

# The role of NGO's in supporting women's entrepreneurship: A study of Quadruple Helix innovation systems in the Baltic Sea region

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## Abstract

A gender gap in entrepreneurship and innovation can be discerned across Europe – often portrayed as a statistical pattern showing differences in prevalence of entrepreneurial and innovative activities between the categories of men and women. The gender gap can be traced back to the general perceptions of gender in society, where entrepreneurial venturing and innovation work are culturally defined as masculine activities. A situation in which dominating policy models for regional entrepreneurship and innovation – such as the Triple Helix model – sustain the gender gap by being blind to gender issues imply both practical and theoretical challenges for critical management research. In this paper, we intend to analyse the gendered norms and consequences of dominating innovation models, such as the Triple Helix, and to identify roles and challenges of NGO's in the alternative conceptualization of Quadruple Helix.

Based on an exploratory case study of an EU-financed project intentionally set up as a Quadruple Helix innovation system, we find that NGOs may fill four roles in bridging the gender gap: (1) collaborative platforms for women-led SMEs, (2) legitimating and linking women-led SMEs to governmental and academic actors, (3) developing competences and process innovations related to entrepreneurial venturing outside traditional Triple Helix constellations, and (4) carrying individual and societal aspects of entrepreneuring.

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## 1. Introduction

Innovation and entrepreneurship is increasingly regarded as an indispensable factor behind growth and societal development, by both researchers and policy makers (Lindberg, 2010). Rather than relying upon corporate managers and public sector leaders to deliver growth, innovation, jobs and prosperity, solutions are to be found in the activities of thrifty entrepreneurs. Much of the strong legitimacy of entrepreneurship in modern society rest upon the general notion of entrepreneurs as “good” (but not necessarily “nice”) guys that put all their energies into innovative actions that in the end will mean prosperity and development for all of us (Ogbor, 2000; Sørensen, 2008). This notion is heavily supported by governmental and societal discourses, which tend to present entrepreneurship as indispensable – and often threatened - in society (Perren and Jennings, 2005).

At the same time, research has repeatedly shown that entrepreneurship and innovation is not equally available for everyone (Lindberg, 2010). If entrepreneurship and innovation research indeed should take explicit ideological stances concerning what is good and bad, what is desirable and not, instead of hiding behind the façade of being a neutral, functionalist and “un-political science”, the field would be opened up for several important lines of critical inquiry (Ogbor, 2000, Grant and Perren, 2002, Perren and Jennings, 2005, Jones and Spicer, 2009; Lindgren and Packendorff, 2009). As innovation and entrepreneurship are seen as desired phenomena in society, they can also be analysed as inclusive/exclusive constructs in the ongoing production of power relations, identities and inequalities.

In this paper, we build on a long tradition of critical gender research as applied to entrepreneurship and innovation (Holmquist & Sundin 2002, Ahl 2006, Berglund 2007, Lindberg 2010). A ‘gender gap’ can be discerned across Europe – often portrayed as a statistical pattern showing differences in prevalence of entrepreneurial and innovative activities between the categories of men and women (Allen et al, 2008). The gender gap can be traced back to the general perceptions of gender in society, where entrepreneurial venturing and innovation work are culturally defined as masculine activities (Fältholm et al, 2010; Ranga & Etzkowitz, 2010). Moreover, the expectations on entrepreneurship and innovation from policymakers are

emphasizing high-tech, high-growth, individualist ventures – i.e. traditional masculine ways of ‘doing entrepreneurship’ (Lindgren & Packendorff 2009). Behind the statistical gender gap in entrepreneurship, there is thus a cultural gender gap. Earlier research has shown how the concepts around entrepreneurship are gender labelled (Ahl 2006, Calás et al, 2009), which has consequences when it comes to expectations and practices regarding women and men’s entrepreneurship and how it is regarded and rewarded in society.

This cultural gender gap of entrepreneurship also permeates societal models for supporting entrepreneurship and innovation. During the last decade, the role of collaboration between different sectors of society in supporting and catalyzing entrepreneurship and innovation has been emphasized through the introduction of the Triple Helix model (Leydesdorff & Etzkowitz, 1998; Etzkowitz & Leydesdorff 2000; Nuur et al, 2009). In this model, successful entrepreneurial activities are seen as dependent upon the effective interplay between private businesses, governmental agencies and universities. At the same time as this model is increasingly used as a conceptual framework in supporting entrepreneurship and innovation in several Western countries (cf. Fagerberg et al 2005, Eklund 2007, Jensen & Trägårdh, 2004; Lavén 2008), there is also research indicating that the ‘gender gap’ has neither been addressed nor reduced. Triple Helix innovation systems tend to emphasise and sustain traditional masculine notions of entrepreneurship and innovation – not least since publicly supported Triple Helix initiatives also tend to be situated within male-dominated settings of networks and industries (Pettersson, 2007; Lindberg, 2010).

