

Entrepreneurial Ecosystems in Relation to National Market Economies

A Case Study in Arendal

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Summary

This paper discusses developments within the field of system approaches to regional economies. The focus of the paper is the approach that was developed in the last decade with a special focus on entrepreneurs within the regional system called the Entrepreneurial Ecosystem approach. While other system approaches primarily analyze institutions and the regions' largest actors such as universities, big businesses, and the government, the Entrepreneurial Ecosystem (EE) focuses primarily on individual entrepreneurs and the dynamics between them and the institutions and actors that support them. These dynamics work in conjunction to create entrepreneurial activity through innovative start-ups that together create value for the regional economy. This approach is still in the early stages of development and has received several criticisms from the academic community. One failing specified is the generality of the approach; there are no comparisons of EE presented, the presented idea is that every Entrepreneurial Ecosystem needs to be contextualized to the local region.

This paper presents the first steps toward creating Entrepreneurial Ecosystem types that describe the kinds of entrepreneurship expected to develop in different types of nations. This was done through the synthesis of the Entrepreneurial Ecosystem approach with the Varieties of Capitalism (VoC) approach. The VoC approach presents markedly different national economies and the dynamics that contribute to their differences and competitiveness. This idea that different countries could have different but equally competitive economies was championed by the Varieties of Capitalism approach, as opposed to the conviction that one kind of economy is inherently better than all others.

This approach defines two opposed ideal types for market economies: the Liberal Market Economy (LME), where businesses primarily relate to other actors through market relationships, and the Coordinated Market Economy (CME) where non-market relationships are most important. The differences between them are described as institutions that affect business decisions in five different spheres of influence. Applying these institutions to the Entrepreneurial Ecosystems approach constructs different foundations and development paths for the ecosystem in each national economy. In general, the EE in an LME country is expected to have a stronger institutional support this well-developed EE will be largely independent and will create value

through new industries in the region. In the CME country, less institutional support is expected, but large actors such as the government and business networks will be more likely to take a strong supporting role in the development of the ecosystem, so that the ecosystem creates value through supporting existing industries and businesses in the region.

This paper also includes an empirical study done to test the theoretical findings of two kinds of expectations for EE. The case study of the Arendal region in the CME nation of Norway found that there seemed to be many similarities between the regional EE and theoretical expectations. But that further studies are required before this should be used in practice.

1 Introduction

Research knowledge advances in many directions. Each study seeks to discover a piece of truth, but there is an opportunity to discover new or more holistic truths through comparing these study directions. While some theories may be based on conflicting assumptions of reality, many theories and approaches are compatible with one another; they can both be true about the same area or group. Combining approaches such as these builds new avenues for research and knowledge development that have the potential to give a better context and holistic understanding. One of the joys of being a researcher is finding compatibility between research areas and seeing how they combine to create new knowledge and understanding. The two approaches that will be analysed in this paper are the Entrepreneurial Ecosystem approach and the Varieties of Capitalism approach.

Local governments have long had an interest in supporting the economies of their cities and regions. In the last decades, there have been a collection of analytical approaches that propose how this can best be done based on varying national and regional factors. One recent systems approach to economic development called the Entrepreneurial Ecosystems has a special focus on new businesses and entrepreneurial individuals as sources of innovation and economic development. Literature has developed a list of all the elements that should be present in an Entrepreneurial Ecosystem; these have also been organized into categories that show how ecosystems can develop and have an impact on the regional economy. This approach has been developing in the last decade but is still subject to criticism from researchers with suggested

areas for improvement. One such criticism is how general the model with little comparisons between regions and descriptions of how the EE can act differently in different contexts. (Alvedalen & Boschma, 2017). Those that popularized the Entrepreneurial Ecosystem approach have said that each ecosystem is unique and must fit their context, requiring analysis for anyone who wants to support the system. (Isenberg, 2010) This paper seeks to enable contextualization of Entrepreneurial Ecosystems to their national context through the combination of entrepreneurial models and the comparative approach to national economies called Varieties of Capitalism (Hall & Soskice, 2001). This paper will use the original method of the VoC approach to divide nations into either liberal or coordinated economies. These market types have an effect on the way firms coordinate with other actors and it is claimed in this paper that they will also have an effect on the development of Entrepreneurial Ecosystems. This will be investigated through the following research question: **How are entrepreneurial ecosystems affected by the national market economy in which they are located?**

The paper first analyses existing literature on the Entrepreneurial Ecosystems and Varieties of Capitalism approaches. These approaches and their development throughout time are synthesised to produce a model for the varying expectations for entrepreneurial ecosystem development in the liberal and coordinated market economies. The general findings of these are that LME countries are expected to have a stronger institutional support for entrepreneurship in the form of laws and culture as well as easier access to private capital, while CME countries are expected to have stronger support systems from government and other large organizations, with potential for entrepreneurial networks to be embedded in larger association and industry networks, allowing easier access to important input.

Finally, an empirical study using this model is carried out. This is a case study of the city of Arendal in Norway, most often characterised as a coordinated market economy. This empirical study answers the question: Can the VoC expectations for entrepreneurial ecosystems be seen in practice, i.e. in the Arendal case? Although the results were nuanced, especially regarding large business involvement in the entrepreneurial ecosystem, similarities between the described ecosystem in Arendal and the expectations for those found in Coordinated Market Economies were found. This supports the conclusion that the entrepreneurial ecosystem was formed to some

extent by the national market economy. Further studies are warranted to critically examine these findings.

2 Theory

This paper builds predominantly upon research into different aspects of market economies and regional development with a variety of approaches to understanding regional systems and institutions. The Entrepreneurial Ecosystems and Varieties of Capitalism approaches in particular will be described with recent developments and critiques of the approaches. They will then be combined with the goal of improving application and analysis opportunities for the Entrepreneurial Ecosystems approach.

2.1 Development of Entrepreneurial ecosystems approach

Governments, be they national, regional or local, play a major role in supporting economic growth. They have a unique opportunity and responsibility to support the wellbeing of the population, including economic health for workers and businesses. There are many initiatives that the government can take to improve the economy. Suggestions from one study includes a focus on supporting innovation through financing innovation projects, investing in research institutes, and encouraging certain labour specializations that needed by businesses (Isaksen, 2000). There are also international examples of regions such as Silicon Valley, that have shown remarkable economic prosperity that other governments and areas are eager to copy. (Isenberg, 2010) However, regional economies are complex and there are many actors and elements that work together to create an environment for growth; what works for one region may not be reproducible in another context. (Isenberg, 2010) In the last decades, there has been a push towards a systematic approach to economic development that does not only look at individual tools and initiatives but at how many elements, contexts and actions affect each other to create unique outcomes. A systems approach differs from earlier theories by attempting to include many different regional elements and variables into a single holistic model that gives a larger context for policy makers and others that want to develop the economic prosperity of a region. (Edquist, 2006) These system models have a variety of focal points and goals for the system. These different approaches have several similarities with earlier approaches giving the

foundation for newer ones. Understanding this development can help in the analysis of the model central to this paper.

Some of the earlier models are the industrial districts approaches that focused on cooperation between small to medium enterprises. (SMEs) (Becattini, 1990) Another model focuses on clusters which are groups of large innovative firms within certain industries. (Porter, 1998) The most dominant model in recent decades is the regional systems of innovation (RIS) approach. RIS, which was first used by Cooke (1992), describes its innovation systems as varying in size, with three main groups of actors: firms, higher education institutions, and government, as well as the infrastructure for interaction between them, both networks and the formal and informal institutions that constrain or support interaction. (Asheim, Isaksen, & Trippl, 2019) The major developments of the past two decades are the inclusion of knowledge bases: three different forms of knowledge that are the building blocks of innovation and the incorporation of path development theory into the model. Different kinds of RIS are categorized both in regard to which actors are central figures in the system, which knowledge bases are most important, and the density and variety of networks in the region. (Asheim, 2019)

One systems approach that has developed in the last decade is the Entrepreneurial Ecosystem (EE) approach. Where other systems theories place the firm or institutions in the centre of focus, the Entrepreneurial Ecosystems approach shifts that focus towards the individual entrepreneur and their start-ups. It builds upon earlier literature that studied what an entrepreneur needs to succeed, placing these elements in a larger model that describes how they interact with each other to support the entrepreneur. While the other system approaches provide a lot of value to policy makers for regional development, they tend to include entrepreneurs either as a side note or grouped in with other small to medium businesses. However, entrepreneurs face unique challenges and can contribute unique value towards the region and require a systems approach that takes this into account. (Stam & Spigel, 2016)

This system approach to entrepreneurship was first used in popular literature by those describing the work that they were doing in various regions in cooperation with local governments. The models presented by Isenberg (2010) and Feldman & Zoller (2012) describe many elements that the ecosystem is made up of, and general advice for policy makers based on their own

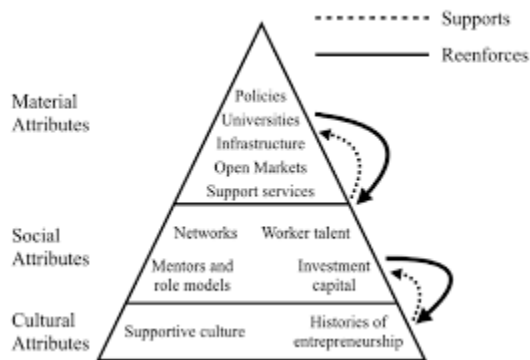


Figure 1: *Entrepreneurial Ecosystem model* (Spigel, 2017)

experience, but give little description of how the elements relate to each other and how the ecosystem evolves over time. This literature and others were the basis of other, more academic papers that went into more depth about the ways these elements interact with each other and affect how the ecosystem may develop. Spigel (2017) presented a preliminary model dividing important elements into material, social, and cultural attributes (see figure 1). These divisions are

primarily according to type rather than function, with recursive influence between each group of attributes. The most recent descriptive model is presented by Stam & Spigel (2016) and will be used in this paper, as it is the model referenced in other recent articles (Alvedalen & Boschma, 2017) and offers the most inclusive use of existing literature.

