

# Clustering, Collaboration and Competitiveness

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## Some introductory cautions

The terms cluster and clustering came into vogue 10 or so years ago. They do not represent radical new thinking but were given a major impetus by an American academic, Professor Michael Porter, who concluded, from wide ranging analysis, that specific locations play a vital role in the competitiveness of firms. His definition is that:

*Clusters are geographic concentrations of interconnected companies and institutions in a particular field. Clusters encompass an array of linked industries and other entities important to competition. They include, for example, suppliers of specialized inputs such as components, machinery, and services, and providers of specialized infrastructure. Clusters often extend downstream to channels (of distribution) and customers and laterally to manufacturers of complementary products and to companies in industries related by skills, technologies, or common inputs. Finally many clusters include governmental and other institutions – such as universities, think tanks, vocational training providers, and trade associations – that provide specialized training, education, information, research and technical support.*

There are three points to note in particular from that definition. The first is that there can be a good deal of **variety** in the make-up of clusters (he qualifies cluster descriptions through the terms *for example, often and many*). The second point is that the bodies involved are **interconnected**; and I find it useful to distinguish between involuntary interconnection (such recruiting from the same labour market or using the same specialist freight handler) and active collaboration (perhaps through joint research projects or by setting up training programmes to meet specific skill requirements). The third point is that clusters are **geographic concentrations**.

Porter clarifies this last point by positing that *a cluster's boundaries are defined by the linkages and complementarities across industries and institutions that are most important to competition*. Practically speaking, this can mean that a cluster focuses on a particular city region – the Italian marble industry is a case in point; with activity centered in the area from which the quality raw material used to be quarried (though it now comes from all over the world for processing and is then sold to worldwide users). Alternatively some clusters are spread quite widely – even spanning international boundaries (Porter cites the German chemicals cluster which crosses over into Switzerland).

The caution that derives from this loose and pragmatic definition is that whilst it is eminently sensible for use in describing what already exists, it is far less helpful in setting the initial bounds for an initiative that aims to build a variety of interconnections between

firms and institutions so that the potential benefits of a cluster can be realized. Put simply, where should a cluster initiative start? At the end of this short paper I will offer a number of suggestions, drawing largely on the expertise of my friend Ifor Ffowcs-Williams whose firm (Cluster Navigators) has wide practical experience of animating clusters.

However, to put some flesh on the conceptual bones, I will first describe briefly a variety of clusters that are widely recognised as having made strong contributions to firms' competitiveness. In doing so I will start by considering the organizations that are seen as players in successful clusters. This is followed by a section instancing what actually happens to help achieve increased competitiveness.

## **Some practical examples of cluster components**

It's not easy to find well-documented clusters with the similar characteristics to amenity horticulture. Regrettably, the cluster that I know best is the Cambridge high tech "phenomenon", and I don't think you will find a great deal of interest in learning about its evolution and current status (though I will touch later on some of the activities that help to sustain momentum in the face of burgeoning global competition).

The earliest clusters were found in the industrial quarters, or districts of major cities. The sorts of activities that were located near to each other were watch and clock making, printing, commodity trading, gun smithing, metal founding, and ceramics. One of the few craft-based clusters that still survives today is the jewelry cluster that is found in area of about a square mile adjacent to Birmingham's city centre. When I last studied it, about 15 years ago, the following components were to be found there:

- diamond and gem merchants
- bullion (gold and silver) dealers and stockists
- jewellery designers
- precious stone cutters
- ring and setting specialists
- giftware packaging designers and manufacturers (elegant little boxes!)
- specialist transportation companies offering high security
- the official assay house that validated the quality of silver and gold and gave a hallmark
- the head office of the British Giftware Federation
- a specialist College of Jewelry that taught design and craft skills and was researching the introduction of new technologies
- lots of retail shops that encouraged buyers to come and visit the Quarter from far afield (and by the coachload!).

Another example, this time from a rural area and spread far more widely, is the California wine cluster at its core are large numbers of grape growers who purchase inputs and services locally from:

- specialist vine growers

- fertilizer, pesticide and herbicide specialists
- manufacturers of grape harvesting equipment
- irrigation technologists.

The growers in turn provide the inputs to a large number of wineries in the area and they purchase specialized inputs and services in the form of:

- barrels and bottles
- corks
- printed labels and packaging
- advertising in specialist publications
- event organizers and tourist agencies.

