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1. Summary

This research project is part of a more comprehensive project managed through the @LIVE programme, and owned by Hedmark University College. The background for the actual described research project is the development in today's society that calls for organizations to be flexible while simultaneously being efficient. It is also an observable trait in small, local and peripheral communities and municipalities that official service organizations and other private bureaucratic organizations play an increasingly significant role in local development and value creation. This apparently creates a paradox in the term of periphery and economic development versus urbanisation tendencies as well as structural, social and cultural development. These are conditions that affect the pattern of settlement, and represent important issues for the society, and also for the bureaucracies and administrative organizations as parts of the system. The focus here will be on the level of bureaucratic organizations that on the one hand are characterized by rigid regulations, structures and decision levels, while on the other hand facing the demand for flexibility, innovation and change. Considering the major role of these organizations with regard to creating the preconditions for producing value and contributing to secure the development and maintenance of the local societies, there seems to be a need for further research to broaden the understanding of this paradox and the potential for development in the context of the periphery.

Creativity and dynamism are keywords for flexibility and ability to change, and are also directly and naturally related to innovation. The purpose of this research will therefore be to widen and deepen the understanding of the organizational working climate and factors supporting and restraining flexibility, innovation and change, related to efficiency in a broader context. The approach in this paper will start on a micro-level, focusing at the organizations inner life, their processes and structures, their management style and communication. The conditions for creativity and interaction between different levels, as well as influencing internal and external factors and how they are experienced and interpreted, will represent the deepening factors that are included parts of the research.

The project will partly depend on data and research results from a previous Master thesis under the title: “Can Innovation and Creativity take place in a Bureaucratic Organized Service Production?” (Berglund, Englet 2006) This approach is based upon an assumption that a typically bureaucratic organization and its leaders, based on different circumstances, are facing problems dealing with the need for change, reform and creativity, while simultaneously being effective and true to its core business. The core of this research is primarily based on the method of Gøran Ekvall (1990). Results from research conducted according to Ekvalls’ method and the Creative Climate Questionnaire are complemented by efficiency measures, represented by sick leave statistics. In addition, relevant material from previous research and findings have been included as part of the background.

The findings here support the hypothesis that a bureaucratically organized organization can be both innovative and efficient, as one of the four units show results of an innovative organization and significantly lower sick leave levels than the other units. This indicates that apparently identical preconditions, like structures, job responsibilities, instructions, measured results etc. are differently experienced and interpreted in the represented units. As the findings show, this also affects the efficiency and thus the produced value. Emanating from this, is a new and interesting phenomenon for further research; i.e. the understanding of the organizations and the effects of the context they are living in, represented by the interpreted and experienced conditions for creativity, innovation, efficiency and value creation. To widen the background and possible intervening and influencing factors, and to strengthen the empiric material, similar research will be conducted to collect data from more and different types of bureaucratic and administrative organizations in the typical periphery areas.

This background very well complies with the focus of the specific, extended research project presented in this paper.

2. Introduction

This research project is initiated and will be conducted through the @LIVE programme. As mentioned, @LIVE is part of Hedmark University College, and is working in the area of regional development, innovation and knowledge development. Developing knowledge to contribute to innovation, creativity and learning in a local and regional context are central parts of the @LIVE programme and parts of its superior objectives.

Increased interaction, changing attitudes, new access to information, time-space influence, rapid technical development etc.- could all be seen as part of processes that influence all levels and funding of society, so also the regional and local levels. These are influences that create an overall need for innovation and ability to change. Emanating from this, it is important to understand how various factors influence, restrain and support innovation and creativity among the actors, which in this case are bureaucratic organized organizations.

The presented research project will be part of a more comprehensive research programme seeking to understand the regional innovation regime and how government politics restrain and support innovation. Public and private sector organizations are regarded as part of the regional innovation regime and are vital for local development and value creation. Especially this is so for small, rural communities in which the public sector considerably contributes to local value creation. In line with this and with an intensified focus on innovation and reform in private as well as public sector organizations, it is interesting to include this as a complementary research project. As mentioned previously, this could bring a new and extended contextual understanding of the actors and their experienced roles, as well as their understanding of innovation and factors restraining and supporting innovation in their environment.

