Women Resource Centres as a research topic

A summary of Malin Lindberg's work

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Introduction

In this text, my research Women Resource Centres is summarized for the purposes of the international project WINNET 8. The summary derives from my doctoral thesis published in October 2010 as well as additional texts about WRCs and gender in innovation policy and regional development policy.

WINNET 8 (<u>www.winnet8.eu</u>) is a European Union capitalization project of Women Resource Centres (WRCs) promoting innovation in gender equality. The project shall contribute to regional growth by improving women's participation in the labour market, focusing on horizontally segregated labour markets, the lack of women in innovation and technology and the lack of women in entrepreneurship. The project aims to shape regional, national and EU-level policies and development programmes that relate to women's status in the labour market and ensure these policies are integrated into mainstream provision.

WINNET 8 involves nine regions in eight member states: Bulgaria, Finland, Greece, Italy, Poland, Portugal, Sweden and UK. The participating regions from the Nordic countries have among the most horizontally segregated labour markets in EU-27, while the regions involved from South and East Europe are less segregated. On the other hand the employment rates among women are lower. The consortium of WINNET 8 builds on successful practices from the III C project W.IN.NET and the III B Baltic Sea project FEM where several of the partners were involved. WINNET 8 thereto involves local and regional authorities, managing authorities, research institutes and NGOs. The project shall reinforce the Roadmap for Equality between Women and Men and the gender dimension in the Lisbon Agenda. The project will build capacity for implementation of policies, practices and WRCs.

This text is disposed as follows. First, my doctoral thesis is presented, including scope, methods, theories, data, analysis and conclusions. This is followed by presentations of papers about the internationalization process of the WRC model, about how a bottom-up approach deconstructs gender in innovation policy, about clusters and innovation systems as gendered tools for regional development and about Women's participation in European regional development. Finally, an anthology chapter about gender in regional innovation systems is presented.

Doctoral thesis

My doctoral thesis was published in October 2010 at Luleå University of Technology in the north of Sweden. The title of the thesis is 'Joint action for innovation - a participative and gender scientific challenge of innovation policy and innovation research'. The data includes some examples of how WRCs in Sweden have organized themselves on local and regional levels. In the analysis, the WRC organization is related to national and regional policy programs furthering joint action networks for innovation. The conclusions have direct impact on the scope of WINNET 8, problematizing the gendered structures of policy and research. Below, my thesis is summarized highlighting scope, methods, theories, data, analysis and conclusions.

In recent decades, politicians, civil servants and scientists have drawn attention to the role that joint action plays in the emergence of innovations. Among other things, the importance of the joint action networks with participants from different sectors of society has been stressed. Joint action networks - otherwise referred to as 'innovation systems', 'triple helix' and 'clusters' - are believed to contribute to the development of innovations. Through national and regional authorities, public funding is distributed to such joint action networks in order to encourage innovation and with the ultimate goal of attaining 'sustainable growth'. However, critiques have been articulated towards the public promotion of innovation systems and clusters that marginalises certain actors and areas. In particular, women and industries employing many women have been disadvantaged by the priorities made. These are the same actors and areas as focused by many WRCs in Sweden. The marginalization occurs despite the fact that several of the industries employing many women - primarily services industries are attributed a central role in the transformation of Western economies to become more dynamic and knowledge-based. Neither policy makers nor researchers have analyzed how joint action networks promote innovation within women dominated settings, for example WRCs. This dissertation strives to address that gap by depicting some Swedish efforts employed to organize joint action networks based on women's entrepreneurship and innovation.

Both policy and research have been characterized by a 'top down' approach, discerning only a limited scope of actors and areas as relevant in the area of joint action networks promoting innovation. In contrast, this thesis considers that a 'bottom up' approach could highlight the importance of a broader spectrum of actors and areas. The dissertation extends the arena for knowledge development in the area of joint action networks by depicting some of the actors and areas currently marginalized in innovation policy and innovation research. This study questions the existing norms utilised to categorise and measure innovation systems and clusters and scrutinises how gender is "done" both in innovation research and innovation policy, which is also the purpose of the thesis. The core of this thesis is to offer a participative and gender scientific challenge to innovation policy and research. The empirical data includes efforts to promote women's entrepreneurship and innovation being pursued by four regional joint action networks in Sweden. These are: SAGA and Emma Resource Centre in northern Sweden, as well as Företagsamma Kvinnor (Enterpreneurial Women) and Lika Villkor (Equal Conditions) in central Sweden. Some of the participants in SAGA network worked in WRC constellations. Emma Resource Centre constituted a WRC in themselves. Both Företagsamma Kvinnor and Lika Villkor constituted regional platforms for WRCs. The four networks had problematized the use of innovation systems and clusters as theoretical concepts and policy tools before the thesis work was initiated. Selecting these same networks to work with for the purposes of this thesis is thus particularly suitable to illustrate and challenge the prevalent innovation policies and research.

