvious differences among the prefectures in terms of the general levels of output per employee. In 1970, for example, labour productivity in Thessaloniki was less than one third the level in Viotia. Such differences can be the outcome of a variety of regional factors (different sectoral mix, different social relations of production, different degrees of automation and technology of the sectors, etc.). The evolution of these differences is indicative of the different regimes of industrial accumulation that have been established in each region and it is this feature which provides the main interest for this paper.

Some regional productivity polarisation is clear in 1970. Output per employee in Fthiotida and Viotia is more than three times the national average. Elsewhere only in Achaia, Imathia, Larissa, Thessaloniki and Attiki is manufacturing productivity higher than in the nation. In general labour productivity in the main industrial centres is higher than elsewhere. But spatial variation is not particularly high among the less industrialised prefectures, the lowest output per employee (Rodopi) is less than one standard deviation from the national figure.

Table 4 shows that from 1970 to 1978 output per employee in Greece increased by 27,400 drachmae (27.9%). Almost all prefectures show gains in productivity, the two exceptions being Kastoria and Fthiotida. The latter suffers dramatic declines from its extremely high base year position. In Kastoria the decline is much more lower. The prefectures that show the greatest gains in productivity in absolute terms are Evritania, Korinthia, Lefkada, Magnissia and Kyclades. Some of these gains are so large that they must be associated with the deployment of high levels of capital investment. In Attiki the gains in productivity are somewhat low (19,400 drachmae), while in Thessaloniki they are more substantial (30,500 drachmae). However, what is more interesting is the fact that many of the island and southern prefectures of the country (Kyclades, Lesvos, Samos, Iraklio, Arcadia) show absolute labour productivity gains much higher than in the northern prefectures. The key to all this is the previous discussion. During this period prefectures in Central Makedonia and Eastern Makedonia - Thraki showed substantial gains both in employment and output, while in the island and southern areas employment losses and slow GDP expansion rates were recorded. However, recall that the areas that gain most in employment do not gain proportionally in output. The lower productivity gains in the prefectures where considerable industrial expansion in both employment and output terms occurs can be indicative of industrial development based upon the expansion of low productivity manufacturing activities.

Table 4 Change in GDP per employee in manufacturing per prefecture, 1970-1988.

NOMOS/PERIOD	ABSOLUTE CHANGE THOUSAND DRS (1970 PRICES)		RELATIVE CHANGE (PERCENT)	
	1970*-1978	1978-1988	1970-1978	1978-1988
EVROS	27.3	-23.0	38.7	-23.5
RODOPI	22.3	-1.0	41.3	-1.3
XANTHI	35.4	41.5	53.8	41.1
DRAMA	16.7	-0.8	27.8	-1.0
KAVALA	28.9	1.3	35.9	1.2
SERRES	23.5	-22.1	32.1	-22.8
THESSALONIKI	30.5	-9.7	30.3	-7.4
CHALKIDIKI	29.8	-24.7	35.0	-21.5
KILKIS	7.0	33.6	9.2	40.4
PELLA	30.7	11.7	40.3	10.9
IMATHIA	32.6	13.8	30.1	9.8
PIERIA	26.9	-22.8	45.5	-26.5
FLORINA	63.3	-51.2	76.1	-34.9
KOZANI	52.3	-47.2	55.4	-32.2
KASTORIA	-16.8	-6.1	-24.8	-12.1
GREVENA	43.8	-60.1	55.8	-49.2
IOANNINA	37.7	-40.7	45.9	-34.0
ARTA	56.1	-19.9	102.1	-17.9
THESPROTIA	29.4	14.3	31.8	11.7
PREVEZA	3.3	46.0	4.1	55.9
LARISSA	22.6	4.0	22.2	3.2
MAGNISSIA	79.5	38.5	91.2	23.1
TRIKALA	15.1	-17.4	19.2	-18.5
KARDITSA	45.4	-29.1	68.7	-26.1
KERKYRA	33.9	-40.8	45.5	-37.6
LEFKADA	102.7	-149.6	105.6	-74.8
KEFALONIA	59.0	-76.1	76.2	-55.8
ZAKYNTHOS	38.6	109.9	61.6	108.5
ETOLIA AND AKARNANIA	23.1	-9.6	29.2	-9.4
ACHAIA	39.9	15.1	36.0	10.0
HLEIA	36.0	-14.6	46.0	-12.8
FTHIOTIDA	-189.7	71.5	-54.5	45.1
EVRIANIA	202.4	-1.5	336.2	0.6
FOKIDA	61.5	-71.4	64.8	-45.6
VIOTIA	21.5	-70.7	6.9	-21.3
EVIA	33.0	80.2	33.7	61.2
ATTIKI	19.4	9.3	19.6	7.9
KORINTHIA	113.2	101.2	120.0	48.7
ARGOLIDA	12.0	17.6	14.6	18.8
ARCADIA	49.7	-49.1	68.3	-40.0
MESSINIA	22.0	4.8	29.1	4.9
LACONIA	31.8	-21.2	49.6	-22.1
LESVOS	52.4	-43.4	72.2	-34.8
CHIOS	25.4	-31.9	36.2	-33.4
SAMOS	40.5	-0.4	59.9	-0.4
KYCLADES	77.8	-46.2	92.5	-28.5
DODEKANISSOS	23.0	-18.4	30.1	-18.5
CHANIA	12.3	-7.8	16.4	-8.9
RETHIMNO	29.2	-61.4	37.0	-56.9
IRAKLIO	42.4	-8.7	68.4	-8.4
LASITHI	29.4	-11.2	53.2	-13.3
TOTAL GREECE	27.4	3.6	27.9	2.9

