CLUSTERING 06 (ISTANBUL CONFERENCE 25TH-26TH MAY): KEYNOTE SPEECH BY MR. ANDREA FORTI

Good afternoon, ladies and gentlemen,

I am very pleased to take part in this Clustering Conference. I thought it would be useful to address what seems to me the key question we must answer: is clustering still beautiful? And if it is, what policies are best suited to support it?

To answer these questions, I will draw on some useful concepts from the toolbox of economic theory and I will refer to some recent empirical findings concerning Italy and Latin America. The sources I'm using are quoted in the written version of my speech.

Clusters are critical masses of sectorally specialized and geographically concentrated activities. Different kinds of cluster have been historically detected. Generally speaking, they include a large number of interrelated suppliers distributed along the whole value chain, providing goods and services including final goods, machinery, components, services (including trading) and technologies. Very often, local public institutions, research institutes, training centres, professional associations and other bodies provide firms in the cluster with a broad range of services and support activities. Well-known examples are the Italian industrial districts that produce silk, garments, footwear, wooden furniture, buttons, ceramic tiles, glasses and so on.

The economic advantages of clustering, which have been labelled as "collective efficiency" (CE), stem from a series of factors which can be traced back to external economies and joint action. External economies (EEs) are advantages that accrue to firms as an unpaid side effect of the presence and activity of other firms and entities, due to factors such as: the availability of skilled workers, networks of specialised suppliers of goods and services, traders linking the cluster to external markets (even very distant markets), professional associations, and so on. EEs are "incidental", but other advantages may come from a deliberate force at work which has been called joint action (JA). The nature of JA is vertical when it links producers, their suppliers and subcontractors, traders and buyers. The nature of JA may also be horizontal when it links two or more producers (for example, joint marketing of products, joint purchase of inputs, order sharing, common use of specialised equipment, joint product development, exchange of expertise and market information). JA can also involve other actors such as service providers, training institutions, professional associations, and so on.

Usually the two aspects of CE go together, in proportions that vary greatly from one case to another.

Once upon a time, clustering was thought to be unquestionably beautiful, enabling small and medium-sized enterprises (SMEs) to be competitive despite their size and therefore to contribute to the well-being of their host territories. Governments and international organisations started seeing clustering as a recipe for growth for developing economies, and several support actions have since been funded and implemented by national and international bodies, including the European Union (EU).

But then globalization happened, and a lot more attention was devoted to another form of coordination of economic agents: the value chain.

Globalization - the world-wide integration of products, services and factors markets - was brought about by the interplay of, firstly, a radical wave of innovation driven by the ICTs and, secondly, a wide-ranging process of market liberalisation, which has quickened pace considerably since the early nineties. Globalisation induces accrued specialisation and division of labour, at a time when vertical disintegration and subsequent outsourcing become possible over very long distances. And while transnational corporations and big firms started exploiting this opportunity, new producers emerged on the world scene. China and India are only the biggest and most mentioned ones.

Such dramatic changes forced the sectors that produced for global markets to shift towards governance structures that were more suitable for coordinating economic agents whose activities were now dispersed, potentially worldwide. The value-added chain concept – usually referred to as value chain (VC) – seems the best way to describe the new, ever-changing situation. A VC can be described as a device for coordinating decisions about 'what' should be produced, 'how' and 'when' it should be produced, 'in what quantity' and of course 'at what price'.

In its most basic and general form, a VC is 'the process by which technology is combined with material and labour inputs, and then the processed inputs are assembled, marketed and distributed'. A VC can consequently be described as a series of horizontal and vertical links between economic agents which can be independent from one another or not. At each link one or more of the chain's activities is carried out, and a contribution is given to the total value added of the whole chain. 'A single firm may consist of only one link in this process, or it may be extensively vertically integrated…'.

Therefore, describing a VC is a matter of technology, organisation and markets, but it is also, obviously, a matter of appropriation of the chain's value added.

The governance of the VC, then, becomes crucial. Coordination can take place through market or non-market relationships.

Market relationships here means the sale of more or less standardised products, whose characteristics can be easily codified and described and which do not require customisation.