A situation in which dominating policy models for entrepreneurship and innovation sustain the gender gap by being blind to gender issues imply both practical and theoretical challenges for critical management research. From a practical viewpoint, the continued prioritisation of men’s business venturing in societal innovation programmes is problematic both from democratic and efficiency-based perspectives. Both the fairness and the rationality behind policies that are blind to certain parts of the business life can be questioned. From a theoretical viewpoint, there is a need to critically investigate the norms and consequences of dominating policy models such as Triple Helix from a gender perspective and to offer alternative conceptualisations (Jensen & Trägårdh, 2004). Guided by an ideal of critical

performativity – involving active and subversive intervention into managerial practices and discourses (cf. Spicer et al 2009) – we intend to analyse the norms and consequences of current models. In this, we are inspired by the existing critical theoretical tradition of gender and entrepreneurship (cf. Ahl 2006, Holmquist & Sundin 2002, Calás et al, 2009; Lindgren & Packendorff, 2009). Hence, we aspire to analyse how the gender gap in innovation and entrepreneurship can be bridged. We will do this by studying the practical implementation of a project promoting regional Quadruple Helix innovation systems in the Baltic Sea region, striving to counteract the gender blindness of dominating policy models and proposing that Non-Governmental Organizations (NGOs) play a central role in promoting gender-inclusive entrepreneurship and innovation.

In the recent debate, an extension of the Triple Helix model into a Quadruple Helix model – including NGOs besides the industry, state and academy – has been proposed to overcome the problem of marginalisation in innovation policies (Carayannis & Campbell 2009, 2010; Lindberg 2010). These proposals have materialised into a number of pilot projects in which NGOs are intentionally involved in the organisation of innovation systems. The advocates of Quadruple Helix claim that the gender gap in entrepreneurship and innovation might be bridged if marginalised actors and areas are linked to each other and given better access to governmental and academic resources (Danilda et al, 2009). This process of inclusion is suggested to be enhanced by intermediate NGO's. With inspiration from these projects, we intend to analyse the gendered norms and consequences of dominating innovation models, such as the Triple Helix, and to identify roles and challenges of NGO's in the alternative conceptualization of Quadruple Helix.

The paper is organized as follows. First, we discuss the gender gap in entrepreneurship and identify several aspects of entrepreneurship as a masculine construction. Then, the theoretical development from Triple Helix to Quadruple Helix innovation system models is described – identifying the roles of NGOs as central in understanding how gender gaps can be bridged in innovation system work. Then, an in-depth exploratory case study of the Quadruple Helix Central Baltic is presented along a number of themes related to the relations, the roles and the challenges of Quadruple Helix settings. The paper ends by a concluding discussion on

the possibilities of bridging the gender gap in entrepreneurship through the inclusion of NGOs in innovation system models.

## **2. The gender gap of entrepreneurship and innovation**

According to the theoretical stream of 'doing gender', gender can be understood as a constitutive part of organizational processes and organizations (Acker, 1999). Gender is then regarded as an ongoing activity and interaction performed among and between women and men. This perspective relates everyday practices and activities to an institutional and structural level (West & Zimmermann, 1987; Fenstermaker & West, 2002; Gunnarsson et al, 2003; Wahl et al 2011). At a structural level, this leads not only to segregation – e.g. on the labour market – but also to hierarchies where areas associated to 'men' and 'masculinity' often are ascribed higher value and status – manifested e.g. by higher wages and faster careers. In practice, this implies an uneven distribution of power and resources between women and men – not least in areas such as entrepreneurship and innovation that tend to be promoted as desirable and admirable in society (Calás et al, 2009; Fältholm et al, 2010). This ongoing construction of segregating and hierarchical gender categories is present in public promotion of innovation in Swedish policy programs targeting innovation systems and clusters (Danilda & Granat Thorslund, 2011). In these policy programs, gender is done when distinguishing different actors and branches of industry and ascribing them different value in relation to innovation and growth (Lindberg 2007, 2010).

The aspect of change is principal from a gender perspective, as the focus on everyday practices underlines the possibility of doing things differently (Gunnarsson et al 2003). It is not inevitable that the doing of gender ends up in segregating and hierarchical patterns. It is quite possible to act in ways that break this trend, opening up for a more dynamic and nuanced perception of the world. Concerning public promotion of joint action networks for innovation, such a change in the doing of gender could imply that sites of innovation are decentred "from singular persons, places and things to multiple acts of everyday activity" (Suchman 2007, p 1).