The analytical frame of reference used to highlight the empirical data consists of three comprehensive groups of theories. These three groups of theories are:

- A bottom up approach to studies of policies (Carlsson 1996, 2000a, 2000b)
- Doing gender in policy and research (West & Zimmerman's 1987 and Bacchi 1999)
- Organization and classification of innovation systems (Frankelius 2005)

One of my aims in this study is to depict actors and activities that have been given a low priority in policy and research. The theories employed in the study make it possible to study the organization of innovation systems and management of innovation policy with a 'bottom up' approach. As an analytical approach, 'bottom up' implies that policies in a given field are studied on the basis of how people at the grassroots level identify policy problems and try to find solutions. This approach does not distinguish crucial actors and relevant areas in advance. Instead, the relevance of different actors and areas is established through empirical studies. The low prioritized areas and actors would not be as apparent if those parts of the theories were used that draws attention only to the importance of a few - centrally distinguished - actors and areas, as is the case in a 'top down' approach.

The research process depicted in this dissertation has been conducted by means of a participatory research approach (also known as action research or interactive research). In this kind of approach, knowledge is developed jointly by researchers and the actors concerned by the research issues. Thus, the knowledge development has been characterized by a mutual influence between practice and theory. Participatory research has a long tradition within Nordic work life sciences. Within this stream of research, two different traditions have emerged: one emphasizing a pragmatic approach to participatory research and the other promoting a more critical approach. The first focuses dialogue within a group, stressing the importance of organizational learning and consensus. The latter tradition highlights how the dialogue between participants and researchers enhances a critical reorientation of existing norms and practices. This tradition can thus initiate social change in a broader sense than the pragmatic approach. The research process described in the dissertation adheres mainly to the critical tradition of participatory research, examining prevailing norms in innovation policy and innovation research. This challenge of norms has taken place in 'dialogue seminars' arranged as a part of a mutual Research and Development (R&D) process. At these seminars, participants from the four regional networks were encouraged to discuss their experiences of promoting women's entrepreneurship and innovation.

In the empirical chapter the results from the discussions at the dialogue seminars are presented, together with some additional data gathered from the four networks' existing documents about their activities. Each network is described separately under three different headlines: Organization, Innovation and Surroundings. The empirical data reveals how the four networks have organized themselves around the topic of women's entrepreneurship and innovation. The SAGA network specifically focused technological development and thereto shared the focus of local and regional development with Emma Resource Centre. The network Företagsamma Kvinnor especially highlighted entrepreneurial women's ability to support themselves economically, while Lika Villkor stressed the importance of increasing the impact of local WRCs in the region. All networks involved actors from four different sectors: the public, the private, the academic and the non-profit sector. Concerning the topic of

innovation, a wide range of innovations could be distinguished in connection with the activities of the four networks. For example, a new system for ICT connection has been developed in a sparsely populated area. New methods for mapping and supporting innovation systems and clusters within areas employing many women have also been developed. Wedding arrangements with a touch of local cultural history is another innovation. Three of the networks have primarily been active in areas employing many women, such as the services industries. One of the networks was equally active in the area of ICT, which is an industry employing mainly men. These networks have acknowledged that actors in their surrounding have influenced their activities, for example by granting or refusing funding.

The empirical data is analyzed and discussed in the two last chapters of the dissertation. There it is portrayed how the four regional networks have challenged prevailing innovation policy and innovation research. The analysis shows that these networks have organized themselves in a manner that is consistent with the logic of innovation systems, gathering actors from different sectors in order to develop new knowledge and enhance innovation. Therefore, they could very well be classified as such, even though the contemporary research and policy on innovation systems have systematically excluded milieus focusing women as actors and areas employing many women. However, the four networks have not unconditionally accepted the prevalent norms for how innovation systems are supposed to be organized. Rather they have challenged these norms by expanding the range of relevant actors in such joint action networks. Besides women and areas employing many women, they have involved the non-profit sector contributing with new ideas, consistency and knowledge. They have also expanded the range of innovations emanating from joint action networks, including new services, methods and experiences besides new physical products.

