

# “How regional culture shapes entrepreneurial logic: A qualitative study in Twente”

Author: Cas Golbach  
University of Twente  
P.O. Box 217, 7500AE Enschede  
The Netherlands

## ABSTRACT,

*This bachelor thesis explores how regional culture influences decision-making styles by entrepreneurs in Twente. Specifically, the choice between decision-making logics effectuation and causation, particularly ‘means vs goals’ and ‘affordable loss vs expected returns’. A qualitative approach was applied with six semi-structured interviews with entrepreneurs from Twente. Thematic coding was applied, using a deductive approach with a specific focus on dimensions derived from the theoretical framework, such as decision-making, affordable loss vs expected return, regional culture, individualism vs collectivism, and uncertainty avoidance. The findings indicate a strong tendency towards a more effectual logic. Entrepreneurs in Twente, therefore, often begin with their available means, try to work as much as possible with the network they are familiar with, and are flexible in dealing with uncertainties. As a result, all four propositions that were developed from the literature were widely supported by the respondents. This contrasts with national-level culture as described by Hofstede (1980). This indicates that regional culture may have more influence on the choice between effectuation and causation, particularly on principles such as means-based and affordable loss, than is assumed in national or cross-national studies.*

## Graduation Committee members:

**Dr Martin Stienstra**

**Dr Lara Carminati**

## Keywords

Effectuation, Causation, Regional culture, Entrepreneurial ecosystems, Noaberschap, Twente

During the preparation of this work, the author used ChatGPT in order to improve the text, spelling, and grammar, and to translate the interview transcripts from Dutch to English. After using this tool/service, the author reviewed and edited the content as needed and takes full responsibility for the content of the work.

# 1. INTRODUCTION

## 1.1 background

I come from the Twente region and therefore find it interesting to do research in my “own area”. Twente is a region in the east of the Netherlands, which consists of many smaller villages, but also some larger cities, such as Enschede, Hengelo and Almelo. From its history, Twente is an industrial area, leading the way in the textile industry, especially in the 19th century (Benneworth & Hospers, 2007). Nowadays, Twente is also more focused on innovation and technology, see for example the University of Twente in Enschede as an important pillar. Twente borders Germany and runs roughly to the areas around cities such as Deventer and Zwolle.

There is a concept in the Twente region known as “noaberschap”, which reflects the collectivist values that are important here in the region. A “noaber” is one of your neighbors, and for them, you are always there when they need your help. This suggests that entrepreneurs in Twente may be more likely to collaborate and share resources. From my personal experience, I think this can vary a lot in certain regions. To illustrate this, I already notice big differences in a small country like the Netherlands. For instance, the mindset in Amsterdam feels very different from that in the Twente region.

In the development of innovative businesses and economic growth, entrepreneurial ecosystems play an increasingly important role (Hübner, 2021). In an ecosystem, entrepreneurs must make their own choices, for example, in terms of how they want to exercise their decision-making. In this, they must decide how to use their resources, with whom to cooperate, if they want to, and how to deal with unexpected circumstances. It is important to understand how entrepreneurs think, through this, you can also explain the behavior of the entrepreneur. You can use different strategies that deal with decision-making, which are essential in ecosystems. Brinckmann, Grichnik, and Kapsa (2010) distinguish between two approaches, planning versus emergence. Planning is about a structured process where entrepreneurs set up a goal and find their requirements in the process, which tends towards causality. Emergence is the opposite; it is about being flexible in an uncertain environment, and acting reactively, where entrepreneurs will use the experience and resources they already have to respond to the situation. This looks more like effectuation. Brinckmann et al (2010) show us that the choice between these approaches is not only strategic, but also based on the context, like regional factors. In regions where the uncertainty is high, for example, entrepreneurs are more likely to adopt an emergent logical approach. This shows us the conceptual bridge between culture and entrepreneurial strategy. The work of Sarasvathy (2001), builds on a similar idea. She also distinguishes between two approaches: effectuation (emergent) and causation (planned approach).

Sarasvathy (2001) uses her well-known “Curry in a Hurry” story to show us the two different decision-making approaches. We see that the “ingredients” that an entrepreneur has is influencing the path they take. With this metaphor, Sarasvathy (2001) explains effectuation and causation. In causation, you go to the store with a specific goal: making curry, and in the process, you gather your needed ingredients (means). In effectuation, you look in your refrigerator at the ingredients you already have, and with these, you come up with what you are going to make. This way of reasoning can be relevant within entrepreneurial ecosystems, because there are limited resources and uncertainty is common.

Stam and van der Ven (2021) discuss entrepreneurial ecosystems and the factors that determine whether they become successful. Here, the role of regional culture is often ignored, even though it can play a determining role in how entrepreneurs think and behave. However, the national role is often emphasized. Entrepreneurial ecosystems consist of multiple elements that shape entrepreneurial activity. Stam & Van de Ven (2021) provide a framework (Table 1 in Appendix 1) that identifies the key concepts like institutions, resources, and new value creation. These elements, as outlined by Stam & Van de Ven (2021), influence various aspects of the entrepreneurial process, including the decision-making logic applied, including the extent to which they apply effectuation or causation. This study is partly inspired by Stam & Van de Ven’s framework. But it focusses also on elements which are in line with effectuation theory. Specifically, the availability of means and the principle of affordable loss. Sarasvathy (2001) argues that effectuation is more common in environments where there is greater uncertainty and resource constraints, thus requiring entrepreneurs to use their available resources. These concepts could be influenced by regional culture. Other elements, while important, fall beyond the scope of this study and can be looked at in further research.

## 1.2 context

Culture can influence entrepreneurs whether to avoid or take risks, or if they are likely to enter partnerships. The choice to enter a partnership might depend on cultural values, such as collectivism vs individualism (Hofstede, 1980). However, cultural frameworks, such as Hofstede’s, are normally focused on a national level, yet there are studies, including the GLOBE project (House et al., 2004) and Trompenaars & Hampden-Turner (2012) that have emphasized that cultural values can differ within countries. Hofstede (2010) also later acknowledged that cultural complexity exists within a country, and thus that regional culture plays a significant role. Hofstede (2010) says, for example, that in Brazil, regional differences are impacting the behavior and values of entrepreneurs. So, this makes Hofstede’s framework suitable for this study, and we can assume, based on these insights and from my own experiences, that this will be similar for the Netherlands.

Benneworth and Hospers (2007) see the region as a technological base with a strong knowledge institution (University of Twente). This ecosystem is therefore characterized by cooperation, and here the choice of effectuation and causation can still be made. Brinckmann, Grichnik, and Kapsa (2010) emphasize that regional and cultural influences play an important role in the decision-making process of entrepreneurs. So, in a region like Twente, where values like “noaberschap”, and collaboration are highly valued, these cultural aspects can prefer effectuation. This can encourage entrepreneurs in Twente to use their means creative and enter partnerships, which enables them to regulate risks and create opportunities within their specific regional context.

Many studies also look at the link between culture and entrepreneurship at the national level. They are then explained using Hofstede’s (1980) cultural dimensions. This study explains well how you see the differences in countries when it comes to entrepreneurship, for example. The study by Hayton, George, and Zahra (2002) emphasizes that national culture does affect entrepreneurial behavior. However, it remains unclear how these cultural influences can be linked to the decision-making logics, such as the choice between planning and emergence, or effectuation and causation. The role of regional culture is also understudied in this context.

To see how regional culture can shape a decision-making process, we draw inspiration from the work of Hübner (2021), who did a study of three entrepreneurial ecosystems: Silicon Valley (USA), Munich (Germany), and Singapore. With these ecosystems, we can experience how regional culture can influence the strategic decisions of entrepreneurs. The link between culture and entrepreneurial strategy is also supported by Brinckmann et al. (2010), in their study, they argue that entrepreneurs plan and act in a way that is not necessarily a strategic choice, but also very much influenced by contextual aspects, such as the environment. They distinguish planning and emergence, but here we dive in deeper in chapter 2. It is good to understand how cultural/regional environments can lead to different entrepreneurial strategies.

