

**42<sup>nd</sup> Congress of the European Regional Association (ERSA)  
Dortmund, August 27<sup>th</sup> to 31<sup>st</sup> 2002**

*Promotion of New Technologies by European Regional Development Agencies - The Case of Austria.*

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***Abstract***

According to the current focus of the regional policy of the European Union on sustainable regional development the question arises - what are the key-elements to achieve a sustainable regional pathway? The identification of these key-factors is a challenge for the regional policy in each member state. One elementary key-factor is the promotion of new technologies as part of a regional innovation strategy. Regional institutions which support environmental improvements within regions can be identified as key-actors for achieving a sustainable regional pathway. The main research question focuses on the relevance of existing regional institutions and their ability of fulfilling the challenges of sustainable regional development goals. Their role within the regional innovation system and their flexibility to change their target group profiles seems relevant for successful applications of sustainable regional development strategies. This contribution focuses exclusively on regional management institutions which were established after the Austria's EU accession.

# 1 Introduction

## 1.1 General backcloth

Sustainable regional development is one of the core topics of regional policy within the European Union. Its implementation in European regions is one of the most recent discussed challenges for both the European Union and each member state. Why?

To find an appropriate answer to this complex question we must refer back to one of the origins of sustainable development – the Agenda 21 (United Nations 1993). The Agenda 21 has one dominant role – *“bringing together key social actors for joint co-operative efforts on vital issues of environment and development”* (Lafferty 1997, p. 166). Key social actors are acting on several spatial levels – the federal, the regional and the local. The efficiency of involvement and co-operation varies on each of these spatial levels. The most intensive co-operation level is the local which is explicitly considered in chapter 28 of the Agenda. Reasons for such a co-operative climate can be summarised as follows:

- **Less complexity:** Local political decision makers are self-responsible. Their local and regional knowledge is one of the most important advantages. The communication and information flows are relatively open and therefore less exclusive.
- **Directly involved stakeholders:** The above mentioned open information and communication structure supports bilateral and multilateral participation. Local and regional stakeholders provide their specific knowledge about the regions strengths and weaknesses. Such a political involvement is one of the success factors for implementing sustainable strategies.
- **Stakeholders know each other:** Co-operation normally depends on trust. Stakeholders that know each other are less sceptical against each others ideas and suggestions in terms of local and/or regional activities.
- **Strengths and weaknesses are well known:** Local and/or regional strategies and visions need to be tailor made. One important requirement for successful strategies is a common knowledge of strengths and weaknesses within the region.

If co-operation is one of the limiting factors for implementing regional sustainable strategies than the question arises how co-operation could be organised within a region. Co-operation between stakeholder groups are extremely offended by conflicts. Are their any stakeholders in

the region that are able to cope with such conflicts? How should these stakeholders be organised to support the region in implementing sustainable regional development strategies which is one of the most urgent European regional policy goals that the Commission agreed upon in the Treaty of Amsterdam (1997)? The main goal of European regional policy in general and especially of EU structural fund policy was originally strengthening less developed regions within the Union. The core instruments to reach this goal focused at international competitiveness approaches based on innovation and new technologies. In order to fulfil both goals – sustainable regional development on the one side and competitiveness on the other side – the following research question comes up:

How could these two main regional policy goals of the current period (2000-2006) be reached? What are the most effective instruments to support these strategies?

Hypotheses:

- (1) There is a strong need for specific institutions on the regional level that are able to cope with specific regional circumstances. These institutions should fulfil the following requirements:
  - Knowledge about the regions strengths and weaknesses – *"local/regional solutions can be tailored to local/regional conditions"* (Hird 1994). Especially for promoting new technologies as one main goal regional and local knowledge about the resources are essential.
  - Part of the staff originally coming from the regions – awareness and sensitivity about the regions potential. Regional development should be oriented on an endogenous pool of resources, know-how and information (regional innovation system).
  - Institutions that are actively involved in the regional development process.
  - *"Rules that specify which actions are required, permitted, or prohibited"* (Ostrom 1998, p. 73).
  
- (2) New instruments: There is a strong need for long-term strategies within the region that fulfil the following requirements:
  - Visions: The regions development should be oriented on long-term visions that provide a kind of framework with different development foci. On the

one side regional institutions responsible for the co-ordination of local and regional projects should link these single projects. On the other side there is a strong need for regulating project funds in terms of their compatibility to the overall vision (Sedlacek 2002).

- Strong goals: The formulation of strong goals within a strategic process keeps instruments as much flexible as possible ("*new public management approach*" Jänicke et al. 1999).
- Stakeholder Participation: Long-term strategies are results coming out of a co-operative action between several stakeholders that need to be moderated by specific institutions.

(3) Sustainable regional development needs to orientate on economic development processes that fulfil the overall goal of stabilising and/or increasing social quality, quality of life and environmental quality within the region. With regard to this the importance of the promotion of new technologies seems extremely requested.

### *1.2 Methods and data basis<sup>1</sup>*

The analysis is based on a survey which is based on a questionnaire focusing on different types of regional institutions. The questionnaire is designed as an e-mail based form. Within the first empirical step of this project we developed a specific questionnaire for the so-called EU regional management institutions. These 38 regional management institutions are installed all over the nine Austrian states (*Länder*). After Austria's EU accession in 1995 the federal government was enabled to apply for European Union structural fund money. For this reason the European Union provided seed money for Austria to establish regional management institutions with the aim of installing specific organisational units to co-ordinate the distribution of structural fund money. Austria as a federal republic has to act according to the subsidiarity principle. The nine states (*Länder*) have their own regional governments responsible for the states' economic, ecological and social development. Therefore the federal and the provincial governments (*Landesregierungen*) co-financed these institutions during the constitution phase in addition to the EU seed money. Afterwards the provincial governments (*Landesregierungen*) and the local governments (*Gemeinde*) received the total responsibility for the regularly basement funding.

