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SMEs: carriers of innovation, the European model.

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Abstract

Europe is very far from representing an economic, political, cultural and social homogenous space.
A factor that unites the societies in countries of the EU is that they are characterized like networks of relationships between SMEs ([1]) and Large Enterprises (LE) ([1]) where the relationship with the market and the public is fundamental and where the intermediate subjects like the Chambers of Commerce, the category associations, the municipalities, etc. play a fundamental role.
The small and medium enterprises are important carriers of innovation. The development of the SMEs can give a determining contribution to the economic and social progress, to new economic activities, the creation of workplaces and to the competitiveness.
The hypotheses of the research concur to construct a model that can be defined "European " in contrast with the more atomized systems, (emblematic for all that Anglo-Saxon), that assumes particular shapes, varying from country to country.
In the research we propose to consider the aspects of the valorization of the innovative potential of the relation SMEs – Large Enterprises. This should not be understood as a convergence towards one only model, but as the ability of every model to adapt itself to the change without losing its specific identity.

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[1] Small, Medium Enterprises, Acronym SMEs, used in the research, refers to the Commission Recommendation (COM(96) 261 final) from 3 April 1996 that provides a definition of small and medium-sized enterprises (SMEs). The new guideline announced by the European Commission the 8 May 2003 will be adopted since 1st January 2005.In the research "Large Enterprises" will be "LE"

1 . The role of the SMEs

The SMEs ([2]) play a prominent role in the European Union's business economy in terms of growth, competitiveness, innovation and employment ([3]).

Europe's competitiveness depends strongly on its small businesses ([4]), which are a key source of jobs, a breeding ground for business ideas and a main driver for entrepreneurship ([5]).

They constitute the great majority of the 18 million enterprises recorded in the 15 Countries members of the EU in the non-agricultural market sectors and form the skeleton of the existing enterprises ([6]): beyond 99 % of the enterprises are SMEs ([7]), they employ 67 % of the workforce and generate 60 % of the total value added ([8]).

This phenomenon is not only found in Europe, but similar conditions also exist in other countries like, for example, the USA. The main characteristic of the European SMEs is the fact

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2 The abbreviation SME used throughout this report refers to the Community definition of small and medium-sized enterprises (SMEs) given in the Commission Recommendation of 3 April 1996. The definition of an SME is summarised in the table below. It must be applied by all Community bodies (for instance the European Investment Bank, EIB, and the European Investment Fund, EIF), and in the context of Community programmes and legislation.

DEFINITION OF A SMALL AND MEDIUM-SIZED ENTERPRISE (SME)			
Criteria	**Micro-enterprise**	**Small**	**Medium**
Number of employees	< 10	< 50	< 250
Annual turnover	---	< € 7 m	< € 40 m
Or			
Total balance sheet	---	< € 5 m	< € 27 m
Independence	---	No more than 25 % of the capital or voting rights held by one or more enterprises which are not themselves SMEs	

3 The conclusions of the European Council of Lisbona (23-24 March 2000) evidence the importance of the SMEs in the starter and the development of innovative enterprises.

4 Commission of the European Communities, Thinking small in an enlarging Europe, COM(2003) 26 final, Brussels, 21.1.2003

5 For this reason, the Feira European Council endorsed the "think small first" principle1 as one way to progress towards the Lisbon objectives. This message has been reaffirmed in the Commission's 2003 Spring Report to the Spring European Council, which places particular emphasis on boosting investment, jobs and growth through knowledge, innovation and business dynamism; Commission of the European Communities, "Choosing to grow: Knowledge, innovation and jobs in a cohesive society", COM(2003) 5, Brussels, 14.1.2003.

6 Cfr. Figure 2 and table 1, data Eurostat.

7 Cfr. fig. 2

8 Data EU 2000

that they often are organized in " industrial districts ", in which the economy of scale is achieved by the system, rather than by the single enterprise and the externalities are positive ([9]).

The SMEs carry out their activities in almost all the fields of activity, although the industries pertaining to the so-called "fashion industry" (clothing, footwear, etc) on one side and the mechanical industries, on the other, are the most important fields of activity.

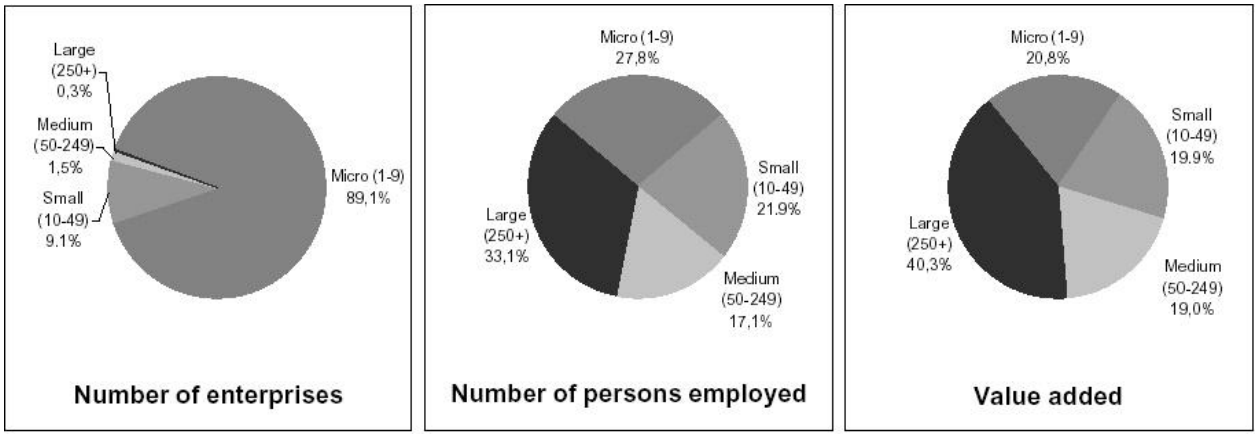
In these industries, in fact, the productive cycle can be decomposed between more enterprises: necessary condition for the establishment of districts ([10]).

2. - The " European paradox ".

Continuing in the description of the structure of the European industry, another important aspect emerge from the analysis of the large enterprises: important above all in certain industrial fields.

If we consider the classification of the 200 large industrial Groups in the world, in the mid Nineties, ([11]) 69 of these were European, 64 American, 53 Japanese, and 14 from other countries.

