

Competitiveness Through Clustering / Collaborative Networks

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The competitiveness challenge

- **Competitiveness* is at the top of the agenda of governments and organizations around the world**
- **Rapid changes in the global economy make achieving true competitiveness increasingly challenging**
- **Resulting pressures are forcing governments and organizations to seek ways of improving the competitiveness of the economic activities in their jurisdictions**
- **Clustering and collaborative networks are an increasing focus of attention for governments, firms, and other organizations**
- **But many jurisdictions around the world are struggling with what they can do in this area**

- *** the ability of a location to deliver high and rising standards of living through the economic activities carried out in a jurisdiction**

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Winds of change

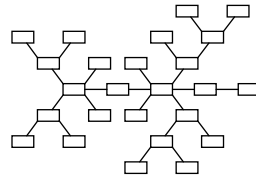
- **The internationalization of competition**
 - **The emergence of new markets and competitors**
 - **Shifts in geographic sources of advantage**
 - **Trends toward deregulation and privatization**
 - **Rapid technological advances**
 - **The rise of the knowledge economy**
 - **The Internet/ IT revolution**
 - **Changing boundaries and new business combinations**
 - **Enhanced financial flows**
 - **The development of supranational organizations and regional economic blocs**
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- **The result is a new world of competition**

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Regional clusters are everywhere

- **High technology agglomerations**
 - **Low tech, labor intensive industries**
 - **Fashion and creative industries**
 - **Large scale manufacturing industries**
 - **Small scale craft industries**
 - **Business and financial services**
 - **“Anti-cluster clusters”**
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- **This is true despite the emergence of the Internet and modern communication technologies**
 - **The wide range of phenomena show the power of the cluster concept**



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Innovative performance in clusters

- **Innovative investment**
 - Incentives to innovate
 - Appropriability of innovative investments
 - Technological opportunities
 - Effectiveness of innovative investment
 - Direction and focus of innovative investment
- **Clusters**
 - Information and unplanned communication
 - Short feedback loops
 - Repositories of skills and capabilities
 - Attraction of skills and capabilities
 - Focal points for investments
 - The value of negative information

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The “recipe”

- **Steps**
 - Identify the clusters and potential clusters in a region
 - Support universities, research institutes, and related support structures
 - Create facilitated interaction among cluster members
 - Encourage private sector participation
 - Provide sufficient support for innovation
 - Measure successes and bask in glory
- **But it doesn't quite work that way**
 - Everyone identifies the same clusters
 - Support for universities, etc. does not necessarily turn into commercially viable output
 - Facilitation and participation are great, but to what end?
 - Measuring success is not straight forward and may involve long lead times

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Irony

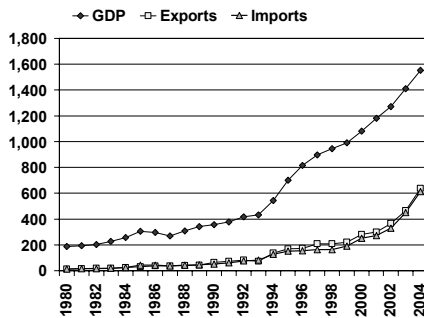
- An approach that holds out the hope of tailored, non-destructively competing, locally embedded development policies is rapidly turning into “one size fits all” recipes using the same tools to focus on the same industries in very different economic settings.
- Better understanding is the best counter to this tendency.

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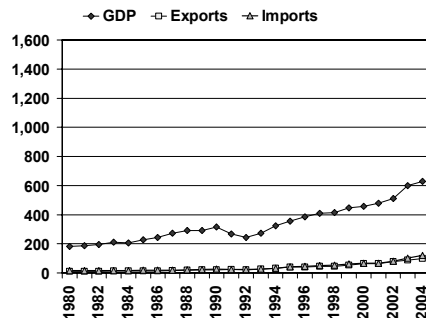
The Rise of China and India