The statistical gender gap of entrepreneurship in the European Union, defined as the difference between the number of firms run by women and men divided by the total number of firms, has been relatively stable around 47% during past years (Lotti 2009). The gap can be traced back to certain constructions of masculinity and femininity, closely related to entrepreneurship and innovation (cf. Maxfield, 2005; Holmquist & Sundin, 2002; Lindberg, 2010). The following aspects of the gender gap in entrepreneurship and innovation have been highlighted in earlier research studies:

- Perceived necessity of entrepreneurship more important for women than for men. Can imply that women to a larger extent will refrain from starting businesses unless perceived as necessary for survival (Sundin & Holmquist, 1989).
- Entrepreneurship as a masculine activity in masculine sectors. Nowadays, the entrepreneur is constructed in society as the saviour of the modern economy. The role models presented in mass media are often tough, decisive, growth-oriented billionaires, working within material- and technology-intensive sectors. Women, who already by education and employment are more likely to be found in other sectors and expecting their businesses to be a stable source of modest income, may feel estranged to the concept and stereotypes of entrepreneurship (Calás et al, 2009).
- Less usage of venture capital among women. Based in a mutual reluctance of women and financiers to engage in venture capital negotiations. Many women as entrepreneurs do not fit into the stereotype of the masculine entrepreneur expected by the venture capital providers, and they also expect to be seen as deviating – as women and also often as representatives of less interesting sectors of the economy (Orser & Foster 1994, Carter & Rosa 1998). According to Lewis (2006) female entrepreneurs might even try to conceal or avoid issues deviating from established masculine norms in order to gain acceptance as ‘real entrepreneurs’.
- Entrepreneurship as integrated with family life. Women entrepreneurs are part of cultural norms emphasizing women as responsible for household matters. This means that it is hard not to see the possibilities of integrating family and business life as a main

issue in entrepreneurship (Sundin & Holmquist 1989, Lindgren 2002; Lindgren & Packendorff, 2008).

- Smaller and more social networks of women entrepreneurs. The importance of social networks and a connective yet renewing relation to local/cultural contexts has since long been emphasized in entrepreneurship research (Lindgren and Packendorff, 2006). There are indications that women often have smaller networks consisting of closer relations, and that this may be problematic in an economy where large-scale networking is important for the possibilities of perceiving opportunities and collaborating with knowledgeable actors (Fenwick 2003, Doyle & Young 2001).

### **3. From Triple Helix to Quadruple Helix – Towards the inclusion of NGOs into innovation system models**

The concepts of Innovation Systems and Triple Helix reflect the fact that innovations increasingly have come to be regarded as dependent on a surrounding system of institutional and cultural norms. That is to say that innovation is believed to occur through interaction networks supported by laws, rules, standards, etc. In research, this systemic view on innovation and innovation policies was widely adopted at the end of the 1980s and early 1990s (Eklund 2007; Nuur et al, 2009). However, it is not primarily a broad system approach that has been applied in research and policy. Instead, a narrow view on the innovation system concept has dominated, focusing research-based innovation, formal technical infrastructure and market-driven research (Lundvall, 1992; Freeman, 2002).

According to Lavén (2008), the innovation system concept originally built upon a Double Helix emphasized the interplay between academy and industry, ascribing the state a minor role in the development of innovations. The Triple Helix concept was introduced as a critique of the Innovation System concept by Etzkowitz & Leydesdorff (2000), highlighting the government as an important actor in joint action networks promoting innovation, besides the academy and industry.

As the innovation system concept has increasingly been applied to the regional rather than national level (Nuur et al, 2009), the view of the governmental actor has changed and widened. Analyses of empirical data concerning the formation of joint action networks in Sweden promoting women's entrepreneurship and innovation expose how these can be interpreted in the light of a broad approach to the innovation system concept (Lindberg 2007, 2010, Danilda et al 2009). Rather than engaging solely the industry and the academy, as in the narrow approach of Double Helix, they have involved actors central, regional and local government as well, as in the broader approach of Triple Helix.

However, these examinations also reveal how a fourth group of actors have been central in the formation of regional joint action networks, namely the non-profit sector (Danilda et al, 2009; Lindberg, 2010). 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 research. What these civil society actors seem to contribute is a complementary function, securing both the survival of the network's member organizations as well as the realisation of projects not fitting the organizational logic of the university or the public financiers. Moreover, the civil society actors are important in the knowledge development, shaping the organisational strategies somewhat differently compared to the emphasis upon universities within the Triple Helix model. This encourages a further development of the limiting conception of Triple Helix, introducing the Quadruple Helix.

