

# 17. Cluster Policy Implementation and Evaluation in Slovenia: Lessons from a Transition Economy

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## 17.1 INTRODUCTION

In the last decade after the link between innovativeness and competitiveness was empirically proven (Porter and Stern, 2002) an increasing attention has been put to innovation as a key driver of competitiveness and hundreds of innovation policy programmes are being developed and implemented in the EU and other countries (Andresson et al., 2004). Within innovation policy, programmes and measures to promote clusters have gained popularity as clusters are considered an organisational survival strategy in today's business environment (Nauwelaers and Reid, 2002). However there is a great variety in cluster policy design, which reflects a strong context-dependency of the approach used with regard to economic development of the country, institutional structure, collaboration practices, and even tradition of social dialogue. Policy initiatives range from performing cluster studies to setting up platforms for dialogue, encouraging co-operation, establishing collective infrastructure and providing subsidies for collaborative projects. Despite the differences in national approaches the main driving force behind cluster policies is the stimulating influence of clustering on collective learning, which leads to innovation and improved competitiveness of participating firms.

The European Commission launched the Innovation Trend Chart project to map innovation performance and analyse innovation policies in EU countries aiming at improving policy co-ordination and policy learning across Europe. The purpose of the project is not simply to identify best practices as the uniqueness of regional success stories makes lesson-drawing difficult if not impossible (Hospers and Beugelsdijk, 2002). The aim is to

encourage a soft version of benchmarking based on a ‘learning-by-interacting’ process (Lundvall and Tomlinson, 2000) where an exchange of experiences takes place between policy makers, who then investigate their own policy practices with regard to the policies used abroad (Nauwelaers and Reid, 2002).

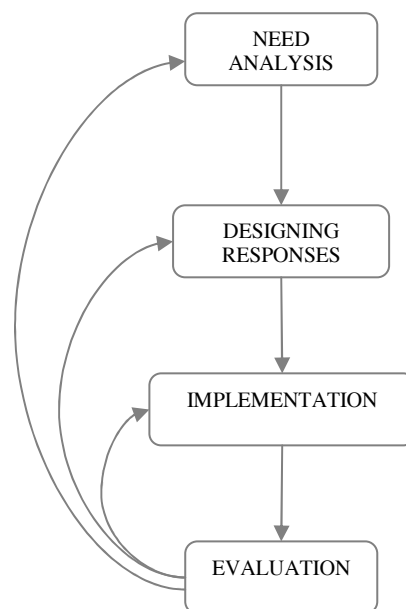
The aim of this chapter is to present the experience of implementing cluster policy in a transition economy and discuss the reasons why the cluster programme stopped in 2005. To do this we present a case study of cluster policy implementation in Slovenia over the last 10 years following a four stage policy life cycle as introduced by Hogwood (1987). We describe how the Slovene government followed a policy life cycle approach and why it failed to develop a longer term programme. We argue that the evaluation phase is crucial to the process of successful policy management. Because of some methodological shortcomings in initiating cluster policy in 2000 (e.g. a too strong top-down approach) and government changes in 2004 Slovenia to a large extent followed a traditional linear policy model. In such a model, evaluation is the end phase of the process, with an emphasis on primarily quantitative (short-term) effects, and where the central role of the government is asserted by its final assessment and decision. The alternative would be to have the assessment(s) not as a ‘final blame accounting’ exercise but a continuous, structured and integrated learning process in the four stage framework in which different stakeholders (not only the government) play their respective roles.

In the first part we present how the concept of clustering was introduced in Slovenia, the mapping and need analysis phase, followed by policy design and implementation. Throughout the process of implementation internal and external evaluations took place and we summarise the main results and implications from those studies. At the end, we present our view on why co-ordinated policy support for clustering stopped in Slovenia and what could be the consequences on further revitalisation of the Slovene economy, its competitiveness and growth.

## 17.2 CLUSTER POLICY LIFE CYCLE

Policy making is increasingly recognised as a set of routinised stages which feed back into themselves. The concept of policy life cycle has been addressed for more than two decades by several authors like Nakamura and Smallwood (1980), Chelimsky (1985), Guba (1984), Jones (1982), Rist (1989, 1990, 1993) and others. Adapting the policy life cycle model described by Hogwood (1987), policy can be described as a process of four distinct phases (Raines, 2001):

- Analytical: an initial analysis of a problem, determination of needs and an audit of existing policies that address those needs;
- Developmental: development of a policy response to those needs and definition of key policy objectives, resource view and policy tool investigation;
- Implementation: preparation of procedures, selection process, budgets and timetable for the implementation of the programme;
- Evaluation: an assessment of the performance of the programme, evaluation of effectiveness and efficiency of the policy after an appropriate operational period.