China
Current US\$ billions



Source: World Bank, national sources

India
Current US\$ billions

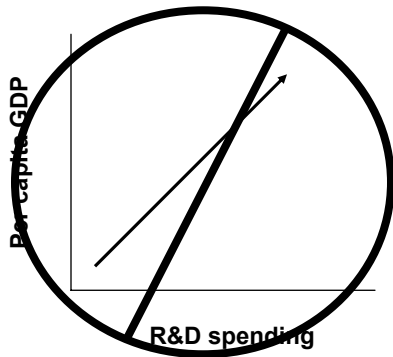


Source: World Bank, national sources

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The nature of the knowledge-economy, innovative, creative economy

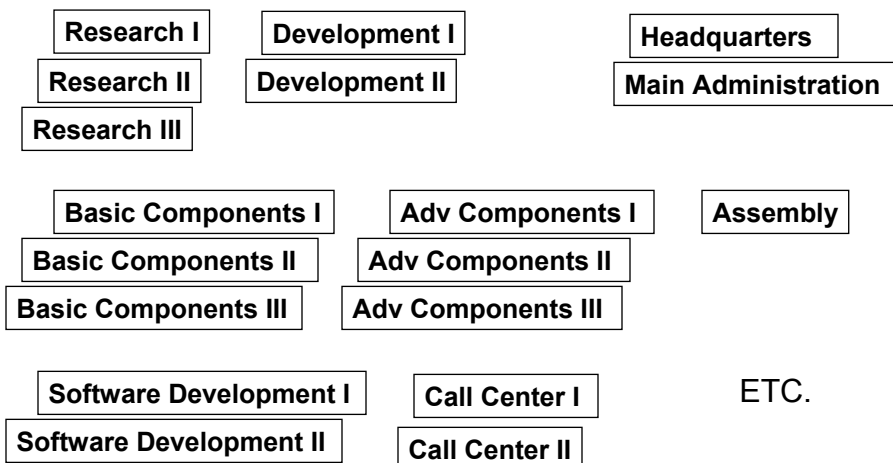


- The knowledge, innovation, creative economy does NOT mean traditional R&D and does NOT mean “high tech” industries
- It means creating new products, services, strategies, management systems, coordination mechanisms, financial instruments, commercialization prospects, etc.
- Focus on activities, not industries
- Just “follow the money”

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Typical value constellation



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The new world of competition

- **Competitive pressures are becoming relentless**
- **Most manufacturing now a commodity**
- **Many service activities will soon be commodities**
- **Value and production chains have become fragmented**
- **IT and modern logistics tie things together**
- **Small and peripheral regions face new opportunities as well as new challenges**
- **Knowledge-intensive, innovative, and creative activities capture the value**

- **Many jurisdictions are turning to cluster-based programs and policies to try to meet the new challenges**

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What are clusters?: Two popular views

- **“Clusters are geographic concentrations of interconnected companies, specialized suppliers, service providers, and associated institutions in a particular field that are present in a nation or region.”**
– Michael Porter

- **“Clusters are groups of independent companies and associated institutions that are:**
 - Collaborating and competing;
 - Geographically concentrated in one or several regions, even though the cluster may have global extensions;
 - Specialised in a particular field, linked by common technologies and skills;
 - Either science-based or traditional;
 - Clusters can be either institutionalised (they have a proper cluster manager) or non-institutionalised.”
- EU Expert Group

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Both helpful, but both with problems

- **The main problem**
 - The inclusion of “associated institutions” and non-firm entities usually has adverse consequences.
 - In practice, this allows “cluster initiatives” to focus on, and be dominated by the “associated institutions,” not the firms.
- **Another problem**
 - The important feature is NOT that they are in related industries or that they are interconnected
 - The important feature is that their performance is interdependent, whether this is recognized or not

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The (definitional) solution

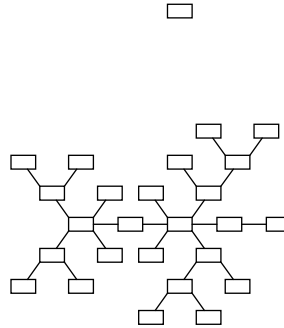
- **“Clusters are groups of firms in the same and related industries whose performance is interdependent.”**
-- Michael Enright
- **The advantages:**
 - Places the focus on the firms, the entities that are going to generate jobs and growth, not the support structures
 - Places the focus on the interdependence of firms
 - Provides easy objective functions and first steps toward programs and initiatives

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There are identifiable features that foster the genesis and evolution of clusters,...

