

Breeding grounds for innovation and their spill-over effects



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Preface

Before I started writing this thesis, my knowledge of the creative sector in the north of The Netherlands was limited. Because of a chance to write my thesis on this subject I started to get interested and started to look into the region and the creative sector that was present. Unfortunately this did not result in a Master Thesis because of a research with the same research topic, that was already paid for, had started. But the creative sector in the North kept going through my mind and eventually I decided to write my thesis anyway, but on a related subject.

I saw that a lot of effort was being put into making the three northern provinces more creative and with that stimulate the economy there. Different initiatives were started to get the creative sector and the traditional sector to acknowledge that they can mean something to each other and eventually, to let them cooperate. One of the larger initiatives with a lot of support from government (related) agencies is the stimulation of the region through creative clusters. When I looked into it I noticed that although resources were being dedicated to the clusters, there was no exact idea of the influence the resources had on the creative sector and in which way it helped to stimulate the region. There also was no research to be found that answered my questions, so I decided to do the work myself.

I invite you to read my Master thesis and hopefully it increases your understanding of the ways in which the region in the north of The Netherlands is trying to stimulate their economy by investing in the creative sector and the experiences of the region while doing this.

I would like to thank my supervisor Dr. T.L.J. Broekhuizen for all the support and insights he gave me while writing this thesis! I would also like to thank the people that were willing to be interviewed and provided me with a large amount of data for my research.

Abstract

Stimulating a region through the use of creativity can be achieved in different ways, but one that is being used often since the books of Richard Florida is the creative cluster. The cluster should function as a source from which internal and external spill-overs originate. In this research the motives for clustering and the expected results are being researched and the actual results and their implications are being presented. The research is carried out from three different angles, namely; the cluster itself, the government and the region to get an overarching view of the situation. In the end it becomes obvious that the cluster does create spill-overs, but that this are almost all internal spill-overs. While these are important too, the region would have more benefit from a higher degree of external spill-over. Stimulating cooperation between the different actors in the region is essential to achieve this.

Key words: creative clusters, creativity spill-over, knowledge spill-over, economic spill-over, stimulation, cooperation, region.

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Chapter 1: Introduction

In trying to make different regions and cities creative hotspots, governments attempt to transform cities and regions into creative hotspots through letting creative minds converge in a single building or geographical location. This in accordance with Florida's theory from his book "Rise of the creative class" (2002). He says that once a creative group is set up within a community, the community will change because of their presence. The creative group that is being put together should positively influence each other, by for instance reinforcing the urge to innovate. Another effect is that the group as a whole should positively influence their environment. This could be in many ways e.g. economically, creatively or just by setting trends early adopters could adopt. These clusters are designed to stimulate creative activities and to act as a leading edge for economic development (Hitters and Richards, 2002). Spill-over effects from the creative hotspot and the attraction it has on other businesses (through for instance the possibility to enlist creative employees) should facilitate a growing number of companies to move to the region to try and reap some of the additional benefits.

Exact data of these benefits is scarce since only limited research is performed and there is no real evidence that the spill-over effects are sufficient to, for instance, justify relocating your business. In some preliminary results from a research of the Province of Drenthe on the subject of the Cultural Economy, some indications showed that the benefits for businesses outside of the creative hotspot might be far less than anticipated. Another question that arises is one considering the creation of additional creativity through the clustering of creative people. Is the clustering of creativity really the way to go, or is it just an accepted format because there is ample research regarding this matter and thus no real counter argument exists? While the province of Drenthe is still looking for ways to stimulate the innovative climate in the region it is interesting to take a further look into the subject of the "creative breeding grounds". The focus will be on the three most northern provinces of The Netherlands.

The purpose of this thesis is to;

1. Provide insight into Creative Clusters and their motives for clustering.
2. To provide an insight in the spill-over effects that are present in the cluster itself and the spill-over effects towards their surroundings.

The Main Research question is: *To what extent do creative clusters have economic/creative spill-over effects?*

The following sub questions are drawn up in order to try and answer the main research question;

1. What are the motivations of creative parties to cluster?
2. What are the anticipated spill-over effects of Creative Clusters?
3. Which variables influence the degree of spill-over effects?

The outline of the thesis will be as following; Chapter 2 will be about motivations from different parties to form clusters and the hurdles that have to be taken to do so. Chapter 3 will focus on different kinds of spill-over effects. In Chapter 4 factors influencing the degree of spill-over effects will be discussed. Chapter 5 will handle the methodology section and Chapter 6 will contain the empirical findings. The conclusion can be found in Chapter 7.

Chapter 2: Clustering and its challenges

This chapter describes the motivations for clustering, the parties being involved and the problems that are encountered while trying to set-up a cluster and run it. This first part will act as a stepping stone for the rest of the thesis elaborating on the central theme of creative clusters. The first paragraph will describe the reasons and challenges for clustering from a government's perspective and the second paragraph will handle motivations and challenges for clustering from a firm's perspective.

2.1 Motivations for clustering: The government's perspective

Jacobs (2005) states that creativity is under a lot of pressure because of a paradox between exploration and exploitation. He therefore argues that the government has a task to preserve a space that is "relatively autonomous and diverse" where there still is room for creativity without pressure from other parties. While this is a task that is not only the responsibility of governments, they are in a position that could facilitate the realization of such a space. The efforts of a government agency are not a case of altruism because the space (or creative cluster) that is to be realized can also work in the advantage of the region it is being built in. These advantages could manifest itself in many ways, but according to Florida (2002), the quality of life itself should improve through for instance the diversification of the population, the increase in productivity through a new impulse for the already present companies and the opportunity to learn new insights from the creative class. So facilitating the creation of a cluster is not only about facilitating a space for (a part of) the creative class in the region, but some even see it as a tool for urban development. Mommaas (2004) argues that the clusters are expected to:

- create a favorable climate for creative workers to work in;
- have a wider symbolic and infrastructural spin-off which will attract other creative workers;
- function as a context of trust, socialization, knowledge, inspiration, exchange and incremental innovation in a product and service environment characterized by high levels of risk and uncertainty.

A research of Marlet and Van Woerkens (2004) showed that there is a positive correlation between a high percentage of creative workers in a municipality and the livability of that same region. They also showed a positive correlation between a high percentage of creative workers and growth in employment in the municipality. These results seem to support the expectations that are given above.

2.1.1 Challenges for governments

The downside of trying to form a creative cluster (from the start) is that there are no guidebooks on how to do so. Mommaas (2004) showed that nothing is really wrong, and nothing is really right. It all depends on the situation, and the cluster forming strategies seem to be heavily based on learning and improving while moving along. Jeffcut and Pratt (2002) say that the lack of knowledge about how to start and optimize a creative cluster plays a large role. This is because there is not a clear understanding of how relationships and networks, that enable and sustain the creative process in a knowledge economy, work and how they are influenced. Mommaas (2004) also argues that another part of the problem is that not only does it matter what kind of facilities you offer in the cluster itself, the surroundings also play a role. The cultural atmosphere, e.g. the place itself, the community and the cultural economy, of the surroundings is a part of the possible success of a cluster. And ultimately the artist/entrepreneur/cultural producer has to decide if the atmosphere of it all (created by the various spatial, professional and cultural qualities) is something he wants to be associated with on a personal and professional level. In order to give the to be created complex entity a fair chance, sound strategic visions are a must (Yigitcanlar, 2009). He promotes a variety of common strategies for building a successful creative cluster;

- political and societal will and good governance;
- dynamic long term development plans;
- strong financial support;
- research excellence;
- value creation to citizens: skill development and employment;
- quality of place, life and affordable housing.

2.2 Motivations for clustering from the firm's perspective

Hitters and Richards (2002) give multiple reasons why the agglomeration of (creative) businesses can be advantageous for companies. These are a result from a research they performed among the inhabitants of a creative cluster in Amsterdam (the Westergasfabriek). They say that there is a reduction in transaction costs, secondly there could be an accelerated circulation of capital and information and thirdly a reinforcement of transactionally based modes of social solidarity can occur. Other benefits that were also mentioned were informal contacts which create a pleasant 'atmosphere', synergy effects from shared learning, the availability of human capital, the option for a collaborative marketing campaign and the ability to obtain bargaining power for the cluster. While some of the benefits here mostly apply for clusters with firms in the same industry it is not unthinkable that the benefits also apply here, but to a lesser extent. Do keep in mind that the firms that are being mentioned

here all are inside the cluster, firms in the surrounding geographical region are not taken into account. The more complementary character of the creative breeding grounds will probably prevent firms in the cluster from receiving too many advantages in the form of bargaining power or transaction costs because of the more small-scaled nature of the purchasing of resources. Exceptions could be the jointly purchase of support functions for the clusters.

According to the research and to the reasons given by other authors, the importance placed on social interaction among the users of the area is a recurring phenomenon. The actual contact with the other users seems to be an important factor for inhabitants of a creative cluster. The reasons given by the interviewees why they show interest in a creative area are quite comparable to the expectations for clustering given by Mommaas (2004) which were described earlier. The central themes of a favorable climate, attraction of other creative workers and a context of trust and collaboration/learning together are recurring.

A research on relations among SMEs in the Mediacentrale in Groningen (Knol, 2009) also uncovered that the main reasons to move to this cluster of starting SMEs for most firms was proximity to other SMEs and their knowledge. The SMEs were hoping to create new opportunities and trying to make the distances between them as small as possible. The second reason that was mentioned for locating at the Mediacentrale, was its atmosphere. This partly corresponded with the theoretical framework Knol (2009) used. The biggest difference was that he did not find accessibility to be much of a decisive factor for SMEs in the decision making process about where they would start their firm. A reason for this could be that the firms located at the Mediacentrale are mostly companies in the “new media” sector. It is possible that these firms rely less on the (traditional) ways of accessibility to other firms and their relations. Other factors like proximity, location, atmosphere and image did correspond with the framework. But while the SMEs stated that they were drawn to the Mediacentrale mainly because of the innovative image and the proximity to other creative SMEs, they also said that the actual contact among the SMEs was far below what they had expected. Beforehand almost all the SMEs said they wanted close contact with the other inhabitants of the Mediacentrale, but they all failed to act accordingly. They said the doors were open all the time, but no one (including themselves) took the effort to try and talk to the other firms.

The reasons for clustering found by the different authors are listed below, in order of decreasing importance;

- Accessibility (Hitters and Richards)
- Collaboration (Hitters and Richards, Knol, Mommaas)
- Cultural profile (Hitters and Richards, Mommaas)
- Cultural atmosphere of the area (Hitters and Richards, Knol, Mommaas)

2.2.1 Challenges for firms

Although benefits are an important factor to look at while examining clusters, the negative effects must also be incorporated to get a full appraisal of the spill-over effects. Managing a creative breeding ground like a creative cluster could cause some problems between the running of the day-to-day businesses and the creative processes that take place there. A lot of literature is written about the mindset of the creative individual and that it is often less compatible with the mindset needed to run a business. The paradox which is presented by Hitters and Richards (2002) between structure and creativity mainly affects the clusters where the actors in the cluster have a common strategy, try to send out a certain image of the cluster or when they collectively do business with other firms. When the cluster is more of a loose collection of individual actors this problem arises less often.

Another example of a less desirable effect is when a certain negative attitude spreads throughout the cluster. If at some point the actors within the cluster develop a certain relation and everything runs smoothly, they might be reluctant to try to innovate too much. This because they do not want to break the status quo and shake up their world and the relations within the cluster. Developments like this are of course contradictory to the fundamental idea of the creative clusters and their innovative nature.

As described above, even though the firms in a cluster say they all seek contact with other firms in order to gain benefits, something is withholding them from actually interacting. This is a problem that has also recently been brought up by others. Apparently putting willing SMEs in one cluster does not guarantee that any spill-overs, internal or external, will take place. It seems that more processes play a role and that these circumstances, or lack of an initial spark, can be a reason why the creative process between firms does not take place and the creative cluster loses a part of its appeal.

Chapter 3: Spill-over effects

The aforementioned preference of the creative class to be close to others within their industry is not surprising, if one keeps in mind that knowledge is the basis of innovation and that the ability to access external knowledge plays a significant role in the innovative capacity of most firms (Simmie, 2003). In order to keep innovating, information and knowledge from outside the firm, and sometimes from outside the industry must be acquired. The transferring of information and knowledge often happens in the form of spill-overs.

3.1 Spill-overs

Spill-overs occur when assets are generated by one firm and are attained by other firms by which they gain new knowledge or other benefits, without having to do the initial effort of research. Spill-overs can be knowledge that is being passed along, but it can entail more than that. Other examples of things that could spill-over are attitudes, mindsets, and interests in a particular subject or certain skills. Because it is hard to research how knowledge travels, most researches focus on the more codified form and try to map patents and patents citations. While an attempt has been made to divide spill-overs into different kinds of spill-overs, a certain amount of overlap will still be present and inevitable.

3.2 Creativity spill-overs

Creativity spill-overs are the basis from which other spill-overs can occur. When creativity spills over, this can lead to new ideas which are valuable. This can then lead to knowledge and economic spill-overs. Creative urban cities can lead to the formation of knowledge cities through the large amount of opportunities for knowledge production and spill-overs (Yigitcanlar, 2009). Creativity spill-overs, the spatial distribution of creativity, are not easily measured. That is why patents are often used to make the flows of creativity apparent. Andersson et al. (2006) used this method to research the flows of creativity and the creation of new knowledge. They found that;

“the level of innovation is sensitive to the density of economic activity of differing kinds, including the density of employment and the density of large and small establishments.”

Density and urbanization matter when looking at the causes for the creation of new knowledge. Other factors that are of influence on innovative activity are diversity, agglomeration and the presence of human capital. The innovation rate is partly determined by the region. Jaffe (1986) found that innovation is promoted just by being in a region where other firms are innovative. Simply by being in their presence the innovation rate rises per amount of money spent. These clusters thus facilitate the diffusion of creativity. Because the presence of other creative people or firms in the region, the (impact of the) actions of other creative and innovative people are being reinforced. The presence of a

creative cluster could thus very well be a reason for (young) creative people to stay in the region, instead of moving to another region where they do have creative parties in the region.

3.3 Knowledge spill-overs

Agglomeration contributes to the heightened availability of knowledge in a certain area, which in it turn heightens the opportunities for innovation. Assuming that knowledge is a vital ingredient to innovation, it is not strange that creative people who try to innovate constantly would like to be clustered. Especially because tacit knowledge is best transferred to others while there is direct (face-to-face) contact between the two actors. Because the successful transfer of knowledge decays with distance (Simmie 2002), proximity to the source of knowledge is necessary to experience the full benefits. Of course acquiring knowledge is not without costs. Costs are depending on how implicit or tacit the knowledge is. The more tacit the knowledge, the greater the stickiness (the degree to which it is costly to acquire, transfer and use (Von Hippel, 1994)) and the harder it is for it to flow freely between actors. Other factors that influence the cost of knowledge transactions are the amount of knowledge to be transferred and the distance the information has to travel.

While learning from different firms within the industry has its pros and cons, it is argued in an article by Audretsch (2003) that acquiring knowledge through knowledge spill-overs that originate external to the firm's own industry are the most important. This is because novel ideas and techniques that are acquired here tend to be new to the industry and maybe new to the world. Spill-overs originating outside the industry have a higher possibility of being part of a truly innovating process, compared to the spill-overs originating in the industry itself, which seem to be facilitating mostly incremental innovations.

The problem with these knowledge transfers is that the firm that receives the knowledge has to have a certain amount of understanding of the subject in order to fully comprehend and utilize the information (Hippel, 1994). Howells (2002) says that for full understanding not only geographical proximity plays a role, but relational proximity is also an important factor. He argues that the formation of organizational routines and social practices may play an important role in many cases and sometimes is more important than geographical proximity. Aside from whether the knowledge was fully understood despite having to travel some distance with the risk of losing knowledge in the process, the knowledge has to correspond with the cultural and social norms to be fully understood by the receiving party. Although geographical proximity plays a direct role in knowledge transfers because of the decay of information when transferred over a large distance, the transfer could also be affected by the relational proximity of the actors.