The Quadruple Helix concept can be found in several recent academic publications, but with different emphasis. Carayannis & Campbell (2009, 2010) suggest that the fourth helix is the societal elite of well-educated, well-informed consumers that participate in innovation systems by being active, demanding and imaginative. A similar emphasis can be found in Arnkil et al (2010) and Galbraith et al (2008) who claim that the user of complex ICT systems is actually also a co-developer in the modern world of open source innovation. The common denominator of these contributions is that they basically regard the Triple Helix model as well-functioning, but blind to the role of the active "prosumer" (Tapscott and Williams, 2007) that is an integral part of modern technological development.

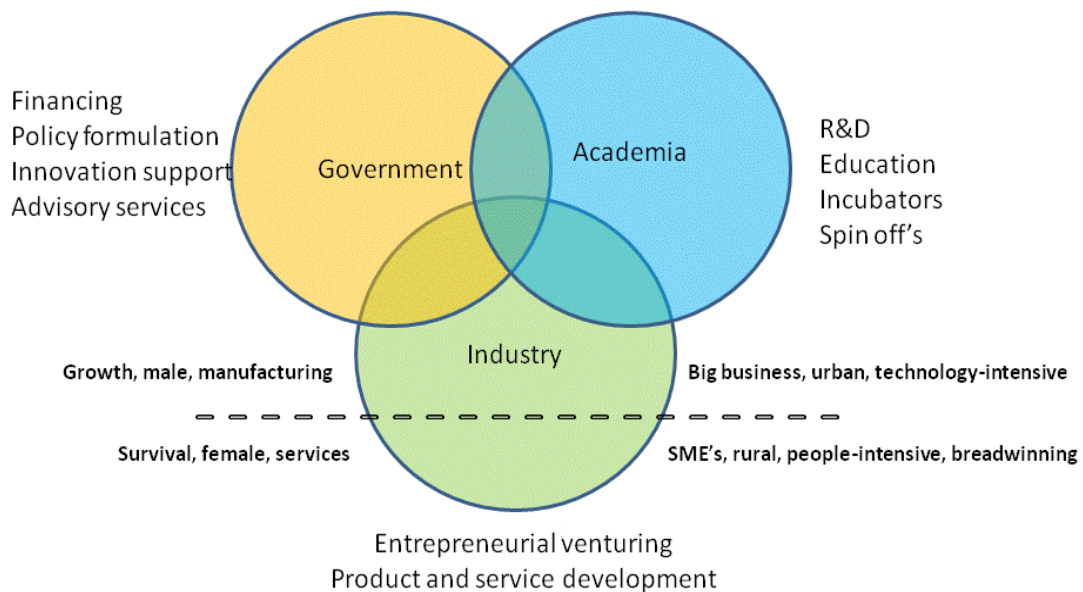


From their study of two cases of structural change in traditional industrial regions, Jensen & Trägårdh (2004) claim that Triple Helix models tend to work less successfully if applied to weak and declining regions, due to simplistic solutions, ill-defined problems, and blurred actor roles. They describe the Triple Helix model as blind to the conditions of contracting economies, as merely a rhetorical construct in the absence of active government and prestigious universities. Their proposed solution is to bring in civil society into such action programmes, thereby creating Quadruple Helix innovation systems.

Another blindness of the Triple Helix model has been revealed by Lindberg (2007, 2010), Danilda et al (2009) and Danilda & Granat Thorslund (2011), namely the gender blindness. In their works, the fourth pillar of Quadruple Helix is not only related to NGOs in general, but also to women's organisations in particular. Women's organisations have persistently been ignored in policies promoting innovation systems in Sweden. The organisations promoting women's entrepreneurship and innovation often belong to the category of Women Resource Centres (WRCs), many of which are organised as – or involving – NGOs. Such centres were established all over Sweden as a result of the Swedish government initiating public funds for this purpose. The aim of the public funding of WRCs was initially to increase women's participation in regional development policy development and implementation. Later, the aim was reformulated to attain gender equality in regional growth policies by highlighting women's life circumstances and by increasing women's influence. The WRCs in Sweden have operated with a double strategy of support and counselling to individual women and strategic actions intended to evoke structural change in regional growth policies. WRCs have thus served to bridge the gender gap of entrepreneurship and innovation. Existing research depict how WRCs systematically have organised themselves at the local, regional and national level in Sweden by linking public, private and non-profit sector and academia around different topics such as entrepreneurship, labour market participation, new technologies (e.g. ICTs), services and creative industries (cf. Lindberg 2011). WRCs have also been established throughout Europe, coordinated by the joint association Winnet Europe (Danilda et al 2009).

