Public and Private interest

– The case of EU's 'Smart Specialisation'

Alexandra Waluszewski[1]

Jens Eklinder-Frick[2]

Andrea Perna[3]

1. Introduction: Policy ambition to create a closer interaction between public research and private business

Policy's that at a first sight appears as promising or at least harmless, aimed to increase collaborations between public and private interests, can have far reaching consequences; wanted as well as unwanted. Furthermore, they can be beneficial for *some* public and private interests, and at a same time, threat *other* public and private interests (Rider and Waluszewski, 2015). The ambition with this paper is not to scrutinize all such controversies, the aim is rather to discuss a specific type of public-private collaboration that in contemporary OECD and EU policy is ascribed beneficial for both public and private interests: those between public research and private firm. The focus of the paper is one of the most recent policy trends in this direction: so called 'Smart Specialisation'. In the EU Regulation, (1301/2013), Smart Specialisation is described as:

> *[…]"national or regional innovation strategies which set priorities in order to build competitive advantage by developing and matching research and innovation own strengths to business needs in order to address emerging opportunities and market developments in a coherent manner, while avoiding duplication and fragmentation of efforts*".

The basic ambition of Smart Specialisation; 'developing and matching research and innovation' to 'business needs' in a 'coherent manner' implies that connections between the public research and private firms have to established – and that adaptations have to be made. The main concern of this paper is what understanding of the public research and private business this arrangement is resting on and what consequences it is assumed to have – for the private and public actors directly involved as well as for society at large.

The research questions are as follows:

1) What understanding of public research respectively private business is EU's concept 'Smart Specialisation' based on?
2) What type of outcome is expected?
3) What consequences – for public research and private business appears – when Smart Specialisation is considered from an interactive perspective?

The research questions will be investigated through a) a discussion of the basic underpinnings of EU's research and innovation policy in general, the Smart Specialisation concept included,

[1] Corresponding author. Uppsala University, Department of Economic History/STS Centre. alexandra.waluszewski@sts.uu.se

[2] Uppsala University, Department of Economic History/STS Centre.

[3] Polytechnic University of *Marche*, *Ancona*, Italy and. Uppsala University, Uppsala, Sweden.

and b) a comparative case study, where the two EU member states engagement in Smart Specialisation is investigated; Italy and Sweden, and c) a discussion of what aspects that comes to the fore when Smart Specialisation is considered from an interactive perspective.

The paper is organised as follows: In the next section we present the research design, then we introduce EU's research and innovation policy and Smart Specialisation as well as the theoretical sources this is inspired by. Thereafter the short case illustration is presented, focusing on policy's interpretation and introduction of 'Smart Specialisation' in Italy's Marche region (with about 5 million inhabitants) and within the Uppsala region in Sweden (with about 300 000 inhabitants). In the concluding discussion we discuss the consequences for public as well as private interests.

2. Research design

The research design of this paper is based on an interactive approach, (Håkansson ed, 2009; Waluszewski, Håkansson, Snehota, 2017) which is utilised to shed light over firstly the basic understanding and the expected outcome of the Marche and Uppsala region's Smart Specialisation policy, and furthermore, to briefly discuss some main consequences for public and private interests. The point of departure is the notion that economic exchange has a content, which affects and gives imprints on social/material resources and actors involved and creates interdependencies across organisational and spatial borders (Håkansson et al 2009). From this perspective we analyse two types of texts: a) EU documents concerning research and innovation in general and Smart Specialisation in particular, b) Regional documents concerning the interpretation and utilisation of Smart Specialisation in the Marche respectively Uppsala region. Furthermore, we discuss these documents in relation to c) theoretical contributions on policy's main source of inspiration, the National Innovation System approach, and d) an interactive approach to business *and* academic research.

2.1 Policy ambitions

What's behind EU's new 'research and innovation' concept 'Smart Specialisation' – and what's the difference compared to the policy task that has dominated since early 2000; to build and reinforce regional 'Innovation Systems'?

The EU Cohesion policy imposed by the Lisbon Treaty propagates for the use of 'best practices' in the field of regional policy (e.g. EC, 2001, 2003; Martin, 2005). After a period of reliance on cluster approaches with Porter (1990) as main source of inspiration, in early 2000 the EU policy focus shifted towards the National Innovation System approach (Lundvall (1992), Nelson (1993) and Edquist (1997), and especially towards the notion that learning and innovation is institutionally embedded – and that the transfer of knowledge from a public 'knowledge producing' setting to an industrial 'knowledge using' setting can be affected through policy interventions. The National Innovation System approach, which also had a strong support from OECD and became integrated into OECD documents (OECD, 2006), made encompassing imprints on EU policy in terms of attempts to build 'place related innovation systems' (Eklinder-Frick and Linné, 2017; Eklund, 2013, Perna et al, 2015).