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<sup>1</sup> This contribution is based on the research project "Nachhaltige Regionalentwicklung – Die Rolle regionaler Institutionen zur Umsetzung umweltorientierter Innovationsstrategien (NAREINNO) funded by the Austrian National Bank ("Jubiläumsfonds der Österreichischen Nationalbank")

The questionnaire is organised in four sections:

- 1) Organisational characteristics
- 2) Field of activities
- 3) Contacts and co-operation
- 4) Assessment of the regional manager's embeddedness

### *1.3 Structure of the paper*

Section 1 provides an introduction to the topic. After the introduction of the general backcloth and the aims and main hypothesis of the study in section 1.1, the methods and the data basis is briefly outlined in section 1.2. Section 2 deals with the conceptual framework on institutions and their role in the regional development process. The theoretical background for the institutional analysis is provided by organisational theories. Section 3 concludes the main results of the first step of the survey along the above mentioned parts of the questionnaire. This descriptive analysis provides a first overview of the organisational features and the field of activities. Section 4 summarises the main results along the conceptual framework and ends up with important questions for the next steps of the analysis.

## **2. Institutions and their role of fostering sustainable regional development strategies**

It is generally agreed that institutions are central actors in the regional context. The main question is could these institutions act as “*organisational mediators to combine regional and local strategies*” (see Schubert and Sedlacek 2000). The regional development process which is mainly based on regional and local strategies is more than a political process where political decision makers are exclusively involved. Regions are dynamic organisms with a quite high participation of several stakeholders. Institutions are stakeholders that are depending on their type focusing on economic (e.g. chambers of commerce), social (e.g. labour services) and environmental (e.g. environmental non-governmental organisations) development. Are there any key-institutions that are able to combine these three levels and act therefore as driving forces to help to implement sustainable regional development strategies? Before answering these questions a closer look at organisational theories (see Kieser (eds.) 2001) seems helpful.

## 2.1 Organisational theories

Organisational theories have a long tradition in several disciplines – i.e. sociology, economics, management, geography, etc. There is a common knowledge about society's perception of organisations or institutions but there is no consistent general organisational theory existing. Organisations are systems of implicit and explicit rules focused on specific objectives (Scherer 2001, p. 1). Actors within and outside these organisations need to behave along these rules.

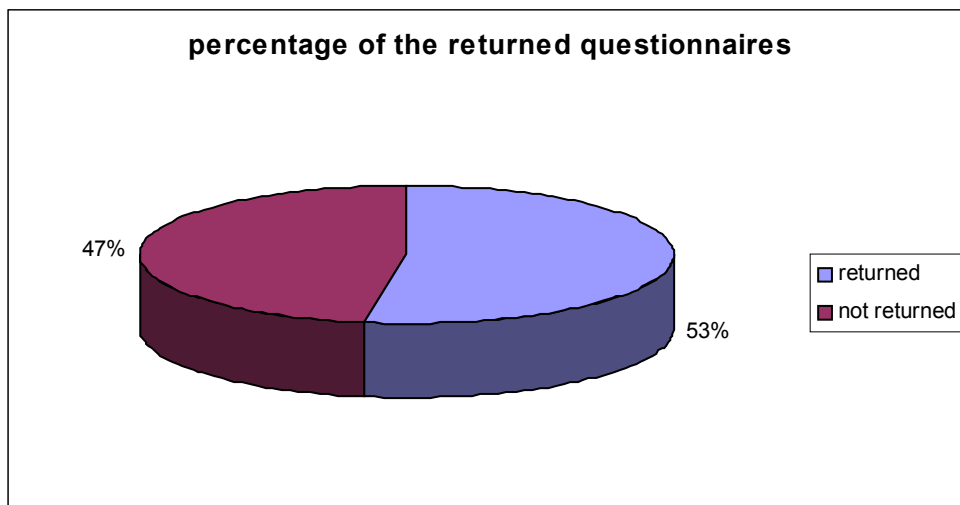
The question of designing institutions for environmental management and sustainable development is discussed with several aspects in the literature (e.g. Baumol and Oates 1975, Loehman and Kilgour 1998). *“Rather than waiting for new institutions to evolve, we favour proactively designing systems to improve environmental and resource management.”* (Loehman and Kilgour 1998, p.1). By arguing along these lines Loehman and Kilgour (1998) referred to the need to analyse management institutions, organisations and policies. Reorganisation is one of their main arguments that comes out of the faster growing decentralisation processes especially within the sustainability debate. Regional and local governments are receiving new responsibilities as a result of state failure (*“Staatsversagen”* Jänicke et al. 1999) but in many cases they are not able to handle it without adequate assistance. On the regional and local level institutions are actively involved in the political decision process, therefore they could have the ability to cope with challenges such as implementation of sustainable regional development strategies. *“Organisations are described by decision-making relationships associated with resource and information flows, relationships that are contained in contracts, treaties, or informal understandings among actors.”* (Milgrom and Roberts 1992, quoted in Loehman and Kilgour 1998, p. 7). According to the above mentioned importance of regional institutions as central actors involved in implementing sustainable strategies it seems helpful to use a framework for designing institutions (Ostrom 1998, p. 68): *“The focus of the Institutional Analysis Development (IAD) framework is on how rules, physical and material conditions, and community attributes shape action arenas and incentives faced by individuals, and hence how these conditions combine to determine outcomes.”* In the early 1970s the IAD framework was developed in political sciences and was used in several cases of studying common pool resources and diverse property regimes. Ostrom (1998) pointed out that one of the results of these empirical studies was that no types of institution can by themselves cope adequately with the vast array of environmental problems. The components of the IAD framework are the following (Ostrom 1998, p. 68ff.):

- **Action arena:** Is the basic conceptual unit for the analysis of behaviour within institutional arrangements. It concludes a set of variables that are described below. It can be described as a social space where actors interact.
- **Action situation:** Is the structure that includes immediate choices and outcomes. It can be described by a set of variables:
  - set of participants or actors
  - rules of each participant
  - information of each participant about the action situation
  - outcomes from the action situation
  - technologies or links that are used
  - costs and benefits of actions and outcomes for each participant
- **Actors:** Are individuals or groups that are functioning as a unit. An action is the actor's behaviour. An actor is specified by the following variables:
  - resources that the actor brings to the situation
  - valuations of actions
  - knowledge and information
  - actor's method of action selection
- **Community attributes:** Can be summarised as culture which includes behavioural norms, the level and nature of the common understanding, homogenous or heterogeneous preferences and the distribution of resources.
- **Rules:** Rules serve to specify the action possibilities of actors, their levels of control over outcomes and the structure of the action situation.
- **Physical and material conditions:** They have an enormous influence upon the effects of rules.
- **Outcomes:** The outcome of an action situation is determined by the rules and the nature of the community.

