CATCH FISH, OR CATCH-22?

The role of diversity of labor opportunities in social cohesion, potentially hampering long-term resilience in Icelandic coastal communities

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Preface

Even though one might feel alone while driving on the rural Icelandic roads, there is no reason to. While there may be no other cars for miles around, many 'vegstikur' can be found - yellow poles that are placed adjacent to the road. Even in snowy, slippery and stormy conditions, one can rely on the many poles to know where the road is, and where one is driving.

If driving on the Icelandic roads resembles the long process of writing a thesis, the many vegstikur have been the people that have contributed to the completion of this journey that has taken over a year to complete. Both in Iceland and in the Netherlands - there are too many to thank. As you are reading this preface, it is likely that you have, in one way or another, contributed to this thesis as well. Therefore, thank you for having been a vegstikur.

Abstract

Many rural Icelandic communities have been dependent on fisheries for centuries. However, in recent decades, the introduction of the quota-based ITQ system, the increase in the education level of Icelandic inhabitants and the rise of automation have reduced the importance and the attractiveness of the fishing industry, creating fragile communities that are looking for alternative ways to achieve long-term resilience. Both diversity of labor and social cohesion have proven to be crucial factors for achieving resilience, however, it is expected that improving labor diversity is accompanied with a decline in social cohesion, making achieving resilience through strengthening both the local economy and the cohesiveness of the community impossible: a Catch-22 situation. Using thematic analysis, semi-structured interviews with eighteen stakeholders from five communities offer a more nuanced view; communities with a higher diversity of labor in general have a better social cohesion compared to less labor diverse communities. Out of the six indices of social cohesion, the interviews show that labor diverse communities have a better *demographic stability*, *community quality of life* and *individual quality of life,* while findings are ambiguous for *social capital* and *economic inclusion,* and less labor diverse communities have more *social inclusion*. In turn, social cohesion also influences diversity of labor, and thus the findings are more in line with positive and negative reinforcement cycles between diversity of labor and social cohesion. Finally, embedded characteristics within the communities show the complex, multivocal whole in which communities must navigate to create a positive reinforcement cycle and achieve long-term resilience. The six embedded characteristics include *seasonality*, *working conditions*, *foreign workers*, *infrastructure*, *individualism and togetherness* and *leadership and agency*.

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1. Introduction

A few decades ago, all Icelandic coastal communities shared a common dependency on fisheries. Nowadays, a closer inspection of the communities shows remarkable differences between communities, as some focus on fishing, while others focus on tourism, aluminium or a combination of sources of income (Kokorsch & Benediktsson, 2018a; Kokorsch & Benediktsson, 2018b; Sæþórsdóttir & Hall, 2019). At the same time, similar differences exist in the social fabric of those places: some communities have a growing population and are filled with events, associations and a richness of services and amenities, while in other communities both the population and the amount of services are declining, and a gloomy atmosphere fills the streets (Chambers, 2016; Kokorsch, 2017; Symes & Phillipson, 2009).

1.1 No fish, no community?

To understand those differences, it is important to define what a community is: a community, according to MacQueen et al. (2001), is 'a group of people with diverse characteristics who are linked by social ties, share common perspectives, and engage in joint action in geographical locations or settings' (p.4). Historically, the fishing industry formed the backbone of the Icelandic villages and provided a common cultural and historical identity (Antonova & Rieser, 2019; Chambers, 2016). This common identity, according to Brookfield et al. (2005), allows inhabitants to make sense of the world, forming a shared understanding where bonds, values, traditions, kinship ties and interactions are based upon (Symes & Frangoudes, 2001; van Ginkel, 2001). The coastal villages in rural Iceland, often isolated from other villages, can therefore be considered communities.

In these communities, small-scale fishing with limited commercial purpose changed into an increasingly professional and commercial approach throughout the nineteenth century, where rowing boats were replaced by sailing boats, which in turn gave way to motorized vessels. Technological advancement, specialization and greater catches provided great economic growth and 'booms', but eventually led to overfishing and deep 'busts' in the sixties and seventies (see paragraph 2.1 'Iceland: a short history' for a more extensive history of Iceland). To prevent further cycles of booms and busts, the 1980s saw an increasing number of exchangeable quotas called ITQs (Individual Transferable Quota) imposed by the national government, turning fisheries from a public good into a private, tradeable good (Eliason, 2014).

Rather than a blessing, the introduction of quotas turned out to be a curse for many communities. Suddenly, catches were no longer dependent on the ability to extract a resource, but also confined to a tradeable and imposed maximum amount that one was allowed to extract. Many small communities did not have enough quotas to make the fishing industry economically viable and lacked the money to buy more quotas (Chambers & Carothers, 2017; Chambers, Einarsson & Karlsdóttir, 2020). Meanwhile, in communities with more resources, large private fishing companies ('quota-kings') emerged, taking advantage of the new system by buying quotas from smaller communities, causing growing inequalities between communities (Carothers, 2015; Eliason, 2014): some communities to lost access to fishing for the first time in their history (Chambers, 2016).

Having lost access to the fishing industry that provided employment, stability and a cultural and historical identity (Kooiman et al., 2005), communities all of a sudden became vulnerable and at risk of depopulation, as they often had limited economic alternatives (Chambers, 2016; Lowe, 2011; Urquhart et al., 2011). Since then, communities are confronted by a dilemma: to adhere to their fishing identity by attempting to keep fishing economically viable through obtaining quota, or to seek alternative sources of labor and income by attempting to diversify the local economy. This caused every community to create their own, unique pathway (Symes & Phillipson, 2009).

1.2 The dilemma of resilience

Regardless of the choices communities make, it is difficult to achieve long-term 'resilience': 'the ability of a community to cope and adjust to stresses caused by social, political, and environmental change and to engage community resources to overcome adversity and take advantage of opportunities in response to change'. (Amundsen, 2012, p1). Despite an extensive amount of studies on rural resilience and the creation of several tools for the assessment of building resilient communities throughout the twenty-first century, many Icelandic communities are still far from resilient (Kokorsch, 2022) - even with grants of the Byggðastofnun (Icelandic

Regional Development Centre) for helping communities in the Fragile Communities program by improving the local economy or realizing of ideas and initiatives.

This raises the question about how communities can remain resilient. Symes and Phillipson (2009) identify a major dilemma for communities: on the one hand, residents of communities value the cultural and historical identity of the village as a 'fishing community' (Antonova & Rieser, 2019), but on the other hand, diversifying the economy can ensure sufficient economic opportunities. Communities committed to fisheries may stick to their cultural and historical identity that forms the social glue of the communities, and the ways of life that are central to residents and their personal identity by giving a sense of autonomy (Antonova & Rieser, 2019; Chambers, 2016; Lowe & Carothers, 2008). However, these communities will increasingly see younger generations leave to seek more fitting and diverse educational and employment opportunities in urban areas (Kokorsch, 2017; Kokorsch & Benediktsson, 2018b), making the future of these rural fishing communities increasingly uncertain (Kokorsch & Benediktsson, 2018a).

Communities may also focus on other industries and diversify the local economy, steering away from fishing; popular and most successful have, until now, been the tourism industry and the energy- and aluminium industry (Sæþórsdóttir & Hall, 2019). Diversification may prevent communities from having their inhabitants leaving due to a lack of economic opportunities, as well as averting a subsequent decline in services and stores. However, as these industries lack the cultural and historical embeddedness of fisheries, the social glue and the identity of the community can fade, causing, in short, the social cohesion to decline (Bjarnason & Thorlindsson, 2006; Robards & Greenberg, 2007). Thus, diverse economic opportunities may prevent a loss of residents, stores and services, at the cost of identity and social cohesion (Kokorsch & Benediktsson, 2018b; Symes & Phillipson, 2009), and in conclusion both pathways identified by Symes & Philipson do not only have advantages, but also have disadvantages.

1.3 Catch-22
In accordance with the previous paragraph, previous research shows that both a diversified economy and strong social cohesion are crucial factors in building resilient communities (Berkes & Ross, 2013; Heijman et al., 2019; Kokorsch & Benediktsson, 2018b; Steiner & Markantoni, 2014). Social cohesion consists, according to Duhaime et al. (2004), of the six indices *social capital*, *demographic stability*, *economic inclusion*, *social inclusion*, *community quality of life* and *individual quality of life*. Considering the dilemma between focusing on more general problems of vulnerable rural communities (by diversifying the economy, but losing social cohesiveness) or the viability of the fishing industry (and thereby maintaining the traditional and cultural identity, but having limited labor diversity), it becomes clear why the two pathways are not creating resilient communities. In short, there may be a **Catch-22 situation**: neither of the pathways create an outcome where a community can achieve both a diversified local economy and a high amount of social cohesion. This Catch-22 situation could also explain why the grants of Byggðastofnun have, until now, only had limited success (Kokorsch, 2022); improvements of the local economy will in turn harm the social cohesiveness of the community.

The existence of this Catch-22 situation has until now not been empirically tested, and will be topic of this research. Specifically, the relationship between the diversity of labor and social cohesion is researched, to see whether diversifying the local economy will harm the social cohesion of the communities, hampering the creation of resilient communities on the long term. Three 'main' communities are selected due to their difference in diversity of labor opportunities, yet comparable population and location. This categorization is based on the differentiation of Sæþórsdóttir & Hall (2019), who state that communities trying to diversify from the fishing industry often have two alternatives: the tourism industry or the energy industry. Therefore, Vopnafjörður (having a low labor diversity with mainly fishing), Seyðisfjörður (having fishing and tourism as the main industries) and Fáskrúðsfjörður (with a diversified local economy with opportunities in fishing, tourism and aluminium) are chosen and compared in terms of social cohesion, to assess how different levels of labor diversity lead to differences in the social cohesiveness. Two other communities are added to assess transferability to other contexts and add additional information as 'extreme cases': both suffered an abrupt loss of access to fisheries, but the current situation of the communities is completely different. Djúpivogur

currently has more labor opportunities than ever before, while in Raufarhöfn the population is declining and services are dwindling.

1.4 Research question

The question is exactly how and under which circumstances the diversity of labor opportunities affects the social cohesiveness of communities, and whether there is indeed a Catch-22 situation that makes long-term resilience difficult to achieve. This leads to the following research question:

In what ways does the diversity of labor opportunities shape the social cohesion in East-Icelandic villages, and does the relationship between diversity of labor opportunities and social cohesion form a Catch-22 situation?

Three sub-questions are formulated to get a more comprehensive answer to the main question. To better understand how social cohesion is shaped by the labor diversity, social cohesion is subdivided into the six indices of Duhaime et al. (2004). First of all, interviews are conducted in three main communities with different assumed levels of labor diversity to compare levels of social cohesion. To assess whether these assumptions are right, the first sub-question is as follows:

1. *To what extent can Vopnafjörður be portrayed as a community with a limited diversity of labor opportunities, Seyðisfjörður as a community with an average diversity labor opportunities and Fáskrúðsfjörður as a community with a high diversity of labor opportunities?*

The second sub-question assesses how each of the six specific indices of social cohesion shaped by different levels of diversity of labor opportunities: if labor opportunities become more diverse, this may lead to a reduction of social cohesion regarding several indices, while other indices might improve as labor diversity becomes greater. Sub-question two is therefore as follows:

2. *To what extent and in what ways does the diversity of labor opportunities of a community shape the six different indices of social cohesion?*

Finally, the diversity of labor opportunities and social cohesion do not exist in a vacuum within the communities, but may be influenced by embedded characteristics within communities such as past events, beliefs of inhabitants or the influence of large employers. The third and final sub-question assesses both what these embedded characteristics are and how they help to shape the relationship between diversity of labor and social cohesion, and is as follows:

3. *What embedded characteristics within the community can be identified that have an impact on the relationship between diversity of labor opportunities and social cohesion, and in what ways?*

1.5 Scientific relevance

Research on resilience is widespread, and multiple frameworks and tools exist that contain factors for building resilience. Although research on resilience is abundant, disproportionally little attention has been paid to gradual, slow-onset hazards (in this case, the diminishing role of fisheries) compared to quick-onset hazards (Amirzadeh & Barakpour, 2021), and similarly the influence of policy changes (in this case the ITQ system) on resilience has also received little attention (Brown & Williams, 2015). Thus, the literature on resilience on community level is not yet sufficiently developed, and according to Kokorsch (2022), 'there are yet too many unanswered questions before one can apply a truly holistic process and future-oriented community resilience approach' regarding Icelandic communities (p.249).

