1. INTRODUCTION: COMPETITIVENESS AS THE MAIN OBJECTIVE OF THE ECONOMIES

Achieving and maintaining the national competitiveness in the global economy is a challenge that nations approach in different ways. There exists a variety of definitions about the competitiveness. One of the most popular is the definition of Michael Porter whose understanding is that the productivity of factors determines the competitiveness of the economy.

The current understanding in the EU about the competitiveness refers to continuous and sustainable raise of the productivity that should result in an increase of the wages and improvement of the standard of living. Therefore, the competitiveness means higher value added on the basis of improved productivity, improved quality and active innovations. Many scientists share the idea that the research and innovations are high-risk and costly endeavors, but they are the definitive factors that ensure the growth and competitiveness of modern economies (ARC Fund, 2010, 10). Since 2005, innovation policy has acquired a greater significance among EU common policies and was recognized as a key factor for competitiveness, productivity and sustainability.

Nowadays, besides the innovations, competitiveness depends more and more on the ability of the companies to co-operate, the effectiveness of the public administration and political decisions that aim at creating more favorable external environment for the companies. Clusters’ presume a co-operation and innovation that’s why they are perceived as a key driver for achieving a sustainable competitiveness. This explains also why nowadays clusters are in the highlight of the day and are a part of the political agenda on different levels of the economies.

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Cluster: a geographically limited critical mass (i.e., sufficient to attract specialized services, resources, and suppliers) of companies that have some type of relationship to one another - generally a complementariness or similarity in product, process, or resource (Попрс М. Е., 2005, 199).
2. CLUSTERS AS AN OPTION FOR RAISING THE NATIONAL COMPETITIVENESS

Neither the cluster approach nor the clusters are a kind of innovation. The idea of clusters dates back to the work of Alfred Marshal and his “Principles of Economics” – the so-called industrial regions.

The potential advantages of clusters that can lead to the rise of the competitiveness are numerous. Some of them have the easier access to specialized inputs, services, employees, information, institutions, training programs, and other public goods; perceivable innovation opportunities; rapid diffusion of best practices; encouragement of the strategic differentiation; ease of coordination and transactions across firms; knowledge creation; spin-offs and startups are encouraged by the presence of other companies; visible performance comparisons and strong incentives to improve. Therefore, clusters can foster high levels of productivity and innovation.

According to Michael Porter, clusters represent a new way of thinking about national and local economies, and they necessitate new roles for companies, government, and other institutions in enhancing competitiveness (Porter M., 2000, p.16) and also … clusters represent a new and complementary way of understanding an economy, organizing economic development thinking and practice, and setting the public policy (Porter M., 2000, 32). Clusters are in fact a business co-operation that aims at improvement of competitiveness of the participants, nevertheless, some of them could be direct competitors. They are a self-organizing production systems/networks where the companies co-operate through horizontal and vertical linkages to each other. This way they can realize an additional value added, strengthen the co-operation and partnership among the members and as a result to increase their own, the competitiveness of the industry and the national competitiveness.

All these different areas and levels of the “influence” of the clusters lead to the conclusion that clusters could be accepted as a part of a broader political agenda and not only as a separate instrument of the economic policy.

3. THE ROLE OF THE STATE

Governments of the states with market economy can not affect directly and create competitive industries. Their role, nowadays, is to implement a policy that aims at creating favorable macro and microeconomic environment (infrastructure, services, educational and training system, trade and fiscal and monetary policy). The last refers also to the essence of the cluster policy.

The importance of clusters suggests new roles for government at the federal, state, and local levels. (Porter M., 2000, 16). But in order to be effective the economic policy should take into account the specific needs of different clusters. Regarding that idea, the economic policy of the countries should not stress only the direct interventions but the indirect stimulation.

In other words, the role of the state in the process of initiation, setting up and evolving of clusters means (1) less decisions based on the “top-down” approach and more encouragement of the companies and other organizations to enter the clusters; (2) provision of an active participation of the public authorities in the process of identification of clusters and further assistance to clusters; (3) choosing the most appropriate policy and set of political instruments.

The cluster policy nowadays presumes an active interactions among all the levels (national, local and the cluster members) and a balance between the two approaches “top-down” and “bottom-up” when decisions are taken. In the field of economic policy cluster initiatives could be regarded as an opportunity/incentive to the roles of private and public sectors and the interactions among them to be redefined.

