

Innovation Enhancement in Regions of Slovenia

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1. INNOVATION ENHANCEMENT IN REGIONS OF SLOVENIA

Abstract

Today's economic challenges require that regions find new ways to compete in a rapidly changing global economy. Regions must understand their strengths and opportunities and, most importantly, take action to create new competitive advantages based on innovation.

The most innovative regions are not only characterized by strong infrastructure conducive to innovation but also by strong socio-economic conditions for innovation fostering and thus build up "innovation culture" as a part of regional social capital. When key developers are nurturing diversity, proactively interacting, communicating, trusting and learning from each other, collaborating, and competing, the entire economy becomes more innovative, dynamic and successful in responding to opportunities for growth and change both locally and globally.

The Slovenian case of cluster development which is also presented in this paper showed that the balance between infrastructure and socio-economic conditions for innovation fostering proved to be very important.

Regions with a successful future must be prepared to transform and grow in totally new ways and directions. But what are these ways and directions? Examples of successful regions around the world (Baden-Wurttemberg, Emilia Romagna, Southern California etc.) show that such regions not only recognize their local authenticity, but also they accept, respond and co-create global trends and are leaders in innovation.

Once we move from purely technical questions of innovation into the paradigm of regions as living systems, developing innovative regions becomes a continuous process. Using this approach, it is possible to create regions filled with people and organizations that are capable of adapting as needed, that are alert to changes in their environment, that are able to innovate. It is possible to work with the innovative potential that exists in all of us, and to engage that potential to solve meaningful problems (Wheatley, 2001).

2. INNOVATIVE REGION

First it is important to establish a mutual understanding of the concept of innovation. Generally we have a very narrow idea of innovation, focusing just on new products and services. Our mental model of what constitutes innovation is usually derived from the technological frontier - even though most regions depend on more prosaic activities (Morgan et al., 2003). To create new opportunities and new wealth for the regions, it is important to begin thinking about innovation at the level of entire regional concept. By regional concept we understand a whole process of how the region creates, delivers, and extracts value. It includes new products, services, technologies as well as new methods of work, better and more effective networking, more dynamic synergies between public and private sectors etc. In the long term the most important question is not what the region is but what it is becoming.

Innovation capability is the capability of acting in diversity. If the region becomes too homogenous, it becomes vulnerable to environmental shifts. Where there is true diversity in a region, innovative solutions are being created all the time, just because different people do things differently. If regional leaders fail to encourage uniqueness and diversity, they destroy the entire region's capacity to adapt. Systems are usually built to resist new ideas and innovations. Innovation is about tapping into the existing potential of people and delivering real benefits (Wheatley, 2001; Ziegler, 2002).

If the region is not experimenting with new concepts, it is probably living on borrowed time. Of course real innovation requires bending - or breaking- rules. Innovations are exceptions because the systems are built for perpetuation, control, and efficiency (Hamel, 2003). Therefore, it is important for regions to develop shared visions that are tuned to this concept of innovation. Radical innovation comes from engaging people and organizations, from generating a collective sense of destiny, from unleashing the imagination of people and teaching them how to see unconventional opportunities.

By nature, innovation is a continual learning process (Senge, 1998). Mastering the discipline of innovation will require stakeholders in the region working together, learning from another's efforts. It is a natural response in the innovation process that stakeholders engaged experience periods of profound discomfort. Confronting such discomfort and uncertainty that innovation process brings is best done together in consultation and by exchange of experiences.

Along with the above discussed principles of developing innovative regions, there is also the resource alignment necessary to promote innovation. Too often, resources are plugged into existing systems and initiatives -- and little change results. When new challenges require people or groups to interact differently than they habitually have done - addressing different challenges with different timing than historically required - it is important to pull them out of the existing systems and draw a new boundary around a new initiative (Christensen, 2001). Such new initiatives can facilitate new patterns of working together that ultimately can coalesce as new process - new capabilities for transforming inputs into outputs.