The most widely used approach of resilience, created by Berkes and Ross (2013), combines two strands of resilience literature: psychology of development and mental health and that of socio-ecological systems. The former emphasizes the need to understand which factors (in this research, diversity of labor and social cohesion) are important for achieving resilience, while the latter emphasizes the importance of assessing how those factors create complex systems by being interrelated and having interactions with each other. Regarding the context of Icelandic communities, Kokorsch and Benediktsson (2018b) used the approach of psychology of development and mental health. However, Kokorsch (2022) calls for an integrative approach, that, regarding the Icelandic context, includes the interrelatedness between important elements of resilience.

This research will focus exactly on this lack of knowledge: the research assesses the way that one important factor of resilience (diversity of labor opportunities) shapes another important factor of resilience (social cohesion) rather than looking at their direct role in resilience, creating a more holistic and comprehensive approach of resilience in the context of rural Icelandic communities.

1.6 Societal relevance

Policy is typically based on a theory that certain interventions in a certain context lead to a certain outcome. However, the development of policy costs money, time and energy, which are not only scarce resources for national governments, but especially for municipalities with limited budget and manpower. Making policy as precise and effective as possible is thus important, and additional knowledge facilitates the creation of policies that 'work', in addition to preventing the implementation of unsound policy.

This research provides information on both the possible existence of a Catch-22 situation and the underlying mechanisms that foster (or hamper) resilience, helping municipalities to make more effective policies for socio-economic development: in case of a Catch-22 situation, policy on improving labor opportunities is accompanied by a reduction in social cohesion, leading to unintended negative consequences, and thus resilience is not improved as much as the policy intended. If no Catch-22 situation is found, findings may still lead to new ideas or strengthen existing knowledge on building resilience.

While the findings are directly relevant to the communities included in the study, other communities should keep the context of the study in mind and consider the applicability of the findings to their own community. A large community close to Reykjavík or a small community in the Westfjords is not similar to the communities of this research. The national government may also benefit from the research to identify pitfalls when attempting to diversify the local economies and strengthen rural Icelandic regions, as so far the shift towards a knowledge-based economy has not been as successful as hoped, and the detrimental effects of the ITQ system show the negative spillover effects that well-intended national policy can have. Finally, the findings may benefit the Byggðastofnun. Their grants mainly focus on either increasing the labor opportunities or improving the community, and a Catch-22 mechanism would mean that communities will get less cohesive through grants aimed at increasing labor opportunities.

1.7 Approach and structure

The research is structured as follows: chapter 2 involves exploring the theoretical background of the research topic, starting with an introduction to the historical context in which the research takes place. Then, the central concepts of labor, social cohesion and resilience are examined, after which the links between these concepts will be explored, ultimately leading to the explanation of the Catch-22 situation.

Chapter 3 involves the methods section. First of all, the method of the thesis - thematic analysis by interviewing stakeholders - is explained and justified, after which a description is given of the communities, the stakeholders and the procedure and process of the interviews. This is followed by an operationalization of the interview guide. After that, the methods of data processing and analysis are explained, concluded by a section on the quality requirements, ethical considerations and a reflection of the researcher on the qualitative research.

The results section (chapter 4) first assesses the amount of labor diversity in each community, followed by an examination of the influence of diversity of labor on the six indices of social cohesion, whereafter the embedded characteristics are both assessed and explained. In the conclusion section (chapter 5), the findings are summarized and the research question is answered, after which the discussion section (chapter 6) will discuss the validity, significance and relevance of the results and put them in a broader perspective.

2. Theory

First, a (historical) description of Iceland is given to properly understand the context of the communities of the study. Next, the concept of resilience is discussed with emphasis on previous approaches and operationalizations, leading to two key factors for improving resilience. These factors, social cohesion and the diversity of labor opportunities, are then explained, after which the Catch-22 situation these factors may form, will be explained and discussed.

2.1 Iceland: a short history

Iceland is an island and a country near the Arctic Circle, located in the North Atlantic Ocean, consisting of just over one hundred thousand square kilometers. Of its approximately 350,000 inhabitants, about two-thirds live in or around the area of Reykjavík (Bjarnason et al., 2021.; Ragnarsson, 2013). The population density outside Reykjavík is low: about one inhabitant per square kilometer, making Iceland a predominantly rural region.

Iceland's history is characterized by a strong dependence on fisheries: from the 9th century until well into the 20th century, both Iceland's economy and means of food supply were centered around fishing. Traditionally, fishing was less commercial and operated on a much smaller scale – only by the nineteenth century the first fishing stations were established. But it was not until the early twentieth century that Iceland's fishing industry grew rapidly with the introduction of motorized vessels that could fish further offshore, yielding increasingly bigger catches and offering numerous economic opportunities. By 1930, 23% of Iceland's population was employed in fisheries (Chambers, Helgadóttir & Carothers, 2017; Government of Iceland, n.d.).

However, the rapid progress also led to challenges. Increased specialization in processing certain species of fish created path dependency and the danger of 'boom and bust' cycles, where economic peaks are followed by deep financial plunges when demand decreased or when catches disappointed. An example is Siglufjörður: between the '30s and the '60s, the community consisting of about a hundred inhabitants quickly grew into the fifth largest town in Iceland with over three thousand inhabitants. During peak seasons, the exceptionally advanced herring industry brought thousands of additional temporary workers to the villages. The booming fishing industry brought prosperity, leading to significant investments in for instance infrastructure, education, health care and the development of high-quality housing (Skaptadóttir, 2007). In their limited free time, the community provided the workers with numerous venues for dancing and music, with eighteen available pubs (Hamilton et al., 2004). Nevertheless, the community suffered badly during downturns. In 1968, when herring catches were low due to overfishing and ecological changes, the village's economy collapsed at once due to the extensive specialization and path dependency. Unemployment caused residents to move away, and real estate prices fell significantly (Westmont, 2021; Sigurdsson, 2006). Currently, the community has about one thousand inhabitants, and out of the eighteen pubs, just two remain (Hamilton et al., 2004; Huijbens, 2012).

To prevent overfishing and to deal with the dangers of the busts, the Icelandic government increasingly introduced quotas - individually tradeable 'rights to a certain amount of fishing' of a certain species of fish - during the 1970's. The number of quotas grew in number as increasingly more species of fish were included, when in 1990 one comprehensive system was introduced: the ITQ system (Chambers, Einarsson & Karlsdóttir, 2020; Kokorsch & Benediktsson, 2018a). The advantages and disadvantages of this ITQ system varied across communities: the quota allocated to smaller communities was often too small to be economically viable, and many small communities lacked the financial capital to buy more quota. Meanwhile, the ITQ system also caused the quality of fish to gain importance over quantity as fishing companies tried to get the most out of their quota. Thus, quotas were sold to larger, more urban areas that did have the capital to invest in both more quota and more specialized ways of processing (Chambers & Carothers, 2017; Chambers, Einarsson & Karlsdóttir, 2020).

The introduction of quotas resulted in clear winners and losers: just after the introduction of the ITQ system, the twenty largest fishing companies held 36% of all quotas. By 2001 this had increased to 59%, and by 2015 70% of quotas were held by the largest twenty companies (Haraldsson, 2001; Icelandic Directorate of Fisheries, 2016). Small-scale fishing, often carried out by (interconnected) families, turned into a non-local, large-scale, globalized system of fishing. Fishing changed from being a common good that everyone had access to, into a private good where access must be bought, causing some communities to lose access to the sea completely,

even though fisheries had been the economic, social and cultural backbone for centuries. Between 2003 to 2008 alone, more than four hundred fish companies ceased to exist, for example by being absorbed into larger companies or by closing down (Jónsdóttir & Knútsson, 2009). After from losing jobs in the fishing industry, loss of fish-processing jobs and support services followed not much later (Skaptadóttir, 2007). This further accelerated the loss of economic and social opportunities, causing many individuals to leave the communities; a self-reinforcing cycle of decline (Benediktsson & Karlsdóttir, 2011; Eythórsson, 2000; Kokorsch & Benediktsson, 2018b; Skaptadóttir, 2007). Some have referred to the introduction of the ITQ system as 'the worst event in Iceland' after the Black Death in the fifteenth century and the volcanic eruption in 1873 that caused a large famine, indicating the great impact that losing access to fisheries had on some communities, both in economic terms and in social terms (Chambers, Einarsson & Karlsdóttir, 2020).

But even communities with plenty of quotas lost jobs, as technological and organizational progress within the large fishing companies made fish-processing jobs redundant: from 1990 to 2008, more than 60% of all jobs in fisheries disappeared (Benediktsson & Karlsdóttir, 2011). Meanwhile, out of all current jobs in fisheries and agriculture, 73% are at risk of disappearing due to automation. In rural communities this equates to 44% of all jobs being at high risk of disappearing, compared to another 44% at moderate risk of disappearing (Þorsteinsson et al., 2019). To mitigate the vulnerability through the decline of fisheries, communities attempt to diversify the economy by focusing more on the creative economy and the knowledge economy and seizing opportunities in the energy- and aluminium industry or the tourism industry (Kokorsch, 2017; Sæþórsdóttir & Hall, 2019), attempting to prevent further loss of job opportunities, inhabitants, services and estate prices (Symes & Phillipson, 2009). This means that, often for their first time, Icelandic communities have to explore new, distinct paths to remain resilient (Antonova & Rieser, 2019), with varying success.

2.2 Resilience

Even decades after fisheries turned into a private good, many communities are still suffering from the consequences and battle against a further socio-economic decline. Academically, several efforts have been made to unpack resilience into smaller components in order to improve understanding what resilience is, how it can be measured and how the resilience of communities can be improved (Aboushala & Haj Ismail, 2022; Steiner & Markantoni, 2014). Over time, many components for building resilience have been identified, with every study having a different approach and identifying different crucial elements for building long-term resilience. Yet, many consistently include both 'the economic' and 'the social' as important elements for resilience, while emphasizing the importance of the interrelatedness of elements. Some of the most relevant studies with regards to the current study are described below.

One of the most well-known approaches is the integrated approach for community resilience of Berkes and Ross (2013), which combines two strands of resilience literature: *psychology of development and mental health* and *social-ecological systems*. The former considers the strengths and weaknesses of communities to build resilience, and differentiates between the nine components *people–place connections* (1), *values and beliefs* (2), *knowledge and learning* (3), *social networks* (4), *collaborative governance* (5), *economic diversification* (6), *infrastructure* (7), *leadership* (8), *and (positive) outlook* (9). While the sixth factor clearly shows the importance of 'the economic', 'the social' encompasses a multitude of components. In the systems-approach, resilience is seen as less straightforward than merely improving individual components, and communities are considered as complex systems involving for instance system memory, windows of opportunity, but also feedbacks and unpredictability, highlighting the influence that factors can have on each other: increasing a specific aspect of a system may lead to the loss of resilience in other parts of the system (Folke et al, 2010).

Other studies also stress the importance of 'the economic', 'the social' and the interrelatedness of (these) factors, for instance in more general theoretical frameworks on measuring and defining resilience. Steiner and Markantoni (2014) differentiate between social resilience and economic resilience, each with an individual and a community aspect. Additionally, Heijman et al. (2019) base their theoretical model of resilience on three factors: economic resilience, social- and cultural resilience and ecological resilience, again showing the importance of the economic and the social aspect of resilience. In both approaches, the components of resilience influence each other and overlap, highlighting the interconnectedness instead of being separate building blocks for resilience.

Specific to the Icelandic context is the approach of Kokorsch and Benediktsson (2018b), which uses only the developmental psychology approach of Berkes and Ross (2013) but differentiate between twelve components for the identification of resilience-building strategies: *adaptive capacity* (1), *coping strategy* (2), *community capacity* (3), *local agency and fate control* (4), *place attachment and sense of belonging* (5), *civic engagement* (6), *collective and/or self-efficacy* (7), *transformation* (8), *community infrastructure* (9), *innovation and education* (10), *drivers of change* (11) and *having a diversified economy* (12). Within the approach of Kokorsch and Benediktsson (2018b), the economic aspect is represented in (at least) component 12, while the social aspect is clearly represented in components 3, 4, 6 and 7.

Finally, the hands-on Fragile Communities program of the Byggðastofnun assesses priorities from within communities before supporting projects with a grant. Where priorities from the community relate to employment affairs, infrastructure, environment, energy and the community, grants to enhance resilience are mainly given to projects relating to either economic opportunities (like tourism related projects) or the social aspect of the community (for instance events) (Baldursdóttir & Halldórsson, 2018). However, just like the approach of Kokorsch and Benediktsson (2018b), interrelatedness between aspects not taken into account regarding the Fragile Communities Program.