Regional culture can be seen as relevant if we investigate the choices of entrepreneurs about decision-making. Hofstede's (1980) framework on the dimensions of culture is very useful in this. These dimensions, such as uncertainty avoidance and individualism vs collectivism, can be used to explain the choice between effectuation and causation.

In individualistic cultures, entrepreneurs are making decisions based on what they think is best, and they don't use the networks they have at all. Twente is an interesting counterpart to Silicon Valley, Munich, and Singapore, for example. It may not be the best comparison because Twente is, of course, a lot smaller, if we speak in terms of prominence, but it is interesting to see how you can find aspects of these ecosystems in Twente.

Affordable loss, as an example, is important in effectuation, and it may well highlight Twente's approach to using its own resources. And through this, therefore, analyze the regional differences and determine if and how culture influences the decision-making process of entrepreneurs. Thus, if we link Twente to the existing research on Silicon Valley, Munich, and Singapore, it can contribute to a better picture of how regional culture influences the choice between effectuation and causation. So, there is a lack of research when compared to international entrepreneurial ecosystems, but we will first have a look at how it is in the three other ecosystems.

-Silicon Valley is described by Hübner as an ecosystem with high risk-taking and thus low uncertainty avoidance (Hofstede, 1980). So, entrepreneurs would be more likely to take risks, and dare to invest more money, so this is about a higher affordable loss. The score of individualism is high for Silicon Valley. That means that the environment also looks very much at personal performance. The power distance is low, providing equal opportunities for startups, also the networks tend to be informal. We see that these are aspects that can fit with effectuation, especially in startups. Yet it can also change to causation when the value of a company increases. For example, investors want there to be a clear plan before they invest (Hübner, 2021).

-In Munich, you see that entrepreneurs avoid taking big risks. They prefer to see the long-term vision, so then aspects of innovation and sustainable growth come into play, look at their auto industry for example. There is an average individualism score, so partnerships in a company are important here. The power distance is a lot higher than in Silicon Valley, so hierarchy in a company is key. So, Munich tends more toward a causation approach, still, according to Hübner (2021), effectuation may occur, but you are more likely to see this in startups that have limited resources, such as university spin-offs.

-In Singapore, according to Hübner (2021) there is more structure. The government is also a big support for startups, for example, they give subsidies and there are tax advantages.

There is also a great focus on international trade, so globalization is demanded. Because of strict regulations, entrepreneurs take fewer major risks, so uncertainty avoidance is high (Hofstede, 1980). To succeed in Singapore's entrepreneurial ecosystem there is also a lot of networking and collaboration, so here you can see that there is a collectivist culture (Hofstede, 1980). Hübner (2021) refers to Zhang et al. (2020), who argue that institutional support for entrepreneurs drives toward a causal approach. However, Hübner notes that leveraging this support can also be seen as using one's available resources, which aligns with the principles of the effectual approach.

It is also relevant to conduct a study on whether these highly developed international ecosystems influence entrepreneurs' decisions, and whether this could possibly cause it to deviate from thinking across national borders, as is traditionally thought. The regional approach can likely provide more insight into the cultural factors that influence entrepreneurs' strategies, and thus the choice between effectuation and causation. This perspective is supported by Reymen et al. (2015). In this study, the cross-border entrepreneurial ecosystem of Eindhoven-Leuven-Aachen Triangle (ELAT) is being investigated. Their research emphasizes how regional characteristics play an important role in how entrepreneurs make decisions. They say for instance that entrepreneurial logic evolves over time, due to uncertainty or the availability of resources. If we look at other studies, we see that despite these examples, the influence of regional culture on entrepreneurial decision-making is still understudied in the existing literature and therefore deserves my attention. Together with the study of Hübner (2021), this research serves as a reference point for comparing Twente. The mentioned regions are known for their innovative and successful entrepreneurial culture; this makes them an interesting and relevant study for my research of the cultural influences on entrepreneurship.

### 1.3 research gap and research question

Limited research has been done on the influence of regional culture on the choice between effectuation and causation for entrepreneurs. Reymen et al. (2015) talk about institutional and geographic context of influence on entrepreneurial decision making. The study is about an ecosystem with companies in Eindhoven, Leuven and Aachen, which are not in the same country, but are in the same region. This also shows that a cross-border area can also be a shared ecosystem, and that regional characteristics such as norms can influence the choice between effectuation and causation. Yet little research has been done on this type of regional ecosystem, especially when it comes to the effect of regional culture on the choice between effectuation and causation. Research is lacking on how these dynamics show up in a region like Twente, specifically on Twente as a case study to examine how regional culture influences decision-making. Therefore, the research question of this study is the following:

*How does the regional entrepreneurial culture in Twente influence the choice between effectual or causal decision-making logic?*

## 2. THEORETICAL FRAMEWORK

### 2.1 Effectuation and causation

Effectuation and causation are the two different ways entrepreneurs make strategic choices (Sarasvathy, 2001). Gregoire & Cherchem (2017), critically examined 101

effectuation articles published between 1998 and 2016. They highlight how important these two concepts are in entrepreneurial decision-making, so, we dive deeper into these two approaches from Sarasvathy (2001),

### 2.1.1 Effectuation

Effectuation is the process by which entrepreneurs use their own resources and in doing so see and explore possible opportunities. (Sarasvathy, 2001). The process is flexible because no goal is set at the beginning. There are a few characteristics that are important in effectuation:

- Bird-in-hand principle: This is about starting with what you have (resources, knowledge, networks)
- Affordable loss: Here you cover your risks by investing only what you can afford to lose.
- Crazy quilt: By collaborating and building relationships you reduce uncertainty.
- Lemonade principle: You have to see the unexpected situations as opportunities.
- Pilot-in-the-plane: Entrepreneurs set their own course, just as pilots set the direction of their aircraft.

These 5 principles all come from Sarasvathy's (2001) theory and have been used and further developed by many other researchers in the years that followed, including Sarasvathy (2009) herself.

### 2.1.2 Causation

Causation is a more planned approach in which entrepreneurs first set a goal, and in doing so they then seek the resources they believe they need to achieve that goal (Sarasvathy, 2001). According to Sarasvathy, the characteristics of causation are goal setting, planning and market research.

Thus, in addition to the difference between effectuation and causation, the regional context also plays a big role in how entrepreneurs make their choices. Brinckmann, Grichnik & Kapsa (2010), tell us that there is a lot of influence on entrepreneurs' decision-making. They say that decision-making is not only about rational factors, such as the means or opportunities you get in the market, but also by the regional values. This fits well with the dimensions used by Hofstede (1980), such as the previously mentioned individualism vs collectivism and uncertainty avoidance. With this, Brinckmann et al supports the idea that effectuation and causation is partly determined by the culture in which it occurs, and thus this also varies by region.

### 2.1.3 Means and affordable loss

In entrepreneurial ecosystems, means and affordable loss are key factors in how entrepreneurs see decision-making. "Means" are the resources that an entrepreneur already possesses, such as financial resources, leadership, networks, and human capital (Stam & Van de Ven, 2021). Sarasvathy (2001) describes "means" in a similar way, but emphasizing who the entrepreneur is, what they know, and whom they know, including personal traits and experience. Affordable loss means that entrepreneurs reduce risks by deploying only what they can afford to lose (Sarasvathy, 2001). This can be linked to regional culture, because the willingness to take risks can vary by region (Hofstede, 1980).

Looking at means, this is not culturally neutral. We see, for example, in regions that are very collectivistic, which is

perhaps why Twente is one of them, that entrepreneurs are more likely to use their network as a means (Gregoire & Cherchem, 2017). And in individualistic regions, this is then often not done so quickly, their individual knowledge will rather be used. This also applies to affordable loss, we see for example in Munich and Singapore (Hübner, 2021), that entrepreneurs are less likely to take risks because these are regions where there is high uncertainty avoidance.