With the idea of regional 'Innovation Systems' as point of departure, the formation of the 'Europe2020' strategy implied that the focus on place-based research and innovation policy became even more apparent (McCann and Ortega-Argilés, 2015; Zasada et al., 2015). The EU Commission decided to build a platform of services to support identified entrepreneurial regional activities through a so called 'Smart Specialisation' strategy (EC, 2010a). In fact, the concept of smart specialisation is currently a key element of the EU 2020 research and innovation plan as a whole (EC, 2010b).

In the same way as the main theoretical source of EU's research and innovation policy; the National Innovation System approach, Smart Specialisation is also based on the idea that policy should identify and prioritise 'promising' targets for intervention; above all in terms of transfer of knowledge from the public to the private sphere. However, there is one distinct difference. The focus on knowledge transfer should due to the Smart Specialisation concept be adapted to the region's specific 'entrepreneurial discoveries' – in contradiction to the Innovation System policy's task to make research advances available for regional and national industrial actors in general (Boschma, 2014).

Smart specialisation thus intends to give regional policy guidelines concerning how to create an 'industry crossing innovative system'. Through a search for entrepreneurial activities within a region, the Smart Specialisation strategy aims to contribute to the identification of a specific 'domain' in which a region can specialise in terms of research and innovation (McCann and Ortega-Argilés, 2015). Hence, the Smart Specialisation concept is based on involvement of public research and institutions, local governmental agencies, with the policy actors as the driving force and responsible for the selection of appropriate domains, and businesses. This imply that it is policy's task to identify a region's resource strengths and deficiencies; in terms of private as well as public resources, and to choose how to pursue a Smart Specialisation strategy in order to identify a portfolio of particularly promising entrepreneurial explorations (Foray, et al, 2009).

2.2 Theoretical approaches inspiring policy

The general EU research and innovation policy is based on the idea that it is possible to achieve regional and national benefits through a policy orchestrated collaboration between the public setting; with academic research in the foreground, and the private industry setting. Inspiration to this thinking has been fetched from a number of research and innovation approaches, such as the Cluster (Porter, 1990), the Triple Helix (Etzkowitz, 19xx) and National Innovation System (Lundvall, 1988). A common denominator is that all these are compatible with and can function as complement to neoliberal market theory (Slaughter & Leslie, 1997; Mirowski, 2011; Rider et al, 2013).

The approach which contemporary OECD and EU policy that since early 2000 has been the most important source of inspiration; the National Innovation Approach, is based on the assumption that publicly made knowledge advances in terms of new scientific and technological contributions is 'information sticky' and therefore difficult to absorb for producers and users in the private setting. Through political and policy arrangements these public resources should be taken out of an 'isolated' existence at universities and other public knowledge producing units, be transformed to commercial resources and contribute to innovation, industrial renewal and growth (Eklund, 2013; Högselius, 2011; Waluszewski, 2011). What makes the National Innovation Approach so policy useful is that although it suggests that innovation has a social dimension and takes place within a *system* which can be affected, it is still possible to combine with neoliberal market thinking. Interdependencies between research and technology advances, commercial producers and users are acknowledged. However, these are mainly assumed to occur among different types of systems; among publicly funded university research, the state and industry; that is, mainly macro-level interdependencies are taken into account (Waluszewski, 2011; Eklund and Waluszewski, 2015; Perna et al, 2015).

Hence, investments in place is mainly assumed to exist in the public setting – while the business landscape is assumed to have the characteristics of market as described in neoliberal economic theory, where new information can be absorbed without friction. As Lundvall

(1988, p. 362) describes it, when it comes to analyses of 'business-as-usual'; i.e. user-producer interaction concerning established products and processes, "the microeconomics theory presented in textbooks will do". In accordance with this, the resources exchanged are treated as knowable for both the user and the producer: "The flow of goods and services between subsystems can – if use-value remains constant – easily be quantified in terms of value and volume." (Lundvall, 1988, p. 362).