Source: Adapted from Hogwood (Hogwood, 1987) and Raines (Raines, 2001)

Figure 17.1 The policy life cycle model

The four-stage process presented above can be perceived as a circle where each stage is not just a linear continuation of the previous phase, but links back into iterative cycles of future policy development (see Figure 17.1). In the case of clusters this constant adaptation process of the policy is crucial, because the policy targets an extremely complex phenomenon: a network of

firms, research and development (R&D) and other institutions, which are strongly embedded in their environment.

Throughout Europe policy measures to promote innovation are being implemented, often using a cluster approach. The European Trend Chart on Innovation reveals that cluster policies differ considerably among European countries (Boekholt and McKibbin, 2003). The differences are mainly in content (strengthening triple helix, improving R&D co-operation, encouraging co-operation in general, etc.), approach (bottom-up or top-down), scale (from hands-on to hands-off support), positioning (when aimed at strengthening the existing clusters they are part of industrial policy, but usually they emerge as part of science and technology policy aimed at encouraging the emergence of new clusters) and level of implementation (local, regional or national). Diversity of measures reflects the differences in economic development, socio-cultural background, political priorities and existing competences of regions, and proves the necessity to adapt the policy life cycle to each specific case (Nauwelaers and Reid, 2002). Also the WEID research group<sup>1</sup> argues that there is no “one-size-fits-all” solution and effective policies must respect the differences in institutional contexts and structural conditions across clusters (Tsagdis et al., 2005). Those specific characteristics strongly influence the policy life cycle and demand tailored approaches to designing, implementing and analysing cluster policies.

All four phases of the process should be implemented in order to achieve the long-term success of a cluster programme. The analysis made among EU and candidate countries revealed that in many cases where cluster policy measures were not implemented following the whole four-phase process it is the evaluation phase that had not been systematically undertaken. A comprehensive overview of the evaluation of cluster policies in the EU (Boekholt and McKibbin, 2003) showed that evaluation practices varied considerably across countries reflecting the specific context of the policy as well as different stages of policy implementation. On the one hand, several countries like Luxembourg, the Netherlands, Germany, Finland and the UK have conducted the evaluation of clusters<sup>2</sup> aiming at assessing the achievement of goals set, cluster performance and possibilities for future development, but on the other hand the evaluation of cluster policies was limited. It was conducted in Slovenia, Finland, the Netherlands and selected regions in Austria and Spain (Boekholt and McKibbin, 2003). The reason for the limited number of evaluations undertaken is on the one side due to the youth of the programmes<sup>3</sup> and on the other side the limited understanding of the role that evaluation can play in the policy life cycle.

The field of policy evaluation has greatly matured in the last 20 years, however there are still many theoretical and methodological disputes<sup>4</sup> that make the evaluation work very challenging (Mathison, 2005). In the 1970s,

when the pioneering work on the impact of regional policies was done, evaluations were mainly based on the analysis of the economic data over a period of time using econometric techniques based on statistical analysis, multiple regression analysis, time series and input-output models to estimate the impact of policies (Ashcroft, 1982; Diamond and Spence, 1983). Due to the limitations of these traditional methodologies, more comprehensive evaluation approaches such as cost-benefit evaluations were developed in the 1990s (Angeles Diez, 1999). Even those more recent approaches were facing methodological challenges related to the accuracy with which they can estimate net effects of the policy and to the problem of evaluating intangible benefits (Raines, 2002). Consequently, new approaches were developed introducing more qualitative methodologies. The new concept of evaluation is understood as a dynamic process, open to the participation of the economic and social actors, in which emphasis is laid on the mutual capacity for learning (Guba and Lincoln, 1989).

The increased importance<sup>5</sup> of evaluation is reflected in several theoretical and empirical research papers dealing with this topic and several evaluation techniques and tools recently developed within the EU, including for example the 'MEANS' collection developed by the European Commission (European Commission, 1999) or 'The Guide for Evaluating Socio-economic Development' prepared by the Tavistock Institute (2003). The role of the evaluation is crucial in testing policy approaches and mechanics, providing constant assessment of programme's performance and its adaptation. Evaluation can help in sharing the knowledge and experience gained through the cluster policy life cycle and upgrading policy learning to the international level in developing a basis for transnational learning. In this respect there is a great need for presenting successful case studies, developing comparative studies, and benchmarking best practices at the international level. In the continuation we present a case study of industrial regeneration through the implementation of cluster policy.

### 17.3 CLUSTER POLICY IMPLEMENTATION IN SLOVENIA

In the recent years Slovenia was often cited as a good practice of how to comprehensively introduce and develop clusters in a transition economy (Sölvell et al., 2003).