3.4 Economic spill-overs

A research by Marlet and Van Woerkens (2004) on creativity and Dutch cities studies the impact the creative class has on (employment) growth within the 50 largest cities in The Netherlands. This research was based on the work of Florida, with his creative capital and its impact on regional economic growth. While Florida states that creative capital and human capital are two different things and says that creative capital has a bigger positive impact on a region, Lucas (1988) thinks otherwise and favors human capital. He says that;

“Where skilled people concentrate, human capital accumulates. Skilled and highly educated people have an ability to generate and to absorb knowledge; this is why they are more productive. Firms are therefore more competitive if they are located in cities and regions with high levels of human capital. These places grow faster than cities and regions with low levels of human capital.”

The main difference between the two kinds of capital are that the human capital of Lucas is focused on the use and creation of knowledge by highly educated and skilled people, whereas with Florida’s creative capital the focus is more on creativity than on education.

In order to study what influences growth in the 50 cities, Marlet and Van Woerkens set up their own definition of creative capital and research the influence it has on growth. They made some adjustments to the creative class Florida created, to adjust it to some of the points of critique Florida’s selection received and to create a better fit with the workforce in The Netherlands.

When the influence of the creative class on employment growth in the cities is measured, a positive correlation is found. Furthermore a positive correlation was found between diversity and employment growth. The tests were also performed with the creative class drawn up by Florida, and remarkably no significant differences in the outcomes were found. To see if creative capital has a higher influence than human capital, the influence of the latter on employee growth also has to be measured. A one-percent-point increase in the share of the creative class meant an average increase in employment rates of 0.9 percent. In the influence test for human capital, education levels were used as a substitute for human capital. Compared to the creative class, a one-percent-point increase in the share of highly educated people (people with a Bachelors degree) means an average increase of 0.66 percent in employment rates. In the research they conclude that the creative class is a better predictor of employment growth than education. The reason for this is being ascribed to the fact that the members of the creative class are working (although they often aren’t highly educated), but highly educated people may not be working at all, or have chosen jobs which leave there human capital largely unused. It seems that everyone has human capital and that it lies at the core of a person’s skills, but that the factor that is responsible for the extra regional growth is the creative use of those skills. In the creative

capital setting, one is using his skills and knowledge creatively, through which the person himself learns, but also the people he is interacting with.

It comes down to the fact that education, and creativity even more, is a predictor for regional growth. There are three likely reasons for regional growth through (an increase in) human capital, namely productivity increase, more firm start-ups and an increase in spending in the region resulting in more jobs.

A concentration of highly skilled and creative people would make people in a certain region more productive. Black and Lynch (1996) found that if there would be an increase of 10% in the average education level of workers this would result in a productivity growth of 12.7% in non-manufacturing and an 8.5% increase in manufacturing. It would also stimulate cost cutting technologies in service sectors and stimulate process innovation. Once this happens this might attract even more people, thus creating a vicious circle. Bates (1990) shows that besides improving the status of existing companies, a pool of creative people also increases the amount of business start-ups and giving them a better shot at creating a firm that lasts. Marlet and Van Woerkens (2004) show that for each increase of the share of the creative class by one-percent-point there are 22 more start-ups per thousand people in the workforce. While the increase in the overall amount of jobs in for instance supermarkets, restaurants and theaters seems likely, no real evidence of growth could be found.

As can be seen from the evidence above, creativity is a large contributor to the economic activity of a region. A creative cluster in the region can result in economic spill-overs towards the region and function as a catalyst for the local economy. New ideas that stem from the creative sector can spill-over in the form of knowledge or directly in the form of a workable format for a firm to improve, or better sell their existing products.

3.5 Social spill-overs

Mommaas (2004) also expects that clusters have a social spill-over (see page 5). The clusters might also spill-over in ways that do not really have an economic, creative or knowledge background, but are somewhat more ungraspable and can be seen as a set of mindsets and codes of conduct which can spill-over to the region and create a change in the atmosphere of a region. The context of trust, socialization, knowledge, inspiration and tolerance could be created that way. Instead of seeing this as just a way in which a higher amount of spill-overs might be created, it also may be a way to bring rest to a region with forms of social unrest.

Chapter 4: Factors influencing the degree of spill-over effects

Several factors could be of influence to the degree of the spill-over effects. Three large actors are especially close to the clusters and will have the biggest influence on the spill-over effects of the cluster. The three parties are the cluster itself, the government (national and regional) and the region where the cluster is located. Aside from these three, a factor that influences the degree of spill-over effects are the communication characteristics of the three actors. The way in which the actors communicate with each other (and fully understand what they are talking about) is important for the degree of spill-overs. These factors will all be discussed.

4.1 The cluster

The cluster itself can influence the amount and type of spill-overs up to a certain amount. But it is also dependent on the stage (or *age*) the cluster is in, how much spill-over is created and how susceptible the cluster itself is to spill-overs from outside and on the cluster's ability to learn from this. The last factor might seem strange, but interactions with the region might result in cross fertilization which in turn can result in new spill-overs. The following paragraphs will highlight different facets of the cluster and their impact on spill-over effects.

4.1.1 Culture

A factor that contributes to the influence of spill-overs is the culture of a cluster (and its surroundings). It is possible that the cluster has a very open culture, or that it is more protective of the information and knowledge within firms. When a culture of secrecy and forming barriers is created to protect acquired knowledge, it might be hard to ignore this when a firm decides to work together after all. Opportunities for sharing (knowledge) should be analyzed on profitability, in any way, and not be automatically discarded because of the nature of the information that will have to be shared (Shapiro & Varian in: Hurmelinna-Laukkanen and Puumalainen, 2007). In some cases sharing is more profitable than trying to reap as much first mover advantages from the information as you can. For instance, through effective knowledge sharing resource restraints could be overcome by licensing out or innovation can be promoted through effective *knowledge sharing*.

4.1.2 Firm and cluster growth

Another factor that is mentioned as an important factor for the need and effectiveness of spill-overs is the growth of firms. One of the things that shows the growth of a firm and get's mentioned by several authors (e.g. Breschi and Lissoni, (2001) and Audretsch, (2003)) is the Industry Life Cycle. They argue that the role of tacit knowledge is the greatest in the early days of an industry. Of course this is true for almost any industry, but in particular when innovation constitutes a large part of the daily business. In the early stage of development the impact of outside influences is the highest

because no industry standards have been set and no dominant design has emerged. The theory of the Industry Life Cycle (ILC) may not be 100% applicable to the case of the creative clusters, but important core aspects of the theory are applicable though. Important aspects of the ILC are the age of the (start-up) firms, their (need for) knowledge, building up a network, their ability to learn and the improvement of the firms' structure over time. Because of the common urge for tacit knowledge of the firms, an agglomeration effect might occur, drawing together different actors who will form a new cluster.

The early stages are often the most innovative stages. New ideas through input of the creative process are very important here. According to research by Feldmann (1994) different inputs of knowledge are acquired through different steps of the innovation life cycle;

- In the discovery stage they rely mostly on university research
- After this, the R&D departments take over and use the university inputs to research the subject in a way more suitable for their own needs.
- In the next step knowledge from experts who are familiar with the technology is used to further develop and refine the product.
- And finally producer services are used to gain market knowledge and knowledge about bringing innovations to the market.

While the beginning of the industry life cycle is characterized by innovativeness, the further we move down the life cycle, innovativeness may be dispersed by additional concentration of production. The concentration of production may certainly be true for a lot of industries but the creative cluster is somewhat a particular case. While traveling along the industry life cycle, the cluster probably won't focus more and more on production like a "normal industry" might be inclined to do. It might be that they do get set in their ways of communicating with the other firms, or in their ways of doing business, but in its core the search for innovation will still drive them. The search for knowledge can decline for certain supporting processes, because they get set in their ways for the everyday tasks. Other processes that are closer to the process of innovation itself will continue to rely on new information that is gathered from within the cluster and from external sources.

According to Audretsch (2003) there even is evidence that not only the common search for knowledge will decrease, but it might even drive the actors apart. The likelihood of this happening would be far greater in traditional industries than it would be for creative clusters. In the case of the cluster it is far more likely that the need for knowledge and the knowledge generation will get more intense resulting in more spill-overs. In the case of the "normal" industry and its maturation, a shift from exploration to exploitation often takes place. The focus shifts from research to production. Assuming the actors in the

industry do not have complementary resources, there is no real need to stick together. The dispersion effect is more likely to take place in an industry where the economic activity is concentrated. If on the other hand the economic activities are more complementary like in a creative cluster, there is a good chance that the effect never occurs. When their core business is to constantly innovate as with the creative clusters, the need for dispersion is far less pressing. Their spill-overs will remain to be of use to each other. In this respect the nature of the actors forming the agglomeration could have impact on the innovativeness of an agglomeration. Not only could it affect the intensity, but also the duration of it. The *composition* of the cluster thus is important. More assumable than the decline of knowledge sharing and spill-overs is the possibility that the *cooperation* with the firms within the cluster, as well as with firms in the region, is intensified. After the initial start-up of the cluster it takes a while before everyone is settled. Once the start-up phase is completed, spill-over effects are more likely to occur. Due to the fact that the structure of the firms is now firm in place, the cluster becomes more well know and they already have gained *experience* (with day-to-day routines), they start moving along the learning curve. Because the firms in the cluster have made it through the initial phases, they have shown that they are *committed*. In the most profitable case, the *relational proximity* with the region is not too big of a problem and the *type of innovation* in the cluster connects with the region. The region might then start showing interest in the cluster and its spill-overs.

4.1.3 External sources of knowledge

The three actors mentioned are not the only ones affecting the flows of *knowledge*. If the firm operates (inter)nationally or locally and how they approach customers and suppliers also influences the spill-overs. Simmie (2002) says that innovation is characterized by uncertainties and that knowledge and experience are tools to combat this uncertainty. To combat the uncertainty there are two sources of knowledge. The first group is formed by internal sources through inter-firm activities and the second group is composed of external sources. Simmie (2002) found that the influences from the external side come from different geographical regions. There are, mainly supply side, local knowledge spill-overs from e.g. suppliers, customers, higher education institutions and business partners. And on the other side there are, mainly demand side, international knowledge transfers. It seems that the combination of local spill-overs and international knowledge transfers helped the firms in the research to overcome the uncertainties they were confronted with in the innovation process. Although the knowledge flows outside of the region are not part of the model, they can influence the knowledge spill-overs ultimately generated by the clusters. The parties external to the region might possess knowledge that is not available in the region. As a result of interacting with them, new knowledge may spill-over into the region and make more innovations possible.

4.2 The government

The government can facilitate (the forming of) clusters or protect clusters in different ways. When the government shows *willingness to cooperate* they do not only help the clusters, but they also gain the ability to steer the direction of the clusters in some way. By influencing the clusters, they indirectly influence the spill-over effects. Ways in which the government can influence the clusters or spill-over effects directly, are for instance through subsidizing, being actively involved in the selection and attracting of desirable firms for a cluster and in lesser form through the legal system which is part of the appropriability regime.

First of all the appropriability regime. The spill-overs can be deliberate, but they can also take place without the knowledge or consent from the firm that is 'leaking'. This is a direct effect of the increase of communication channels like the internet, employees changing between jobs easier and the image of information that it can be obtained freely. Howells (2002) also mentions other forms like unintended knowledge sharing, unintended signaling of key information and unintended leakage by consultants. Even though it may be that "stolen" knowledge is also a spill-over, the strictness and effectiveness of the appropriability regime (or better, *the legal system*) do partly influence the regularity these kind of spill-overs occur. To counteract the amount of stolen knowledge, a lot of firms try to make their knowledge more non-transferable. The protection of assets is an attempt to try and secure knowledge that was gained by research in order to experience early mover benefits and collect the rents for it. Because of the underlying character of a creative cluster of openness and sharing, using the legal system might not seem a logical choice. Nonetheless even creative people need to earn rents to ensure the right to exist for their firm, or want to protect their property under some form of legal system. Even if it is just through the use of Creative Commons so other (creative) parties can use their work in order to innovate further, free of charge. Ideally this would then heighten the rate of innovation.

While the character of the cluster is largely open and aimed at innovation there also might be things a firm does not want to see shared. Some firms lose the incentive to invest in R&D and innovate if they know beforehand that the knowledge they acquire will be hard to protect and might find its way to others free of charge. This could very well hurt the innovation rate in the region (and in the country the region is part of). Whether the legal system which is drawn up by the government can withhold firms from acquiring and using information or knowledge from other firms, is largely depending on the strictness of the system and the ability of firms to evade it (Hurmelinna-Laukkanen and Puumalainen, 2007). Instead of protection alone, there also are some other important factors when considering the legal system. It is not clear if the firm's *willingness to cooperate* would be higher when there is a tighter legal system and better protection can be offered. They also might be pushed off by a legal system which dictates that everything is recorded meticulously and might lose the willingness to

cooperate because of all the paperwork it causes. While the system might prevent some transactions from being used, the nature of the spill-overs in these creative clusters might not be easily defended by these measures. This because of the creative nature of the spill-overs that are somewhat ungraspable and often are not recorded. That is why it is suggested that it is not the maximization of protection that should be sought, but the maximization of the efficiency of the appropriability regime.

A second way in which influence can be exercised is through setting up a *creative policy*. One major part of this will be *subsidizing*. Some projects may receive financial aid, and others may not. Through selecting which projects will be able to rely on grants, the government can somewhat steer the projects into a direction they think is appropriate for the region. Projects that are found suitable and fit into the future plans the government has for a region, have a bigger chance of receiving grants. In this way influence is exerted indirectly. A more direct form could also be used, for instance when the grant will only be given when the government will get certain *privileges*. These could entail the power to screen firms that apply for a spot in the cluster, deciding on which location the cluster will be housed or that grants will only be given when certain predetermined goals are being achieved. When at a certain point it becomes clear that more subsidizing means more spill-over effects, the government can control the amount of spill-overs through the amount of resources spend. If at a certain point it becomes clear that for instance economic spill-overs are being stimulated if a certain firm gets subsidized, the government also has power over which kind of spill-overs are being promoted. But subsidizing is not all positive. When the grant is not lump sum (which is often the case as came forward in an interview with someone from the creative sector), but is split up in multiple payments the subsidizing party could get itself in a less than desirable situation. When certain (hard to measure) pre-set goals are not achieved, is it wise to pull the plug on the grants or not? When the financial aid stops the project might not make it and an attempt to make the region a more innovative place might be stopped (premature). This is also a concern on a national level. Recently a publication was released concerning different grants given to innovative parties across The Netherlands and if the goals were being met. The research showed that far from all goals were achieved. The question is now if the grants should be continued, if different kind of grants might be better and what the consequences are if the grants are to be stopped.

Other ways in which influence on the degree of spill-over can be exerted is by stimulating the different actors to work with each other, or at least put them in contact with the other actor. It might be the case that the cluster is not well know in the region and a publicity campaign originating from the government might at least spark some initial contact and *stimulate cooperation*.

4.3 The region

The geographical region is important for the degree of spill-overs created in the way that they have to receive the generated spill-over and have the ability to act on it (and possibly creating spill-overs of their own). There seem to be relations between having an active innovative character, as a firm or a region as a whole, and having the ability to learn from external sources such as spill-overs (Oerlemans et al., 2001). One could then more easily interpret the knowledge received and use it to innovate. A reinforcing circle of innovation could then occur in the region, positively influencing the degree of spill-over effects. So *absorptive capacity* of the region plays a large role.

Apart from the ability of the region to cooperate with the cluster, they also have to be willing to do this. When it lacks in *willingness to cooperate*, relational proximity counts for nothing. When there is a certain reluctance to interact, it might be in the interest of the government to bring the two together. When *stimulating the cooperation*, they can control which firms from the region are contacted to participate and thus partly influence the kind of spill-overs that might result from enforcing the *creative policy*.

4.4 Communication characteristics

Apart from the three main actors, there are some other factors influencing the degree of spill-overs generated. These factors influence all actors in some way and in that way indirectly influence the degree of spill-overs generated.