In the same way as EU policy's interpretation of the National Innovation System approach the Smart Specialisation is based on the idea that policy can act as a driving force in terms of creating a closer interaction between a region's business community, public institutions and local governmental agencies (Foray, et al, 2009). One of the main sources of inspiration, Foray et al (2009) argues that Smart Specialisation implies that public 'knowledge producers' and private 'knowledge users' join forces to find appropriate domains for future regional collaboration:

> *"Smart specialisation therefore implies rejecting the principle of a sharp division of labour between knowledge producers and knowledge users".*
>
> Foray et al (2009)

Although Smart Specialisation is argued to be 'joint and bi-directional process', it is based on policy's assessments, or as Forey et al, (2009) express it, on 'judgements made about a commercial viability of a certain line of business' that had been identified ex ante, through a formal 'foresight' process". The idea is that the identified regional 'domains' will stimulate overlapping research and development activities, and adapt the regions scientific and technological knowledge to business activities and trade partners. Hence, in the same way as National Innovation Systems, it is based on the presupposition that an entrepreneurial firm's most important knowledge providers are located within certain national or regional borders, and furthermore, that the knowledge advances made within this region is direct useful for its businesses. In the next section we will take a closer look at how the Smart Specialisation is utilised by policy in the Marche region, Italy respectively in the Uppsala region, Sweden.

3. Smart Specialization in Italy: the case of the Marche Region

> "*Policy resources must be **prioritised on those activities, technologies or sectors where a region has the most realistic chances to develop wide-ranging and large-scale impacts** which also develop and build on many different local and interregional linkages and connections*" (Foray et al. 2012, p. x).

Smart Specialisation, based on the idea that policy should identify entrepreneurial domains where 'a region has the most realistic changes' to prosper, was approved by the government of Marche region in February 2014.

Marche is a medium-sized region with a population of approximately 5 million people and is located in the central-east part of Italy. According to the Italian statistical office (ISTAT), Marche was recently among the top 15 most industrialized European region.

If we look at the Marche innovation support measures implemented between from 2000 and onwards we can identify three different trends. In the period of 2000-2006 the focus was on creating collaborations between universities, so called technological transfer centers and SME's, and about 20 million Euro was invested in order to support this type of public-private knowledge transfer process. Especially SME's were considered urgent actors to support.

In the next period, 2007-2013, along with supporting SME's the policy focus became directed to foster collaborations between public research and 'key regional value chains', such as the traditional fashion industry. About 108 million Euro was invested in policy support.

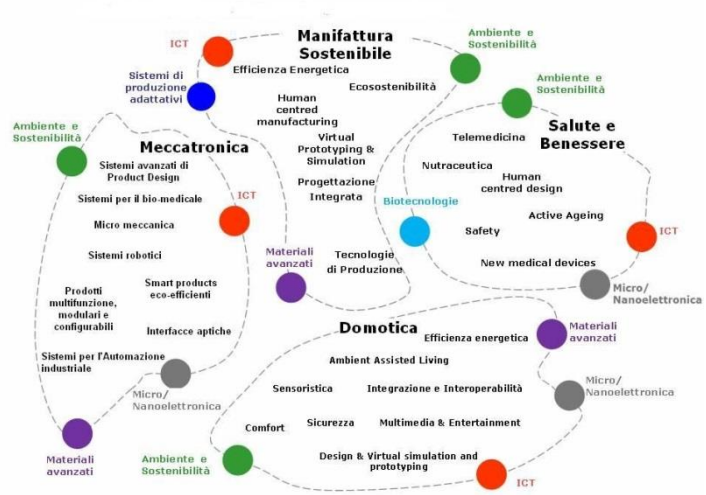
The third and still ongoing period, from 2014 and onwards, is based on Smart Specialisation, and is considered to transform Marche region from a *labour intensive* to *knowledge intensive* region by enhancing close interactions among science, technology and industrial production (Ciffofilli, 2014; p. 22). Smart Specialisation strategy is supposed to increase the research and development expenditures in the Marche region and allow the creation of knowledge base for the local industry Ciffolilli (2014).

When the Smart Strategy was approved by the government of Marche region it involved representatives both from the public and private settings, with about 35 representatives involved. The idea was to identify 'different roles played by the involved stakeholders' and to provide a clear-cut description of the Smart Specialisation strategy in Marche region – from the strategy development stage to the monitoring and evaluation process.