Slovenia is a particularly interesting case that can shed light on the applicability of general conceptions about cluster initiatives to transition economies...the country has made cluster initiatives an important and much publicised element of its economic policy strategy. Its overall success and its significant experience make

Slovenia the prime candidate from which to learn about the success drivers of cluster initiatives in transition economies (Cogan, 2003, p. 71).

At the end of 1990s, when the Ministry of Economy started an initiative to promote the concept of new inter-organisational structures among companies, such as clusters, technology networks, technological parks and incubators, Slovenia was still on the last place among candidate countries regarding the number and development of industrial clusters (World Economic Forum, 2002). There are many obstacles that prevented dynamic and more organic cluster formation in Slovenia. Among those obstacles the integrated self-management should be mentioned, when Yugoslav companies were reorganised into basic organisations of associated labour and then integrated into large conglomerate companies (Hocevar and Jaklic, 1999). This experience of wide integration that happened after 1976 is still influencing Slovenian companies in a way that they are cautious with the formation of networks as they often understand it as a new form of 'forced' integration. With increasing market pressure, R&D and technology demands the need for the creation of different kinds of networks arose and in the early 1990s the first ideas for industrial regeneration through clustering were developed (Petrin, 1991). Besides the integrated socialist self-management heritage some other factors influenced the late processes of clustering, namely the small size of the economy and consequent lack of critical mass of firms in related industries, low level of trust among actors in the economy and the relative closing of Slovenia for foreign investments in the 1990s, which prevented the creation of mixed (international) clusters.

We discuss next the whole process of cluster policy implementation in Slovenia with the aim to present a case study of implementing a cluster policy in practice. We follow the process through the four phases of the policy life cycle: need analysis, policy design, implementation and evaluation. Those phases also coincide with the chronological sequence of events from the late 1990s to these days.

### **17.3.1 Need Analysis**

In order to systematically approach cluster development and identify possibilities for clustering in 1999 the Ministry of Economy started a research project entitled 'Encouraging Company Linkage, Specialisation in Production Chains and the Joint Development of International Markets under a Cluster System' (Dermastia and Kriznic, 2002). Its aim was to identify the potential clusters in Slovenia, especially those that were of strategic importance to the economy in terms of number of companies, level of employment, existing competitive advantages, development potential and domestic and foreign market share. The research which was designed as a mapping study included some 1,700 companies (Dermastia, 2002). For the

purpose of the research clusters in Slovenia were defined as ‘product/service networks of co-dependent but independent companies, which should include producers of end products or services, specialist suppliers of parts and components, producers of complementary products, suppliers of machinery and hardware, service providers, companies with complementary skills, know-how and technologies, government organisations, research and advisory institutes and customers’ (Dermastia, 2002, p.8). Despite the wide definition of clusters, the primary conclusion of the survey was that there were no real clusters in Slovenia. The results showed that co-operation and networking between companies and other institutions were weak, the identified networks did not have a clear geographical (regional) dimension and were dispersed throughout Slovenia. Another characteristic was that identified networks did not fulfil the criterion of critical mass of companies that promises to develop into a cluster. In addition, the development of infrastructure for cluster development was only in its initial stage and the research pointed to the absence of support structures and specific knowledge that could encourage collaboration and networking. However, 10 industries were identified with the potential for cluster development.<sup>6</sup>

### **17.3.2 Policy Design**

On the basis of research results the Ministry of Economy designed a cluster development programme that aimed at promoting the concept of clusters, acquiring experience in cluster promotion and strengthening the most prosperous clusters. The programme was planned for the period between 2000 and 2003 and comprised three measures: the first measure aimed at encouraging co-operation and networking between companies and between companies and R&D institutions, the second measure aimed at strengthening the skills, expertise and know-how of actors that will promote the development of clusters and the third measure was the formation of clusters in practice. In contrast to a generally accepted definition of clusters – as networks of SMEs, the cluster policy programme in Slovenia was not only limited to SMEs. The criteria for applying for governmental support was that applications should include at least three partners in the value chain that co-operate with at least three companies and some support institutions in a specific area.

The process of policy design in Slovenia was also influenced by foreign experience. The transnational learning started through co-operation with a Dutch expert group that participated in the second developmental phase. They helped in designing a cluster programme and setting the implementation structure for the programme. After the first international co-operation, in 2001 the Ministry of Economy was invited to participate in an

OECD LEED project called 'Clusters in Transition Economies' (OECD, 2005) which enabled the exchange of experiences and knowledge on clustering in transition economies. The transnational learning was further encouraged by co-operation with the Swedish Agency for Innovation System Vinnova, which enabled Slovenian policy makers to get deeper insights into structures needed for effective policy implementation as well as knowledge and skills on policy dialogue facilitation. The Ministry of Economy entered in co-operation with the Competitiveness Institute which enabled them to start dialogue and policy learning at a global level. These forms of cross-national co-operation helped the Slovene government to develop and implement a sound measure for cluster promotion