Non-market relationships may be of three types: the first type is a network, between firms of more or less equal power, the second type is a quasi-hierarchy, between firms that are legally independent from each other, but a leader of the chain exists and the others are subordinated to it, and the third type is a hierarchy, where a firm is owned by another firm (or there is only one vertically integrated firm).

It is now clear that a single firm may be part of a cluster focused on local markets, but it is most likely that SMEs belonging to clusters are also part of VCs – which very often span the whole world, and are therefore called global value chains (GVCs).

So, we can now come back to our initial key question on clustering: in such a context, does clustering help SMEs to maintain and improve their competitiveness?

According to the most recent theoretical and empirical studies available, the answer seems to be: yes, but not always, and when it does, it doesn't always necessarily help to the same extent.

To see why, we must take a look at the concept of competitiveness. It is widely agreed that there is both a 'high road' and a 'low road' to competitiveness. The 'low road' is chosen when firms compete by squeezing wages and profit margins, which is quite often the case in developing countries. The 'high road' firm competes by improving productivity, wages and profits.

The choice between the two depends on a firm's ability to upgrade, that is, it depends on its capacity to increase the value added of the goods and services it sells; its capacity to appropriate a bigger portion (and possibly a growing share) of the value added generated by the VC.

Four types of upgrading strategies have been identified: the first is process upgrading, or shifting to more efficient processes, for instance by adopting new or updated technologies; the second is product upgrading, or shifting to products with a higher unit value; the third is functional upgrading, or shifting to more valuable functions within the chain, for example from manufacturing to design or marketing; and the fourth is intersectoral upgrading, or moving into a new sector by using the abilities acquired in another activity.

To choose the high road, a firm must adopt an upgrading strategy. Its ability to do this depends on its ability to innovate. And innovation occurs if a firm is capable of accumulating new knowledge, that is, capable of learning.

So the question becomes: what is the impact of different levels of CE (the clustering dimension) and different patterns of governance (the VC dimension) on the capacity of SMEs to upgrade? And what are the possible interrelations between these two forms of organised cooperation between firms?

Some recently available empirical studies seem to show that there is no single answer. There seem to be several answers depending on the sector we are talking about. And this has to do with the typical ways in which knowledge can be transmitted in that sector.

I will try to clarify this point with some interesting lessons that we can learn from a recent study on 40 Latin American clusters, covering a wide range of sectors in four countries.

In traditional labour-intensive manufacturing industries, such as textile, garments, shoes, furniture and ceramic tiles, product and process upgrading were often found, functional upgrading only seldom, and intersectoral upgrading was almost never found. In these sectors, technological knowledge is mainly tacit knowledge, which means that it is difficult to write down in manuals and guides and it is not easily taught. On the contrary, in these sectors knowledge is learned mainly by practice, through examples and training. The Latin American case studies showed that collective efficiency due to clustering helped firms to upgrade their processes and products, mainly through the circulation of information and the labour force propagating tacit knowledge, vertical joint actions with local suppliers and buyers, and multilateral joint actions such as participating in international trade fairs, collecting information on worldwide fashion trends, and facilitated connections with international buyers. Technological innovation was driven by suppliers of machinery and raw materials and came as an externality. The VC governance was mainly of the quasi-hierarchical type, led by large international buyers. These buyers provided support for SMEs to upgrade because products were not standardised and knowledge could not be easily codified. So, the buyers had to rely on the competence of their suppliers, and were somewhat forced to help them enter the GVCs. Functional upgrading was certainly not helped by this kind of governance of the chain, as SMEs tended to be tied into relationships that left them dependent on a small number of large customers.

It is very interesting to note that the same small producers we are talking about were also part of local VCs, supplying their local markets, where the governance was of the market-based type, made up of small buyers ready to buy shoes bearing the producers' brand. It turned out that in these chains functional upgrading was also possible, with positive, albeit weak, support coming from the cluster level.