Fig. - 1 ([12]): Breakdown of main indicators in the EU's business economy by enterprise size class, 2000 % share of total (please note that the percentages do not add up to 100 due to rounding effects)



9 Where for esternality we consider an effect (positive negative or), had to the activity carried out from an individual, than is reflected directly on the well-being of an other, without to pass through the mechanism of the prices. The esternality generated in the district can be: from production to production; from production to consumption. For deepenings: http://www.economisti.org/microeconomia

10 The attention dedicated to this model of the SMEs and the "industrial districts", in the past international meetings, G7/G8 and European, , it does not have previous.

11 Cfr. European Commission, Panorama of EU Industry 1997, Bruxelles, 1997 – "The world's largest industrial groups"

12 Estimated based on incomplete country data – see table 1 for applicable footnotes and reference years. Source: Structural Business Statistics, Statistics in focus – Theme 4 – 39/2002, Eurastat, pag. 2

Fig. 2 ([13]): Breakdown of main indicators in the business economy by enterprise size class, 2000 (% share of total)

	B(2)	DK (3)	D (4)	EL	E (5)	F(2)	IRL	I	L	NL(6)	A (2)	P(7)	FIN	S (8)	UK	
Number of enterprises																
Micro (1-9)	92.1	79.7	81.4	:	93.0	92.1	:	94.9	:	91.3	83.2	93.0	90.2	93.3	85.5	:
Small (10-49)	6.7	16.4	15.5	:	6.2	6.7	:	4.5	:	7.3	14.2	5.9	8.1	5.6	12.2	:
Medium (50-249)	1.0	3.2	2.6	:	0.7	1.1	:	0.5	:	1.1	2.2	1.0	1.5	0.9	1.9	:
Large (250+)	0.2	0.7	0.5	:	0.1	0.2	:	0.1	:	0.3	0.4	0.1	0.2	0.2	0.4	:
Number of persons employed																
Micro (1-9)	30.0	13.9	19.1	:	40.6	24.5	:	47.8	:	22.3	22.4	43.4	22.5	28.0	21.7	:
Small (10-49)	21.4	23.8	22.5	:	24.4	21.2	:	21.9	:	24.3	24.2	21.3	18.4	19.0	18.1	:
Medium (50-249)	15.3	23.5	19.5	:	14.8	16.6	:	12.5	:	14.9	20.4	17.3	17.6	16.1	15.3	:
Large (250+)	33.3	38.8	39.0	:	20.3	37.7	:	17.8	:	38.5	33.0	18.0	41.5	36.9	44.9	:
Turnover																
Micro (1-9)	24.3	11.8	10.1	:	27.8	20.4	:	30.5	:	:	16.5	32.5	15.3	19.6	16.2	:
Small (10-49)	22.9	18.5	16.9	:	24.9	20.4	:	23.7	:	:	21.6	22.5	15.4	19.2	16.7	:
Medium (50-249)	19.3	22.7	20.5	:	19.4	17.6	:	17.5	:	:	24.6	21.6	18.3	18.8	17.4	:
Large (250+)	33.4	47.0	52.5	:	27.9	41.6	:	28.3	:	:	37.2	23.4	51.0	42.5	49.8	:
Value added																
Micro (1-9)	19.0	13.1	8.5	:	30.0	19.5	:	32.5	:	:	16.7	30.6	17.5	20.1	20.9	:
Small (10-49)	20.9	20.7	16.4	:	23.9	19.1	:	23.4	:	:	21.7	20.0	15.6	17.7	20.0	:
Medium (50-249)	18.7	22.7	20.6	:	18.6	16.9	:	16.6	:	:	21.9	20.7	16.2	17.8	18.3	:
Large (250+)	41.4	43.5	54.5	:	27.4	44.5	:	27.4	:	:	39.7	28.6	50.7	44.4	40.8	:

(1) Activity coverage is NACE Sections D, F, G, H, I and K. (2) 1999. (3) 1999; NACE Sections D and F. (4) 1999; NACE Sections D, F, G and H; value added, also excluding NACE Section G.
(5) 1999; NACE Sections D, G, H and K. (6) 1999; NACE Sections F, G, H, I and K. (7) 1999; number of enterprises excluding NACE Section F. (8) 1998. (9) 1999, excluding NACE Section F.
Source: Structural Business Statistics (theme 4/SBS/sizclass), Eurostat

The European groups realized optimal performances in various fields which: chemistry, pharmaceutics, alimentary and oil refinery. In the electronics and computer science instead American and Japanese groups emerged. Finally, a Co-leadership existed in the "Industry of the Industries ", the automotive: General Motors, Ford, Toyota, Daimler-Benz occupied the first positions of the classification.

Classification of manufacturing sub-sectors by value added in 1999 shows that three industries predominate - chemicals, the manufacture of machinery and equipment and food and beverages, accounting for first, second and third place respectively in the EU ([14]). The food and beverages industry came first in six out of 15 countries, namely Denmark, Greece, Spain, the Netherlands, Portugal and the United Kingdom; the chemical industry was predominant in Belgium, France and Ireland, whilst the manufacture of machinery and equipment dominated in Germany, Italy and Austria.

13 Source: Statistics in focus – Theme 4 – 39/2002, Eurastat, pag. 2

14 The chemical industry includes basic industrial chemicals and agro-chemicals, the manufacture of paints and varnishes, soaps, perfumes and toilet preparations, other chemical products and man-made fibres, the manufacture of pharmaceuticals and the manufacture of rubber and plastics.
The manufacture of machinery and equipment includes the manufacture of machinery, general equipment, agricultural machinery, machine-tools, other machinery for specific uses and the manufacture of arms and munition.
The food and beverages industry includes the processing of meat, fish, fruits and vegetables, oils and fats, the manufacture of beverages, dairy products, grain, animal feed and other food industries.

Fig. - 3. The three main manufacturing sectors for each country, by value added, in 1999 ([15])*

	First sector	Second sector	Third sector
EU	**Chemicals**	**Machinery and equipment**	**Food and beverages**
Belgium	Chemicals	Food and beverages	Motor vehicles
Denmark**	Food and beverages	Machinery and equipment	Chemicals
Germany	Machinery and equipment	Motor vehicles	Chemicals
Greece**	Food and beverages	Chemicals	Non-metallic mineral products
Spain	Food and beverages	Metal products	Chemicals
France	Chemicals	Food and beverages	Motor vehicles
Ireland**	Chemicals	Food and beverages	Publishing and printing
Italy	Machinery and equipment	Chemical	Metal products
Luxembourg	Metals	Rubber and plastics	Non-metallic mineral products
Netherlands	Food and beverages	Chemical	Publishing and printing
Austria	Machinery and equipment	Metal products	Coke, refined petroleum & nuclear
Portugal	Food and beverages	Non-metallic mineral products	Textiles
Finland	Radio, TV & communication equip.	Pulp, paper and paper products	Machinery and equipment
Sweden	Motor vehicles	Machinery and equipment	Chemicals
United Kingdom	Food and beverages	Chemicals	Machinery and equipment

(*) 2000 for EU; 1998 for Italy, Austria's third sector and the Netherlands' second and third sectors; 1997 for Luxembourg and the Netherlands' first sector.
(**) Classification based on value added, net of VAT but not of other taxes on products; these are important in the chemicals and food and beverages sectors and are likely to have inflated the importance of these sectors.
Source: Eurostat

The chemical industry featured in the top three industries in 11 of the 15 EU countries, putting it ahead of food and beverages (9 countries) and machinery and equipment (7 countries). Luxembourg was unique in that none of these industries featured in the top three places.

