INDUSTRIAL BUSINESS CLUSTER DEVELOPMENT IN SLOVAKIA AND ITS EFFECTS ON REGIONAL EMPLOYMENT

Dimuth Nambuge, Veronika Nambuge

INTRODUCTION

Globalisation has gradually shifted the basis of industrial competitiveness from static price competition towards the ability to innovate and create knowledge (Malmberg & Maskell 2001). This has happened both within firms and at the national level, where rapid technological change is pressuring countries to adapt quickly. Cluster development has become an increasingly attractive way for policymakers to respond to this challenge, as seen from the growing literature on cluster development (Tilman Altenburg & Meyer-Stamer 1999; England's Regional Development Agencies 2004; Enright 1998; Enrighht 2000; European Commission 2003) are “geographical concentrations of interconnected companies, specialised suppliers, service providers and associated institutions (e.g. universities; standard agencies; and trade associations) in a particular field, linked by commonalities and complementarities.”

Firms in a cluster are both competing and cooperating. A cluster provides a potential platform for innovation and collective action, which are main ingredients, among other things, to boost national competitiveness.

The cluster approach has attracted the attention of those designing policies for economic development, and many countries have sought ways to implement it successfully. Nevertheless, formulation and implementation of cluster policy is by no means a clear-cut process, since there is no uniform model or formula to develop clusters that is valid everywhere and at any point in time (Nauwelaers 2001). Given that every cluster is unique, imitating a cluster policy that has proven to be effective elsewhere is hardly a plausible tactic. Evidence from cluster development in various countries shows that a cluster policy implemented successfully in one country might not be suitable in another country or context. Hence, this study examines the process and dynamics of cluster development from a holistic perspective. It investigates several clusters in Slovak Republic, in both technology-driven and natural resource based.

The primary objective of this study is to assess;

- If cluster increases local competitiveness by increasing employment, can policy makers, by interlinking clusters achieve an even better effect at the state level.

Three partial goals are formulated in relation to the main objective of the study.

- Analyse industry business clusters within Slovak republic and the structure of existing clusters in four major geographic regions.
- Analyse economic performance in major geographic regions and contribution of industrial business clusters towards local economic development.
- Did current cluster/industry policy made any impact on clusters and its performance?

1 CLUSTER CONCEPT

According to Wolfe and Gertler (2004) the cluster concept has been applied in two different ways in the cluster literature: analytical and political. Firstly, as a functionally defined group of firms and supporting institutions that produce and market goods and services from a group of related industries that are concentrated in a specific geographical localisation.

This approach takes the point of departure in a cluster definition that is very similar to Porter’s that was cited in the beginning of this chapter (Porter, 1998). The main purpose of this approach is to explain analytically the mechanisms of cluster development. These identified mechanisms could and should provide guidance to local and regional policy-makers in preparing their cluster promotion and support strategies (Wolfe and Gertler, 2004).

Secondly, in the political approach the cluster concept is used as a policy tool – as “an overarching framework to guide policy-makers in the design of initiatives to promote cluster development” (Wolfe and Gertler 2004, p. 1072). In this second approach there are often more applied practitioners that ideally should start from the results of the analytical approach when drafting policy guidelines. According to Wolfe and Gertler this is unfortunately done in a rather limited way. The
practitioners very often limit their interpretation of the analytical cluster studies to the elaboration of lists of the ‘critical factors’ for cluster development that were derived from individual studies of the most successful cases. These lists used by policymakers may be counter-effective as they very often do not take the region- and industry specific factors into account, e.g. regional specialisation tradition, institutional context.

Fig. 1: Cluster Concept

2 CLUSTER AND ECONOMIC DEVELOPMENT

The concept of clusters is a modern description of the long observed phenomenon of geographical concentration of economic activities, which is widely believed to be an important factor for economic development. (Marshall, 1890) described already in the 19th century the advantages of agglomeration of economic activities in terms of availability of a qualified workforce and specialisation. Similarly, (Schumpeter, 1939) referred to the “swarming” or clustering of industry. The concept of clusters is very broad and comprises different perspectives and aspects covered by other concepts that have been around for a long time. It builds upon traditional location and agglomeration theory and integrated other concepts, such as the concept of “industrial districts”, growth poles (“poles de croissance”), new industrial spaces, systems of production, innovative milieux, national or regional innovation systems, learning or creative regions, to name a few.