To borrow from Michael Porter again “*A host of local institutions is involved with wine, such as the world-renowned viti-culture and enology programme at the University of California at Davis, the Wine Institute and special committees of the California senate and assembly.*” This reference to the legislature is interesting and may point to the increased leverage that a coordinated cluster campaign, drawing in the diverse range of associated interests, can exert in seeking to secure a favourable regulatory and fiscal framework. I believe that the Scotch whisky industry has been especially adept at this.

A third example that has been cited as an example of good practice is the Danish bacon cluster. It is interesting because it has had to cope with a limited domestic market (80% of output is exported), stringent regulations and a high cost economy. Further challenges come from a sophisticated home market in which high per capita consumption is matched by price sensitivity and concerns about health and animal welfare. This cluster has evolved an advanced and cluster wide institutional framework. One trade association covers the whole production chain and equipment suppliers. There are also:

- four farmer-owned slaughterhouses (with downstream processing)
- a breeding initiative funded by a food levy
- an extensive programme of pig related research and effective technology transfer mechanisms
- a network of advisory centres – providing both specialist information and advice on business development issues
- an innovative feed supply sector
- specialist equipment suppliers
- firms offering specialist logistics
- effective regulation to underpin quality practices across the cluster.

Finally, and in order to emphasise the ubiquitous nature of clusters, one of the most successful and long – lived is found in the City of London. As well as the finance houses and markets themselves (wholesale banking, money markets, stockbrokers, commodity traders, insurance companies for example) there are highly sophisticated supplier firms offering services and facilities such as: computer software design and hardware, high performance and secure IT connectivity, physical security, printing, advertising and PR, specialist property etc.

## What actually happens within a cluster?

There is, naturally, a good deal of variation between clusters in the nature and the scope of the interconnectedness that I mentioned in the first section. The scale of the cluster and how widely it is dispersed are two of the variables that impact on this and, as instanced above, there is a great deal of variability on both counts. There are, however, some aspects that typify the ways in which most clusters operate:

- a general, if sometimes cautious, sense of trust in business dealings. Clusters are about relationships rather than one night stands and reputations count
- collaboration between firms in order to compete more successfully (often in export markets)
- an emphasis on networking between firms themselves and with the supporting infrastructure e.g. educational and training bodies, research institutes and the providers/operators of hard infrastructure (ports, airports etc.).

Three specific examples may help to explain what can be involved in practical terms:

- in Emilia Romagna the textile and clothing industry had an association that provided market intelligence on market preferences – e.g. colour, fabric, designs, accessories. This helped quite small individual firms to **compete** aggressively for business in high value markets. Their competitive strength in international markets was, however, said to be strengthened by a tradition of local **collaboration** between firms; whereby if one firm had the possibility to win a large order with a tight delivery deadline (beyond its own capacity) it could rely on efficient subcontracting to other firms in the district – in the knowledge that the relationship would be reciprocated on some future occasion
- in Norway, assisted by the network programme, firms (typically small ones) pooled their expertise and capacities to supply markets that they could not have tackled on their own. For instance 5 or 6 supplier of small office equipment items, such as staplers, hole punches, ring binders, plastic desk tidies, joined together to produce a colour and style coordinated “collection” to meet the requirements of major retail chains who were not interested in buying separate items
- in Cambridge there are several initiatives to encourage networking within the business community **and** to encourage firms from outside to visit (both virtually and in person) to learn more about the strengths and enthusiasms of firms in the cluster. As well as the - web-centered - Cambridge Network, there is a specialist business-led network, ERBI, that brings together firms and institutions linked to biotech and the life sciences generally across the eastern region – it serves to share information, raise the area’s profile (build the brand) and spread the cost of inward and outward missions.

As a rather heroic generalization I would suggest that the key drivers towards collaboration within a cluster include:

- changing customer requirements that challenge established business arrangements
- the need/desire to tackle new markets
- a recognized opportunity to share the costs of accessing market intelligence
- other issues in which scale is important for competitiveness (e.g. purchasing)
- challenges from new regulations or rapid advances in Science and Technology
- the perceived advantage in building a shared brand (e.g. Scottish food).