The analysis of relevant literature reveals that many approaches, whether theoretical, practical, related to the Icelandic context or not, consistently include both 'the economic' and 'the social' as important elements for assessing resilience of communities. Meanwhile, interrelatedness of elements is also seen as important for resilience, even though this is not as structurally included in studies on Icelandic communities. Therefore, this research will use the economic and the social as drivers for resilience (although resilience is not exclusively dependent on just economic and social factors), and will, instead of their influence on resilience, look at the interrelatedness of these factors by looking at the effects of the economic on the social, as has historically been most common.

For the social aspect of resilience, the theoretical framework of Duhaime et al. (2004) is used that divides 'social cohesion' in six indices that together form a powerful tool in assessing the social dimensions of (Arctic) communities (see paragraph 2.3). Regarding the economic aspect, 'diversity of labor opportunities' is used (see paragraph 2.4): rather than the total amount of available jobs, especially the diversity of labor opportunities is crucial, as it both reduces the vulnerability of dependence on one industry and provides inhabitants and newcomers with a broader range of options (Carlsson et al., 2014; Kokorsch, 2017; Kokorsch & Benediktsson, 2018b; Symes & Phillipson, 2009). Figure 1 describes the relationship between diversity of labor opportunities, social cohesion and resilience as described in paragraph 2.2, with the relationship researched in this study highlighted in green.
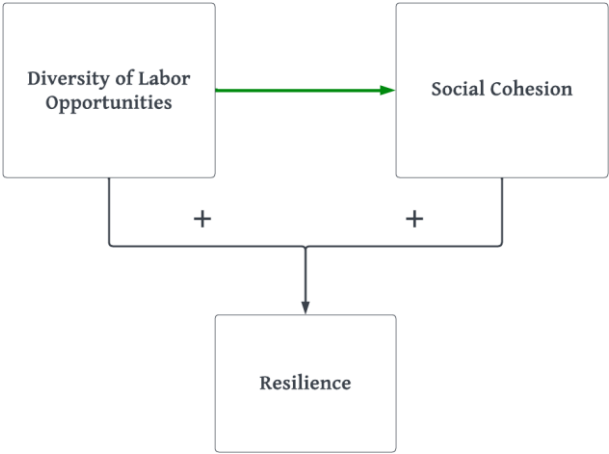

Figure 1: the relationship between diversity of labor opportunities, social cohesion and resilience

2.3 Social cohesion
In this research, the following definition of social cohesion is used:

> *Social cohesion involves building shared values and communities of interpretation, reducing disparities in wealth and income, and generally enabling people to have a sense that they are engaged in a common enterprise, facing shared challenges, and that they are members of the same community* (Maxwell, 1996, p.13)

According to Duhaime et al. (2004), social cohesion, at least in the rural Arctic, consists of six indices. Although the rural communities in Iceland are technically not a part of the Arctic, they share a similar degree of isolation as many Arctic communities. Additionally, according to the study, the six indices can be applied to other contexts. The six indices are *social capital*, *demographic stability*, *social inclusion*, *economic inclusion*, *community quality of life*, and *individual quality of life*. An extensive description of each index of social cohesion can be found in Annex 3. Social cohesiveness plays an important role in the resilience of communities, especially communities dependent on a single resource (Carson et al., 2020). In general, people from rural areas feel more connected to their community and neighbors and have more deep-rooted social networks compared to inhabitants of urban areas (Kitchen et al, 2012; Turcotte, 2005). In single-resource communities, these feelings of connectedness and having a sense of belonging are important. When residents feel engaged in a common enterprise and share challenges, this provides stability to the predominant industry (Rickson et al., 1995).

Even though this single resource dependency was common practice through the shared interest and dependence on fisheries (Symes & Phillipson, 2009) – providing bonds, kinship ties, collective values and a mutual lens to see the world through (Urquhart et al., 2011) – the role of the fishing industry is diminishing. Social cohesion, according to Duhaime et al. (2004), encompasses both mechanical and organic solidarity, where mechanical solidarity encompasses the cohesion consisting of similarities and kinship ties within the community (closely related to *social capital* and *social inclusion*), and where organic solidarity means the cohesion consisting of the more formal interdependencies and differences that come with waged labor (more closely related to *economic inclusion*) (Chambers, 2016; Duhaime et al, 2004; Thilakarathna, 2019). The traditional, small-scale fishing industry provided the Icelandic communities with both organic solidarity based on ties that are established within income-producing activities, and with mechanical solidarity based on kinship ties, informal bonds and traditions (Chambers, 2016; Duhaime et al., 2004; Urquhart et al., 2011), but the emergence of large technologized fish factories put the mechanical solidarity under pressure. A lack of balance between organic and mechanical solidarity can harm the social cohesiveness of communities, consequently also hampering resilience (Duhaime et al., 2004).

When the (diversity of) labor opportunities change(s) even further in the future, several indices of social cohesion may be affected. The further erosion of fisheries and mechanical solidarity may decline the well-being of residents (*individual quality of life*), yet more diverse labor opportunities may improve economic opportunities and organic solidarity, leading to an increase in the population (*demographic stability)* and the income of residents (*economic inclusion*). This may in turn impact the resilience of communities. Figure 2 shows the relationship between diversity of labor opportunities, the six indices of social cohesion and resilience.
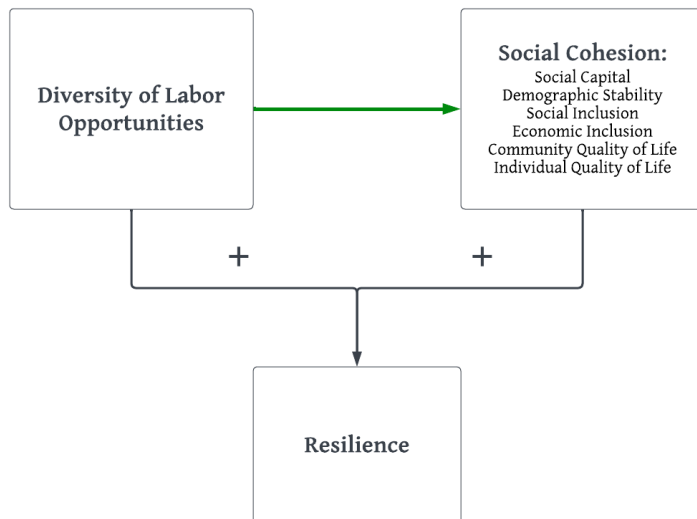
Figure 2: the relationship between diversity of labor opportunities, the six indices of social cohesion and resilience

2.4 Diversity of labor opportunities

For labor, the definition of 'work' is chosen: an activity, such as a job, that a person uses physical or mental effort to do, usually for money (Cambridge University, 2020). This means that, even when work is not economically viable (such as, in some instances, the fishing industry), it is still considered work (van Ginkel, 2001). With the loss of jobs and the diminishing role of fishing, many communities try to diversify the labor opportunities to keep the communities attractive for newcomers and current inhabitants (Kokorsch, 2017). Given the dependence on fisheries for generations, innovation and entrepreneurship are limited, as they never had to seek alternative sources of income before: this may cause difficulties in improving labor diversity (Arnarsson, 2013; Einarsson, 2009; Gylfason & Wijkman, 2016; Kokorsch & Benediktsson, 2018b; Kokorsch, 2017; Sæþórsdóttir & Hall, 2019).

Where labor market policies envisioned a shift towards the knowledge- and creative industries for decades, many of the new jobs are low-skilled, temporary or seasonal (Pétursson, 2018; Sæþórsdóttir & Hall, 2019; Wendt et al., 2020). However, especially permanent opportunities for higher educated individuals are needed to limit a brain drain from the community (Blackwell et al., 2002), as rural communities often lose younger inhabitants who desire pursuing higher education in urban areas. Struggling to re-attract high-educated individuals back to the local economies, communities effectively educate their children away from them (Kokorsch & Benediktsson, 2018b). A shortage of skilled residents may lead to both a lack of entrepreneurship and innovation and a limited number of services and amenities like health services, education and cultural- and recreational opportunities. This may in turn affect the social cohesion of the communities (Bjarnason & Edvardsson, 2017; Corcoran et al., 2010). Similarly, jobs may come to fruition that are readily available within the existing resources, rather than much-needed jobs in the creative- and knowledge industries, leading to the emergence of jobs in tourism and energy.

Since the beginning of the twenty-first century, tourism quickly became the largest source of employment in Iceland, as the number of international tourists increased with, on average, 13% per year. This caused many communities to come up with strategies to cater to tourists (Sæþórsdóttir & Hall, 2019). However, the large influence of tourism also has downsides, as it may cause limited career options, as many jobs in tourism are low-skilled and seasonal and involve low salaries – not the jobs that attract newcomers into communities (Pétursson, 2018). Furthermore, inflation (due to stores asking tourist prices) and increased rent and housing prices (due to the seasonal influx of tourists and employees) may lead to further financial issues of residents, while increased traffic issues and marginalization of locals may have a negative effect on social cohesion and well-being - both limiting resilience (Bjarnadóttir et al., 2016; Karlsson et al., 2017; Sæþórsdóttir & Hall, 2019; Sæþórsdóttir et al., 2020).

Meanwhile, jobs in energy and aluminium are mostly dependent on investments from outside of the community, as municipalities lack money, knowledge and manpower for major building projects like dams or aluminium smelters. Because private investors are not bound to one location, they can choose where to invest. Therefore, they are often more flexible than municipalities (Einarsson, 2009) and more successful than local entrepreneurs (Kokorsch & Benediktsson, 2018b), which can strengthen rural societies (Jóhannesson & Heiðarsson, 2010). Nevertheless, investments of private investors also come with a catch, as they lack local embeddedness in the social fabric of the community, and especially bottom-up approaches rooted in the local (culture of the) community have a positive effect on the economy and the resilience (Kokorsch & Benediktsson, 2018b). Furthermore, history has shown that investors can create dependency, leaving the community without work when pulling out – similar to the re-location of fishing companies.

Diversification may also lead to conflicting interests within the community. People with a stake in tourism often oppose the expansion of the fishing- or energy industry, as for instance power lines and salmon farms may harm the view of Iceland having 'unspoiled nature', and the interests of the whaling industry and whale watching tours are not compatible (Einarsson, 2009; McDonagh, 2020; Sæþórsdóttir & Hall, 2019). Furthermore, objections of inhabitants to economic and employment opportunities may lead to tension in the community that can decrease the social cohesiveness. For instance, many inhabitants feared the inevitable environmental damage before the construction of the Kárahnjúkar Hydropower Plant. However, the Minister of Environment claimed that economic and societal benefits superseded environmental concerns (Karlsdóttir, 2010). Indeed, the power plant increased employment opportunities and caused the population to grow, however, at the expense of nature - justifying concerns of inhabitants (Guðmundsdóttir et al., 2018; Karlsdóttir, 2010).

In short, diversification of labor to create resilient communities has been proven difficult for communities, while the decline of having a common identity and togetherness in the community through the loss of importance of fishing has not been mitigated. Rather than creating skilled jobs (and thereby increasing services and amenities), jobs in fishing are replaced with seasonal and low-skilled jobs in tourism, while communities may in part become dependent on 'deux ex machina' investments in the energy sector. This relationship is shown in figure 3.
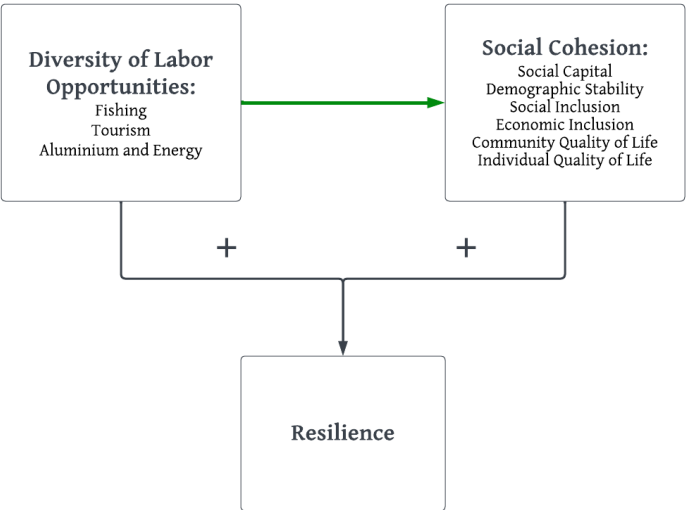

Figure 3: the relationship between diversity of labor opportunities (regarding fishing, tourism and energy/aluminium), the six indices of social cohesion and resilience

2.5 Catch-22?

Paragraph 2.3 and 2.4 show the importance of diversity of labor opportunities and social cohesion for resilience, but also demonstrate that long-term resilience is difficult to achieve for communities (Kokorsch, 2022). Both pathways, according to Symes & Phillipson (2009), come with a caveat.