Research shows that innovation, creativity and learning most often happen in contexts where different actors are working in a network characterized of trust, partnership and shared perceptions of conditions that support innovation and learning. Several accepted theories

indicate that the basic nature of typical bureaucracies is restraining innovation and creativity. Factors like rigid regulations, structures, control routines, hierarchies and many decision levels are mentioned as typical characters of a bureaucracy. Supporting characteristics for innovation and creativity, however, are often stated to be the opposite; i.e. factors like flexibility, freedom, debate, risk-taking and challenge. (Ekvall 1996, Amabile 1998)

At the regional and local level, public governmental actors as well as public and private bureaucratic organizations, are important parts of such partnerships. Increased knowledge and understanding could contribute to the founding of a shared perception structure and thus more efficient partnerships including both private and public actors. This knowledge could also contribute in order to improve the ability of the actors to predict and be proactive in their behaviour with regard to their specific environment, as well as governmental and public politics.

Part of the basis for this research, will be the results from the mentioned Master thesis. A short presentation of this research project and the actual findings will be presented here, as part of the background.

Bureaucratic organizations in local communities and innovation present conditions that obviously expose challenges and interesting questions. Looking into this could provide knowledge and an improved understanding of how creativity and innovation can be stimulated at these levels. This research project therefore focuses on the conditions related to periphery and the local regime through the local bureaucratic organizations and their ability to achieve qualitative development through creativity and innovation. Part of this is how they perceive and interpret innovation and creativity, and how this interrelates and is influenced by internal and external conditions in the organizations, and how they see their role and function as part of these processes.

1. Case – previous study of a bureaucratic organized service production:

The purpose of this project was to broaden the understanding of the working climate and the conditions for creativity and innovation, related to bureaucratic organized organizations. The

title of this project is: “Can Innovation and Creativity take place in a Bureaucratic Organized Service Production?” (Berglund and Enget 2007)

Existing theory and research show that it is a well-accepted fact that innovation presupposes creativity, and is influenced by the organizational climate. According to Gøran Ekvalls (1990, 1996, 1998) research and theories, it is possible to define and measure factors of a creative climate that supports innovation. The purpose of this research project was to provide insight into the climate factors, as well as management, structures and organizational processes in a bureaucratic organization. Developing knowledge about this would hypothetically contribute to an improved understanding of bureaucratic organizations with regard to creativity and innovation, and could give new insight into specific factors supporting and restraining a creative climate and efficiency in this type of organizations.

The approach was based upon the paradox pointed out by Brunsson (1985) and the theory, research and method of Ekvall (1990, 1996). In the book “The Irrational Organization” (2000) Brunsson pinpoints the fact that an organization is formed with the aim to be stable and predictable, - so to speak in principle difficult to change, due to its nature. Brunsson also states that the most effective organizations are the least changeable and thus the least innovative, because procedures, roles and ideology are so focused on performing the core responsibilities. In consequence, this should mean that an organization could not be effective and true to its core business while simultaneously being innovative. These traits described by Brunsson all fit well with known characteristics and descriptions of a bureaucracy. Ekvall (1990, 1996) sees the characteristics of bureaucratic and innovative to be conflicting, this creates an interesting paradox between the two theories.

1.1. The picture of a bureaucracy:

The term bureaucracies, or bureaucratic organized organizations, are often identified with management or administration characterized by hierarchical authority among numerous offices and levels and by fixed procedures. Furthermore, another perception is the image of a rigid administrative structure of large or complex organizations. Bureaucracies are also regarded to embrace administrative systems in which the need or tendency to follow rigid or complex procedures, restrain effective action. Management focus is top down and the level of control is regarded to be high.

On the positive side bureaucracies often are assumed to provide safety and trust, order and clarity and a reducing effect on conflicts. Further, and related to fixed procedures and control, consequent and fair handling of similar matters is regarded as a positive aspect. Finally, fixed procedures are also stated to improve efficiency.

In sum this creates a picture of the bureaucratic organization as hierarchical and heavy regulated by strict structures and procedures with well-established control routines. The bureaucracy is also seen as a type of organization that renders little room for personal freedom and judgements, but is still seen as an organization that supports safety, trust and possibly efficiency (when it comes to repeated routine work). The question of efficiency thus presents a contradicting picture.