* The employment data refer to 1969 and the GDP data to 1970.

Source: ESYE.

The prefectures in which productivity grows faster than nationally are not very different from the areas of high absolute gains - the leading areas being Evritania, Korinthia, Lefkada, Arta, Kyklades, and Magnissia. In Attiki the increase in productivity is smaller than nationally (19.6%), while in Thessaloniki and Achaia the output per employee increases approximately by one third. In Fthiotida the decline is sharp (-54.5%), while in Kastoria the decrease is lower (-24.8%). If the prefectures are grouped it is clear that productivity grows faster than nationally in the prefectures of Eastern Makedonia-Thraki, Central Makedonia (with the exception of Kilkis), Western Makedonia (with the exception of Kastoria), Ipiros, Western Greece, Peloponissos (with the exception of Argolida), the Northern and Southern Aegean Islands, Kriti (with the exception of Chania) and the Ionian Islands. In Thessaly and Central Greece only half of the prefectures show higher than national growth rates.

As already pointed out changes in productivity are not always the outcome of consistent industrial growth or decline. The dramatic decline in Fthiotida, for example, is the outcome of severe output decline and a substantial employment increase. An acute crisis can have (through the close down of the less productive firms) the same results in productivity as an acute boom (through the birth of more productive firms). Between the boom and crisis there is much scope for many other subtle and complex processes to take occur (jobless growth for instance). Change in labour productivity is an outcome of potentially different and complicated processes.

Whatever are the underlying causalities the point is that change has the potential to widen the gap in productivity levels among Greek prefectures. Although the standard deviation was reduced in 1978 mainly as a result of decline in Fthiotida, the distance of many prefectures from the national average (125,600 drachmae) was increased. In 1978 Kastoria, Rodopi, and Drama lagged the national average by more than one standard deviation, but the productivity levels in Viotia, Evritania, Korinthia and Lefkada showed the opposite tendency, and in many other prefectures well above national average levels were apparent.

Although the second period, 1978-1988, is not characterised by marked changes at the national level, this is most definitely not the case regionally. Nationally, output per employee is increased slightly by 3,600 drachmae (2.9%). However in 34 of 51 prefectures labour productivity declines. The most severe losses in absolute terms are recorded mainly in less industrialised areas (with the exception of Viotia). Productivity declines more sharply in Lefkada, Kefallonia, Fokida, Viotia, Rethimno, and Grevena. Many of the less industrially developed areas faced GDP declines accompanied by employment gains at this time. In contrast many areas with a substantial industrial base exhibit high gains in productivity, namely Korinthia, Evia, Fthiotida, Xanthi and Magnissia.