The purpose of the thesis was to examine how a 'bottom up' approach can highlight how gender is done in innovation policy and innovation research. This purpose is fulfilled by the conclusion that gender is done in a segregating and hierarchical manner in innovation policy and innovation research when women and areas employing many women are marginalized in the promotion of innovation systems and clusters. The four networks have challenged this way of doing gender by proposing a less segregating and hierarchical tactic, opening up for many different actors at many different areas promoting many different kinds of innovations. This conclusion calls for further development of existing theories on how innovation is promoted by joint action networks. The development includes 1) a new operationalization of 'innovation', 'innovation systems' and 'clusters' to comprise a wider range of actors and areas and 2) a shift from 'triple helix' to 'quattro helix' as a theoretical model in order to include the non-profit sector as well. Policy implications to be drawn from the analysis are the inclusion of a wider range of actors and activities in the innovation policy priority patterns, reaching beyond segregating and hierarchical notions of gender.

These conclusions have implications for the scope of WINNET 8, problematizing the gendered structures of policy and research. According to the project plan, WINNET 8 shall contribute to regional growth by improving women's participation in the labour market, focusing on horizontally segregated labour markets, the lack of women in innovation and technology and the lack of women in entrepreneurship. In the light of the focus areas of WINNET 8, my doctoral thesis highlights how WRCs challenge the pattern of prioritization in innovation policy and research due to the horizontally segregated labour market. They prove that additional actors and areas are important for creating innovation and growth, not least women and areas employing many women as the services sector. Thus, the thesis problematizes "the lack" of women in innovation and technology as well in entrepreneurship.

WINNET 8 aims to shape regional, national and EU-level policies and development programmes that relate to women's status in the labour market and ensure these policies are integrated into mainstream provision. My thesis contributes to these aims by exposing how the doing of gender in policy programs affects women and men in their everyday life, delimiting or granting access to public funding of different kinds. Up till now, joint action networks comprising many women mainly have had access to funding from policy programs promoting gender equality and women's entrepreneurship. They have thus so far been excluded from funding targeting innovation networks, delimiting their access to higher amounts of grants covering a longer period of time. WRCs constitute an alternative to this logic of public promotion. They open up the arena for promotion of entrepreneurship and innovation for a multitude of actors, areas and innovations.

Paper about the internationalization process of the WRC model

At the conference Triple Helix VII arranged in Glasgow (UK), May 11-13 2006, I presented a paper titled 'Women Resource Centres - A Quattro Helix Innovation System on the European Agenda' together with Inger Danilda and Britt-Marie Torstensson. The paper contained an analysis of the internationalization process of the WRC model from Sweden throughout Europe. Below, the paper is summarized highlighting scope, design and main conclusions.

In the early 1990s public funds were initiated, channelled through the County Administrations, to encourage the establishment of Women Resource Centers (WRCs) in Sweden. WRCs would work to increase women's participation in regional development. Since 1998 the funding of local and regional WRCs is distributed by the Swedish Agency for Economic and Regional Growth (NUTEK). At the turn of the millennium the government's instructions to grant funding to WRC activities were changed. In addition to help increase women's participation the WRCs should now also contribute to sustainable development and gender equality within the framework of various regional programs, such as the regional growth programs (RTPs). WRCs have systematically organized innovation systems at the local, regional and national level in Sweden by linking public, private and non-profit sector and academia in a "Quattro Helix" around different topics such as new technology, culture and the service industry.

Gradually, the WRC innovation system has also expanded internationally through funding from various European Union funds. In 2006 the network WINNET Europe was formed, gathering WRCs from 21 countries. The aim of the network is to develop and implement a model for this kind of network organization comprising quality standards for efficacious actions by the WRCs. One of the main topics in this endeavour is women and new technology. In this paper we describe the internationalization process of the WRC innovation system in the light of theories of innovation system organization. Our study is part of an interactive collaboration process between the national organization of WRCs in Sweden (NRC) and a network of researchers specialized on WRCs in particular, as well as on women's entrepreneurship and innovation in general. This specific paper is developed by NRC in cooperation with Encounter AB and The Division of Gender and Innovation at Luleå University of Technology.