2.2. Characteristics of a creative working climate:

According to Ekvall (1990, 1996, 1997, 1998) innovation presupposes a creative working climate, which in many ways holds the opposite principles when compared to those of the bureaucratic organization. Here it is important to distinguish between organizational climate and culture. The organizational culture concerns the values, beliefs, history, traditions etc., reflecting the deeper foundation of the organization. The culture is long-standing, deeply rooted, and usually slow and not easy to change. The organizational climate, however, refers to the recurring patterns of behaviour exhibited in the day to day life and environment of the organization, as experienced, understood and interpreted by the individuals within the organization. It concerns peoples' perceptions of these behaviours and how they influence their attitudes at work as well as their levels of performance and productivity. Ekvall gives the following definition of the organizational climate:

“Climate affects organizational and psychological processes such as communication, problem solving, decision making, conflict handling, learning and motivation, and thus exerts influence on the efficiency and productivity of the organization, on its ability to innovate, and on the job satisfaction and the well-being that its members can enjoy. The individual organization member is affected by the climate as a whole, by the general psychological atmosphere, which is relatively stable over time. No single separate event produces this more lasting influence on behaviour and feelings; it is the daily exposure to a particular psychological atmosphere”

A climate for creativity and change promotes the generation, consideration, and use of new products, services and ways of working. The climate actually supports the development, assimilation and utilization of new and different approaches and concepts.

The climate is also influenced by many factors, internal as well as external, and affects the organizational processes like group problem solving, decision-making, communication and coordination. Psychological processes include learning, individual problem solving, creating, motivating and committing. These components, in addition to other central and more structural central elements like management and leadership, centralization, formalization, order and clarity and goal clarity exert a direct influence on the creative climate and innovation. These are factors that influence efficiency related issues, represented by the performance and outcomes for the individuals as well as working groups and the organization as a whole. (Ekvall, Isaksen and Lauer (1998.)

All of these variables have an impact on how people view the working climate as well as innovation and efficiency outcomes. However, climate research suggests that the strongest influence is related to management, and that the climate to a fairly large extent is in the hands of the managers.

2.3 The Creative Climate Questionnaire:

To assess the climate for creativity, innovation and change Ekvalls' questionnaire and well-documented survey method was used. The method examines and measures the climate for creativity, innovation and change on the following dimensions:

- Challenge – representing emotional involvement and joy in the work
- Freedom – representing independence and freedom to make decisions
- Dynamism/Liveliness – representing the eventfulness of life in the organizations, new things happening, energy and excitement
- Trust/Openness – representing the emotional safety in relationships, open and direct communication
- Idea Time – represents slack. Allowed and used time for elaborating new ideas.

- Playfulness/Humour – representing a relaxed atmosphere characterized by spontaneity, humour and laughter
- Conflicts – representing the presence of personal and emotional tension
- Idea Support – representing the way new ideas are welcomed and treated
- Debate – representing the occurrence of encounters and clashes between viewpoints, ideas and differing experiences and knowledge
- Risk-taking – representing the tolerance of uncertainty in the organization. Actions and decisions are prompt and rapid

Through an extended research material and based upon this survey method, the Creative Climate Questionnaire, and results from various organizations, Ekvall has presented average values characterizing innovative, average and stagnated organizations. According to the results from his research the dimensions of risk-taking, dynamism, freedom and debate seem to be the climate dimension that make a crucial difference to support innovation, whilst conflict is the single dimension that exerts the strongest negative and restraining effect.

This previous research project was primarily based on Ekvalls method (1990, 1996) and related theories, combined with efficiency measures in terms of sick leave rates. An extra dimension on management was also added. Moreover, relevant material from earlier interviews and research in the same organization were included as part of the data and background.

2.4 Case study results:

The research project included 4 units of Skatteetaten in Oppland county (the county's public tax organization) and showed consistent differences. The main research question was:

“To what degree can innovation take place in a bureaucratic organized service production with strictly regulated core responsibilities?”