A similar pattern of productivity declines in the less well developed centres emerges for relative changes in productivity between 1978 and 1988. In the major industrial centres the situation is a little more variable with some gains (Attiki, Evia, Korinthia, Achaia, Magnissia, Larissa, Imathia and Pella) and some declines (Thessaloniki, Kozani, Kastoria and Viotia). Productivity decline, then, is a 'symptom' affecting the less industrialised areas, but additionally many of the major industrial centres and the emerging prefectures of the north are not able to avoid it. Basically, employment expansion is not accompanied by an equal expansion of the industrial product for whatever reason - low levels of capital investment perhaps.

The outcome of all this is a deepening gap between the most and the least labour productive areas. It is not only that the standard deviation of the productivity distribution increases but also that the gap between the prefectures with the highest labour productivity and the rest increases. The difference between the GDP per employee in Korinthia (308,800 drachmae) and the national average is more than three standard deviations and for Viotia and Evritania it is more than two. Fthiotida, Evia, Zakynthos and Magnissia are each more than one standard deviation ahead in labour productivity terms. Areas lagging more than one standard deviation include Kastoria, Rethimno, Lefkada, Kefalonia, Grevena, Pieria, Chios and Kerkyra. Moreover, the gap between the first seven ranking areas in productivity and the rest is considerable. The output per employee in Magnissia is more than 39,000 drachmae higher than the next ranked place - Achaia.

Such productivity rankings of manufacturing dynamism as these convey messages much different from those dependent on the examination of employment or output evolution. Rapid expansion of employment in Central Makedonia and Eastern Makedonia-Thraki and the decline of employment in some of the southern major industrial centres does not seem basically to have undermined the dominant position of the latter in terms of productivity. Five prefectures around Attiki: Korinthia, Viotia, Evritania, Fthiotida, Evia form the group of the five most productive prefectures in Greece in 1988. All, with the exception of Evritania which is by no means an industrially developed area, also ranked near in 1970. The same seems to be the case for Attiki, although its rank position is somewhat reduced - here employment losses were not accompanied by proportional decline of output and hence in productivity. The same, only more so, seems to be the case for the two other major industrial centres of Achaia and Magnissia which succeed in maintaining productivity rankings despite achieving rates of GDP and employment expansion lower than those of the 'dynamic' northern areas.

In contrast the prefectures of northern Greece do not have high standings in the productivity ranking. In Eastern Makedonia-Thraki only Xanthi succeeds in advancing its position and entering in the top ten. Drama, Rodopi and Evros are way down the list, while even Kavala can only manage twentieth place. In Central Makedonia, Thessaloniki and Imathia which have shown considerable manufacturing dynamism both in terms of employment and output growth have both lost position. In 1988 only Imathia was in the top ten of the most productive rankings while Thessaloniki was fifteenth and was followed by Pella and Kilkis. Pieria and Serres, which also have shown employment dynamism during the eighties, were still in the bottom of the productivity list, while Chalkidiki lost ground in productivity terms. In Western Makedonia the changes were even more acute. In 1988 Kastoria was the lowest ranked prefecture in terms of GDP per employee while Grevena was not many places above. Kozani and Florina were classified in the middle of the ranking and their position had considerably worsened since 1970.

The above observations raise many questions concerning the interpretation of the manufacturing expansion in northern Greece during the seventies and eighties. Although, as already shown, the trends are variable (even in the north there are prefectures where employment and output declined in eighties) the question remains - is employment expansion a sign of real dynamism of the regional economy or is simply the outcome of a growth of low productivity activities that after the late seventies could not be undertaken in Attiki and other major industrial centres? The deterioration of the productivity position of these northern prefectures seems to give some weight to the second interpretation. The differences in productivity levels are so high that it is tempting to assert that manufacturing growth was simply based upon the expansion of labour intensive and low productive activities that socio-economic circumstances both in the north and the south permitted. Changing social relations of production ensuing from rapid urbanisation and industrialisation of Attiki and other southern prefectures associated with an increasing range of alternative economic activities in these areas may well have prevented certain sorts of manufacturing expansion, whereas the almost total lack of alternative activities in the northern prefectures may well have afforded circumstances which were ripe for development. Undoubtedly, the full answer to this question necessitates the carrying out of local field research. The examination of local socio-economic structures and their interaction with the changes that are representative of the region is critical for a full understanding of the different facets of the accumulation process.

