



Abstract

The cluster approach continues to gain ground as a key strategy for industrial development in today's globalised era. Nevertheless, not every country and cluster achieves the desired competitiveness goal of cluster development. While many cluster studies have examined factors and conditions that influence the success or failure of cluster development, most focus on only one or two aspects. But cluster development is a complex process that involves numerous interdependent actors and institutions. To develop clusters successfully, policymakers must view cluster development as a 'process' and understand their intertwining elements and mechanisms. This study, hence, develops a holistic framework for cluster policy analysis. This framework provides a better understanding of cluster development processes and mechanisms so as to bring about more effective formulation and implementation of cluster policy. The analytical framework takes account of the interplay and interrelationships of five key elements: (1) context and external factors, (2) cluster characteristics, (3) cluster governance, (4) the institutional modality of cluster intervention and (5) the effectiveness of the institutional modality. A case study approach and a multi-dimensional comparison of clusters across national contexts and sectors were applied as the main study methodology. Seven clusters in three sectors and in three country settings were purposively selected for comparative analysis. These include the Thai hard disk drive (HDD) cluster, the Taiwanese semiconductor cluster, the Malaysian electronics cluster, the Thai and Malaysian automotive and auto-parts clusters, and the Thai and Taiwanese orchid clusters.

This study produced five main findings. *First*, clusters in the same sector are likely to have a similar structure due to the influence of the industry-specific context. *Second*, cluster governance is likely to be aligned with

COMPETITIVE CHALLENGES AND CLUSTER RESPONSES

the structure of the cluster. *Third*, country-specific context can alter the governance of clusters from the typical form shaped by the industry-specific context. It does this by intervening in the capabilities of local actors/institutions. *Fourth*, clusters facing a similar challenge and operating under a similar form of governance do not necessarily utilise the same institutional modality to cope with their competitive challenges. Rather, the modality applied depends on the composition of actors in the cluster structure and on the industry-specific context. *Fifth*, differences in the degree of effectiveness of the institutional modality of cluster intervention are attributable to (1) differences in business systems and industrial contexts, (2) characteristics of a core agency for cluster coordination, (3) the type of competitive challenge faced and (4) the presence (or absence) of specific cluster actors.

In addition, the findings of this study reveal three key lessons and policy implications for cluster policymakers and practitioners. *First*, policymakers should consider formulating cluster policy that suits the developmental stage of the cluster. *Second*, to effectively implement cluster policy, the key role of government is to strengthen capabilities of local actors and institutions. *Finally*, in evaluating cluster policy, government should focus more on 'process effectiveness' rather than on only the outputs/outcomes of cluster development policy.