The here presented IAD framework will be used for summarising the first empirical results in section 4. The framework provides a common structure for the analysis of different institutional actors. For this contribution the framework is used for working out the regional management institutions' strengths and weaknesses.

### 3. Empirical Results

To get a vision of how regional management institutions are organised, what their main tasks are, what kind of projects and activities they are handling and how they are a questionnaire was designed which was addressed to the total sample of these regional management institutions. With a return rate of 53% (see figure 1) and a balanced geographical distribution the sample gives a quite good overview about the institution's activities. Within the next step on the one side a telephone contacting round will be started to increase the return rate.



**figure 1: Percentage of the returned questionnaires**

Even if only 53% replied at the moment, these 20 questionnaires give us a relative complete information for whole Austria, because every Austrian province (*Land*) returned at least two answered questionnaires.

On the basis of the returned questionnaires the analysis of four sections will be presented. In the first part we asked the members of the regional management institutions about the structure of their organisation, their annual budget, their staff and the characteristics of their organisation. The second part includes questions about the engagement in different types of projects and activities. The third part contains if and how the regional management institutions co-operate with other institutions. Finally, the last part of the questionnaire and the analysis deals with a very general description about tasks, visions and sustainable development.



### 3.1 Organisational characteristics

About 70% of the regional management institutions were founded in the years 1995 and 1996, therefore immediately after Austria's EU accession. Therefore most of the institutions were established with structural fund money of the former period. The question about the type of organisation provides an overview of seven different categories. Almost 70% of the regional institutions are organised as non-profit associations, only three institutions are private limited companies (figure 2). About 82% of the institutions are sole organised, the rest is organised as an independent part of an umbrella institution (e.g. provincial government).

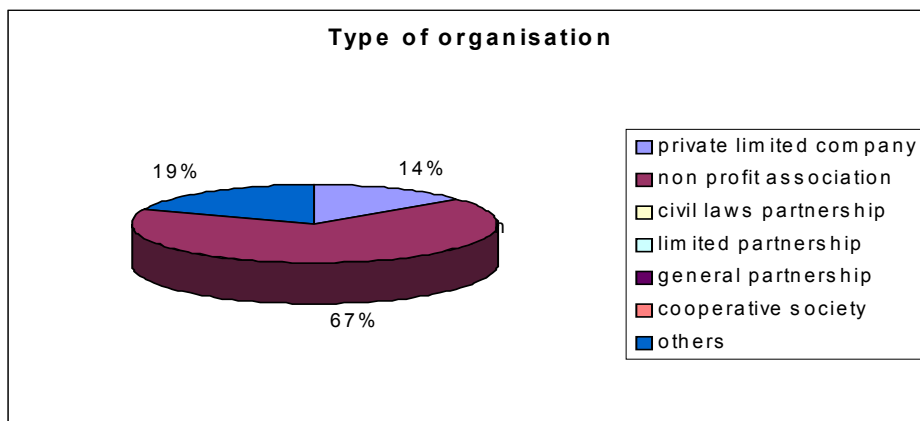


figure 2: Type of organisation

The number of staff is one of the critical factors to evaluate the institutions activity profile. The size of the institutions can be indicated as small, 13 of 20 regional management institutions consist of one to five staff members, who work there with a contract of employment. Three institutions have five to ten staff members and only four institutions consist of more than ten staff members (figure 3).

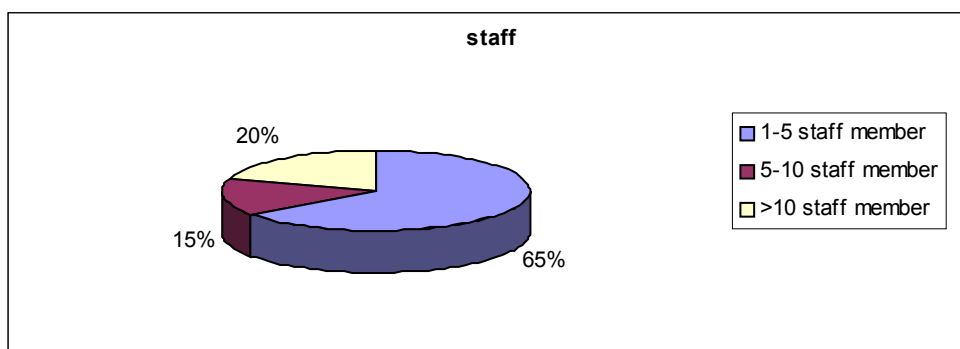
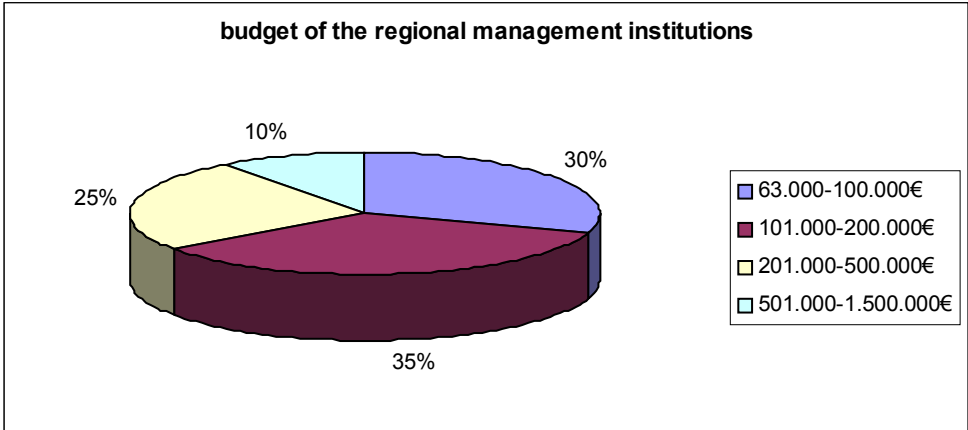