Our exploration of the Quadruple Helix model is thus based in a critique of the discriminatory effects of the dominating innovation policy models – i.e. that they neglect

gender as a societal structure and as a result tend to sustain the traditional masculine dominance in innovation and entrepreneurship (Fältholm et al, 2010). As exposed by Lindberg (2010), the major part of publicly promoted innovation systems and Triple Helix constellations in Sweden relates to actors and areas in a masculine, industrial, high tech setting. The partially blind Triple Helix model is illustrated in Illustration 1.



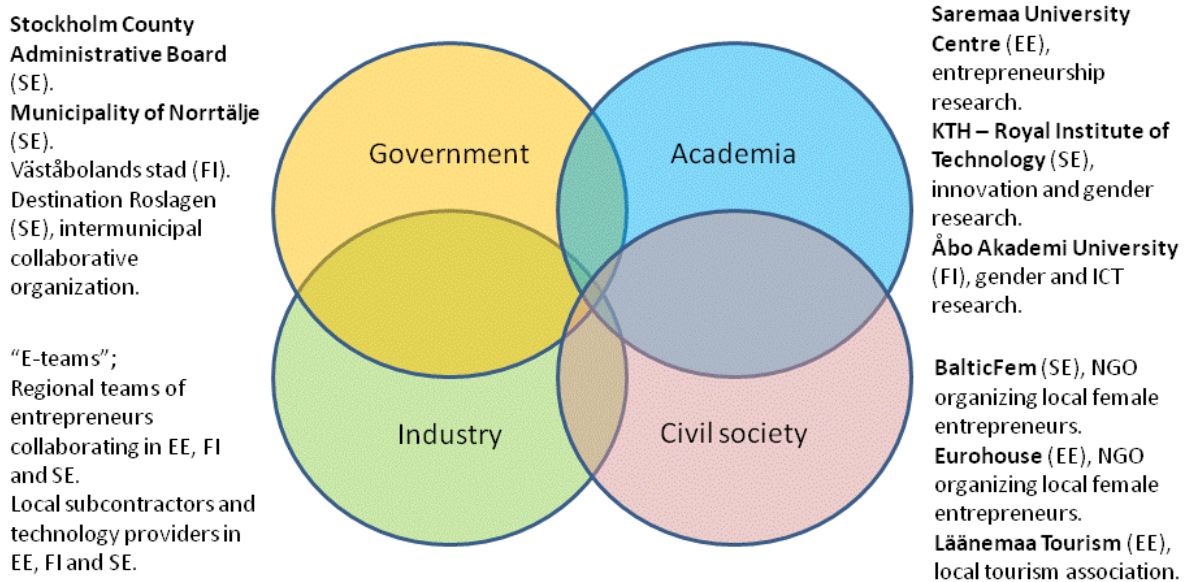
*Illustration 1: The partially blind Triple Helix model*

In our conceptualisation of the Quadruple Helix, we thus relate to the view held by Afonso et al (2010), Delman & Madesen (2007), Jensen & Trägårdh, 2004, and McGregor et al (2010) where the fourth helix consists of non-governmental organizations. In the Quadruple Helix model, it is not only the commercial, political and theoretical parts of innovation systems that are regarded to be of interest, but also the non-profit aspects. In its multitude of actors, areas and aspects, the Quadruple Helix model partly overlaps with Lundvall's (1992) notion of a broad approach to

innovation systems, emphasising the importance of people, skills, relationships and interactions besides the importance 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 growth in Sweden (Lindberg, 2010). A broader approach to innovation systems, as e.g. manifested by the Quadruple Helix, acknowledges the important role of civil society and the non-profit sector and might bring about a change in the view of the contribution of NGOs within regional growth policies and innovation policies.

#### **4. Empirical data: The Quadruple Helix Central Baltic project**

The empirical data in this paper was generated in interviews and seminars in the *Quadruple Helix Central Baltic* project, running 2009-2011 and involving eight partners from three countries: Estonia, Finland and Sweden. The project is funded by the European Union Central Baltic INTERREG IV-A programme. Intentionally set up as a Quadruple Helix constellation, the project focuses on gender equality, entrepreneurship and ICT innovations – inviting family- or women owned small tourism businesses in three Baltic archipelagos to participate in an interactive development of ICT-based business support systems. The project title, *Quadruple Helix Central Baltic*, derives from the working model where four sectors of society – i.e. public authorities, researchers, entrepreneurs and civil society actors – join forces in order to strengthen the competitiveness of the central Baltic Sea area. The civil society is here defined as consisting of NGOs, consumers and citizens. The Quadruple Helix model is especially suitable for development of the tourism sector. This is since the customers often are active in designing their own services and since the sector is dependent on the "local community" to great extent.