Since Sweden joined the European Union in 1995, local and regional resource centres for women have been active in transnational projects. A survey reveals that over 60 % of the centres had participated in one or several projects with partners from other countries (NRC 2008). The rationale for participating in these transnational projects has been manifold i.e. to get funding in order to secure the survival of the centres, to develop new approaches and

methods and to learn from women initiatives in other parts of Europe. For some centres it has been a strategy for achieving legitimacy and visibility in their own local community. WRC project proposals denied funding from local, regional and national programs in Sweden with the justification that "the idea is not innovative" has sometimes been perceived as highly innovative by different transnational EU initiatives. By linking a WRC to European networks the centre in question could attract interest from key actors in the community, such as local and regional authorities, and eventually also funding from these actors.

In parallel to the developments of WRCs in Sweden, similar processes emerged in other EU member states during the 1990s and networks between women's initiatives in different countries were strengthened. An important first step towards a European network for WRCs was a call for pilot projects in the EU programmes RECITE II and ECOS OUVERTURE, 1997/1998, funded by the European Regional Development Fund (ERDF). Some of the resources in these programmes were ear-marked for integration of women into economic life and eleven European networks promoting WRCs were selected for funding in these programmes. One of the networks supported by RECITE II 1998-2001 was ENREC (European Network of Resource Centers for Women). The network led by an Italian organisation, involved Swedish partners in the counties of Västra Götaland and Norrbotten as well as partners from Greece and Finland. ENREC aimed at creating a permanent transnational network but this objective was not reached. Instead the partnership developed a European training model for WRCs and basic material for starting up and managing centres according to the model (www.winneteurope.eu). The networks and WRCs established with the support from RECITE II and ECOS OUVERTURE was the second step towards a European network. Some of the partners involved in these networks joined forces and applied for funding from the ERDF programme Interreg III C in 2003 for a project called W.IN.NET (European Network of Women Resource Centres). W.IN.NET capitalised on experiences from six of the networks in RECITE II and from nine EU member states. Similar to ENREC, the project aimed at creating a European network of WRCs. Furthermore, the objectives in W.IN.NET were to exchange experiences in the field of local development and gender equality policies, define benchmark indicators for WRCs, local policies and gender equality, and improve approaches for supporting women in entrepreneurship and in technology as well women facing social exclusion.

The successful results in Interreg III C, where a project was transformed into a sustainable platform (i.e. WINNET Europe), increased the legitimacy and visibility for WRCs in EU. W.IN.NET is for example mentioned in the Operational Programme for Interreg IV C (European Union 2008) for the period 2007-2013 and several examples of WRC practices are highlighted in a newsletter focusing on "Gender Mainstreaming and Regional Development" from the European Commission in 2007. As a result of W.IN.NET a position paper on women and ICTs was presented for the Directorate for Information Society and Media at a seminar in Brussels, 5 April 2006 (Interreg 3C W.IN.NET project position paper on Getting into ICTs 2006). At a seminar during the Finnish EU Presidency in the autumn of 2006 WINNET Europe was asked to arrange a seminar to present the work of WRC s in the field of Women in Technology and Science. Besides W.IN.NET another WRC project initiated in Sweden that has gained high visibility is Female Entrepreneurs' Meeting in the Baltic Sea Region (FEM). The project received funding from Interreg III B Baltic Sea Region (BSR) 2004-2007 and the participating organisations came from Sweden, Finland, Norway, Estonia, Latvia, Lithuania, and Poland. Lead Partner for FEM was the Ministry of the Interior in Finland. Baltic-Russian-Swedish Resource Centre for Women in Östergötland, played a key role in the design and implementation of FEM. The project also involved NRC and regional WRCs in Skåne and Östergötland. FEM partners are now members in WINNET Europe. Thanks to a lot of effort by and co-operation between FEM and WINNET Europe partners to support governmental representatives from Sweden and Finland with information of the results of the above mentioned projects, it was possible to secure that the gender perspective was included in the Baltic Sea Programme.