figure 3: Number of staff members of the regional management institutions

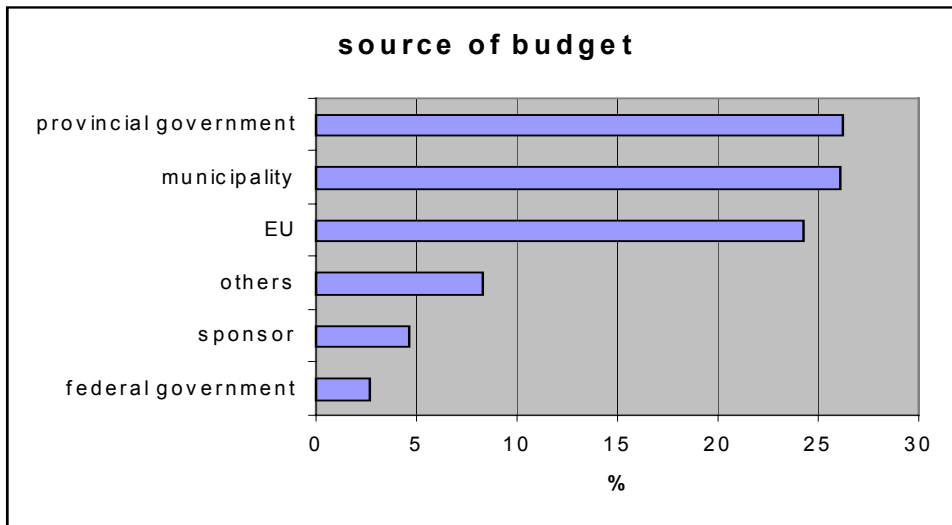
To sum up the core organisational elements the majority of the regional institutions is organised as a non profit association with a small number of staff members. The biggest part of the staff (88%) is originally coming from the regions which is an advantage for developing sustainable regional development strategies.

The information about the budget, which is available to the institutions, was very detailed, so we created clusters, to get a better overview about the whole financial situation. The results shown in figure 4 indicate that about 65% of the regional management institutions have to get along with a budget under 200.000€. Concerning the later on discussed fields of activities this average budget seems quite small. The question arises if these institutions are well equipped for such manifold activities.



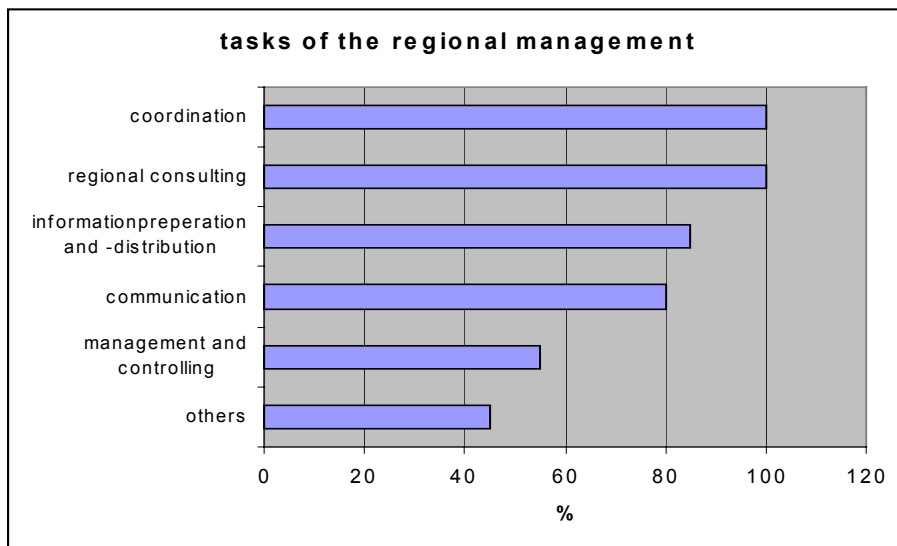
**figure 4: Budget of the regional management institutions**

The main sources of the budget for the institutions are originally coming from the EU, provincial governments and the municipalities (figure 5). It is of interest to note, that only three percent of the budget are supported by the federal government. Especially because the federal government had a prominent role in supporting the establishment process of these institutions.



**figure 5: Source of budget**

All regional managers report that they are regional consultants and co-ordinators (100%), but also responsible for preparing and distributing information and communication with all actors in the region (figure 6). According to the above discussed limited resources of most of the regional management institutions the scope of the fields of activity seems to be a challenge. The question arises if the regional managers are working effective.



**figure 6: Tasks of the regional manager**

To get a vision about the situation and structure of the regions in Austria, the last question in the first part of the questionnaire focused on the characteristics of the particular region. The

results can be divided in two parts. On the one hand there are economic trends like migration, unemployment, firm establishments and manufacturing and services, which are all mainly increasing or stagnant and only in a few cases decreasing (figure 7).