*Illustration 2: The Quadruple Helix Central Baltic project. Formal project partners in bold. EE, FI and SE are the official European Union acronyms for Estonia, Finland and Sweden.*

According to the project plan, *Quadruple Helix Central Baltic* experiments with mobile technologies to promote collaboration across borders within the tourism industry. The overall aim of the project is to stimulate clusters in the tourist sector alongside development of innovation support measures and implementation of methodologies for gender mainstreaming in cluster processes. Activities targeting entrepreneurs in the tourist sector is thus combined with activities targeting regional partnerships, tourism and business promoters as well as decision makers. Entrepreneurship and innovation in the tourist sector is to be promoted by the project with a specific focus on micro enterprises (0-10 employees) and women-led businesses. Different mobile technology applications for the tourist sector should be further developed within the project, acknowledging the needs expressed by the entrepreneurs,

innovators and end users. The project seeks to answer two questions: How can entrepreneurship, innovation and clusters be managed in a more gender equal way? By doing so, what can be gained in terms of development, prosperity and innovation?

Interactions between the four helices in the project are based on pre-conceived notions of what each helix could contribute to achieve project targets. As the practicalities of the Triple Helix model are well documented in literature, the contributions of each of these three helices have been specified from the start. Public sector organisations are expected to contribute with financial resources, policy making, innovation system support and business advisory services. The academic sector can provide both technologies related to products and services (in this case ICT-based solutions to increase the visibility of tourism firms to their customers), and knowledge on innovation systems, business clusters and other forms of collaborative practices. Academia may also provide training and education, as well as business incubators and research spin-off:s. The small firms will run and develop their businesses, using the support structures provided by the two first helices. By introducing the civil sector in the guise of NGO's, the project aim at improving the relations between the other helices and establish regional and transnational business collaborations, such as alliances, co-branded destination services, and industry clusters.

Below, we analyse empirical data based on an ongoing process study of the interactions in the *Quadruple Helix Central Baltic* project. The data was collected by two of the authors of this paper through semi-structured interviews, participant observation and dialogue seminars. In the dialogue seminars, representatives from all four sectors of the Quadruple Helix constellations participated. While the interviews aimed at understanding how individual actors worked on a daily basis and perceived their relations to others, the dialogue seminars were intended to bring out both shared and diverging interpretations between the actors. We also participated in project partner meetings as well as in workshops where the actors undertook joint business development – for example by collaborating on a co-branded tourist trail supported by mobile ICT applications. Interviews were recorded and transcribed, dialogue seminars documented through protocols, and meetings through protocols and field notes.

The empirical research questions relating to this paper were related to the possibilities and challenges involved in bridging the gender gap in entrepreneurship and innovation through a Quadruple Helix approach –with a focus on what the fourth helix, the NGOs, could contribute. These possibilities and challenges were summarised from interview and dialogue seminar data explicitly aimed at understanding the relations between different helix actors and the relevance of NGOs in improving these relations.

Concerning the relations between the actors in the project, the partial blindness of Government and Academia in relation to small, female-led businesses was a common theme. Most relations between government actors and small businesses had developed on local levels, but were characterised as incomplete and often missing the point. Most interactions related to issues of inspection and compliance, and the business owners found it hard to come into contact with business advisory services and to navigate between multiple contact points. They also made repeated claims that civil servants did not understand the conditions for running small businesses very well, as they tended to think of private companies in the same way as of their own organisations – stable, resourceful, well-staffed. Local government actors found it difficult to reach female business owners as they were often outside established networks such as Rotary Clubs and in general not spending much time away from home (where their businesses were usually located). They also tended to focus on a few large enterprises rather than many small ones.

Similar descriptions were given on the relation between small businesses and Academia. Interaction with universities and research institutes were seen as very time consuming, and the small business owners found it very hard to come into contact with the right experts due to the universities' inability to set up well-functioning contact points. Universities were not often interested in the problems of small businesses unless they concerned advanced technological matters, and the costs of buying research were found to be far beyond what any small (or medium-sized) business could ever afford. A common experience from both business owners and university staff was that small businesses often went to the wrong place – in most of the cases they just needed access to generic knowledge or simple mappings of market trends that

could preferably be offered by high school teachers or local consultants. Quite often, the two actor categories tended to speak different languages and to ask the wrong questions.