The first pathway, that of increasing the labor opportunities (see paragraph 2.6 'pathway of diversification'), will lead to the reduction of social cohesion through the loss of the cultural and historical identity and ties surrounding fishing - harming the resilience (Antonova & Rieser, 2019; Chambers, 2016). However, the second pathway (see paragraph 2.7 'pathway of fishing'), will lead to reduced resilience as well, as the focus on the viability of fisheries causes a lack of diverse employment opportunities (Browne, 2018; Symes & Phillipson, 2009). This would mean that no matter what pathway is chosen, long-term resilience is inaccessible for communities: this is the Catch-22 scenario that this research will focus on (see Figure 4).
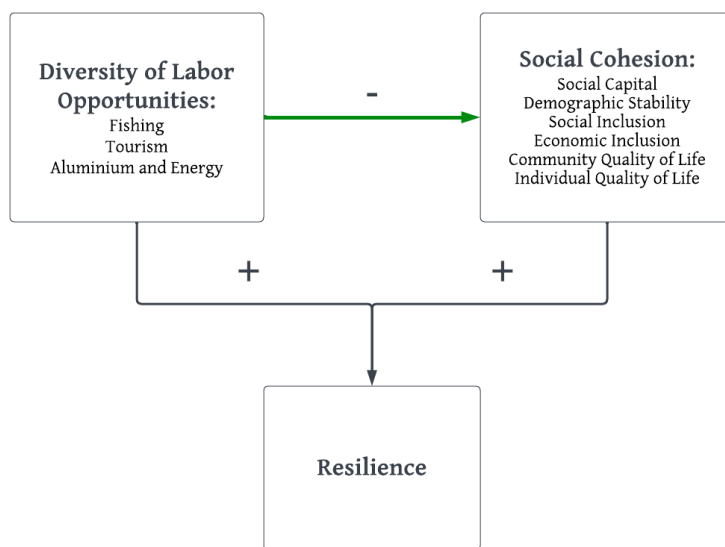
Figure 4: the influence of diversity of labor opportunities on social cohesion, presenting a Catch-22 scenario.

Additionally, rather than merely looking at the Catch-22 scenario, it is important to take the *embedded characteristics* of the communities into account. As the approaches from Kokorsch and Benediktsson (2018b) and Berkes and Ross (20123) show, a multitude of components apart from labor diversity and social cohesion influence the resilience of a community. To see how these components influence and shape the possible existence of a Catch-22 mechanism, and thus their role on the relationship of diversity of labor on social cohesion, these embedded characteristics are assessed.

The (final) conceptual model can be seen below in Figure 5: labor diversity and social cohesion are crucial components for building resilience (red arrows, not the topic of this research), and thus the relationship is indicated with a plus. Between communities, each with a specific amount of labor diversity (4.1 in the findings sections), the research will assess what the influence of diversity of labor opportunities is on social cohesion (green arrow, 4.2 in the findings section) – with the expectation that improved labor diversity is accompanied by a loss of social cohesion (indicated with a minus). Finally, the embedded characteristics of the communities are taken into account (paragraph 4.3), shedding light on how the characteristics of communities shape the relationship between labor diversity and social cohesion. This is indicated with both a plus and a minus, as some embedded characteristics may strengthen the negative effect of labor diversity on social cohesion, while others weaken this relationship.
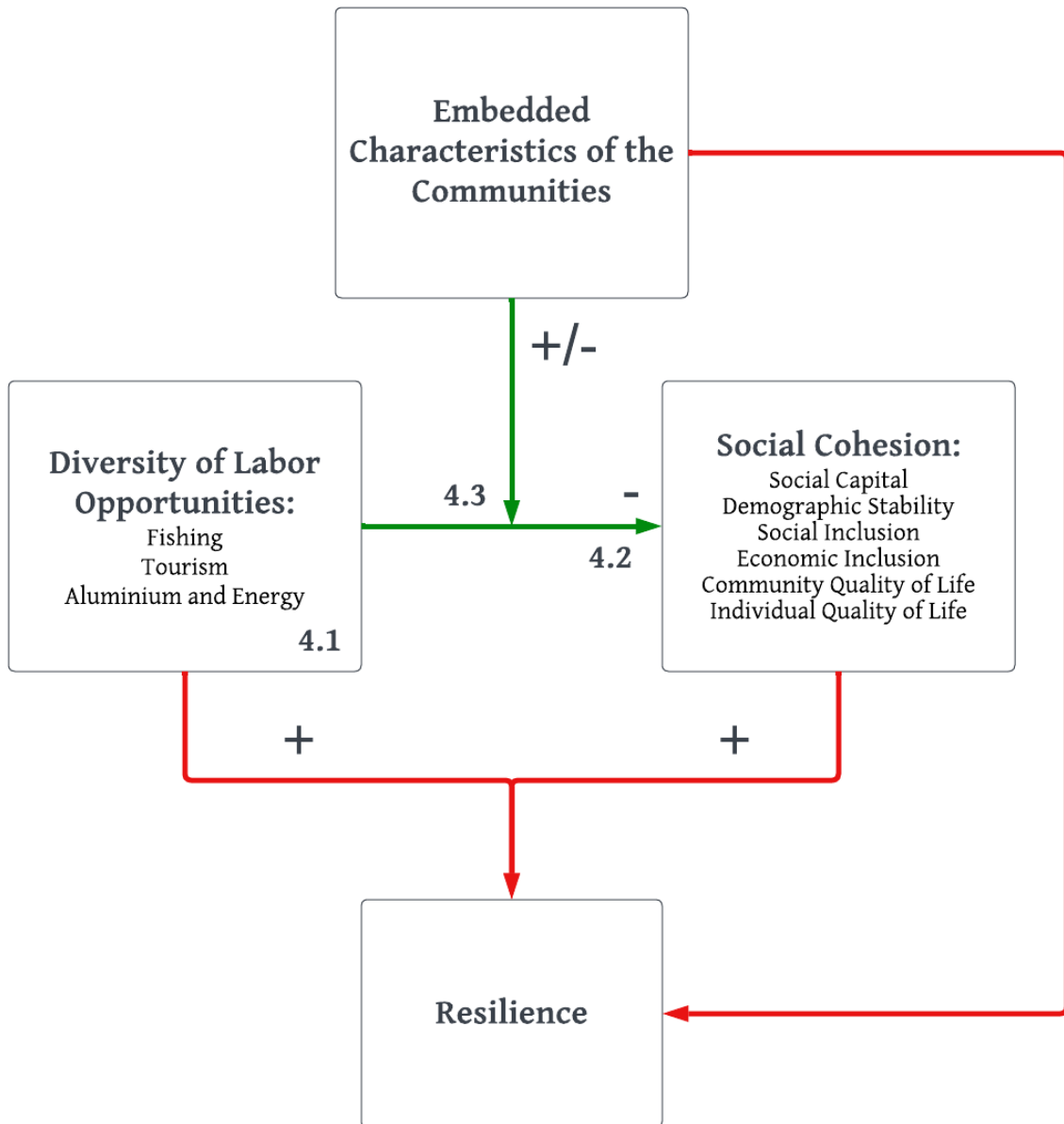
Figure 5: the conceptual model, presenting a Catch-22 scenario and involving embedded characteristics of the communities

2.6 Pathway of diversification

The first pathway of achieving resilience is the one most chosen by communities, and involves attempting to diversify the local economy to increase the attractiveness of the community and reduce single-industry dependence (Symes & Phillipson, 2009). Due to the lack of labor opportunities, the insecurity surrounding the fishing industry and increased opportunities in urban areas, inhabitants opt to leave their communities, harming the viability of services and amenities. Medical services, retail outlets and public transport may suffer, just like, for example, schools (Kokorsch & Benediktsson, 2018b; Symes & Phillipson, 2009). Where the school in Raufarhöfn had over a hundred students in 1990, this reduced to only seven students in 2014 after the fishing industry left the community (Kokorsch & Benediktsson, 2018b).

However, diversification of the local economy also influences the community's social cohesion. Fishing is more than just a job for individuals and communities, as Brookfield et al. state that 'fishing is the glue that holds the communities together' (p.56), as well as being a way of life for individuals (Jacob et al., 2001). Fisheries generate social capital and form a paradigm; the community makes sense of the world from a perspective garnered from being involved in fisheries for decades (Brookfield et al., 2005; van Ginkel, 2001). According to

Symes and Frangoudes (2001), the fishing industry generates ties and interactions between inhabitants that are important for egalitarian and reciprocal economic and social relationships. Adversities in the fishing industry may harm social cohesion and challenge the cultural identity within the community, leading to a sense of directionlessness (Symes & Phillipson, 2009). In an economy that becomes more diverse, the role of fisheries as the 'common denominator' may decline: no longer is fishing the way of life for all inhabitants, dissolving the glue that held the community together.

2.7 Pathway of fisheries

The second strategy is less commonly used by communities: trying to remain a fishing community. Although history shows that maintaining a viable fishing industry as the sole or main source of income is difficult and possibly hazardous, communities can choose this pathway due to path dependency, lack of alternatives (and agency) and the value they assign to the cultural significance and importance of fishing for the community (Arnarsson, 2013).

When the largest source of employment of the community becomes more fragile, the whole community can become more fragile. For many rural communities, the introduction of the quota-system and automation caused job losses and increased job insecurity, leading to negative attitudes of mainly women, higher-educated and younger inhabitants towards jobs in fishing, as they were associated with low skill, low pay and low status (Karlsdóttir, 2009; Bjarnason & Thorlindsson, 2006) – even though the fishing industry itself is deeply ingrained in the communities (Antonova & Rieser, 2019; Brookfield et al. 2005). This lack of attractiveness caused many inhabitants to leave for areas with better educational opportunities, more diverse labor markets and better career opportunities (Skaptadóttir & Proppé, 2005; Þorsteinsson et al., 2019; Symes & Phillipson, 2009).

Loss of jobs and (consequent) financial worries can lead to social inertia, apathy, as well as decreasing feelings of 'belonging to a community', making it more likely that even more inhabitants will move away (Góis, 2012). In the long run, this may lead to learned hopelessness: when individuals observe that social change is unlikely to happen, they lose hope that things will improve, making it even harder for villages to become resilient once more (Ardila, 1979; Cidade, 2012). Even though it may lead to a further loss of jobs, residents and subsequent services and amenities, the sense of hopelessness, combined with fisheries remaining crucial for the cultural and historical image of the communities, might explain why fishermen often continue to fish, even when it is no longer economically viable (Bjarnason & Thorlindsson, 2006; Chambers et al., 2020; Kokorsch & Benediktsson, 2018b; Lowe, 2015; van Ginkel, 2001). This became especially apparent when inhabitants of Raufarhöfn had to indicate their concerns at the start of the Fragile Communities program back in 2012: even more than two decades after the introduction of the ITQ system and the subsequent loss of both jobs and population, inhabitants still indicated that getting more fishing quota was the highest priority for the community (Baldursdóttir & Halldórsson, 2018).

3. Methods

In this chapter, the method of analysis will be explained and justified (3.1), followed by information about the participants and the method of data collection (3.2). The operationalization of the interview guide will be discussed in paragraph 3.3, after which the means of analysis will be explained (3.4). The methods section ends with a paragraph on the trustworthiness and the ethical considerations of the research and the reflectiveness of the researcher (3.5).

3.1 Method of analysis

In this study, qualitative research with thematic analysis is used. The research focuses on understanding what role the diversity of labor opportunities plays in the social cohesion of communities, aiming to uncover how and why the mechanisms work (and when they do not), as well as taking the embedded characteristics of the communities into account. In other words, the study focuses on gaining in-depth insights on the 'why' and 'how', including complexity and nuances: as the use of qualitative methods allows for this creation of a deep and thorough understanding of the topics of research, this method of analysis is chosen (Hennink, et al., 2020). More specifically, stakeholders are interviewed. As stakeholders are centrally positioned within the community, they are also likely to be aware of the experiences of others, as well as their own. Furthermore, stakeholders may have knowledge and visions concerning the resilience of their community due to their profession, providing a richness of information to uncover the relationship of diversity of labor on social cohesion.

The choice for a semi-structured interview guide (see Annex 1) ensures that the deductive concepts based on previous research on resilience are discussed, while enough space is maintained to let the stakeholders share their own inductive visions, experiences and knowledge. By interviewing stakeholders and using a semi-structured interview guide, both the (deductive) Catch-22 situation can be assessed while (inductive) patterns may emerge that can add nuance or develop a more complete picture of the relationship between diversity of work and social cohesion in Icelandic communities. Face-to-face interviews were chosen as opposed to online interviews, as they provide more ease in building rapport (in a familiar environment for the interviewee), allow for more fluent interviews in terms of probing, follow-up responses and capturing non-verbal cues and nuances that are useful in understanding the perspectives of stakeholders (Lobe et al., 2022; Varma et al., 2021).