15 European business 2002 Strengths and weaknesses of businesses in the EU, Eurostat News Release, No 106/2002 – 5 September 2002 pag. 2

If from the specializations and the strengths we pass to analyze the weaknesses of our European industrial system, the fundamental consideration concerns its insufficient innovative ability, above all if compared to that of the American industry.

Of the 25 greater Americans companies, 19 did not exist or were very small before 1960 (in order to make two famous examples - neither Microsoft neither Intel existed at the time). To the contrary, examining the 25 greater European enterprises, the fact emerges that no enterprise is new, all existing for more than 30 years ([16]).

Therefore we can speak of a " European paradox ". Europe does not boast, in fact, any leadership in the fundamental industries of microelectronics and information technologies, and continues to dominate the world panorama in the old industrial fields.

This is a weakness in comparison to the United States and an other world economic power: Japan, does not emerge a clear way from the major part of the index of the " scientific and technological production " (for example the number of licences, scientific publications of international level, etc.) They show instead a European performance substantially equal to that of the United States and Japan (although the other fundamental index, given from the relationship between investments in R&D and GDP is lower).

The true European weakness resides in the insufficient ability to transform the European technological and scientific knowledge, although of a good level, in effective entrepreneurial opportunities. Many factors to be considered in order to improve the co-operation between science and industry to stimulate the establishment of new enterprises and the consolidation of those existing in innovative fields, those with high technological content (electronics and computer science, and also biotechnologies); those fields in which the advanced countries can maintain a competitive advantage to the developing countries.([17])

The European systems seem less prepared in order to support the development of an economy based on innovation.

3. SMEs and Large Enterprises

SMEs are the backbone of Europe's economy ([18]) and the key to our competitiveness.

In this context the SMEs not only cover a fundamental role in the European economy by number of employees, but also because this role is crucial in the relation between SMEs and LE such role is essential under the economic profile, including innovation, since it is one of our weaknesses and for social cohesion.

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16 cfr. On. Prof. Romano Prodi "L'Industria e la Finanza Europee nella competizione internazionale", European University Institute, Florence Italy, XXa Conferenza Jean Monnet 20 marzo 1998

17 On. Prof. Romano Prodi. L'industria e la Finanza Europee nella competizione internazionale, European University Institute, Florence Italy, XXa Conferenza Jean Monnet 20 marzo 1998

18 Commission of the European Communities, Report from the Commission to the Council and the European Parliament on the implementation of the European Charter for Small Enterprises, COM(2003) 21 final/2, Brussels, 13.2.2003

In the analysis of the relationships of collaboration between SMEs and LE it is necessary to look at another key element of our system represented by the participation and the influence of the associations and the governmental agencies (local, national and those of the EU) on the economic activity.

Between the other factors that concur to explain the mentioned phenomenon we mention the variety and the relative weakness of the markets and the financial specialist (above all of those specialized in the support of technological innovations).

The previous considerations on one side place the importance of the SMEs for the harmonic development of the economies and the European societies, suggesting, on the other hand, the necessity to govern the relations SMEs - LE and other players of the economic - social system. Such relations are considered crucial for the consolidation and the development of the European model. In the following paragraph an attempt is made to apply the mentioned model, placing in evidence the weakness and strengths and suggesting possible lines of intervention.

4. The European model

Europe is very far from representing an economic, political, cultural and social homogenous space. Way to harmonization has produced important results on the economic plan and on that of the rules that govern the markets and the fields; many other interventions are necessary for the construction of one European identity.

The European market is characterized by a great variety and articulation and here lies the difficulty to construct a model that can represent Europe like a single truth ([19]). The enterprises operate in various environments of culture, history, ethics, religion and therefore their development processes differ as they are bound to the environment in which they exist ([20]).

Beyond the diversity, there also exist homogeneities characteristics tied to the fact that all the enterprises work and survive on the base of rules and processes that are identical in any context.

Every enterprise can operate only by creating economic value, and only in that way the possibility of success and long enterprise life is ensured.

A factor that joins our societies in countries of the EU is that they are characterized by like networks of relationships between SMEs ([21]) and LE where the relationship with the market and the public turn out fundamental and where the intermediate subjects like the Chambers of Commerce, the category associations, the municipalities, etc. play a fundamental role.

The introduced hypotheses concur to construct a model that can be defined " European " in contrast with the more atomized systems, (emblematic for all that Anglo-Saxon). The European