## 2.2 Entrepreneurial ecosystems

Entrepreneurial ecosystems are, according to Stam (2015), environments that are connected throughout the region, which facilitates entrepreneurship in a way that there are several resources and actors or institutions who interact with each other. The actors and resources consist of various elements like human capital, leadership, networks, financial resources and institutions. These contribute to the success of the entrepreneurial region (Spigel, 2017; Stam & Van de Ven, 2021).

Hübner (2021) talks about an entrepreneurial ecosystem as a self-sustaining environment. The stakeholders in that environment, like investors, entrepreneurs and policymakers, cooperate to create growth for startups. Hofstede (1980) and Hübner (2021) show us that the region of the ecosystems varies, they can be affected by the economic conditions, support they receive from institutions or the culture that prevails locally

### 2.2.1 Factors that make ecosystems successful

Entrepreneurial ecosystems can become successful due to a lot of factors (Stam & van de Ven, 2021). When we look at the framework outlined by Stam and van de Ven, we can identify a few constructs that define an entrepreneurial ecosystem. The key factors that are relevant to effectuation are means and affordable loss.

Means can be things an entrepreneur already has (resources), such as knowledge, human capital, or financial resources (Stam & van de Ven, 2021).

Affordable loss, for example, is the amount of risk an entrepreneur takes and therefore invests how much he can afford to lose (Sarasvathy, 2001). It is often seen as a financial component, but Sarasvathy also says, for example, that it has to do with time you put into something, or the effort, or your sleep and mental health. An entrepreneur may decide to spend nights working, in order to get something finished, but for how long can you continue with this. And how much stress is acceptable. These are all relevant theories, it fits well within effectuation, because this is not only about gaining the maximum, but also about mitigating risk to a level that is accepted by the entrepreneur.

The framework of Stam & Van de Ven (2021) shows us the most important things that we can link to means and affordable loss, such as:

- Leadership is about the joint act that has to be done to determine the strategic choices of an organization.
- Financial resources, if you have a lot of financial resources, the investments will be higher for startups (Spigel & Harrison, 2018).
- Human capital
- Knowledge
- (Formal) institutions, for example, government policies, legislation, or other supporting agencies. These can be seen as

means because an entrepreneur can leverage them, such as subsidies, networks or favorable regulations in the entrepreneurial ecosystem. Institutions have an indirect influence on affordable loss because there may be support from the government for an entrepreneur, for example, which makes the risk lower, thus the affordable loss is higher.

These elements suggest that affordable loss may extend beyond financial resources, potentially including personal efforts and strategic choices.

## 2.3 Regional culture

As we have said many times now, decisions of entrepreneurs are very much influenced by cultural values, and even better, regional values. So, the values are not just national (Beugelsdijk & Noorderhaven, 2004). In their research, they show that social capital, and trust in cooperation can be very different per region, and that this also leads to different entrepreneurial behavior. In Twente, this is quickly visible, as collaborations, and solidarity are highly valued here. The more frequently mentioned “noaberschap,” which is about social responsibility, can thus be seen as collectivistic. The regional culture is in line with the crazy quilt principle of Sarasvathy in which establishing collaborations and partnerships plays an important role in avoiding uncertainty (Sarasvathy, 2001).

In smaller regions such as Twente, sometimes people look beyond the financial aspects. Loss of reputation or goodwill, for example, can also be important to the decision-making process. Beugelsdijk & Noorderhaven (2004), also talk about the important pillars of regional entrepreneurship, because of this they do not only talk about the economic aspect of affordable loss. If we compare this to the large international ecosystems such as Silicon Valley, where it is much less collectivistic and where they are willing to take more risk (Hofstede, 1980 & Hübner, 2021), you can see that in Twente there is a different interpretation for effectuation. Rather, entrepreneurship is guided by collectivist considerations. So, with this we can only emphasize that the (regional) cultural context plays a major role in the entrepreneurial process and that this research is relevant for academic purposes.

## 2.4 Propositions

Based on the theoretical insights discussed above, which relate to regional culture, entrepreneurial ecosystems, and the distinction between effectuation and causation, we can formulate propositions for the next phase of the research. These propositions are not hypotheses, which will be tested statistically, but conceptual expectations, derived from the theoretical framework. They act as starting points of the research, serving as tools during the empirical phase. As a result, the following propositions have been developed to guide our research:

1. In regions with a collectivistic culture, such as Twente, entrepreneurs are more likely to adopt a means-driven logic, characteristic of effectuation, rather than predefined goals than in regions with an individualistic culture.
2. “Noaberschap” encourages the Twente region and its entrepreneurs to engage in collaborations, which leads to more effectuation.
3. The choice between effectuation and causation is determined not only by national culture, but more by regional culture.

4. Although the Netherlands generally scores high on uncertainty avoidance (Hofstede, 1980), Entrepreneurs in Twente appear to take a more pragmatic approach towards uncertainty, often combining effective and causal strategies in their decision-making process.

## 3. METHODOLOGY

### 3.1 Research approach

The research follows a qualitative and exploratory approach, in line with the work of Gioia et al. (2013) next to Maxwell (2012), aiming to understand the regional cultural values in the Twente region, and whether this influences the decisions entrepreneurs make, focusing on the choice between effectuation or causation. This approach is chosen because it provides an insight into the experiences, choices and behavior of entrepreneurs in a specific region. This research approach is inspired by Hübner (2021), because a similar method is used to investigate the local cultural values that influence entrepreneurship.

### 3.2 Sample

A sample was selected from a regional entrepreneurial hub in Twente. This organization functions as a parent company that has several different businesses in Twente. There is a great mix of young and experienced entrepreneurs, which makes a diverse sample in terms of age, experience, and entrepreneurial stage. Six entrepreneurs have been interviewed; they are all active in the Twente region and owner of their business. In appendix 3, control variables can be found of the participants, such as age, gender, and years of experience as an entrepreneur. The parent company not only provides a place for all these enterprises, but also stimulates cooperation and knowledge sharing, so they work in the same building. This setting offers valuable insights into how regional cultural elements, such as the aforementioned “noaberschap,” are reflected in entrepreneurship.

### 3.3 Data collection

In the research, data is collected through semi-structured interviews. This allows us to refer the important topics of the study to the answers of the participants and flexibly ask about the relevant points of the research. With their experiences, expertise, and insights, it can add value to academic literature.

The interviews are conducted in May 2025. All the interviews are held in Dutch, as all participants are native speakers from the Netherlands. Also, the interviews took place in person at the place where the entrepreneurs are working. The setting was familiar for them, so this helped to create an open interview environment. In appendix 2 you can find the interview questions.

Each interview was around thirty to forty-five minutes. All the interviews were audio-recorded to make sure that the analysis of the interview could be accurate.

### 3.4 Data analysis

To analyze the qualitative data collected from the interviews, we used a deductive coding approach based on theoretical concepts introduced earlier in this study. Predefined themes such as regional culture, entrepreneurial logics, and elements of

entrepreneurial ecosystems were the structure of the coding process. These themes were derived from the theoretical framework.

A codebook was created, which can be found in appendix 4. After this, a transcript was analyzed with a senior researcher for consistency and reliability; following this, the process was continued independently. This step helps to process interpretations and for calibration of the coding scheme.

Although the process was mainly theory-driven, the analysis was inspired by the Gioia methodology (Gioia et al., 2013). While Gioia et al emphasize inductive, grounded theory-building, they also admit that theory-based coding can still be valuable, when the researcher remains open to new insights. So, a deductive structure is used in this study.