Proximity

In order for the maximization of spill-overs, proximity is an important factor. Proximity affects all three of the actors in their dealings with each other and within each actor itself. The proximity of other firms who are active in the same industry could provide more benefits than just information or knowledge. In an article by Oerlemans et al. (2001) other benefits are given such as *risk sharing*, availability of money as well as other physical resources and synergies of *resource sharing*. Proximity is also very important because it plays a large role in the transferring tacit knowledge from one party to another. Because of the highly encrypted form of knowledge, transferring this face-to-face is the most efficient. Being geographically close to each other is beneficial. The effects of clusters that are mentioned are not all positive, a few downsides to clustering are also mentioned. Examples of this are larger dependence, possible future restraints on strategies and stickiness of knowledge. The points mentioned above are not only applicable to clusters of firms within the same industry, but also on clusters which have a more complementary nature. The role that proximity plays affects the way the three parties interact and understand each other, but also plays a role within the three parties itself.

The degree to which the cluster's region is influenced by the cluster and vice versa, is largely dependent on *relational proximity*. Can the cluster connect easily to the environment on a creative, economic or social level or do their visions, beliefs, mindsets, ways of communication, interests or education levels differ too much for an easy connection? Howells (2002) states that geographical proximity is not always direct and;

'Geographical space influences cultural, social and psychological space through which knowledge is generated and imparted. Hence 'relational proximity' associated with the formation of organizational routines and social practices may indeed in many instances be more important than geographical proximity.'

Innovation type

Maillet (1991) points out that the *type of innovation* (radical or incremental) is of importance. Depending on the goal, different needs arise. While incremental innovation would most of the time be performed with in-cluster resources, for radical innovation more relations with the environment have to be developed in order to acquire knowledge which is complementary to what is already known within the cluster. This provided that the environment contains firms with sufficient knowledge of the concerning matters. If not, the search for knowledge can lead to the creative entrepreneurs being forced to get their knowledge from (inter)national sources. When the distance between the source of certain knowledge and the recipient increases, the nature of the knowledge becomes important. It could become quite costly if the source is located far away (geographically speaking). The *desired goal*, a particular type of innovation, also has its effect on the degree of spill-over generated for the region.

4.5 The conceptual model

In figure 1, a visual representation is given of all the parties involved and their influences on the degree of spill-over effects in the region. In the blue boxes the four *actors* of influence are shown. The dark green arrows depict in which way the actors influence the *spill-overs* and each other. The lighter green circle depicts the *communication characteristics* factor and shows its influence on at least three of the four actors who can alter the degree of spill-over effects. In their turn the actors themselves are also influenced by the communication characteristics in their own way. The creative entrepreneur actors are part of the cluster, but are there to show which factors are of influence within the cluster. Because they influence the cluster, they eventually also influence the impact of the cluster on the degree of spill-over effects.

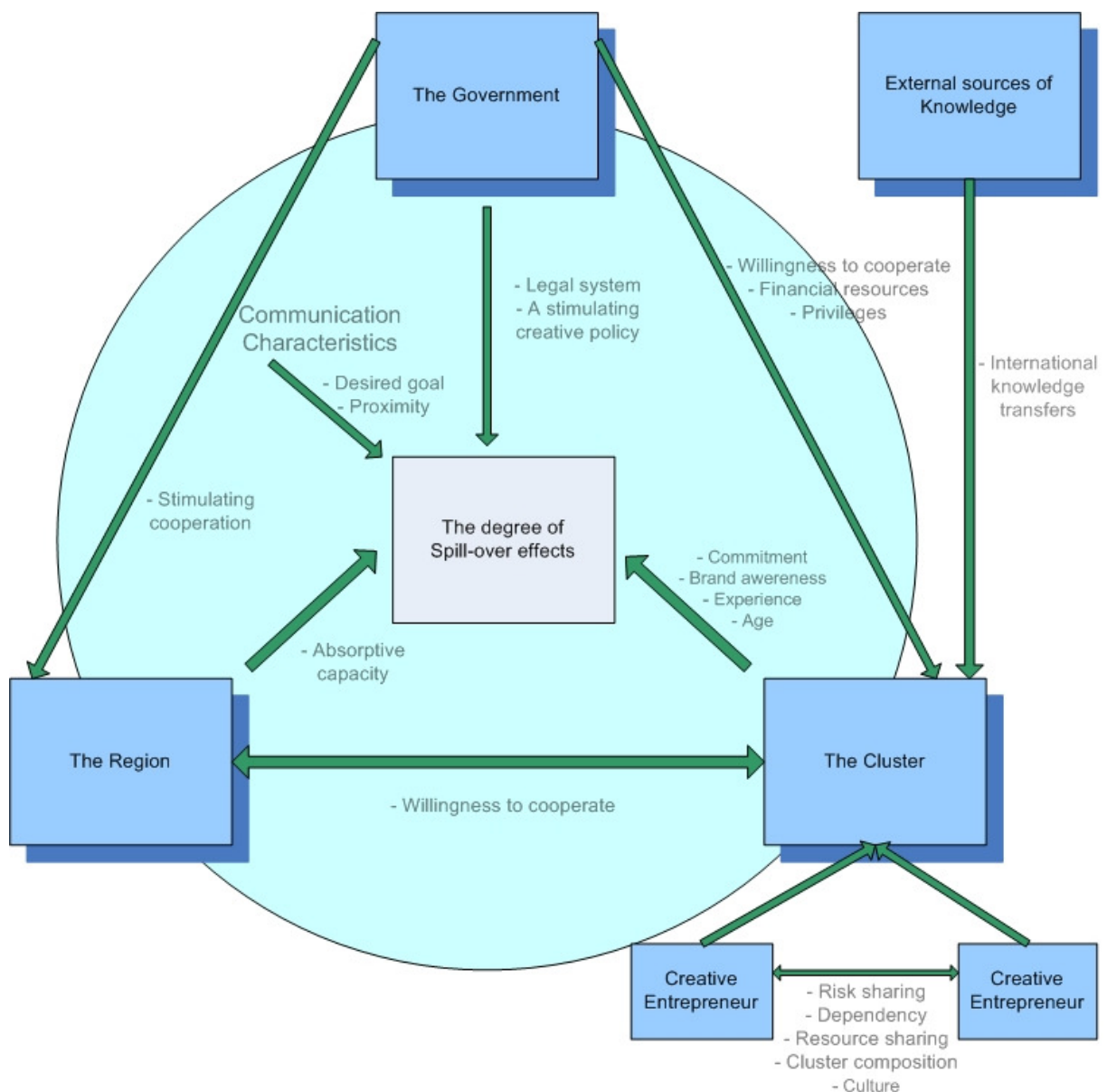


Figure 1: The conceptual model

Chapter 5: Methodology

Research methodology

In trying to answer the research question posted in the beginning, empirical research shall have to be performed. To test the validity of the conceptual model presented earlier, in combination with the clusters in the north of The Netherlands, certain information has to be obtained. There are different ways in which this can be done, but the case study approach is the most appropriate approach. Due to time restraints the focus will be on one cluster and its surroundings. In a case like this the focus is on the dynamics within single settings and according to Eisenhardt (1989) the case study fits this profile the best.

Data collection method

To uncover to which degree the clusters have spill-over effects that influence the region, several things can be researched. While it is very hard to measure different kinds of spill-overs directly, the degree of realization of the intended effects can be measured. To get information about these subjects, semi-structured interviews were held with the creative entrepreneurs that are part of the creative cluster. Additionally, background data are used to compose the interview questions. According to Saunders et al. (2000) the semi-structured interviews are an appropriate way to get information when there is a combination of explanatory and exploratory research. In the semi-structured type of interview it can be made sure that the essential core topics will be discussed while giving the interview enough space to touch other topics that were not thought of before, but which can turn out to be useful.

The matter of subject will be twofold, on one side there are the experiences of the people in the firms and region and their vision and experiences on the spill-overs. On the other side there are the economic spill-overs which connect more with the government and the region. The possible social spill-overs that were mentioned in Chapter 3 will not be researched in this thesis because they are extremely hard to measure and because the economic and creative spill-overs are believed to be of a far greater influence to the region.

In order to look at the effect of the different variables shown in the conceptual model on the degree of spill-overs, different topics were brought up. To deduct something about spill-overs, questions were asked about the relational proximity of the different parties, about the experiences of the firms with (face-to-face) interactions, if the firms had expectations about the interactions and if the interactions gave them what was expected beforehand. Trying to uncover if there is some kind of guidance for start-ups or if there are channels through which things like knowledge or inspiration are shared or firms are helping each other in another way should shed some light on the role of the cluster in the context mentioned by Mommaas (2004)

Uncovering if there are (economic) spill-overs towards the region is the second part of our goal. It can be worthwhile to see on what kind of restrictions the government has based their motives for subsidizing the clusters and if they are based on certain restrictions (and if the goals are being met). It might be possible to take a look at statistics of general employment growth in the region from before and after the creation of the cluster. In particular if there are more start-ups firms because it is suggested that the growth of employment because of creative clusters is mainly through the start-up of new firms. The clusters were selected on basis of the duration of their existence. The longer the clusters exist, the bigger the chance that effects occur. Questioning people who are actively involved in the creative sector should also provide valuable insights.

Interviews

The interviews were held with interviewees from all three actors mentioned in the conceptual model. Each one of the actors was asked questions regarding different topics in trying to uncover their role in the degree of spill-overs in the region. All the interviews took approximately between 1 hour - 1,5 hour.

	Tag	Type of actor	Department/Business
R. Postma	Gov1	Government (Province of Groningen)	Economic Affairs
G. Tolner	Gov2	Government (Municipality of Groningen)	Spatial planning and Economic affairs
W. van der Veen	C1	Cluster	De Pudding
D. Inden R. Koning	C2	Cluster	Estheticon Soundbase
P. Diphorn	R1	Region	Syntens

Table 1: Interviewees

Questionnaire

The topics for the government mainly concern the economical side of the research and will cover their vision on the goals they have for the region and the cluster, the way in which they use subsidizing as a tool of influence and to what extend they are looking at the results of their given subsidies and trying to create a favorable climate in the region for spill-overs altogether.

Topics for the cluster are mainly focused on the cooperation of the cluster (internal and external), e.g. are different firms working together, are there exchanges being made, are there differences in culture, are there synergy effects and are they noticing any spill-over effects. Relational proximity and the transfer of (tacit) knowledge with the region are also important subjects. The interviewees for this actor all came from the Puddingfabriek.

The subjects of interest for the last actor, the region, are mainly focused on the influence the cluster might have on them and vice versa, if they have noticed any spill-over effects and if any form of collaboration has had a positive outcome (in a broad sense). Relational proximity and the transfer of knowledge also are important here.

The interviews and the interview questions can all be found in the appendix.

Chapter 6: Empirical findings

The information gathered in the interviews will show to what degree the theory, and the conceptual model that was drawn up, are a depiction of the actual situation. The three parties and their influences are discussed and tested against the statements made in the theories. First the cluster will be discussed, followed by the government and the region.

6.1 Findings for the Cluster

In the case of the cluster there are 2 types of factors which can have an influence on spill-over effects. There are internal and the external factors that can influence the degree of spill-over effects created in the region. The internal factors of the cluster are mainly focused on the interaction between entrepreneurs and the ability of the cluster to innovate together and possibly offer their services to the region as a unit, instead of as a combination of loosely connected firms. The external factors focus more on the interaction with the region and how the cluster is perceived by the region and how they interact and work together with the firms in the region. To gain insight into these matters interviews were held with three persons who have been in the creative sector for a long time, who have their workplace inside a cluster and who are actively involved in trying to stimulate the creative sector in their surroundings.

Interactions between entrepreneurs of the cluster

When looking at the different factors which influence the ability of the cluster to influence the degree of spill-overs created, as listed in figure 1, it becomes clear that these factors are about the functioning of the cluster as a unity. When looking at what was said in the interviews, it is remarkable that the *risk sharing* and *dependency* that were mentioned in the literature do not seem to play a role of importance. The literature suggested that these two factors would be a few of the benefits that being in a cluster would provide. That these factors do not seem to be as important as was anticipated could very well be explained through another difference between literature and practice. While the literature sees a cluster as a tightly interwoven unity of creative entrepreneurs, the actual situation often is different. The information from the interviews (C1, C2 and Gov2) suggests that the unity within the clusters dilutes as time goes by, this is very different from the image that is being given in the theory. There it is nowhere suggested that the effect of dilution should occur. Nonetheless, it does. Because the level of unity is lower than suggested, it is less likely to see high levels of risk sharing or dependency between the creative entrepreneurs that influence the degree of spill-over effects created. This is not necessarily a bad thing for the creation on spill-overs. The creative entrepreneurs in the clusters apparently do not have to become dependent on each other to survive. They can help each other out, but that is something entirely different. Because they can jump on every opportunity they

see without having to talk it through with other parties, they can act much faster. This is beneficial for the degree of spill-overs created.

The interviewees C1, C2 and Gov2 all said that the firms in the early stages of the cluster really try to build something together and try to act as a unity instead of a cooperation between a couple of firms that were scraped together. This does not take away the fact that in many cases this notion of unity slowly dilutes and the firms in the cluster start to focus solely on their own firm. This phenomenon seems to be less in a cluster that was formed by the creative sector itself, instead of being initiated by a (government) organization (C2). Other factors like *resource sharing* and *cluster composition* did prove to be important. It is important that the firms in a cluster are complementary because the firms can relate to each other's business and understand to some extent what the others are doing without being each other's competition. In that way new insights can be gained by working together because of the different fields of expertise (C1). Furthermore C2 adds that it is easier for a firm to take a job for which not all the expertise is already present in the firm, thus creating a capability of accepting a wide range of jobs. Because of the complementary character of the firms in the cluster, obtaining knowledge about something is fairly easy. Knowledge spill-overs occur during the process and there is a chance that new innovative ideas emerge from these conversations because the complementary fields of expertise all look at something from a slightly different, fresh, angle. This not only helps the individual firms to accept jobs easier, but more importantly helps to strengthen the relations between the firms in the cluster itself. Because of the face-to-face time between the firms, an atmosphere is created where people feel comfortable, can learn from each other and a 'the-door-is-always-open-atmosphere' is being strengthened. An advantage of a versatile cluster is that they almost never have to turn a client down, because there almost always is a firm in the cluster that can take on the job. That is good for the *image* of the cluster.

As for the *culture* of the cluster, C1 and C2 do not see excessive differences between the people within the cluster or differences between cultures within the cluster and within traditional companies. They think that differences of culture are not negatively influencing the cooperation within the cluster in any way. C1 does add that whereas the culture has no real influence in their cluster, the difference in backgrounds of the different entrepreneurs has. He says that '*the cooperation between the creative entrepreneurs will mostly create at least some kind of spill-over, because firms with different backgrounds and fields of expertise are working together.*' This stimulates the creation of spill-overs. According to this the firms in the region and the creative entrepreneurs should not find it too troubling to work together on basis of their respective cultures. This was to be expected because the theory on the motives for clustering said that one of the main reasons to cluster is the social interaction and the opportunity to work together with other creative entrepreneurs. While differences in culture within the cluster itself did not appear in this research, the chance of this happening is present. If too large a

difference exists in the cluster, the degree of spill-over created could be influenced negatively. If the differences prohibit the creative entrepreneurs in the cluster to socially interact or work together, chances are that a lower degree of spill-over is created. Although there was no noticeable difference in culture within the cluster, there is a difference in the culture between the different clusters. C2 mentions that for instance the Puddingfabriek focuses more on the creative side of the word 'creative entrepreneur' and that the Mediacentrale focuses more on the 'entrepreneur' side of the word. This means that it is somewhat more formal in the Mediacentrale and appointments have to be made to see someone, whereas this does not count for the Puddingfabriek. The cluster at the Bloemsingel has more spaces for autonomous artists and apartments for 'normal' people, which creates a more 'every man for themselves' atmosphere in contrast to the interacting and doing business together atmosphere in the Puddingfabriek. How this difference influences the creation of spill-over is not clear. The creative entrepreneurs stated that there is almost no regular contact with the other clusters, and differences in culture cannot negatively influence relationships that aren't there. C2 did say that the slight difference in culture would not stop him from interacting, but that most often they saw no reason to interact.

Something else that is important according to both C1 and C2, is not only the composition of the firms in the cluster, but also the location of the cluster and the size of the building it is located in. If the building is too big and has spaces in it that are almost too large to handle (as is the case with the cluster in the Mediacentrale), creating a good atmosphere where everyone feels at home and knows each other is hard to create. This definitely has its impact on the (lack of) relations that are being formed between the firms and ultimately on the spill-overs that could be created.