2.2 Definition of entrepreneurial ecosystem

The Entrepreneurial Ecosystem can be best defined by first defining the component parts. The term entrepreneurship is defined as a process in which opportunities for creating new goods and services are explored, evaluated and exploited (Shane & Venkataraman, 2000). Innovation is integral to this process. Therefore, the general agreement is that entrepreneurship does not include all self-employment and small businesses. Some would limit entrepreneurship to high growth start-ups or scale ups alone; others expand this to include entrepreneurial employees and innovative start-ups, whether or not they have as large an impact as successful high growth start-ups. Definitions agree that entrepreneurship within the EE approach should demonstrate a level of innovation. The self-employed and small business entrepreneur, often included in more traditional definition of entrepreneurship, lack this kind of innovativeness and are thereby excluded. (Stam & Spigel, 2016)

The term ecosystem comes from the realm of biology, describing the way that many individual creatures interact with each other within their environment. By using this term, the EE approach denotes the focus of the approach on individuals rather than organizations. While other systems approaches, such as regional systems of innovation, have large businesses and government as the central actors, the EE approach considers these as feeders to the system, placing the entrepreneurs themselves in the centre. (Stam & Spigel, 2016) The combined Entrepreneurial Ecosystem term is defined by Spigel (2017) as ‘combinations of social, political, economic, and cultural elements within a region that support the development and growth of innovative startups and encourage nascent entrepreneurs and other actors to take the risks of starting, funding, and otherwise assisting high-risk ventures.’

Entrepreneurial Ecosystem Model

This paper will use the model presented by Stam & Spigel (2016). This is a model for Entrepreneurial Ecosystems that divides the elements that support entrepreneurial activity into framework and systemic conditions. This model summarizes the largest share of the literature to date and is mirrored in earlier work by ANDE (2013). Stam & Spigel (2016) separate the elements of the Entrepreneurial Ecosystem into four different groups based on how those elements interact with the ecosystem as a whole. (See figure 2) These are: framework conditions, systemic conditions, outputs, and outcomes.

Framework conditions are those which exist as predecessors to the ecosystem; they are static characteristics of the region which facilitate the development of the ecosystem and change slowly, while systemic conditions are the active aspects of the ecosystem. These systemic conditions then facilitate concrete entrepreneurial activity of different kinds, the output of the system. This activity then creates different kinds of value for the region, the outcome of the ecosystem. Each of these groupings are interconnected where entrepreneurial activity and value is caused by the ecosystem, but also supports further development in the ecosystem by changing the individual elements in the framework and systemic conditions. The framework conditions are the fundamental causes of entrepreneurial activity found in a region. These are made up of formal and informal institutions, physical infrastructure, and demand. The systemic conditions are networks, leadership, finance, talent, knowledge, and support services/intermediaries. These

10 framework and systemic conditions are all important elements in facilitating entrepreneurial activity. Closer definitions of each are important before one can work further with the model.

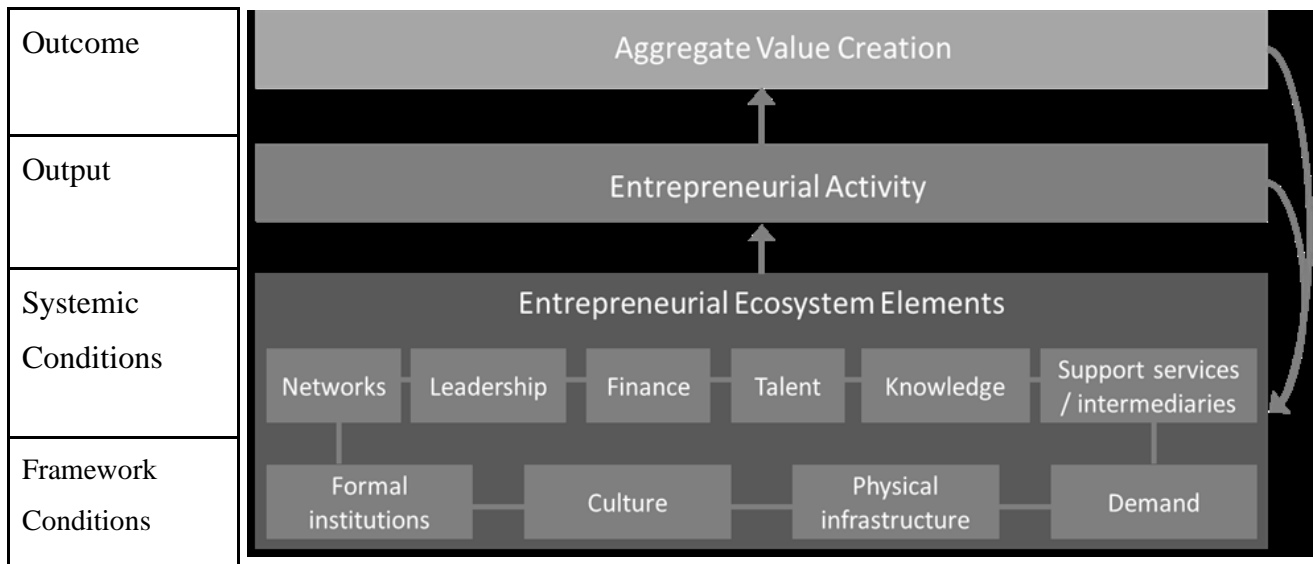
Formal institutions are the laws, policies, and regulations that influence new businesses, especially favourable tax and investment policies. A successful Entrepreneurial Ecosystem also needs informal institutions that support the formation of systemic conditions as well as an entrepreneurial culture. An entrepreneurial culture can be defined as a culture where entrepreneurship is viewed in a positive light, as something that is idealized or admired by the population (Sorensen, 2017). The ecosystem also requires some elements that are considered to be exogenous to the system, such as physical infrastructure in the region that facilitates movement and business activity. This includes roads, electricity, and population. Finally, demand for new goods and services provides a market for entrepreneurship and can be from both businesses and consumers.

As one of the systemic conditions, the network is the centre of activity. The network includes both formal and informal connections between entrepreneurs and is observed through shared events, partnerships and closeness in activity. Leaders in the ecosystem can take two forms; it includes both entrepreneurs that have been successful and support the ecosystem as examples and inspiration as well as those who take an active role in helping others in the region. Ideally these leaders will be committed to developing the ecosystem. Financing is any sort of capital available for investment in entrepreneurship. The ideal is investors with entrepreneurial knowledge, but there are many forms this can take, such as venture capital, angel investors, or capital from personal relationships. The talent pool is described as perhaps the most important element of a successful ecosystem. This pool is a collection all workers that are available to be employed in new businesses. There is a need for both specialized workers in each start-up field, as well as business competencies such as marketing, and business development. This pool can be measured both in how broad it is - how diverse the competencies are, as well as how deep it is - the level of capability among those available. There must be sources of knowledge, both public and private, that provide opportunities for entrepreneurship. These can come from research and development centres like universities, or through shared projects between existing businesses and work experience. Finally, there must be a supply of support services catering to entrepreneurs to lower entry barriers and speed up innovation. These services include real estate, accounting,

legal, and insurance and will ideally have special offers for start-ups. This also includes intermediaries and “all inclusive” services such as incubators and accelerators that provide both a service and network connections to entrepreneurs. (Stam & Spiegel, 2016)

The systemic and framework conditions coordinate in such a way to enable entrepreneurial activity. According to the above definition, this includes both innovative and high growth start-ups, as well as entrepreneurial employees, wherever individuals pursue innovation. These innovations are what create new value for the region in the form of increased regional income, production, employment and standard of living. This is the outcome of ecosystem. (Stam, 2014) As entrepreneurial activity and innovations are produced by the ecosystem, they feed back into the system, developing framework and systemic conditions to further support entrepreneurial activity. These framework and systemic conditions, together with the output and outcome of the ecosystem are summarized in figure 2.

Figure 2 Entrepreneurial Ecosystem model (Stam & Spiegel, 2016)



(Modified by Alexander LaPierre)

2.3 Limits of the Entrepreneurial Ecosystem approach

The entrepreneurial ecosystem is unique among system approaches to regional innovation in its focus on entrepreneurship. It is, however, not without critique. It is unclear at what scale the

ecosystem approach applies, whether the conditions of the ecosystem apply at a city, region, or national level. Some literature speaks of national Entrepreneurial Ccosystems, but others make no distinction. (Acs, Autio, & Szerb, 2014) There is also little use of network theory, despite networking being a central part of the ecosystem. Another critique is that it not contextualized; there is little comparison between regions and how entrepreneurial ecosystems develop in some regions better or differently than others. (Alvedalen & Boschma, 2017) This last critique presents an analysis problem for policy makers trying to support the development of entrepreneurial ecosystems in their region. There is an understanding from the literature that each EE is unique and that approaches cannot be copied from another region, because the ecosystem must arise around the people and institutions already present. (Isenberg, 2010) But starting analysis from a blank slate in each region can be costly and require expertise like that of Isenberg and other specialists. Added tools to ease this analytical burden can enable a broader use of the EE approach and enable more effective support from policy makers and regional shareholders. To that end the EE model can be supplemented with well established regional or national approaches so as to differentiate ecosystems from one another on a general level. This will allow for a head start in analysis by presenting some general expectations for the development of the entrepreneurial ecosystem within that context.

There are several regional approaches that can be used to this end, each with their own pros and cons. The RIS approach differentiates between thin, thick, specialized or general regional innovation systems, all with different expectations for the kind and extent of innovation expected. (Asheim, 2019) However, not every region has been yet been analyzed using the RIS approach, and so using innovation systems together with EE may require extra analysis in the region, adding complexity instead of reducing it. Todd (1989) presents a hereditary culture approach to regional differentiation; while these are well defined and established, the effect of these cultures on each element of the entrepreneurial ecosystem is unclear because of the limited scope of differentiation in the assorted regions. One approach that is well suited to this kind of application is the Varieties of Capitalism (VoC) approach (Hall & Soskice, 2001). In this approach, there is a clear definition of two kinds of market economies that developed western countries can have: a Liberal Market Economy (LME) or a Coordinated Market Economy (CME). It is also described how the institutions in each of these market economies affect each

level of the market, making it possible to apply the approach to each element of the Entrepreneurial Ecosystem. While there are some challenges in using the varieties of capital approach in this way, there are some conclusions that can be drawn by applying it. The VoC will first be described and discussed below before a synthesis of both VoC and EE is presented.

2.4 National contexts for Entrepreneurial Ecosystems

The Varieties of Capitalism approach is a new comparative look at market economies in developed countries that has opened many new avenues for research as well as new tools for policy makers. Policies that would be successful in supporting businesses in an LME would be damaging to businesses in a CME. This applies to start-ups as well as more established companies and so is a valuable tool in helping policy makers to encourage systematic entrepreneurship in a region.