The thematic coding was used to systematically identify certain patterns in the data. This method shows us the specific themes we want to cover, which is based on our predetermined important topics for our research. The topics we extracted from our theoretical framework that are important for the interview are:

-Effectuation vs Causation

-Affordable loss vs expected return (Sarasvathy, 2001)

-Regional culture (Noaberschap)

-Individualism vs collectivism (Hofstede, 1980)

-Uncertainty avoidance (Hofstede, 1980)

-Means (Bird-in-hand principle - Sarasvathy 2001)

Once the interviews were conducted, relevant quotes and other important statements from each research participant were coded under these themes. This deductive approach can help us highlight different sides of the participants' perspectives. So, in this you can recognize, for example, patterns in how entrepreneurs operate in the Twente region. Because of its exploratory nature, the method we use can compare well with our established propositions.

## 4. RESULTS

The results of this research are presented thematically from the interview questions, which derive from the theories of effectuation/causation (Sarasvathy, 2001), national dimensions (Hofstede, 2001, 1980) and regional culture, such as the concept of noaberschap, from the Twente region. The analysis is structured according to the aggregated dimensions, and corresponding first order codes, and second order themes:

(1) Decision-making: Effectuation vs causation,

(2) Affordable loss vs Expected return,

(3) Regional culture (Noaberschap),

(4) Individualism vs Collectivism, and

(5) Uncertainty avoidance.

In each of these sections we see the main patterns reflected from the coded interviews. Within these five themes we used different codes, see Appendix 4 for the coding sheet. I was inspired by Hofstede's book – culture's consequences (2001) regarding a part of the coding. In the book, he provides the operationalization of certain dimensions, such as uncertainty avoidance and individualism, which was applied to the interview protocols, outcomes and transcripts. Fragments from the interviews are linked to the codes and this allows us to

summarize the insights in this chapter. In the final paragraph we look back at the propositions we established in Chapter 2, and confirm, nuance, or reject them based on our findings.

### 4.1 Decision-making: Effectuation vs Causation

Entrepreneurs from Twente have different ways of approaching a new project, reflecting characteristics of both effectual and causal decision-making. The interviews show that most of the participants start new projects or initiatives from resources currently available to them, such as their own expertise, network or experiences.

In this analysis, several first-order codes were identified. From there they were grouped into second order themes. "Means-based" and "goal-driven" are examples of this. These codes can be grouped into so-called second order dimensions. In this research, "effectual logic" and "causal logic" have been used.

The code "means-based" was a frequently assigned code when a question on this topic was asked, appearing 13 times. "Use of alliances or partnerships" was also frequently chosen (29 times). This highlights that collaborations are very important for these entrepreneurs from Twente, especially in the start-up phase of a project. However, they do look from the other angle as well. The code "goal-driven" was also assigned 14 times; this code is representative for causation. For example, one of the entrepreneurs indicated that they do start with a goal in mind but then rethink from that perspective to see what the needs are. So, this defines the mix of the two approaches. The entrepreneur said the following: *"I think about what outcome needs to be achieved, so I overlook the project. Begin with the end in mind, and then I reason back to what and who we need for that. Then I form a team, who have the same idea in mind."*

This quote shows elements of both goal orientation and reliance on existing resources and partners. The code "embrace-contingencies" also appeared frequently, 25 times. This reflects the entrepreneurs' willingness to adjust their strategy to such an extent because they have gained new insights into the process, or because circumstances have changed. Five of the six entrepreneurs said they do this every project. One entrepreneur said the following: *"I think adjusting your strategy is going to happen automatically as you go along, because you can't always do things according to the pre-established plan. It's an ongoing process."* The one entrepreneur who does not change anything about his strategy explained it as follows: *"I start by thinking if the project is viable at all, and then I want to change as little as possible, because this can have a lot of impact on the result, and therefore on the price and margin. During this process we don't want to change anything anymore. So, in advance we figure everything out."*

The more traditional causal codes, such as "competitive analysis," and "avoid contingencies," which you can apply to this last quote, were hardly present among the six participants. This shows that the entrepreneurs put little focus on analyzing their competition and avoiding uncertainties at the beginning of projects.

Summarizing this, we see that there is more effectuation applied by the entrepreneurs in their decision-making, i.e. starting with available resources, working with partners they trust, and being open to the unexpected. The goal orientation is present (goal-driven), but it is hardly deployed in an elaborate way.

## 4.2 Affordable loss vs Expected return

Entrepreneurs in Twente appear to apply the principle of affordable loss more frequently than expected return in their decision-making regarding risk and investments. Decisions are therefore not made to maximize expected profit but rather based on what one is willing to lose. This is also reflected in the interview coding results for this theme. The code “affordable loss” was assigned 21 times to a fragment, while “expected return” was assigned 12 times.

Several interview participants indicated that they often make an initial estimate in advance of what a project may be allowed to cost, not only financially, but also in terms of time, effort, commitment, or other mental burdens. One of the entrepreneurs stated: *“Everything you put into something (time, money, energy) you can't put into something else, so that costs something, and you can't put it into something else.”* He also added: *“You are an entrepreneur 24 hours a day, which means you just have to accept it, otherwise you can't call yourself an entrepreneur.”* This indicates an informal but clear mental threshold, this implies a boundary of what he thinks is acceptable, pointing toward a more effectual approach.

Another entrepreneur had a counterargument: *“I believe that an entrepreneur should be able to do their work in 40/50 hours a week. If you have entrepreneurs who already have to make sacrifices, such as an 80-hour work week, then I think you're doing something wrong.”* This is also a good example of affordable loss, because he clearly sets a limit on what he is willing to invest. According to this perspective, entrepreneurship does not come at the expense of everything, such as personal well-being, or the balance between work and life. These contrasting perspectives show that affordable loss is not a uniform behavior, but rather a principle that can act differently, either as an acceptance of high effort, or as a limitation of workload and personal investment. A third entrepreneur expressed a more forward-looking interpretation of affordable loss: *“I want everything to run as smoothly, and preferably in as little time as possible. The main goal is to create stability, so we can absorb any blows in the future if necessary.”* This participant highlighted that affordable loss is not only about effort or investment, but also about maintaining control.

## 4.3 Regional culture (Noaberschap)

The regional culture of Twente plays an important role in shaping entrepreneurial behavior, particularly through the concept of noaberschap. The term is often described as a form of social responsibility and mutual support within communities or ecosystems. It therefore reflects the collectivist orientation of entrepreneurs. The findings of the interview confirm this picture in Twente. Emphasis is placed on building and maintaining trusted relationships, and entrepreneurs also mention regional characteristics of the Twente region when talking about their way of doing business. This is reflected in the coded results “noaberschap present” which appeared 22 times in the interviews, whereas “noaberschap absent” only appeared twice, we also had a code for “regional cultural values & behavior, which was mentioned 37 times. In fact, all entrepreneurs felt that noaberschap and regional culture influence them, and that this is reflected in the way they do business. One entrepreneur said, for example: *“We do everything we can in the region, and preferably here in Twente with people we know. With my company, we used to have everything made throughout the country, but we have also brought that here. So, I personally find that very important. I do think that we would help each other a little faster here in the*

*region, so in fact, the “noaberschap” comes back here. At least that's how it works for me.”* The others supported him in this opinion: *“Yes, I think our entire company is built on the idea of neighborliness; we do it together. You go faster alone, but you get further together; that's the idea of Noaberschap.”*

Many entrepreneurs see “noaberschap” as a strong and reliable regional network. This forms the foundation for collaboration, trust, and mutual support. One interviewee described it as follows: *“Noaberschap is basically a network in your village or town, where you want to help each other. With a good network, you do the same thing, only in the business world. I see this reflected in the way I do business; I am very keen on building a good network. So, if I find myself in a situation where someone has helped me in business, the next time I need the same thing, I will call on that person to give them the business, because I know it is good, and I would not easily go to someone else.”* The importance of networking is also reflected in the number of times the code “collectivism” was applied, namely 31 times. Entrepreneurs often talked about how loyalty to their colleagues, network, or community motivates them to work together, share resources, or build partnerships. Noaberschap and regional culture encourages collaborations for most entrepreneurs, which fosters a means-driven decision-making process. Because entrepreneurs depend on reliable networks, they are more confident in dealing with embracing contingencies and overcoming uncertainties together, which encourages a pragmatic, collaborative entrepreneurial ecosystem.