4. POLICIES AND INSTRUMENTS FOR CLUSTER ESTABLISHMENT AND INVOLVEMENT IN THE EU

The key concepts that underlie the idea of cluster approach continue to be central for the economic policy at European, national and regional levels. In some cases, the policy interventions are explicitly called cluster policies but in many others the main features of the cluster concept are present but the term cluster is not mentioned. Often, the cluster policy is included in or it complements the innovation policy on national and regional level. The analysis of the EU policies shows that the European strategies supporting small and
medium-sized enterprises (SMEs) and the competitiveness are tightly linked with the clusters. 

During the last years in European countries could be identified different approaches to support the development of the clusters. Political instruments towards the establishment and enhancing the development of the clusters in the EU countries are not new or purposely designed for especially for clusters. The most widely spread ones are: programmes for co-operation between the industry and scientific institutions (including universities); improvement and development of the infrastructure and logistics; funds for risk capital/investments; support for educational and training programmes; measures for attracting foreign direct investors, etc.

The experience of different countries shows that most programmes focus on one or several families of instruments aiming to (1) engage actors, (2) provide collective services and/or (3) promote collaborative research. Several innovation-focused programmes also include instruments to promote entrepreneurship and new firm foundation. There are examples of countries that have linked instruments through different programmes across parameters, such as the product lifecycle or the cluster initiative’s stage of development to offer a full range of cluster support instruments (OECD, 2007). What is specific is that in different countries diverse combinations of the instruments were applied. The purpose they have pursued was new types of synergy effects among the instruments and as a result further and a considerable raise in the competitiveness to be achieved.

Therefore, we can conclude that the idea for a cluster policy accepted as a strict model is not possible. The attention and stress of such a policy should be on the specific conditions and the unique characteristics of the given industry and the given region.

5. BULGARIAN CLUSTERS AND STRATEGIC FRAMEWORK

Cluster development in Bulgaria started with some delay in comparison to the other European countries. The starting point was the middle of the 2000s. The first cluster was set up in the second half of 2004. At that moment the Council for Economic Growth to the Government has taken a decision about four key industrial sectors suitable for the cluster initiative. The first cluster, Bulgarian cluster for Information and Communication Technologies Foundation (ICT Cluster) was registered at the end of 2004 as a non-for-profit entity. Up to the first half of 2005 two more clusters were registered and to the end of 2006 the total number of clusters was 14. At the beginning of that process the public authorities on national and regional level gave a strong impetus and support to the cluster creation but during the next years the setting up of clusters was not so intensive.

5.1. Strategic and institutional framework for clusters

At the national level in Bulgaria exists recognition of the potential of the clusters as a driving force for the innovation and competitiveness. This is obvious in a considerable number of strategies, programs and schemes, promoting the co-operation among business, universities and research institutions, and public bodies. Among the most general documents that aim at raising the national competitiveness and have not that direct significance for clusters are: National Plan for Development of Republic Bulgaria 2007-2013; National Strategy for Regional Development 2005-2015; National Strategic Plan for Agriculture and Rural Development (2007-2013); Convergence Programme (2009-2012); Operational Programmes OPs: Environment; Transport; Administration capacity; Human resources.


Among the documents stated above the National Cluster Strategy is the one that is explicitly directed to the specific action for clusters. It aims at raising the competitiveness of Bulgarian SMEs in key sectors through the activities based on clusters. Unfortunately, the priorities as defined in the draft of the strategy

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3 In their last report the experts of the Eurobank EFG state that Bulgaria has to accept a new model for its economic development the stress should be on competitiveness and export instead on foreign investments (Eurobank EFG, 2010).

4 Pursuing the cluster policy objectives set under the country’s strategic documents, on 16 July 2010 was launched a call for proposals under the grant scheme Support for cluster development in Bulgaria (BG161PO003-2.4.01).
(the only accessible version of the document) sound quite generally and vague.

Regarding the clusters, the National Strategy for the Encouragement of SMEs 2007-2013 and the Innovation Strategy are important strategies. The first one has as a priority “development of clusters in order to enhance the process of innovation in Bulgarian companies”. Linked to that priority is also the second one, the Innovation Strategy that aims at improving the ability of the enterprises to overcome the competitive pressure of the market forces in the EU. One of the measures for the implementation of the National Innovation Strategy envisaged particularly the development of clusters in the country and the introduction of the best EU practices in that field. The action plan under this policy measure included the creation of adequate framework conditions for cluster development, the set-up of advisory and consulting centers to support cluster start-ups, the dissemination of relevant information and the organization of training courses, the enhanced development of the research and development institutions network, as well as the launch of cluster pilot projects (Innovation Strategy, p. 14). But it is a fact that Bulgaria remains the only EU member-state, which does not have a national target for the level of research and development intensity.