Effective lobbying and participation in a broad spectrum of different EU programmes explain the successful export of the Swedish WRC model, the creation of hundreds of WRCs throughout Europe and the visibility at European level. Strategic lobbying has triggered the interest for the model also among members of the European Commission such as the Commissioner for Regional Policy. In late 2006 a dialogue started between WINNET Europe and the European Commission, and DG Regional Policy, on how to capitalise on successful WRC initiatives in the ERDF programme Interreg IV 2007-2013. The dialogue also involved the Swedish and Finnish Federations of WRCs; the Swedish Ministry of Enterprise, Energy and Communications; Nutek and participants in the FEM project such as the Finnish Ministry of Interior. This dialogue resulted in an application for funding from the Nordic Council of Ministers and some of the resources were allocated for a conference with the theme "Women's Entrepreneurship and Regional Development with a Focus on WRCs" arranged in Stockholm, October 2007. The Conference gathered 180 policy makers, WRC representatives, experts and researchers from 18 countries. One result from the conference was a European action plan for promoting women's participation in regional development, especially in fields such as entrepreneurship, innovation and ICT. After the conference, NRC and Nutek decided to invite Swedish regions to a dialogue around an application for funding from Interreg IV C and a so called Capitalisation project. Partners from the W.IN.NET and FEM projects and organisations from European regions where WRCs are not yet established were invited to participate. In January 2009 an application for a project called "Women Resource Centre Fast Track Network" (WRC FTN) was sent to Interreg IV C with the Municipality of Älvdalen as Lead Partner. This formed the basis for the project WINNET 8, being pursued during two years (2010-2011).

Having analyzed the empirical material by means of a bottom up approach we discern how the WRCs endeavours primarily can be interpreted in the light of a broad theoretical approach to the innovation system concept. Rather than engaging solely the industry and the academy, as in the narrow approach of Double Helix, they have involved actors from the state as well, as in the broader approach of Triple Helix. The role of the Swedish state and the EU institutions has in fact been crucial for the WRCs strive to get funding and access to partners abroad. However, our examination also reveals how a fourth group of actors have been central to the process of internationalisation, namely the civil sector. This sector is constituted by NGOs running their activities in a non-profit manner, thus reaching beyond the borders of commercial enterprises, political institutions and scientific academy. This encourages us to break free of the limiting conception of Triple Helix, introducing a third category of helixes: the Quattro Helix. In this kind of helix, it is not solely the commercial, political and theoretical potentials in the innovation system cooperation that are regarded to be of importance, but also the idealistic ones. The organization of a Quattro Helix innovation system by WRCs thus partly overlaps with Lundvall's notion of a broad approach to innovation systems, emphasizing the importance of people, skills, relationships and interactions as well as the role of basic research, workplace development and low technology sectors. NGOs with limited financial resources are seldom perceived as key actors in the partnerships for local and regional development in Sweden. A broader approach to innovation systems, manifested in the Quattro Helix, acknowledging the role of the civil sector, might bring about a change in the assessment of NGOs within innovation policy and regional development policy.

Paper about how a bottom-up approach deconstructs gender in innovation policy

At the conference Past, Present, Future – From Women's Studies to Post-Gender Research arranged in Umeå (Sweden), 14-17 June 2007, I presented a paper titled 'Deconstructing gender in Sweden's innovation policy'. The paper contained an analysis of how a bottom-up approach can deconstruct gender in Sweden's innovation policy. Below, the paper is summarized highlighting scope, design and main conclusions.

In the paper, I employed a bottom-up approach in order to expose how four regional networks in Sweden further women's innovation by means of the organization of innovation systems. My intention was to 1) expose their different strategies of organization in comparison to the dominant models being promoted within Sweden's innovation policy, and 2) discuss how the co-construction of gender and innovation within Sweden's innovation policy is being challenged by the work of these networks.

Innovation constitutes an emerging policy area in Sweden, even though still being integrated in the policy areas of regional development and business development. The development and diffusion of innovations are being regarded as crucial in the reconstruction of the economy to become more dynamic and knowledge based. One way in which the Swedish government is stimulating innovations is the financial support to the development of innovation systems. Such systems refer to the construction of joint platforms where different sectors of the society merge with the aim to enhance innovations in a specific area of knowledge. Specifically, the model of triple helix identifies three sectors as main participants in innovation systems: the public sector, the private sector and the academic sector. The public financial support to innovation systems are distributed by regional and national public authorities on the basis of different policy programs, where specific areas and actors are identified as premier target groups for this measure. The implementation of innovation policy in Sweden is thus characterized by a "top-down" approach, a term frequently used within the research area of policy analysis.