## 4.4 Individualism vs Collectivism

We asked how entrepreneurs involve others in their decision-making and how individualistic or collectivistic they themselves are. Many of the entrepreneurs adopted a collectivist approach. As mentioned earlier, the code “collectivism” appeared 31 times, and “individualism” appeared 24 times. These numbers reflect a nuanced balance between taking initiative and group cohesion in the region. For example, when we looked at how the entrepreneurs described themselves, one person said the following: *“The older I get, the more I brainstorm with others to see things from a different perspective. No matter how hard you try, you always see things from only one side. If you ask others whose opinions you value because they have a certain experience or success, you want to learn from them.”* Another comment was: *“I try to involve my team in my decisions. This also applies to setting up certain markets. For my own decision-making and that of the company, I naturally also have to deal with my fellow shareholders, with whom I brainstorm every three weeks, so they are always involved. Still, as director, I can decide a lot myself, but if I'm not sure about something, I discuss it a lot with the people around me.”* We see that individualism is also used to some extent here, but that was often because the entrepreneurs stated that they were always ultimately responsible and that this meant they could and had to make their own choices, which is why “individualism” was mentioned relatively often. The process leading to this individualistic choice is often described as collectivistic. Almost all entrepreneurs described their collectivistic mindset and how, together with long-term relationships with partnerships, this is very typical for the Twente region.

This is further supported by the frequent occurrence of the code “use of alliances or partnerships”, which appeared 29 times in the interviews. One of the entrepreneurs stated: *“we have very good relationships with our suppliers, which means we can really rely on them. That's something that comes from Twente,*

but we also have customers all over the world, with whom we apply the same vision of partnering.”

## 4.5 Uncertainty avoidance

For this last theme, entrepreneurs are asked specifically how they deal with unexpected circumstances and uncertainties. This provides a good representation of uncertainty avoidance. We have the codes “high uncertainty avoidance,” which was only mentioned four times, and “low uncertainty avoidance,” which came up more often, namely 13 times. This indicates that most entrepreneurs are comfortable with uncertainties and are willing to deal with them. Codes that support this include “embrace-contingencies,” which came up 25 times, and “avoid contingencies,” which was only used five times. Entrepreneurs embrace unexpected circumstances more often and use them as opportunities rather than trying to avoid them, it appears. One of the entrepreneurs said: *“I always say at moments like this: ‘Swallow the frog. If something unexpected needs to be done, or if things get difficult, we tackle it right away, before we do anything else. We do the difficult things first. ‘Get it over with’. Tackle it and then we can do the rest, don’t leave it hanging, but deal with it.”* This entrepreneur is not afraid of unexpected or difficult situations, but tackles them immediately, here you see that there is no question of long-term preparation or planning. Within effectuation, this uncertainty is seen as an opportunity, and not as a threat, the entrepreneur proactively deals with the unpredictability, this fits in well with the effectuation principle of embracing contingencies.

Another entrepreneur shows a different way of dealing with uncertainty: *“I can easily deal with unexpected circumstances; it doesn’t bother me much. Many young entrepreneurs think they have to take immediate action when something happens, but in my experience, you must first think carefully and then perhaps decide to wait and see. I am not greatly affected by uncertainties, because in the last 14 years they have never been so great that I thought they would threaten my business.”* He also added: *“I am quite prepared to take risks, but not blindly. I am not necessarily risk averse. Entrepreneurship involves taking risks and assessing. I think I can assess it well, and then I do not find risks taking a problem.”*

## 4.6 Propositions

In the following section, the four propositions formulated in chapter 2.4 are revisited and assessed based on the findings presented in this chapter. Table 2 provides an overview of how each entrepreneur (E) responded in relation to the propositions. ‘C’ indicates that the entrepreneur’s answers on the interview confirm the proposition, while ‘R’ indicates that their perspective rejects it.

**Table 2: Confirmation or rejection of propositions**

	E1	E2	E3	E4	E5	E6
Proposition 1	R	C	C	C	C	C
Proposition 2	C	C	C	C	C	C
Proposition 3	C	C	C	C	C	R
Proposition 4	R	C	C	C	C	C

As can be seen in table 2, most of our propositions were confirmed by the majority of the respondents.

Proposition 1 is considered confirmed because five of the six respondents indicated that they start from their available resources, thus acting from the effectuation principle “means-based.” The sixth respondent stated that they work more goal-oriented, yet also emphasize collaboration and flexibility, in this you can see that despite the causal approach, Twente’s collective culture remains influential.

Proposition 2 is adopted as well, by all six respondents. All entrepreneurs referred to the importance of trust and reciprocity in the region. This informal approach shows the regional driver of effectual behavior.

Proposition 3, which also talks about regional culture in decision making, received broad support. Because entrepreneurs often talk about regional identity, rather than national identity. This image shows that they deviate from the Dutch pattern, this confirms the proposition.

The last proposition was adopted by five of the six entrepreneurs. Each indicated flexibility when it comes to uncertainty, this differs from how Hofstede characterizes the Netherlands, namely as risk averse. Because of this difference, the proposition is accepted. These results suggest that the propositions formulated in chapter 2, throughout the theoretical framework, are largely held in practice, yet it still retains nuance and further investigation in the discussion. An overview of all propositions, including quotes per respondent, also with the first-order codes, second-order themes, and aggregated dimensions can be found in appendix 5.

## 5. CONCLUSION & DISCUSSION

### 5.1 Conclusion

This research set out to explore the following research question: ***How does the regional entrepreneurial culture in Twente influence the choice between effectuation and causation?*** Based on the analysis of the five themes and the formulated propositions derived from the theoretical framework, the results show that there is a clear preference for effectuation among entrepreneurs from Twente. Most respondents indicated in the interview that they start with their own expertise and networks, being guided by affordable loss, and show that flexibility is more important than detailed planning. These are all key characteristics of the effectuation theory of Sarasvathy (2001).

Networking emerged as a strong theme. with all entrepreneurs highlighting it as something that fits very well with the Twente region. Many also made a distinction with the ‘biggest’ entrepreneurial ecosystem in the Netherlands, the Randstad (including Amsterdam, Rotterdam, The Hague, and Utrecht). For example, it was often said that entrepreneurs in Twente come from a more reliable culture, where long-term relationships are highly valued, and where trust therefore plays an important role in doing business. This can be linked to the concept of noaberschap. It was emphasized that entrepreneurs in the Randstad are more into a short-term, transaction-oriented approach, which we can see as fast-paced, or short-term mindset. One entrepreneur linked it to Silicon Valley for example, because of this and the level of hierarchy, which is high there. In Twente we stand more next to each other.

Although entrepreneurial ecosystems and the process of decision-making have been researched, the role of regional



culture has still received little attention. By formulating these four propositions and the research question, this gap could be tested by the findings of the interview. The results suggest that regional influences may play a much greater role than if often acknowledged in national or international studies. Comparing Twente to ecosystems like Silicon Valley, it reveals that every region operates following their own norms, values and logic. Furthermore, we see that the findings in Twente are not in line with the image of the Netherlands, if we look for example at the dimensions of Hofstede (1980). This shows again that regional culture is an important variable in decision-making, and for example the choice between effectuation or causation. In conclusion, the entrepreneurial patterns observed in Twente, reflects to a strong preference for effectuation over causation.

## 5.2 Discussion

### 5.2.1 Interpretation of findings

The interpretation of these findings reveals that there is a strong tendency towards effectual reasoning in Twente among the entrepreneurs. This is visible across dimensions such as reliance on available means, use of partnerships, affordable loss and embracing changing circumstances. This pattern, which we saw in most entrepreneurs, suggests that entrepreneurial reasoning in Twente is shaped by a mix of pragmatism, community orientation and adaptive thinking. It is not just personal preference but also fits in with the entrepreneurial culture in Twente.