There is no single template which explains the success of "advanced regions", since each has its own specificity (Morgan et al., 2003). However, an innovative environment can be consciously stimulated. Regional developers are invited to bring together a cross-section of

people at all levels to share new perspectives that may be the cornerstones of bold new technical, organizational or conceptual innovations.

Innovation is therefore fostered by the following conditions:

capability to develop diversity,

practicing new interactions,

possibility for learning together - learning from sharing experience,

resources to support all of the above.

It is important to institutionalize innovation by building a safe place for people to think new thoughts. Skarzynski and Hamel suggest three ways to start the innovation process: 1. start new conversations by bringing together people of all ranks to question orthodoxies and search for new ways, 2. seek new perspectives - if region wants to do a better job of envisioning the future, ask the people who will get to the future first: young people, 3. spark new passions - innovation comes from heart as well as the head (Hamel, Skarzynski, 2002). Regions that are not afraid to innovate engage people energies in a new and profoundly different way.

3. VALUE GENERATED BY INNOVATIVE REGIONS

As traditional definitions of innovation make too much of the tangible technical dimension and too little of the intangible social, organizational and relational dimensions (Morgan et al., 2003), so do the traditional innovation policies concentrate mainly on development of the infrastructure conducive to innovation. This infrastructure usually includes the following priority areas: educational system, R&D infrastructure, protection of intellectual and industrial property, administrative simplifications, legal and regulatory environment, taxation etc. However, the value that developers of innovative regions can provide is not created only by the infrastructure conducive to innovation, but is getting more and more dependant on the people's experience and perceptions of quality of life in the region. Quality of life relates to the appreciation of their creative and innovative capabilities and relations at work, quality of leisure time and potentials of creating a successful family and community life.

The following principle of the total value applies:

Value generated by regions

$$V_t = W_1 V_0 + W_2 V_e$$

v_t is total value

v₀ is value of the infrastructure, products and services provided (quality/price)

v_e is value of the experience and perception of quality of life

w is ponder - relative emphasis by key players

v₀ is a "competitive imperative"

v_e is a "competitive differentiator".

Based on Scansaroli and Szymanski, 2002

What regional key players are looking for and what they will be demanding in the future is growing in sophistication and complexity. A historical perspective of value reveals value in terms of price - i.e., lower price of infrastructure, products and services being equated to higher value. Later they would be looking at value as quality relative to price (v_0). Today, value estimations also include explicit assessment of the experience and perception of quality of life (v_e). People in innovative regions want their “sparks of creative passion” that Skarzynski and Hamel are talking about. They are focusing on total value of the region and giving added emphasis (w_2) to the experience of quality of life (v_e) when making value assessments. Although fluctuations in socio-economic and personal conditions can cause fluctuations in the emphasis placed (w_1 versus w_2) on the quality/price versus the experience, the overriding trend in innovative regions has been toward giving greater weight to the experience.

The expanded value equation reveals that innovative regions are creating value not only through superior infrastructure conducive to innovation but also put explicit efforts into maximization of value through the experience of the region as a place where open-mindedness is cultivated, as a rewarding place for people to think new thoughts. It is therefore expected that the regional competition of the future will focus on how well a certain region can provide people with opportunities to express their creative potentials.