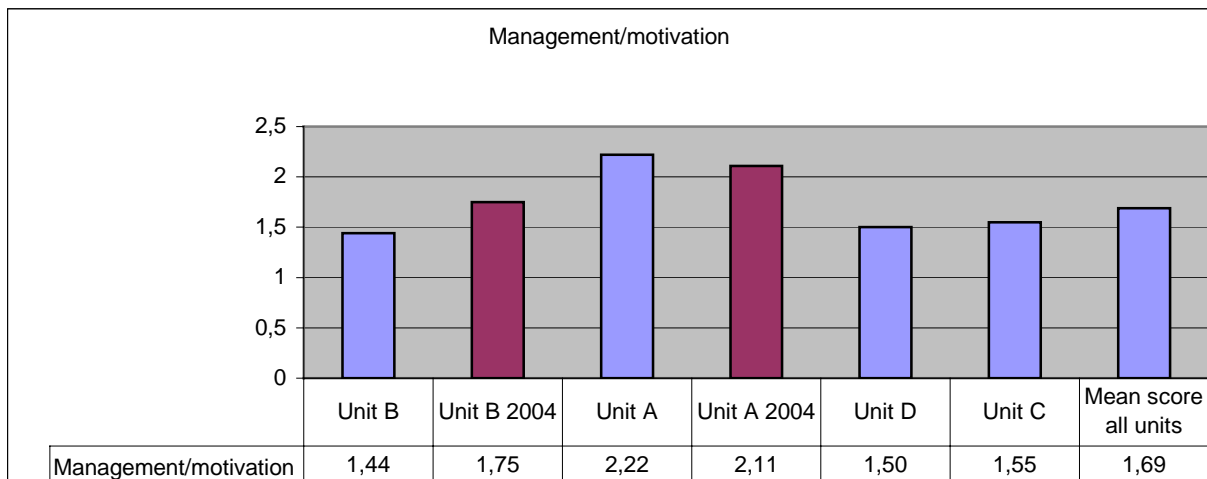
The results of the creative climate survey showed that one unit fully complied with the given parameters for an innovative organization while the others showed values on the level of average or stagnated organizations. Ekvalls' average scores (1990, 1996, 1998) for the innovative and the stagnated organizations are shown below.

Climate dimensions	Innovative Organizations Average	Stagnated Organizations average
Challenge	2,38	1,63
Freedom	2,10	1,53
Idea Support	1,83	1,08
Trust/Openness	1,78	1,28
Dynamism/Liveliness	2,20	1,40
Playfulness/Humour	2,30	1,40
Debates	1,58	1,05
Conflicts	0,78	1,40
Risk Taking	1,95	0,53
Idle Time	1,48	0,97

As mentioned above, the overall results showed that one unit fully complied with the given parameters for an innovative organization, while the others showed values on the level of average or stagnated organizations. In order to illustrate and verify the most important findings in this research, results from the management dimension is presented below. In addition the full scale results on all dimensions for all units are presented to show the relationship and differences, compared to the average values for innovative and stagnated organizations.

The findings on the added dimension on management and motivation show results from the 4 units, and for two of these results are compared to similar results in a previous research from 2004 (Enget, Hagestande, Lindstad 2004). The results show that one unit has improved their score from 2004, while the other shows lower scores in 2006 compared to those of 2004. It also shows a significant higher score on this dimension for one unit compared to the other three units. This indicates that the leadership in one specific unit is experienced to be more motivating than the leadership experienced in the other units. According to Ekvall (1990, 1996, 1998) management and leadership style strongly influences the creative climate and innovation.