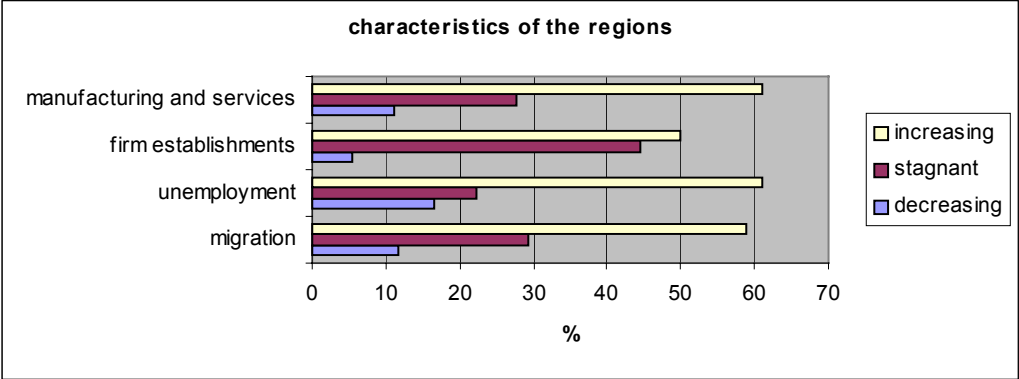


figure 7: Economic trends

On the other hand there are characteristics influencing the region’s landscape like agriculture, paved area, tourism and environmental pollution which show a rather different picture. Agriculture decreases definitely in all regions which confirms the general tendency. Meanwhile environmental pollution behaves very different in the single regions. Finally, the rest of the characteristics are as well as the economic trends above all increasing or stagnant (figure 8). The here discussed characteristics seem highly important to the regional managers because of their strong influence to the field of activities. Beyond this these characteristics are significant for a sustainable pathway in the region.

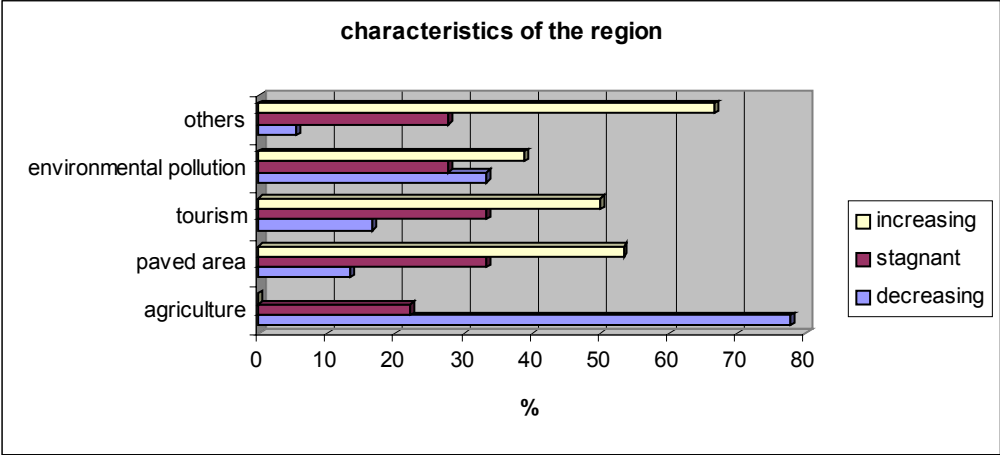


figure 8: Characteristics influencing the landscape

### 3.2 Field of activities

In the second part of the questionnaire we differentiate between projects and other activities of the regional management institutions. This distinction seems important for evaluating the whole variety of different tasks.

The main type of projects is related to the regional context. The local as well as the cross-border level projects represent each 20% of the sample. All together more than 60% of all projects take place in the near neighbourhood (local and regional level) which underlines the importance of local actors.

The initiation for the projects is above all matters of the regional management institutions and the municipalities. The fact that 90% of the projects are initiated by the municipality may be a reason, why so many projects take place on the local level.

In contrast 90% of the project management and –controlling is indicated exclusively as a task of the regional management institution. But only 40% of the tasks is under responsibility of the municipalities. So the municipalities are indeed initiating projects but are not actively involved in management and controlling tasks. Citizens and companies act in the same way. In contrast the federal government, which hardly initiates projects (only five percent), takes over 40% of the management and controlling tasks. The direct comparison of project initiation to project management and controlling is shown in figure 9.

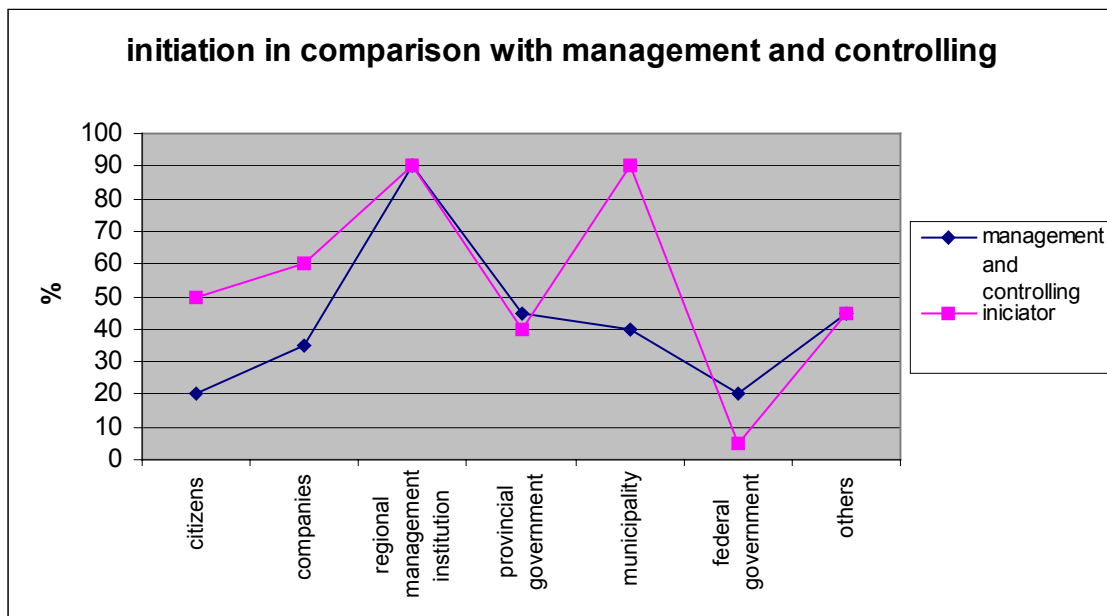


figure 9: Project initiation in comparison with management and controlling

The role of regional management institutions in projects is very many-sided. Informing and consulting, contact initiation, moderation and mediation and also active co-operation in projects are important tasks of a regional manager. Once more the question of the limits of the regional manager’s capacity arises which needs to be analysed in further research.