A possible explanation for this can be found in the cultural norm of *noaberschap*, which encourages mutual support and long-term relationships. These values are in line with the logic of effectuation. In individualistic entrepreneurial communities, there is often competitive thinking, and they are focused on growth (Spigel & Harrison, 2018), yet we see back among the Twente entrepreneurs that they value sustainability and resilience over rapid scale-up. This local orientation may come from the past, where the region had a more peripheral position and also an industrial legacy in the national economy. Thus, these conditions will perhaps encourage the culture of interdependence, which in turn looks toward collaboration and an adaptive approach to entrepreneurship.

All four propositions were supported by most participants, with two of them endorsed by all six entrepreneurs. Proposition 1, which addressed the relationship between collectivistic culture and a means-driven logic, was confirmed by five out of six respondents. This indicates strong alignment between regional culture and effectual reasoning.

It is interesting that even the entrepreneur who rejected this proposition and leaned more towards causal reasoning still found that flexibility and collaboration were important. This nuance offers an addition to existing literature, which often dismisses effectuation and causation as two opposing ends. (Chandler et al., 2011). Also, the link between effectuation and collectivism may be more dynamic than is assumed. It appears to be more localized, in regional form, than is often theorized at national level. While proposition 3 dives deeper in national vs regional dynamics, it is already clear from the data that norms like mutual support and embedded networks shape entrepreneurial logic.

Proposition 2 considered the role of *noaberschap* in encouraging cooperation and effective reasoning. This was unanimously confirmed by all respondents. Long-term

relationships and trust were linked to this cultural norm. It is remarkable that *noaberschap* was not only mentioned as value but is actively operationalized in the behavior of the entrepreneur; “you want to help each other move forward, you have to create a kind of synergy.” This is similar to Sarasvathy’s (2001) “crazy quilt” principle but also adds a regional perspective. Instead of general stakeholder involvement, entrepreneurs in Twente are involved through a culturally embedded sense of mutual obligation. Regional norms like *noaberschap* function as informal institutions within the entrepreneurial ecosystem (Stam & Van de Ven, 2021).

Proposition 3, which stated that regional culture plays a bigger role in decision-making than national culture, received broad support. This is interesting to see if we talk about the outcomes of propositions 2 & 3, because most respondents referred not to their national identity, but to their regional identity. It is important to note that this analysis was more focused on the selected principles of effectuation, such as the use of means and affordable loss. But these concepts align closely with some of the dimensions of Hofstede (1980). For example, affordable loss can be linked to uncertainty avoidance. Entrepreneurs who are acting with low uncertainty avoidance are more inclined toward accepting affordable loss and also tend to embrace contingencies, as shown in the findings from the interviews. These links can bridge the gap between the effectuation theory and cultural frameworks. This makes the findings propose a broad regional influence on decision-making, but still, further research has to explore the full range of effectual and causal strategies in different cultural contexts.

When we continue with the cultural dimensions, we see that Hofstede (1980, 2001) describes the country as individualistic. The Netherlands scores high on individualism in his model. This seems to suggest that people value personal autonomy more than group cohesion. However, entrepreneurs from Twente deviate from this phenomenon. They emphasize long-term collaborations and shared responsibility. This indicates that regional culture may have a significant influence on entrepreneurial behavior, potentially more than national averages suggest. This adds weight to the argument that when you want to understand entrepreneurial behavior, you also need to look at the local embeddedness of cultural values.

Proposition 4 dealt with uncertainty avoidance in the Netherlands, and that entrepreneurs in Twente appear to take a more pragmatic approach towards uncertainty than what the Dutch standard is. This was also confirmed by five of the six entrepreneurs, which shows a comparative phenomenon when we look at the framework of Hofstede (1980). This deviation supports the idea that regional culture can shape the way that entrepreneurs manage uncertainty. These findings highlight that regional cultural differences can play a greater role than is thought at the national level.

Taken together, the propositions show that regional entrepreneurial behavior in Twente is shaped by multiple factors, including the cultural and contextual elements of the region. This emphasizes the need to look beyond national frameworks and consider the influence of local culture in the decision-making process.

### 5.2.2 Reflection to existing literature

The findings of this study broadly align with the effectuation theory developed by Sarasvathy (2001); however, the study also comes up with the dimension that behavior is deeply rooted in regional cultural norms. We see this, for example, in the work of Hayton, George and Zahra (2002). It is claimed that entrepreneurial behavior cannot always be explained solely by

national culture. If the Netherlands is compared with, for example, the United States, it can be noted that the scores for individualism and uncertainty avoidance are approximately the same. Nevertheless, the entrepreneurs in Twente deviate considerably from these patterns, which we also see in ecosystems such as Silicon Valley. These differences therefore show that there are differences within ecosystems, even within culturally similar countries.

In the study by Hübner (2021), it can also be seen that entrepreneurial ecosystems not only differ per country, but also within countries. That article compares Silicon Valley, Munich and Singapore. It illustrates how local norms, for example around hierarchy, risk and cooperation, determine the choice of a strategy.

In this study, Twente emerges as an environment with a low hierarchy and high trust, where long-term cooperation is given priority over rapid scaling up or competition. This supports the article by Reymen et al. (2015), which shows the importance of local, cross-border entrepreneurial behavior, and emphasizes and also advocates more contextualization when researching ecosystems.

These findings also tie in with the insights of Stam and Van de Ven (2021), who discuss that entrepreneurship is always about broader institutional and regional contexts. In Twente, the concept of *noaberschap* appears to be a good example of the regional institutional norm. This forms a framework within which certain norms are self-evident. These specifications of context are often missing, just like in the models of Hofstede (1980). The results of this study therefore confirm the increasing demand for the role of regional culture in literature on entrepreneurship.

### *5.2.3 Theoretical and practical implications*

This study contributes to literature highlighting the important role of regional culture as a important variable in the adoption of effectual or causal decision-making. Much of the existing literature focuses on national culture, but these results show that important regional values, such as in the case of Twente, collectivity, partnerships, and common sense, have a significant influence on the behavior of entrepreneurs. This highlights the cultural nuances that should be included more often in the effectuation theory and the associated ecosystem model.

When looking from a more practical perspective, these insights are relevant for the policymakers in a region like Twente. Trust, loyalty and collaboration are key elements, so entrepreneurial education could benefit from acknowledging the local cultural dynamics in its design.

### *5.2.4 Limitations & further research*

This exploratory research offers several qualitative insights into how regional culture may shape entrepreneurial reasoning in Twente. Nonetheless, there are still some limitations that should be acknowledged for future research. The findings are based on a limited number of interviews within the same regional context. While the use of these semi-structured interviews and thematic analysis offers depth, it also relies on interpretation.

Future research could address these limitations by conducting comparative case studies in other regions in the country, perhaps even regions outside the Netherlands. This would allow for more understanding of how regional culture shapes entrepreneurial behavior. Combining qualitative interviews with quantitative surveys would validate patterns found in the

results. It can also be valuable to track longitudinal changes in effectual reasoning, to investigate regional culture, and how this develops in different ecosystems.

## **6. ACKNOWLEDGMENTS**

I would like to thank several people who played an important role in the completion of this bachelor's thesis.

Firstly, I would like to express my sincere gratitude to my supervisor, Martin Stienstra, for his valuable guidance, feedback, and support throughout the entire research process. This has ensured that this research has been elevated to a higher level.

I would also like to thank all respondents for their time, openness, and willingness to participate in an interview. Without their insights and experiences, this research would not have been possible.