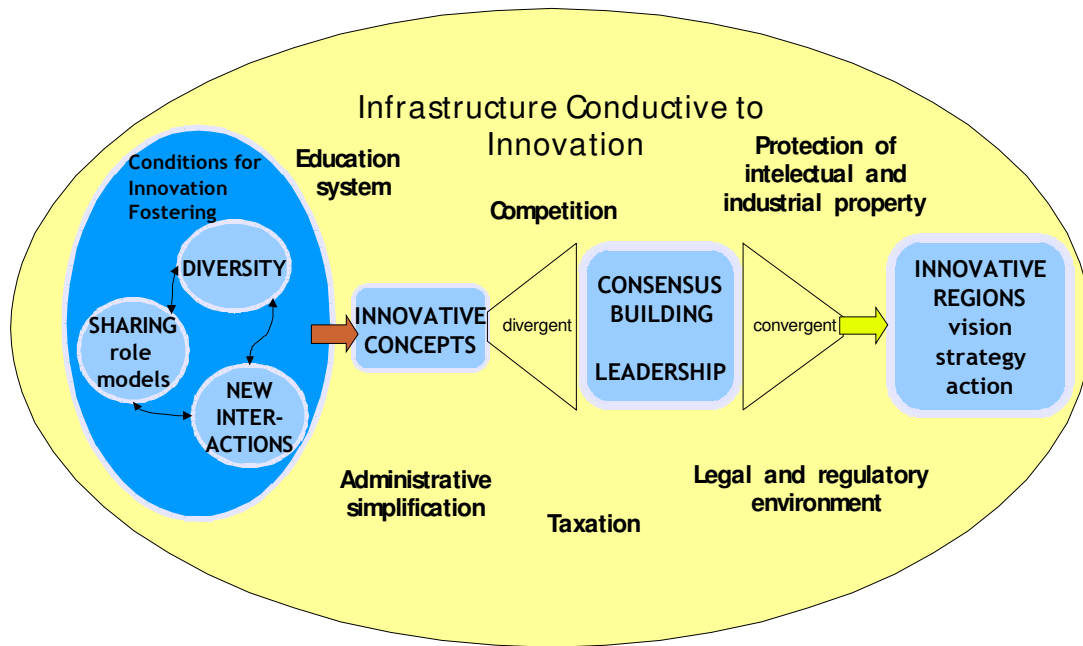
4. REGIONAL INNOVATION ENHANCEMENT FRAMEWORK

Along with the infrastructure conducive to innovation, innovation enhancement in the regions is therefore also a thing of creating value through experience of quality of life and will become more of “competitive differentiator” between the regions than “competitive imperative”. But how can regional developers stimulate this kind of regional innovation capability?

As a starting point, in most cases we are dealing with a challenge of low level of stakeholder engagement and low level of social capital, particularly sharing common values such as trust, reciprocity, joint commitments, learning by sharing, courage and risk taking. To enhance regional innovation capability, it is necessary to develop both infrastructure conducive to innovation and socio-economic conditions for innovation fostering and thus build up “innovation culture” as a part of regional social capital. In such regional environment innovation leaders can create successful visions, strategies and actions.

After the infrastructure conducive to innovation (i.e.: education system, R&D infrastructure, protection of competition and intellectual property, appropriate legal and regulatory environment and taxation conducive to innovation) is put in place, innovation as a social process is fostered by (1) diversity, (2) new interactions, (3) possibility for learning together - learning by sharing (see Figure 1).

Figure 1: Regional innovation enhancement framework



Diversity is enhanced by appreciating and nurturing diversity of people and institutions/organizations. For people it means diversity in terms of age and gender structure, nationalities, culture and life styles, educational and occupational structure, individual and team work orientation, people’s mobility etc. Diversity of institutions/organizations means diversity in terms of size (LE, SME), activity (industries, agriculture, services - R&D, education, finance etc.), technology, international orientation, ownership (public, private, collective - i.e.: chambers, trade associations, unions), etc.

New interactions are the second factor of innovation enhancement. Innovation policies have usually focused on intensification of co-operation between research, universities and companies. When more advanced, their effort would then lead to the cluster development. It is important to deepen these efforts of new interactions (formal and informal) to enhance even more “unusual” co-operations i.e.: business and NGOs, art and business, sports and art etc. New interactions will require bringing parties together that normally do not co-operate, parties, often seeing one another as the primary obstacle to progress as they defined it. The relationships among leaders across normal boundaries might be the most crucial ingredient to major change (Senge, 2006). New interactions must eventually lead to new partnerships for innovation and these partnerships take time, trust and real commitment.

The third factor of innovation enhancement is possibility for learning together - learning by sharing which is complementary to the traditional educational system and requires willingness and trust to share knowledge and experience from different fields of development.