**All regional management institutions replied, that the EU and the provincial governments support all projects. Additionally about 65% of the projects are supported by the federal government and the municipalities. In comparison to that the activities are mainly supported by the provincial governments, the EU and the municipalities, but hardly by the federal government.**

figure 10 shows the comparison of the origins for project and activity funds.

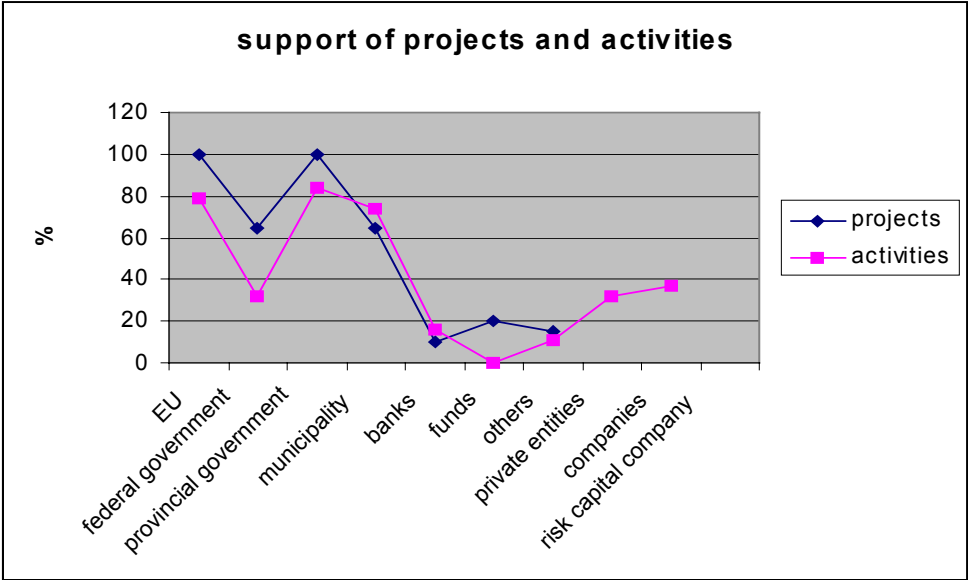
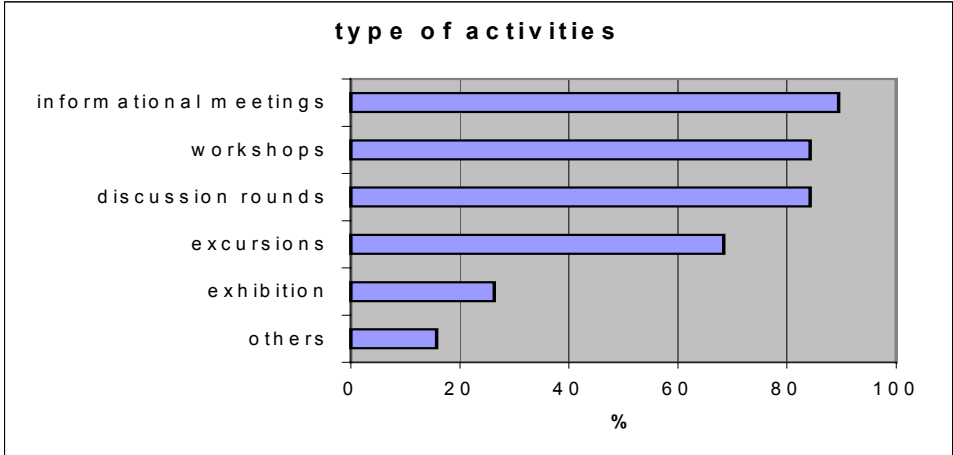


figure 10: Support of projects and activities

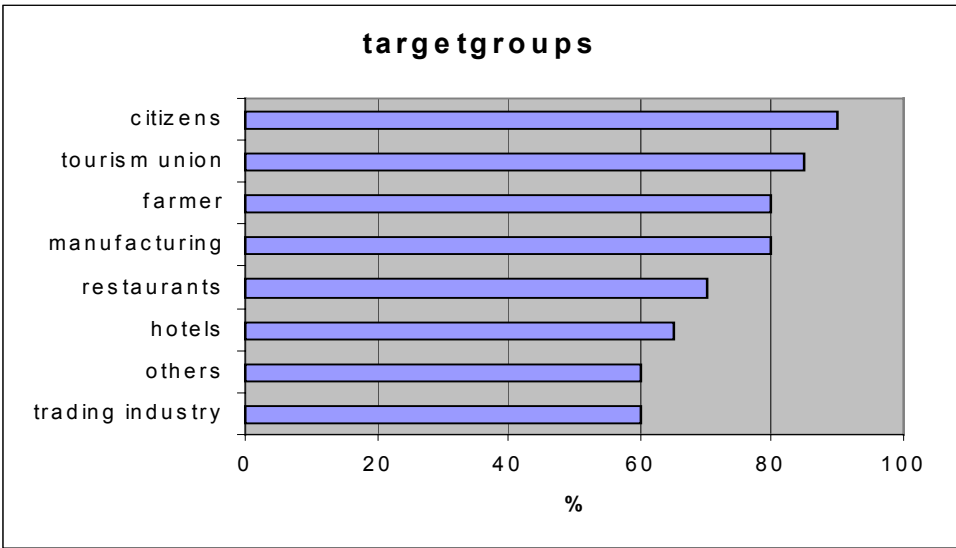
Unless projects the main activities of the regional management institutions are informational meetings, discussion rounds and workshops. Altogether a broad variety of single activities that cover a huge amount of the manager’s resources (figure 11).