### **17.3.3 Implementation**

In order to gain knowledge and experience in cluster development, educate participants about the cluster concept and promote the idea among other actors in the economy the Ministry of Economy launched a pilot project. In 2000 it issued a call for proposals, inviting prospective clusters to apply to receive government assistance for developing and implementing cluster strategies. Out of six applicants three pilot clusters were selected: the automotive, toolmakers and transportation-logistics clusters. The main selection criteria was geographical concentration of companies, reputation of companies in the community, access to international markets and the ability and willingness to support cluster development. At that point it was important to select such groupings of firms and institutions that would successfully implement the programme's goals and endorse the programme with good results (Rebernik et al., 2004).

The Ministry intended to develop the programme as a bottom-up initiative, leaving the decisions about areas (industries) of cluster development, organisational and managerial issues to the participating actors. In reality the programme nevertheless followed a top-down approach, which will be discussed in the following paragraphs. One of the roles that the government should play is to act as a catalyst of the clustering process, providing co-financing of start-up costs for selected clusters. The financial scheme aimed at encouraging private initiative, as the government provided 40% of start-up costs and participating companies another 60%. The financing scheme followed a three-phase cluster development process, which suggested that cluster initiatives begin with the initiation phase when actors develop a common vision and develop an action plan for its implementation. In the early growth phase actors implement the action plan and develop the platforms necessary for the final phase of dynamic growth (Rebernik et al., 2004). The financing was initially provided for the first year, but could be

extended for two more years on the basis of a detailed action plan for further cluster development (Table 17.1).

*Table 17.1 Governmental co-financing budget for cluster development programme in 2001 – 2004*

| Year | Governmental co-financing (mio EUR) |
|------|-------------------------------------|
| 2001 | 0,6                                 |
| 2002 | 1,3                                 |
| 2003 | 2,6                                 |
| 2004 | 4,0                                 |

*Source:* Evaluation Report (Deloitte, 2004)

After the pilot project the programme continued and two calls for proposals were issued in 2002 and 2003. The interest for clustering increased and spread to other industries. In the second call eight new clusters out of 15 applicants were selected to receive governmental co-financing and in the third call 14 clusters out of 30. Until 2004 17 clusters had been supported in different phases of their development. The clustering initiative attracted more than 300 SMEs, 70 large firms, 80 knowledge institutions and almost 30 other support institutions, involving more than 66,000 employees.

Through the years the programme became quite extensive and promoted more and more clusters. In order to get the feedback information on programme implementation and gain input for further policy intervention the government decided to carry out the evaluation phase.

#### **17.3.4 Evaluation**

The first evaluation in 2002 was based on three pilot projects and brought an interesting insight into the process of cluster development. The usefulness of the first research encouraged the government to continue the evaluation process and in 2004 an extensive research including more than fifteen clusters was completed. The research design of both evaluation studies as well as their results are explained here.

First a *pilot project evaluation* was designed as a mid-term formative evaluation that would show how the process of clustering evolved, identify potential problems and analyse business opportunities of clusters. The aim of the study was to collect the field experience and use it when designing future cluster policy measures. It was done at the end of 2002, that is, over the two years the pilot clusters had operated. Only three clusters were studied and at

that time it was too early to measure quantitative effects of clustering. As a consequence the methodology was based on a qualitative research design based on semi-structured interviews with 32 representatives of participating companies and workshops with two groups of participants (managers of participating companies). Questions were oriented toward ascertaining the participants' satisfaction with cluster development, identifying areas in which joint projects were realised, the level of trust between cluster members, functioning of the cluster office, internationalisation strategies, communication within cluster and the kind of policy anticipated to promote the cluster's further development.

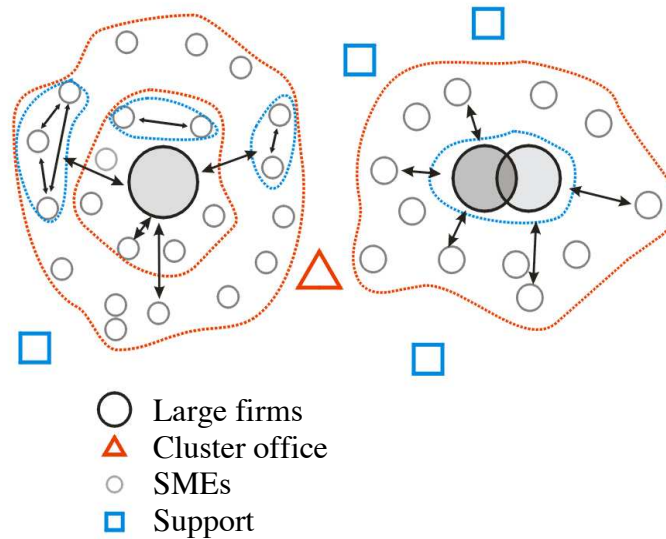
The analysis of the three pilot clusters revealed that the process of clustering is a long-term process, especially in a transition economy where there is low level of trust in policy intervention (Sölvell et al., 2003) and resistance from forced integration known from the previous system. The research showed that cluster members needed time to get to know each other, obtain the needed level of knowledge, develop collective infrastructure and most importantly build trust before they engage in more demanding projects. At that time the main focus was on encouraging communication among actors. The policy still lacked the recognition of an important project that would attract interest of all players, bind cluster actors closer together and encourage the culture of co-operation and fair-play. The support for clustering was high, however all three clusters had the problem of low commitment of top management, especially from large firms.