The actions to be developed within the Smart Specialisation strategy was defined together with representatives from the industry. Managers, consultants and representatives of the business organizations elaborated insights during several focus groups, seminars, web contest organized by the Regional government with the goal of facilitating the 'entrepreneurial discovery process' in Marche region.

The '*entrepreneurial discovery process*' is considered an important element of the Smart Specialisation strategy since the companies and other business actors are empowered in order to indicate which *technological domains* should be pushed forward and supported more. Therefore, the Marche region scope is to create a fertile ground in order to *exploit research results in the long-term* instead of supporting a specific industry or a specific product. The government of Marche together with the other stakeholders such as managers and business organizations identified four 'hot' domains to focus on: domotics, mechatronics, green/smart manufacturing, health and well-being. Figure 1 sum up the four domains and the 'topics' considered key and object of the interventions.

Figure 1: Smart Specialisation in Marche region, themes and topics.



Source: www.marcheinnovazione.it

The Smart Specialisation goals identified for the Marche region are expected to be achieved through collaborations between public and private actors; or more precisely, between

universities, research centres, SME's and other private firms. The policy prioritised goals are: 1) Promotion of investments in R&D in four identified technological domains, 2) Supporting the development of the local communities, 3) Supporting the birth and development of innovative start-ups, 4) Industrializing the research results, 5) Supporting the innovative capabilities of SMEs, 6) Supporting the transformation of SMEs towards the digital era, 7) Promoting the cross-fertilization strategy among SMEs (expected to be achieved by 'networking'), 8) Promoting new ICT tools within SMEs, 9) Promoting the access to green energy sources, 10) Strengthen internationalization processes (www.marcheinnovazione.it)

The expected outcome, considered as beneficial for both public and private interests, is 300 companies are collaborating with Universities and research centers, that 400 startups are created and that 273 patents are filed (www.marcheinnovazione.it. In the next section, we will take a closer look at how Smart Specialisation is utilised by policy in the Uppsala region.

4. Smart Specialization in Sweden: the case of the Uppsala Region

Sweden's connection to the Europe 2020 strategy; Smart Specialisation, is emphasized in the The Swedish national strategy for regional innovation and growth, formulated in the document 'Strategy for Sustainable Regional growth and strengthened Attractiveness 2015-2020'[4]. This serves as a blueprint for the development of regional strategies for growth in Sweden and also states that Sweden's strategy for innovation should be intimately tied to the Europe 2020 strategy and thus contributes to a "smart, sustainable and inclusive growth for all". Furthermore, synergies between European, national and regional strategies and domains for specialisation should be supported, while over-lapping of specialisation domains avoided.

The strategy explicitly identified as Smart Specialisation is going to connect regional and national innovation policy in order to gain international competitiveness. The guidelines for regional strategies underlines that connections between sectors of different industries and diverse knowledge areas should actively be supported. Innovations within the life science industry as well as climate smart innovation are singled out as promising areas for investments, while networks that combines this focus but span industry and cluster boarders is prioritised. Such boarder spanning initiatives are said to cross both industry and geographical boarders, be regional, national and international in scope, as well as based on surrounding world and industry analysis. The regional policy actors are therefore encouraged to identify areas of regional strengths, and based upon such an analysis, seek out national as well as international collaborations.

The Uppsala region is forced by the Swedish law "regulating regional development responsibility in some municipalities"[5] (2010:630) to "develop and affirm a strategy for the municipality's development as well as coordinate efforts for its implementation". In the case of Uppsala municipality, like in most Swedish regions, this is done through a regional development strategy[6], which is explicitly based upon the Europe 2020 strategy as it is interpreted in the Swedish innovation strategy; Smart Specialisation included.

The Uppsala strategy states that the region should strengthen its attractiveness as an innovation area by encouraging "people, big and small companies, networks, business and innovation support, academy, research, municipalities and government authorities to meet and collaborate more". Regional innovation support initiatives should be able to "specialise and develop focus areas, but still be able to accommodate businesses and entrepreneurs regardless

[4] 'Strategin för hållbar regional tillväxt och stärkt attraktionskraft 2015-2020'. Author's translation.
[5] Lagen om regionalt utvecklingsansvar i vissa län, 2010:630. Author's translation
[6] Regional utvecklingsstrategi, (Region Uppsala, 2017)

of their origin and industry", something that suggests a smart specialisation approach but also suggest that the interactive and systemic aspects are of equal importance.

