iCLUSTER PROJECT: Innovation Network CONNECT 2020

Amado Villarreal González
Regional Development Institute
Tecnológico de Monterrey
Main objective:

Determine strategic clusters in the two pilot regions:

A) Monterrey - Saltillo – Texas region
B) Tijuana- San Diego region

Given the current economic structure of these regions it is foreseen to allow and encourage the design of regional policies or innovation policies.
The identification of clusters starts from the recognition of the strategic economic activities. These are those that maintain greater economic weight, specialization, dynamism and regional competitiveness.
Regional Quantitative Analysis.
Identification of the most promising clusters

The most promising activities are those that meet at least two of these criteria:

**Motor activity:**
Relevance of the economic activity given by: production, employment and added value.

**Star activity:**
Specialization and dynamism of the regional economic activity with respect to national levels.

**Leader activity:**
Competitiveness of an economic activity in a certain region.
A study was conducted at a regional level in order to identify the area where integration is based on a high economic interaction and a close relationship of economic sectors rather than an area defined by geopolitical boundaries.

It was identified an economic region composed by 20 Mexican municipalities and 8 US counties.
The identification of the economic clusters is based on the relationships between the strategic economic activities and the productive chains.

The objective is that the economic activity, defined as relevant in the analysis, should be present at least in the supplies, intermediate products and final products.

In order to identify strategic clusters, the methodology was applied on Texas regions and the region Monterrey-Saltillo, while also considering the analysis done for Texas attributed to the "Cluster Mapping".

<table>
<thead>
<tr>
<th>Cluster Mapping</th>
<th>iCluster-Tecnológico de Monterrey</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Texas Region</strong></td>
<td><strong>Texas Region</strong></td>
</tr>
<tr>
<td>Chemical Products</td>
<td>Chemical Products</td>
</tr>
<tr>
<td>Oil and gas</td>
<td>Oil, Gas, and Energy</td>
</tr>
<tr>
<td>Logistic services</td>
<td>Logistic services</td>
</tr>
<tr>
<td>Touristic services</td>
<td>Touristic services</td>
</tr>
<tr>
<td>Machinery and Equipment</td>
<td></td>
</tr>
<tr>
<td>Electric and electronic products</td>
<td>Electric and electronic products</td>
</tr>
<tr>
<td>Land and Maritime Transport Equipment and Parts</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Medical services and hospitals</td>
</tr>
</tbody>
</table>
The identified strategic clusters in the region between Mexico and Texas are those that for both countries complement each other. The strategic clusters of the region are the following:

- Business services cluster
- Chemical manufacturing cluster
- Logistic cluster
- Tourism cluster
- Machinery and equipment cluster
- Electronic equipment cluster
- Transportation equipment cluster
- Medical services cluster
- Energy, oil and gas cluster
The clusters show a relationship between main, intermediate and final products in the two regions in terms of complementarity.
Georeferenced clusters - Examples

- Logistic cluster
- Tourism cluster
- Maquinary and equipment cluster
Georeferenced clusters - Examples

- Business services cluster
- Energy, oil and gas cluster
- Electronic equipment cluster
INEGI Cluster Mapping

Aerospace Vehicles and Defense

Variables:
- Udacidades económicas
- Clases
- Fabricación de aviones, motores de reacción y aviones múltiples
- Fabricación de aviones comerciales

Table:

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>NACIONAL</th>
<th>REGIONAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Udacidades económicas</td>
<td>3,200,000</td>
<td>140</td>
</tr>
<tr>
<td>Fabricación de aviones, motores de reacción y aviones múltiples</td>
<td>3,000,000</td>
<td>43</td>
</tr>
<tr>
<td>Fabricación de aviones comerciales</td>
<td>3,000,000</td>
<td>1</td>
</tr>
</tbody>
</table>

Conclusions and recommendations

Linkage between organizations, companies and individuals based on the confidence, the exchange, and **the cooperative integration** that sectorial binational agendas of innovation promote towards the strategic identified clusters.

**Implement strategic plans or agendas** according to the socioeconomic and innovation context existing in the binational region.

**Strengthen the technological infrastructure** focused towards the strategic binational identified clusters.

**Improve the incentive system**, legal and political frame that contribute to the improvement of the regional binational innovation system.

**Increase the international cooperation mainly in the municipalities and counties** of the binational region.

**More efforts that integrate science, technology and the innovation in more broader agendas, based on a common economic development strategy** to increase the region competitiveness.

**Develop monitor and evaluation tools** on the binational strategic actions implemented.