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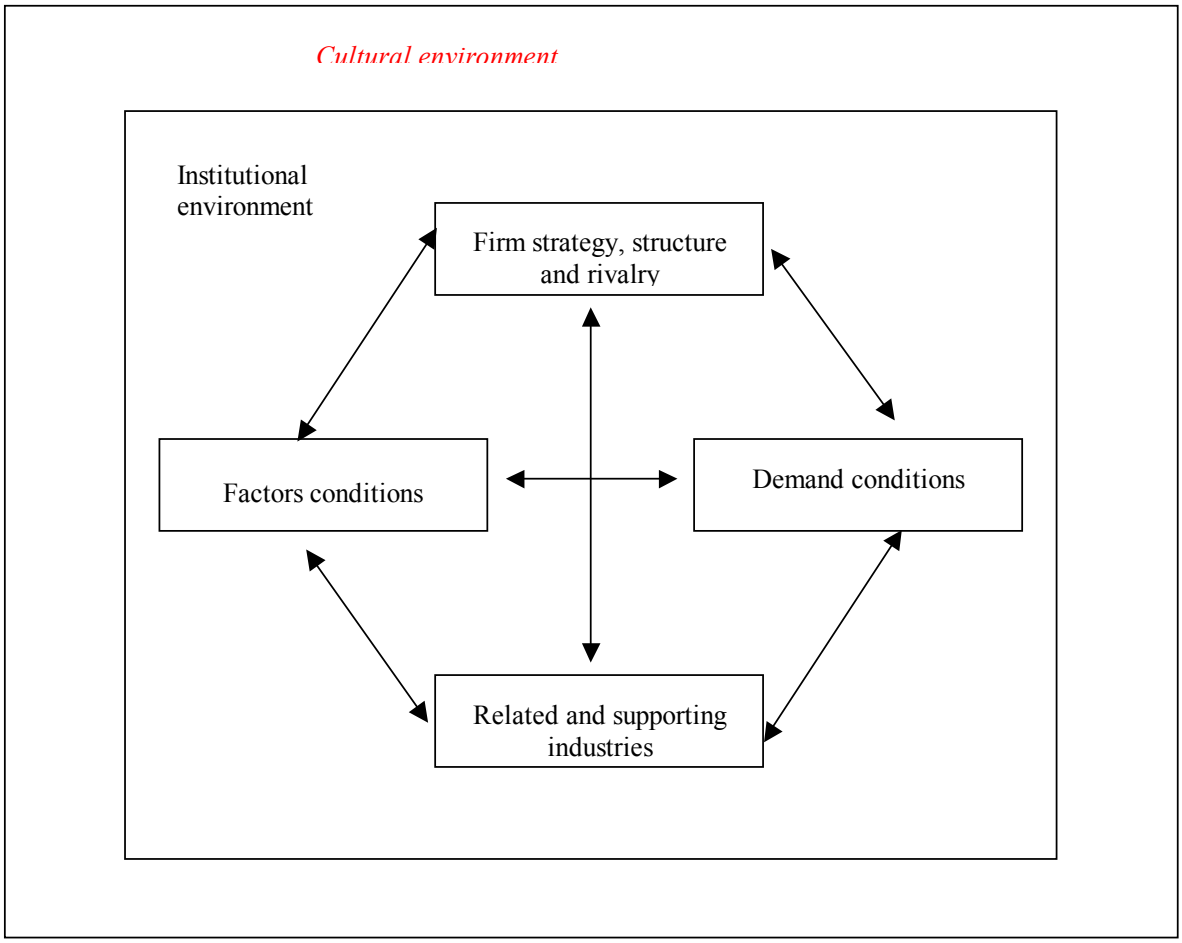
19) Helen Bloom, Roland Calori, Philippe de Woot, Euro Management. A new style for the global market, British Library Cataloguing in Publication Data, London, 1994, pagg. 9-10

20) Murray Steele, The European Brewing Industry, in The Business of Europe. Managing Change, edited by Roland Calori and Peter Lawrence, British Library Cataloguing in Publication Data, London, 1991 pag. 28

21 Acronym PMI, used in the research, refers to the Commission Recommendation (COM(96) 261 final) from 3 April 1996 that provides a definition of small and medium-sized enterprises (SMEs).

model does not constitute only a way to organize the economic activity; it informs the European societies also under a political and cultural profile.

Fig. 4 - Determinants of European advantage (With the institutional and social variables)



Our elaboration from Michael E.Porter "The competitive advantage of nations" London, Basingstoke MacMillan, 1990

It represents the essence of our way to make economy, to conceive the society and we can see that its advantages and limits are evidenced from the actual conjuncture. This system is characterized by an elevated resilience that has allowed to mitigate the shocks and to have less tough fluctuations. The European model up to now has allowed to overcome deep economic crises.

To this fundamental advantage exists a disadvantage i.e. a greater rigidity that penalizes development and innovation, above all in periods of growth of the world economy.

The European model would seem fit to manage periods of recession, while it would lose competitiveness in the periods of expansion causing unbearable differentials of economic development and social dynamism.

The used hypothesis is that the ability to manage the crises and the rigidity of the system are not two aspects of the same system that cannot be eliminated, but that the European model could be strengthened with entrepreneurial innovations without threatening the basic structure of the system that till now has showed social stability and ability to react in dramatic situations.

In order to improve the model without modifying it, it is necessary to understand the working mechanisms not only from the economic point of view but also the non economic view. This is not easy because:

1) the problem is economic and non economic and therefore interdisciplinary

2) there are local peculiarities that render it difficult to come up with a common model.

In order to describe " the European " model we use as a base the model of Porter ([22]) "modified " because we want to consider the extra economic element: corporate governance and social organs. The model of Porter has been integrated with the variables that concern the institutional environment of the enterprises (structures and mechanisms of corporate governance) and to the cultural environment.

5. Four macro-variables of European advantage

In order to analyze the determinants ([23]) of the enterprise model that allow a geographic area (a region in our case) to gain international success we can consider four macro-variables, that shape the environment in which local firms compete that promote or restrict the creation of competitive advantage:

a. Factor conditions; The national's position in factors of production, such as skilled labor or infrastructure, necessary to compete in a given industry;

b. Demand conditions; the nature of home demand for the industry's product or service.

c. Related and supporting industries; the presence or absence in the national of supplier industries and related industries that are internationally competitive.

d. Firm strategy, structure and rivalry; the conditions in the nation governing how companies are created, organized and managed and the nature of domestic rivalry.

The determinants, individually and as a system, create the context in which a_geographic area's firms are born and compete

Firms gain competitive advantage:

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[22] The model to which reference is made is the "diamond" of the competitive advantage of the nations Michael E.Porter "The competitive advantage of nations" London, Basingstoke MacMillan, 1990.

[23] Michael E. Porter, Il vantaggio competitivo delle nazioni, Arnoldo Mondadori Editore SpA, Milano, 1991, pagg. 93 etc..

- Where their home bases allows and supports the most rapid accumulation of specialized assets and skills, sometimes solely due to greater commitment;
- When their home base affords better ongoing information and insight into product and process need;
- When the goals of owners, managers, and employees support intense commitment and sustained investment;
- Because their environment is the most dynamic and the most challenging, and stimulates and prods firms to upgrade and widen their advantages over time.

Geographic areas are most likely to succeed in industries or industry segments where the "diamond" ([24]) is the most favorable.

This is not to say that all a geographic area's firms will achieve competitive advantage in an industry. In fact, the most dynamic the regional environment, the more likely it is that some firms will fail, because not all have equal skills and resources nor do they exploit the geographic area environment equally well.

The "diamond" is a mutually reinforcing system. The effect of one determinant is contingent on the state of other. Advantages in one determinant can also create or upgrade advantages in other.

6. The other variables

The determinants of region advantages shape the environment for competing in particular industries. In the histories of most of the successful industries chance events also played a role.