Once innovative concepts are generated we face a situation of many “potential futures” for the region. At that point it is important to develop consensus building capabilities and recognize leaders who will help regional stakeholders to extract the specific direction the region is about to take (Colnar Leskovsek et al., 2005). Consensus building includes among other things agreement-reaching and conflict-resolutions as well as other activities of future collaboration

enhancement. Those capabilities can be enhanced by independent and professional facilitation. The facilitation process should embody values of openness, inclusion and collaboration. The role of facilitators is to help stakeholders to open and bring their professional resources to the work at hand and thus create new opportunities. An important effect of shared decision making is that participants recognize themselves as actors who influence the regional development outcome.

5. SLOVENIAN REGIONAL DEVELOPMENT SYSTEM

In terms of its land surface (20 274 km²) and population (2,01 million in 2007), Slovenia is one of the smallest EU member countries. Slovenia's per capita gross domestic product (GDP) measured by purchasing power parity stood at 87% of the EU average in 2006. According to Eurostat, in 2006 Slovenia was in the 16th place in the 25-member EU in terms of its per capita GDP, just before Portugal and behind Greece. GDP growth rate was 5,2% in 2006 and 7,2% in the first half of 2007 which is far above the 25-member EU average (in 2006: 2,9%). Slovenia became "the lucky 13th" member of the European Monetary Union in 2007, fulfilling all Maastricht criteria. Despite the strong economic growth, the current account deficit is rather small (below 2 percent of GDP), exports are growing much faster than imports, wage and productivity trends are stable.

At the moment Slovenian regional system consists of municipalities and statistical regions. Based on the Act on the Establishment of the Municipalities (1994) municipalities were established as holders of the local self-governance in Slovenia. The country is now divided among 210 municipalities (11 of these are town municipalities), extremely diverse in terms of population and economic power. The largest in terms of population and national GDP contribution is the city municipality of Ljubljana (265 881 inhabitants).

The last regional division of Slovenia created twelve statistical regions (NUTS 3). This division was based on the social-geographic regionalization of Slovenia (functional medium-size regions). Statistical regions coincide with the so-called planning regions determined for the purposes of spatial planning. They have no political or administrative function. However there has been a constant debate about the establishment of administrative-political regions (provinces) as an intermediate level between the state and the municipalities.

Figure 2: Statistical regions of Slovenia (NUTS 3)



Some domestic experts seem to be very critical of the Slovenian regional development. While the situation in the area of regional development in the 1970's and 1980's was marked by conflicts of interest between various supporters of development due to the lack of capital, a qualified labor force, and a suitable infrastructure, from the 1990's on, the absence of cooperation or any common administrative network linking development centers became increasingly obvious. The gap between the state and the local communities is increasing. According to predictions, only the metropolitan Ljubljana region, which has long been Slovenia's leading development generator, will be successful at »catching up« with globalization currents (Ravbar, 2004) and developing innovation enhancement conditions.

Within the existing system the innovation enhancement in Slovenia is mainly the responsibility of national Ministries of the Government of Republic of Slovenia. Ministry of Economy along with the Government Office for Growth seems to be most active in this area (EC, 2006). However, a lot of critical discussion took place when the so called pro-active industrial policy has been developed. Policy was implemented through the Program of Measures to Promote Entrepreneurship and Competitiveness 2002 -2006. The three cornerstones of the Program were: (1) knowledge for development which dealt with improving the flow of knowledge from educational and research institutions to the economy, strengthening international R&D cooperation and increasing researcher mobility; (2) entrepreneurship promotion including the development of supportive entrepreneurial environment and creation of new SME-s and their investments; (3) improvement of enterprises' competitive capacity which stimulated introduction of the strategies to increase productivity of the enterprises, promoted enterprise investment in technological development, innovation and internationalization and as a special program promotion of networking and development of clusters.