Defining "policy area" as a specific set of ideas and the institutional arrangements that are set up in order to implement these ideas, makes it possible to employ a "bottom-up" approach on innovation as a policy area - in contrast to the top down approach mentioned above. Instead of taking it for granted that the three political institutions identified above are the main agents in the existing platforms of innovation in Sweden, the bottom-up approach assumes that a lot of different actors might contribute to such formations, based upon a wider range of problematizations and solutions than those found in the public policy programs. Empirical investigations of innovation as a policy area by means of a bottom-up approach are thus constructed upon the active agents' own view upon their activities. In this paper, I employ a bottom-up approach in order to expose four different platforms of innovation, conducted in two different parts of Sweden: northern Norrland and Malardalen. These platforms are all run by women, each of them pursuing innovation either in male dominated and depicted "masculine" areas of activity or within women dominated and depicted "feminine" areas of activity. My intention is to discuss how the construction of gender in contemporary dominating understandings of how innovation systems and innovative processes are brought about is being challenged by these women. Specifically, I'm interested in how these women are challenging the idea that women are seldom active as innovators or incubators in male dominated or depicted "masculine" areas of activity, as well as the idea that women dominated and depicted "feminine" areas are seldom being successfully embraced by innovators or incubators. Focusing these women's different geographic and social contextualized experiences makes it possible to deconstruct gender in common concepts and hypotheses within innovation policy and innovation policy research regarding who participates, in what purpose, by which means and with what outcome.

Critique has been forwarded toward the manner in which certain actors and areas have been given priority in these policy programs, both in a Swedish context and elsewhere. Emma Resource Centre has, in a series of reports, exposed how the actors and areas being included in such policy programs tend to be the ones characterized by a domination of men as employees and entrepreneurs as well as the ones being envisioned as "masculine" on a symbolic level. This is confirmed by Megan K Blake & Susan Hanson exposing how innovation hence is valued in accordance with a dualistic construction of gender, discerning "men" and "women", as well as "feminine" and "masculine" areas of innovation, as differing in innovative capacity.

In the model of triple helix, collaboration between private companies, universities and society/policy is requested. My investigation of the actors actually being involved in the organization of innovation systems by the four networks exposes a modified strategy. All of them deliberately turn to the civil sector besides the private and public one. What the civil society actors seem to contribute with is a complementary function, securing both the survival of the network's member organizations as well as the realization of projects not fitting the organizational logic of the university or the financiers. Moreover, they are obviously important when it comes to knowledge development too, thus shaping the organizational strategies somewhat different compared to the emphasis upon universities within triple helix model. The four networks might thus be described as organizing a "quatro helix" instead of a triple helix. The four corners are in these cases occupied by private companies, public authorities, civil society actors and knowledge organizations respectively. Their understanding of how local and regional development is brought about thus relies on a strategy highlighting the importance of the civil sector on the one hand, and the function of other knowledge producing institutions than universities on the other.

At a general level, the main function of innovation systems is to enhance innovation by means of the development, diffusion and use of innovations. As I have exposed, the four networks pursue this function. However, the activities conducted by the networks are challenging the co-construction of gender and innovation noticeable in Sweden's innovation policy. On the one hand, they are challenging the comprehensive understanding of innovation as an activity primarily being pursued by men, by exposing how some women are actively developing and promoting innovations. The activity of the SAGA network members, developing a system for network connectivity, thereto offers an example of how some women are innovators within male dominated or depicted "masculine" areas of activity. The most valued professions on the area of ICT are all dominated by men and ICT is also typically depicted as masculine, e.g. in connection to the computer nerd or the technical specialist being identified by Wajcman. On the other hand, since at least three of the four networks primarily organize their innovation systems within women dominated and/or depicted "feminine" areas of activity, they are challenging the understanding of these areas as seldom being successfully embraced by innovators or incubators. Focusing how the organization of innovation systems is being brought about in practice by these networks thus constitutes a deconstruction of gender and innovation simultaneously, suggesting that there is no ground for discerning separated gender

categories or for estimating innovations differently, neither when it comes to the practice of innovation, nor in regard to different areas of innovation. This deconstruction challenges the dominating models within Sweden's innovation policy regarding who participates in the organization of innovation systems, in what purpose, by which strategies and with what outcomes.