3 INDUSTRY CLUSTER ANALYSIS

The economic development tools utilized in the study are Location Quotient, Econom Base Model, and Shift-Share Analysis. These tools complement each other and together they can furnish necessary information to local economic development agencies in developing policies for business retention and attraction. Location quotient identifies strength and weakness in a local economy with respect to industry clusters. Export-oriented industry clusters, which are considered to be the drivers of local economy, are identified using the economic base model. Finally, the shift-share analysis measure performance of local economy with respect to the national trends. Industry clusters identified in this paper are adopted from a study conducted at Centre for Strategy and Competitiveness, CSC Stockholm School of Economics April 2011. The following Cluster were indentified.

Tab. 1: Cluster by region

<table>
<thead>
<tr>
<th>Bratislava Region</th>
<th>Central Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive</td>
<td>Automotive</td>
</tr>
<tr>
<td>Oil and Gas</td>
<td>Building equipment and services</td>
</tr>
<tr>
<td>Telecom</td>
<td>Metal Manufacturing</td>
</tr>
<tr>
<td><strong>Western Region</strong></td>
<td><strong>Eastern Region</strong></td>
</tr>
<tr>
<td>Heavy machinery</td>
<td>Apparel</td>
</tr>
<tr>
<td>Lighting and electrical equipment</td>
<td>Building equipment and services</td>
</tr>
<tr>
<td>Automotive</td>
<td>Metal manufacturing</td>
</tr>
<tr>
<td>Building equipment and services</td>
<td></td>
</tr>
<tr>
<td>Footwear</td>
<td></td>
</tr>
</tbody>
</table>
Location Quotient

The location quotient (LQ) is defined as the ratio of industry cluster's share of the local economy and the share of the nation, or the state, or the region. This study compares the local economy which is divided into four major geographical areas such as Bratislava region, Western region, Central region and Eastern region. Industry cluster employment is the most widely used variable in LQ analysis, even though it can be estimated using other variables, such as sales and income. LQ identifies dominant clusters in a given region. It can identify export-oriented clusters, which drive the local economy by bringing money into the region, rather than just circulating it.

LQ is calculated as follows:

$$ LQ = \frac{E_i/E}{N_i/N} $$

where $E_i$ represents regional employment in a given industry cluster $i$, $E$ represents total regional employment, $N_i$ represents national employment in a given industry cluster $i$, and $N$ represents total national employment.

The LQ analysis indicates that ICT industry as star clusters in the Bratislava region. However the ICT industry cluster, one of the driving forces of the local economy, is transforming from being a star to a mature cluster. Another prominent clusters for the local economy are the tourism and Automotive industry cluster which is becoming less concentrated and shifting towards a star cluster in the future. Cluster that is emerging and have a potential to be a future star cluster is the Heavy equipment manufacturing cluster.

The Electronic industry cluster in transforming to be a emerging cluster from a current transforming cluster.

The LQ analysis indicates that the Heavy equipment manufacturing and Electrical equipment manufacturing as the star clusters in the Western region. These dominant clusters are becoming more concentrated. The Electronics cluster, one of the driving forces of the western region economy, is transforming from being a star to a mature cluster. Further, there is a tendency that Electrical equipment cluster will follow the above pattern in future. The apparel cluster is moving from being an emerging cluster to a star cluster. Another clusters that is emerging and have a potential to be a future star cluster is: tourism industry. Industry clusters such as: ICT and Metal industries are less concentrated in the region as compared to the nation, and are becoming less concentrated over a period of time. Automotive industry is moving from being a mature cluster to a transforming cluster.

Central region LQ analysis indicates that there are no prominent star cluster industries in central region. However the metal industry cluster, is transforming from being a star to a mature cluster. Heavy equipment manufacturing cluster is prominent for the region and gained maturity in the region compared to the nation. Automotive industry cluster is an emerging in the region and moving towards a future start cluster. Both apparel and electrical equipment manufacturing clusters are also emerging with high concentration and potential to move towards a star cluster. The ICT cluster is shifting to be a emerging cluster from a current transforming cluster.

Eastern Slovak region’s cluster performance with respect to the nation. The LQ analysis of regional industry clusters with respect to the nation indicates that the Metal industry accounts for a major share of local economic contribution in eastern region appearing to be the largest industry in the region. Star clusters currently not representing in the region however with low concentration the tourism cluster may slowly approach star cluster in future. Eastern Slovak region consists of several emerging clusters some of them been newly presented in the area namely Automotive, ICT, Electrical equipments and electronics. Apparel industry cluster is mature cluster in the region appearing one of the largest industries, while heavy equipment manufacturing is identified as a pure transforming industry cluster. Shift-share analysis presented in the later part of the research provides further information regarding the increasing and decreasing concentration of clusters.