3.2 Communities, participants and data collection

3.2.1 The participants and the communities

The changes in the fishing industry and the process of urbanization affect smaller communities more severely than larger communities (Kokorsch & Benediktsson, 2018a). Therefore, comparing communities of similar size is important. The same applies to differences in location: the closer communities are located to the Reykjavík metropolitan area, the more they benefit from the services and labor opportunities of this urban region. Consequently, three communities with a similar number of inhabitants were selected in the same region of Iceland, but with varying levels of labor diversity. For labor diversity, the distinction of Sæþórsdóttir & Hall (2019) was used, which distinguishes between the fishing industry, the tourism industry and the energy industry within the rural Icelandic context. As a result, Vopnafjörður (only fisheries), Seyðisfjörður (fishing and tourism) and Fáskrúðsfjörður (fishing industry, tourism industry and the energy- and aluminium industry) are chosen based on a careful analysis of articles on East-Iceland (Guide to Iceland, n.d.; Icelandic Times, n.d.; Mohammed, 2017).

In each community, six people were initially invited for an interview. Invitations were sent based on professions that are likely to have an overview on the past, current and future affairs of the community, and are relevant regarding the topics of resilience, social cohesion or diversity of labor. Another prerequisite was that all three communities should have the profession of a certain specific stakeholder in their community, without too much overlap with other stakeholders within the community, in order to get as many different perspectives as possible within the community, while simultaneously making comparisons between communities easier and more trustworthy. This resulted in the identification of six stakeholders: the mayor and a policy employee (regarding the municipality), the owner of the local supermarket and the owner of a local café or restaurant

(concerning the private sector) and a teacher at the local school and an employee of a local sports association (both employed in the public sector). Unlike for instance police officers or doctors, these stakeholders are not restricted by confidentiality. Stakeholders were contacted through an email address found on the internet, with one reminder in case of an initial non-response. This selection of stakeholders thus involved a combination of 'critical case sampling' where individuals are chosen based on their experiences, and 'key informant sampling', where individuals are chosen based on their expertise (Johnson, Adkins & Chauvin, 2020).

Due to non-existent or non-working email addresses, a lack of response (even after a reminder), refusals, non-matching agendas or willing stakeholders with insufficient experience, initially ten out of the eighteen interviews were conducted. During the process of interviewing, inviting additional stakeholders was considered as to increase depth, leading to the addition of five interviews, at least one in every community, using snowball sampling. From that point on interviews were conducted with people considered to be a stakeholder 'in that community', losing the sameness of stakeholders in all communities. Because tourism played, for instance, a bigger role than expected in Seyðisfjörður, a tourist officer was interviewed. Vopnafjörður was as expected more of a fishing community, and an employee of the fishing company was interviewed. This second wave of interviews with community-specific stakeholders added depth, and helped achieving a sense of saturation in each community.

Additional interviews were conducted in two other communities based on meaning saturation ('understand it all') rather than code saturation ('heard it all') (Hennink et al., 2017). Expanding the scope of the research by adding 'extremes' in terms of historical changes in labor diversity allowed a better understanding in how social cohesion is shaped by labor opportunities. Those two communities are Raufarhöfn and Djúpivogur. The first community, Raufarhöfn, has suffered significantly from the loss of quotas and jobs since the start of the twenty-first century. The community has around 170 inhabitants remaining, down from around five hundred during the sixties (Thorsteinsson, 2023). Until now it is struggling to find stable alternatives from the fishing industry (Baldursdóttir & Halldórsson, 2018). While Djúpivogur faced a similar faith when the main fishing company moved and left the community, the community showed remarkable resilience, and currently has more job opportunities than prior to the loss of quota (Unnarsson, 2020). The two 'extreme cases' are compared with each other, but the differences are also compared to the three main communities to understand 'what works when': a difference-in-differences approach. Apart from reaching meaning saturation, adding these communities increased the transferability and applicability of the study to a broader range of communities (see paragraph 3.5). In both communities, a staff member of the local municipality was invited. Through snowballing, another interview was conducted in Raufarhöfn. A reflection on these choices can be found in section 3.5. After this second round of interviews, the total number came to eighteen: five stakeholders per community, two interviews in Raufarhöfn and one interview in Djúpivogur.

3.2.2 Procedure of the interviews

Upon agreement, an appointment was made for a face-to-face interview at a suitable location in Iceland. To ensure as much privacy as the interviewee needed, they could choose the location. After arriving at the location, the interviewer introduced himself and (again) explained the purpose of the interview, stating that it would typically take about forty-five minutes. Then, the informed consent form was discussed (Annex 2) (of which a discussion can be found in section 3.5). After mutually signing the informed consent form, permission was asked to make an audio recording of the interview: in case the interview was disrupted, both the recording and interview were temporarily stopped. All interviewees signed the informed consent form and allowed an audio recording to be made. Following this, the interview was started.

The interview guide was adhered to reasonably well, although in some interviews a fluent conversation quickly emerged with little reliance on the interview guide. Nevertheless, all interviews covered the most important topics from the interview guide, leading to a comprehensive overview of the experiences, visions and knowledge of stakeholders. As more interviews were conducted, the interviews progressed more fluently, partly because more relevant and contextual knowledge on the topic was gathered. At the end of the interview, the questionnaire was examined once more to ensure that no important topics were missing, after which the audio recording was stopped, allowing time for a chat. Interviewees were told that if they had any

additional information or questions, they could always contact the interviewer or one of the supervisors. In addition, stroopwafels were handed over as a thank-you gift.

The interviews were conducted in English. While most stakeholders were proficient in English, it is not their native language; possible nuances, meanings and depth can be 'lost in translation'. Often, questions had to be repeated, and some more complex terms like 'cohesion', 'labor diversity' and 'volunteering' required explanation. When the researcher sensed that a stakeholder experienced difficulties in expressing themselves properly, help was offered in translating, for instance through Google Translate. Difficult words or typical expressions known only in their native language were translated by interviewees or the interviewer to convey the understanding, and after translating, this specific was further discussed to ensure a shared understanding. Additionally, this allowed to get the exact phrasing on the audio recording, which helps to understand subtle meanings and interpretations that are key to grasp the stakeholders' experiences. Furthermore, some stakeholders used secondary sources such as books containing information on fishery catches, knowledge from the internet or other sources like images to further explain or underpin their experiences, knowledge and visions. In some interviews, the pace was slower to provide enough time to build rapport and to make sure the interviewer and the stakeholder had a shared understanding. Additionally, the interviewer then used more easily understandable language. A sign for the interviewer that the stakeholder was struggling to explain a certain concept was the use of the word 'hérna' (roughly translated 'like' or 'uh').

All interviews were conducted in the period from mid-April to mid-May in 2023, mostly lasting around forty-five minutes but ranging from around half an hour to slightly longer than an hour. One stakeholder was interviewed in a different village than the respective community of study, as the town hall of the municipality of the community is located in another village.

3.3 Operationalization of the interview guide
The interview schedule (see Annex 1) contains seven questions in total, each containing sub-questions. All but two questions are open-ended, allowing interviewees to provide insights into their experiences, thoughts and feelings (Tenny et al., 2020). There are four types of questions included in the interview schedule: (type a) questions to establish rapport, (type b) questions that focus on the interviewees' experiences, visions and knowledge to explore the relationship between diversity of labor and social cohesion, (type c) questions to assess the diversity of labor opportunities within the communities, and (type d) questions directly testing the two Catch-22 mechanisms. The majority of the questions fall under type b.

The interview begins with question 1, designed to build rapport (type a.). This question is divided into three elements: how is the stakeholder involved in the community, in what ways do they participate in the community both professionally and informally, and how does this involvement in the community allow the interviewee to have an oversight of what is happening in the village? In this way, the interviewee has space to tell something about themselves, and it can be checked to what extent the interviewee is actually a stakeholder.

The first mechanism-seeking questions (type b.) are questions 2a, 2b, 2c and 2d, discussing the past of the community: first, question 2a inquires what general changes have occurred in the village, whereafter question 2b focuses on changes in terms of services and shops, question 2c explores changes within the social aspect of the community and question 2d examines the changes within jobs and work in the community. Therefore, question 2c emphasizes social cohesion, question 2d the diversity of labor and question 2b emphasizes both. Questions that directly assess the diversity of employment opportunities in each community (type c.) are 3a, 3b and 3c, inquiring what the main sources of labor are, how diverse the jobs are (e.g. by sector or level of education) and how good the job opportunities are for newcomers.

After the questions regarding diversity of labor, a range of questions inquire the link between diversity of labor and social cohesion (type b.). First, questions 3d and 3e attempt to understand the contribution of people in certain occupations to the community. 'New' sectors like tourism are compared with the more traditional fishing sector in terms of their impact on the cohesiveness of the community. Question 4 concerns a sensitive question, assessing the mental health and demographic situation within the community. Questions 4a and 4b investigate whether people perceive life as good in the community and whether they are generally happy,

while questions 4c, 4d and 4e involve the demographics – exploring who leaves and enters the community (4c), why (4d), and what effect this has on the community (4e).

Two questions (5 and 6) directly assess the existence of the Catch-22 situation (type d.) using an example. To assess whether there is a lack of diversity in labor opportunities, question 5 introduces the village of Flateyri in the Westfjords, while question 6 addresses the decline of the traditional fishing identity. If the stakeholders agree with the notion of one of these questions, further in-depth questions are asked to better understand the context of the Catch-22. Where appropriate, some examples of elements of social cohesion can be given, but the experiences of the stakeholder are leading. Finally, question 7 again determines the role diversity of labor plays on social cohesion (type b), but differentiates between stakeholders employed within the municipality and stakeholders that are not. Both parties are first asked what the municipality has done to improve the communities (7a), after which municipality stakeholders are asked what the successes have been (7b) and what still needs to be improved (7c). For non-municipality stakeholders, the question focuses on whether they see the effects of the municipality's policies and how satisfied they are with them (7b). Lastly, looking at the future, stakeholders are asked what the municipality should do in order to improve the community (7c).

As a whole, the questions constitute a chronological journey through the years, beginning with assessing the past (with question 1), moving to the present in the following questions and ending with a question about the future of the community (question 7). In conclusion, the interview addresses the past, the present and the future, the amount of diversity of labor opportunities, the different indices of social cohesion and both deductive, theory-based questions and more exploratory, open-ended questions in order to assess the interviewees' experiences, knowledge and visions, providing a comprehensive assessment of the research question.

3.4 Data processing and data analysis

Thematic analysis was used following Braun & Clarke's (2006) six steps. In a thematic analysis, texts are examined to identify recurring themes - patterns that capture something significant or interesting from within the data relating to the research question. Thematic analysis is useful as it allows for both breadth (through the identification of a multitude of themes) and depth (through the high amount of detail within themes). This helps to understand not only through what mechanisms labor diversity influences social cohesion and whether there is a Catch-22 situation (breadth), but also exactly how and under what circumstances these mechanisms come into play (depth). Within thematic analysis, a codebook approach is chosen (Braun & Clarke, 2021). This approach allows the testing of pre-constructed themes while permitting the construction of new codes and themes from the data, fitting this research best: the Catch-22 situation is deductively researched, while the simultaneously emergent patterns leading to new theories and contextual knowledge on the relationship between labor diversity on social cohesion (stemming from the experiences and knowledge of stakeholders) are inductive (Braun & Clarke, 2023).

The analysis is divided in three parts (see figure 5 and 6) following the three sub-questions stated in paragraph 1.4, and given the complexity of the research design, multiple kinds of themes can be identified, both inductive and deductive. First, paragraph 4.1 answers sub-question one about the labor diversity of each community, based on the distinction of Sæþórsdóttir & Hall (2019), and therefore uses only one, deductive theme: 'Labor Diversity'. Subsequently, paragraph 4.2 analyses the influence of labor diversity on the six indices of social cohesion, answering sub-question 2. The effect of labor diversity on all six indices of social cohesion are separate, deductive themes, as they are again based on earlier research as stated in the theory section (4.2.1 until 4.2.6).

Finally, chapter 4.3 assesses the existence of embedded characteristics of the community that shape the relationship described in 4.2. As opposed to 4.1 and 4.2, these characteristics are based on bottom-up patterns that emerged from the transcripts: all six embedded characteristics are thus inductive themes, that will be explained from 4.3.1 through 4.3.6. Finally, the deductive theme 'Catch-22' is used throughout 4.2 and 4.3 for codes that directly encompass the mentioning of a Catch-22 situation. The research therefore consists of eight deductive themes and six inductive themes, a summary of which can be found in figure 6 - the full codebook can be found in Annex 4.