The two public universities located to the region; Uppsala University/Akademiska Research Hospital and the Swedish University of Agricultural Sciences, are considered as being of special importance to the regions innovation capability. Hence, to strengthen the collaboration between the two public universities and the region's industrial actors is a prioritised issue. Besides the general ambition to create collaborations between academic research and industry, the Smart Specialisation terminology is used to underlined the need for collaboration between regional domains identified as advanced and innovative: (Pulp production, nuclear tools manufacturing, specialised casting and specialised cabling, energy and environmental services 'green' industries, mobile and computer games tech industry and life science.)

Behind the strategy headings "innovation for smart growth" the Uppsala region's policy strategy is still mainly based on supporting collaborations between public research and business actors. Although Smart Specialisation is mentioned and cross-fertilisation between prioritised areas of industries, the Innovation System Approach is still the basic policy guideline. Actually, the Smart Specialisation strategy offers less specific guidelines for policy activities, and seems to be added on merely as rhetoric or as a hope for a future direction.

5. Concluding discussion

Firstly, from an interactive perspective (Håkansson et al, 2009; Waluszewski et al 2017) Smart Specialisation at first sight appear as an attempt from policy to start out from the resource structure of the regional business landscape in order to support innovation and renewal. The 'entrepreneurial domain' is supposed to be identified based on observations of the business landscape – and supported by public resources in terms of academic research contributions and policy support. In that sense it differs from the established Innovation System Approach based policy, which aims to transfer academic research advances to the private business setting.

However, the Smart Specialisation strategy rests on the idea that the judgement of which domains to support is made by policy actors – based on what's identified as innovative and entrepreneurial firms located to the region. Hence, Smart Specialisation rely on the same neoliberal economic inspired understanding of the business landscape as the Innovation Systems Approach, as discussed above. It is the transfer of knowledge from the public to the private sector which is considered as the key obstacle to overcome. The identification of 'domains' is made without any considerations of the identified firm's interdependencies to the supplier and customer side; without considering interaction patterns and relationships and last but not least, without considerations investments in place and what type of resource constellations and activity patterns each firm has to contribute to.

Secondly, what the Marche and Uppsala interpretation of 'Smart Specialisation' has in common is the utilisation of university research is a basic ingredient. Regardless if the policy is directed specifically to Smart Specialisation or to the general ambition to create regional Innovation Systems, the aim is to create a close collaboration between public, academic research and regional industry. Furthermore, such collaboration is assumed to have positive consequences – for regional public *and* private interests. This implies that a basic warning addressed by one of the earliest advocates of 'National Innovation Systems', Lundvall (1988 p. 365) is ignored:

> *"National systems of innovation may temporarily become strengthened when universities become subordinated to industry. In the long run, the production and world-wide distribution of knowledge may become weakened"*
> (Lundvall, 1988, p. 365).

Hence, what's lost in policy's interpretation of the National Innovation System approach is the awareness that if "the academic mode of production is undermined and replaced by a profit-oriented mode of behaviour", one of its principal merits of publicly funded academic research may get lost: "its tradition for world-wide diffusion of knowledge". Lundvall (1988, p. 365.

From an interactive perspective (Waluszewski and Håkansson 2015) a closer collaboration between public academic research and private business interests has some clear risks both for public and private interests – at least if it is not restricted to transfer of academic research results *ex post* of that the direction of research has been established and research results achieved. If publicly financed academic research is going to be direct useful for business interests, it has to be adapted to these. This firstly implies that public research risks to be directed to interests which are possible to identify *ex ante* the direction of research is established. This can impact negatively on public research which direct usefulness as a commodity is difficult to outline – but important for public and private interests in the long run. Hence, a basic idea with publicly financed, academic research; as formulated in the European universities Magna Charta's first principle is threatened:

> *"The university is an autonomous institution at the heart of societies" […] "To meet the needs of the world around it, its research and teaching must be morally and intellectually independent of all political authority and economic power".* [7]

In the long run, this implies that both public and private interests are risked. The general research and innovation policy based on the idea of establishing regional innovation systems and the Smart Specialisation approach is beneficial for *some business interests: those who can benefit from commercializing research results based on future expectations of these.* (Waluszewski and Håkansson, 2015). However, public and private interests where the renewal is not based on direct utilisation of commodified academic research results cannot benefit from this policy.

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[7] http://www.magna-charta.org/magna-charta-universitatum/the-magna-charta-1/the-magna-charta

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