Results Management/Motivation

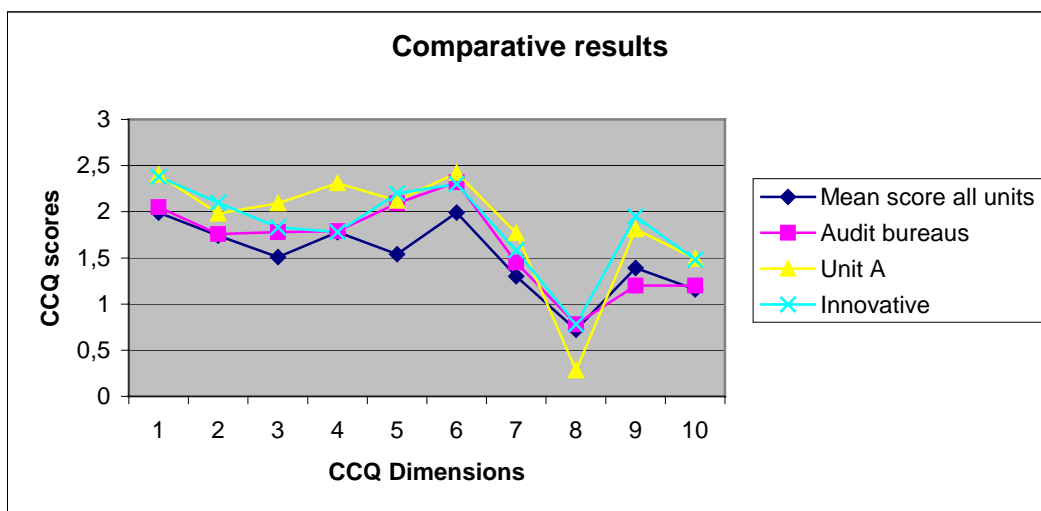


Blue colour: 2006 results

Burgundy colour: 2004 results

To render a full picture of the results on all dimensions a diagram showing this is presented below. This shows the scores for the 4 units as well as the mean scores for innovative and stagnated organizations. In addition mean scores for audit bureaus (Ekvall 1990, 1996) are shown in order to compare with the scores for a similar type of organization.

Comparative results – all dimensions and units



Light blue colour: mean score innovative organizations **Yellow colour:** Unit A

Pink colour: mean score audit bureau

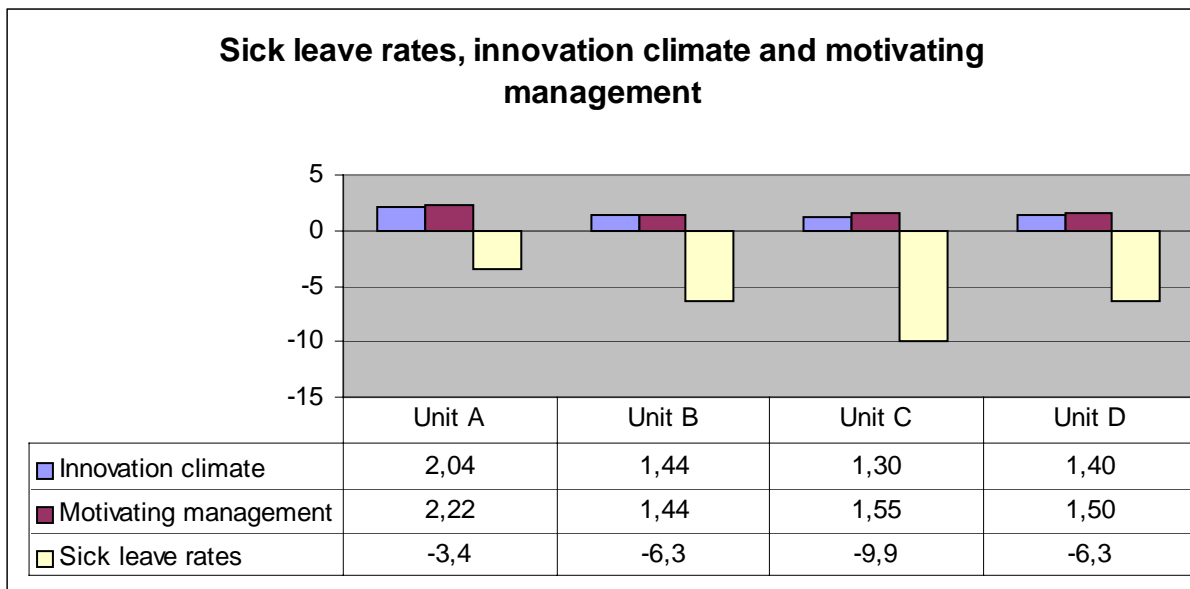
Dark blue colour: mean score all units

The results are shown as mean score for all four units. The scores of the four units on several dimensions show results in line with those of audit bureaus and thus confirm Ekvalls' previous presented results (1990, 1996, 1997) for various types of organizations. The observed differences are found on the dimensions idea support, dynamism/liveliness and playfulness/humour, and also shows significant different and favourable scores for one unit compared to the total mean score for the 4 units.