Locally focused research will also facilitate proper understanding of other descriptive dimension pointed up in this paper. The prefectures of the Northern and Southern Aegean Islands, for example, which have been lagging both in employment and output, have been successful in preserving or improving their productivity rankings. Again it is difficult to resist

to the temptation to assert that one of the factors of the decline was the existence of more productive alternative activities, such as tourism and other services, and that part of manufacturing to survive was competitive in productivity terms.

In Kriti, Western Greece and Peloponissos the position has remained more or less the same. Thessaly, Magnissia and Larissa have preserved their relatively high standings, while Trikala and Karditsa have remained somewhere below the middle of the ranking. Finally, all the prefectures of the Ionian Islands (with the exception of Zakynthos) lie near the bottom of the ranking, although that all of them, especially Lefkada had relatively good standings in 1970. Equally they are not uninteresting questions to speculate on the local forces that have engendered all this.

5. Conclusions

Attempting to make sense of the evolution of manufacturing employment, output and labour productivity no matter what the specific regional or national context is no easy task. The main point is that these measures are essentially outcomes of processes and as such are somewhat divorced from the underlying causalities which may well be many. This is particularly true in the context of the current paper where the large number of (often rather small) areas makes the construction of a meaningful industrial development typology difficult. Furthermore, the trends are not stable for the whole period examined and there is much variation in the regional fortunes apparent in each subperiod. However, the main aim of the paper was not the construction of regional typologies but rather it was an attempt to reveal some of the spatial characteristics of the industrial accumulation process at the local level which tend to be ignored when only one parameter - employment - is examined.

In this context the most important finding of the analysis is the existence of two different uneven geographies of industrial expansion. Attiki and the other major industrial centres seem to gain more in terms of the increasing value of their industrial product, while the peripheral northern prefectures seem to be winners in the distribution of employment gains. The existence of these two different geographies is indicative of the existence of (at least) two different patterns of industrial development at local level. In the major industrial centres manufacturing growth reflects the outcome of the expansion of capital intensive activities, while in the less developed but dynamic job generating prefectures of the north, manufacturing growth is the outcome of the expansion of labour intensive activities. There is no single route to manufacturing expansion or decline. The notion of 'jobless' growth is well known, 'outputless'

growth is perhaps less well known, and between them there is plenty of room for other outcomes of the complex processes of efficient manufacturing production.

The study of the special characteristics of each region, the local socio-economic structures and the established regime of accumulation is necessary in order to really understand these processes. It is not enough simply to say that some areas offer comparative advantages for the development of low productivity activities while others are unsuitable. The increasing gap in labour productivity terms among the Greek prefectures requires a proper explanation in which local factors will be key. In Greece, where small family owned firms are the norm, low labour productivity usually means low profits. Hence, the questions that arise are rather significant. Is the industrial expansion in the peripheral northern prefectures the outcome of the lack of alternative economic activities at local level? Is the employment decline in many of the major industrial centres the result of the crowding out, for whatever the reasons, of low productivity concerns from relatively high cost locations?

The evidence provided here from the parallel examination of the three indices is not enough to give a definite answer to these questions. But the broad scope of the issues have been explored. The point is that national change is not only the general context in which regional change takes place. Industrial development takes place in space and spatial characteristics are decisive factors in the formation of the trends. Undoubtedly the examination of more parameters even based on secondary sources, such levels of profitability and trends in private capital investment, will further understanding but they will not replace the real need for studies focused at the local level which can reveal the fundamental aspects of local industrial development processes.

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