Paper about clusters and innovation systems as gendered tools for regional development At the 14th Nordic Conference on Small Business Research arranged in Stockholm (Sweden), May 11-13 2006, I presented a paper titled 'Clusters and innovation systems as tools for regional development in a small business and gender perspective – experiences from northern Sweden'. The paper contained an analysis of which aspects of gender theory that have been regarded as useful by networks promoting women's entrepreneurship and innovation. Below, the paper is summarized highlighting scope, design and main conclusions.

As the concepts of 'clusters' and 'innovation systems' were introduced in the Swedish politics for regional development in the beginning of the 21st century there was little known about how these concepts were related to innovation and growth in a small business context. Neither was there an abundance of experiences concerning whether these concepts were applicable to other branches or sectors than manufacturing industries and industries based on new technology (biotech, telecom, geographical information systems GIS etc.). In the municipality of Vilhelmina with its 8,000 inhabitants - situated within the County of Västerbotten in northern Sweden – these facts became evident as the Regional agreement for economic growth (Regionala tillväxtavtalet) was launched for the period 2004-2007. The agreement proposed funding for the development of 'clusters' and 'innovation systems' mainly within branches where the labour force and entrepreneurs were mostly constituted by men (for example mining, forestry, car testing, GIS and bio technology). As Vilhelmina was fighting the flight of women from the municipality, and was in need of funding for the development of both the private and public service sector (where women mainly chose to work and conduct entrepreneurship), this Agreement at the regional level constituted an obstacle.

This obstacle was given attention by Emma Resource Centre - a local non-profit organization for women in Vilhelmina – as they pleaded funding for a project called "Clusters in a gender perspective". The application was granted by the County Administration of Västerbotten, the Swedish Agency for Economic and Regional Growth (NUTEK) and the Municipality of Vilhelmina, and later on by the European Union's Structural Funds and ALMI Västerbotten. This enabled Emma Resource Centre to pursue the project during the period 2002-2005. Within the frames of the granted project, Emma Resource Centre gathered information about strategies of development used within small businesses in the private service sector (for example tourism, health care and local food processing). The findings were then analyzed in relation to regional and national funding of 'clusters' and 'innovation systems', aiming to inspire authorities on local, regional and national level to include the development of small businesses in the service sector in policies of regional development through 'clusters' and 'innovation systems'. Emma Resource Centre also applied their gathered knowledge in a development project where a mining cluster and an embryonic GIS innovation system - both situated in the western parts of the County of Västerbotten - took part. One of the topics in this paper is, hence, a detailed description of these findings, analysis and experiences and to relate them to gender theory.

During the project, knowledge of theories and practices of 'clusters' and 'innovation systems' in a small business and gender perspective were produced and communicated through written

reports, seminars and conferences - with participants from small businesses; non-profit organizations; universities; and local, regional and national authorities. Contact was established with Luleå University of Technology, where research was conducted on the interaction between women's local initiatives to entrepreneurial innovation processes and authorities in regional development. Later on, contact was also established with researchers of entrepreneurship and regional development at Mälardalen University. These contacts resulted in a joint application within the program 'Gender perspective on innovation systems and equality' led by the Swedish Governmental Agency for Innovation Systems (VINNOVA). Thanks to funding from both Vinnova and the European Union's Structural Funds, the project Lyftet (apps. The Raise) was conducted 2005-2008. Within this project, experiences from women's local and regional initiatives to innovation processes and entrepreneurship within the service sector, in the Counties of Norrbotten, Västerbotten (which are situated in the north of Sweden), Västmanland and Södermanland (which are situated in the mid parts of Sweden), are being gathered by the four researchers involved. This joint material was then analyzed in relation to those regional and national programs for 'clusters' and 'innovation systems' that were applied in the four Counties.

This joint project Lyftet rests upon the theoretical and practical knowledge of 'clusters' and 'innovation systems' in a small business and gender perspective that was accumulated within Emma Resource Centre. A detailed description of this development of theory and practice is the second topic in this paper. I will here give a brief account of this development. The starting point of the project run by Emma Resource Centre was illustrated by the title of the project - "Clusters in a gender perspective". Eventually, this title was expanded to also include 'innovation systems' and a small businesses perspective, as these aspects were found to be closely linked to the initial ones. The study object was initially women as entrepreneurs within the branch of tourism. As time went by, this was complemented by other branches in the private service sector - as health care and local food processing. In addition to this, the regional and national policies for development of 'clusters' and 'innovation systems' became yet another study object. These changes were a result of the scientific theories applied in the project. Emma Resource Centre found that the topic of deliberate long term development of the private service sector was closely linked to theories of power and normativity. This was evident as the established policies of regional development had adopted a perspective according to which the economic activity taking place in branches dominated by men was given great importance, and the economic activity taking place in branches dominated by women was given less. A situation which excluded the latter from funding. Among others, Katarina Pettersson and Carol Bacchi provided useful research and theories on this area.