Economic Base Analysis

The main purpose of the economic base analysis is to classify regional clusters into export and import industry categories. The analysis provides information on where a county was and where it is currently with regard to employment concentration. The economic base analysis is used to identify sectors of the local economy that serve other regions (export industries/clusters). These sectors are the
backbone of local economy. The economic base theory assumes that the industry structure of local economy is made of up two sectors:

1. Basic Sector, which produces and distributes goods and services for export outside the region, thus bringing wealth to the local economy. Examples of basic sector include firms in the manufacturing and energy clusters, which produce goods that are consumed within region as well as outside the region.

2. Non-Basic Sector whose goods and services are consumed primarily within the local area. Examples of non-basic sector include industries such as, retail trade, construction, transportation, and utilities. These firms mainly serve the local population. The study compares county industry cluster employment to that of the state and the nation. It is important to relate the local economy to other regions because the economic activity in the local area usually depends on other regions, as well as on the state and the nation. There are several direct and indirect industry classification techniques that determine whether an industry cluster is export-oriented or not. Even though direct methods have more precision, they are not commonly used because of their intensive time, labour and financial requirements (Galambos and Schreiber 1978). Dinc (2002) proposed four different methods for classifying industry clusters into basic and non-basic sectors:

A LQ equal to 1.2, indicates that the local employment is sufficient to meet the local demand and all good services are utilized locally and nothing is exported, therefore, these industries are also considered to be non-basic in nature; and 3. Finally, industries with LQ greater than 1.2 indicates that some of the goods and services are exported to other regions, which in turn indicates that some of the employment in that industry is basic in nature. Base employment in industry i in region r is calculated as follows:

$$BE_{ir} = \left(1 - \frac{1}{LQ_i}\right) * E_{ir}$$

Where LQi represents location of industry i and Eir represents employment of industry i in region r. Once the base employment is calculated, it can be used to estimate the Base Multiplier, which is the ratio of the total employment in year t to the base employment in that year. The base multiplier is calculated as follows:

$$BM = \frac{E^t_r}{BE^i_r}$$

Where represents base employment of a given industry in region r and time t. represents a given industry's total employment in region r and time t. The multiplier will provide an insight on local employment (non-base employment) based on a given change in the base employment. For example, a base multiplier value of 3.5 indicates that for every one base job created there will be additional 2.5 non-basic jobs. Base multipliers are powerful tools in analyzing and forecasting regional economic activity.

Tab. 1: Economics Base Analysis Results

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Bratislava Region</th>
<th>Western Region</th>
<th>Central Region</th>
<th>Eastern Region</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>08</td>
<td>09</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Automotive Industry</td>
<td>0.54</td>
<td>0.57</td>
<td>0.58</td>
<td>0.53</td>
</tr>
<tr>
<td>Tourism Industry</td>
<td>0.67</td>
<td>0.74</td>
<td>0.61</td>
<td>0.60</td>
</tr>
<tr>
<td>Electronic Industry</td>
<td>.07</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICT Industry</td>
<td>0.86</td>
<td>0.91</td>
<td>0.78</td>
<td>0.80</td>
</tr>
<tr>
<td>Metal Manufacturing Industry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heavy Machinery Industry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apparel Industry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical Equipment Industry</td>
<td>4.39</td>
<td>7.16</td>
<td>3.89</td>
<td>1.07</td>
</tr>
</tbody>
</table>

Source: Own calculations/ Euro stat
Shift-Share Analysis

Shift-share analysis is an additional economic development tool, which complements LQ and economic base analysis. The shift-share method provides valuable detail about the uniqueness of local growth and competitiveness of local industries. This method begins with a baseline value for expected output growth and is termed as the national growth component. The second component, termed as the industrial mix component, adds or subtracts a GDP/Employment change value that accounts for the country’s unique industrial mix. The third component, is termed as competitive share, adds or subtracts a GDP/Employment change value reflecting the competitiveness of local firms within their own particular industrial sector. The advantages of using this technique are: (1) it is simple and straight forward calculations, and can be readily understood; and (2) the ability to measure the gains and losses of each market in comparison with the total market.