The objectives and policy actions of the Innovation Strategy were updated and complemented by the OP “Development of the Competitiveness of the Bulgarian Economy, 2007-2013”. The development of a knowledge-based economy and innovation activities was set as a first priority axis of this programme, focusing the government involvement on assisting the development of research and development activities of enterprises, strengthening their innovation potential and establishing a favorable pro-innovative business infrastructure. What is already accepted to be a weak point regarding the functioning of the OP is the significant delay of the implementation of measures.

The regularly updated National Reform Programmes (NRP) are among the strategic documents that pay special attention to the support of cluster development through a combination of measures falling under different policies. For example, Priority 4 “Support for enterprises, entrepreneurship and innovations” stated that “considerable efforts will be made for the promotion of clusters and regional business incubators development with a view of increasing the efficiency of enterprises’ production and market performance”.

In 2010, a new four-year project “Encouragement of internationalization of Bulgarian companies” was launched by the Ministry of Economy, Energy and Tourism. It aims at consolidation and expanding of the participation of Bulgarian companies in the European and world markets and efficient utilization of competitive advantages of Bulgarian companies. The branches selected are: food production; beverages production; manufacture of chemicals and pharmaceuticals, manufacture of textiles and textile products, apparel industry, including leathers, furniture, manufacture of machinery, equipment and appliances, manufacturing of electrical machinery and apparatus, manufacturing of motor vehicles other than cars, manufacturing of rubber and plastics, manufacturing of medical and optical apparatus and instruments, manufacturing of office machinery and computers and services in the field of computer technology. In fact these are branches in which Bulgarian economy has already positioned itself in the European and world markets. Some of the targeted branches are the ones where the clusters have been created.

In general the strategic framework exists but some imperfections need to be outlawed. Priorities of the National Cluster Strategy 2007-2013 are not clear and specific enough. The lack of target for the level of research and development intensity on national level could be an obstacle for the definition of national objectives in that field. Strategic documents need regular updates because of the quick changes in the internal and external environment. Besides, very often the heavy administrative procedures prevent more active participation in the measures and initiatives initiated in the frame of the before mentioned strategic documents.

5.2. Public Bodies Responsible for the Cluster Initiatives

The responsible institutions at the national level are the Ministry of Economy, Energy and Tourism being the managing authority of the OP “Development of the Competitiveness of the Bulgarian Economy, 2007-2013”. The other institution tightly linked to the cluster development in Bulgaria is the Bulgarian small and medium enterprises promotion agency (BSMEPA) that is an intermediate body under Priority axes 1 and 2 of the same OP.
Two funds established at the national level also refer to the cluster initiatives. They are the National Innovation Fund and the National Science Fund. Both of them are financial mechanisms promoting scientific and entrepreneurial activities, highlighted in the Innovation Strategy.

Another positive sign at the national level is the establishment of the Bulgarian Association of Business Clusters (ABC) in 2009. Its aim is to promote cluster development in accordance with the best European practices. Represented in the ABC are over 250 Bulgarian companies, research and educational institutions, and NGOs.

We can conclude that at the national level the strategic framework and institutions responsible for clusters are available. But most important issue is how all these elements of the system function.

### 6. CLUSTERS AND SMES IN BULGARIA

The growth of clusters during the period 2004 – 2011 was largely enhanced at the beginning by a PHARE project that aimed at introducing an appropriate cluster approach and model. Up to now the number of registered and functioning clusters is 27.

In the table 1 it is visible that the clusters are concentrated in the four leader cities in economic development – Sofia, Varna, Plovdiv and Stara Zagora. As to the specialization the predominant part of them are in the industry branches.

Innovation activity is one of the most important indicators in the case of clusters. According to the research of BSMEPA the innovation activity index for SMEs is quite unfavorable (BSMEPA, 2011, 87-88). 91% of the SMEs have low innovation activity; 5% are in the middle of the scale (neither low, nor high) and only 4% have a high innovation activity. On the first