Other regional comparative tools that could be used include Cooke's (2001) use of the Entrepreneurial Regional Innovation System (ERIS) and the Institutional Regional Innovation System (IRIS). The IRIS is presented as the traditional RIS approach that is seen in Germany and Nordic countries where leading industries innovate through incremental advances that build upon each other within a context of systematic relationships between the production and knowledge infrastructure. The ERIS, found in the UK and the USA, lacks these systematic elements but instead get their dynamism from entrepreneurial infrastructure such as venture capital, entrepreneurs, scientists and support systems for these groups. This has already been compared to the VoC with IRIS fitting well within a CME and ERIS being supported by the LME. (Heidenreich, 2004) However, this does not mean that entrepreneurship only thrives in LME countries. Studies have found a similar variety in entrepreneurship in the Netherlands (a CME country) and in the USA (Gerwin & Goey, 2014) as well as examples of well-functioning entrepreneurial ecosystems in other CMEs like Sweden where Stockholm has a large high-tech start-up activity. This implies that entrepreneurship is supported by different mechanisms in CMEs. (Asheim, 2019)

By working with two clear types that qualify how policy makers can support entrepreneurial ecosystems, they will have tools to simplify the analysis process of the local ecosystem, lowering

costs and potentially increasing the likelihood of deciding on effective methods of support. There is also a benefit of being able to analyse different ways that the ecosystems can develop and what place they can have in the greater economic development of the region. Using the Hall & Soskice (2001) division allows for this effect. However, applying varieties of capitalism is not without its challenges. Though Hall & Soskice (2001) presented two ideal types, they admitted that not all countries would fall into these categories. Later literature has created other categories like Mixed market economy (MME) for developing nations and state other more nuanced differences between nations, and that the institutions in countries change. (Paunescu & Schneider, 2011) In addition, the issue has been raised of whether varieties of capitalism can be applied on a regional level as well as a national level (Knudsen, 2016). Gould, Barry & Wilkinson (2015) also points criticism at only using national regions for the variety of capitalism, stating that regional industries can vary more within a single country as across borders. These are important criticisms that can affect the viability of using VoC together with regional systems such as entrepreneurial ecosystems, if true this means that assumptions of institutions on the national level may not apply in the specific region of study. However, because the varieties of capitalism includes national institutions such as laws and national networks, one cannot entirely remove the national level from the approach. This means that there may be some regions which are at a mismatch with national institutions; this can affect their competitiveness. The drive of firms to conform to institutions granting competitive advantage is described by Hall & Soskice (2001); there is an expectation that even in regions contrary to the national market type, there will be a leaning towards the market type that the nation as a whole shows. Despite many criticisms and attempts to create a more nuanced analysis of nations and regions in regard to VoC, many studies still use the original version as a basis for comparison. (Paunescu & Schneider, 2011) This paper will use the original version of the VoC approach because the comparisons of ideal types give a clear and straightforward basis for analysing regions in different contexts. The amount that regional differences as suggested by Knudsen (2016) affects entrepreneurial ecosystems in specific regions is not yet established and remains an opportunity for future empirical studies. The next section provides a description of Varieties of Capitalism as presented by Hall & Soskice (2001)

2.5 Varieties of Capitalism

Varieties of Capitalism is an approach to analyzing different national and regional capital economies through the lens of how businesses interact with different spheres of influence in that nation or region. This approach changes the way that national economies are viewed. Capitalism could always be compared with socialism and communism, but now capitalist economies can also be divided into categories of competitive kinds of markets. The foundation of capitalism is that the economy is led by private businesses, therefore the Varieties of Capitalism approach focuses on businesses and the way that they interact with the market. Hall and Soskice (2001) found two capitalist economies that have very strong performing markets despite having markedly different market compositions, Germany and the USA. The principal difference between these economies is the way that the market is organized. In the USA and similar countries (Canada, UK), the market is organized according to market relationships and is called a Liberal Market Economy (LME) because the market works freely and independently while in Germany and similar countries (Netherlands, Japan), the market is organized according to non-market relationships and are thus called a Coordinated Market Economy (CME) because the market is coordinated by other forces in society. They found that there are five “spheres” of interaction in which businesses influence and are influenced by the national market. These spheres are best described by Hall & Soskice (2001), the following sections describing the five spheres in CME and LME are drawn from their book.

The five spheres of influence identified by the approach are as follows. 1) Corporate governance: where firms go to for financing and how investors are assured of a return on their investment. 2) Industrial relations: how firms interact with the labour market in regard to wage bargaining and working conditions. 3) Vocational training and education: the coordination of how firms secure a skilled workforce and how workers choose how much to invest in which skills. 4) Inter-firm relations: the sphere of the relationships that firms have with other firms, most notably suppliers and customers. This defines how much firms work together and how much standardisation and shared technology exist in an industry. 5) Employees of firms: how leadership within firms interacts with their employees and other actors.

These implementations are said to be complementary; this means that a nation's market is strengthened the more the five spheres line up together. When institutions within the spheres of influence are congruent with each other, they create a synergistic power that strengthens the nations' markets.

These five spheres are instituted in different ways in two ideal types presented in the VoC approach. These are the Liberal Market Economy (LME) and the Coordinated Market Economy (CME) These two market economies are defined by the driving force that coordinates firms through the five spheres of influence in that nation. In the LME, the five spheres are coordinated through market forces. The firms and other actors relate to one another at arm's length through market transactions. In the CME, it is non-market forces that coordinate the five spheres of influence. Firms and other actors create close relationships with each other seeking to benefit the whole industry and nation. These forces affect each of the five spheres. The two ideal economies are presented as diametrically opposed but competitive. Though they act and work differently, the one is not superior to the other overall; they excel in different industries and forms of innovation. The Liberal Market Economy is focused on flexibility and taking advantage of short-term opportunities. Businesses will typically advance through radical innovation. The Coordinated Market, on the other hand, is focused on long term investments and commitments. Businesses compete through advances done through incremental innovation (Knudsen, 2016)

2.6 Coordinated Market Economies

In general, the CME is focused on the long-term regarding profits, relationships, and careers. The five spheres of influence steer firms toward stable paths that depend on trusting relationships between firms and other actors. The way that these spheres do this are described as follows.

Corporate governance generally allows firms access to financing that is not entirely dependant on public data or current returns. There is less stock market capitalization and instead businesses rely on investors using private data. Private data is provided to investors through close connections with other firms in their industry and third party organisations that have an intimate knowledge of the industry. In this system, reputation is a key factor. This allows for investment capital that survives downturns, enabling businesses to focus on long term investment that may

not be profitable in the short term, and to prioritize long term workforce over short term profits. It is also important how the overall structure of the market is organized. CME countries will tend to have tax provisions, securities regulation and a network of cross-shareholding that discourages hostile mergers and acquisitions, a danger when businesses prioritize long term relationships over short term profits.

The internal structure of the firm in CMEs supports this network monitoring. It is more difficult for top leaders to take unilateral action. They must instead gather agreement from supervisory boards that include employee representatives and stockholders, as well as suppliers and customers. This bias towards consensus decision making encourages sharing information and building trust between members of these boards, thereby facilitating network monitoring that feeds into corporate governance requirements. Long term employment contracts lead managers to focus on their reputations as opposed to short term profitability.

Industrial relations in CMEs are shaped by the strategies of firms therein. Many firms rely on highly skilled labor force with a substantial work autonomy that shares information acquired to continuously improve production lines and processes. These strategies require long term commitments from their employees. This is attained through industry level bargains between trade unions and employer associations. Standardized wages across an industry removes incentives for employees to change employers and instead commit deeply in one business. This also leads to restrictions on business against arbitrary layoffs and changes to working conditions.

Because labour in CMEs is focused on business and industry specific skills, they depend on vocational training and education systems that can provide workers with those skills. Workers must believe an apprenticeship will lead to consistent employment, while ensuring businesses that their investment in apprentices will give them usable skills that will not be poached by other firms. This is achieved through unions monitoring a potentially publicly subsidized training system. The skills learned are standardized so that apprentices are guaranteed to learn important competencies regardless of the business at which they are employed.

Finally, because firms rely on long term employment contracts, they cannot rely on a knowledge exchange between firms through the movement of personnel. Instead, they cultivate inter-firm relations that facilitate the diffusion of technology and knowledge across the economy. This is supported through publicly subsidized programs to improve specific competencies and joint research programs between several firms and research facilities. Firms collaborate beyond tightly written contracts with employees and knowledge sharing that builds upon and establishes industry standards for inter-firm relations. This collaboration is facilitated by industry associations and both norms of conduct and government regulation.

This form of coordination influences the kinds of innovation dominant in the market. Because of the focus in the universities and other vocational schools to train students toward specialized careers, there are less resources given to pure research and development and most common kind of innovation is incremental innovation, small improvements to existing technologies, products, and processes. This comes from the Doing, Using, and Interacting mode of innovation, or DUI. While employees in businesses are doing their work, they gain experience on how to do it more effectively, and as they give feedback to others in the firm and interact with customers and suppliers, they find better solutions throughout the value chain in production. (Isaksen, 2016)

This is in tension with the STI mode of innovation: Science, Technology, Innovation. The STI mode primarily innovates through research and development centres and contributes to radical innovations that create totally new products or services. Because of the increased trust between firms and their employees and the close relationships between firms, DUI innovation is strongly facilitated and there are many opportunities for incremental innovations. STI and radical innovation is less common because of the focus on medium technology industries in CME countries and less resources given to research and development. (Knudsen, 2016)

2.7 Liberal Market Economies

The liberal market economy is described using the United States as an example. In America, the five spheres are coordinated in a different fashion. The five spheres complement each other to build an economy that specializes in radical innovation and flexibility. Firms are encouraged to

look for new opportunities that can be exploited in the short term. This is seen in each of the five spheres.

The corporate governance sphere encourages firms to focus on current earnings and the value of company shares. Regulatory organisations allow acquisitions that can be hostile. The ability for large firms to secure finance is heavily dependent on their valuation in the equity markets and publicly available information. Top management is often rewarded for net income and stock increases. Because of arm's length corporate networks, investors do not have access to inside information and must rely on public information such as quarterly balance sheets. Some exceptions of this are firms in high technology industries that rely on venture capital companies that can monitor performance within the company, as well as companies with easily accessible assets connected to forward income.

The industrial relations sphere is influenced by the market relationship between individual workers and employers to organize the labor force. There is little protection given to employees, and management is given freedom to hire and fire. Trade unions are generally weaker than in CMEs. Wages are therefore controlled through policy and market competition rather than organizational coordination. Highly fluid labour markets push firms toward flexible strategies rather than strategies that require long term employee investment.

The education and training systems complement the highly fluid labour markets. Educational institutions focus on general skills because firms will not invest in industry-specific skills that can easily be poached by other firms. Workers focus on acquiring general skills that can be used in many different firms. In-house training tends to build on general skills. The workforce tends to be suited to the service sector while it is lacking in industries that require highly specialized or company-specific skills.