Interactions between the cluster and the region

The external factors directly affect the degree of spill-overs generated through the ability of the cluster to connect with the region, position itself in such a way that they get noticed and possibly make sure that the innovations they make agree with the interests in the region. Although it does not need to be in the interest of the cluster to tailor to the wishes of the region, when they specialize in work that is easily transported (for instance working in the new media sector). Although the highest degree of spill-over effects for the region logically takes place when the cluster and the region have the same interests and preferably slightly different backgrounds. This does not take away that it's not possible for creative entrepreneurs with completely different interests to create spill-over effects. The highest chance of spill-overs to have an impact on the geographical region are the ones created with innovations or ideas the region can grasp.

While the creative entrepreneurs have already shown that they are *committed* to what they do by taking the step to join a cluster, this is only the first step. Depending on the stage of the cluster, if it has started only recently or it already existed for a longer time, the advantages for the new creative entrepreneur will vary. While the cluster should also provide benefits for the creative entrepreneurs

that have been in the cluster for some time, the benefits for the starting creative are the largest. Gov2 and C2 acknowledge that this group benefits the most. The *age* and even *experience* of the different creative entrepreneurs within the cluster do not really seem to matter to firms in the region, it mostly comes down to the *brand awareness (or image)* of the cluster as a whole. The image of the creative entrepreneur seems to be secondary to the image of the whole in the eyes of the region. This does not take away that the experience of the creative entrepreneur does count in the eyes of the cluster. The more experience and knowledge a new creative entrepreneur takes with him into the cluster, the more the cluster benefits from its new inhabitant. That experience can be of influence on the image of the cluster. Once the cluster (and the individual creative entrepreneurs) gain experience, it is easier to build a positive image for the cluster. Whether this is accomplished by promotional campaigns or just by performing well when they have a project. The image of the cluster will then be affected by the experience of the creative entrepreneurs within the cluster. Something else that has to be considered is the age of the cluster as a whole. When the cluster exists for some time, knowledge spill-overs have had enough opportunity to occur. If a creative entrepreneur then decides to leave the cluster, the cluster does not lose all that knowledge because over time parts of it have spilled over to other creative entrepreneurs in the cluster.

The possibility of the creation of a certain degree of spill-over towards the region thus depends on the image the cluster has in the eyes of the region instead of the image of the creative entrepreneur as an individual. It is far better for a starter if he can say that he works in a well known cluster than if he works from his own attic (C1). While the activities that are being done might be exactly the same, firms in the region might decide to hire him when he is in the cluster, while they might be reluctant to do so when he is operating from his attic. It is important for a committed creative entrepreneur to be part of a cluster. A reason for the region's focus on the image of the cluster instead of on the age or experience of the individual creative entrepreneurs could not be found. It could be that the region knows of the availability of knowledge and the sharing of it within the clusters and hopes to use all the knowledge of the cluster by hiring just one creative entrepreneur. Another, much simpler reason, is that the firms in the region are more aware of the cluster simply because of its size and decide to hire them instead of a small creative entrepreneur who works on his own and of which the region is not aware.

Another advantage for starters is that building up a network is easier when you already know others in the creative sector. The cluster also provides the creative entrepreneur with knowledge that is easily accessible. Because of the sharing of resources in the cluster, knowledge is easily obtainable on a wide arrange of subjects. This is good for the rate of innovation in the region. The availability of knowledge is also why creative entrepreneurs only rarely use (international) *external sources of knowledge* (C2). They do not see the need to get their knowledge from afar because they got everything they need in the cluster or in the region. While this is convenient and it tells us that there is a lot of knowledge and

creativity in the region, or at least enough to satisfy the needs of the creative sector in the region, it might not be the best option considering the degree of spill-over created. The theory states that knowledge from within the region itself is mostly used for incremental innovations and that knowledge from external sources is most often the basis for radical innovations. This because of the origin of the knowledge then most often lies in adjacent fields of expertise, the combination of knowledge from both fields results in a radical innovation. By simply collecting knowledge from within the region, it can be that certain spill-overs are being missed. The effects from this on the degree of spill-overs created might be that instead of creating spill-over from radical innovations, only spill-over from incremental innovations is being created. Although the theory is there, it is not sure if it will hold up in practice here and it is also not sure if the creative entrepreneurs can find the knowledge they need from these kind of external sources.

As the image of the cluster is quite important it is vital that you keep working on it in order to try and remove misconceptions the region might have (C1). The region often does not discriminate between culture and creativity. And because artists, which are almost always positioned in the cultural sector, are often perceived as somewhat strange or off-beat by a lot of people, this misconception also spreads to everything that is creative. That is why people at the Puddingfabriek cluster are glad that the cluster at the Bloemsingel is created, which is mainly focused on the cultural aspects. As firms in the region can now compare the cultural and the creative cluster, they hope that some misconceptions will be fixed and a possibly negative image will not negatively influence the degree of spill-overs.

The clusters are an important tool to stimulate innovation and creativity in the region and the government also has stakes in making the clusters a success. That is why they are *willing to cooperate* with the creative sector and (in)directly give financial resources and privileges to the creative sector and the clusters. This all in an attempt to make the region more creative and innovative. But it seems that (a part of) the creative sector has its doubts about the way the government is spending its money.

Something that C1 and C2 agree upon is that subsidizing the creative sector (heavily), might for a large part keep firms alive that shouldn't be and it might lessen the creative spirit of the creative entrepreneurs. When subsidized, a firm might start to become lazy. They do not have to find creative solutions to solve problems they encounter, because they already have money. And when that money runs out, they do not know what to do to keep their business up and running or they find out that they could never run their business profitably. The only way in which this type of subsidizing might be beneficial to the government if they support people that are on welfare money now, and try to set-up their own business. If this succeeds, the creativity in the region goes up, and the government does not have to pay them welfare money anymore (C2). Overall they think this kind of subsidizing is bad for the creativity and the creation of spill-overs in the long haul.

C2 thinks that, although the clusters themselves are a good initiative and surely should not be abandoned, instead of just continue building more of the same (clusters), the money might be spend more efficiently. An example are the highly subsidized working spaces for starting artists at the Bloemsingel cluster. These are unnecessary because the artist that is serious about his business will be able to pay prices that are more market conform or can find working space through anti-squatting organizations like Carex. It would be better to use this money to facilitate a platform on which up-to-date information is kept about the availability of buildings/spaces that are unoccupied and can be rented for a low fee. And while the clusters are good for stimulating the creativity in the region, it might be a good idea to not just copy the cluster and make more of them, but to tinker with different variables like use of space, size, location and type of firms in order to try and find out how to build 'better' clusters (C1). Grants could also be used to advertise the successes of the creative sector to heighten the awareness in the region. Until now, this is not happening often enough. By counting the successes of the creative entrepreneurs and the clusters they will highlight what the (creative part of the) region is capable of (C2). Showing the region what the creative sector can do will boost the image of the cluster and heighten the awareness of what is happening within the clusters. This can positively influence the willingness of the region to cooperate with the clusters and the possibility that spill-over is created. It is not that the firms in the region do not want to cooperate with the cluster, but often they do not exactly know what the clusters can do for them.

There are no real barriers why the firms can't contact the firms in the clusters. Not even the different forms of legal system that the government make use of. C1 and C2 say that they make use of the legal system and that it plays a role in their day to day business. While it restricts them in some ways, it also helps to protect their own work, *'you will be surprised how often the owner of for example a piece of music or film will discover that his work was used by someone that did not have the rights'* (C1). The creative entrepreneurs also mentioned that they never rejected a job because they thought that the legal issues were getting too much. Sometimes you have to deal with all kinds of agreements, but that is business and you just have to deal with it. In the end you still are an entrepreneur. The only thing what does happen sometimes is that the firms in the region are reluctant to go to the 'vague artist types'. One thing that was a bit remarkable was that the creative entrepreneurs said that most of their jobs came from firms in the region, but once they were asked to name a few businesses with which they worked together (intensively) they could not name a single firm. This implies that the contacts with firms in the region are only short and that no real relationships are formed between them.

6.2 Findings for the Government

To get accurate information on the role of the government in stimulating creativity and cooperation, persons in different parts of the government were interviewed. Someone from the municipality Groningen (Gov2) and someone from the Province of Groningen (Gov1) were willing to participate in the interviews. The latter person was mostly trying to translate (inter)national rules, regulations and projects to the needs and strengths of the northern region. The person at the municipality was more focused on trying to implement these projects into the region and trying to accommodate the already present creative sector in multiple ways. Both layers of the government agreed that the work on the creative sector in the north of The Netherlands was ultimately based on the thoughts of Richard Florida. Of course it also helps that the knowledge economy is getting more important every day, because large parts of the production economy have already migrated towards the (mostly) third world countries. That is why the stimulation of spill-overs of amongst others knowledge and cooperation is therefore very important.

Stimulating cooperation with the cluster

The creative sector can create knowledge through innovation. To do that certain amounts of cooperation are needed, be it between creative firms or between traditional and creative firms. Apart from some initiatives from the creative sector and the IAG (Innovative Action program Groningen) like the 4x4 program, there were no real attempts to stimulate cooperation between traditional and creative firms (Gov1). But there are a few instruments used by the government, to stimulate the creative sector and the creation of spill-overs amongst parties in the region which will be discussed below.

Legal system

The persons at the local governments do not normally work with the legal system as such. Maybe because of this, their view on the legal system (as a factor that influences spill-overs) might be somewhat distorted. Both acknowledged that most of the times it is hard enough to deal with the legal system for the often larger traditional firms, let alone for the creative firms. That is probably also why there were some doubts about the degree to which the creative sector in the North could make use of this. The opinion ranges from *'the creative sector probably does not use the legal system because of the costs and because they are all about sharing'* (Gov1) to *'they probably do use the legal system to protect themselves, but not everything in the creative sector is easily protected'* (Gov2). Although the legal system might not be very easily accessible in the eyes of the government, it is formulated and determined nationally and normally can not be altered to fit the needs of a specific region. It is the same for all the firms and clusters in The Netherlands. Although it is acknowledged that the legal system plays a role in the degree of created spill-over effects, the amount of influence probably is not

that large because the creative sector can execute the creative processes with the system in place. They do not feel hindered. While it is difficult to measure the exact effect, according to the government the legal system might not be doing what it is supposed to be doing for the smaller firms, namely protecting their assets. The system might be too hard to access for smaller firms, but that does not keep back their efforts to be creative and innovate. In the eyes of the government the system does not negatively influence the amount of spill-overs, it is just that the smaller firms might not see the full rent that they deserve for creating the spill-overs.

It is surprising that the beliefs of the government on this matter are so different from the actual situation, because the cluster stated that they do make good use of the legal system. Although there is a slight misconception on the side of the government, the consequences for the degree of spill-over effects should be minimal. This considering that the cluster has to work with it, which they are obviously doing, and the local government can't alter the legal system even if they knew it was being used by the cluster. Literature about whether legal issues are restraining the creative spirit or not is widespread and not unambiguous. In this case creating spill-over from creative processes does not seem to be hindered too much (C1 and C2). Everyone has to deal with the same legal system, the creative entrepreneurs say they never had to decline a project because of the system and at the same time their innovations are reasonably protected under the same system. How a less strict legal system would influence the degree of spill-over created could not be estimated by the interviewees.

A stimulating creative policy

There are a couple of things that are being done to make the region more creative and innovative and put the north of the Netherlands on the map and at the same time make a transition to a more knowledge based economy. There are the promotion campaigns of the city of Groningen which advertises itself as the City of Talent (Gov2). An example of this is using a large beamer to project the City of Talent logo on the tower of the Martinitorren (a church in the centre of Groningen) during the Keiweek. Aside from this there also is a program that actively tries to attract new firms towards the region that are complementary to the firms already present in the region. Attracting new firms is done by the NOM (Northern Development Agency) by order of the government. They can offer information on certain sites and guided tours to try and get certain parties to settle in the North of the Netherlands. A downside is that this is almost never done for (the almost always very small) creative firms (Gov1).

Due to the fact that stimulating the creative sector on a scale as is happening today is new, it is still not really clear what the effects of different measures are. That is why a large amount of funds that are dedicated to stimulating the creative sector is invested in research (Gov2). This can be in the form of locally conducted research in order to discover the needs/possibilities/whishes of the already present creative sector. Or in the form of a joint research with multiple cities in Northern Europe (the Creative

City Challenge) concerning finding formats for creative breeding grounds as catalysts for the creative industry and the knowledge economy.

Willingness to cooperate between government and cluster

The government and the cluster are quite willing to cooperate, because they can mean something to each other and with that they can mean something to the degree of spill-overs created in the region. Heightening the intensity of cooperation between the two parties increases the chance of creating spill-overs in the region through cross-fertilization. For the government to achieve cooperation, the promotion of the creative sector is important because of its innovative nature, the symbolic function and gaining a critical mass of creatives to attain and attract new creative entrepreneurs. The bigger the creative sector, the more diversity and buzz, the more the creative persons feel at home in the region and the bigger the chance of a higher degree of spill-over (Gov2). And the bigger the sector is, the bigger the chance that traditional firms can find a suitable creative entrepreneur to work together with.

Versatility is also important, that is why the government also tries to get as much complementary firms in a cluster they (indirectly) subsidize (Gov1). The creative sector in its turn can profit from the advantages the government can give them. A large part of the clusters in the North are still in its infancy, but growing. This can be aided by the government by for instance scouting suitable working area's for the creative entrepreneurs and offering them at a reasonable rent (the clusters). Offering spaces for multiple creatives to work in seems a good place to start cooperating. But not everyone believes that they have that much influence on cooperation and spill-over effects. From the little experience that is present it seems that the sentiment of unity and the willingness to really work together within the cluster is only present in the initial phase of the cluster and diminishes over time (Gov2). The cluster as a unit of relations and the opportunity of knowledge in the proximity might be overrated. The clusters would be of most worth to starting creative entrepreneurs because it heightens the image of the individual entrepreneur and the contacts they have in the cluster might come in handy when a network still has to be build.

Financial resources for the cluster

The use of grants is a widely acknowledged tool as part of the stimulating creative policy. For now, most of the money spend on the creative sector in the north is not directly going to the creative sector. A lot of the funds go to research about the sector so that, in the future, the resources can be spend more effectively (Gov2). Government money is never given to a single firm, this to prevent distortion of competition (although there are parties like the NIOF (Northern Innovation Support Facilities) that do give grants to single firms). As direct subsidizing almost never happens for single firms, clusters and creative projects are the focal point of the subsidizing. While the government sees

this as one of the ways in which they can influence the level of creativity and innovation in the region, and indirectly influence the degree of spill-over effects, the money that is available for the sector is mostly distributed to different projects by different agencies (Gov1). Only a small part of the grants are awarded directly by the government, by different departments like the Department of Economic Affairs and the Department of Culture.

Something that is remarkable is that the kind of restrictions in place differ when different departments of the government issue the grant. When for instance the Department of Economic Affairs makes restrictions, these are more measurable in the form of workplaces created and income generated. When the Department of Culture makes restrictions it is focused on “*making the cultural side of the region more visible, stimulating meetings and transactions between creative people, facilitating contacts between creative sector and the business sector and retaining young talent in the region*”. While these restrictions are being drawn up, the projects are rarely cut on their grants or forced to pay them back when they cannot meet them. There are no real numbers on what these creative sectors mean for the region in an economical/creative sense. The data that is gathered is focused more on the cluster itself and not on what kind of changes (in e.g. the amount of workplaces) this brings about in the region. This is partly because changes in the cluster are visible, in contrast to differences in the influence the cluster has on the region. Because the government is also limited in resources and to some extent limited in knowledge about this subject, this is the best way to see what the effects of the grants are.

A large part of the grants that are being awarded are not directly handled by the government but are awarded through the IAG, a government controlled program to give a new impulse to innovation in the region. Koers Noord is also a party which the government has chosen to cooperate with and is an example of a program which wants to strengthen the (inter)national position of the North. Choosing between different kinds of programs is the most influence the government has on influencing the eventual spill-overs (Gov1). The points of attention of Koers Noord are creating more points of economic interest and make the transition to a high quality knowledge and innovation based economy. This corresponds with the guidelines the government has in order to try and make the Dutch economy a real knowledge based economy. The creative sector can contribute to this by generating knowledge through innovation.