4.1: Assesment of Labor Diversity per community	4.2: Influence of Labor Diversity on Social Cohesion	4.3: Influence of Embedded Characteristics on Relationship 4.2
Deductive	Deductive	Inductive
Theme(s): Labor Diversity	Theme(s): Social Capital Demographic Stability Economic Inclusion Social Inclusion Community Quality of Life Individual Quality of Life	Theme(s): Seasonality Working Conditions Foreign Workers Infrastructure Individualism & Togetherness Leadership & Agency
	Deductive Theme: Catch-22	

Figure 6: a description of all themes used in the research and in what specific part of the results section.

3.4.1 Transcribing

Audio recordings were made of all eighteen interviews. Due to pauses and malfunctioning audio recording equipment, some interviews were divided into two parts. A small part of the audio in one interview is missing. The audio recordings were transcribed using the transcription software otter.ai. After transcription, the transcripts were reviewed and improved to remove errors and to maintain the nuances of the interviews. Following transcription, the audio recordings were removed, and the transcripts were placed on the secure environment of the University of Groningen, the Y drive. The transcripts were then transferred to ATLAS.ti, where a combination of the community and the job of the stakeholders was used instead of names to increase anonymity.

During transcription, the first step of thematic analysis also takes place – becoming familiar with the data, which was done by reading and rereading the transcripts (Maguire & Delahunt, 2017). This allows a first impression of what is in the data and what is interesting about the data (Braun & Clarke, 2006). For every interview, a memo was written that summarizes and highlights key elements of the interview. These memos enable other researchers to quickly know the content of a specific interview.

3.4.2 Coding

The second step of the process of thematic analysis is the creation of initial codes and the systematical organization of the data (Maguire & Delahunt, 2017). Text fragments (e.g. one or more sentences, phrases or words) are assigned one or more (inductive or deductive) codes in case it is of interest to the research (Hennink, et al., 2020). This code is then given a name that reflects a more general overarching concept of all text fragments under that code. There are three types of deductive codes: for the Catch-22 situation (for instance: Catch-22 – cultural), examples of indices of social cohesion (for instance: population increase or decrease, as part of demographic stability) and for diversity of labor (for instance: tourism industry). At this stage, coding still remains close to the text, and numerous codes emerge. As the usability of the data is at this point still uncertain, it is better to have too many codes compared to having too few codes (Braun & Clarke, 2006). For instance, different codes are made with regard to finances: 'finances', 'finances – finding alternatives', 'finances – only buying necessities/saving', 'financial worries' and 'financial – cost of living'. Concerning labor, thirteen separate codes exist, with some being used only a handful of times while other

codes are applied more than fifty times. Some codes may look similar and sometimes multiple codes are added to a specific text fragment. For instance, if a stakeholder mentions leaving the community due to a lack of high-educated jobs, this fragment receives both the code 'human settlement environment' and 'population increase or decrease'. Given the fact that many concepts in the communities have unique, distinguishable characteristics despite being closely related to each other, as well as the analysis encompassing three steps, the process of coding was detailed and thorough; many pieces of text received multiple codes. In total, 137 different codes were made, encompassing around 1300 quotations.

3.4.3 Analysis
The analysis phase consists of step three, four and five. Step three involves the search for themes. Where pieces of text fall under a code, codes fall under a theme. Regarding deductive themes, code were searched that matched the specific theme, while inductive themes were established when a set of codes clearly fitted together. For instance, 'winter', 'tunnel' and 'road closure', created (among others) a broad initial theme called 'Infrastructure'. Similarly, the codes 'optimism', 'pessimism' and 'adversity and unhappiness' formed (among others) the initial theme 'Attitude'.

In the fourth step, themes are assessed. All text fragments that fall under the codes of a theme were examined to check whether the themes are logical and correct, whether the pieces of text support the theme, whether the themes are too broad or too narrow and whether themes should contain subthemes. Additionally, in the case of inductive codes, it was checked whether themes can be merged (or left out) (Maguire & Delahunt, 2017). The aim was to make sure themes are internally similar (in terms of codes and parts of transcripts) yet easily distinguishable from each other (Braun & Clarke, 2021). This circular process was continued until the themes (both within and between themes) were an accurate reflection of the data.

Regarding the deductive themes of 4.1 and 4.2, many codes were removed from themes during this step. Labor diversity was broader than needed to merely assess the labor diversity in a community, and in many of the themes regarding indices of social cohesion over half of the codes were removed as to minimize overlap and to be more concise. As an example, many codes regarding economic troubles were removed from 'Individual Quality of Life' and only included in 'Economic Inclusion'. Furthermore, themes were changed as well. This for instance meant that the theme 'Attitude' was incorporated into a new theme called 'Culture, Norms and Attitude', and 'Infrastructure' was broadened to include housing and internet instead of focusing just on the mobility-aspect of infrastructure. During this process, the themes 'Seasonality', 'Working Conditions' and 'Foreign Workers' were constituted as well. Although the themes are closely related to each other, the three themes embody a distinct concept (both regarding codes and meaning) with each theme influencing the relationship between diversity of labor on social cohesion differently. Finally, to ensure that the constructed themes reflected the data adequately, all interviews were examined once more.

In the fifth step, themes were organized and given a final name and description, determining the essence of the themes (Braun & Clarke, 2006). The primary goals were making the themes and the relationship between the themes clear, coherent and understandable, which was especially vital to clarify the inductive embedded characteristics in 4.3, and ensuring that themes were distinguishable, particularly crucial to distinguish the separate (deductive) indices of social cohesion of 4.2. During this stage, there was a feeling that the constructed themes did not give the full picture. While the influence of diversity of labor on social cohesion was clear (4.2) not all important factors from the transcript were (properly) included in the inductive themes of 4.3. 'Culture, Norms and Attitude' resembled at best an 'other'-category with little internal coherence, while the aspects of leadership and a sense of togetherness within the community were not properly addressed. Therefore, 'Culture, Norms and Attitude' was removed, and two themes were added; 'Leadership and Agency', and 'Individualism and Togetherness'. The final theme inductive themes were thus 'Diversity of Labor', 'Seasonality', 'Working Conditions', 'Foreign Workers', 'Infrastructure', 'Individualism and Togetherness' and 'Leadership and Agency'.

Even though (due to the large amount of information that the interviews yielded), more inductive themes were initially constituted, these were eventually dropped and not further analyzed: 'Reinforcement Cycles' and 'Subjective Atmosphere and Image' (too much overlap with other factors), 'Services, Amenities and Things to

Do' and 'Settlement' (too closely related to an index of social cohesion) and finally 'Globalization and Upscaling' and 'Context of the Current Situation' (not enough focused on the dynamics of the communities). Given the already complex nature of the analysis, no further divisions were made by adding sub-themes in order to present the findings as clear and straight-forward as possible.

The final step (step six) is incorporated in the results section and presents the outcomes of the analysis. In this section, the final result of the analysis is presented in a concise, clear and coherent manner. Quotes are added to convey the meaning of themes and to provide visibility to the perspectives of the stakeholders. A thick description of each theme will be given, and the full codebook can be found in Annex 4. Finally, the conclusion and discussion section contain both a comparison of the findings to the theoretical framework and an exploration of previous research to underpin inductive findings.

3.5 Trustworthiness of the qualitative research
To guarantee the quality of qualitative research, attention has to be given to the *trustworthiness* of the research and the findings, as determined by the quality of four criteria established by Lincoln & Guba (1986): credibility, transferability, dependability and confirmability. These four criteria are described in the paragraphs below.

3.5.1 Credibility
The concept of credibility broadly addresses two questions: are the presented results consistent with the insights of the interviewees and are these insights credible (Tobin & Begley, 2004)? In short: are the findings presented consistent with reality (Shenton, 2004)? Early familiarity with the culture, history and customs of the interviewees helps to understand the presented views of the stakeholders (Shenton, 2004). The isolated geographical location, the traditional role of fishing, the emergence of tourism, important historical events such as the introduction of quota and the characteristics of the communities shape the unique experiences of the inhabitants, and are crucial to be aware of. Previous to visiting the communities, the history of the communities was researched by reading English and translating Icelandic literature. Two case-study questions within the interview were explicitly based on this: questions 4 and 5.

Within the communities, time was taken to familiarize with the (culture of) the communities through observations, conversations (with locals and Icelandic researchers) and museum visits. This helped to understand the experiences of the stakeholders and created depth during the interviews, as better follow-up questions could be asked. However, not becoming too familiar with the communities and not getting attached or favoring one specific community is important to prevent bias and a lack of objectivity. In addition, awareness of the accuracy of statements is key, as stakeholders might feel ashamed or proud of their community and give a more positive presentation of the community than reality. Another challenge lies in the subjectivity and personal nature of the experiences: a negative experience is not invalid in a town that is 'objectively' doing well, and vice versa. Communities are complex and not univocal and so are their inhabitants – this was taken into consideration in the presentation of the results.

The snowball sampling of the second wave (allowing more depth within communities) endangered credibility. Snowball sampling is prone to homogeneity, as interviewees often recommend others with similar characteristics. However, analysis of the transcripts showed that subsequent stakeholders often had different experiences and visions compared to the person they were recommended by.

In the end, the results contained a well-rounded representation of general stakeholders and stakeholders 'in the community', as well as being a good mix of stakeholders within executive positions, like mayors, and non-executive functions, like store owners. Additionally, the interviews captured a broad range of experiences (of both stakeholders and others), as well as visions and knowledge, as well as not only capturing the current state of the communities but also an historical overview and an orientation on the future regarding the communities. The interviews with stakeholders, many of whom have been actively involved with the community for a long time, created an insight in the (changes of) important social institutions over time, shedding light on the characteristics of the communities and the concepts of the diversity of labor and social cohesion. As a result, credibility issues in the research are limited.

3.5.2 Transferability

Transferability concerns the extent to which the results of the research can be applied to other situations (Shenton, 2004). The three villages were selected due to the different degrees of diversity of labor, while further maintaining as many similarities as possible. This allowed specifically the relationship of diversity of labor on social cohesion to be analyzed, while minimizing the influence of other characteristics. Thus, by keeping other differences between communities as small as possible, more insight is gained into the exact influence of labor diversity on social cohesion (because only this factor is different in the communities). However, little is then known on how diversity of labor influences social cohesion in communities with different characteristics like size and location, raising the question to what extent the mechanisms are transferable. A higher credibility (is it truly diversity of labor that is influencing social cohesion?) therefore equals problems with transferability.

As a solution, three interviews in 'other contexts' – the communities of Raufarhöfn and Djúpivogur - enhanced transferability. Instead of being similar to the other communities, the two other communities are considered 'extremes': Raufarhöfn became increasingly fragile after losing access to fishing, while Djúpivogur became more resilient after a similar loss of access to fishing. The transferability can be determined by comparing the communities between themselves, and then between the three other communities. If Raufarhöfn and Djúpivogur have similar differences compared to the differences between Vopnafjörður, Seyðisfjörður and Fáskrúðsfjörður, different contexts yield similar findings, and transferability is higher. However, transferability is lower if the findings between the two communities are completely different compared to the three main communities, as it indicates that different contexts yield different results. In this way, through a qualitative difference-in-differences approach, transferability is enhanced while maintaining credibility.

Finally, the study should be seen in the light of the already existing scientific literature. Results from this study contribute to a better understanding of community resilience. As more research is done on one phenomenon, it becomes clear what works and what does not work under which circumstances (Borgman, 1986; Pitts, 1994): the results should be seen as a tool in the toolbox for creating resilient communities. Therefore, it is important to be as transparent and thorough as possible throughout the research, so readers know 'what works in what situation', and can apply the findings to different contexts (Guba, 1981). By adding more and more tools over time, more effective and efficient policies can be made to improve the situation of communities.

3.5.3 Dependability

The third criterion is 'dependability': would the results be similar if the study was conducted again with the same context, procedures and participants (Shenton, 2004)? Phenomena, however, change over time (Fidel, 1993), and in Iceland the number of tourists is projected to increase by about 50% from 2018 to 2030 (Tómas, 2022), while the trend in fisheries is the opposite: approximately 36% of jobs were lost from 1990 to 2015, a trend expected to continue (Kokorsch & Benediktsson, 2018a). Sudden changes, as happened with the introduction of the ITQ system, can also occur. If the research is therefore conducted again at a later stage, both the diversity of labor opportunities and social cohesion are likely to have changed, possibly leading to different findings.