Inter-company relations are generally based on standard market relationship and formal contracts. In the USA, there are also rigorous antitrust regulations designed to prevent collusion to control prices and markets. Technology transfer happens through the movement of workers from one company or research institution to another. LMEs also rely on the sale of innovation to

affect technology transfer. Standard setting is done through market races that allow the winner to license their technology to many users. This rewards venture capital firms where one success can pay for many failures.

The internal structure of firms concentrate authority in top management that focuses on flexibility. Labour can easily be released and strategies changed to take advantage of new opportunities or to avoid crisis. Top leaders are often incentivised with stock options and lead in a way that keeps share value up and would rather fire employees than suffer losses in the short term.

The innovation form most dominant in the LME is the STI mode. The ease of acquiring financing to exploit new products and services through stock market capitalization encourages investment in research and development institutions, giving many opportunities for radical innovations. The flexibility of firms to operate with project-based development and market transactions such as sales and licensing of patents between firms incentivize radical innovations. These are innovations that create entirely new products, services, or processes. (Knudsen 2016) These kinds of innovations have the potential to create whole new industries. DUI innovation mode is much more difficult, however, because of the lack of trust between employees and the firm, and arm's length relationships between firms. Because of this, LME countries are more competitive in high tech industries where things are continually changing, and not as effective in medium high technologies such as production and the process industry, where things are more stable and there is more room for incremental changes.

2.8 Varieties of Capitalism and Entrepreneurial Ecosystems

These two market economy types are drastically different from one another, despite both being capitalist economies that share the same global economy. Crucially, these two market types are competitive with each other. They both have strengths and weaknesses, preferred industries and forms of competitive advantage. Researchers have the foundation to compare economies of nations with each other without requiring one to be better than the other, giving a more nuanced picture of how systems, policies, and practices can have different effects in different contexts.

This makes the Varieties of Capitalism an effective tool to help contextualize the Entrepreneurial Ecosystems approach.

Varieties of Capitalism has not before been used in regard to Entrepreneurial Ecosystems, but it has been studied in regard to entrepreneurship on a general level with interesting results. Gerwen & Goey (2014) did a study on the differences of entrepreneurship between LME and CME countries, specifically with Netherlands and Germany as CME countries, and Great Britain and the USA as LME countries. They did not differentiate kinds of entrepreneurship, specifically including SMEs that did not have an innovation or ambitious focus. They were surprised by how little difference there was amongst entrepreneurs between the LME and CME countries. Based on Hall & Soskice (2001), the businesses would be expected to conform to the forms of coordination that the five spheres facilitate. Researchers found a variety of types of entrepreneurship, innovative or family business, SME or big business, in both LME and CME. There were no kinds of the above-mentioned business types that were missing in either market type. One conclusion they had was that smaller businesses did not experience the same coordinating issues that large firms do regarding labour, capital and competition. (Gerwen & Goey, 2014) However, they did find more positive attitudes towards entrepreneurs and a stronger preference for self-employment in LMEs rather than CMEs. This study seems to say that there is no difference between LME and CME countries regarding entrepreneurship, aside from levels of institutional support.

Another study compared entrepreneurship between the United States and Germany, not with Varieties of Capitalism in mind, but using the USA as an example for Germany to follow. They used an early version of the Entrepreneurial Ecosystem approach as a way of showing how Germany could become more like the USA. Their conclusion was as follows: “A comparison between the United States and Germany showed that today the US indeed is a more entrepreneurial country and has had, on average over the last years, about 40 times more available venture capital than Germany. Its open culture, its recent 200+ years of immigration history, as well as its investor friendly tax policy and its entrepreneur friendly bankruptcy laws all together favor the foundation and growth of new ventures in the US.” (Schwarzkopf, 2016, p. VII)

These two comparative studies show conflicting conclusions that give a valuable picture for how Entrepreneurial Ecosystems can function in different contexts. Schwarzkopf (2016) concludes that there is much more support for new firms in the USA, the blueprint of the liberal market economy Gerwen & Goey (2014), on the other hand, conclude that there is little difference in the kind of entrepreneurship produced. There is more entrepreneurship and stronger institutional support for entrepreneurship in the LME country than the CME, both in regard to laws and culture. However, entrepreneurship of all kinds, both high-growth and self-employment, is found in both kinds of market economies. This can mean that while there are successful start-ups in each market context, and individual entrepreneurs and firms do not personally feel constrained by the coordination problems that affect the large firms that are the focus of the VoC approach. Entrepreneurs appear to be receiving support in other ways than Schwarzkopf (2016) and the literature for the Entrepreneurial Ecosystem approach would predict.

Limits of the effects of market economies on Entrepreneurial Ecosystems

In the same way that the different market types still share many similarities despite different ways that firms coordinate with their context, it is expected that not every aspect of the Entrepreneurial Ecosystem will be affected by their context. Some aspects of the Entrepreneurial Ecosystem may depend on characteristics that both kinds of economies share, while other aspects are very region specific. The components that may be the least affected by market economies will be discussed here according to their categories.

The framework components (formal institutions, culture, physical infrastructure, and demand) are those most directly shaped by the regions' market economies because they are not necessarily region specific. Many formal and informal institutions are nationwide and can thereby be expected to be similar no matter the unique traits of the region itself. As institutions are the core of the Varieties of Capitalism approach, it is expected that they will be heavily affected. The other two framework components however are less clearly affected by the market economy. Physical infrastructure has to do with the nature of the local region and the economic development of the nation. Though one can conceive of nuanced differences in the infrastructure for liberal and coordinated economies, they are not clearly defined enough to be accounted for in

this paper. Demand for new products and services is also not clearly affected by the market economy though some effects can be inferred by the way that the entrepreneurial ecosystems develop in each economy type.

The systemic components (networks, leadership, finance, knowledge, and support services) share many of the same attributes as does the five spheres of the Varieties of Capitalism approach and can therefore be described in more detail, but they are also more region specific. While generalities can be described there will still be differences in each of the areas. As the empirical studies suggest, entrepreneurs acting as individuals do not feel the same pressure to conform to the institutions of the national market economy as larger businesses, so those aspects of the entrepreneurial ecosystem which deals with individuals will not expect to see much difference between the market economies. The only aspect in the systemic components with these criteria is the leadership component which deals with the effect that key individuals have on the ecosystem.

The other components have different expectations for their development in either the CME or LME nation; the way that this shapes the whole ecosystem in each type of region will be discussed in the next sections of this paper.

2.9 Entrepreneurial Ecosystems in the Liberal Market Economy

The Liberal Market Economy supports the entrepreneurial ecosystem as it is described by Stam & Spigel (2016) This is not surprising, given that entrepreneurial studies are often based on LME countries such as the USA. The conclusions of comparative studies also show LME countries to be better at supporting entrepreneurship in general so it is expected that the descriptions of the LME institutions would fit with the dominant model for entrepreneurial ecosystems. The entrepreneurial ecosystem is expected to provide the same kinds of innovation and aggregate value as the market economy. The framework and systemic conditions contribute to this effect. The expected entrepreneurial ecosystem in LMEs is summarized in figure 3.

Figure 3: LME Entrepreneurial Ecosystem expectations (Made by A. LaPierre)

Aggregate Value: New value through Path creation. New industries are strengthened in the region					
Entrepreneurial activity: Radical innovation centering around a breakthrough business in a new industry					
Networks are built through chance meeting and friends of friends.	Leadership: Independent of VoC	Finance: Venture capital and other short term investors	Talent wide shallow talent pool	Knowledge: From research and universities. STI innovation	Support services: Independent actors motivated by profit
Formal institutions: Supports patent based business, business owner friendly tax laws		Culture: Positive towards	Physical infrastructure: Independent		Demand: Tends to come from consumers

The focus of the LME country on flexibility and short-term exploitation of opportunity easily supports entrepreneurial projects and ecosystems. The norm in LME countries is for individuals to invest in careers that span several different jobs, potentially in different fields. This means that it is seen as a positive thing for individuals to leave one job to start something new and there is a potential for entrepreneurship to be idealized in local culture. The norm of rewarding top leaders for performance also supports a culture for entrepreneurship, because it creates a cultural aspiration for individuals to become top leaders.

The focus on stock market and public information for financing does not benefit entrepreneurship directly because startups are by their nature not publicly accessible. However, the combination with patent laws allows for venture capital firms to arise that specialize in high growth startups, especially those in technology. The existence of venture capitalists supports the

creation of support services as well. This is because venture capitalists get a closer look into startups and have a vested interest in seeing entrepreneurs prosper. It can be inferred that they will lead to support services because venture capitalist businesses have motivation and opportunity to do so. They are motivated to build businesses that offer support services to entrepreneurs so that their investments will pay off and they have opportunity through existing capital and connection with previously supported entrepreneurs that are willing and able to start these services.

The industrial relations sphere and the education sphere have a positive effect on the skilled workforce (or talent pool) available for entrepreneurship, both in depth and in breadth. The industrial relations sphere creates an uncertain environment for workers in established firms. Because of this, they are more willing to change jobs to look for new opportunities because they are not sure they will be able to keep the job they have in the future. The education sphere encourages workers to acquire a broad set of skills; this in turn broadens the talent pool. The knowledge flow that gives entrepreneurs opportunities for innovation come from these employees that have learned from other jobs, just as in the rest of the inter-firm sphere.

Because of the LME countries' dependence on research-based innovation (STI) the expectation is for entrepreneurial innovation to also be in the same mode, with an emphasis on totally new products and services through radical innovation. This will create value through path creation as new industries and industry paths are created in an entrepreneurial ecosystem. Because entrepreneurship is expected to create new industries there is a higher expectation that start-ups will be not only servicing existing industries and supplying business, but that they will have a more direct line to the consumer market than ecosystems in CME contexts. This could mean that demand for new goods and services from consumers will be more prevalent than from businesses in LME contexts.

2.10 Entrepreneurial Ecosystems in the Coordinated Market Economy

The Coordinated Market Economy has very different expectations for business formation and coordination, and this extends to entrepreneurship as well. Entrepreneurship happens in CME

countries in all sorts of forms, both innovative firms, SMEs and sole proprietorships. Gerwen & Goey (2014) concluded that individuals and small businesses themselves are not constrained by the national institutions. However, as the Entrepreneurial Ecosystem approach shows, while an individual entrepreneur can succeed regardless of their context, as a group and network they are still affected by their region. here is, therefore, an expectation that the entrepreneurial ecosystems will develop differently than in the LME country. While the ecosystem itself may not be expected to create the same amount of value as in the LME country, with many facets that directly support entrepreneurship, it will nevertheless contribute to a competitive economy.