6. CUSTER DEVELOPMENT PROGRAM AS PART OF PROACTIVE INDUSTRIAL POLICY

The implementation of cluster program in Slovenia has been undertaken in three phases. The first phase entailed the identification of potential clusters, the second the definition of cluster policy, and the third the implementation of the cluster policy in practice. The original concept was, on the basis of the clusters identified, to promote the development of those clusters that were of strategic importance to Slovenia in terms of the number of companies, the proportion of employment, the existing advantages, development potential, and market share in Slovenia and on foreign markets.

In March 2000 a review of the geographical concentration of industries and identification of product/service systems, i.e. potential clusters, was carried out (Dermastia et al., 2000). The key research findings that there was no »real« cluster in Slovenia (weak links, early phase of development for cluster development infrastructure) and that there were at least ten potential clusters (product/service systems) had a significant influence on the original concept for the implementation of cluster policy via support for strategic clusters in Slovenia. In place of a uniform measure for encouraging the development of clusters, Ministry of Economy designed a wider package of measures for encouraging co-operations and networking.

In 2000 the Ministry of Economy began pilot program of cluster development in practice. The rationale of the pilot program is based on fact that Slovenia had no experiences, knowledge and available instruments in the field of cluster development in practice (Dermastia, 2002). The whole clustering process facilitated by the Ministry was a learning process. The pilot program had the aim to develop the systematic approach to cluster development, the promotion of the

cluster concept, the acquisition of experience and the strengthening cluster policy. Ministry invited groups of at least ten companies in value system and at least three support institutions, which together could qualify as a potential nucleus of the cluster, to develop way forward in conjunction with Ministry. An open call for tenders was launched, out of which 3 pilots projects have been selected (automotive cluster, transport logistics and tooling). The choice of pilot projects involved several criteria such as regional concentration of companies, access of the groups to international markets with products of high added value, existing cooperation and networking among the companies and between the companies and research and development institutions, the existence of support organizations and the reputation of key companies in the group.

The experience of pilot projects has shown that clustering is a process of accepting diversity in people, systems and processes of all parties involved. It is also a process of continuously ongoing interactions, which entails communication at all level (general management, executive management R&D personal, technicians) and among all actors (companies, institutions, organizations, public partners), active cooperation between companies and agents of knowledge and offensive participation in international networks of cluster structures. Further, the development of a cluster is a learning process. Awareness raising and the targeting of joint objectives are also important activities, and entail the preparation and holding of a range of well facilitated workshops and bilateral and joint meetings. The effectiveness of the activities can be increased if the leadership of the project is entrusted to outside independent experts in the area of the development of structural networks and clusters. Training, the expansion of knowledge of the cluster concept and the creation of project groups in strategic areas of cluster development are vital. During the work process in this period the idea that cluster development is an investment in the future and entails a demanding web of relations based on collaboration, trust and coordination also matured. The investments in cluster development are large, as they require major engagement on the part of the key people of those involved, specific knowledge and skills, technical resources and thus financial investments.

7. CONCLUSIONS

The size of Slovenia enabled the Ministry of Economy to implement a national cluster program which proved to be one of the most successful ones in its time. The special quality of the program was that the Ministry acted only as a catalyst of the clustering process providing co-financing of start-up costs (40%) of cluster initiatives (management, projects), relevant analysis, facilitation, training and international networking. The Ministry measures did not in any way replace market mechanism. Decisions about areas (industries) of cluster development, organizational and managerial issues were domain of participating actors. Initiative and responsibility for success of cluster initiatives remained domain of private leadership, researchers, employees, etc. It proved later on that the cluster initiatives that followed those principles remained successful even after the cluster program has been canceled by the new government in 2005.

The Slovenian case of cluster development is a case of balance between key factors conducive to innovation: infrastructure, diversity, new interactions, learning by sharing, consensus building capabilities and leadership with vision, strategy and actions. It showed that governance of innovation cannot be developed in the absence of strong public private partnership, which in return, can not be developed without the culture of collaboration and trust between employers and employees, between boards and shareholders, and between state and citizens.

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