Chance events are occurrences that have little to do with circumstances in a region and are often largely outside the power of firms (and often the national government) in influencing competition. Some examples which are particularly important in influencing competitive advantage are the following: acts of pure invention; major technological discontinuities; discontinuities in input costs such as the oil shocks; significant shifts in world financial markets or exchange rates; surges of word or regional demand; political decisions by foreign governments, wars etc..

Chance events are important because they create discontinuities that allow shifts in competitive position. They can nullify the advantages of previously establishment competitors and create the potential that a new region's firms can replace them to achieve competitive advantages in response to new and different conditions.([25]).

Change events ply a role partly by altering conditions in the "diamond".

Some characteristics of the enterprise models seem to be strictly bound to the institutional environment and cultural that generated them. Therefore it is necessary to integrate the "diamond" with the analysis of the institutional environment and the historical-cultural environment.

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[24] The "diamond" is the a term we will use to refer to the determinants as a system.

[25] Cfr. S. Vaccà, Scienze e tecnologia nell'economia delle imprese, F. Angeli, Milano 1989

Institutional environment can influence (and be influenced) each of the four determinants either positively or negatively.

Factor conditions are affected through subsidies, policies toward the capital market, policies toward education, and like. Government's role in shaping local demand conditions is often more subtle. Government bodies establish local product standards or regulations that mandate or influence buyer needs. Government is also often a major buyer of many products in a nation, among them defense goods, telecommunications equipment, aircraft for the national airline, and so on. The way this role as a buyer is played can either help or hurt the region's industry ([26]).

The nature of appropriate government policies, and especially the priorities among them, varies with the stage of development. While economies at an early stage depend on progress in achieving macroeconomic stability and improving basic factor conditions (e.g., administrative and physical infrastructure), economy's advantages rest on such things as deep clusters and policies that encourage innovation and vigorous local rivalry.

While the role of institutional environment in creating and sustaining national advantages is significant, however, it is inevitably partial. Without the presence of underlying regional circumstances that support competitive advantages in a particular industry, the best policy intentions will fail. Governments do not control regional competitive advantage; they can only influence it.

The historical-cultural environment represent the system of values that influence competitive success and characterize the social collectivity where enterprises work.

Social norms and values affect the nature of home demand, as well as the goals of managers and the way firms are organized. Social and political history influences the skills that have been accumulated in a region and the institutional structure within which competition operates. These aspects, which some call cultural, are often closely intertwined whit economic factors. Cultural factors are important as they shape the environment facing firms. These factors influence is important to competitive advantage, however, because they change slowly and are difficult for outsiders to tap or emulate.

7. The European competitive advantage

The model reflecting many diverse elements of a geographic area, measures how well the region creates and transmits these forces to its firms, as well as the presence of the insight and tools needed for competitive advantage.

The individual determinants that define the regional environment are mutually dependent because the effect of one determinant often depends on the state of other. Sophisticated buyers will not translate into advanced products, for example, unless the quality of human resources permits companies to meet buyer's need.

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[26] M. E. Porter, How Government Matters: Influences on Prosperity, Competition, and Company Stretegy, All-Academy Session, Academy of Management Washington, DC August 6, 2001

Selective factor disadvantages will not motivate innovation unless rivalry is healthy and company goals support sustained investment. At the broadest level, weaknesses in any one determinant will constrain an industry's potential for advancement and upgrading.

The determinants of European advantage constitute a complex system, through which a great many national characteristics influence competitive success. Yet the system is an evolving one, in which one determinant influences others.

The determinants of competitive advantage reinforce each other and proliferate over time in fostering competition in an industry. As this mutual reinforcement proceeds, the cause and effect of individual determinants becomes blurred. The "diamond" that we use to illustrate the determinants is symbolic of these relationships. In reality, every determinant can affect every other determinant, though some interactions are stronger and more important than other.

Two elements:

- Domestic rivalry and
- Geographic industry concentration

have especially great power to transform the "diamond" into a system ([27]), domestic rivalry because it promotes upgrading of the entire national "diamond", and geographic concentration because it elevates and magnifies the interactions within the "diamond" ([28]).

The other variables influence the model in different ways. We start to illustrate the model with the factor conditions.

Investments in generalized factors, such as transportation infrastructure and the secondary school system, are made in virtually every geographic area, normally as a natural outcome of public policy at various levels of government. Though generalized factors are not a sufficient basis for national advantage in advanced industries, they serve as the foundation from which advanced and specialized factors are created. Sustained investment in generalized factors is therefore essential to regional economic progress.

What is important for competitive advantage is usual effective mechanisms for creating and upgrading factors that are advanced and specialized, such as a world-class research institute in composite materials technology.

Investments in advanced and specialized factors are governed in more complicated ways. Unlike generalized factors, investments in them are far from evenly spread across regional economies.

Where do advanced and specialized factors get created and upgraded? The other determinants of European competitive advantage have an important if not decisive role.

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27 About the systems theory cfr.: P. Mella, Dai sistemi al pensiero sistemico, Franco Angeli, Milano, 1997, pagg. 26 e segg.

28 G.L. Clark, M.P. Feldman, and M.S. Gertler, eds., Location, Clusters, and Company Strategy in The Oxford Handbook of Economic Geography, New York: Basic Books, 2000.

Factor creation is perhaps most strongly influenced by domestic rivalry. A number of local competitors in vigorous competition stimulates the rapid development of skilled human resources, related technologies, market-specific knowledge, and specialized infrastructure.

Firms invest in factor creation themselves, singly or via trade associations, under pressure not to fall behind. As important, however, is that a group of domestic rivals also triggers special programs in local schools and universities, government-supported technical institutes and training centers, specialized apprenticeship programs, industry-specific trade journals and other information providers, and other types of investment in factors by government and other institutions.

The presence of a number of rivals not only signals the importance and potential of the industry, causing individuals and institutions to take notice, but also reduces the risk of investing in creating specialized facilities and skills. The presence of several domestic rivals may also elevate the political support and consensus for investments in creating specialized factors by government.

These influences of a group of domestic competitors on factor creation are important and common, but far from automatic. Local firms must perceive the need for constantly upgrading the pool of factors, and work actively to stimulate investments in them.

The conditions of factors and the rate at which they are created are also shaped by the presence of related and supporting industries. Such industries possess or stimulate their own mechanisms for creating and upgrading specialized factors. Some of the factors are usually transferable.

Another influence created on the particular types of factors is demand conditions. A disproportionate level of demand for a product, or unusually stringent or sophisticated demand, tends to channel social and private investments into related factor creation. Advanced and specialized factors of production grow up to help meet pressing local need. Heightened or stringent local demand raises the likelihood of consensus in government for making factor-creating investments. It also focuses the attention of individuals and firms on the need for making private investments.