The results of the study were presented to the government in a report (Jaklic, 2003) that included suggestions for several policy implications. The evaluation report suggested that future policy intervention should be adapted to specific needs of individual cluster and that negotiations should be introduced into the selection process in order to overcome the bureaucratic 'take it or leave it' approach. This approach would enable a selection of truly prosperous projects within a cluster and prevent the selection of 'well-written' proposals that have low prospects for realisation (Jaklic, 2003).

One of the main conclusions of the study was related to the continuity of the programme. In transition economies there are often doubts of the longevity of programmes and a fear that a programme might be abandoned with a change of government (Sölvell et al., 2003). The same was true in Slovenia, where we lacked the comprehensiveness of the cluster policies and harmonisation of approaches taken by governmental institutions. The evaluation proposed the formation of the microeconomic strategic council in which key government representatives (including the Prime Minister) would participate and discuss key strategic guidelines for cluster promotion and negotiate the harmonisation of operations between the ministries and other institutions that play a vital role in promoting regional clusters, including

Regional Development Agencies, Small Business Promotion Centre, municipalities, technology parks, incubators and so on (Jaklic, 2003). In Slovenia cluster policy was often understood merely as the promotion of co-operation between companies. However cluster policies should include a wide variety of other initiatives like for example infrastructure development, education and training, research and development, development of supporting services, human resources policies, internationalisation policies that have to be comprehensively introduced if we aim at quality cluster development.

The study revealed that none of the pilot clusters had the configuration of equal members in the cluster and the process of clustering was mainly driven by large firms, while SMEs only entered the process as followers. As larger companies had the main role and power in project selection within clusters, small companies were not properly incorporated into the process and there was a problem of trust within clusters, which was identified as one of the main reasons for the relatively slow development of Slovene clusters. As a possible solution to the problem the evaluators proposed a model of clustering based on 'dynamic concentric circles' (Jaklic et al., 2003) that is presented in Figure 17.2. In this clustering model core firms organise a network of smaller circles of SMEs. Small companies can then form sub-clusters on the basis of their specialisation and geographic concentration.



Source: (Jakic et al., 2003)

Figure 17.2 Slovene model of clustering with dynamic concentric circles

The picture presents two alternatives of Slovene clustering. The left part of the picture presents the concept where large companies start outsourcing to existing smaller suppliers on the one side and newly created spin-offs on the other. A network of companies then sometimes creates sub-clusters within themselves and grows around the lead firm, which presents a basis for cluster creation. The second alternative presented on the right side of the picture is also based on lead companies and includes mergers, acquisitions or other capital relations. A strong lead centre could use its economic power to organise a network of suppliers and support institutions around itself. The two presented alternatives do not exclude each other and could coincide within one cluster. Within those networks smaller companies could achieve competitive capabilities and opportunities for more independent operation and get involved in other (also international) networks. By organising clusters in this way the problem of size and power differences among cluster members and consequently low level of trust among cluster actors could be solved. We believe that the proposed model can only be developed through companies' initiative and could not be forced by policy intervention. However, government should stimulate larger companies to release a larger number of commercial activities (i.e. the formation of spin-off companies) as large companies are decidedly too 'weighted-down'. Additionally, start-up activities should be actively promoted within existing clusters, because this process could not evolve naturally due to resistance of large firms. We believe that spin-off and start-up processes would lead to positive restructuring of Slovene clusters introducing simultaneous competition and co-operation and enable them to grow and become more competitive.