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## APPENDIX

### Appendix I - Table 1 (Stam & Van de Ven, 2019)

Table 1 Constructs of entrepreneurial ecosystem elements and outputs

Concept	Construct	Definition	Element
Institutions	Formal institutions	The rules of the game in society	Formal institutions
	Informal institutions	Cultural context	Culture
	Social networks	The social context of actors, especially the degree to which they are socially connected	Networks
Resources	Physical resources	The physical context of actors that enables them to meet other actors in physical proximity	Physical infrastructure
	Financial resources	The presence of financial means to invest in activities that do not yet deliver financial means	Finance
	Leadership	Leadership that provides guidance for, and direction of, collective action	Leadership
	Human capital	The skills, knowledge and experience possessed by individuals	Talent
	Knowledge	Investments in (scientific and technological) knowledge creation	Knowledge
	Means of consumption	The presence of financial means in the population to purchase goods and services	Demand
	Producer services	The intermediate service inputs into proprietary functions	Intermediate services
New value creation	Productive entrepreneurship	Any entrepreneurial activity that contributes (in)directly to net output of the economy or to the capacity to produce additional output	Productive entrepreneurship

### Appendix II - Interview questions

#### Controlevragen

- Wat is uw leeftijd?
- Wat is uw opleidingsachtergrond / Welke studie(s) heeft u afgerond?
- Hoelang ben je al ondernemer?
- Wat heeft u hiervoor gedaan?
- Hoe beschrijf je uw sector waarin u actief bent, en kunt u wat vertellen over uw onderneming?
- Hoe ben je betrokken geraakt bij de organisatie, (en wat is uw rol binnen het bedrijf)?

#### Besluitvorming: Effectuation vs Causation

1. Hoe pakt u doorgaans de start van een nieuw project aan? Kunt u uitleggen welke overwegingen u maakt, bijvoorbeeld het beginnen met een doel voor ogen, of kijkt u naar de beschikbare middelen die u hebt (Wie ben je, wie ken je, wat weet je)?
2. Hoe ziet uw proces eruit bij het plannen en ontwikkelen van het nieuwe project, maakt u bijvoorbeeld vooraf plannen, of een marktanalyse, of ontwikkelt u gaandeweg door te experimenteren (met wat wel werkt, of wat niet)?
3. Kunt u een voorbeeld geven van een situatie waarin u uw strategie heeft aangepast tijdens een project (omdat u bijvoorbeeld nieuwe inzichten krijgt), of doet u dit helemaal niet?

#### Affordable loss vs Expected return

4. Hoe weegt u bij het nemen van beslissingen mogelijke opbrengsten af tegen de risico's of verliezen dat het met zich mee kan brengen? Kunt u iets vertellen over uw aanpak of denkwijze hierover?
5. Is er een situatie geweest waarin u bij een zakelijke beslissing, of investering, bewust rekening hield met wat het u zou kunnen kosten – denk hierbij niet alleen aan geld, maar bijvoorbeeld ook tijd, energie, of emotionele inzet? En hebt u het gevoel dat ondernemen in het algemeen persoonlijke offers van u vraagt?

#### Regionale cultuur en Noaberschap

6. Bent u bekend met het concept “noaberschap” en wat betekent dit voor u, komt dit bijvoorbeeld terug in de manier waarop u zaken doet, kunt u hier indien een voorbeeld van geven?
7. Zijn samenwerkingen met andere ondernemers belangrijk voor u, en in welke mate?
8. Denkt u dat er in Twente verschil is in ondernemerschap ten opzichte van andere regio's / delen van Nederland, denk bijvoorbeeld aan de Randstad, heb je hier bijvoorbeeld ervaringen mee?
9. Denkt u dat er bepaalde normen of ongeschreven regels zijn in Twente waar ondernemers zich aan houden? En merkt u verschillen in hoe vertrouwen wordt opgebouwd of zaken worden gedaan in Twente, vergeleken met andere regio's?

### Individualisme vs Collectivisme

10. Sommige regio's worden gezien als individualistisch, en Twente bijvoorbeeld als collectivistisch, in hoeverre betreft u anderen (partners, collega's of netwerk) bij uw besluitvorming, spelen zij een belangrijke rol?
11. Hoe zou u uw stijl van ondernemen beschrijven, als het gaat om bijvoorbeeld samenwerking en zelfstandigheid?
12. Zoekt u bij nieuwe projecten (dan ook) actief naar partners of probeert u (dus) eerst zelfstandig het project van de grond te krijgen?
13. Ziet u ook verschillen tussen generaties, bijvoorbeeld tussen jongere en oudere ondernemers, als het gaat om samenwerken of zelfstandig ondernemen?

### Omgaan met onzekerheid en risico (Uncertainty Avoidance)

14. Hoe gaat u om met onzekerheid of onverwachte omstandigheden in uw ondernemerschap/bedrijfsvoering of de sector waarin u opereert, bijvoorbeeld als zaken anders lopen dan dat ze vooraf gepland zijn?
15. In hoeverre speelt uw eigen gut feeling (onderbuikgevoel) een rol in uw besluitvorming, ten opzichte van analyse en planning?

### Ter afsluiting

16. In hoeverre denkt u dat u bent ingesprongen op een onbenutte marktbehoefte met uw onderneming?
17. Denkt u dat er unieke kenmerken zijn aan het ondernemen in Twente die invloed (kunnen) hebben op de manier waarop beslissingen worden genomen?
18. En daarop voortbordurend, denkt u dat de Twentse regionale cultuur u heeft beïnvloed als ondernemer, bijvoorbeeld in uw bedrijfsvoering, kun je hier een voorbeeld van geven?

### Appendix III – Control variables

Respondent	Gender	Age	Education	Years of experience
1	M	52	University of Applied Sciences + Technical training	5 years
2	M	60	University MSc	14 years
3	F	58	University MSc	25 years
4	M	38	Vocational Education	6 years
5	F	35	Vocational Education	1 year
6	M	61	University MSc	30 years

### Appendix IV

#### Codes effectuation/causation (Sarasvathy)

Causal	Effectual
G-Goal-driven	M-Means-based
R-Expected returns	L-Affordable loss
B-Competitive analysis	P-Use of alliances or partnerships
A-Avoid contingencies	E-Embrace contingencies
X-Causal (no subcategory given)	Y-Effectual (no subcategory given)

#### Codes cultural dimensions (Hofstede)

I-Individualism -> Persoonlijk verantwoordelijk; eigen initiatief	C-Collectivism -> Loyaal aan groep/organisatie; overleg en afstemming
UH-High uncertainty avoidance	UL-Low uncertainty avoidance

## Codes regional culture

NP-Noaberschap present	NA-Noaberschap absent
RC-Regional cultural values & behavior	

## Appendix V

### Propositions:

1. In regions with a collectivistic culture, such as Twente, entrepreneurs are more likely to adopt a means-driven logic, characteristic of effectuation, rather than predefined goals than in regions with an individualistic culture.
2. “Noaberschap” encourages the Twente region and its entrepreneurs to engage in collaborations, which leads to more effectuation.
3. The choice between effectuation and causation is determined not only by national culture, but more by regional culture.
4. Although the Netherlands generally scores high on uncertainty avoidance (Hofstede, 1980), Entrepreneurs in Twente appear to take a more pragmatic approach towards uncertainty, often combining effective and causal strategies in their decision-making process.