Home demand conditions for an industry reflect many geographic area attributes such as population, climate, social norms, and mix of other industries in economy. Yet the other determinants play an important role.

The analysis, exemplificative and not exhaustive, explains how determinants are mutually dependent because the effect of one often depends on the state of other.

Geographic areas achieve success in international competition where they possess advantage in the presented model. Because the requirements for success in industries and industry segments differ widely, and because a limited pool of resources precludes success in all industries, regions can enjoy dominance in one industry and fail miserably in another. In the most successful industries, it is often hard to know where to start in explaining competitive advantage: the interplay and self-reinforcement of the determinants are so complex as to obscure cause and effect.

The influence and reinforcement of the determinants leads to the phenomenon of clustering, and to the prevalence and importance of geographic concentration.

The system is dynamic and a geographic area has the prospects for competitive advantage if the underlying determinants are favorable or can be developed.

The process of creating and sustaining competitive advantage is one where history matters. The base of already-established industries, institutions, and values affects the process of industry development, as do change events ([29]).

8. The models developed in the single nations

Although the likeness, to imagine an European model with the competitive advantage is an abstraction. The models developed in the single nations are very articulated.

Enterprises can acknowledge at the same time homogeneity characteristic and diversity. The homogeneity is due to the fact that every enterprise works and survives on the base of rules and of processes that are identical in any context.

But, at the same time, every enterprise is the product of culture, society, history, ethics, religion prevailing in the Country in which it is found. It is therefore the result of the environment in which it is been established and operates ([30]).

The context is not from considering the internal environment in which the enterprise must operate, but with the characteristics that the environment produces ([31]).

It penetrates in the enterprise through the relationships with all stakeholders and the relations with the market.

In this conception the environment alone does not represent the contour for the enterprise, but it is an active force that enters to compose the characteristics of the enterprise and it conditions the way to operate.

The differences between Countries reflect various factors, but two of these must be emphasized:

1) the normative picture, with particular reference to its fiscal aspects and of the job;
2) the efficiency of the financial markets

The continuing advantage in an industrial field is the glare of a diamond that works well, but the system only very rarely already established from the beginning. An advantage is a specific determinant which often supplies the push for the formation of an industrial field in a geographic area, and does not relate to one single enterprise. Once begun, a process is started in which

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[29] About the interaction between enterprise and environment cfr. G. Colombo, Da Atena a Hermes: Pensare e agire la strategia, in Gestione Strategica d'impresa, ISDAF, Milano, 1993, pagg. 8-12

[30]) About environment cfr.: G. Airoldi, G. Brunetti, V. Coda, Economia Aziendale, Il Mulino, Bologna 1994 pagg. 267-271

[31]) L. Guatri, S. Vicari, Sistemi d'impresa e capitalismi a confronto. Creazione di valore in diversi contesti, EGEA, Milano, 1994, pagg. 1-3

contenders are attracted, other determinants become important and the advantages accumulate, if there are necessary conditions.

The formation of a regional industrial sector normally is activated from one of three determinants:

- an advantage in the factors of the production, the local availability of the factors, in particular of the natural factors, is what often attracts the interest thus starting the beginning of an industrial field;
- the industrial fields correlated between them and those of support;
- the conditions of the demand, a substantial local demand, or much specific one constitutes a first stimulus for the formation of local enterprises.

The ability to sow a seed starts them, to grow until becoming a competitive industrial field in a geographic area, will depend on the fact that advantages already exist or can be created others determinants.

With the aim to complete the search it is possible to make reference to certain models, in European Countries:

a) Italy, pure expression of Latin Europe, with its creativity, but also with weaknesses and to times preventions towards the capitalistic enterprise;

b) Germany, like example of succeeding of the European economy, based on some characters which have insufficient replies in the continent;

c) France, the country of the trained economy ", historically characterized by the dualism of supported public enterprises from a efficient often judged bureaucracy and of private companies that try to adapt the Anglo-Saxon models to a world permeated from deep and various historical roots.

9. Italy and the industrial districts

The geographic fragmentation characterizes Italy in a particular way ([32]). There seem to be two aspects of greater moment of this fragmentation: on one side the articulation of the production in very defined geographic areas and on the other side the ability to operate in areas of market contradistinctive from logic of niche: for example where design, style, fashion, esthetic quality in kind are important, where that there's a need of flexibility, change, adaptation to the tendencies and personal taste ([33]).

The development model that has been asserted in Italy is that one of the industrial districts. The vicinity of enterprises of the same kind is not only a phenomenon of geographic agglomeration, but it represents instead a model of industrial organization that is quite unique in the world.

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[32] F. Visconti, Le condizioni di sviluppo delle imprese operanti nei distretti industriali, EGEA, Milano, 1996.

[33] L. Guatri, S. Vicari, Sistemi d'impresa e capitalismi a confronto. Creazione di valore in diversi contesti, EGEA, Milano, 1994, pag. 11

The model is similar to that one of a productive organization that carries out its functions within only one real enterprise, but in that an enterprise-area constituted of companies connected between themselves to be part of a same wider production process. In this virtual enterprise the several processes are carried out in more plants, pertaining to various legal subjects, in part along the productive row, part in parallel series, but in a coherent way, as if planned in advance. All this seems to have grown through the process of auto-organization. Some economies of area which are a result of virtual agglomeration of enterprises are trust, economy of scale, absence of economy of scale, economy of flexibility, the economies of information, the advantages of attraction, the competitive intensity.

Often it has been verified that the SMEs, grouped and operating in network, obtain very positive results and survive better in turbulent markets. Several examples of districts and networks include the regional districts formed by enterprises with connected activities and operating in the same geographic areas.

The advantages deriving from this type of grouping are:

- the SMEs can work individually but belong to a wider and more substantial entity and more often characterized by geographic vicinity (fundamental for the stimulus of the entrepreneurship, the innovation and the competitiveness).
- advantages for the participants for example the sharing of the technologies, the access to better infrastructures etc
- the individual parties reinforce each other, thanks to a infrastructure base created for them by the governments or the competent agencies

10 Germany and the "social economy of market"

In the German market the guideline to the relations is influenced by a strong interest in the demand and in the offer relating the technical dimension of the product. The German clients are in fact demanding and pay a lot of attention to the functional characteristics and the corresponding quality of the products. This aiming of technical quality in many fields, especially in the production of industrial goods, led to a cooperation between suppliers and clients, expecially in the important processes of research and product development. All this involves establishing a strong and stable relation between the enterprises and the customers, relations fed from mutual desire of a constant technical improvement of the offer and from the search of continuous economies due to the experience curves.