Paper about Women's participation in European regional development

At the 6^{th} European Gender Research Conference arranged in Lodz (Poland), 31 August – 3 September 2006, I presented a paper titled 'Innovation system and cluster in Northern Sweden – Women's participation in European regional development'. The paper contained an analysis of which aspects of gender theory that have been regarded as useful by networks promoting women's entrepreneurship and innovation. Below, the paper is summarized highlighting scope, design and main conclusions.

'Gender mainstreaming' constitutes an emphasized concern within the European structural funds and Swedish policy for regional development. Women and men's equal participation are to be thoroughly integrated in all policy areas. However, this aim is far from being fulfilled within the actual policy programs. By means of an action research approach, aiming at a close interaction between researcher and actors, this paper provides an analysis of which

aspects of gender theory that have been regarded as useful by two civil society actors in northern Sweden – Emma Resource Centre and Sirges Sámi village - in their processes of promoting women's participation in regional development policy in general, and public programs promoting 'clusters' and 'innovation systems' in particular. Moreover, the objective is to analyse how these choices of theory were connected to action aiming at actual change in each process. An account of contemporary gender theory exposes three main categories: 'gender system', post modernism and 'doing gender', each contributing differently to the aspects of structure and change. In their projects, both actors tried to combine a structural approach with aspects of change, thus opening up for variations within gender relations over time and space. The analysis exposes that both actors seem to have managed to bridge the theoretical gap between structure and change. In practice, both succeeded in their ambitions to initiate processes of actual change on the basis of their theoretical analyses. By paying attention to the actors own formulation of problems, analyses etc 'robust knowledge' is achieved.

Chapter about gender in regional innovation systems

In an international anthology about regional innovation systems edited by Annika Ricke, Henry Etzkowitz and Staffan Laestadius, I contributed with a chapter titled 'Gender in regional innovation systems – why it matters and how it is mainstreamed in the Swedish case'. The chapter focused the topic of gender in regional innovation systems (RISs), which was explored by asking why gender matters and how it is mainstreamed in innovation policy programs targeting RIS's. Below, the paper is summarized highlighting scope, design and main conclusions.

In this chapter, the topic of gender in RIS is explored by asking why gender matters and how it is mainstreamed in innovation policy programs targeting RIS's. The Swedish case is selected as the empirical example since it can be regarded as a forerunner in its efforts to implement a gender perspective in innovation policy, innovation research and RIS practices. The empirical data comprises two policy programs managed by the Swedish Governmental Agency for Innovation Systems (VINNOVA) - BEGINN and VINNVÄXT - both supporting 'gender mainstreaming' in RIS's. Guided by the main research question if Swedish innovation policy in its official documents has adhered to the theory on 'doing gender' - where gender is seen as continuously constructed and where the contraposition between change and resistance is addressed - these two programs are analyzed concerning their incentives and modes of gender integration.

The results show that two of the incentives for gender integration advocated by VINNOVA are congruent with 'doing gender', namely the ones of 'policy incentives' and 'innovation incentives', in that they highlight the promotion of men and male as the norm in innovation policy and expose whether 'gender mainstreaming' truly has been implemented in all policy areas or not. The 'recruitment incentives' do not adhere to this theory to the same extent in their ambition to increase the number of women in men dominated industries. Concerning the modes of gender integration maintained by VINNOVA, it is mainly the strategies of 'agenda setting' and 'displacement' that accord with 'doing gender' in that they challenge prevalent policy norms by bridging dualistic gender constructions. The analysis reveals that VINNOVA's support to critical examinations of the innovation system concept via BEGINN has a potential to transform and reorient existing policy paradigms, while their encouragement of gender equality work in existing RIS's via VINNVÄXT imposes 'gender mainstreaming' rather as a way to achieve other policy goals. It is concluded, however, that both of these measures could be transformative when implemented side by side.