- **Initial location**
 - Resource or skill base
 - Location of markets
 - Related industries and spillovers
 - Particular entrepreneur or firm
 - Government impetus
- **Subsequent development**
 - Skills and capabilities
 - Labor/ supplier/ buyer pools
 - Innovative performance
 - Competition and cooperation
 - New entrepreneurs and firms
 - Other external economies

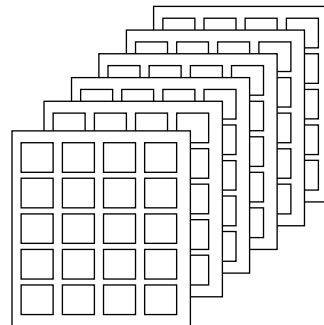


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...but regional clusters differ from each other in several important dimensions,...

- **Geographic scope**
 - **Industry scope**
 - **Vertical Scope**
 - **Activity Scope**
 - **Transaction governance**
 - **Size of firms**
 - **External linkages**
 - **Local / foreign ownership**
 - **Innovation performance**
-
- **So general conclusions may be difficult to reach**



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...clusters differ in the level of activity and self-realization,...

- **Working clusters**



- **Latent clusters**



- **Potential clusters**



- **Policy-driven clusters**



- **“Wishful thinking” clusters**



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...and there are multiple failure modes for regional clusters

- **Product obsolescence**
- **Organizational obsolescence**
- **Competition from other clusters**
- **Loss of cooperative relationships**
- **Ossification**
 - Limited information
 - Consensus culture
 - Political lock-in



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Nations and regions also differ in important ways...

- **Strength of the local economies**
- **Specific profile of existing and potential clusters**
- **Strength of public institutions and support structures**
- **Administrative efficiencies**
- **Strength of private sector organizations**
- **Nature of the interaction between public and private sectors**
- **Nature of power sharing between national and local governments**
- **Overall philosophy toward government interaction in the economy**

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... and fostering the innovative process in clusters is difficult

- **Proximity does not equal interaction**
- **Cross-cultural challenges can be substantial**
- **Large firms may not want to participate**
- **SMEs often cannot absorb new capabilities**
- **Suspicion makes cooperation difficult**
- **Funding could reduce or replace market initiatives**
- **Supply push can rarely match demand pull**
- **Public and private returns from innovation differ**

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What does this all mean?

- **We must understand in detail how exactly the global economic forces are influencing companies, industries, and clusters**
- **We have to understand the nature of the knowledge-intensive, innovative, creative economy**
- **Different regions, and in fact different clusters within the same region, may need different things**
- **The search for recipes that can be applied in all places for all clusters may not be very helpful**
- **Instead, one must search for guidelines and processes that can be tailored to local circumstances**
- **And we need to use our analysis and understanding of underlying economics to drive programs and policies**

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Using what we know

- **If there are recognizable features that help initiate and develop clusters, these need to be a focus initiatives**
- **If clusters differ along several dimensions, this provides clear directions for initiatives**
- **If clusters differ in terms of self-realization and actualization, this provides clear directions for initiatives**
- **If we understand what the failure modes are, then we can seek ways to avoid them**
- **If nations and regions differ, then we must adapt our approach to fit with the local environment**
- **If fostering the innovation process is difficult, we must focus on the entire innovation chain and we must accept a certain level of failure**

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Focusing on market failures

- **Importance of market failures**
 - **Market failures provide an underlying basis for cluster programs and policies**
 - **But most cluster initiatives do not explicitly identify the market failures that they seek to address**
- **There are four basic failures that cluster programs are particularly good at addressing**
 - **Impacted information**
 - **Managerial myopia**
 - **Underprovision of public goods**
 - **Coordination failure**
- **Successful programs (often implicitly) target one or more of these failures**

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Using clusters and cluster organizations to articulate demand for public services