Other case studies focused on clusters based on natural resources, including a large number of food producers. Here process and product upgrading is strongly dependent on scientific and technological advancements in upstream industries (machinery and tools, plants, seeds, chemicals, and so on). Small producers were again participating in different chains, from domestic to global. The global chains were led by large international buyers, which helped SMEs to meet some international standards, but which didn't support them in their upgrading efforts due to the fact that those standards were codified and easily transmitted. International chain leaders limited themselves to taking on suppliers that complied with the required standards. So global buyers were not an ideal solution for upgrading. On the contrary, case studies showed that product and process upgrading benefited from joint action at the cluster level, for instance, due to public support that eased relationships between SMEs, universities and research centres.

Other case studies focused on clusters specialising in so-called complex products, such as automotive, aircraft, and consumer electronics. Here innovation is a complex task, led by large, scale-intensive multinational firms that invest huge sums in R&D and design and marketing activities and which outsource production globally as well as outsourcing the development of some components. The global outsourcing strategies of these multinationals can shift easily to other suppliers. In the Latin American clusters examined, process upgrading, and to a lesser extent product upgrading, took place in several cases, but functional upgrading was very scarce. And it turned out that upgrading of local SMEs was not supported, neither by the multinational buyer, nor by CE effects at the cluster level. In this case, clustering was not helpful and upgrading was left to the market: local firms willing to upgrade had to contract consultants, buy technological services and so on.

Let's turn our attention now to Italy, which likes to describe itself as the homeland of clusters, which Italians prefer to call industrial districts. Here, again, a wave of recent studies show that globalisation is redesigning industrial districts as a consequence of massive shifts to international outsourcing by firms, including medium and small size. These shifts involve not only traditional sectors such as textiles, garments, footwear and furniture, but also the vast mechanical industry, which is delocalising low value-added manufacturing phases to low cost countries. These shifts are due to a mix of different factors: the search for cost efficiency, the lack of supply in the domestic labour market, especially of skilled professionals, and the need to put down roots in emerging markets. This trend is very often a positive one in terms of competitiveness, being part of an upgrading effort. At the same time, it has displaced a series of areas in which the main source of income and employment was a mass of small and very small manufacturing subcontractors, whose upgrading perspectives are critical.

Some industrial districts (for example, ceramic tiles) are shifting from manufacturing the final product to designing and producing the related specialist machinery and machine tools.

To summarise: clustering and participation in (global) value chains are two possible upgrading strategies that depend on the CE of a cluster, the governance of the VC and the sector-specific patterns of accumulation and transmission of knowledge.

So, clustering might still be beautiful (that is to say, it might still be conducive to upgrading) but not always, and not always to the same extent. It plays a key role in some sectors and for some types of upgrading, but not in other cases.

This leads us finally to some implications for policy making.

First of all, there are no universal recipes.

In order to be effective, policies must be carefully adapted to each case, trying to take into account its specific aspects in terms of: one, sources of technology, and ways to accumulate and transmit knowledge; two, the type of governance of the VC; and three, the dynamic scenarios in terms of markets, competitors, viability of upgrading strategies to avoid the 'low road' and consequent adjustment needs.

If clustering matters, it has to be seen whether collective efficiency can be boosted by supporting joint actions or by increasing positive externalities or both. As an example, it may be necessary to stimulate some missing activities in order to add value to the local supply capabilities. It can then be decided whether to attract investments from outside or to support the start-up of new firms. In other cases, it may be necessary to strengthen the relationships between firms and universities and research centres and/or to fund specific research and development projects.

As a final point, it is useful to stress that all what we have said about clustering has to be put into a dynamic perspective. Globalisation brings continuous changes and consequent needs for adjustment, which involve firms and clusters as well. Policies should support firms and clusters to take the 'high road' to competitiveness through upgrading. The 'low road' should not be an option, even for developing countries. Let me quote one of the biggest Italian producers of garments, who told me two years ago that he was leaving Romania, he said, 'because it's becoming too costly' – and remember that Romania has a per capita income far lower than Turkey's.

So the bell rings for us all, and the discussion in this conference, as well as the clustering strategies and policies we look forward to, should concentrate on ways to favour adjustment in the clusters, not to hinder it.

Thank you for your attention.

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