Taking the whole system into consideration, there is a picture of entrepreneurship maintaining a different role in the regional economy than in the LME country. Instead of the entrepreneurial ecosystem standing as an independent force that can be the primary source of value in the region, the CME EE is expected to exist in connection with other more established networks where large organisations and associations take a larger role in the dynamics of the ecosystem. This creates opportunities for entrepreneurs to innovate in ways that support the path development of existing industries. In as much as this supports the regional industries, there are incentives for business networks and government to actively support these ventures, despite the lack of financial incentives more common in LME countries such as stock market capitalization. This dynamic will be now analyzed for each of the elements in Stam & Spigel's model (2016) summarized in figure 4.

Figure 4: CME Entrepreneurial Ecosystem expectations (Made by A. LaPierre)

Aggregate Value: Path renewal supporting existing industries					
Entrepreneurial activity: Incremental innovation centering around existing businesses and industries					
Networks: Relate through formal networks	Leadership: Independent of VoC	Finance: Predominantly from Government and business sponsorship	Talent: deep but narrow talent pool	Knowledge: From businesses networks and experience. DUI innovation	Support services: Embedded in networks, motivated by regional development
Formal institutions: Negative support		Physical infrastructure: Independent Of VoC	Culture: Extra work required to change public opinion of entrepreneurs		Demand: Tends to come from businesses

The framework conditions are those which are most directly impacted by the national market economy. The formal institutions in the CME are supportive of well-established businesses. The labour laws that support long term employment over short term projects can be a hindrance for start-ups that have the need to be flexible. Similarly, tax and investment laws support long term investment from risk averse sources that depend on the respect that start-ups will struggle to earn. In general, there is expected that there are fewer formal institutions and tax laws that facilitate entrepreneurial ecosystems as described in EE literature because of the mismatch between supporting established industry networks and businesses and starting new projects. (Schwarzkopf, 2016) Similarly, in the case of culture and informal institutions, the focus in CME countries on long term employment and firm loyalty supports a culture that does not idealize entrepreneurship. As a result, there is a less supportive culture in general when compared to

LME countries. The demand for goods and services can come from many sources and there is no direct commentary on demand for new products and services, but the focus on existing industries and long term investment suggests that demand will be available from existing businesses seeking to improve their services and stay competitive. Because of the open channels of information between business through networks in CME nations, demand for new goods and services from business may be more apparent in CME contexts than in LME contexts.

Systemic conditions in the coordinated market economy

The systemic conditions are shaped by the same institutions that affect the framework conditions. The entrepreneurial network is shaped by the already extensive networks present in CME countries. These can be industrial clusters, unions, or professional networks that with which individual entrepreneurs have contact or in which the network is formally embedded. Regardless, these connections may be a resource that developed entrepreneurial networks can draw upon, given the background entrepreneurs have through either vocational training or job experience. Because of the institutions that facilitate unionization, the network may contain some of these formalized elements, or be contained partially within other structured networks. As mentioned above, the entrepreneurial leader is considered in this paper to not be observably governed by the market economy. This is because individuals are not constrained by institutions in the same way as larger groups. The talent pool that entrepreneurs can draw from, both the expected training of the entrepreneurs and their teams, will have the same expectations as are expected in the rest of the market - a skilled workforce dominated by specialized workers that can only fill select roles. This favouring of specialization can lead to an over amount of certain kinds of workers based on the industry of the region. This provides a deep but narrow pool, when there are many well qualified candidates available in some fields, engineering for example, but lacking in others.

Another effect of the coordinated market economy is the attractiveness of entrepreneurial jobs for potential candidates. There is an expectation that more employees would prefer to stay with their present job rather than leave to pursue a start-up position. New businesses will have less ability to headhunt, further constraining the talent pool in both depth and width.

The financing opportunities in the CME country has some clearly negative effects on the entrepreneurial ecosystem, but there are also some positive opportunities. Because of the low

stock capitalization, it is expected that there would be less access to venture capital and other private investors than in an LME country. The focus on financing that is based on non-market information is positive for entrepreneurs since start-ups are not able to share market information anyway. (Hall & Soskice, 2001) However, financing from banks and long-term investors tends to be risk averse and as mentioned above, the entrepreneur will not always have the same trust and respect from banking institutions that is enjoyed by larger businesses. However, one opportunity that is more prominent in CME countries is investment with the purpose of benefiting the industry in the whole region. Strong cross-business networks and active involvement from large organizations like the government and associations allow for investment into start-ups that promise to improve the competitiveness of businesses in the region altogether instead of quick gains from public offerings. Because of shared information and cooperation between businesses, there is not the same risk of losing the investment to competitors as in LME countries. Whether this is through entrepreneurial employees, spin-offs, or external entrepreneurs seeking cooperation, business networks in CME countries have institutional incentives to finance and otherwise help innovation in this way. The government also has a role in this area. In the same way that higher education is subsidized to support the regional economy, the government may take an active role in financing start-ups when they see potential for value generation in the local economy.

The knowledge that gives rise to entrepreneurial opportunities will come predominantly from the vocational training institutes and accompanying work experience that are central to the labour market coordination. Innovation knowledge is expected to be incremental and mainly DUI type innovation, because of the focus on work vocational education instead of research and development. As well, the reduced incentives for patent-based innovations, due to lower stock capitalization and increased non-market cooperation between large firms, lowers the value of local patents.

Support organizations and intermediaries are expected to be connected in the extensive networks that otherwise dominate the coordinated market economy. The expectation is for support services to be either subsidised by an active government, or available through business networks. Though some services may be for profit, there is less expectation of entrepreneur-targeting solutions such as payment in equity, because of the lower emphasis on stock in CME countries.

This type of entrepreneurial ecosystem is expected to favour start-ups that focus on incremental innovations already within the dominant industries in the region. The knowledge sources in the CME are primarily DUI innovation types, and the competencies that are available from the talent pool are most likely to be specializations within the industries of the region. This does not mean that there will not be individuals with other competencies with the ability to create start-ups in other fields using STI innovation, but that there will be greater likelihood for the facilitation of the DUI innovation type because of the systematic and framework components at work. Network and financing opportunities also support this. The opportunities that come from close connection to larger existing networks and organizations sharing their experiential knowledge and innovation opportunities encourages incremental and industry-oriented innovation as the dominant form of entrepreneurial activity. This form of entrepreneurial activity over time leads toward an aggregate value that supports and extends the competitiveness of existing industries. The value created is not only measured in the output of the start-ups, but in how they extend the life and competitiveness of their local business customers. This is called path extension, where the existing industrial path is saved from decline by new waves of innovation that keep businesses competitive in the larger market. (Asheim, 2019)

2.11 Analytical Framework

There are then two entrepreneurial ecosystem models, those that work in a CME country and those that work in an LME country. This affects the way that ecosystem will develop and what kind of value it is likely to create both regarding the kind of innovation likely to come from a given start-up as well as what the aggregate effect the ecosystem will have on industries and industrial paths. When a policy maker is analysing how they should support an entrepreneurial ecosystem, they can use these models as summarized in figures 3 and 4, for entrepreneurial ecosystems in different market economy contexts to make initial assumptions about the way an ecosystem will develop even before the system is fully established, thereby eliminating some danger of erroneously copying other regions' success factors in ways that do not work in the local context. There are also presented alternative focuses that entrepreneurial ecosystems can have, whether it is predominantly creating new industries through radical innovation and independent networks in LME contexts or predominantly expanding existing industries through incremental innovations and entrepreneurial networks embedded in established networks and

associations in CME contexts. These two models provide a theoretical answer to the primary research question; Entrepreneurial Ecosystems are affected by their national market context through the way that institutions affect the framework and systemic conditions in the ecosystem. The different ways that the conditions interact with each other can produce different kinds of regional development. These two sets of expectations should be tested with several cases to establish their veracity and accuracy before they can be used in practice. This paper includes a preliminary case study below with the research question: **Can the VoC expectations for entrepreneurial ecosystems be seen in practice, i.e. in a case study?**

3 Case

The above theory comparing Entrepreneurial Ecosystem expectations for the central types in Varieties of Capitalism is useful as a practical tool for policy makers and other regional leaders who want to support the ecosystem in their region. If true, it will enable analysts to avoid copying idealized ecosystem examples such as Silicon Valley. Rather, they would form their expectations to that of their own national institutional context. To help in that endeavor, the theoretical approach will here be tested empirically. This empirical study is predominantly exploratory and qualitative with the goal of finding possible connections between the theoretical conclusions presented above and the local reality. This first study will be a case study of a town chosen within one of the two market economies described by the Varieties of Capitalism theory to see to what extent this case seems to be shaped by its national market context.

Because the CME market presents as most different from typical entrepreneurial ecosystem examples from LME countries, such as Silicon Valley, Boston, and Waterloo, (Stam & Spigel, 2016) a region from a CME nation was chosen so as to avoid a strong connection to the theory in the first place. The same can be said of well-known cases already in CME countries that may have such well-rounded entrepreneurial ecosystems that they look like the examples in LME countries. Using these cases as examples would provide possibly wrong conclusion that entrepreneurial ecosystems in CME countries are not different from LME countries, while these cases may instead be outliers in themselves as examples of EE in CME countries. Because there were few requirements for the chosen region, and because of the time restraints of this paper, it was decided to choose a case that was practically feasible to study.

Arendal is a small city in southern Norway with a population of around 50 000. (SSB, 2019) It is the centre (until 2020) of the larger fylkeskommune, Aust-Agder. The fylkeskommune is larger and quite spread out, with main population centres close to Arendal city. The region of the entrepreneurial ecosystem is here defined as Arendal and the surrounding municipalities, Grimstad, Froland, and Tvedestrand. Areas farther west have closer connections to the city of Kristiansand and those further east, a closer connection to Porsgrunn and Telemark. (information from interviewee S1) The Arendal region has a collection of entrepreneurs, support organizations and industries that provide demand for entrepreneurial activity, but the entrepreneurial ecosystem has much room for development.

There is an entrepreneurial support organization owned by the four above mentioned municipalities called Etablerersenteret IKS that is working actively to establish entrepreneurial networks and otherwise guide entrepreneurs. There is also a university campus in Grimstad that provides many bachelor and master degrees, but is especially focused on engineering and nursing degrees. Recently, two research complexes have been established in the area, the Mechatronics Innovation Lab (MIL) and I4 Helse and work with the university, government and business sector for innovation.

