

## Clusters vs. Networks



*Supporting Manufacturing SMEs in all aspects  
of Digital Transformation and Industry 4.0: A  
New and Innovative Industry Cluster.*

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## Clusters vs. Networks

Throughout existing cluster studies, ‘network’ and ‘cluster’ terms have been used interchangeably. Consequently, network theory can be regarded as an area of interest within the body of cluster literature. A **network** can be defined as, “*a set of connections among a multiplicity of separate entities sharing a common characteristic*”. Networks can be described as alliances between firms, which work together towards an economic goal. They can be established between firms within clusters, but also exist outside clusters.

A **cluster** may contain numerous layers of networks. In cluster theory, the actors in the network represent various organisations or even people (individual entrepreneurs or inventors, firms – suppliers or buyers, universities research institutes, public organisations, etc.). In turn, while the relation, or linkage, represents a type of relationship (formal or informal, buyer or seller linkage, information or knowledge sharing, etc.) between the different actors. Clusters and networks are dissimilar, yet they are often linked. They are both seen as facilitators for improving industrial transformation, for developing new regional competitive advantages, for rallying up the establishment of businesses and employments and thereby, influencing economic prosperity.

- **Comparisons and Differences?**

**Table 1: The Comparisons and Differences between Clusters and Networks**

| <b>Clusters</b>   | <b>Networks</b>  |
|---|--|
| Clusters attract needed specialised services to a region                        | Networks allow firms to access specialised services at lower costs |
| Clusters have open “membership”   | Networks have restricted membership                                |
| Clusters are based on social values that foster trust and encourage reciprocity | Networks are based on contractual agreements                       |
| Clusters generate demand for more firms with similar and related capabilities   | Networks make it easier for firms to engage in complex business    |
| Clusters require both cooperation and competition                               | Networks are based on cooperation                                  |
| Clusters have collective visions  | Networks have common business goals                                |

**Clusters are more collaborative**, susceptible to change and foster the development of interconnected firms. It is important to note that clusters can be regarded as being more collaborative, susceptible to change and foster the development of interconnected firms which can demonstrate their true value.

It can be argued that a line between clusters and networks must be drawn, even though they can appear to be similar. Networks of firms are structures precisely developed for active collaboration and this collaboration could be open-ended or focused on a specific project task. They may or may not be confined to a specific geographical location and set of industries, whereas clusters are a specific type of network that is concentrated in a geographical area.

Arguably, clusters and networks can complement each other, as one will provide the business agglomeration and the other one the connections, the sharing of knowledge, and information to achieve common goals. Networks and clusters also foster knowledge spillovers in which the knowledge produced by one firm can be appropriated, at little cost, by other firms. Linkages appear under a number of terms in cluster definitions, including:

- **relationships**
- **networks**
- **connections and**
- **interactions.**

In reviewing numerous cluster definitions, there are linkages between, co-operation and collaboration present in most. In a cluster, co-located firms must be connected in some way to form a network, which results in superior performance. This is when compared to spatially dispersed non-cluster firms. Being in geographic proximity may be beneficial for firms (e.g. access to labour and availability of suppliers), but it is the linkages with firms and other organisations in the locality that are critical to enhancing the competitiveness and productivity of a firm.

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## Appendix

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