Privileges

Although the government cannot give preference to a particular sector because of distortion of competition, they can do some things for the creative sector (Gov1). A large part of the region will benefit if the creative sector will start to blossom and the innovation might help to move towards a knowledge economy. That is why the government is quite willing to help the creative sector in the ways they can. They can change development plans for pieces of land or buildings and can facilitate the acquirement of needed permits and licenses for activities or special projects (Gov2). An example

of this is found near the creative cluster at Bloemsingel 10. Right next to the cluster is a large piece of terrain which is not in use at the moment, but was meant to build houses on. Due to the economic situation this program has been delayed. Now through an initiative of the creative sector and the help of the government, temporary housings, a gallery to sell art and buildings for starting entrepreneurs are build (the Open Lab Ebbinge project). This as a support function for the cluster(s) and to stimulate a creative/innovative ‘buzz’ in the region.

6.3 The Region

The region is the last of the three actors that will be discussed. Unfortunately no firm located in the region could be found which had cooperated on separate occasions and had formed a real relationship with a cluster. The work that is being done at the clusters appears to be once only jobs and almost no relations are formed. To try and get insight into this side of the conceptual model, someone (R1) from a company which focuses on increasing the innovative and competitive nature of the region was interviewed. This company is partly financed by the Department of Economic Affairs of the Province of Groningen. It is just another way of the Province to try and stimulate the innovative and creative character in the region through the *stimulation of cooperation*.

They do this through trying to optimize single (traditional) firms who come to them for help, and bring parties from the region together who could mean something to each other, or to the region. They also work together with (parts of) the creative sector in the region on occasion, so their understanding of what’s going on in the region is quite good. Because the creative entrepreneurs do not often seek assistance, R1’s contacts with creative entrepreneurs from the region are variable. Nonetheless it is obvious to R1 that by working together both the creative sector and the traditional firms could benefit. When he looks at the needs from the traditional sector and the response on meetings they organized between traditional and creative firms, he concludes that there definitely is a *willingness to cooperate* and that cooperation holds great potential for both parties. The opportunities range from simply solving solutions the traditional firms have with a wide range of problems through looking at it from a different perspective to cross-fertilization and innovation. This would certainly heighten the degree of spill-overs created with a great amount.

A problem for traditional firms that occurs a lot is that they do not (know how to) differentiate themselves and their products from their competitors. If the creative sector and the traditional sector would work together this could not only result in economical spill-overs through differentiating the products of the regional firms, but could just as well result in product innovations because other materials are used or because the whole product was redesigned. The problem often is that the traditional firms do not think of working together, because they do not know it is an option. It comes down to a lack of awareness in the traditional sector when it comes to this kind of cooperation resulting in a large negative influence on the degree of spill-overs. Cooperation just doesn’t happen

often enough. Heightening the awareness of the traditional sector about the creative sector and the possibilities they offer would positively influence the degree of spill-over created in the region. Where most of the spill-overs would be economical of nature in the beginning, unforeseen possibilities can be discovered during the process, leading to other kind of spill-overs.

R1 does not believe that a lack of *absorptive capacity* in the region is a reason for traditional firms to be reluctant to work together. The firms that are willing to change things in their company or are willing to try things someone else suggests, mostly are committed to what they do. They are willing to spend time and resources into making their company better and in understanding what the creative sector is trying to do and vice versa. If for instance knowledge spill-overs could occur, R1 does not think that a lack of absorptive capacity in the region would prevent this. There is a good chance that the creative sector and the traditional sector could profitably work together, if steps are being taken to encourage this.

6.4 Communication characteristics

Proximity

The physical *proximity* factor does play a role in the creation of spill-overs. This factor is about the physical distance between two parties that have to cooperate or share knowledge. Not only within the cluster is this a factor, but also between the parties in the region. The awareness of the traditional firms in the region about the creative sector is quite low in most cases. If there is a large geographical distance between the traditional and creative firms, the chance of cooperation between them, and the possible change of spill-overs, diminishes. The proximity factor also plays a large role between creative entrepreneurs within a cluster. Resource sharing, mostly knowledge, but also things like networks or working spaces (C1 and C2) is something that happens often. When the geographical distance increases (even within clusters) the chance of a diminishing effect on cooperation is present. An example of this is the Mediacentrale (C2), where there is a lot of space that makes cooperation harder to manage because of the size of the building. This would mean a lower degree of spill-over created, even if it almost all takes place within the cluster. The downsides of proximity mentioned in paragraph 4.4 such as certain restraints were not encountered. So only positive points regarding proximity on the creation of spill-overs were encountered. Now it is the question how to optimize this factor and its influence on the creation of spill-overs effects.

Real differences in *relational proximity* were not encountered. These differences entail differences in culture, beliefs, mindsets and so on between the creative sector and the traditional sector. A large difference in this factor can work as a barrier to cooperation and the creation of spill-over effects. In this case both the creative sector and region said that there was no real difference here. There was a big enough amount of absorptive capacity in the region according to R1, and the differences in things

like culture were taken for granted by the region because it is they who want to hire the expertise of the creative sector (C1 and C2). Minor idiosyncrasies are taken for granted. The biggest problem here is that a lot of the times the traditional firms are not aware of the possibilities the creative sector can offer. If people from the traditional sector would start cooperating with the creative sector and produce positive results, the awareness problem will diminish if the successes will be given exposure within the region.

Although no large differences were discovered considering the (relational) proximity a few minor things were encountered. Relational proximity does play a role in the cooperation between the government and the creative sector. It is not as much that the parties do not understand each other, but they are bound by a different set of rules. The government has to account for everything they invest and must set up terms that have to be met in order for someone to be considered for a grant. A lot of people in the creative sector do not care for all the rules and regulations. They have a plan and say “just give me the grant and come back in a year and you will see that it worked”. Obviously the start of the cooperation will be a bit troublesome. Further misunderstandings are being prevented as much as possible by regular face to face contact. This is good to reduce the relational distance from each other and further problems might be detected and acted upon in an early stadium.

There was a small difference between Gov1 and Gov2 in their knowledge about the creative sector and their needs/wishes. But this was to be expected considering that the persons spoken to were on two different layers of the government organizations. One of them was on the level which directly interacts with the creative sector and the other does not. Both differences in relational proximity should not have an influence on the degree of spill-overs created in the region.

According to the theory about relational proximity and the effectiveness of knowledge sharing and face-to-face time, the more tacit the knowledge is, the higher the dependence of a successful knowledge transfer is on face-to-face contact. Considering that the factor proximity only showed positive influences, and that the relational proximity did not cause problems, the face-to-face meetings should not be hindered by these factors. This is beneficial to the degree of spill-over created in the region. The only thing is that at the moment there are only a few cases in which the creative sector and the traditional firms sat around the same table and tried to reach a common goal. The interviews (C1, C2, Gov2 and R1) showed that most projects the creative entrepreneurs receive from the traditional firms do not involve extensive contact between the two parties. The nature of these projects had more in common with outsourcing certain tasks than with strategic cooperation. In that light the impact of the positive influence of (relational) proximity on the degree of spill-over created for the region is less than what could be the case. Once the two parties start to cooperate properly, the potential of these factors can be used and they would become more important as a factor influencing the degree of spill-overs that is created.

Innovation type

When looking at the innovation types coming from the cluster in relation to the region, it does not become clear whether this results in a lot of spill-overs for the region. Innovations made in the cluster vary from small (creating new sounds for the music industry) to large (creating the first online dating agency) to designing all kinds of projects by architects (C1). Although a substantial part of the work received in the clusters comes from the region, no real relations are formed. It seems that most of the work are jobs which the firms in the region see more as just outsourcing something (setting up a website) than as creating an innovation together. Most of the spill-over that is created seems to take form in the cluster itself, because knowledge is often shared within the cluster in order to successfully complete jobs offered by the region. The creative entrepreneurs in the cluster say that if the knowledge that is needed is not present in their own firm, they start searching within the cluster. According to them, it is almost never the case that they have to search outside of the cluster, let alone that they have to obtain it from a (inter)national source (C2). It seems that *in this situation* the innovation type is not relevant to the creative entrepreneur as a basis on which they decide where to get their knowledge from. This in contrast to the theory which states that knowledge for radical innovation often comes from outside the region or field of expertise and the knowledge for incremental innovations often comes from within the region. For the cluster it does not matter if the innovation is large or small, the knowledge is most frequently gathered within the cluster itself. Because of that, the impact of the innovation type as factor for the degree of knowledge spill-over created for the surrounding region in this situation is low. As is already discussed in the previous paragraph, this does not take away that if the creative entrepreneurs would search knowledge in sources external to the region, the importance of the innovation type as an influencing factor on the creation of spill-overs would be bigger. If knowledge is gathered from outside, according to the theory the chance of radical innovation occurring over incremental innovation rises. This would then positively influence the degree of spill-overs created in the region, because the spill-over from radical innovations often has a larger impact than that of the incremental innovations.

Chapter 7: Conclusion

The conclusion

This thesis started with the main research question: *To what extent do creative clusters have economic/creative spill-over effects?* In this section an answer is given for as much as this is possible. Because no hard data in the form of numbers was available and could not be acquired because not one of the parties can clearly show/measure the spill-over effects, the following is based on the qualitative research that was performed.

When looking at which actors from the model have influence on the degree of spill-overs created in the region, two actors clearly have more influence than the other. The highest amount of influence is being exerted by the creative sector (the clusters). The second actor that influences the degree of spill-over created is the government. The firms in the region exert the least amount of influence at this time.

The cluster is the largest producer of spill-over at the moment and is willing to cooperate with the firms in the region. They really are trying to get closer to the firms. They host (network)meetings and have special innovation vouchers which firms can use to get in contact with creative entrepreneurs and work together against a reduced price. It is regretful that a firm from the region could not be spoken to and it could not be uncovered how the region valued the attempts of the creative sector or if there were things that they would value higher. The spill-over created at this moment is mostly between the creative entrepreneurs in the clusters themselves, when they are working together, or just during informal moments. These spill-overs might eventually spill-over into the region, but it is less direct than the synergetic effect of working together with a firm from the region.

The government has a big role to play in the stimulation of cooperation. In order to make the region more attractive and play their part in the knowledge economy, a higher innovative character in the region is wanted. A lot of research is done (and is still going on) on how to best spend the available resources in order to create spill-overs. Although the government tries to spend their funds as effective as possible, they too are restricted by rules and regulations. This sometimes also restricts them from doing what they think is the best and they have to choose the next best thing. And although they are trying to stimulate, it is hard to see which approach makes best use of the resources granted. This is mainly because it is very hard to estimate the real potential of projects and to determine what would be reasonable restrictions and expectations. The only way in which is measured if the grants that were issued were effective is by measuring the amount of creative activity in the region (Gov2). The municipality has a statistical tool based on the definition of innovation by TNO, which can show the amount of activity of certain groups of firms (in this case the firms that were labeled 'creative/innovative'). The creative activity increases when for instance new firms in these sectors are

founded. Apart from this, measuring the effects of stimulating measures can only be deduced through dialogues with the parties that are involved.

If we take a look at the contribution of the firms in the region, we can see that this is minimal. The times that they decide to cooperate with the creative sector, it feels more like outsourcing than working together. It became clear that the full potential of the relations between the creative sector and the traditional firms is nowhere of being used to its full extent. No relations are formed and once the work is done by the cluster, they go their separate ways. According to persons from the government, the cluster and the people from the region, it would help if the creative sector would be promoted in the region to show that they are there, what they are capable of and what they have achieved already. This would be a great stimulus for the cooperation within the region and for the level of creativity and innovation. The firms in the region might discover all the reasons why they should be working together which then could lead to a higher degree of spill-over created.

In the following table, the factors that were introduced in the conceptual model are being presented along with the actor the factor belongs to, the frequency the factor was used to influence the degree of spill-over effects created and the impact the factor has on the degree of spill-over created. Every factor will be discussed briefly.

Factor	Actor	Frequency	Impact
Brand Awareness	Cluster	Is used regularly. Is often a factor on which the decision of firms is based whether to work together or not. Both newcomers in the cluster as older creatives in the cluster benefit.	Reasonably high, could be even higher if the firms became more aware of the clusters.
Commitment	Cluster	Commitment to innovation is everywhere throughout the cluster. People deal with innovation every day.	Reasonably high, will have more pay-off if the commitment is used in cooperation with firms in the region.
Experience	Cluster	Experience of the cluster is constantly used to innovate, whether it is personal	Moderately, the experience of the cluster as a whole has

		experience or that of the cluster as a whole.	more impact than the experience of the individual creatives. Creatives that have been in the cluster for some time can transfer their knowledge to the newcomers.
Culture	Cluster	Differences between the culture of the cluster and the region are not often a factor by which the creation of spill-over is influenced (in this case). Only small differences were found, but these could be overcome.	Moderately, the impact of culture would be bigger if bigger differences were detected. Cooperation can become more troublesome with bigger differences, but rewards might become bigger.
Age	Cluster	Not frequently an influence on the amount of spill-over created. Age is not a selection factor for the firms in the region.	Fairly low, image (and to some extent experience) are far more important.
Risk sharing	Cluster	Does not happen	Low
Dependency	Cluster	Although the creatives in the cluster are not dependent on each other to survive, they can help each other out. Creatives can be replaced easily when they exit the cluster.	Low
Resource sharing	Cluster	This happens a lot within the	High, but could be

		cluster. Especially higher if the knowledge is shared within the cluster. Sharing knowledge or other things with external parties is almost non-existent.	
Cluster composition	Cluster	Frequently influences the creation of spill-overs. When the cluster is composed of complementing firms, knowledge from different fields of expertise is present and can easily spill-over to others in the cluster.	High, if creatives have complementary skills in a cluster, this greatly influences the spill-overs. Problems can be solved from looking at it from different angles and the chance of radical innovations becomes bigger.
Legal system	Government	Is used often, but all the actors state that the legal system does not inhibit or encourages them to innovate.	Low, but because it is a given constant no estimations were found what the impact would be if the legal system would change.
A stimulating creative policy	Government	Is used frequently to try and stimulate the creation of spill-overs in the region.	Moderately, if more research and control mechanisms were present, a better understanding could be given of which factors should be stimulated. It is not yet very effective.
Willingness to cooperate	Government	Is high, in order to make the region more innovative and	Low, because real cooperation almost

		create spill-overs.	never happens and the willingness is thus not used.
Resources (and restrictions)	Government	Is often used to stimulate the creative sector and the cooperation of the traditional firms with the creative sector.	Moderately, would be higher if it was known what kind of resources would have what results. The government is also limited in their use of resources by regulations.
Privileges	Government	Is not used that often, the government is also bound by rules and cannot favor certain actors (distortion of competition).	Moderately, power of the government can be used to gain favors. The cluster then still has to work to create value.
Stimulating cooperation	Government	Is used now and then, but a good procedure is not yet known.	Moderately, but if the region and the creative sector would work together, the impact on spill-overs would be high.
Absorptive capacity	Region	Is not often an issue because cooperation does not happen often.	Low
Willingness to cooperate	Region	Does not frequently influence the degree of spill-over created. There does not seem to be a lack of willingness to cooperate, but a lack of awareness that this	Low, but if the awareness of the possibilities would be bigger, the impact would also be bigger.

		is possible.	
International knowledge transfers	External sources of knowledge	Almost none existent. All the knowledge is acquired within the cluster or region.	Low, but the impact could be far higher because of the higher chance of radical innovation through external knowledge.
Desired goal	Communication characteristics	Does not frequently influence the degree of spill-over created.	Low, mostly the goal dictates which cooperation is needed and where the knowledge has to be acquired. But considering almost no cooperation takes place and knowledge is only gathered in the cluster the impact the degree of spill-overs is low.
Proximity	Communication characteristics	Is often important, mostly because of a large part of the cooperation takes place within the cluster in the form of internal spillovers. Proximity improves the easy way with which the cooperation takes place. In what way proximity plays a role with external spill-overs could not be researched.	High, the knowledge that is being shared is mostly tacit knowledge and is better transferred with higher levels of proximity. It becomes even more important when the parties that are cooperating are further apart from each other (external spill-overs).