The industries in the area are divided into several main areas. The dominant sector is the process industry; this is primarily offshore oil processing, largest both regarding number of businesses and employees. This is followed equally by electronic and ship building industries with the third split between the machine, metal, and woodworking industries. (SSB, n.d.) Outside of production industries the dominant sectors are construction and building maintenance, as well as the health sector with a regional hospital situated in Arendal. These industries act as the context for the Entrepreneurial Ecosystem in the Arendal area.

The market type that forms the national context for the Arendal region requires some discussion. The type of capitalism in the country of Norway was originally stated to be a Coordinated Market Economy (Hall & Soskice, 2001). One study that empirically tested the claims of Hall & Soskice (2001) measured several different indicators for modes of coordination in each country

mentioned in the original study over 10 years. (Paunescu & Schneider, 2011) They found that Norway moved from a CME grouping to a more hybrid category over the 10 years of the study. However, the changes were much less obvious than in other Scandinavian countries and Norway remained CME leaning over time. While there are, of course, differences between Norway and Germany institutionally, Norway is still, according to this study, closer to being a coordinated market economy than a liberal market economy. This can be positive for this study, if similarities are found between the entrepreneurial ecosystem in Arendal and the CME expectations there is reason to believe that other countries outside of Germany will also have similarities between EEs and CME expectations. This can expand the potential usefulness of this paper to outside of the 'pure CME' countries like Germany and its neighbours. The other issue is the claim that market type can vary within nations. Knudsen (2016) claims that the Agder region in particular has a LME leaning through its cultural history. As mentioned above, this study will not take regional differences in VoC into account, but this, along with Paunescu & Schneider (2011) may account for some anomalies if found in the study. If Arendal EE does not fit the expected CME template, this may be caused by the fact that Arendal leans towards the LME or that theoretical expectation of CME EE does not fit realities. This would mean that further studies are necessary to test whether other regions may still conform to CME expectations.

4 Method

To establish to what degree the Entrepreneurial Ecosystem in the Arendal region is affected by a CME national context requires a holistic overview of the elements in the region that affect the ecosystem. This study accepts an internal realism perspective with the understanding there are objective observable facts but that cause and effect relationships are difficult to find. (Easterby-Smith, Thorpe, & Jackson, 2015) Instead of finding specific statistical relationships to prove a hypothesis, this study will use databases and key people within the system to give a picture of the whole system. This was attained through in-depth interviews of people in key places such as innovative entrepreneurs, leaders in government organizations, and support organizations. Interviews were chosen over surveys or other data gathering techniques for several reasons. First, this is an explorative study with the need for nuanced answers difficult to achieve through surveys. Another reason is that the participants of the entrepreneurial ecosystem are not equally placed; some have more insight than others and into different parts of the ecosystem. The third is

that because of the informal nature for entrepreneurs, participants in the study are not readily available but are instead spread throughout the region with varying availability for contact. Because of this, there was a need to exploit those that were willing to contribute for as much data as possible.

Eight interviews were conducted over the course of the study. Three interviews were with innovative entrepreneurs and five with employees of support organisations. Several of these employees had entrepreneurial backgrounds. The entrepreneurial ecosystem distinguishes entrepreneurs from small business owners by the level of innovation and potential for growth of the business. In Norway, one way to objectively define a business as innovative is by the fact that financial support was received from Innovasjon Norge which requires a level of innovation and scalability for all startups they support (Innovasjon Norge, 2019) Respectively, these three entrepreneurs worked in the process industry, the marine industry, and with digitalization within the building and offshore industry. Each of them were part of different co-working houses in the Arendal region and had different vantage point within the entrepreneurial network.

The interviews with the five employees of support services demonstrated varying perspectives based on their locations and places of employment. Three were leading employees in coworking spaces from Grimstad, Arendal, and Tvedestrand and two were leaders within the municipality and for Etablerersenteret IKS. These were chosen because initial assessment seemed to place these two organizations in the centre of the entrepreneurial network, with connections and insights both into the way the entrepreneurs were organized, as well as connections to other businesses and organizations. These eight interviewees are summarized in figure 5.

The interview guide (Attachment 1) followed the same structure for each of the interviewees. Using the Entrepreneurial Ecosystems model by Stam & Spigel (2016) as a starting point, each interviewee was asked to describe the characteristics of each of the 11 elements in the model with the interviewer looking specifically to determine how much the regional ecosystem aligned with the CME framework (figure 3). The insights into each of the above elements varied between those who were interviewed. The interviews were adapted to the level of insight

demonstrated by the interviewees. Where the interviewee had more understanding into the existing network, for example, the interviewer spent more time discussing this element.

Figure 5: Overview of interviewees

Entrepreneur 1 (E1) document and digitization business	Support Actor 1 (S1) Employee of Etablerersenteret IKS	Support Actor 4 (S4) Employee coworking space in Tvedestrand
Entrepreneur 2 (E2) Marine food production	Support Actor 2 (S2) From Arendal Municipal government	Support Actor 5 (S5) Employee UiA incubator
Entrepreneur 3 (E3) Process industry	Support Actor 3 (S3) founder of Arendal coworking space	

In addition to the eight interviews, the study collected a list of start-ups in the region that were funded by Innovation Norway within the last ten years. These lists are publicly available. (Innovation Norway, 2019) There are many kinds of funding that Innovation Norway gives out to businesses, including loan and research grants for established innovative businesses, grants for traditional businesses, and establishing grants for innovative businesses. While some of the other grants may have been given to innovative start-ups, only the establishing grants were used in this study. 41 different business were found from the Arendal region that fit these conditions. Of these 12 no longer had any available information or mode of contact, leaving 29 businesses that were categorized according to industry, kind of customer, and form of innovation. These statistics then were used to give some overview on areas of the entrepreneurial ecosystem that interviewees did not have insight into. These categorizations are summarized in figure 6.

Figure 6. Distribution of innovative start-ups in the Arendal region

28 Innovative start-ups in the Arendal region were distributed according to three categories

1. Targeted industry			2. Target customer	3. Innovation type	
Offshore Oil	Other Marine	Digitization	For businesses	DUI	
5	4	5	16	21	
Undefined industry		Building	For consumers	STI	Unknown
10		4	12	4	3

5 Analysis

In this chapter we will use observations from the above-mentioned interviews and information from Innovation Norway to analyse the Entrepreneurial Ecosystem in the Arendal Region. The interviews, together with the statistical data give some hints of how the entrepreneurial ecosystem in the Arendal region is formed and how it may be affected by the national market economy. The ecosystem will first be described in according to the elements of the Stam & Spigel (2016) model with each element being compared to the expectations for EE in LME and CME nations. This analysis will follow the same structure as the entrepreneurial ecosystems model, first covering framework conditions, then systemic conditions, and concluding with the outputs and outcomes of the ecosystem.

Overall, the ecosystem reflects similarities to the CME expectation. Although there are some unexpected findings as well as some data points that were unable to be covered, there are some clear signs that the entrepreneurial ecosystem is embedded into a larger network with businesses, unions, and government organisations. There are also many signs that the entrepreneurial ecosystem is still undeveloped; this is especially obvious in the culture and leadership conditions.

5.1 Framework conditions in the Arendal region

The framework conditions show a clear similarity with the CME expectations, especially regarding formal institutions and culture. The physical infrastructure in the Arendal region does

influence the entrepreneurial ecosystem, but not in a way that is caused by the market economy. Demand in the region was less clearly defined.

Formal Institutions

In comparison with LME nations such as the USA, there is still much lacking regarding laws and policies that support entrepreneurship. (Schwarzkopf, 2016) One issue is the high taxes and the way they are collected. Interviewee S2 from the municipality stated that some businesses can be bankrupted because of tax debts especially regarding sales tax where the time between paying sales tax and reimbursement can be too long. The labour laws were also seen as difficult for businesses as was stated in by interviewee E1 because of the employer taxes and the inflexibility of employment contracts. Interviewee E1 built their business model from the fact that business would rather outsource certain services to them rather than commit to having their own employees in that area. Their business is made up of four women that were temporarily or permanently laid off from a business in the oil industry in the region. Together they have started a business offering various documentation services to large well-established businesses. This is done both as consultants (with little innovation) as well as working offering digitalization services, the ultimate goal being to make their own consultant jobs obsolete. As this example shows, the labour laws present both a challenge for entrepreneurs building their business with employees as well as an opportunity for new start-ups. As larger businesses in the area downsize because of the economic downturn, previous employees can start their own firms that provide similar services to that which they gave in their previous jobs, with a drive and new opportunity to innovate and improve that product or service.

In recent years there have been a move in the formal institutions to increase in support for entrepreneurship. A new tax law was introduced in 2017 that gave tax deductions to those who invested in new businesses This allows individuals to deduct up to kr 500 000 from their personal income when they invest in a recently started business, if they follow several restrictions. (Skatteetaten, 2019) This is a positive change but is not without its challenges. Interviewee E3 described how they tried to use this tool to encourage investment in their business. There were several who were interested but that ended up investing without using this tax deduction because it had too many restrictions on the investor in regards to dividends and

length of investment. There was also some confusion as to exactly how these restrictions worked, the advisors at the Norwegian Tax Office were not able to clarify these issues for them, because the advisors themselves did not understand this new policy. This is evidence that even though there is a desire amongst politicians to support entrepreneurship, it is not an integrated part of the formal institutions. This description of the formal institutions by the interviewees reflect the CME expectation of the entrepreneurial ecosystem. As expected, and as shown through earlier studies (Schwarzkopf, 2016) there is less support for entrepreneurship among formal institutions in CME countries than in LME.

One outlier to these observations are the GEI report which reported very high support for entrepreneurial ecosystems on an institutional level. (Acs, Lloyd, & Szerb, 2018) This is a contradiction to the interviewees responses and should be addressed. There could be a couple of reasons for this discrepancy. The Stam & Spigel (2016) focuses on formal institutions that actively support entrepreneurship; tax laws, investment vehicles, amongst others, while the elements described in the Global Entrepreneurship Index measure hindrances to entrepreneurship such as corruption and the lack of safety nets. Because Norway has low corruption scores, excellent welfare systems, and widespread economic safety, they scored well in these areas, despite not having the same entrepreneurial laws that are more common in LME countries.