Concerning the relations in between the category of small businesses, there were some differences between the three countries. In the Swedish E-teams, they had the experience that cooperation was a good way to increase the profitability of all involved forms – the problem was to find the time and resources to spend on collaborative projects and alliance building. The Estonian actors understood it in a different way: they looked upon other firms as competitors and rivals, and on their own knowledge and information as something to be kept secret rather than shared. In general, small business owners were still interested in everything from study visits to long-term collaborations, but were unsure about how to start, what the best practices of collaboration were, and how to find the best potential partners. Notions of trust and common values were always present in all collaborations, and they related several accounts on the reluctance to let additional firms into established collaborative arrangements.

## **5. Discussion: Bridging the gender gap in Quadruple Helix constellation**

From the empirical data, we could thus discern several aspects related to the role of the NGOs for promoting women's entrepreneurship and innovation in the studied project – both in terms of how NGO staff perceived themselves and in terms of what expectations and challenges that were laid upon them. These aspects are summarised in Table 1.

<b>Bridging role of NGOs</b>	<b>Bridging activities</b>	<b>Bridging challenges and obstacles</b>
<b>Collaborative platforms</b>	Non-hierarchical networking, business collaboration nodes, cluster incubators, arena for trustful communication and information exchange, carrier of common goals and values.	Short-term financing despite long-term needs. Difficult trade-off for individual business owners between collaborating and running their own firm.
<b>Legitimizing and linking</b>	Promoting gender mainstreaming in legislation and business support services. Linking small businesses to authorities and academic institutions.	Questioned legitimacy due to informal practices and being 'womens' organizations'. Seen as competing with governmental structures. Lack of local legitimacy. Problems of creating linkages to academic organizations.
<b>Competence development and process innovations</b>	Competence development and process innovations related to firm categories usually excluded in Triple Helix systems.	Innovations not directly transformable into commercial products and services not valued by other helices.
<b>Carrying individual and societal dimensions</b>	Promoting bifocal approaches emphasising gender change as both individual and structural.	Individual and structural aspects of womens' entrepreneurship seen as controversial and irrelevant in business communities.

*Table 1: Bridging roles, activities and challenges of NGOs in Quadruple Helix innovation systems.*

First, the involved NGOs had a clear role as *collaborative platforms* for women as entrepreneurs. They were seen as arenas for non-hierarchical networking and business collaborations between individuals, projects and firms. That also implies that they could serve as 'cluster incubators' where systemic patterns of collaboration and competition can emerge over time. The core aspects of being collaborative platforms was the emphasis on core values such as trust, gender equality and open information-sharing, and having a common cause and agenda. Many small business owners said that they would never spend time networking unless they could see any potential future benefits.



Second, the NGOs also have the role of *legitimizing and linking* small businesses led by women to the other helixes. For example, they may affect the formulation of governmental policies in the direction of gender mainstreaming, and connect small businesses to academic research and education. Being less formalized they were seen as able to handle different linkages in a pragmatic manner, to give voice to marginalized categories of entrepreneurs and firms in non-traditional industries, non-traditional sectors, non-urban areas and with atypical sizes and growth ambitions.

Third, NGOs tend to *develop competences and process innovations* related to entrepreneurial venturing outside traditional Triple Helix constellations – becoming platforms for developing knowledge on, e.g., women’s entrepreneurship, solo venturing, rural entrepreneurship and small-scale service production. Based on this knowledge they may also become arenas for developing effective procedures of supporting entrepreneurs, collaborative practices and firms usually not considered in dominating societal models – e.g. related to business advisory services or practical cluster building.

Fourth, NGOs were also expected to *carry the dimensions of individuals and societal structures* – such as the link between gender structures and conditions for individual women pursuing entrepreneurial ambitions – often neglected in traditional Triple Helix constellations focusing on firms and projects. Thereby, they could promote bifocal approaches to supporting women entrepreneurs, inducing change both on the individual and structural levels instead of on the former level only. The ability to combine professional business thinking with supporting local development and pursuing ideological agendas appeared as central to NGO work in this area.

In the empirical data, we also find several examples of challenges and resistance that NGOs become faced with in pursuing the abovementioned roles in the continued attempts at bridging the gender and entrepreneurship gap. In the role of being collaborative platforms they continuously face the problems of maintaining their ongoing operations on a long-term basis, beyond short-term project financing and commitments.

In their role of linking and legitimating they are often taken less seriously due to their informal ways of operating and to their character of “women’s organisations” as such – several

of the studied NGOs experienced that they became scrutinized in a way that other helix actors were not, and seen as prone to initiate “disturbing” gender conflicts. Often, they were also seen as competing intruders in existing governmental structures for e.g. business advisory services. The basis of legitimacy therefore often may rest on a regional, national or transnational level rather than on a local level. They also often found it especially hard to link to other helix actors (such as universities) neither used to nor organized for handling entrepreneurial organizations – especially not small, female-led ventures.