<table>
<thead>
<tr>
<th>N</th>
<th>Name of the cluster</th>
<th>Economy branch</th>
<th>Cluster center</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bulgarian Information and Communication Technologies</td>
<td>ICT</td>
<td>Sofia</td>
</tr>
<tr>
<td>2</td>
<td>Srednogorie Copper</td>
<td>Mining and processing</td>
<td>Pirdop</td>
</tr>
<tr>
<td>3</td>
<td>The Energy Heart of Bulgaria</td>
<td>Energy</td>
<td>Radnevo</td>
</tr>
<tr>
<td>4</td>
<td>Bulgarian Silk</td>
<td>Textile</td>
<td>Ruse</td>
</tr>
<tr>
<td>5</td>
<td>Rhodopes Tourism – BG</td>
<td>Tourism</td>
<td>Smolyan</td>
</tr>
<tr>
<td>6</td>
<td>Port Varna – West</td>
<td>Chemicals</td>
<td>Devnya</td>
</tr>
<tr>
<td>7</td>
<td>Troyan Furniture</td>
<td>Furniture</td>
<td>Troyan</td>
</tr>
<tr>
<td>8</td>
<td>Tourism – Varna</td>
<td>Tourism</td>
<td>Varna</td>
</tr>
<tr>
<td>9</td>
<td>Optela – LT</td>
<td>Optical technologies</td>
<td>Plovdiv</td>
</tr>
<tr>
<td>10</td>
<td>Clothes Production</td>
<td>Textiles</td>
<td>Haskovo</td>
</tr>
<tr>
<td>11</td>
<td>Agricultural Technologies</td>
<td>Machine-building</td>
<td>Ruse</td>
</tr>
<tr>
<td>12</td>
<td>Traditional Bulgarian Products</td>
<td>Food industry</td>
<td>Stara Zagora</td>
</tr>
<tr>
<td>13</td>
<td>Balkania</td>
<td>Tourism</td>
<td>Troyan</td>
</tr>
<tr>
<td>14</td>
<td>Eco-Industrial Cluster</td>
<td>Industry and environment</td>
<td>Pernik</td>
</tr>
<tr>
<td>15</td>
<td>Digital Media Cluster</td>
<td>Media</td>
<td>Sofia</td>
</tr>
<tr>
<td>16</td>
<td>Bulgarian Media and Press</td>
<td>Media</td>
<td>Sofia</td>
</tr>
<tr>
<td>17</td>
<td>Thracian Elixir</td>
<td>Wine tourism</td>
<td>Haskovo</td>
</tr>
<tr>
<td>18</td>
<td>Furniture Production</td>
<td>Furniture</td>
<td>Stara Zagora</td>
</tr>
<tr>
<td>19</td>
<td>Dionysius Road</td>
<td>Wine production</td>
<td>Plovdiv</td>
</tr>
<tr>
<td>20</td>
<td>Eastern Rhodopes Green Carpet</td>
<td>Tourism</td>
<td>Kardjali</td>
</tr>
<tr>
<td>21</td>
<td>Orpheus Road</td>
<td>Wine tourism</td>
<td>Plovdiv</td>
</tr>
<tr>
<td>22</td>
<td>Bulgarian Textile Cluster</td>
<td>Textile</td>
<td>Sofia</td>
</tr>
<tr>
<td>23</td>
<td>Mechatronics Cluster</td>
<td>Electronics</td>
<td>Sofia</td>
</tr>
<tr>
<td>24</td>
<td>Cluster Elemon</td>
<td>Energy and engineering</td>
<td>Varna</td>
</tr>
<tr>
<td>25</td>
<td>ICT Cluster</td>
<td>ICT</td>
<td>Varna</td>
</tr>
<tr>
<td>26</td>
<td>Information Resources Cluster</td>
<td>Information and technologies</td>
<td>Sofia</td>
</tr>
<tr>
<td>27</td>
<td>Maritime Cluster</td>
<td>Maritime transport</td>
<td>Varna</td>
</tr>
</tbody>
</table>

sight the reason may be the period of economic crisis but what is warrring is that in an earlier research of the Agency (BSMEPA, 2008, 85) the conclusion about the innovation activity is the similar. According to the same research the innovation activity of the medium-sized companies is three times higher than in micro-sized companies. Taking into account the fact that micro-sized enterprises in Bulgaria, in 2009, are 90.3% of all the enterprises the need of clusters became more than obvious. This way the small and micro-sized companies can improve that indicator.

Only 4% of SMEs are involved in clusters (BSMEPA, 2011, 94). Managers state that the existing clusters deals mostly with the activities of training, innovation and public-private partnerships. The benefit that they outline on the first place is the partnerships (78% of the respondents) with the other companies. Other benefits that the companies have being members of clusters are:

- exchange of good practices – 61% of the respondents (The experience shows/suggest that the implementation of best practices is directly related to the innovation activity of enterprises)
- assistance in case of joint contracts/commissions - 61% of the respondents
- exchange of important information – 49%
- ideas about new products – 43%
- security the realization of production – 21%
- delivery guarantees – 17%
- participation in fairs and exhibitions – 14%
- participation in international meetings and conferences – 8%

The research of BSMEPA shows that the main activities in the frame of Bulgarian clusters are education; innovation and partnership. Hence, the enterprises in the cluster still don’t use all the potential benefits of the cluster formation.