Table 2: An overview

In uncovering to what extent the creative clusters have a part in the creative/economic spill-overs created in the region, it can be said that they have the most influence of the three main actors that were examined in this thesis. The biggest part of the spill-over was created within the clusters itself, but even when looked at which of the three actors created the largest amount of spill-over in the region, the cluster also is the biggest contributor. Nevertheless, the amount of spill-over created could be far more if the different parties (especially the region and the creative sector) could be made insightful into the potential working together holds. Until now mostly internal spill-over is created and the extent to which external spill-over is created stays behind.

Implications

The biggest implications from this research will be for the government and to lesser extent for the region. If the government wants to stimulate cooperation between the region and the creative sector a few important things have to be done. The government is already trying to gain knowledge on different subjects. Nonetheless it cannot be stressed enough that sufficient knowledge concerning the stimulating of creation, cooperation and of trying to find ways in which the results of the different initiatives that are being executed can be monitored, is essential. It is essential that the firms in the region are being made aware of the possibilities the creative sector offers, because according to the interviews, there are no barriers and there is no lack of willingness to cooperate.

According to the creative entrepreneurs, the government is committed to support the creative sector, but never once asked the creative entrepreneurs about their opinion on the support measures of the government. If the government would ask for their opinion, the policy for stimulating creative activity might gain some useful initiatives and the government might gain more insight into the on goings in the creative sector. A shift in Wijnberg's selection system would then take place from "expert selection" to "peer selection". Examples here are other forms of subsidizing in which creative entrepreneurs do not get 'lazy' or building a platform on which available working space is being placed instead of building heavily subsidized projects which will probably never make up for what they have cost in the beginning.

Something that has not been taken into account by the government, but might be worth the effort, is trying to convince the creative sector to look into cooperating with clusters or firms which are outside the region. The focus could then shift from a situation in which there are purely internal spill-overs to a situation in which external spill-overs occur. In that way the chance of obtaining new knowledge in the region becomes bigger and with that the chance that the region reaps the benefits of radical innovations and their spill-overs. It is not one of the easiest things to do, but when successful will prevent the region from being stuck with the same products and services forever. The proximity factor would then become more important because of the increasing distance between parties. How the

proximity factor will then influence the cooperation and its spill-overs in this new situation cannot be said, because no information could be collected regarding this matter.

The region also has responsibilities in trying to make the region more innovative and creating chances for themselves as well as for the other firms in the region. They should be stimulated to tell about the successful cooperations they had with the creative sector. By doing this the awareness is raised, cooperation is being stimulated and further spill-overs can be created.

In the end, the cluster also has to put some more effort into trying to make cooperation possible and work towards a higher degree of spill-over created in the region. In the end everyone will benefit, including the cluster. For all parties in the region external spill-overs are better than internal spill-overs. To accomplish a higher degree of external spill-overs, cooperation has to be accomplished. The cluster already has made attempts to lower the barriers for the firms in the region by giving out innovation vouchers. Another option to overcome the barriers can be for someone from the cluster to go and talk to the local firms. This can be in a 1 on 1 setting, but can also be in the form of a large meeting with multiple parties. At the same time misconceptions about the image of the cluster in the eyes of the region can be taken away.

The cluster also has to realize that the region has an image of them as a whole. It might be worthwhile for all the creative entrepreneurs to all try and send out the same message, so the right image of them is enforced. In this light it also is a good idea for them to do or create certain activities together and try to adjust their businesses to a common goal of making the cluster a cluster, instead of a collection of loosely connected creative entrepreneurs. That was the idea from the beginning when they started clustering, so why not try to achieve it.

Research limitations

Even though this thesis is written with best intentions, there are always things that cannot be controlled or limit the research that is performed, as is the case with this thesis. One of the biggest limitations is that almost no hard data concerning the economy spill-overs could be found. For a lot of factors it is hard to clearly see all the effects they might have, let alone if it is possible to measure the effects that are being detected. Because of this, no statistical data could be used and the research questions had to be answered on basis of information that was gathered by interviewing people. Because these people have different perspectives on the matter, an insight in the creative sector and its region could be formed. On basis of these insights the questions were answered.

Another limitation is that the interviews with the cluster were all performed in a single cluster. The main reason for this is that this cluster is the oldest one in the region. By interviewing creative entrepreneurs from this location, the chance to find relations between the creative entrepreneurs and the traditional firms in the region was the highest. The level of cooperation between the two could

partly be estimated because of the interviews with the cluster. It also shed some light on the changing dynamics within the cluster (from a unity to a collection of loose firms working together) and on the position the cluster has in its environment. While this was the place with the highest possibility to find accurate information, it does only depict the situation of one cluster. The circumstances this cluster was formed in, however will be comparable to other clusters. Nonetheless it can't be said if all the clusters will follow a more or less comparable path and if their environments will respond in the same way. The findings are specific to this cluster and the northern provinces of The Netherlands.

If people from other regions would be interviewed it could be the case that they have different approaches or experiences with the creative cluster and the creation of spill-over effects. Because of this, the research cannot be used without adaptations to look at other regions and compare them to this region in the north of The Netherlands.

It also was somewhat of a surprise that a firm from the region could not be found to be talked to about their relations with the creative sector and in particular with a cluster. While this also tells us something, it is a limitation that such a firm could not be found. Information about the settings in which knowledge would be shared, the differences between cultures, the reason why certain firms were chosen to cooperate, what results were achieved and how the initially were brought into contact with the creative sector could only partly be derived from information received from other sources. Information on this actor should be interpreted with caution. It would have been a contribution to the research if information could have been obtained from these sources directly. Then a clear image of possible barriers between the creative sector and the traditional sector could have been formed, or at least possibilities to heighten awareness of the creative sector in the region might have surfaced. This information can be used to bring the two parties together and start a cooperation with spill-overs as a result.

Future research

Creativity, knowledge and innovation are a large part of our economy and will be part of it for a long time to come. If we want to know how these themes can be used to influence regions further research is needed. This research has tried to show which factors are of influence on the creation and utilization of spill-over effects in a certain region. Some differences with the existing theory came to light and other theories held up. If the theories on these subjects are to be expanded and be kept up to date, researching the following topics would be useful.

Researching ways in which the government could more effectively influence the degree of spill-over created would be helpful in trying to effectively spend resources. Better knowledge of the effectiveness of different interventions to stimulate the degree of spill-over created is essential. To do this, research has to be performed on how to measure the effects of interventions and how to set-up

benchmarks on what these measures mean. With this as a guideline an estimation can be made whether a good value for every amount of resources spend is achieved, or that other interventions might have a better return on investment. Without a good measurement system you will never know how effective the attempts to influence the degree of the amount of spill-over created are.

At this moment there is virtually no cooperation between the different creative clusters in the region or external to the region. Instead of only looking at ways in which the creative and the traditional sector could be moved to work together, it also might prove useful to investigate the possibilities and opportunities created by a more intense cooperation between the different clusters. The clusters in the north of The Netherlands are quite close to each other if looked at it from a relational proximity kind of view, but their interest lie in different fields of expertise. If cooperation with clusters in the rest of the country were to be pursued also larger changes in culture or fields of expertise might result in valuable insights.

And finally, if a way could be found to better track the path of creativity, knowledge, information and innovation a better understanding could be created of the way innovations come into being. If innovations can be followed around the country or region, one could see the environment it was created in. It would then be easier to try and recreate such circumstances in an attempt to recreate the innovative character of one place and recreate it somewhere else. But this is dependent on so many variables that something like this would require a whole lot of research.

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Appendix 1: The interview questions

Cluster

- 1-What was the reason to join the cluster? (finding different motivations to join the cluster)
- 2-What kind of interaction is there between the firms within the cluster and do the interactions stimulate the degree of spill-overs? (relational proximity/different kinds of sharing: finding out on what levels interactions (can) occur, if they are just arms length connections or do they go further)
- 3-What do the firms think of the (importance of) composition of the cluster and what might improve the degree of spill-over effects? (cluster composition: see if the cluster itself has insights in composition and if they have ideas on how to compose a cluster to optimize the spill-overs)
- 4-Are there obvious differences in culture within (groups or) firms within the cluster and how does this influence the cooperation in the cluster? (culture: measuring differences in culture that might explain why a certain amount of spill-overs is created or not)
- 5-Is there any knowledge on the possible influence the cluster has on its surroundings? (finding out if the firms in the cluster know about certain effects the cluster has on the surroundings and if they use this in order to influence the degree of spill-over effects)
- 6-Is there an effect showing the increasing interest of the region in the cluster due to the gaining of reputation over time? (measuring brand awareness and the effect of age/experience: researching if age/experience is a factor influencing the degree of spill-overs)
- 7-Is there evidence to suggest that certain types of innovation are better received in the region than others? (measuring relational proximity and innovation type: finding out if the cluster and the region are able to connect easily with each other or not)
- 8-Are the innovations produced by the cluster (in cooperation with the region) mostly small or are there also large innovations? (innovation type: according to the literature the type of innovation has influence on the sources of knowledge and the amount (and recipients) of spill-overs created)
- 9-Are there obvious differences in culture/interests/beliefs between the region and the cluster? (relational proximity: testing if the cluster and region can easily connect on basis of culture /interests/beliefs and can easily team up to undertake joint projects or at least understand one another)
- 10-Is there any reluctance from the region to cooperate with the cluster? (willingness to cooperate: is the region willing and able to cooperate or are they held back by certain things)

11-Is the age of the firm a barrier when it comes to finding partners in the region to cooperate with? (age/experience: is it easier to gain the cooperation of others once you can show you have more experience, showing if young clusters have a disadvantage in comparison to aged clusters)

12-In what way do the firms notice that the government is trying to support them and what is their opinion on these attempts? (government's creative policy: finding out what the firms in the cluster think of the measures taken by the government and what suggestions they might have to improve these in order to ultimately improve the degree of spill-overs)

13-What kind of action from the government would possibly improve the degree of spill-over effects? (subsidizing/giving resources/creative policy: finding out what actions, besides the ones directly aimed at the cluster, the firms would think of as beneficial to the degree of spill-overs)

14-Is there reason to believe that the legal system plays a role in the degree of spill-over effects that are created? (legal system: finding out if the firms experience any negative/positive effects from the legal system and how this influences their activities)

15-Are there cooperations with (international) firms from outside the region? (knowledge transfers: from which sources is knowledge obtained and how specific is this knowledge)

16-Are there certain kinds of knowledge that are needed, but are not available in the surrounding region? (knowledge transfers: is there a need to contact actors outside of the region to gain critical knowledge in order to realize large innovations)

17-When knowledge is transferred is this often on a face-to-face base, can this also happen in other ways and is there a difference between local and international knowledge transfers? (knowledge transfers: finding out if the knowledge that is obtained is mostly tacit or not and if the transfers differ when distance increases)

Government

1-What kind of measures does the government use to try to influence the degree of spill-overs? (creative policy: getting an insight into the different ways the government tries to influence the degree of spill-over effects)

2-What kinds of restrictions/goals are there for firms in order to be eligible for grants? (subsidizing: how does the government preselect their firms that are eligible for grants and what should they (be able to) do to actually receive the grants)

3-Does the government use different forms of subsidizing in order to influence the degree/kind of spill-over effects? (subsidizing: in what ways does the government tries to steer the (degree of) spill-over effects of the cluster through the use of grants)

4-Is there reason to believe that the legal system plays a role in the degree of spill-over effects that are generated? (legal system: does the system influence the spill-overs and can the positive influences be enhanced)

5-Are there statistics justifying the use of grants to try and influence the degree of spill-over effects? (is there any statistical data that shows the benefits of the subsidies given so far)

6-Has there been any feedback from the creative parties on the government's subsidy policies?

Region

1-Are there any changes to be noticed since the cluster has entered the region?

2-What kind of cooperations have there been with the cluster and were they successful? (have there already been encounters or spill-overs)

3-Are there obstacles that hinder the cooperation between the region and the cluster? (relational proximity/legal system: is there relational proximity which might positively influence the degree of spill-overs)

4-If knowledge is transferred is this often on a face-to-face base, or can this also happen in other ways? (transferring knowledge: finding out if the knowledge that is obtained is mostly tacit or not and if distance plays a role)

5-Is the age of the firm in the cluster a barrier when it comes to finding partners in the cluster to cooperate with? (age/experience: is it easier to gain the cooperation of others once you can show you have more experience, showing if young clusters have a disadvantage in comparison to aged clusters)

6-Apart from income, is there a stimulus to work together (closer) with the cluster? (does the region see any spill-overs or synergy effects and is there any willingness to cooperate because of this)

7-Do the types of innovation of the cluster and the region match? (innovation type: when the innovations are roughly in the same sector, the degree of spill-overs is likely to be higher because of a higher relational proximity)

8-Can the cluster and region grasp and use each other's thoughts on their respective fields of expertise? (relational proximity/absorptive capacity)

9-When interacting with firms within the cluster, how do these interactions take form (transferring (tacit) knowledge: In which way do the different actors communicate)

10-Are there successful cooperations which have led to innovations? (finding out if spill-overs have led to any positive results for the region)

11-Have long-lasting relationships originated with the cluster from joint projects, ensuring more spill-over effects? (commitment/willingness to cooperate: looking at the duration of the joint projects and if they might form a basis for the creation of further spill-overs)

Appendix 2: The interviews

Government (Rubin Postma EZ)

1-What kind of measures does the government use to try to influence the degree of spill-overs? (creative policy: getting an insight into the different ways the government tries to influence the degree of spill-over effects)

The main measure used to be the use of grants, but the government has decreased the bulk of their subsidizing programs over the last 2 years. There still is money available, but the main part of the resources that are allocated to this is done via the IAG (Innovative Action program Groningen).

Something that is still done is executed by the NOM (Northern Development Agency) is attracting new firms to the region. Among other things they can offer information on certain sites and guided tours to try and get certain parties to settle in the North of the Netherlands. But this is almost never done for (the almost always very small) creative firms.

2-What kinds of restrictions/goals are there for firms in order to be eligible for grants? (subsidizing: how does the government preselect their firms that are eligible for grants and what should they (be able to) do to actually receive the grants)

While no grants are being given to individual firms, the different projects do have to get restrictions in order to receive resources. Of course these are all case specific. In the case of the Mediacentrale one of the restrictions was that all firms that wanted to be part of the Mediacentrale had to be in the 'media and broadband industry'. This in order to try and create a certain character for the cluster. Furthermore there were restrictions concerning the minimal amount of workplaces created by the project and that they had to be able to generate incomes that originated from outside of the three northern provinces.

Something that is a bit remarkable is that the kind of restrictions in place differ when different departments of the government issue the grant. When for instance the Economic Department makes restrictions, these are more measurable in the form of workplaces created and income generated. When the Department of Culture makes restrictions it is focused on "making the cultural side of the region more visible, stimulating meetings and transactions between creative people, facilitating contacts between creative sector and the business sector and retaining young talent in the region".

While these restrictions are being drawn up, the projects are rarely cut on their grants or forced to pay them back when they cannot meet them. This is mainly because it is very hard to estimate the real potential of projects and to determine what would be reasonable restrictions.

3-Does the government use different forms of subsidizing in order to influence the degree/kind of spill-over effects? (subsidizing: in what ways does the government tries to steer the (degree of) spill-over effects of the cluster through the use of grants)

The government does not give grants to single firms but only takes part in (partly) financing groups of firms in the form of different projects. Most of the time the government does not do this on their own, but the financing takes place through cooperations with other parties and under preset regulations. This because the support might be an unfair advantage provided by the State. Parties that do give grants to individual firms are a.o. the NIOF (Northern Innovation Support Facilities) which is being supervised by the SNN (Collaboration North-Holland).

The choice of the government with who to cooperate is the main influence on the degree/kind of spill-over effects that they have. The most recent project is Koers Noord (which is also supervised by SNN). The focus of this project is on strengthening the (inter)national position of the North. To do this their points of attention are creating more points of economic interest and make the transition to a high quality knowledge and innovation based economy. This corresponds with the guidelines the government has in order to try and make the Dutch economy a real knowledge based economy. The creative sector can contribute to this by generating knowledge through innovation. In the end, the government has a more facilitating role instead of a pro-active role. They do not constantly seek new opportunities for different parties to cooperate and set-up projects. When the projects are already founded they might be able to assist them in certain ways.