The low mean score on idea support most probably could involve problems related to idea support in a high competence organization and restrain development and innovation. Low scores on dynamism/liveliness indicate that there could be a degree of lack of interest and emotional involvement, affecting how much energy people invest in their jobs. Low scores on playfulness/humour indicate a climate characterized by gravity and seriousness and a stiff atmosphere, and could affect creativity and the experienced ease and joy.

As for the mentioned unit showing significant different scores, the conditions for a highly creative climate and innovation seem to be most favourable. In this unit the employees obviously have a positive experience of the conditions covered by the climate dimensions.

Efficiency dimension – sick leave rates:



Blue colour: Innovation climate

Burgundy colour: Motivating leadership

Yellow colour: Sick leave rates

As shown in the figure here, the tendency of the significantly different results for one unit was verified also in the efficiency measures (sick leave rates). The results show more than average high sick leave rates for the other three units, while the only unity showing values as an innovative organization also presented sick leave rates that were about half of the other three units.

The public goal set by the Norwegian government programme for an including work environment is 5,5%. The results for the unit on the level of innovative organizations showed an average of 3,4 % which is considerably lower than the national goal of 5,5%. These results most probably can be seen as an efficiency indicator, and actually verify that the unit showing scores in line with, or even better, the mean scores for innovative organizations also is the most effective.

Concluding comments:

The results thus indicate that innovation and creativity are possible in a bureaucratic organized service production with strictly regulated responsibilities and standards. As the findings show, there were also indications that bureaucratic organizations can be effective both on the background of low sick leave rates and according to Ekvalls' criterias. This presented the mentioned new and interesting phenomenon – the different interpreted and experienced conditions of the apparently identical conditions and “reality”, and will serve as basis for the further research to develop an extended contextual understanding of the actors and their experienced roles, their understanding of innovation and factors restraining and supporting this in their environment.

The previous research very well suits the purpose as a pilot case study and will serve as a model for further similar studies, in order to develop a basis of empiric, reliable data for different types of bureaucratic organizations. Furthermore, this will provide data that creates possible new combinations for comparative findings related to different, selected factors and contexts. These are factors that exert effects on the climate for creativity and change, and will contribute to the widening of the material and possible further combinations, for a new and extended understanding.

3 Continuing research project; Innovative potentials – widening and deepening the understanding of preconditions based in, and emanating from bureaucratic organizations

The intention of this continuing research project, initiated and conducted as part of the @LIVE programme, is to contribute to the development of new and extended knowledge promoting innovation, creativity and learning in a local and regional contexts.

3.3 Widening the basis and the empiric material:

This research project will be part of a more comprehensive research programme in order to understand various aspects of the regional innovation regime. This will include how government politics restrain and support innovation. Complementing the understanding of different aspects of the regional innovation regime and government politics, this research project will focus on the local level in peripheries, and bureaucratic organizations and how these interpret and experience the conditions regarding creativity and innovation in an extended contextual understanding.

The described methods and results of the research project presented in this document will serve as basis to widen the empiric material and the basis for further research in order to strengthen the reliability and widen the possible implications. The purpose of this is the possible value of reliable and transformable results that could form a basis for valid interpretations, understanding and conclusions in a wider context, in order to understand and define vital influencing conditions and connections. Furthermore, these facts and empiric data will serve as a platform to deepen the knowledge and understanding as described in the coming section.

3.4 Deepening the approach:

In order to give a deepened and better understanding of the influencing and intervening aspects of the regional innovation regime and cultures for innovation and creativity, this research project will seek to provide insight and understanding of the internal environment, their creative and innovative processes and how it is experienced and influenced. More specific this research project will focus on the following main issues:

1. How do these bureaucratic organizations basically interpret and understand innovation and innovation processes?

2. What is their view of experienced internal and external conditions that promotes and restrains innovation and creativity?
3. How do they interpret their role as an organization related to innovation, creativity and value creation in the local community, for the employees and inhabitants?