There are three components involved in performing shift-share analysis, they are:

I. National Growth
II. Industry Mix
III. Competitive Share component

National Growth Component (NG): This component explains how much of the regional industry’s growth is explained by the overall condition of the national economy. It measures the regional economic change that would have occurred if the regions had grown at the same rate as a reference area (Dinc 2002). The NG is calculated as follows:

\[ NG = E_i^t \left( \frac{N^{t+1}}{N^t} - 1 \right) \]

where \( E_i^t \) indicates regional employment in a given industry \( i \) at the beginning of a period \( t \), \( N^t \) represents total national employment at the beginning of a period \( t \), and \( N^{t+1} \) represents total national employment at the end of the period \( t+1 \).

Industry Mix Component (IM): This component determines the quantity of growth that can be attributed to the region's mix of industries. It determines the share of regional industry growth that is explained by the growth of that industry nationally. The IM is calculated as follows:

\[ IM = E_i^t \left( \frac{E_i^{t+1}}{E_i^t} - \frac{N_i^{t+1}}{N_i^t} \right) \]

where \( E_i^t \) indicates regional employment in a given industry \( i \) at the beginning of a period \( t \), \( E_i^{t+1} \) indicates regional employment in a given industry \( i \) at the end of the period \( t+1 \), \( N_i^t \) represents national employment in a given industry \( i \) at the beginning of a period \( t \), and \( N_i^{t+1} \) represents national employment in a given industry \( i \) at the end of the period \( t+1 \).

For our analysis purpose, we also calculate expected change, which is a sum of national growth and industry mix component, which is basically the job growth that one would expect if the region follows national trend. The total economic change, which indicates a region's actual growth or decline, is determined by summing up the three components.

\[ EC = NG + IM \quad TEC = NG + IM + CS \]

For example, if an industry is growing in a region, we would generally assume that the region favours that industry, however, shift-share analysis may reveal that the industry is growing at a faster rate nationally, indicating that the local factors have less influence on regional industry growth. This is especially the case with Appeal cluster in Bratislava region. Between 2009 and 2011, Apparel cluster gained 1702 jobs, which is mainly because of nation trend which accounted 1118. The region was not performing as good as the nation.

<table>
<thead>
<tr>
<th>Tab. 2 Bratislava Region</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year</strong></td>
</tr>
<tr>
<td><strong>Competitive Effect</strong></td>
</tr>
<tr>
<td><strong>Expected Change</strong></td>
</tr>
<tr>
<td><strong>Job Gain/Loss</strong></td>
</tr>
</tbody>
</table>

Source: Own calculations/ Euro stat
Tab. 3 Western Region

<table>
<thead>
<tr>
<th>Year</th>
<th>Auto</th>
<th>Tourism</th>
<th>Electronic</th>
<th>ICT</th>
<th>Metal</th>
<th>Heavy</th>
<th>Apparel</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitive Effect</td>
<td>22389.87</td>
<td>787.09</td>
<td>10468.12</td>
<td>6301.81</td>
<td>2763.97</td>
<td>16458.91</td>
<td>7749.03</td>
<td>16481.97</td>
</tr>
<tr>
<td>Expected Change</td>
<td>23453.21</td>
<td>748.60</td>
<td>11431.44</td>
<td>6221.14</td>
<td>2608.06</td>
<td>15852.50</td>
<td>7385.35</td>
<td>16375.03</td>
</tr>
<tr>
<td>Job Gain/Loss</td>
<td>45843.08</td>
<td>1535.69</td>
<td>21899.56</td>
<td>12522.94</td>
<td>5372.03</td>
<td>32311.41</td>
<td>15134.38</td>
<td>32857.00</td>
</tr>
</tbody>
</table>

Source: Own calculations/ Euro stat

Table presents the results of shift-share analysis of industry clusters in the Western Slovak region as compared to the nation. The Western region when compared to nation has a comparative advantage for industry clusters such as: Tourism, ICT, Metal manufacturing, Heavy machinery manufacturing, Apparel and Electrical equipment.

The region, however, has a comparative disadvantage for Automotive and Electronics cluster. Even though the region did not lose employment in respective sectors the region achieved less job opportunities in Automotive and Electronics clusters compared to the nation. Although the shift-share analysis determines a region's comparative advantage/disadvantage with respect to a given industry cluster, it does not specify the factors responsible for the actual growth or decline. A study conducted by Harvard Business school (2012) indicated that availability of labour market, skilled technicians, High levels of R&D, and sufficient supplier depth are the most significant factors affecting the location of the Automotive cluster.