4-Is there reason to belief that the legal system plays a role in the degree of spill-over effects that are generated? (legal system: does the system influence the spill-overs and can the positive influences be enhanced)

Despite the fact that this part of the government does not deal with the legal system, it is a fact that it is a rather complicated system. It is difficult for (large) companies, but for small creative companies it is even more complicated and often might not even be a worthwhile option to pursue in an attempt to try and protect their interests. This because of time and money constrains, but also because of the belief of the creative sector in sharing knowledge.

5-Are there statistics justifying the use of grants to try and influence the degree of spill-over effects? (is there any statistical data that shows the benefits of the subsidies given so far)

With most of the projects meetings are scheduled on certain intervals (for instance every 6 months) and in these meetings the progress of the projects is being assessed and problems reviewed. A part of these meetings is also looking at the restrictions made in the beginning and seeing if these are still reasonable. If this is not the case, they may be altered to fit the project better. The data that is gathered is also more focused on the cluster itself and not really on what kind of changes (in e.g. the

amount of workplaces) this instigates in the region. But when you go to a creative cluster, for instance the one at Bloemsingel 10, you do see that there is all kinds of activity and that people with different backgrounds are meeting there. You also see that people do want to live there because the cluster creates some kind of buzz that is attractive.

6-Has there been any feedback from the creative parties on the government's subsidy policies?

Because the government does not provide grants to individual firms, there is no real feedback on this subject. But one of the things that is heard more often is the difference in mindset between creative people and others. While the creative person might say "just give me the money and it will be fine, I'll make certain it works", this doesn't correspond with the way subsidizing works. They do not really see that the government has to justify where the money goes, and on which terms and estimates this is being approved. All this paperwork is not really appreciated and quite often found difficult to deal with. These differences between the parties sometimes brings on friction.

Government (Gerard Tolner, ROEZ)

1-What kind of measures does the government use to try to influence the degree of spill-overs? (creative policy: getting an insight into the different ways the government tries to influence the degree of spill-over effects)

While the municipality knows about the creative spill-over effects and they believe in the power of the creative sector in improving the region in multiple ways, they have only just begun to research which variables have to be tweaked in order to get a certain kind/degree of spill-over. The municipality tries to enhance the degree of spill-overs by attracting creative/innovative people through some general measures like publicity campaigns about the creative/innovative character of the city of Groningen (Groningen City of Talent). Because they believe in the theory of Florida they want to create a critical creative mass to ensure that other creative firms will also join (or stay in) the region so the likelihood of spill-overs will be larger and innovation will take place. There also is a preference for attaining/gaining firms that can work together with the (traditional) firms that are already situated in the North. An example of this is the creative firm called Pezy, which works together with Philips on high-end shaving appliances. Because the municipality is still not sure on which measures to use for the best effect, they have joined a project (the Creative City Challenge) with other cities in Northern Europe in order to exchange ideas and results and try to find catalysts for the creative industry and the knowledge economy.

Another way in which the creative class is being stimulated to do their thing is found near the cluster at Bloemsingel 10. Right next to the cluster is a large piece of terrain which is not in use at the moment but was meant to build houses on. Due to the economic situation this program has been delayed. Now, with ideas from the creative sector, temporary housings, a gallery to sell art and buildings for starting entrepreneurs are built (the Open Lab Ebbing project). This as a support function for the cluster(s) and to stimulate a creative/innovative 'buzz' in the region.

2-What kinds of restrictions/goals are there for firms in order to be eligible for grants? (subsidizing: how does the government preselect their firms that are eligible for grants and what should they (be able to) do to actually receive the grants)

3-Does the government use different forms of subsidizing in order to influence the degree/kind of spill-over effects? (subsidizing: in what ways does the government try to steer the (degree of) spill-over effects of the cluster through the use of grants)

The municipality does not really give grants to firms/projects. It might be the case that once a certain firm wants to move its business to the region they will go through some extra trouble to get it done. But there isn't often money involved. They also make use of microcredit subsidizing in certain

areas of Groningen in which the municipality wishes to develop and strengthen. If the creative firm would set-up in a area like this, they too can use these microcredit arrangements.

4-Is there reason to belief that the legal system plays a role in the degree of spill-over effects that are generated? (legal system: does the system influence the spill-overs and can the positive influences be enhanced)

Although the protection is also very important for creative firms, there is no real difference with the traditional firms, e.g. most of the time the process of patenting is found to be (to) expensive. A solution for this might be to find a larger firm (for example the UMCG) and to team up with them and patent the innovation together.

5-Are there statistics justifying the use of grants to try and influence the degree of spill-over effects? (is there any statistical data that shows the benefits of the subsidies given so far)

The only way in which it is measured is by measuring the amount of creative activity. The municipality has a statistical tool based on the definition of innovation by TNO which can show the amount of activity of certain groups of firms (in this case the firms that were labeled 'creative/innovative'). The creative activity increases when for instance new firms in these sectors are founded. There are no real numbers on what these creative sectors mean for the region in an economical/creative sense. But what you do see is that people no longer follow the work, but the work follows the people. So if a critical mass of creative people/firms can be created, there are bound to be some (traditional) firms that will come to the region.

For now there are only statistical programs showing what kind of creative activity will develop when investments are made and some early results from actual measures taken. But because it is almost undoable to measure which activities were sparked by the investments of some sort and which are not (for now) no research is done on the effectiveness of the measures.

6-Has there been any feedback from the creative parties on the government's subsidy policies?

There is no record of these kind of signals from the creative sector in the environment, but that is also because the measures for stimulation are still in the start-up phase. The municipality is involved in multiple kinds of research on different scales, from finding catalysts for creativity with other cities to in-house researches aimed on the housing needs and wishes of the creative class. There were some sounds from the creative sector that they sometimes could not see which grants or other kinds of help were available to them, this because of bureaucracy and because the different forms of support are scattered between different institutions. A website which lists all grants and the requirements for them would be an enormous improvement.

Extra:

The person at the municipality that was spoken to believes that while the clusters provide (starting) creative firms a nice and affordable workspace, the cluster as a unit of relations and the opportunity of knowledge in the proximity is overrated. While the firms may have benefits from the image of the cluster (or the creative image of a region), he does not really believe that a lot of joint work/learning/taking on projects will be a result of the cluster. Real life experience has shown that the (working)relations between inhabitants in a cluster dilute after the initial start-up phase.

Although quite some effort is being put into trying to get Groningen on the map as a creative city (as also is being done by other cities with their own campaigns), these efforts almost never get an 'outside firm' to settle in the region. The effectiveness of these efforts is quite low.

Cluster (Wimer van der Veen)

1-What was the reason to join the cluster? (finding different motivations to join the cluster)

Because the creative entrepreneur wanted to organize all kinds of things and saw potential in running the main hall which functions as a place where meetings/parties can be held, and is the central room in the building. It also more or less functions as the meeting point for the firms in the building.

2-What kind of interaction is there between the firms within the cluster and do the interactions stimulate the degree of spill-overs? (relational proximity/different kinds of sharing: finding out on what levels interactions (can) occur, if they are just arms length connections or do they go further)

When the cluster was initiated, the firms that joined formed a united cluster, they really wanted to make it work together. Over the years this more or less disappeared when the composition of the cluster changed. Although some companies do try to bring this back it seems that the cluster is just a loose combination of different firms. The main reason is that in the end, every firm has to make sure that they survive to see another day and the cluster comes second.

But when a firm has found a project for itself to work on and happens to need a firm to e.g. make photographs, firms within the cluster are hired in preference to firms outside of the cluster. It are mostly short contacts and there is no real effort anymore to try and run the creative cluster together.

The firms within the cluster do have control to some extent over attracting new firms for the cluster when someone moves out. They will prefer firms which complement the firms already present depending on the supply of interested firms. This also to prevent that the focus within the cluster will shift too much to a certain sector.

3-What do the firms think of the (importance of) composition of the cluster and what might improve the degree of spill-over effects? (cluster composition: see if the cluster itself has insights in composition and if they have ideas on how to compose a cluster to optimize the spill-overs)

When looking at the composition and what kind of firm would be a welcome addition a few things spring to mind. An in-house accountant that can take care of the financial side of the firms in the cluster (when asked to do so). This because a lot of creative firms encounter problems in these kind of tasks. Another addition could be someone who does acquisitions for the cluster as a whole. Someone who goes out in to the region to promote the different firms within the region and tries to get projects for them to work on. This will also promote the name of the Puddingfabriek, but will mainly make people aware of the capabilities of the cluster. A lot of people already know the name, but they do not know what goes on here. The acquisition will also be more efficient when one party will promote the cluster as a whole and will probably bring in more projects than if the firms in the cluster

would have to do it themselves. And only if there is some kind of work to be done, can firms in the cluster do things together.

4-Are there obvious differences in culture within (groups or) firms within the cluster and how does this influence the cooperation in the cluster? (culture: measuring differences in culture that might explain why a certain amount of spill-overs is created or not)

There is no real difference. The differences between people in the Puddingfabriek are probably just as big as it would be between the employees of any 'normal' company. The Puddingfabriek is just more oriented on the creative sector than a normal company. So there are no excessive differences in culture that influence the cooperation. But the firms in the cluster work in different disciplines which increases the creative nature of the building. The cooperation between the firms will mostly create at least some kind of spill-over because firms with different backgrounds and fields of expertise are working together.

5-Is there any knowledge on the possible influence the cluster has on its surroundings? (finding out if the firms in the cluster know about certain effects the cluster has on the surroundings and if they use this in order to influence the degree of spill-over effects)

While most of the people who work in the vicinity of the cluster go home directly after work, the cluster does have a certain bond with the neighbors. They try to create goodwill by organizing certain events like cleaning up the neighborhood and keeping the amount of noise to a minimum. The people do find it nice that something is happening in their region as long as they don't notice the negative effects of it. That is why some goodwill is created so they give the cluster some slack when the inconvenience might be a little bit too much for the neighbors. Other than trying to create a good relation with the region and trying to organize events they can partake in, there are no real effects known to the cluster.

6-Is there an effect showing the increasing interest of the region in the cluster due to the gaining of reputation over time? (measuring brand awareness and the effect of age/experience: researching if age/experience is a factor influencing the degree of spill-overs)

Yes there is. In the beginning almost no one knew where or what the Puddingfabriek was, and now almost everyone you ask at least knows where it is. You also see that the amount of projects attained by firms in the cluster gets more and more in proportion to the age of the cluster (although last 2 years they did have problems because of the recession). The rising amount of projects is probably highly related to the reputation of the Puddingfabriek. With time going by, you can also shape the image of the cluster and try to get misconceptions out of the way. The region often does not make a difference between culture and creativity and more or less has the idea that all the people in the cluster are a bit vague. That is why they are happy with the cluster at the Bloemsingel, because

they are a truly cultural cluster and so the image people have of the Puddingfabriek might shift a bit more towards the creative side. That is also why the refrain from using the word 'creative' when they have to describe themselves and use words like 'innovative' or 'exclusive' instead.

7-Is there evidence to suggest that certain types of innovation are better received in the region than others? (measuring relational proximity and innovation type: finding out if the cluster and the region are able to connect easily with each other or not)

Most of the firms in the cluster are not working for parties in the direct environment. There are firms in the cluster who make websites for firms like Philips and Sony and almost do no work with local parties. The cluster does facilitate the incumbent firms in this through the well known name of the cluster. Some of the firms in the cluster could also very well be located in someone's attic, but then companies like Sony might be reluctant to work with them although they are basically the same firm.

8-Are the innovations produced by the cluster (in cooperation with the region) mostly small or are there also large innovations? (innovation type: according to the literature the type of innovation has influence on the sources of knowledge and the amount (and recipients) of spill-overs created)

The innovations within the cluster vary in size. Some of the companies have made very large innovations (like the first online dating site) and some make small innovations in the form of making new sounds for the music industry while others have already had their innovations a long time ago and are building new things on that foundation. The way in which some of the firms work is also quite innovative. There are some architecture firms in the building and they have their own floor. While these are separate firms, they will work as one when either one of them gets itself a project that is too big for only one firm.

9-Are there obvious differences in culture/interests/beliefs between the region and the cluster? (relational proximity: testing if the cluster and region can easily connect on basis of culture /interests/beliefs and can easily team up to undertake joint projects or at least understand one another)

While there is little knowledge about this exact topic, there is no real reason to believe that this is so. There are some differences between the various creative clusters in the region. While the Bloemsingel is more culturally orientated and a bit more restricted in their maneuverability because of the subsidizing, the Mediacentrale is more a collection of loose companies of which some of them do not even know everyone in the building and there is little cooperation among them. Whereas the Puddingfabriek has more inter-cluster contacts and some parties within the cluster who actively try to organize more things together within the cluster, starting with things like informal networking events. There is also almost no form of cooperation between the different clusters in the region.

10-Is there any reluctance from the region to cooperate with the cluster? (willingness to cooperate: is the region willing and able to cooperate or are they held back by certain things)

No, there is no reluctance to work together, but most of the time the firms in the region do not know (enough) about the possibilities the cluster offers. When they do not know what the cluster can mean for them, they won't hire them. Sometimes the interviewee thinks that the Puddingfabriek is better known outside of the region than within.

11-Is the age of the firm a barrier when it comes to finding partners in the region to cooperate with? (age/experience: is it easier to gain the cooperation of others once you can show you have more experience, showing if young clusters have a disadvantage in comparison to aged clusters)

This is not a problem, but when you are better known in the region this is an advantage. Another advantage of the Puddingfabriek is that because of the versatile nature of the firms in the building, they almost never have to turn a client down, because there is almost always someone in the building with the expertise that is needed. This is very positive for the image of the cluster but also for the amount of return customers. Why would you hire someone else if the last project went to satisfaction of the customer?

Something that might be a barrier is the image of the cluster in the eyes of the region. When they have the idea that it is run by all kinds of vague artist type of people they might be reluctant to take a look or to try and cooperate with a firm in the cluster.

12-In what way do the firms notice that the government is trying to support them and what is their opinion on these attempts? (government's creative policy: finding out what the firms in the cluster think of the measures taken by the government and what suggestions they might have to improve these in order to ultimately improve the degree of spill-overs)

Of course there is the matter of subsidizing, but I'm not too fond of this myself. When a firm is subsidized in any way, they might lose the entrepreneur in them because they get money for free. They do not have to keep themselves financially healthy for a certain time because they already have money. Once the money runs out, the firms do not know what to do. Because of the grant, a firm was being kept alive that might not make it on its own. And because everyone in the cluster calls himself a creative entrepreneur, they should be able to take care of themselves. Instead of living on grants, they should be able to provide for themselves. It can also refrain people from seeking creative solutions because they do not have to do that anymore. The interviewee has never seen a heavily subsidized firm that came with a profitable/innovative idea. And if you have a good idea it is not so hard to find investors. The only way in which the government might benefit from subsidizing is when they help people start their own firm which live on welfare money.

There are some projects initiated by the government e.g. Stichting de Creatieve Stad (Foundation for a Creative City) which have to stimulate the cooperation among (creative) firms in the region. This is a good initiative, but they have never been to the Puddingfabriek, which is quite remarkable.

13-What kind of action from the government would possibly improve the degree of spill-over effects? (subsidizing/giving resources/creative policy: finding out what actions, besides the ones directly aimed at the cluster, the firms would think of as beneficial to the degree of spill-overs)

It could be a positive thing to increase the amount of clusters and playing with the amount of firms within the clusters and the composition of them. One of the reasons why the Mediacentrale might be a bit industrial/impersonal is because of the use of the space and the scale of the building. This is not positive for the degree of spill-over effects.

Another idea is to centralize the grants and give a large/central party a large part of the grants so that they can make a more efficient use of the resources in the name of the creative sector in the region. So for instance give a grant to the Mediacentrale because they have a grand hall in which lectures could be held which are interesting for a large part of the creative sector in the region.

14-Is there reason to believe that the legal system plays a role in the degree of spill-over effects that are created? (legal system: finding out if the firms experience any negative/positive effects from the legal system and how this influences their activities)

Yes, the legal is very important for us. You do have to keep in mind that you do not use material from others in pieces of music or in video clips because the owners will find out more often than you might think. But in that way we can also protect our own innovations. You do have to invest if you want to be protected, but it is worth it.