The research project thus will include both interviews and questionnaires to deepen the knowledge in order to understand the background for their perceptions, experiences and interpretations related to innovation and creativity. This information will be valuable to deepen the understanding of the background, and will enable deepened interpretations based on extensive empiric material. In sum this can create a basis of reliable data in order to reach valid conclusions.

3.5 Preconditions based in and emanating from bureaucratic organizations:

The findings of the previous research on bureaucratic organizations and creative climate present the paradox of bureaucracy and an experienced innovative climate. However, it is a fact that the form of Ekvalls' creative climate questionnaire is focused on how the individuals see and evaluate the conditions in their environment as a whole, and not how it is experienced and interpreted. In order to develop further knowledge about the preconditions in the inner context of the organization and the conditions that influence the climate, this research project therefore will seek to look into the connections between the inner contexts and how the climate is experienced and interpreted, related to the actual existing structures and other central elements of the environment.

Ekvall; Isaksen and Lauer (1998) describe central internal and external factors that influence the organizations and the climate. Due to their effect on the organizational and psychological processes these will exert a direct influence on the performance and outcomes for the individuals as well as working groups and the organizations as a whole. It would therefore be reasonable to assume that these factors play a role in the connection between the experienced inner context and the existing structural and central element. The central factors indicated by Ekvall, Isaksen and Lauer (1998) could therefore serve as guidelines for issues and collection of relevant data. These cover both internal and external factors. In this research project the external factors will be part of an analysis of conditions and influencing factors in the local society and as part of the periphery dimension.

In short the factors stated by Ekvall, Isaksen and Lauer (1998) cover the following dimensions:

- External environment
- Mission and strategy
- Structure and size
- Resources and technology
- Task requirements
- Individual skills and abilities
- Leadership behaviour
- Organizational culture
- Management practises
- Systems, policies and procedures
- Individual needs, motives and styles
- Organizational and psychological processes
- Individual and organizational performance and well being

3.6 The local and peripheral dimension:

This is an important part of the project as bureaucracies and bureaucratic organizations play a vital role with regard to local societies, their development and value creation. It is a well-accepted fact that local, peripheral and often rural places are characterized by a strong public sector representing the main part of the job opportunities. The continuance, as well as the cultural and economic development of these local places is susceptible and dependent on public sector for employment and local value creation. This is illustrated by the fact that employment statistics for the area Sør-Østerdal show that public sector holds close to 40% of the employment, which is considerably more than the average of 30% for Norway. Another characteristic is one, or a few corner stone private companies that also play a central role both through their own activities and through economical and cultural side effects. (ØF – report 09/2004) These companies are often organized as bureaucracies.

In this context the local and peripheral dimension of the bureaucratic organizations and their influencing and interrelating factors with the actual local society will be of great interest, as they play an important role and exerts impact on the conditions for innovation and creativity.

The organizations exist in a context, which in this project is defined as the local community, and they are affected by their external environment as well as their internal environment. These effects produce both individual and organizational output or performance. This consists with the indicated and assumed effects with regard to creative climate and innovation. (Ekvall, Isaksen, Lauer 1998).

The external environment is regarded as any condition or situation outside the organization itself, but exerts an influence on the organization's performance. This could be represented through market conditions and influence, financial conditions, governmental obligations and regulations, politics and the political system, technological and scientific developments.

In addition to this, social and cultural factors will be taken into consideration, as they are assumed to influence both the local society and the local bureaucracies. Central factors here might be organizational and local culture, including values, beliefs, history and traditions that reflect the deeper foundations. This influences communication and patterns of interaction as well as choices and decisions people make. The culture also determines the worldview and mindset for those who belong, and influence the way people behave and particularly how they respond to surprise, ambiguity, creativity and change. (Ekvall, Isaksen and Lauer 1998)

Experienced and available infrastructure, resources and technology are basic and important tools both for places and organizations located in the periphery to complete their business. This together with knowledge and skills are key resources, and can exert an impact on the feelings and attitudes of people either by facilitating or inhibiting behaviours to the benefit of the climate for creativity and change.

In sum this represents the background for local and external factors and will be part of the described concept for interviews and questionnaires.

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