To make the research repeatable, detailed descriptions are given of every stage of the research and why decisions were made as they were. The methodology was discussed extensively, covering the aspects of how the data was collected (the interview schedule, the way of approaching respondents, how many interviews were conducted, how these interviews went and which alterations were made from the original plan of research) and the way the data was processed (including transcribing, coding and analysis). Shortcoming and limitations are openly examined in the discussion section in order to reflect on the conduct and the findings of the study, in all of which openness is key. Meanwhile, the anonymity of the stakeholders had to be maintained: a reflection on this dilemma can be found in 3.6.

Finally, saturation helps with transferability. The interviews were conducted until a feeling was achieved that follow-up interviews would not provide new insights. If the research were to be done again with different stakeholders, eventually the same sense of saturation will (in all likelihood) occur: saturation, if correct, thus supports dependability.

3.5.4 Confirmability

Confirmability, finally, entails that the presented findings of the study are from the knowledge, experiences and views of the interviewees instead of the characteristics and preferences of the researcher. Within qualitative research, the researcher plays a major role in the results, and true neutrality does not exist, given that it is unavoidable that researcher's actions and choices contain some form of bias (Shenton, 2004). To address this criterion, the following paragraph (3.6) includes a reflection on my role before, during and after the research, and how this may have affected the quality of the research (Hennink et al., 2020). Furthermore, providing a clear description (and justification) of the theory and methodology creates transparency and allows the reader to gain insight into decisions and considerations made by the researcher, minimizing implicit bias.

On top of this, interviewing stakeholders helped, given the researcher is not Icelandic. Stakeholders possess not only experiences and visions, but also more objective knowledge. This helped to portray a more 'neutral' picture of the communities. However, there may also be other residents in the communities with a different view of the community. While stakeholders may know what they feel and experience, their unique experiences are not included in this interview directly, potentially altering the findings. As an example, many stakeholders stated having limited contact with foreign employees, as well as the interviewees sharing little experiences of both the elderly and younger inhabitants of the community. Even though the decision of the researcher to interview stakeholders may improve the trustworthiness of the research, it may cause perspectives of some groups to be underrepresented.

3.6 Reflection on ethics and positionality

Separating the researcher from the research process is not possible within qualitative research (Boeije, 2014). Given the potential influence that the researcher has on the findings, the interviewees and the communities, it is important to explicitly reflect on my own position and implicit bias as the researcher, as well as addressing ethical considerations. Therefore, I reflected on how I could assess whether the findings are of good quality - consistent with the insights of the interviewees, which was done by asking myself continuously how I can know that I am truly capturing a correct image of the communities while having limited experience in qualitative research, as well as limited knowledge on the communities. Simultaneously, I had to minimize harm to those participating in the research, on which I continuously reflected by asking myself in what ways participants benefit from the research, and in what ways they might be harmed by their participation. By paying attention to these considerations, acceptability and usefulness of the research can be valued (Elo et al., 2014), and thus readers are shown that the findings of the research are worth paying attention to and worth taking account of (Lincoln & Guba, 1985).

First of all, the collaboration with my supervisors was important. Continuous reflection and discussions with my supervisor in Iceland were helpful to learn more about the context of (East-)Iceland and the communities. For instance, Fáskrúðsfjörður was chosen instead of Bakkagerði, as this community was more comparable to Seyðisfjörður and Vopnafjörður. Meanwhile, reflection and discussions with my supervisor in Groningen increased methodological rigor, for instance in the process of making the interview guide and the subsequent thematic analysis. I also reflected on the selection of participants: people considered a stakeholder due to their job. Perhaps interviewing more experienced people (that have a less important job, but have lived in the community for a longer time) would have allowed more objectivity compared to me choosing certain jobs that I (from a Dutch perspective) considered 'stakeholder jobs' (for instance a mayor) – improving the confirmability. However, finding stakeholders with 'experience' rather than stakeholders with an important job is difficult without relying on snowball sampling that is subject to bias (harming credibility). I also reflected on the participation bias of those who agreed to be interviewed. Stakeholders might be more willing to be interviewed when they hold positive views, or when they are more proficient in English and therefore not intimidated by doing an interview in English. Likewise, interviewing a tourism officer is likely to present a positive image of the influence of tourism on the town, while an employee of a fishing company is probably positive regarding the influence of fishing on the community. Especially in these interviews, the findings are interpreted critically and are compared to other interviews in that community.

It is also important to reflect on differences and challenges regarding language and nationality. Language has been a barrier both in developing the theoretical framework of the research, during the interviews (see 3.2)

and while presenting the findings. Regarding the latter, ChatGPT 3.5 was (together with Grammarly) used for the purpose of language correction, in line with the basic rules established by the University of Groningen. This improved the readability of the study through, for instance, correcting grammatical errors and detecting poor phrasing. Regarding the development of the theoretical framework, English information on many Icelandic websites is mostly basic and sometimes only provide an English abstract; translating software is also not always sufficiently reliable. Even though there was plenty of international and Icelandic research on the topic of resilience, even on the social aspects of the fishing industry, my knowledge may be more limited compared to native Icelandic researchers. However, my perspective may be more neutral and independent: I am not Icelandic, I have no stake in the communities or any industry, the research is not executed for the government and no further connections were established with any of the stakeholders or communities, except for being open to answer questions regarding the research. Additionally, my residence during the months this research was conducted, was outside of the previously mentioned communities. This caused both the stakeholders and myself to talk freely (as both of us did not risk social repercussions), allowing them to reflect and learn new things about their community – reducing harm while increasing the quality of the findings.

The informed consent form is important regarding the minimization of harm. Before conducting the interviews, stakeholders were provided information about the research either in person or through e-mail, and were explained why they were contacted. Upon agreement, I explained the informed consent form before starting the interview. First of all, I again shared information on the research and emphasized that participation is entirely voluntary and only involves doing the interview, that participants are able to stop the interview at any time, and that interviewees are not required to answer any question. In case a stakeholder wants to revisit anything said during the interview or has any remarks regarding the study, I explained that they can get in contact at any moment.

After that, I discussed the risks and the way they are minimized. To ensure that nothing said during the interview can be traced back to a stakeholder, I explained the measures taken in terms of anonymity, access to the data, the storage of the data and (ultimately) the removal of the data. I also discussed the benefits of participation in terms of personal reflection and new insights and benefitting from changes following the research. I also shared that the study will be added to the depository of the University and will be shared with relevant people and institutions. Finally, I asked whether the stakeholder wishes to receive the final report upon completion. The ethical approval is discussed as the last part of the consent form: I told the interviewees that the research adheres to ethical standards set by the University of Groningen, after which the stakeholders could agree to participate and agree with the interview being recorded on audio, but not before I shared the contact details of the research team.

I also reflected on considerations and trade-offs between anonymity of the stakeholders and transparency of the research. Being transparent throughout the research is important, allowing insight into how the research is conducted, how useful and acceptable the research is, how it can be repeated (to give similar results) and to what extent the findings can be applied to different contexts. However, minimizing harm to stakeholders and communities is also crucial, which may result in a decline of transparency. Exactly who was interviewed and what quote was said by what stakeholder is therefore not revealed, as within the small communities answers can be easily traced back to one person if a combination of a first name, age or job description is given. This choice was made well before the first interview and was emphasized before the start of the interview to allow stakeholders to feel secure in their responses. While this decision enhanced credibility, it may harm transferability. This also meant that, during interviews, I was unable to share personal experiences of other stakeholders, while requiring consideration that (follow-up) questions did not contain any information that could be traced back to another stakeholder. Furthermore, only quotes without information regarding the identity of a stakeholder could be used, losing some information and context. Yet, minimizing harm was prioritized above the usefulness of findings.

Finally, I had initial difficulties regarding the topic of saturation. When do I have a complete image of the communities? First, I saw the communities as a puzzle containing many pieces, but later I realized saturation can better be seen as painting a portrait of the communities. While a painter can endlessly add details by creating layer upon layer, patterns emerge when similar opinions and experiences are repeated, and thematic

analysis uses these patterns to form a complete image. The question is thus not 'do I have every bit of information of the communities', but rather 'will the addition of more interviews significantly change the existing themes or cause the emergence of new themes'. This was a matter of discussion with my supervisors and trusting my feeling. Like a painting can never be 'finished', the research is about finding a balance between capturing all significant patterns and not being overly detailed. This was, in my opinion, the case after the second wave of interviews, creating depth within communities as well as adding the communities of Raufarhöfn and Djúpivogur. Therefore, I believe I eventually reached a good middle ground where I minimized harm by providing anonymity while simultaneously achieving saturation and being transparent.

4. Results

In the results section, the findings of the interviews are presented systematically to answer the research questions. First of all, the assumption on diversity of labor for every community is examined using one deductive theme: *Labor Diversity*. (4.1). Following this, the role of diversity of labor plays in shaping the social cohesion of the communities is analyzed using the six indices of social cohesion as deductive themes: *Social Capital*, *Demographic Stability*, *Social Inclusion*, *Economic Inclusion*, *Community Quality of Life* and *Individual Quality of Life* (4.2). Finally, the influence of embedded characteristics of the community on the relationship described in 4.2 is taken into account in 4.3, consisting of the inductive themes *Seasonality*, *Labor Conditions*, *Foreign Workers*, *Infrastructure*, *Individualism and Togetherness* and *Leadership and Agency*.

4.1 Diversity of labor in the communities

Regarding the diversity of labor per community, stakeholders indeed characterize Vopnafjörður as a community with a relatively low amount of diversity of labor, frequently mentioning the large influence of the fishing company *Brim* on the community. They further indicate that the large majority of the jobs involve manual, low-skilled labor and that opportunities in skilled employment are limited. Regarding the consequences of losing the fishing industry,2 one stakeholder shares their pessimistic view, indicating the large influence of the fishing industry on Vopnafjörður:

> *To Vopnafjörður? I think it's very difficult to say. But I am very afraid because, you know, 70 people would lose their job that live in Vopnafjörður. That means around 130, it would influence around 130 people, families and also children. And so it would be very difficult for Vopnafjörður to survive that. Yeah, we would need another company to step in and just do something. But if, if no company would come, then Vopnafjörður would just...* (Vopnafjörður, participant 5)

Stakeholders further emphasize the indirect influence of the fishing industry, as several companies and services in the community are dependent on work they provide for Brim. Given examples include not just the maintenance company *Bílar og Vélar* and local electricians, but also employment in the local store and the school can be affected by a loss of jobs in the fishing industry. The energy industry is not mentioned by any stakeholder, while the role of tourism is limited in Vopnafjörður. Opinions on (expanding) the tourism industry are diverse, ranging from 'the town is not supposed to be in tourism' to a more nuanced view where the potential benefits from tourism are identified, while acknowledging that at this point opportunities are not sufficiently seized yet.

Despite the limited diversity of labor opportunities, there is no shortage of work; fishing and services (like healthcare and education) provide more than enough jobs, and stakeholders mention the difficulties in filling vacant positions, for instance in the school. This is partly due to Brim outcompeting other employers with good pay, creating little incentive to further diversify the local economy of the community. Some of the stakeholders also add that a gradual increase in the amount of higher educated jobs can be observed, with for instance jobs in marine biology, human resources, economics or engineering (especially with regards to Brim).

Seyðisfjörður indeed has a (according to stakeholders) stable fishing industry, but the influence of tourism is more extensive than expected. Similar to other communities, Seyðisfjörður faced the sudden loss of the fishing company and consequently saw a sharp decline of labor opportunities. After hitting rock bottom, however, the cheap housing turned the community into a place of residence for artists. Nowadays, through the combination of the unique landscape, the arrival of the (only) ferry from mainland Europe and the presence of artists, Seyðisfjörður has evolved into a vibrant and artsy community that draws a large number of tourists during the high season. Not only is the tourism industry interwoven with a significant cultural and creative industry, stakeholders describe the community as having an 'entrepreneurial spirit'.