**figure 11: Type of activities**

*3.3 Contacts and co-operation*

Many single actors and institutional units are target groups of the regional management institutions, especially citizens, tourism unions, manufacturing and farmers of the region. In regard to the here presented (figure 12) variety of target groups the question arises how these actors are getting in contact with the regional management institution.

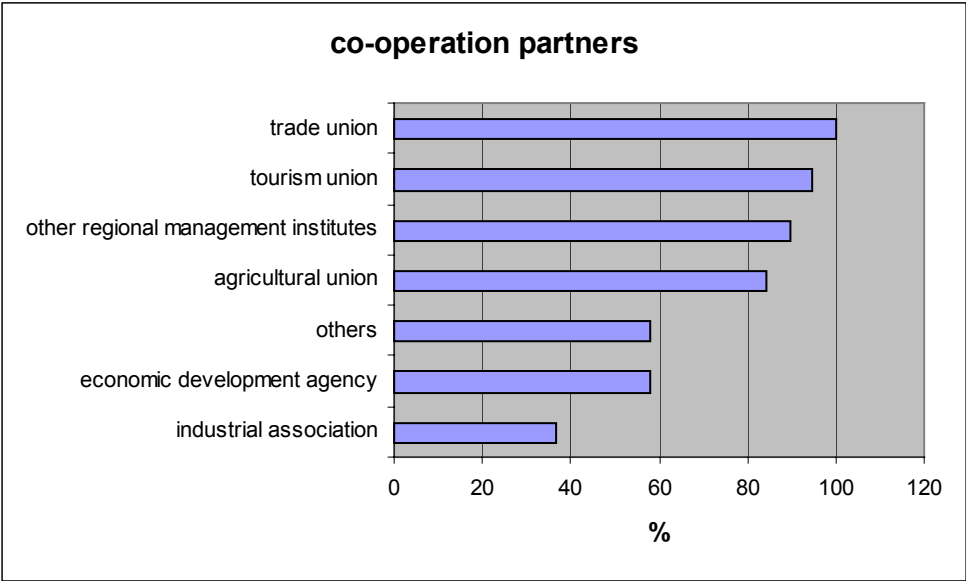


**figure 12: Target groups**

The regional managers included in the here presented sample indicated that they are mainly getting in contact with target groups via telephone and internet or at events. Beyond this regional actors are informed about the managers activities by all types of media.

Clustering the above illustrated target groups (figure 12) in two groups of single actors – citizens and companies – we asked the regional managers to assess the target group’s acceptance and support. The result presents an average acceptance (value 3 on a scale 1-5) of both actor groups. In the same way the regional managers estimated the actor’s support. In terms of the relevance of participation within a sustainable regional development process these results seem rather sub-averaged. For the case-studies it might be helpful to actively include these target groups.

The second interesting part of analysis around external linkages are specifications of co-operation processes, i.e. co-operation partners, focus, initiation, etc. All regional management institutions specify trade unions as an important co-operation partner. Beyond trade unions the regional managers co-operate with tourism unions, other regional management institutions and agricultural unions. figure 13 shows an impressive variety of different co-operations partners which might indicate a quite good integration of the regional managers in the regional development process.



**figure 13: Co-operation partners**

*3.4 Assessment of the regional manager’s embeddedness*

In order to get a picture of the regional manager’s embeddedness in the region the last section of the questionnaire focuses on the main tasks, visions and handicaps the regional manager’s are confronted with. Similarly to the question in the first part, where we gave a few possibilities to choose, the results of the open question confirm the impression, that a regional manager co-ordinates, communicates, informs and supports contacts in the region. Also supporting projects and consulting in difficult situations are several times quoted tasks of the regional management institutions.

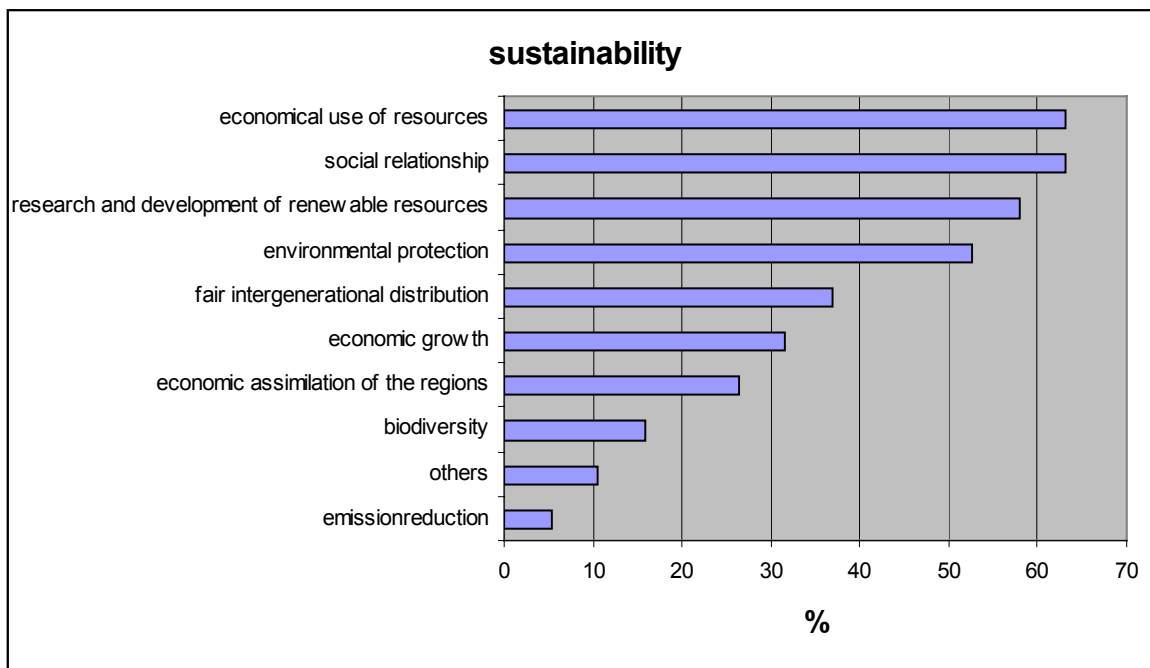
The main visions and wishes of the regional managers for the future focus on the one side an improvement of the region’s location factors in terms of job creation and competitiveness. On the other side there is a tendency to strengthen the increasing development of tourism.