In Germany a communitarian vision of the society and the economy has been asserted that has endured influences that derive from the history of German industrialization ([34]). The German communitarian spirit, didn't lead to a participation of the State in economy, as in other European Countries, brought about a rather advanced system of social regulation, the definition of social co-habitation rules and working relations, but without interference by the State. The relationship

[34] cfr. Alfred D. Chandler Jr., Dimensione e diversificazione. Le dinamiche del capitalismo industriale, Il Mulino, Bologna, 1994, pagg. 649 e seguenti. Edizione originale: Scale and scope. The Dynamics of Industrial Capitalism, Cambridge (Mass.) - London, Harvard University Press, 1990

between enterprise and workers that characterizes Germany is the strong participation of workers in business decisions.

In Germany a communitarian vision of the society and the economy has been asserted that, deriving from the "center european" culture, which later was influenced by German industrialization history. The liberalism of the German economy melted away by social orientation, as a response to that part of the German culture awarded by the Marxist culture, like the rest of the great part of the Western European countries.

The German vision is that to favor the well-being of the society, favoring the " producers ".

The control of the enterprise is made of complex equilibrium between shareholders, institutions related to the workers and public structures, with the active coordination of the banks. In Germany the banks carry out a effective role of having direct interest in the life of the enterprises possible and legitimate due to their participation in the capital , due to the substantial financial means that are put to the disposition of the enterprise for the effective management and the strategic choices ([35]).The German industries in which the banks exercise an important function in the creation and the development of an enterprise furnish the best one, and practically the only one, financial example of Capitalism.

Between the others stakeholders participants to the control we find the workers and the trade unions: that happens through a congestion model, than according to diffused opinions it has raised important results. The trade unions, the company board (in which the workers have the right to obtain a lot of information and must be consulted for all the problems relating to the personnel) and the representation in the Council of Surveillance are the three channels through which the congestion finds practical application. In no European country a " structured social contract " exists so structured and effective, of which the results are very visible: from the substantial absence of conflict (and therefore of strikes), and a efficient participation facilitated from continuous and important formation activity.

The cooperation between enterprises forming a part of this model defined at times as " social economy of market ". The entrepreneurial associations carry out important functions at the sector level, also with regard to the common holding of means and instruments for research and development. The large enterprises act as stimulus and towing for the SMEs, of which the German textile is a very rich one. This happens through supplier relationships and sub-suppliers, by means of the commercialization to the foreign country of their products. The SMEs find in the LE (like in the category associations) stakeholder that they have meaningful weight on their control.

In order to complete the model it is necessary in a generalized manner to remember the function of connection and address carried out by the State and by Public Administration. According to the principles of "economy of market", the State does not interfere with the markets and not even in the relationships with the enterprises, but plays the role of the legal, social and monetary guarantor.

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35 From the analysis of the structure of the share possession in Germany for a long period we can see the increasing role of the banks even if the banks have always tried to hide the industrial participation in the own financial, A. Banfi, R. Locatelli, C. Schena, Il sistema finanziario tedesco, Il Mulino, 1991, pag. 248)

11. France and the administered economy

The French economic model has been called " Capitalism trained " for the essential function of the State and Public Administration. In this Country the State and Public Administration do not represent only a completion of the private entrepreneurial activity, as in kind it happens, but are a fundamental motor of the economy.

Public participation manifests in several forms, from the direct management of the enterprises, to the management of the mixed enterprises, to the distribution of the directly carried out services, to the application of incentives administrative, fiscal, financial and social. The phenomenon in a large way relates to a type of public enterprise, for example, quite diverse from that Italian: regarding managerial criteria of management and a low degree of political governance ([36]). The " Grandes Ecoles " (which the E.N.A. and the Ecole Polytechnique) form an illuminated and efficient bureaucracy. The State is often a demanding shareholder, that controls the results; and if they are not achieved, it changes the management.

The control of the private companies is characterized by a determining influence of the shareholders ([37]). The others stakeholders (banks, staff and mayoralties) do not have in truth very high influence.

12. Strengths and weaknesses

The European market, like already specified, is peculiar because is not conceived like a single substantially homogenous truth, but in terms of variety and articulation, under the ethnic, political, social profile, various styles of life and consumption models.

This diversity is perhaps the more important characteristic of the European markets and has been the fact that has historically characterized industrialization in Europe.

The European model is better lent to face the crisis situations; moreover it is characterized by sufficient flexibility in order to adapt itself to various cultural, social and economic contexts, therefore making it potentially " exportable " to support the foreign politics of the EU.

In the international cooperation and in the preparation of the future increase of the boundaries of the EU our model is potentially exportable to the countries that will enter in it because, is less monolithic and takes into consideration the local members and a variety of actors, thus considering the variety and the articulation of the European truth.

It introduces the following characteristics:

- the European model succeeds to adapt itself to the variety of the regional and national situations better than Anglo-Saxon;

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36) Some authors are more cautious in judging the the French " administered economy": cfr. A. Aftalion, La faillite del l'Economie administré. Le paradoxe français, Presse Universitaires de France, 1990 t

37 Jonathan Charkham, Keeping good company, A study of corporate governance in five countries, Claredon Press, Oxford, 1994, pagg. 126-127

- it is potentially more adaptable to the economies characterized by great variety and articulation (complexity);
- It is a factor of social stability.

The model introduces also limits and weaknesses; in particular it does not seem to promote in a consisting way the dissemination of the radical innovations in the economic system.

13. The improvement of the model

Small businesses represent the vast majority of businesses in Europe. However, one of the difficulties is that small businesses and their employees are not always good at making their concerns known. They may feel that they have more pressing concerns than talking to government. As a result, consultation of small and medium sized enterprises in policy and law making remains low across the EU.