The evaluation of the pilot project gave a clear insight into the programme development and suggested necessary changes that should be implemented when designing further policy measures. The study confirmed the need to improve the vertical connections between companies and the institutional environment with the development of technological networks, and enhance the flow of information between universities and companies. The evaluation process enhanced the establishment of a strong link between the Ministry of Economy, Faculty of Economics and cluster actors that continued throughout the implementation of the programme. The co-operation took place formally through meetings, conferences and focus groups as well as informally through casual meetings of different stakeholders. This co-operation encouraged mutual learning that resulted in successful calls for new clusters. However, not all the stakeholders were systematically and actively involved in the evaluation phase. The evaluation did not cover other initiatives like the development of small local networks launched by the Small Business Promotion Centre. There was also an insufficient communication of evaluation results among public institutions that aim at stimulating regional

development. The evaluation study was nonetheless used by the Ministry of Economy in further policy intervention and the encouraging results of the pilot project have been an effective promotion of cluster initiative, which was then reflected in an increasing interest for clustering among firms from several industries.

Since the first evaluation was of significant importance for policy learning, in 2004 the government decided to order an external evaluation of all measures promoting entrepreneurship and competitiveness between 2001 and 2003 (Deloitte, 2004). Within this project an extensive evaluation of cluster programmes was done. The *mid-term evaluation* analysis included 16 clusters<sup>7</sup> that were supported by the government between 2001 and 2003.

At that point cluster development was already well established and it was important to design a study that would collect qualitative as well as quantitative data. While developing the methodology for the study an extensive overview of current practices in evaluation from other European countries was prepared. The main conclusion was that the majority of evaluations still follows a traditional approach and is not open to all stakeholders (e.g. companies, service centres, research institutions, governmental administration) who are mainly taken as a source of data and are active participants in the evaluation process (Angeles Diez, 2002). The desktop review confirmed that there is no single evaluation model for tackling the evaluation of new regional policies that could serve as a methodological recipe. Each situation requires a unique and specific evaluation design. The evaluation of cluster policy in Slovenia was conducted by an independent research institute<sup>8</sup> that designed a comprehensive and unique methodological tool. The main goal of the study was to develop policy implications on the basis of collected data that will serve for the future design of cluster policies. The evaluation was mainly focused on assessing the policy initiative, but data for the evaluation of individual clusters was also collected as those two concerns are highly interrelated and there is a need to define the link between the performance of individual cluster actor, performance of the cluster and impacts on the wider environment (Raines, 2002).

The evaluation design included the collection of secondary data (national statistics data bases, cluster reports, articles), focus groups with different stakeholders (e.g. representatives of the Ministries, Regional Development Agencies, cluster managers, firm representatives and academia), in-depth as well as structured interviews with cluster managers and structured interviews with representatives of the companies. The structured interviews were based on two questionnaires<sup>9</sup>, one for the firms and the other for cluster managers. The questionnaires were very detailed in order to get a thorough insight into cluster development. The design of questionnaires followed the

recommendations made by the EC (European Commission, 1999; Tavistock Institute, 2003) however the questions were developed specifically for the Slovene study.

The results of the study together with policy implications were presented in an extensive report (Jaklic et al., 2004) and were also presented to the government representatives. The main conclusions of the study are discussed in the following paragraphs.

The call attracted groups of firms and other institutions that have previously collaborated, which increased the chances for successful cluster development. The results proved that the initiative was successful in stimulating the co-operation that would not have otherwise happened. Three quarters of clusters agreed that governmental initiative was crucial for cluster formation and almost all companies planned to actively participate in their cluster also after the termination of governmental co-financing. The participants could already identify the benefits of clustering, mainly in terms of improved communication, increased knowledge transfer and also some quantifiable improvements in terms of increased sales, value-added and export. However the majority of firms expected major benefits of clustering in the long run and estimated the benefits of clustering to outweigh the costs after six or more years. This proves that cluster initiatives should be designed as long term interventions and should not be terminated due to lack of short term results.

Insufficient level of trust among members still is among the main obstacles for clustering. However the level of trust seemed to be constantly increasing which was reflected in increasing number of joint projects, increasing number of cluster actors and improved transfer of information. Other obstacles identified by cluster actors were a lack of financial and human resources and insufficient knowledge and skills in network management. These last two obstacles could be tackled by policy intervention through co-financing of additional resources and active education and training in network organisation and management. Trust building, however, requires more time and active participation of firms. The experience showed that the successful completion of initial projects noticeably increased the level of trust and enabled cluster actors to engage in more demanding projects.

The evaluation confirmed the results of the first study that identified a lack of harmonisation between ministries and other institutions that should be actively involved in regional development. The process of clustering in Slovenia is too often understood as the sole responsibility of the Ministry of Economy and does not actively involve other public and private institutions. Additionally, cluster policies should include many measures and not just the formation of co-operative networks. In the initial phase of clustering firms

were mainly searching for areas where they can achieve synergy effects through collaboration like for example the development of infrastructure, R&D, education and promotion activities. Later on, co-operation should be upgraded by competition, which did not happen in Slovene clusters. This was partly due to a non-holistic approach to cluster policy design. The programmes were mainly developed for strengthening co-operation, but lacked attention to the dynamic aspect of clustering. The evaluation study identified the need to open Slovene clusters to domestic and foreign competition, enhance spin-off and start-up processes which would bring a necessary dynamic into cluster development.