Tab. 4 Central Region

<table>
<thead>
<tr>
<th>Year</th>
<th>Auto</th>
<th>Tourism</th>
<th>Electronic</th>
<th>ICT</th>
<th>Metal</th>
<th>Heavy</th>
<th>Apparel</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitive Effect</td>
<td>11836.87</td>
<td>340.09</td>
<td>2801.12</td>
<td>6421.81</td>
<td>7695.97</td>
<td>13014.91</td>
<td>4169.03</td>
<td>5455.97</td>
</tr>
<tr>
<td>Expected Change</td>
<td>12113.93</td>
<td>647.50</td>
<td>2409.06</td>
<td>7040.25</td>
<td>7497.99</td>
<td>13518.24</td>
<td>4041.58</td>
<td>5604.03</td>
</tr>
<tr>
<td>Job Gain/Loss</td>
<td>23950.81</td>
<td>987.59</td>
<td>5210.18</td>
<td>13462.05</td>
<td>15193.96</td>
<td>26533.15</td>
<td>8210.61</td>
<td>11060.00</td>
</tr>
</tbody>
</table>

Source: Own calculations/ Euro stat

Table presents the results of shift-share analysis of industry clusters in the Central region as compared to the nation. The Central Slovak region has a comparative advantage for Automotive, metal industry and heavy equipment manufacturing cluster. These industry clusters are performing relatively well in the region as compared to the nation. For example, Electronic cluster is gained jobs in the region much ahead of national gains.

Tab. 5 Eastern Region

<table>
<thead>
<tr>
<th>Year</th>
<th>Auto</th>
<th>Tourism</th>
<th>Electronic</th>
<th>ICT</th>
<th>Metal</th>
<th>Heavy</th>
<th>Apparel</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitive Effect</td>
<td>8416.87</td>
<td>692.09</td>
<td>3187.12</td>
<td>7327.81</td>
<td>12751.97</td>
<td>5578.91</td>
<td>6936.03</td>
<td>4767.97</td>
</tr>
<tr>
<td>Expected Change</td>
<td>8738.12</td>
<td>424.35</td>
<td>2770.66</td>
<td>8027.72</td>
<td>13078.13</td>
<td>5582.20</td>
<td>6873.61</td>
<td>4841.06</td>
</tr>
<tr>
<td>Job Gain/Loss</td>
<td>17155.00</td>
<td>1116.44</td>
<td>5957.78</td>
<td>15355.52</td>
<td>25830.10</td>
<td>11161.11</td>
<td>13809.64</td>
<td>9609.03</td>
</tr>
</tbody>
</table>

Source: Own calculations/ Euro stat

Table presents the results of shift-share analysis of industry clusters in the Eastern region as compared to the nation. The Eastern Slovak region has a comparative advantage of marking Metal, Heavy equipment, Apparel and Automotive. The Metal cluster seems to be a booming industry in the eastern region creating highest number of job gains in the region where as Automotive industry takes the second place in chosen clusters job gains. Further Apparel, Electrical equipment manufacturing and ICT sector contributing effectively towards local job gains.
CONCLUSION

Recent years time, national and local economic development planners as well as research economists have been using industry cluster analysis to understand regional cluster structure and to design and develop strategies for cluster growth. The primary objective of this study was to assess the Slovak Republic's regional competitiveness in attracting and retaining industry clusters. Specifically, the study utilizes different regional economic tools to analyze the industry cluster structure and composition. The economic development tools may not give a comprehensible picture of the regional economy, because the results are sensitive to the time period chosen. However, they provide necessary tools for assessing the present economic condition of the region. The location quotient model is helpful in quantifying the degree of concentration of a particular cluster in a region relative to the nation or the state. It reveals the most specialized clusters in the region as well as the ones that are emerging or transforming. The economic base model identifies the export-oriented clusters in the region.

This model measures the economic impact of export-oriented clusters on the local economy. The shift-share analysis on the other hand, differentiates the national and industrial contributions from local or regional contributions with regard to cluster growth. It identifies the clusters that are mainly influenced by local factors as compared to external factors. It measures a region's comparative advantage for industry clusters. The study analyzed 8 industry clusters in 4 regions. The study did not discuss the results of country cluster analysis in depth; however, the results are reported in tables and graphs format. Interpretation of country cluster analysis results is similar to that of the regional cluster analysis.