Another recent research that deals partly with clusters is the one of the ARC Fund (ARC Fund, 2010). One of the investigated aspects is the innovative clusters. The insufficient level of innovation activity is stressed here too.

The conclusion that Bulgarian enterprises are lagging in the process of innovation is proved by the figures in Table 2. In 2009, the share of enterprises-laggards is over 50% of all the enterprises. The second position is for enterprises-optimizers (26%) and the smallest is the group of enterprises innovation leaders (10%). Like in most of the other EU member states, in Bulgaria the share of the expenditures for research and development of the enterprises has increased after 2005 compared to the share of the government sector. But nevertheless the positive change measured in absolute terms remains very low in both the state and the private sectors. Research and development spending has diminished from 0.36% of GDP in 2000 to 0.28% for 2008 (ARC Fund, 2010, 9). Another peculiarity visible from the research results is that the foreign ownership matter in the case of the innovation. The bigger the foreign participation is more innovative are the enterprises.

The selected set of indicators indicates that most of the clusters are at the initial stage of their development and their members have not started to benefit from these formations. Still the potential and benefits of clusters in Bulgaria are not assimilated. Bulgarian clusters are at the beginning of their development.

### Table 2 Innovative Clusters in 2009

<table>
<thead>
<tr>
<th>type of innovation</th>
<th>Innovation leaders</th>
<th>Optimizers</th>
<th>Laggards</th>
<th>Catching-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product innovations (number of enterprises)</td>
<td>53</td>
<td>6</td>
<td>1</td>
<td>77</td>
</tr>
<tr>
<td>Process innovations (number of enterprises)</td>
<td>78</td>
<td>7</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Organizational innovations (number of enterprises)</td>
<td>68</td>
<td>38</td>
<td>18</td>
<td>42</td>
</tr>
<tr>
<td>Marketing innovations (number of enterprises)</td>
<td>62</td>
<td>63</td>
<td>0</td>
<td>43</td>
</tr>
<tr>
<td>Share of enterprises, %</td>
<td>10</td>
<td>26</td>
<td>52</td>
<td>12</td>
</tr>
<tr>
<td>Share of enterprises in cluster with over 50% foreign ownership, %</td>
<td>19</td>
<td>12</td>
<td>9</td>
<td>14</td>
</tr>
</tbody>
</table>

Source: ARC Fund, 2010, 75

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5 The potential benefits of the clusters are open to all its members never mind their size.

6 Those who were interviewed in the frame of the research, hold by the team of BSMEPA.
7. CONCLUSION

Clusters are an adequate instrument for raising the national and regional competitiveness. That’s why they can be accepted as drivers for the competitiveness. Countries develop different policies for clusters. What is specific is that neither the concept of clusters nor the instruments of the so-called cluster policy are new or innovative. The more successful practices of some countries in the field of clusters prove the importance of the decisions about what kind and set of political instruments to be used in order stronger synergy effects to be generated. As far as the role of the state, it should put the stress on the indirect stimulation.

Bulgarian clusters are at the beginning of their way. The strategic framework exists but the way it functions is under question. The research presented in the paper brought out some imperfections regarding the framework that could be treated as an obstacles in the process of the cluster development, innovation activity of the companies and as a consequence an obstacle for the national competitiveness. The statistical data in the area of innovation activity, innovation type of the enterprises (members of the existing clusters), main activities of the clusters and the benefits for the members of the clusters indicates that there is still much to be done in order for Bulgarian clusters to be one of the pillars of the national competitiveness.

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Ideja o klasterima nije nova, ali je danas ponovo u centru pažnje. Kroz politiku o klasterima zemlje pokušavaju da podignu svoju nacionalnu konkurentnost. Rad se bavi sledećim zadacima-razmatanjem i evaluacijom strateškog okvira za klastere u Bugarkoj i analizom stanja bugarskih klastera. Rad ukratko prikazuje opšta pitanja koja se tiču nacionalne konkurentnosti i klastera kao jednim od mogućih instrumenata ostvarenja održive konkurentnosti. Politička praksa u Evropskoj uniji na polju klastera je osnova za zaključke o ulozi vlada. Drugi deo se bavi strateškim okvirom inicijativa u vezi sa klasterima u Bugarskoj i sa selekcijom indikatora u vezi sa malim i srednjim preduzećima i klasterima u zemlji. Na osnovu ovoga, može se izvući zaključak o stanju razvoja bugarskih klastera. 

**Ključne reči:** klasteri, Bugarska, konkurentnost, ekonomска politika

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