Both evaluation studies revealed the main advantages as well as pitfalls of cluster policy implementation in Slovenia and should as such valuably contribute to policy learning, which in practice did not happen. If the continuity in policy programmes is to be achieved, the experience gained through the evaluation process and the results of evaluation studies should serve as input in further policy life cycle process and the basis for policy learning. In the concluding discussion we present why continuity is crucial in innovation programmes and why it is so difficult to achieve.

#### 17.4 CONCLUDING REMARKS

The new generation of innovation policies are strongly embedded in the socio-economic framework as they are tackling complex interactions between several regional actors and stimulating collective learning and capacity building. The policy life cycle of those policies is a complex and interactive process with continuous feedback loops and no linear causal relationship between resources, results, effects and regional impact (Angeles Diez, 2001). Due to those specific characteristics effective cluster policies must respect the differences in institutional contexts and structural conditions across clusters and such an approach should be implemented to all phases of the policy life cycle. In order to capture the full dynamics of clusters and their environment the literature suggests the use of participatory and interactive approach where participating stakeholders are involved in all phases of policy life cycle (Zoltan et al., 2003; Angeles Diez, 2001; Nauwelaers and Wintjes, 2002).

In order to constantly improve and adapt policy intervention to the changing environment there is a necessity of introducing a learning dimension into the policy-making process (Lundvall and Borrás, 1997). This can be achieved by policy learning, a process of systematic adaptation of different policy initiatives in accordance with the changing situation and needs of the cluster (Tsagdis et al., 2005). There are three central frameworks that support and stimulate the process of policy learning: enhanced

communication, systematic use of evaluation studies and adaptive benchmarking (Tsagdis et al., 2005). In Slovenia the first two frameworks were implemented, but not exploited to their full extent. Their role will be discussed in the following paragraphs.

In cluster policy life cycle there is an enhanced need for on-going and two-way communication between stakeholders which enables the development of open climate for continuous self-reflection. This encourages a search for improvement in collective action and consequently improvement in cluster policy implementation. In Slovenia the communication and exchange of opinions between policy makers was weak. The cluster policy cycle was not open to a whole range of actors (e.g. companies, service centres, research institutions, governmental administration) and there was insufficient communication flow between private and public institutions which led to insufficient co-ordination of policy interventions (Bartlett and Bukvic, 2005). This resulted in the incapability of public and private actors to reach a strategic agreement on further economic development. Consequently policy interventions aiming at cluster development were not harmonised and initiatives were scattered between different Ministries and other institutions.

Evaluations of cluster programmes in Slovenia have been implemented as part of Hogwood's four-phase process. The linear connections between the phases were well established, however feedback loops deriving from the evaluation phase were not developed to the full extent. The results of the first pilot evaluation study were used for further policy development, while the results of the second evaluation were often misinterpreted and not used to develop further policy intervention. Both evaluations have assessed the cluster programme as one of the most successful measures of industrial policy that contributed to increased co-operation among business enterprises as well as increased co-operation between business sector and public research institutions (Deloitte, 2004). Many authors have presented the Slovene case as one of the best practices in cluster policy implementation (Sölvell et al., 2003; European Commission, 2004; Tsagdis et al., 2005). However the new government and the media selectively presented the results to the public, often taking them out of context with a tendency to present the problems of the existing cluster policy rather than its benefits.

In 2005 the new government unexpectedly decided to discontinue the cluster programme. They implemented the already signed contracts with clusters, but did not launch new calls. The main argument for terminating the cluster programme was the lack of tangible and measurable benefits of clustering although it is clear that cluster policies are directed towards the creation of knowledge and learning at both individual and collective level (Landabaso, 2000) and that it takes time to witness the results of the intervention. New innovation and regional policies should be designed as

long term programmes that are not dependent on government changes. The effects of clustering can hardly be captured by only measuring its quantitative effects (e.g. number of new employees, increase in sales, etc.) and it is also hard to estimate the net contribution of policy intervention into the final outcome. All those characteristics make the evaluation results very sensitive to interpretation and require a deep understanding of the role of innovation policies, well established institutional collaboration and preparedness for open dialogue and policy learning.