- **Governments make substantial investments in public goods and public services**
- **A cluster approach can be used to better articulate the demand for public goods and services resulting in more focused investments**
- **Often the answer is not more expenditure, but rather more focused expenditure**
- **A cluster, rather than a firm or industry approach, is more likely to yield investments that maximize public benefits**

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Committing to clustering, not individual clusters

- **Governments often commit to developing particular clusters, this is dangerous for several reasons**
 - It creates a political imperative that can be counterproductive
 - It creates incentives for the private sector to sit back and ask government to take control
 - Sometimes the various actors
- **It is far better to commit to clustering than to individual clusters**
 - Creates a dynamic setting, work with some today, some tomorrow
 - Provides a mechanism to terminate cluster initiatives, or at least government involvement
 - Provides a mechanism for forcing the private sector to engage in order to obtain government engagement

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The importance of collaborative networks

- **Collaborative networks are a key means of fostering the type of understanding, articulation, and action required in cluster initiatives**
- **It is important that networks are considered a means rather than an end**
- **The network must have or find a clear reason for being (i.e. the self-interest of relevant parties)**
- **The ability to develop and make such networks sustainable is a real skill**

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Network facilitators

- **Network facilitators are key to the process**
 - Business people and officials can use the help
 - Need someone focused on making things happen
- **Facilitators need to be**
 - Knowledgeable
 - Accessible, personable
 - Creative, resourceful
 - Neutral
- **Facilitators need to be able to form networks of their own to obtain information from outside the networks**
 - Locally, nationally, internationally
 - Business specific, non-business specific
- **Challenge often is how to be active without being controlling**

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Role of the public sector in cluster initiatives and collaborative networks

- **The appropriate role of the public sector depends on the state of the economy, local norms and practices**
- **Focus on undeniable roles of the public sector, i.e. education, training, infrastructure, provision of public goods (with limits), and coordination (but not control) activities**
- **Focus on identifying barriers to development that only the public sector can overcome**
- **Then move on to forms of support for building skills and capabilities**
- **Think about creating mechanisms for the private sector to articulate demand for public services**
- **Support for dialog among the various actors**
- **Coordination function**
- **A rule of thumb is “as little as possible, as much as necessary”**

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Role of the private sector

- **Ultimately, it is the private sector that will determine the success or failure of cluster initiatives**
- **The private sector must provide some leadership and direction for initiatives**
- **After an initial period, the private sector needs to step up with funding and organizational support**
- **The private sector needs to think through how both day to day and longer term issues may be addressed collectively**
- **Private sector networks and networking is critical to the success of cluster initiatives**

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Role of “outsiders”

- **Information on initiatives elsewhere**
- **Facilitation and coordination**
- **Organization of conventional and unconventional wisdom**
- **Independent analysis and points of view**
- **Technical and other information on technology, markets, business practices, etc.**

- **Note that these functions can be very different. Don't be surprised if different people or organizations are necessary for the different functions.**

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Guidelines for initiatives

- **Formulate clear and realistic goals**
- **Create sensible criteria for identification and prioritization of clusters**
- **Get relevant actors on board**
- **Understand what the relevant networks are or ought to be**
- **Use analysis to build urgency and to focus efforts**
- **Target real market failures, not illusory ones**
- **Go after little victories first, important and difficult items later**
- **Build appropriate cluster organizations to support the system**
- **Build institutional and support systems around the cluster**
- **Commit to clustering, not individual clusters**
- **Remember that one size does not fit all, use models carefully**
- **Terminate (or curtail some types of support for) initiatives that fail and those that succeed**
- **Build the evaluation process into the beginning of the process, not the end**
- **Evaluate and iterate**

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Conclusion

- **Cluster strategies can be useful tools for local development, but must be used with care**
- **The notion of clustering provides directions, not recipes**
- **“One size fits all” strategies are unlikely to all be successful**
- **Collaborative networks provide a critical mechanism to foster cluster development**
- **The networks must have a purpose recognized by members (a means not an end)**
- **Network facilitators play critical roles in the process**

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Thank you

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