Proposition	Quote	Confirm or Reject	First-order code	Second-order theme	Aggregated dimension
1	Ik ben heel erg van het analyseren voordat ik iets doe. Om ergens te komen, daarvoor analyseer ik het helemaal. Ik bekijk het project heel rationeel.	R	Analyze/plan on beforehand	Goal-driven	Decision-making
2	Ik zie noaberschap een beetje als een soort netwerk. In de zin van, in een netwerk heb je elkaar ook. Met een goed netwerk kun je gewoon heel ver komen.	C	Trust on local network	Noaberschap present	Regional culture
3	Ja, ik heb dus de 20 jaar hiervoor altijd in de commerciële wereld gewerkt, en als je kijkt naar mijn sales trackrecord ben ik altijd wel succesvol geweest. Dat komt denk ik omdat toen ik als verkoper door heel Nederland en de hele Benelux trok, als betrouwbaar werd gezien, omdat ik uit Twente kwam. Mensen durfden hierdoor sneller iets bij mij neer te leggen in een deal of iets dergelijks. Dit heeft dus uiteindelijk zeker invloed.	C	Regional origin is associated with reliability	Regional cultural values & behavior	Regional culture
4	Wij werken bij grote projecten met aanbestedingen, en ook naar onze leveranciers toe doen wij ook deelaanbestedingen. Waarbij als het heel erg spanned zou worden, wij ook werken met bankgarantie, waarmee we dus de grootste ‘risico’s’ al afdekken.	R	Actively mitigate risks	High uncertainty avoidance	Uncertainty avoidance

### Respondent 1

Proposition	Quote	Confirm or Reject	First-order code	Second-order theme	Aggregated dimension
1	Ik heb ervaring genoeg om risico’s te zien, ik ga uit van mijn eigen kennis en gevoel.	C	Trust on own expertise and experience	Means-based	Decision-making
2	Dat is gebaseerd op dat we hier in Twente meer zijn aangewezen op onze netwerken, maar dat zit ook wel in de mensen	C	Networking as part of regional culture	Noaberschap present	Regional culture

3	Maar uiteindelijk blijkt, dat door de cultuur hier, we in het algemeen een meer betrouwbaardere cultuur hebben. Dat zie je terug in het nakomen van afspraken, en de betrouwbaarheid in het algemeen.	C	Reliability and keeping promises as regional characteristics	Regional cultural values & behavior	Regional culture
4	Ik ben niet perse risicomijdend. Ik denk ook dat ik gewoon vanuit mezelf onderneem. Sommige mensen worden ondernemer, en sommige mensen zijn ondernemer, ik ben een ondernemer denk ik. Bij ondernemerschap hoort risico's nemen en inschatten. Ik denk dat ik het goed in kan schatten, en dan vind ik risico's nemen geen probleem.	C	Willingness to take risks, good judgement	Low uncertainty avoidance	Uncertainty avoidance

#### Respondent 2

Proposition	Quote	Confirm or Reject	First-order code	Second-order theme	Aggregated dimension
1	Als we bij een project onderzoek moeten doen, doen we dat op pragmatische manier, ik ben ook niet echt van het onderzoeken	C	Pragmatic approach with existing expertise	Means-based	Decision-making
2	Het idee van mijn onderneming is gebouwd op noaberschap, dat we het samen doen, niemand kan het alleen, dat is echt onze insteek. Als eenling kun je nooit verder groeien dan een bepaalde grens, en ga je samenwerken met mensen, dan is "the sky the limit"	C	Focus on collaboration	Use of alliances or partnerships  & Noaberschap present	Regional culture
3	Of regionale cultuur veel invloed heeft? Ja, een op een, dat komt ook doordat ik in dat Twentse de afgelopen jaren ook met andere ondernemers heel veel heb geschakeld.	C	Collaboration is influenced by regional norms	Regional cultural values & behavior	Regional culture
4	Als het echt crisis is, dan is het de kunst om je hoofd koel te houden. Naarmate je ouder wordt, en hoe meer ervaring je hebt, dan gaat dit een stuk beter.	C	Acting calm in uncertain situations	Low uncertainty avoidance	Uncertainty avoidance

#### Respondent 3

Proposition	Quote	Confirm or Reject	First-order code	Second-order theme	Aggregated dimension
1	Het komt voort uit een vraag waar geen oplossing voor is, en dat probeer ik te koppelen aan de dingen die ik al in huis heb.	C	Using available means	Means-based	Decision-making
2	wij doen eigenlijk alles wat kan in de regio, en het liefst hier in Twente met bekenden, ik doe het wel samen.	C	Collaboration in region with known entities	Noaberschap present	Regional culture
3	Ik denk dat het saamhorigheidsgevoel heel belangrijk is, het denken van, laten we het in Twente houden en met elkaar doen.	C	Regional sense of community	Regional cultural values & behavior	Regional culture

4	Ik denk ook altijd, wat gebeurt er nu dan weer, maar dan ga ik iets verzinnen wat ik kan verkopen zodat ik het eigenlijk afwind. Dus in andere woorden, eigenlijk dek ik me er zelf wel voor in, ik kom wel met een oplossing. Dat is iets wat je niet kan plannen.	C	Responding creatively to unexpected circumstances	Embrace contingencies	Uncertainty avoidance
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#### Respondent 4

Proposition	Quote	Confirm or Reject	First-order code	Second-order theme	Aggregated dimension
1	We experimenteren, zien wat er op ons pad komt en proberen projecten op te zetten met onze bestaande relaties.	C	Experimenting and building on existing relationships	Use of alliances or partnerships	Decision-making
2	Dan is er voor mij eigenlijk geen “winst”, maar voor de groep, en de ondernemer die ik help wel. Dus dan doe ik dat, het is niet eens dat ik dan wat terug verwacht.	C	Creating a sense of community by helping others without personal gain	Noaberschap present	Regional culture
3	Ik denk wel, dat waar je bent opgegroeid, dat dat een sowieso van invloed is op de manier waarop je bepaalde dingen ziet, hoe jij acteert als ondernemer. Dat weet ik wel zeker.	C	Origin influences entrepreneurial behavior	Regional cultural values & behavior	Regional culture
4	Wanneer er onzekerheid is, is het soms dan ook weleens beter om even de emotie te laten zakken, en daarna er rustig over na te denken.	C	Letting emotions settle before acting in unexpected circumstances	Low uncertainty avoidance	Uncertainty avoidance

#### Respondent 5

Proposition	Quote	Confirm or Reject	First-order code	Second-order theme	Aggregated dimension
1	Ik ben er 100% van overtuigd dat je je eigen kennis en gut feeling moet volgen, dat moet de doorslag geven.	C	Following own expertise and gut feeling	Effectual	Decision-making
2	Je kunt natuurlijk de gunfactor wel noaberschap noemen. Het is natuurlijk van oudsher een wederkerig iets, dus het is natuurlijk wel mooi dat als je een leverancier hier in de buurt hebt, dat je hoopt dat hij ook ooit iets terug doet.	C	Reciprocity and mutual support	Noaberschap present	Regional culture
3	Dat weet ik niet, ik heb in heel Nederland gewerkt, en ook in het buitenland zelfs, en ik vind het nu wel heel leuk dat ik kan werken in de regio waar ik ook ben geboren. Dus ook dat ik de regionale contacten kan opbouwen en uitbouwen, dat vind ik leuk. Maar ik ben er niet zeker van of zoiets nou echt door Twente komt.	R	Working locally feels meaningful, but regional influence is uncertain	Regional cultural values & behavior	Regional culture
4	Tegenwoordig is het een continu verbeteringsproces, dus je gaat plannen, dan ga je het doen, dan ga je het controleren of het zo is gegaan hoe je het	C	Describing unforeseen circumstances as a continuous	Embrace contingencies	Decision-making



	voor ogen had, en dan ga je bijstellen. Dat probeer ik een beetje aan te houden.		improvement process.		
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Respondent 6

#### Appendix VI – Number of times a code is applied

	Totals
○ Affordable loss Gr=21	21
○ Avoid contingencies Gr=5	5
○ Causal (no subcategory given) Gr=4	4
○ Collectivism Gr=31	31
○ Competitive analysis Gr=2	2
○ Effectual (no subcategory given) Gr=22	22
○ Embrace contingencies Gr=25	25
○ Expected returns Gr=12	12
○ Goal-driven Gr=14	14
○ High uncertainty avoidance Gr=4	4
○ Individualism Gr=24	24
○ Low uncertainty avoidance Gr=13	13
○ Means-based Gr=13	13
○ Noaberschap absent Gr=2	2
○ Noaberschap present Gr=22	22
○ Regional cultural values & behaviour Gr=37	37
○ Use of alliances or partnerships Gr=29	29
<b>Totals</b>	<b>280</b>