The problem of weak communication between stakeholders involved in the cluster programme and the inappropriate use of the evaluation studies proves that the preconditions for policy learning are still weak in Slovenia. The main problem lies in the perception of the role that evaluation plays in the policy life cycle. As in many other countries the evaluation is perceived only as the final phase in the process and not as a tool for implementing policy learning. The new government did not enter the policy learning process which would enable it to upgrade the platform that was set by the previous government. The discontinuity in cluster programme does not mean that existing clusters will discontinue their collaboration. Some of them managed to gain financial resources from EU Structural Funds or applied to open calls of the Ministry of Economy, Chamber of Commerce and other institutions but many of the existing clusters are still in their initiation phase when external co-financing and institutional support is crucial. In our opinion the main problem arising from the termination of the cluster programme is actually not related to the financial aspect of cluster development as prosperous clusters will always find the necessary resources. We see the main problem of this decision in the discontinuity of governmental intervention. This signals that even the programmes that proved to bring positive effects on the competitiveness of firms could easily be terminated due to a change of government. As a consequence companies have low trust in policy intervention as the focus of industrial policy usually changes with the government.

The purpose of this chapter was to present a case study which could help researchers, policy makers and other stakeholders from other countries in their own learning process. The Slovene experience is interesting because it evolved over a relatively short period of time. Due to the small size of the economy new concepts and approaches can be easily developed, implemented and tested. Each country or region has to develop its own approach to all four phases of the policy life cycle and establish a policy learning process that fits local conditions. Despite the national, regional and local specifics many important lessons could still be drawn from Slovene and other case studies. However when comparing experiences an adaptive

benchmarking has to be applied, taking into consideration the systemic nature of cluster policies.

The Slovene case is a good example of systematic and integrated implementation of cluster policy. However, two main reasons can be identified that led to discontinuity in policy intervention and prevented a development of a long-term innovation policy based on the cluster concept. First, shortcomings in the methodological design of the cluster policy. Both evaluations have proved that there was a lack of clear motivation of enterprises to participate in clusters. Their prime motivation was to get public money. We believe that too much emphasis was given on co-operation per se. Policy makers should have been aware of the legacy of the companies having bad experience of forced co-operation in the socialist times. Some other specific and more discrete purposes (e.g. joint R&D developments) could have been proposed as a stimulus for co-operation. This lack of motivation of participants can also be partially blamed on a relatively strong role of outside consultants, evaluators and policy makers who to a too large extent played a role of 'gurus' and not process moderators (promoting more a top-down than bottom-up approach).

Second, a policy learning process was only partially established. There was a clear lack of communication and co-ordination between policy makers, as well as between other stakeholders. In other words, a 'policy-making cluster' was missing in the process. Besides supporting co-operation the government did not pay much co-ordinated attention to other possible policies supporting clusters (e.g. policies attracting new firms to cluster areas, policies for start-ups, physical infrastructure development, education and training, research and technological development, information diffusion and accessibility for firms, policies providing customised services to firms, policies helping labour recruitment in the area, policies improving availability of venture or risk capital). Because the cluster policy was not sufficiently embedded in the system it was not too difficult for the new government to abandon it in 2005.

The Slovene experience proves that despite following a theoretically proposed sequence of phases, the implementation of cluster policy is not an easy task. The most difficult to establish is the policy learning process, which prevents policy makers and other stakeholders to repeat their mistakes and enables a constant improvement of policy interventions. If we want to experience the long-term benefits of innovation policies, the government and other stakeholders have to engage in a learning process. It is important to learn from previous experience and continue with well established innovation programmes while constantly adapting them to changing conditions and requirements of the business environment.

## NOTES

1. EU-funded project entitled WEST-EAST-ID (WEID) 'Industrial Districts' Relocation Processes: Identifying Policies in the Perspective of EU Enlargement', 2001-04 (Contract no. HPSE-CT2001-00098). More information can be found on <http://www.west-east-id.net>.
2. It is important to distinguish between evaluation of cluster development and evaluation of cluster policy. The first has mainly to do with the efficiency of the policy (formative evaluation) and the latter is addressing the effectiveness of the policy (summative evaluation).
3. Some countries like Sweden, France and Portugal have innovation systems and cluster programmes in their early phase and it was too early for evaluation.
4. For more details see: Policy Evaluation: Linking Theory to Practice (Rist, 1995).
5. Increased importance of evaluation has been shaped by four groups of pressures (Bachtler, 2001): political need to determine economic effectiveness, need to account for public spending and demonstrate value added, necessity to improve implementation and delivery systems and to test assumptions regarding the relationship between policy and spatial growth.
6. These were the following industries: electric-optical, automotive, household appliances, construction, transport, information technology, furniture, textiles, tourism and pharmaceuticals.
7. Data was collected from 16 cluster offices and from a sample of firms participating in selected clusters (84 firms or 21% of the whole population).
8. The Institute for Cooperation and Competition operates within the Faculty of Economics, University of Ljubljana.
9. Can be obtained by the authors of the study on request.

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