Culture

The prevalent culture in Arendal is difficult to substantiate without surveying a representative amount of the population. This was outside of the scope of this study, but several of those interviewed were able to give their impression of the region. As stated above, interviewee S1 commented that innovation and entrepreneurship have become buzzwords in Norway in recent years and that many are supportive of entrepreneurs and want them to succeed. E1 echoed this, adding that the population is supportive of those who choose to be entrepreneurs but that the general population feels that entrepreneurship is not for them personally. They would rather work in an established business. Interviewee S4 also stated about those in Tvedestrand: “People think that entrepreneurship is interesting, but distanced from themselves, that entrepreneurs can do what they want but they themselves just want to keep working at their job.” (Translated from Norwegian) This creates a picture of a culture where potential entrepreneurs do not meet many

social obstacles if they want to start for themselves, but also where entrepreneurship is not necessarily the first choice for those in need of a new job position. This is also in accordance with the CME expectations. Entrepreneurship is important and it is supported in the population, as one would expect in an LME country as well, but the norm is for individuals to not consider themselves as entrepreneurs which is indicative of a CME influenced culture.

Physical Infrastructure

Regarding physical infrastructure, Arendal is a well-developed city in a first world nation so the travel and construction infrastructure are of high quality. There is an airport within one hour's drive with various transport options to and from larger cities such as Kristiansand. Several interviewees commented that the relatively small population of Arendal had an effect on the entrepreneurial ecosystem. A lower population will form the ecosystem in several of the systemic conditions, primarily in regard to the entrepreneurial network and the talent pool. This will be discussed in detail below. The negative effects of the low population is somewhat mitigated by its close proximity to Kristiansand, a city of 93 205(SSB, 2019) but the whole region has a much smaller population than the capital, Oslo, and even more so when compared to idealized entrepreneurial ecosystems such as Silicon Valley, with millions of inhabitants. This creates different expectations for the scope and form of the entrepreneurial ecosystem in the Arendal region. These characteristics are not based on the market economy and the effect they have on the rest of the observed entrepreneurial ecosystem will be taken into account so that any conclusions are not skewed by these effects.

Demand

Demand is one of the framework conditions discussed in this study. In the case of the region of Arendal the demand for new goods and services is difficult to quantify directly. It is also considered to be largely exogenous to the ecosystem and as such does not reflect how well established the ecosystem is in the region. Since supply mirrors demand, we find that by taking a look at the start-ups from Innovation Norway's statistics we have some hint of where the demand is predominantly, or at least where the perceived demand is. Of the 28 business with available information, almost 60% had businesses or the government as their primary customers. Of these, six were linked with the marine and oil industries, the dominant industries in the region. These

numbers, taken from such a small sample size, do not prove to be conclusive about the demand in the region. Interviewee S1 had further insight saying that they see that entrepreneurs will more often target businesses because it is easier to see the demand than with consumers. This may give further weight to the observed number in that direction. Because of these close numbers and because the expectation for differences between CME and LME expectations in demand are not clear in the theory, there are no conclusions drawn from these observations about whether demand in the Arendal region is in line with CME expectations or not.

5.2 Systemic conditions in the Arendal region

The systemic conditions were able to be described in varying degrees by those interviewed. Some of the conditions such as entrepreneurial leadership and the talent pool were inconclusive as to whether they represented the CME expectation for entrepreneurial ecosystems. The others showed evidence of being affected by a CME national context.

Networks

The network for entrepreneurs in the Arendal region is built around several hubs. According to interviewees S3 and E2, the center of the network is the entrepreneurship support organisation Etablerersenteret IKS with support from the local government. Interviewee S2 observed five coworking spaces in Arendal city with two in Grimstad and one in Tvedestrand, neighbouring towns in the same region. Each of these coworking spaces has several start-ups and more established businesses working in close proximity and in consistent connection with each other. Interviewee S3 stated that entrepreneurs will generally help others in the co-working space through connecting them with others in their personal network rather than working together on projects. These eight co-working spaces are largely independent of each other, but in the last year the municipality, led by S2, has been organising meetings for each of them in order to build a shared network. Interviewee S3 states that the meetings are having a positive effect on the network. There are also regular events, courses, and meet and greets organised by the coworking spaces, by Etablerersenteret and by other parties not after financial gain in the area. Several of the entrepreneurs interviewed stated that this was the most important way that they built their network in the city. Because of the small size of the city, there is more opportunity for individual entrepreneurs to come in contact with people of influence in the city, whether

government or business leaders. Interviewee S3 shared that entrepreneurs in their coworking space say they are able to get in contact with anyone in the city that could help them, because of their connectedness with each other and the small size of the city. Interviewee E3 mentioned that their connection to Etablerersenteret was critical because they were able to put them in contact with important business networks within the process industry that otherwise had no entrepreneurs in the cluster. These clusters have otherwise few direct contacts with entrepreneurs, but are in contact with Etablerersenteret and the municipality. Interviewee S1 from Etablerersenteret described their own role as primarily to connect potential entrepreneurs to those that can help them, whether that is a coworking space, a business leader, or another entrepreneur. The size of the network and how connected entrepreneurs are with each other and the wider business network is still developing, but many organisations and individuals are dedicated to improving it.

The Arendal region's network displays aspects from both of the market economy expectations. Regarding the importance of formal vs. informal connections, each interviewee that felt qualified to answer (S1, S3, E1, and E2) expressed the feeling that informal connections were more important than the formal ones. There also appears to be less connection than expected between established business networks in the form of clusters and entrepreneurs directly. However, it is government support-organizations that are situated in the centre of the network, Etablerersenteret IKS was the connection point between several businesses, including a process industry cluster, and E3. This and the tendency for entrepreneurs to gather in close knit coworking spaces point towards the CME expectations for the entrepreneurial ecosystem where the entrepreneurial network is embedded in large organizations and formal groups like the coworking spaces.

Financing

Financing in the Arendal area can come from a variety of directions although there is a restricted amount of private venture and seed investment funds. Innovation Norway lists 8 different nationwide seed investment funds, with one focusing specifically on the southern regions. However, the majority of these are at capacity and are only sporadically looking for new investment opportunities (Innovation Norway, 2018) There is also an investment organisation

called Connect AS that works directly with connecting entrepreneurs with potential private investors, organising pitch events for promising entrepreneurs. According to interviewee S1 they show around 100 start-up ideas to investor panels throughout the year, but only 3 percent are in fact financed this way, The majority of financing comes from government funding. Innovation Norway and the Regional business fund (regional Næringsfond) were mentioned by every interviewee as important sources of financing. There was very little financing that came directly from large businesses however. Interviewee S1 described that they will often make contact with large businesses in the region that share the same industry as a potential start-up. These businesses and business leaders will often be willing to meet with the entrepreneur, but only to share advice. Interviewee E3 stated that the process industry cluster that he was put in contact with initially shared only knowledge, especially in regards to where there was opportunity for innovation. After initial research was done by the start-up they began a shared research program that a large business provided some financing for.

Another source of financing in the Arendal region is a cooperation with NAV, the social services centre, in helping unemployed people become entrepreneurs. Generally, the national system for unemployment aid is that beneficiaries must follow a regiment of courses and applying for jobs to qualify for their monthly payout. However, according to interviewee S1, in Arendal Etablerersenteret IKS cooperated with the local NAV office to create an option allowing those who want to start a business to receive their unemployment payout for the first 12 months of work on their start-up. This policy is now being implemented in other municipalities as a result of how effective it has been in Arendal helping entrepreneurs. Interviewee E1 made use of this service themselves and emphasized its importance for their ability to succeed.. While Innovation Norway and Regional Næringsfond have requirements for innovation and growth potential, support from NAV is for any who want to start something new and the majority of those who use the service work only to be self-employed. These descriptions are very much in line with CME expectations.

The low market capitalization gives low incentives for venture capital and the dominant industries in the region are not those typically targeted for patent development. Financing instead comes from organisations with the goal of investing in the region as a whole. The financial

support from NAV is a strong sign of CME entrepreneurial ecosystem development, because it is tied to the strong labour protection institutions that CME countries are known for.

One thing that was not expected was the low level of investment from business networks and clusters, something that could be expected from a CME region. This could be from the low development of the entrepreneurial ecosystem. As stated above, there is little networking connection between the large regional clusters and the entrepreneurial network. Perhaps as these organizations have more contact with entrepreneurs, they will be more willing to invest in them for the sake of their own industry.

Talent Pool

It was difficult to establish a definitive picture of the talent pool in Arendal without using an extensive survey of the population. The interviews give only a general picture and are most useful to measure how the entrepreneurial network perceives the talent pool, rather than an objective definition. The entrepreneurs that were interviewed had started their businesses too recently to demonstrate a need for new employees. Both interviewee E2 and E3 were at the stage where only the start team actively working on the project. Interviewee E3 stated that they believe they would be able to easily find employees in the process industry field because of the nearby university with an engineering focus and the other established industry in the region. They were less sure about other fields. Interviewee E1 stated that they have been able to find qualified employees through the national unemployment program run by the NAV, the same organization that enabled them to start their own business.

The entrepreneurial network improves access for entrepreneurs to the talent pool. Interviewee S3 stated that they are confident that any in their space would be able to find the right person by leveraging the network, minimizing the need for traditional search tactics. However, S3 also mentioned a need for luck as “the right people may not be available at that moment” (translated from Norwegian) This shows an expectation that potential employees would not be willing to leave established positions to join a start-up. This culture can limit the talent pool. The population of Arendal and the greater Agder region also affects the amount of available talent. A smaller population denotes a smaller pool of talent from which to hire at any given time. While

the business people interviewed did not seem to experience trouble finding employees with the correct competencies, their answers gave an expectedly vague assessment of the regional talent pool and there are no conclusions drawn on whether this is reflective of an LME or CME national context.

Knowledge

The knowledge sources that lead to start-up ideas are varied. Interviewee S2 commented on a strong relationship between regional research institutes and the local businesses community. Interviewee S5 stated that the University of Agder in Grimstad recently launched the Mechatronics Innovation Lab (MIL) and I4 Helse, two innovation centres focusing on the STI innovation mode geared specifically towards the local production industry and medicine respectively. Interviewee E3 also mentioned a research institute within one of the leading process industry firms in Kristiansand that combines STI innovation with DUI innovation. E3's business was in cooperation with this research institute to find solutions to problems in the process industry and their own business idea was formed on the basis of STI innovation. However, among the 28 businesses that were supported by Innovation Norway in the region, only five of them gave indication of the STI innovation mode through their online presentation of their business. (see figure 5) This discrepancy may be due to the lack of connection between business clusters and the entrepreneurial network, or may show a bias from this research institute towards established businesses rather than entrepreneurs. At this point, E3's business appears to be an outlier among those interviewed in the region, though they stated that research and patent based entrepreneurship are more common in cities like Trondheim, where there is a larger university and a more established marine oil industry. That the majority of entrepreneurs appear to use DUI innovation method is in accordance to the CME expectations for the ecosystem.

