Group Dynamics

European small and medium enterprises are increasingly working beyond their comfort zone – collaborating in clusters to create broader value networks that better exploit their assets and support internationalisation

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The world economy is based on globalisation and international trade. Despite protectionist tendencies, many companies – particularly large companies in high-tech sectors such as life sciences, industrial and commercial flows – transgress national boundaries and work across international value creation chains.

An emerging trend, however, is that protagonists of such global value chains are now also specialised small and medium enterprises (SMEs) that create network links with counterparts in other countries.

In a time of semi-permanent crisis, such as the current period, companies that are able to exploit opportunities derived from global markets and can be leading players in these global chains will perform better, compared to those focused only on local markets.

But that said, not all SMEs have the internal resources and skills to position themselves at a global level. Financial constraints, limited experience in international business, and dimensional limits have a negative impact on the internationalisation process of single SMEs.

Cluster Effect

The tendency towards globalisation is coupled, particularly in the life sciences sector, with a strong tendency for geographical concentration of actors. This 'cluster effect' allows SMEs to develop common activities, exploiting all the advantages of a supportive ecosystem.

Sharing knowledge, critical mass of activities, the presence of risk capital investors, and supportive organisations (such as incubators, science parks and cluster managing companies) are all elements that facilitate the desire and ability to develop an international strategy for SMEs.

The cluster environment can support the growth of small SMEs through alliances, activate financial resources, stimulate the emergence of R&D projects and support entry into foreign markets. However, at a single cluster level, there are still some limits, including size, missing knowledge and network reach. In a context such as the European one, where there is a high degree of fragmentation, clusters are usually not comparable in size and power to their non-European counterparts – for example, in the US, where bioclusters have the dimension of a multimillion inhabitant town or larger.

Networked Growth

In order to develop a solution to such fragmentation – particularly as the current financial situation is not going to enable signficant cluster growth – different clusters have in recent years formed alliances that follow the so-called 'metacluster paradigm'. Respecting the single territorial cluster specificities and using them to develop trans-border value creation chains, metaclusters are based on common strategic visions which exploit specific cluster assets in a networked and dynamic way.

At a higher level still, single clusters are working together in pan-European initiatives. The Council of European BioRegions (CEBR) is the most prominent example, aiming to share methodologies and tools, discussing common problems between clusters, and identifying shared solutions.

Joint Working

These three levels – single cluster, metacluster and pan-European – are working in synergy and have to be carefully managed from a practical point of view, particularly in relation to internationalisation issues. A good example of such management is offered by several collaborations that were launched a few years ago.

CEBR Special Interest Group

CEBR developed a special interest group formed by individual clusters interested in discussing internationalisation issues – resulting in recommendations for cluster internationalisation and laying the foundation for annual activities that get clusters active on a global scale. This approach also works in specific topics such as clinical innovation, where clusters are now working together across Europe towards a common technical and business development issue.

EDCA-Led Diagnostic Clusters

The European Diagnostic Clusters Alliance (EDCA), established as an international not-for-profit organisation, has the aim of promoting and developing collaboration between

European diagnostic clusters to consolidate the competitiveness of their SMEs, and to facilitate access to non-European markets for European SMEs specialising in medical diagnostics.

Up to now, 11 clusters from seven different European countries – representing around 500 companies, mainly SMES, and 50 universities – are part of this initiative. This is an excellent illustration of how it is possible to reach critical mass across different countries and clusters on a specific technological and sectorial field by exploiting the metacluster paradigm. For example:

- The alliance is fostering collaborations between companies and research centres that are EDCA members, to apply for R&D funding through the EU Horizon 2020 initiative
- EDCA is realising ambitions to have a one-stop-shop service for clinical samples through a deal between EDCA and several biobanks

BioXclusters

The result of a world-class cluster EU-funded project, BioXclusters is a further example. Four clusters from four different countries joined their knowledge, skills, best practices and dynamic companies in life sciences under the common strategic vision of personalised healthcare. The four clusters represent around 1,700 companies, mainly SMES, working in pharma, diagnostic, medtech and services. Their goal is not just to work at European level, but also to support SMEs in developing global activities in targeted markets.

In the last two years, specific activities have been realised in China, Brazil and the US, aiming to create entry points for European companies and 'soft landing' solutions for commercial, industrial and R&D collaborations. The clusters involved in the BioXclusters project have also launched a European Strategic Cluster Partnerships platform in personalised healthcare, involving a fifth cluster, and have kick-started activities in three more non-European territories: Japan, South Korea and North Africa.

Intelligent Partnering

Clusters are committed to supporting the development of local companies and also in creating European value creation networks. Single clusters and single companies can better exploit their specific assets in a pan-European platform through focused collaborations.

In recent years, the EU has launched different initiatives to support cluster development, although probably not with any systemic or strategic view. From one side, through structural funds, the European Commission has supported the regional growth of sectorial or technological clusters as an element of territorial development. From a different perspective, at European level, a world-class cluster call has supported the creation of pan-European alliances following a metacluster approach. However, nothing has been explicitly launched to link the two different platforms.

Metaclusters need to be viewed differently by regional policymakers and funders if they are to be an integrated part of cluster and regional development. The use of structural funds to support the growth of sectorial or technology-focused clusters needs to go hand-in-hand with programmes such as the world-class cluster calls that create pan-European critical mass.

The intelligent partnering of clusters into metaclusters brings both regional and European economic benefits, and the 'smart defragmentation' delivered by metaclusters should also be reflected in the delivery of policy and funding.

About the authors

Claire Skentelbery completed a PhD in Biochemistry before moving into scientific marketing and communication, and acted as the National Contact Point for the EU's Framework Programme 5 before becoming an independent consultant in biotechnology development. While in the UK, she split her time between supporting the development of the Cambridge cluster through her role in ERBI (now One Nucleus) and freelance proposal writing. Claire assisted in creating the CEBR, which is now an independent non-profit organisation in Belgium. She is the Network Manager for CEBR asbl, and also the Secretary General of the European Biotechnology Network. **Email: info@cebr.net**

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