There are almost no situations in which it is thinkable that a cooperation would not continue because of legal issues. The only case in which this almost happened was with Shell, because they had to comply to a lot of rules and regulations. But in the end as an entrepreneur you are opportunistic enough to put that aside and just continue. Of course it does matter in which part of the creative sector you are working. Some innovations are easier to protect than others.

15-Are there cooperations with (international) firms from outside the region? (knowledge transfers: from which sources is knowledge obtained and how specific is this knowledge)

No, whenever a certain type of knowledge is needed that is not in the firm itself, local (inter cluster) firms are contacted. Sometimes the internet is used to gain a certain type of knowledge. But cooperations with firms in the region where information is transferred are scarce. Most of the time the transactions are short transactions and often are not repeated.

16-Are there certain kinds of knowledge that are needed, but are not available in the surrounding region? (knowledge transfers: is there a need to contact actors outside of the region to gain critical knowledge in order to realize large innovations)

Not in the case of this firm.

17-When knowledge is transferred is this often on a face-to-face base, can this also happen in other ways and is there a difference between local and international knowledge transfers? (knowledge transfers: finding out if the knowledge that is obtained is mostly tacit or not and if the transfers differ when distance increases)

Most of the times when knowledge is required, this is transferred face to face. The thought behind the process is almost always to transfer it in such a way that in the future the knowledge is present in the firm itself and no third party has to aid them to get the job done. The want to internalize the knowledge in contrast to what often happens in large, traditional, companies. This shows one of the possible strengths of the clusters, people are willing to learn from each other which results in cross-fertilization.

Cluster (David Inden en Renger Koning)

1-What was the reason to join the cluster? (finding different motivations to join the cluster)

One of the persons that was spoken to was part of the originators of the creative cluster the Puddingfabriek in Groningen. In the late 90's a group of creative entrepreneurs was inquiring what the needs in the creative sector were. They found out that what the sector wanted was a building where they could work in together, instead of all the small and separate spaces they were using before that. Only after that they contacted the government and asked if they could help them find a suitable space for them. In this case the cluster was created in a bottom-up process instead of the top-down process that is used to create the clusters nowadays.

2-What kind of interaction is there between the firms within the cluster and do the interactions stimulate the degree of spill-overs? (relational proximity/different kinds of sharing: finding out on what levels interactions (can) occur, if they are just arms length connections or do they go further)

Because of the complementary character of the firms in the cluster, a lot of interactions occur when one firm has a job for which he has to hire another creative entrepreneur from the Puddingfabriek to help him with a specific part. For instance a website builder who hires someone to make sound effects for a new website. Because of these interactions, there is a lot of face-to-face time between the firms in the cluster and this strengthens the 'the door is always open' culture. If a part of a job cannot be performed by a firm itself, they will always look for the expertise in the building itself. When this cannot be found in the cluster (which almost never happens) then a firm from the region will be contacted.

3-What do the firms think of the (importance of) composition of the cluster and what might improve the degree of spill-over effects? (cluster composition: see if the cluster itself has insights in composition and if they have ideas on how to compose a cluster to optimize the spill-overs)

The composition is important, complementary firms are a big plus. That kind of firms will more easily contact each other and do things together. That is not only good because firms in the cluster can more easily accept work for which they need some expertise that is not present in the firm, but it is also very good for the relationships in the cluster itself. If everyone knows each other and works together on projects, everyone is easily approachable and this results in a better working climate.

Aside from the composition of the building, the size also matters. It is easier to create a good atmosphere when the building is not too big and hasn't got area's in it that are too large to handle (as is more or less the case in the Mediacentrale). Another thing that plays a role is the location of the cluster. The closer it is to the city and its 'buzz', the easier it is to create a lively atmosphere.

Something else that has influence is the start-up of the cluster, in the case of the Puddingfabriek, it was a bottom-up process initiated by the creative sector itself. When you want to recreate that somewhere else, you always have variables that are a bit different or cannot be copied. This all has influence on the creative cluster and its power to create spill-overs.

What might be a nice addition to the present firms is not really clear. As long as the nature of the cluster is diverse and the new firm is complementary, it will be alright. Someone who might take care of the acquisition for the entire building might be a good idea, but who is going to pay for that?

4-Are there obvious differences in culture within (groups or) firms within the cluster and how does this influence the cooperation in the cluster? (culture: measuring differences in culture that might explain why a certain amount of spill-overs is created or not)

No, there are no differences within the cluster when it comes to culture. There are differences however between the different creative clusters in the region. In the Mediacentrale for example everybody is walking around in suits and focuses more on the entrepreneurial side of the creative entrepreneur, in the Puddingfabriek no one walks around in suits and the focus lies more towards the creative part (although they too are entrepreneurs). You also have to make appointments if you want to speak to someone there, in contrast to the Puddingfabriek where everybody just walks in. Another difference is that in the Bloemsingel 10 cluster there are a lot of autonomous artists and apartments for the public which creates less interaction and a more 'every one for themselves atmosphere' in contrast to the firms in the Puddingfabriek who interact and do business together.

The differences are no reason to decide that a cooperation is not possible, but not everyone might feel at home in the different settings and a lot of creative entrepreneurs would certainly not feel at ease if they would have to work in such an environment.

5-Is there any knowledge on the possible influence the cluster has on its surroundings? (finding out if the firms in the cluster know about certain effects the cluster has on the surroundings and if they use this in order to influence the degree of spill-over effects)

There is no direct knowledge about the influences of the cluster itself on the environment, because it is really hard to measure something like this. The cluster does try to connect with the region in different ways. This is facilitated by a big hall in which parties are hosted and events take place. This is an advantage because an area like this attracts people who would otherwise never come to the cluster. The cluster as a meeting place is an important attracting factor that might facilitate people meeting each other and instigate new things. They also try to connect with the MKB (the small and medium sized firms) in the region through the Puddingvoucher. This is a voucher with which a firm from the region can 'buy' itself creative time/expertise with firms within the cluster for a very large discount. This is good for the image of the cluster and helps to connect (and cross-fertilize) the cluster

and the firms in the region. A large part of the firms in the cluster also do business with firms in the region.

6-Is there an effect showing the increasing interest of the region in the cluster due to the gaining of reputation over time? (measuring brand awareness and the effect of age/experience: researching if age/experience is a factor influencing the degree of spill-overs)

Yes, the image of the Puddingfabriek is an important tool to get new jobs, especially for the people who are just starting their business. People who have already built up their own network rely less on the image of the Puddingfabriek.

7-Is there evidence to suggest that certain types of innovation are better received in the region than others? (measuring relational proximity and innovation type: finding out if the cluster and the region are able to connect easily with each other or not)

Most of the firms in the cluster get the largest part of their work from firms in the region. Of course there are differences in the amount of work received from the region based on the type of expertise offered and if it can be easily transferred over longer distances (for instance new media firms). Because a lot of the work is coming from the region for almost all firms, the innovations are probably well received there.

8-Are the innovations produced by the cluster (in cooperation with the region) mostly small or are there also large innovations? (innovation type: according to the literature the type of innovation has influence on the sources of knowledge and the amount (and recipients) of spill-overs created)

9-Are there obvious differences in culture/interests/beliefs between the region and the cluster? (relational proximity: testing if the cluster and region can easily connect on basis of culture /interests/beliefs and can easily team up to undertake joint projects or at least understand one another)

Not really, there never has been such a difference that it obstructed the progress of a job. And most of the times the client more less expects some differences from a creative entrepreneur. Deadlines for instance, if the deadline is not being met, it is accepted as being an unavoidable hazard of doing business with a creative entrepreneur and his creative processes. They accept that because they do business with the creative entrepreneur because of his skills, so the little differences are being tolerated.

10-Is there any reluctance from the region to cooperate with the cluster? (willingness to cooperate: is the region willing and able to cooperate or are they held back by certain things)

There is no reluctance from the region, but we do not do business with the region alone. Although a lot of work for the cluster is originating in the region itself, there also is a lot of work

coming from other parts of the Netherlands and from all over the world. It does depend on the line of work the firm is in and how easily transferable the work is, but for the firms that work with (new) media distance is not a problem. They can work where they want and take orders from around the globe if they want to.

11-Is the age of the firm a barrier when it comes to finding partners in the region to cooperate with? (age/experience: is it easier to gain the cooperation of others once you can show you have more experience, showing if young clusters have a disadvantage in comparison to aged clusters)

Not really, it is more a case of image and of how widely known you are than it is of age.

12-In what way do the firms notice that the government is trying to support them and what is their opinion on these attempts? (government's creative policy: finding out what the firms in the cluster think of the measures taken by the government and what suggestions they might have to improve these in order to ultimately improve the degree of spill-overs)

You do see that the government is trying to create a more creative region through building creative clusters. It is just that they probably could spend it better so it would be more efficient. An example are the highly subsidized working spaces for starting artists in the cluster at the Bloemsingel. These are aimed at housing autonomous artist for a really low rent per month. This is unnecessary because there is plenty of space available for these people through (anti)squatting organizations like Carex and they will always find a way to a working space. The return on these kind of investments is quite low because it is only facilitating something that already exists. It would be more efficient to facilitate a platform on which up-to-date information is provided about buildings/spaces that are empty and can be rent for a low fee. The reason to attract these starting creative entrepreneurs is valid, only the resources spend to achieve this might be far too much. If the entrepreneurial creative person takes his business serious, he can afford a working space which is priced conform the market.

It might be that the government overestimates their power and control over the location decisions of the creative class. Most of the creative entrepreneurs are not bounded by the region in terms of work or suppliers, because a lot of it can be easily transferred/transported. The only reason why persons from the creative class are here is because they feel comfortable here and function here. Also the big reason of the government to attract creative people and try to create a buzz and a creative economy might be overestimated because a lot of work is done with/for parties outside the region. The only reason then would be to create clusters because other cities also have them and you would be in a disadvantage if you would not have them.

13-What kind of action from the government would possibly improve the degree of spill-over effects? (subsidizing/giving resources/creative policy: finding out what actions, besides the ones directly aimed at the cluster, the firms would think of as beneficial to the degree of spill-overs)

It would be a good idea if the government would research what kind of creative activities are happening in which regions on The Netherlands. People who are already in the business for a longer period might be able to find jobs and freelancers and suppliers through their network. This is a lot harder for starters. Stimulating the process of supply and demand (adding transparency to the market) might be a good way of stimulating the amount of innovation and spill-overs.

Another thing that might be helpful is counting the successes that have been realized and show them. Not only successes of projects or finishing the build of a creative cluster, but also the successes booked by the creative entrepreneurs themselves. That will heighten the awareness of the region that something is happening in the region and will also show what the (creative part of the) region is capable of.

Something else that could be done is focusing more on what we think of something (experience economy) and how we can enforce these positive things without looking at the criteria for measurement too much. So looking at how we can stimulate the creative sector without having to worry about for instance what this will mean for the employment rate in the region. Also because those economic figures are not only influenced by the measures taken to improve the creative sector, but also by the general economic developments (the economic crisis is a good example).

Something that could be very helpful is advertising the activities of the clusters as a whole. Now the clusters advertise their activities separately and to a certain set of people who happen to be on a mailing list. It would be far better for the creative sector if a central party would handle the publicity of the different activities of all the creative clusters and make them known to the public through a central channel (like city marketing for Groningen).

14-Is there reason to believe that the legal system plays a role in the degree of spill-over effects that are created? (legal system: finding out if the firms experience any negative/positive effects from the legal system and how this influences their activities)

Of course it plays a role, but it is not necessarily positive or negative. You can also use it to protect your work through copyright protection. And of course sometimes you have to deal with some paperwork and non-disclosure agreements when you are working with companies like Shell or Philips. This has never been a reason to decline work, it's just part of the business.

15-Are there cooperations with (international) firms from outside the region? (knowledge transfers: from which sources is knowledge obtained and how specific is this knowledge)

Yes but most of the time it is not so much a cooperation, but they hire the creative firm to do a job for them. Of course there is always some sort of knowledge transfer, but in a lot of cases this is not a large amount. And if knowledge is needed the first place to look for it is in the region and preferably in the cluster itself. A reason why you might go a bit further to get knowledge is because of the name of a company, if it might sound chic if you worked together with a certain firm. But for the rest most of the knowledge you might need is present in the region.

16-Are there certain kinds of knowledge that are needed, but are not available in the surrounding region? (knowledge transfers: is there a need to contact actors outside of the region to gain critical knowledge in order to realize large innovations)

Not really, in the cluster itself a quite divers amount of knowledge available. Until now there was no real need for us to go into the world and try to find the needed knowledge.

17-When knowledge is transferred is this often on a face-to-face base, can this also happen in other ways and is there a difference between local and international knowledge transfers? (knowledge transfers: finding out if the knowledge that is obtained is mostly tacit or not and if the transfers differ when distance increases)

When we exchange knowledge this is almost always on a face-to-face basis because a lot of the knowledge is already present in the cluster. And because of the open culture we can just walk towards another firm and learn from each other. And you also learn by just talking to each other at the coffee machine or the network events without intentionally going to there to learn.

Region (P. Diphorn, Syntens)

The interview that was taken was done with a party that is involved in the creative sector in the region, but is not a normal firm. They play a more mediating role in the sector between different (traditional) firms and sometimes between the creative sector and traditional firms. The reason why no real traditional firms was interviewed was because no firms with long lasting, deeper relations with the creative sector could be found. During the interview it became clear that the interviewee, and the company he was working for, had a different definition for the word cluster. Because of these things, the interview questions were only partly usable. That is why the interview questions were not really used, but the topics that the questions were about were used either way, in order to attempt to get as much information from the interview as possible.

Syntens is a company that is partly financed by the government and focuses on optimizing single (traditional) firms, when a firm asks Syntens to help them. They also focus on increasing the level of innovativeness and competitiveness in the region, by bringing parties from the region together who could mean something to each other, or to the region. When looking at bringing different parties together, Syntens sees/focuses more on a cluster as an alliance of firms which all work in the same sector and who try to reach a common goal through forming an alliance. These clusters do not have a common working space like the definition of a cluster that is used in this research. One time they meet in the office of one of the alliance members and the next time they might meet somewhere else in the region. These clusters recognized by Syntens, sometimes originate because the certain type of sector realizes that they want to work together, or Syntens can originate the cluster because they see a need in the region that is not being satisfied.

A huge difference between the two type of clusters is that the Syntens cluster has a limited period in which it will exist. Once a problem has been fixed, a need has been satisfied, certain skills have been learned or there is too little input from the firms in the cluster itself, it will be terminated. At that point there is no need any more to do certain things together.

While Syntens has contacts with a large part of the traditional firms in the regions and some with the creative clusters, the clusters have never really approached Syntens in any way. Syntens does see that combining the traditional firms and the creative entrepreneurs has value. They even started to organize meetings for the two types of firms to get to know each other. But they notice that the overall rate of normal and creative firms working together is quite low. While their knowledge of the traditional firms in the region is quite good, they do not have a large amount of knowledge about the creative entrepreneurs. The traditional firms often come for help to Syntens, but creative entrepreneurs have almost never come to Syntens to seek guidance for improving their day-to-day business of exploring the possibilities for them in the region. On the other hand, the traditional firms that do come to them, almost never see (or ask for) the possibility of joining up with a creative party. This is a thing that the

people at Syntens want to change. They see a lot of possibilities for the (traditional) firms in, for instance, trying to differentiate their products from the competition through changing esthetical aspects. From the first couple of experiences it became clear that once the traditional firms were suggested that they could try to work together with someone from the creative sector, the first responses were quite positive. Although some relations were formed between the traditional and the creative sector, implications for the long term can only be guessed because the results are variable. For now, no long term relations seem to have formed. The reasons for this are unclear for now, but differences in culture of some sort do not seem to be the source of the failing to occur of long term relationships.

Although they work with a different definition of the cluster, the interviewee is familiar with other kind of cluster. While some of their own clusters might not have such a big impact on the region, he believes that the other clusters have a bigger chance to do this. Because of their workspace is in one physical place, it is easier to connect to the environment and to make an impact on it. Take for example the Open Lab Ebbinge Project where they interweave the creative sector with the traditional sector and housing projects. To see whether these projects can mean something to Syntens and if they can learn from similar creative clusters in the north of The Netherlands and Germany a research will be executed to find out what possibilities there are.