Beyond this the regional managers complained a demand for actively involved actors in the region, specific strategies for creating new jobs and stabilising the typical strength of the several regions.

As most important handicap concerning their work the regional managers report on the one side a lack of acceptance for their activities, a limited budget and a lack of staff members. Due to the importance of political control they identified on the other side major complications and handicaps concerning their freedom of action. These arguments confirm the importance of integrating the regional managers in the regional development process. Without being involved and well known in the region the regional managers contribution for a sustainable pathway cannot succeed.

Finally, at the end of the questionnaire we listed a lot of keywords, and asked the regional manager to choose those three which they most of all associate with the word sustainability. The results shown in figure 14 seem rather untypical for the mainstream interpretation of the sustainability concept in terms of the three dimensions - economic, social and ecological. The ecological factors are over represented compared to the type of projects the regional management institutions are involved in. A first analysis of the project lists clustered in six categories – social, social/economic, economic, economic/ecological, ecological, ecological/social – results in a strong bias of project with mainly social and social/economic focuses. In comparison projects with an explicit ecological focus are very rare.



**figure 14: Associations with sustainability**

#### **4. Summary and conclusions**

The objective of this paper has been an analysis of the regional institutional landscape that is mainly influenced by the European Union Structural Fund Policy goals - strengthening regional economies and their international competitiveness. Within the current period (2000-2006) sustainable regional development strategies are additionally required (see section 1.1) development agencies are one of the core institutions within a regional innovation system (Cooke, Boekholt, Tödting 2000). The here presented survey focused on a new form of regional institutions – the regional management institutions. Their field of activities is much broader than focusing exclusively on economic development. For that reason we identified this type as one of the key-institutions for fostering sustainable regional development.

Therefore the main hypothesis for the study focuses on institutions, their organisational characteristics, their acceptance, their fields of activities, etc. The conceptual framework used for the analysis comes out of the wide range of organisational theories – the Institutional Analysis Development (IAD) framework (see section 2.1). Parts of the IAD framework help to structure the institutional activities:

**Action arena:** Is the basic conceptual unit for the analysis of behaviour within institutional arrangements. It concludes a set of variables that are described below. It can be described as a social space where actors interact.

In principle we have analysed regions where actors interact but with a specific focus on sustainable regional development. Normally regional development processes are oriented on hard-core economic development factors , i.e. growth, competitiveness, job creation etc. In our case we are interested in strategies fostering sustainable regional development, i.e. oriented on the identification of strengths and weaknesses in specific regions to cope with environmental problems within these regions. On the basis of these strengths and weaknesses the regions should work out visions for the future development. One of the elementary key-factors is the promotion of new technologies (environment oriented technologies) as part of a regional innovation strategy. Regional institutions are the key-actors for achieving a sustainable regional pathway.

**Action situation:** Is the structure that includes immediate choices and outcomes. It can be described by a set of variables.

In our case the particular action situation can be concluded as a specific region under study which is supervised by a specific institution (EU regional management institution within the first step of our survey) with the aim of achieving a sustainable regional development. The set of actors is defined as target groups that are directly involved in the regional development process – regional management institution are the key-actors that co-operate with and co-ordinate other actors. Their organisational characteristics (see chapter 3.1) illuminate how effective their actions are. Most of the analysed institutions are small-scaled and not embedded in public organisations, although their budget is coming from governmental institutions (municipality or provincial) and the European Union. Therefore they are mainly depending on public money. The rules of each participant depend on their particular role in the region. The regional managers fulfil a wide range of tasks which is in terms of their organisational size and their limited budget a bottleneck. Besides their everyday tasks the management institutions are involved in regional and local projects. In most cases they undertake the management and controlling function within the projects. Besides this they are almost exclusively responsible for tasks like moderation and mediation. To sum it up the regional managers are actively involved in both the overall regional development process and

concrete projects. As pointed out in one of the hypotheses the regions development should be oriented on long-term visions that provide a kind of framework with different development foci. Regional managers who are involved in both projects and the overall process seem quite adequate for co-ordinating long-term strategies. Due to their contact and co-operation profile almost every target group is addressed and involved which is a strong indicator for successful stakeholder participation.

**Actors:** Are individuals or groups that are functioning as a unit. An action is the actor's behaviour.

The analysis of the actors' profile provided a quite similar picture in almost every regional management institution – the most important actor is the regional manager. In terms of valuations, knowledge and information the manager pools almost the total know-how. Here the question of limited capacities arises. On that account the importance of inter-institutional co-operation needs to be discussed. Gathering from the results of the survey the regional management institutions co-operate with almost every other institutional actor within the region. But how effective are they co-operating? Are they aware of the synergies between their work? Questions that need to be integrated in the case study analysis.

**Community attributes:** Can be summarised as culture which includes behavioural norms, the level and nature of the common understanding, homogenous or heterogeneous preferences and the distribution of resources.

The local and regional milieu is one of the most important factors for regional co-operation. Most of the staff members in the regional management institutions are originally coming from the region which is an indicator for local and regional knowledge, identity and a common culture. Information about the rules within the region are therefore well-known.

The outcome of the first step of our survey is a perfect starting point for the next steps. Regional management institutions seem highly integrated in the regional development process although their individual view is more sceptical. Their strengths are identified within their position as a link in between the provincial and the local government and the private and commercial stakeholders in the region. They are able to communicate top-down strategies and vice versa they are able to cope with bottom-up visions. Their organisational settings need to be upgraded to improve their output which is as a consequence of their limited resources often

lacking. Within the next step the focus should turn to inter-institutional co-operation to find out if synergies between institutional actors could solve this problem.

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