When compared to the nation, Bratislava region was found to be specialized in ICT cluster. The main reason for the increasing concentration of ICT cluster is the national trend + regional trend. Several jobs were gained as a result of local conditions (see Shift-Share results). Conversely, Metal, Apparel and Electric equipment manufacturing was declining because of local economic conditions as compared to the national trend. Bratislava been the capital city with several ICT and presence of other multinational companies less favours heavy manufacturing industries. There are no major export oriented cluster in Bratislava region. Two of the eight clusters are favoured by local economic conditions indicating that their growth in the region is better compared to nation. Namely, ICT cluster and Automotive cluster. The region has two emerging clusters, of which Heavy equipment and Apparel product manufacturing hoping will make contribution to local economic growth in the near future.

When compared to the nation western region has found to be specialized in Automotive, Electrical equipment manufacturing, Electronics and Heavy machinery. The region seems to be one of the best region in attracting additional cluster members. (shift-share analysis results) According to Sario.sk Kia Motors Zilina, VW Trnava and PSA Trnava are the major members of Automobile cluster. However, tourism industry did not show any comparative advantage compared to the nation. Compared to the nation, region's clusters promote export oriented firms. Export oriented clusters were found in Automotive, Electronic, Heavy machinery, Apparel and Electrical equipment industries. Job multiplication in these industries were the highest accounting less unemployment rates in the region compared to other regions. Electronic, Apparel, Heavy equipment, Electrical equipment clusters were star clusters where as Metal and ICT industry been emerging clusters. Automotive Industry, heavy equipment, Electronics and Electrical equipment are the prominent clusters in the region. This conclusion is based on the fact that:

1. These clusters are export-oriented in nature (basic clusters)
2. They are favoured by local factors as indicated in shift-share analysis
3. Their location quotient is approaching the threshold values.
4. These are clusters with large employment.

Both central and Eastern regions follow somewhat similar patterns with Heavy equipment, Metal, Apparel and Automotive industries been prominent industries. In Central region with high base multipliers Heavy equipment and Metal industries are export oriented and in eastern region Apparel and Metal manufacturing industries are creating jobs in the local economy. The emerging factor of Automobile cluster is visible in Central and Eastern regions hoping it will dramatically shift towards a star cluster and continue to benefit local economic development in respective regions. Apparel industry cluster is matured in Eastern region with job multiplication seems to improve consistently. According to sario.sk US steal Kosice and Spinea Presov are major contributors in the Eastern region. Over the past few decades, state and local economic development planners as well as research economists have been using industry cluster analysis to understand regional cluster structure and to design and develop strategies for cluster growth. The primary objective of this study was to assess the regional competitiveness in attracting and retaining industry clusters. Specifically, the study utilizes different regional economic tools to analyze the industry cluster structure and composition. The
economic development tools may not give a comprehensible picture of the regional economy, because the results are sensitive to the time period chosen. However, they provide necessary tools for assessing the present economic condition of the region. The location quotient model is helpful in quantifying the degree of concentration of a particular cluster in a region relative to the nation or the state. It reveals the most specialized clusters in the region as well as the ones that are emerging or transforming. The research concludes that despite the theoretical underpinnings and recommendations of international agencies including European commission, there are no signs of cluster policy development reported in Slovakia up to date. There has been attempt to create Cluster initiative which has not gone beyond paper pack. Although the priority to support SME development has yielded benefits to regional economic growth.

LITERATURE:


Authors’ address:
Dimuth Nambuge
dimuth.nambuge@gmail.com
Veronika Nambuge
INDUSTRIAL BUSINESS CLUSTER DEVELOPMENT IN SLOVAKIA AND ITS EFFECTS ON REGIONAL EMPLOYMENT

Abstract:
Industry business clusters are regarded as geographic concentration of companies which are interconnected through a buyer-supplier chain. Business Cluster analysis provides a clear picture of the regional and national economy by indicating the industry clusters that are growing in importance, emerging and declining. Inevitably analysis of industry business clusters is a starting point in constructing economic development strategies. Moreover, Economic development strategies implemented for industry clusters will have additional effect on regional/national growth in comparison to ones intended for individual industries. This study measured the performance of industry clusters of Bratislava region, Western region, Central region and Eastern region of Slovak republic. The primary objective of this study was to assess regional competitiveness in attracting and retaining industry clusters.

Key words:
Employment, Business Clusters, Economic Development, Growth

JEL Classification:
O10, E24