In order to improve the model it is necessary to consider the following aspects:

- Improve the coordination between governments and local and international organizations on the subject of programs of industrial development aiming initiatives to support the growth of the SMEs;
- Better legislation and regulation, all governments should be committed to improving and simplifying regulation;
- promote the support services and financial services, including those offered by the intermediary subjects (for example, organizations of mutual assistance, entrepreneurial associations, centers of technical assistance, etc.) in order to stimulate the international cooperation and to offer a better access to information, financial and technological resources and new markets;
- favor the politics about SMEs which can promote the development of this sector on the long run and encourage working in network. The political and institutional mechanisms that favor the large enterprises, often controlled by the State, to disadvantage of the small enterprises, in particular in the fields that do not answer to the characteristics of economies of scale or other conditions of "natural monopoly", must be removed ([38])
- Teaching Entrepreneurship, promote the role of education and training of the staff, fostering entrepreneurial attitudes starts with education.
- Availability of skills, small and micro enterprises increasingly consider lack of skilled labour as a major hindrance. Over 20 % of micro enterprises and almost 30 % of small enterprises see this as their number one constraint ([39]).
- Strengthen the technological capacity of small enterprises

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[38] La carta di Bologna sulle politiche concernenti le PMI , adottata il 15 giugno 2000

[39] The number of micro enterprises considering lack of skilled labour as a major constraint has increased by 150 % from 1999 to 2001. Source: Observatory of European SMEs 2002/1 "Highlights from the 2001 Survey".

The economic development depends on the thin interaction between SMEs and LE, in which the SMEs carry out an important role in the economic and social development and in the creation of workplaces.

As we have already said previously the innovation is a key factor of the industrial competitiveness.

The small and medium enterprises are important carriers of the innovation. The development of the SMEs can give a determining contribution to the economic and social progress, to new economic activities, the creation of workplaces and to the competitiveness. It is necessary to simplify the access to the advanced technologies that they need and to the possibilities offered by the research programs of the EU.

The participations would have to avoid to upset the model, pointing instead at the insertion of conditions that facilitate the innovation on one side, or better the diffusion of the innovations, the transfer of technology, also through relations LE - SMEs on the other side the flexibility of the system, which should not be understood as a convergence towards one only model, but as the ability of every model to adapt itself to the change without losing its specific identity.

Public Administration and the associations can play an important role in the planning and realization of such interventions. It's a strategic challenge that represents a new way to conceive territorial politics . In order to make that happen it is necessary not only to invent new ways of collaboration between LE and SMEs, but also between private enterprises, their representations and Public Administration, on different levels.

Considering this the importance of the SMEs for the harmonic development of the economies and the European societies on one side, on the other, the need to govern relations SMEs- LE and other actors of the economic - social system. Such relations are considered crucial for the consolidation and the development of the European model.

If Europe can provide a constantly improving environment for its small businesses and stimulate and exploit its entrepreneurial potential, then its future competitiveness will be much more assured.

Figure 5 – Summary table of aid for SMEs

FINANCIAL INSTRUMENTS, COMMUNITY PROGRAMMES AND SMEs				
Community action	**Estimated amount allocated to SMEs in euros**	**Estimated number of SMEs**	**Estimated SME participation in projects overall**	**Estimated SME share of the total budget**
FINANCIAL INSTRUMENTS				
EIB Global loans (1997-2001)	**22.5bn**	**100 000**		
EIF Guarantees (1994-2002) **- of which "Growth and Environment" (1995-2002)** *Estimated loan amount* *Estimated guarantee amount* *EC budget contribution*	**1 382m** **1 300m** **649m** **25m**	**5 500**	**100%**	**100%**
SME Guarantee Facility (1998-2000) *Estimated loan amount* *Estimated guarantee amount* *EC budget contribution* **SME Guarantee Facility (2001-2005)** *Estimated loan amount* *Estimated guarantee amount* *EC budget contribution*	 **9 822m** **2 526m** **199m** **8 000m** **2 500m** **203m**	**120 585** –	**100%** **100%**	**100%** **100%**
EIF Venture capital instruments **EIF own resources (1997-2002)** **EIB mandated resources (1997-2002)** **ETF Start-up Facility (1998-2000)** **EFT Start-up Facility (2001-2005)**	 **150m** **Up to 2 000m** **168m** **92m**	 **700** **1 250** **206** –	 **100%** **100%** **100%** **100%**	 **100%** **100%** **100%** **100%**
Seed capital action (2001-2005)	**22m**			
JEV (1997-2002)	**57m**	**298**	**100%**	**100%**
STRUCTURAL FUNDS (2000-2006)				
Objectives, Community initiatives and Innovative actions (2000-2006)	**16bn**			**11%**
RESEARCH AND DEVELOPMENT				
5th RTD Framework Programme (1998-2002) **- of which specific SME measures**	**1.463bn*** **544m**	**11 911** **7 296**	**38%*** **100%**	**13.5%* of the budget of the priority thematic areas** **100%**
6th RTD Framework Programme (2002-2006) **- of which specific SME measures**	**2.2bn** **430m**		**100%****	**Min. 15% of the budget of the priority thematic areas** **100%**
VOCATIONAL TRAINING				
Leonardo da Vinci *Participation in the first three years (2000-2002) of the 2nd phase of the programme (2000-2006) – Procedures B and C*	**25m (SME contracts)**		**9% SMEs as project promoters** **18% overall involvement of SMEs in projects**	**10.5%**
INTERNATIONAL COOPERATION AND EXPORT PROMOTION				
Business Support Programme (1998-2001) *Phare contribution*	**42.7m**			
SME Finance Facility (1999-2002) *Estimated partners' contribution* *EC budget contribution*	**1 430m** **241m**		**100%**	**100%**
AL-INVEST (2002-2006)	**46m**			
Asia-Invest (2002-2005)	**35m**			
EBAS (1999-2002)	**20m**			
PROINVEST (2002-2008)	**112m**			
Gateway to Japan (2002-2005)	**3.5m / year*****	**200-250 / year**	**SME-oriented (>95%)**	
ETP Japan	**7m / edition*****	**35-50 / year**	**Open to SMEs (+/- 50%)**	
ENVIRONMENT				
LIFE financial instrument (2002)	**28.8m******	**141******	**38%**	**42%**

(Source: Commission of the European Communities, Creating an entrepreneurial Europe. The activities of the European Union for small and medium-sized enterprises (SMEs) COM (2003) 26, Brussels, 21.1.2003 pag. 11)
N.B. This table gives an overview of various types of Community action (grants, loans, guarantees, etc.) covering different periods. The amounts cannot, therefore, be added together. It includes major instruments and programmes, but is notintended to be exhaustive. The figures are estimates. For guarantee instruments, the *estimated guarantee amount* is the amount actually guaranteed by the EIF thanks to the *EC budget contributio*n. The *estimated loan*

amount is also provided.
* Data till 2001 as regards Shared-cost projects; definite data as regards specific SME measures.
** Part of the funding used to cover the costs of research performers for their work, to the benefit of the SMEs who own the results.
*** No direct grants paid.
**** SME being beneficiary or partner and according to a broad definition of SME (incl. federations, research centres, etc.).

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