## **Starting a cluster initiative – why, when and how**

### **Why consider a cluster initiative?**

The simple answer is that there is a convincing base of evidence to show that clusters can be important elements with the economic make-up of successful economies and this is strikingly illustrated in a talk I heard in mid September by the head of economic development for the, highly prosperous Lombardia Region. Data for Italy in the mid 1990s showed the vital aggregate contribution of clusters – accounting for 20-25% of GDP, 25-28% of exports and 30% of workforce employment. Moreover the importance claimed for Italian clusters as leaders in world trade niches is equally striking:

<b>Product</b>	<b>District</b>	<b>% of world trade</b>
Wool cloth	Prato-Firenze	19-20
Wool cloth	Biella-Vercelli	14-15
Silk cloth	Como	24-26
Hosiery	Mantua	40
Ceramic tiles	Modena	38-40
Spectacle frames	Belluno	15-17
Jewelry	Vicenza	13-15
Jewelry	Arezzo	12-13
Upholstery	Bari	7-9
Chairs	Udine	7-8
Plastic machines	Varese-Milano	6-7.

### **When is a cluster initiative appropriate?**

I hope that, by dint of posing the question, it will be clear that I see cluster development initiatives as one amongst a number of possible approaches to helping improve business competitiveness. They are by no means appropriate in all, or even most, circumstances. Clusters cannot be grounded in aspiration alone, there needs to be substance as well. It is possible to start with very little but in that case a commensurate level of investment must be committed over a long period of time. Singapore is seeking, through government intervention, to build a biotech cluster and may well succeed, but the level of investment devoted to achieve this ambition is staggering.

Moreover, there has to be a strong private sector commitment. The public sector can provide catalytic resources, but unless leadership soon switches to the private sector (albeit with continuing support from other stakeholders) there must be doubt as to how relevant the cluster approach is to be business success. Perhaps the key question is whether or not there are significant potential benefits to be gained from closer collaboration and I have suggested already some possible indicators of such potential.

### **How could a cluster initiative be initiated ? (plagiarized from Cluster Navigators)**

Having identified that there seem to be enough of the ingredients in place to justify consideration of a cluster initiative, a sensible plan of action would:

- identify a possible facilitator, with experience and personal qualities that will jibe with the principal actors (firms and organizations) and check whether, if it is decided to proceed, pump-priming resources are likely to be available – if not you may waste firms time and cause unnecessary irritation
- undertake some evidence gathering/assembly to fix the geographic and activity scope for the initial focus (it's always possible to broaden out later) and hold exploratory discussion with key stakeholders to identify constraints and opportunities in a confidential dialogue – but avoid too much study and consequent paralysis by analysis
- identify a leadership group of 6-8 individuals – usually senior people turn up to the first meeting; if they send a junior to the second this is a warning sign
- develop an outline vision of the 'preferred future' and a structure/culture with a private sector ethos – able to move at the speed of business
- agree, ideally through a workshop discussion, a small number of priorities to be tackled for which there are individuals committed to getting involved – no passion = no action. Seek to draw in a wider group of people
- develop an immediate action agenda – ideally with some 'easy wins' – avoid wish lists without identified responsibilities for implementation
- **only at this point will it be appropriate to have a public launch – irrespective of when the next election is scheduled!**

## Finally: are there any examples in your sector?

SQW does not specialize in horticulture related projects. We do, however, undertake a good deal of work related to development of the rural economy and we have over 50 consultants employed in the firm. Tapping into this expertise, the most interesting initiative that colleagues identified – albeit at rather short notice - was the Lincolnshire Ornamental Challenge. From indirect evidence, I don't think that it is a fully fledged cluster initiative – as the emphasis on collaboration seems muted – however many of the activities featured on the website ([www.loc.org.uk](http://www.loc.org.uk)) would fit well within the action agenda of a cluster initiative. They include:

- funding opportunities for the sector
- a *plant trail guide* to encourage and assist buyers
- a *find the grower* database of wholesale and retail nurseries
- short case studies of successful projects
- a, light read, newsletter with snippets on firm' experiences.

## Round-up

Of course, you may do all this and more already and feel that a cluster approach is inappropriate to your circumstance. I would certainly advise caution in starting a new initiative if existing structures and activities are doing the job that's needed and likely to continue to meet future needs.

If there are well-established, well-functioning (active, inclusive, imaginative, forward-looking, ambitious) organizations that understand and represent the needs of their sector and have effective dialogue with other organisations – whether in the public or private sector – then this may be an indication that it's best to leave well alone.

Equally if the key drivers, that may make closer collaboration desirable, are not especially important, then I would question whether a cluster initiative is likely to be the best use of limited cash resources and the time and energy of key individuals.