Leadership

Leadership in the Arendal region ecosystem is not very strong, according to those interviewed. There are no widely known "big wins" from the recent years and none of the entrepreneurs that were interviewed had any mentors or role models to emulate in starting their businesses. There are entrepreneurs investing in the region, however. Most notable is Tor Arne Haugland in

Tvedestrand, a serial entrepreneur; he and a few others have started a coworking space in Tvedestrand built around their engineering business Otecko. Unfortunately, their connection with the network in Arendal and the rest of the region is limited. They were mentioned by both interviewee S1 and S3, but were unknown to the entrepreneurs interviewed who were not living in Tvedestrand. This lack of leadership and entrepreneurial role models may be an important limiting factor in the development of the entrepreneurial ecosystem, but has little bearing on this study focusing on differences between CME and LME affected ecosystems.

Support Services

A large variety of the support services listed in the entrepreneurial ecosystem model are available for entrepreneurs in the region. Many of these services are free, either given to members of various associations or provided by the government. In an interview with E2 it was said that they have used free appointments with a lawyer through their membership in NHO (Næringslivets Hovedorganisasjon) This association for business leaders offers reduced membership price for start-ups for their first two years and offers free legal counsel, as well as free counsel from regional leaders. (Næringslivets Hovedorganisasjon, 2019) Interviewee E1 said that they are self sufficient as far as accounting, marketing and such, but that they learned these skills from complementary courses offered through NAV and the local government. Interviewee S1 also described guidance services that Etablerersenteret IKS give to any entrepreneur that applies, free of charge. They also organize events, seminars and meet-and-greets for entrepreneurs that E1 said were very important for their network development. These counselors are offered by Etablerersenteret as well as incubators such as UiA Nyskaping where S5 is employed. The co-working spaces spread throughout the region are offered to start-ups at prices they can pay in their early establishing phase. E3 described his ability as a student to use the UiA Nyskaping space for free. S3 explained that their co-working space is an independent and privately owned business, but the goal of the business was to break even so that they could instead support local start-ups with low rent and an inspirational community. For accounting, there are online services targeted towards small businesses where entrepreneurs can do their own taxes. E1 and E3 described using this service instead of employing an accountant and that this was sufficient because of guidance from the network and beginner courses offered for free in the area.

The support services are not entirely ideal however. One service that was noticed to be lacking was that of an accelerator. E2, who had some experience and was a business developer as well, described that there was no organization that offered the “whole package” to promising entrepreneurs. They saw a need for accelerators, programs that offer entrepreneurs investment, mentorship, and connections all in one package. There was also no insurance service that was specifically targeted towards start-ups, although none of those interviewed complained about insurance prices.

The support services offered in the Arendal region were in line with expectations. Although there were a few for profit services targeted at start-ups and SMEs, the majority were either free or offered at a low cost as an investment into regional development either from the government or associations. There were no offers found for services in return for equity as expected in a region with lower market capitalization.

5.3 Outputs and outcomes in the Arendal region

Entrepreneurial activity in the region follows largely along the line of existing industries in the region. There was substantial variety among businesses supported by innovation Norway. One created custom-made children’s dolls, another produced innovative children’s books.

(Innovasjon Norge, 2019) These varied businesses did not have any pattern to them and seemed independent of the entrepreneurial ecosystem. Within the network there were different focuses in the different coworking spaces. Interviewee S1 described some as focused on the green shift, others on culture, another on industry, another on marketing, the coworking in Tvedestrand was focused on offshore technology. Those which were innovative tended to stick to the energy sector, digitalization, or the marine sector. The majority of the business funded by innovation Norway fit within these three. There were two businesses that were judged to be able to form new industries based on radical innovations. One that sold roofs with integrated solar power, a combination of building competencies and the energy sector, and a business that sold floating buildings, a combination of marine boat building and the building sector. As there were several businesses focusing on digitalization and innovation in the marine and oil industry, the combined impact of these businesses is expected to be path renewal in the region, allowing for continued

competitiveness for established businesses and their industries. This is as expected from a CME influenced entrepreneurial ecosystem.

6 Conclusion

The entrepreneurial ecosystems approach gives an important tool for policy makers to analyse how they could support entrepreneurship in their area. The approach helps to measure several causes of entrepreneurial activity so that policy makers do not focus on just one key element regardless of the context. Instead, they can see what is lacking in their specific region and fill in those gaps. A recent model separates these elements into larger categories of framework conditions that are the context for the ecosystem and systemic conditions that directly enable entrepreneurial activity. To this point, the way that these conditions work together in a given region has been unclear with no condition being seen as more important than another, only that they can each condition can influence the ecosystem and together affect the regional economy. This paper has sought to improve the understanding of how these conditions can synergize together differently in different contexts. This was done through the inclusion of the Varieties of Capitalism approach.

The Varieties of Capitalism approach claims that capitalist economies can act differently, but still be competitive in the global economy. It presents the coordinated- (CME) and liberal- (LME) market economies as ideal market economies that contrast with each other in the way firms relate to other actors in the country. In LME countries they relate predominantly through market relationships, and in CME countries they relate through non-market relationships and regulations.

When theoretically comparing the descriptions of the market economies to the entrepreneurial ecosystem model, it was found that the LME economy shared many similarities with the ideal ecosystem from literature. The CME description presented another picture of what the entrepreneurial ecosystem could look like. It demonstrates an expectation that there will be weaker support from the national culture and laws as well as less financing opportunities from the private sector but that there is a potential for strong direct support for entrepreneurs through active government investment into the ecosystem. Entrepreneurial networks can also be

embedded in the already strong networks that exist in business associations and within industries, allowing entrepreneurs to take a supporting role in existing industries in the region.

Entrepreneurship is presented as a central aspect of the LME country, creating new industries through radical innovations. In the CME country, entrepreneurial ecosystems could exist as a supporting piece of a larger network, keeping established industries in the regions competitive through incremental innovations. These differing expectations for the two kinds of national contexts give new tools for analysis of specific regional entrepreneurial ecosystems, especially in CME countries. When researchers or policy makers apply the expectation model to a specific region it can give understanding of why existing elements of the ecosystem have developed and what avenues of support may yield better results.

The theoretical expectation for CME Entrepreneurial Ecosystems was tested in the Arendal region in Norway, classified as a CME country, through interviews with local entrepreneurs and leaders of support services and their intermediaries. It was found that low levels of formal and cultural support for entrepreneurship exist. There were also signs of an undeveloped entrepreneurial ecosystem with no recent success stories and few entrepreneurial leaders. However, there are signs of a growing entrepreneurial network centralized around incubators and coworking spaces. There was surprisingly little direct interaction between entrepreneurs and business clusters, but there was substantial government investment in the entrepreneurial ecosystem in the form of financing from government sources such as social services (NAV) and Innovation Norway and through the government owned support organization Etablerersenteret IKS. This acts as a central figure in the entrepreneurial network and as a connection point to business networks. These together with other factors that were observed showed signs that the Entrepreneurial Ecosystem in the Arendal region is affected by the CME context. There were parts of the ecosystem that did not fit perfectly in this expectation, most notably the lack of support and networking with business clusters. It is postulated in this paper that this situation is predominantly because of the underdevelopment of the ecosystem, and that the climate for entrepreneurial activity will improve if the ecosystem strengthens.

Areas of further study

That there was found to be evidence of the coordinated market economy national context on the entrepreneurial ecosystem in Arendal presents some avenues for further study. The first steps could be to empirically study several regions from CME countries to further examine all aspects of the CME expectation model from this paper. Studies can also be done to compare regions from both LME and CME contexts, both with well-established entrepreneurial ecosystems and with regions where this is lacking. A discussion of the similarities and differences can be used to improve the expectations for CME and LME affected entrepreneurial ecosystems. As these models are used empirically in a variety of contexts it may improve the understanding both of the different ways that Entrepreneurial Ecosystems can develop, as well as the different effects that market economies can have on the strength and types of Entrepreneurial Ecosystems

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8 Attachments

Attachment 1: General interview guide, Norwegian

Innledende

Hvor lett er det å starte en ny bedrift i deres området i forhold til andre plasser? Hvilken begrensninger/fordeler er det i området for nyetableringer?

Framework Conditions

Formal institutions

Hvordan er entreprenørskap påvirket av lokale og nasjonale lover og politikk?

Culture

Hva synes lokale folk om entreprenørskap?

Hva om den lokale kulturen er til hjelp eller hinder for entreprenørskap?

Physical infrastructure

Hva om byen og lokale ressurser påvirker entreprenørskap. Hvilken lokale industrier er basert på lokale ressurser

Demand

Hvilken innovative bedrifter finnes allerede i området?

Hvordan forholder nyetableringer til eksisterende industrier?

Blant de nyetablerte bedriftene dere er i kontakt med, hvilket marked selger de til? (konsument, offentlig, bedrifter) (lokalt, nasjonalt, eksport)

Systemic conditions:

Networks

Hvordan er dere i nettverk med gründere i området? Hvor ofte treffes de sammen? Hva slags tilbakemelding får dere fra gründere om netverket?

Hva er de formelle og uformelle samarbeidsmuligheter i området?

Leadership

Hvem investerer i gründere i området? Hvordan investerer de?

Talent

Klarer gründere å finne ansatte med riktig kompetanse? Når har gründere ikke klar å finne ansatte/partnere med riktig kompetanse?

Hva slags kompetanse har gründere i området?

Finance

Hvor kommer kapital for nyetableringer i området fra?

Hvilken finansierings muligheter har gründere dere er i kontakt med bruket?

Knowledge

Entreprenørskapskompetanse: Hvor får gründere start-up kompetanse? Er læringsmuligheter tilfredsstillende?

Teknologisk kunnskap: Hva slags samarbeid er det mellom F&U organisasjoner (Private og Universiteter) og gründermiljøet?

Support services/intermediaries

Gründer trenger diverse støttetjenester for deres bedrifter. Disse er blant annet juridiske, regnskap, eiendom, forsikring, og rådgivning. Hvilken av disse tjenester er lett tilgjengelig for nyetableringer? Finnes det spesialiserte tjenester for nyetableringer i disse områder?

Hvor stor ressurs er lokale bedrifter i støtte for nyetableringer?

Entrepreneurial activity

Hva slags innovative bedrifter etablerer seg i området? Hva er deres kobling til eksisterende bedrifter?

Aggregate value

Hvilken effekt har entreprenørskap i området? Hvilken industrier er avhengig av entreprenørskap?