Concerning the role of competence and process development, NGOs often experienced that their results were not considered to be innovations – unless they could be commercialized. Process innovations concerned with how to support women as entrepreneurs and their collaboration and cluster building were not seen as “real” innovations.

Finally, while carrying the perspectives of individuals and societal structures, they were questioned precisely of this – allegedly attending to politically controversial issues of cultural patterns and discrimination rather than “doing proper business”.

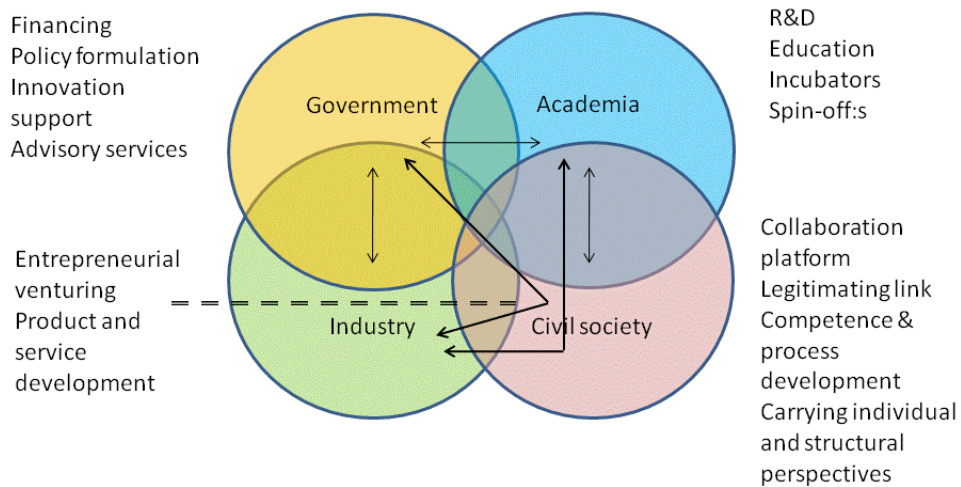
## **6. Conclusion: Bridging the gender gap in entrepreneurship and innovation**

In this paper, the gender gap in entrepreneurship and innovation has been scrutinized by analysing gendered norms and consequences of dominating innovation system models, such as the Triple Helix. Thereto, the roles and challenges of NGO’s in the alternative conceptualization of Quadruple Helix have been explored, based upon the experiences made in the project *Quadruple Helix Central Baltic*. In this endeavour, we have been guided by an ideal of critical performativity – involving active and subversive intervention into managerial practices and discourses (cf. Spicer et al 2009) intended to alleviate gender inequalities in entrepreneurship and innovation (cf Calás et al, 2009).

Combining critical analysis with pragmatism, we have analysed both how the gender gap in innovation and entrepreneurship is constituted and how it can be bridged within a Quadruple Helix setting. Thereby we draw the conclusion that the concept of critical performativity is a useful approach when aspiring to highlight prevalent norms as well as to

challenge these norms. This is possible by encouraging researchers to “get their hands dirty”, engaging themselves in practical problems alongside theoretical ones. Similar procedures are employed within the theoretical and methodological streams of action research and participatory research, though not focusing management studies specifically (cf. Aagaard Nielsen & Svensson 2006).

In this paper, we have exposed how the project *Quadruple Helix Central Baltic* has strived to counteract the gender blindness of dominating policy models and proposing that NGOs play a central role in promoting gender-inclusive entrepreneurship and innovation. Based on these discerned roles we propose a conceptualization of Quadruple Helix that includes the sectors and functions pictured in *Illustration 3* below.



*Illustration 3: Developed notion of a Quadruple Helix innovation system.*

Our proposed conceptualization of Quadruple Helix acknowledges the importance of non-profit actors and areas alongside public, private and academic ones. It also addresses the challenges and resistance that NGOs have become faced with in pursuing the abovementioned roles.

These types of challenges and resistance reflect the implicit gendered norms permeating dominating innovation system models (Danilda and Granat Thorslund, 2011), such as the Triple Helix, where women and NGOs are not expected to be of importance. By promoting an innovation system where these marginalised groups play central roles, the project *Quadruple Helix Central Baltic* provide interesting examples on how to bridge the gender gap of entrepreneurship and innovation in future innovation systems initiatives. As best practice, their experiences can guide future policy programs on regional growth and innovation when aspiring to create more inclusive ways of “doing entrepreneurship”.

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