The entrepreneurial and bottom-up spirit of the community is self-reinforcing. As one stakeholder states: *You know, if you don't have a job, just make it then. Yeah. I think we have a lot of people that are just into that* (Seyðisfjörður, participant 4). Examples of opportunities beyond fishing and tourism include jobs in for instance art, science and healthcare. These opportunities become evident in examples given by stakeholders, like museums, art exhibitions, the specialized Alzheimer-department in the nursing home, the Lunga-festival in

summer or the community- and culture center Herðubreið, which even has a cinema. With the fishing industry (now providing year-round employment) returned, the local economy is relatively diverse given the limited size of the community, with a relatively high amount of jobs requiring higher education. As many jobs in tourism are seasonal and offer limited pay (contributing to differences among inhabitants), stakeholders agree that further diversification and expansion of the creative industry is key for the community, just like additional jobs that require higher education. As one stakeholder states:

> *The fishing industry has, of course, been a huge industry in Seyðisfjörður for many, many years. But you cannot rely or you cannot expect that it will stay like that forever. So one of the things what we have to do is to find the possibilities to create more industry. Yeah. More industry than only fishing industry and the travel industry. Yeah. We have to have more options.* (Seyðisfjörður, participant 5)

The diversity of labor of Fáskrúðsfjörður is influenced by factors within and outside of the community. Regarding the former, the community has a strong dependence on the fishing company *Loðnuvinnslan.* The ownership of this company is unique compared to other fishing companies: Loðnuvinnslan is around 83% owned by *Kaupfélag Fáskrúðsfjörður*, and approximately 350 out of the 750 inhabitants of Fáskrúðsfjörður are members of this Kaupfélag. Stakeholders indicate that, due to this ownership, the chance that the fishing company will leave to another community is nihilated. This gives the company a very stable position within the community. Additionally, the company makes decisions that benefit the local community, and money remains in the community instead of going to non-local owners. Loðnuvinnslan even hands out grants to people in order to stimulate the development of new initiatives. As one stakeholder states:

> *Most of the money go into the company itself to build up. And even though we pay a small amount to each shareholder, most of the amount going to the company here on the place and use it to, you can say, give it to the sports here and the youngsters, to the elder home or to the school or to build up something for the people in the place. Yeah. That's how it works. And because of this, there is not so much money going out. Yeah, because the ownership is all here and we can use it here.* (Fáskrúðsfjörður, participant 3)

Two top-down events (outside of the community) have been crucial regarding further diversification of labor. The creation of a tunnel to the neighboring Reyðarfjörður and the opening of a large aluminium smelter (Alcoa Fjarðaál) in this community greatly improved the labor diversity in Fáskrúðsfjörður. According to stakeholders, the new possibilities for year-round commuting to neighboring communities and new job opportunities surrounding Alcoa had a big impact on the community. One stakeholder describes this transformation as follows:

> *This aluminium smelter for people. …. We got more young people into the area. It changed a lot with the aluminium smelter, and also the number of inhabitants stopped declining and started rising again. Yeah, so. It was the, you can say, the big changes on this area. And for the transportation between places, this tunnel was a great change.* (Fáskrúðsfjörður, participant 3)

The assumption that tourism played an important role in Fáskrúðsfjörður was, however, wrong; while tourism plays a more prominent role compared to Vopnafjörður, stakeholders indicate the limited influence of tourism in terms of jobs and benefit to the local economy. Thus, the labor opportunities in Fáskrúðsfjörður consist mainly of the collectively owned fishing industry and the accessible labor in neighboring communities, in particular the aluminium smelter.

Regarding the two other communities, Raufarhöfn indeed has a relatively low amount of diversity of labor. After the loss of the fishing industry, the population steadily but continuously decreased, eventually halving to under two hundred. Even though the return of fisheries (with the arrival of Húsavík-based *GPG Seafood)* has had positive effects on labor opportunities, the local economy remains limited. The school is limited in size with about ten children, while many inhabitants receive retirement pensions. While the community does have a bar, a hotel, a restaurant, a bank and a post office, these offer only limited amounts of employment.

Stakeholders identify plenty of opportunities, but also mention that those opportunities are underutilized, especially in tourism. For instance, the community has the potential to exploit the (unfinished) *Arctic Henge* (a

monument with similarities to the Stonehenge) and the unique biodiversity that offers opportunities for bird watching and fishing. As one stakeholder states:

> *I think this place has a lot to offer and we have to market it for, you know, working, tourists and people who, you know, get to work from home and stuff like that. (…). We need tools and money to do that marketing.* (Raufarhöfn, participant 1).

Djúpivogur, finally, is more similar to Seyðisfjörður (although with only two-thirds of the inhabitants); a lively and entrepreneurial community with year-round fishing and seasonal tourism, along with additional diversity provided by a variety of museums, exhibitions, services and amenities. Creating more diversity is key for Djúpivogur, as the stakeholder states:

> *And I think that is very important. Because you, you might hire someone and they have either a wife or a husband or whatever who may be in a totally different line of work. And you need the diversity. Yeah. And you also need the diversity in order for people to find their intellectual peers. You need to be able to relate to people. Yeah. And with, that's another thing. You need to be able to find someone. At the level you're at. Yeah. To relate to. Yeah. And that is very important.* (Djúpivogur, participant 1)

Compared to Seyðisfjörður, the community places even more value on people being self-sufficient and creative. According to the stakeholder, a community of self-sufficient and creative people fosters both an external image of a community's ability to cater to different needs and a sense of identification among inhabitants, allowing them to feel part of a community with like-minded peers. This emphasis on self-sufficiency can enhance the diversity of labor, as one stakeholder states:

> *Like, certain social problems and so forth. Unemployment. Here, is non-existent. No. And, the people who have tendencies to be out of work. They don't last very long here, because they have no peers.* (Djúpivogur, participant 1)

While in Raufarhöfn opportunities are not fully seized, Djúpivogur is considering a cap of tourists by restricting the amount of cruise ships that can visit the community. Despite potential limitations of economic opportunities, the well-being of the inhabitants outweighs the local economy if the community is overrun by tourists.

In conclusion, Vopnafjörður is still mainly dependent on fisheries, while the diversity of labor in Fáskrúðsfjörður and Seyðisfjörður is mostly 'different'; more top-down and focused on aluminium and commuting in Fáskrúðsfjörður, and more bottom-up and focused on tourism and art in Seyðisfjörður. Djúpivogur has many similarities compared to Seyðisfjörður, albeit being more selective in seizing every possible economic opportunity. Finally, Raufarhöfn resembles Vopnafjörður as a fishing community, although Vopnafjörður is larger and has more diverse and higher-educated labor opportunities.

4.2 Relationship of diversity of labor on social cohesion

In short, stakeholders indicate that the diversification of labor opportunities generally has a positive effect on the communities, unlike what would be expected in a Catch-22 situation. This conclusion is drawn from stakeholders mentioning the positive effects of (increased) diversification of labor in the community, as well as a comparison between communities revealing that stakeholders within diverse communities frequently mention the positive effects of diverse labor opportunities on the social cohesion, while stakeholders in less diverse communities mention a lack of labor diversity as a reason for limited social cohesion.

In general, stakeholders mention the benefits of increasing the labor opportunities regarding three indices of social cohesion: *demographic stability*, *community quality of life* and *individual quality of life*. Meanwhile, stakeholders hold mixed views regarding the benefits on *social capital* and *economic inclusion*, while the effect on *social inclusion* is perceived as mostly negative. Rather than a Catch-22 situation, communities seem to experience positive and negative 'reinforcement cycles', in which more diverse labor opportunities lead to improved social cohesion, which in turn contributes to the further creation of new labor opportunities.

Similarly, loss of labor diversity can be accompanied with a decline in social cohesion, which can subsequently harm the labor opportunities.

4.2.1 Demographic stability

Demographic stability is the first index. Generally, more diverse communities in terms of labor also have a more stable population. While stakeholders from all communities recall periods of population decline in their community (most due to a lack of job opportunities), at this point most of the communities are remarkably stable, and stakeholders indicate that the main barrier inhibiting further growth is the amount of available housing (see paragraph 4.3.3 on infrastructure).

Fáskrúðsfjörður serves as a good example of how an increase of labor opportunities can enhance the demographic stability. One stakeholder mentions the population declining by around 5% to 10% every year at the turn of the 21st century, accompanied by a decrease in services: a typical spiral of decline. However, the construction of both a tunnel (allowing commuting) and an aluminium smelter (stimulating the local economy) resulted in a sudden, large increase in labor opportunities. Stakeholders unanimously recall the impact of these two 'deus ex machina' events to Fáskrúðsfjörður, quickly reversing the decreasing population trend and breaching the spiral of decline.

Seyðisfjörður suffered from a similar population decline, initiated by the loss of the fishing industry. Even though this was back in 1989, one stakeholder vividly recalls the community housing two fishing companies, which, soon upon merging, went bankrupt. This left the community with a lack of available jobs, causing people (especially the youth) to leave the community in search of better opportunities. Eventually housing prices became low enough to attract new, creative residents, marking the beginning of Seyðisfjörður as an entrepreneurial community centered around tourism and arts. However, the number of inhabitants is still not as high as it was during the fishing era. The stakeholder describes this transformation as follows:

> *It became a bit of a place for like artists and people that wanted just a cheap place to get out of Reykjavík, stay somewhere else for the summer and yeah. And I think that just led to the town becoming a bit more interesting for young people again.* (Seyðisfjörður, participant 3)

Raufarhöfn experienced a similar population decline in the period between the adversities of Seyðisfjörður and Fáskrúðsfjörður. However, stakeholders point out that the decrease in inhabitants was never really reversed. Similar to Seyðisfjörður, access to fishing was lost after the fishing company (owning all the quotas) moved away. The effects losing access to fishing were slow and gradual, yet negative, as one stakeholder states:

> *Yeah, it was slow. Maybe, maybe one of the, the husband and wife. Maybe one of them was working there. And because of that. And it just starts like, little steps. And then, maybe, a lot of people left around 2000. Yeah.* (Raufarhöfn, participant 1)

Additionally, comparison between communities shows that those with a more diversified economy are more attractive for inhabitants or potential newcomers than less diverse communities. Stakeholders in both Vopnafjörður and Raufarhöfn identify the challenges for individuals not interested in fishing. Fisheries-dependent communities not only face difficulties in attracting newcomers, but also in maintaining the current inhabitants or re-attracting younger people that left the community for higher education. One stakeholder from Vopnafjörður recalls their experience with the limited labor opportunities in the community:

> *We have not, we don't have a big choice in choosing where you work. When I stopped in this old, old people's house, the nurse. Then I came here. I just jump on it because I didn't want to work day and night in the in the [fishing industry].* (Vopnafjörður, participant 3)

Communities with more diverse opportunities (like Seyðisfjörður and Djúpivogur) enjoy the advantage of being able to cater to individuals' tastes, as well as cultivating an image of liveliness and diversity of the community that radiates outwards, causing the community to attract additional entrepreneurial people. This not only adds more labor diversity, but also further enhances the overall attractiveness of living in the community: a positive reinforcement cycle. One stakeholder from Seyðisfjörður explains this as follows:

I think it's really important to have a variety. Yeah. You know, you don't, you just don't want just to have tourists. You don't just, you just don't want to have only fish factories. So I think it is a quite good mix here. Yeah, we have in the winter, we, the school is open, so we have the young people coming into the Lunga school, which is quite nice and it makes us make, makes it able to have like a restaurant open all year round. (Seyðisfjörður, participant 4)

The same stakeholder also suggests that with the current growth rates, even a second restaurant could operate all year long. In the same light, a stakeholder from Vopnafjörður explains that an increase in the population could further expand the capacity of the (now limited) dancing school: as communities grow larger, new labor opportunities arise and become viable.

In conclusion, diverse labor opportunities generally foster demographic stability by increasing the attractiveness of the community, and vice versa. In line with spirals of decline and increase, stakeholders in communities with more diverse opportunities emphasize the importance of these opportunities on the attractiveness to live in the community, while agreeing that an increase of people can further enhance job opportunities. Meanwhile, communities with little diversity struggle to attract newcomers (and in turn, to create more diverse labor opportunities), despite stakeholders agreeing that labor diversity is key for maintaining the population size.

4.2.2 Community quality of life

Comparison between the communities reveals that more diverse labor opportunities are generally accompanied by higher satisfaction among inhabitants with key services and conditions in the community, including current job satisfaction and the satisfaction with job opportunities, education, freshness of food in stores and the quality of recreational facilities. Additionally, stakeholders within communities acknowledge that increased labor diversity would result in an improvement of the quality of life within the community: diverse labor opportunities not only provide better quality employment, but often also new services, amenities and facilities.

First of all, stakeholders indicate that residents are generally satisfied with their jobs, although options for higher educated people are limited. As many jobs are manual or require little formal education, many of the inhabitants that move across the country to go to university, face, upon completion, the dilemma of choosing not to return to the community or having to compromise and accept a job below their educational qualifications. However, stakeholders mention an increasing trend in the return rates of younger people upon completion of their education, especially in communities with a spiral of increase like Fáskrúðsfjörður, but in particular Seyðisfjörður and Djúpivogur. Here, stakeholders indicate that diverse opportunities increase the likelihood of individuals finding a fulfilling job, and that the entrepreneurial spirit helps inhabitants to create new jobs themselves that fit their own expertise. One stakeholder from Seyðisfjörður states this as follows:

I think the return rate is getting better every year. … I mean, it's no longer just one or two things. Yeah. And there's people here that are working in Egilsstaðir and living here. Stuff like that. Yeah. People that can actually work a lot from home. … That was pretty much non-existent back in the day. (Seyðisfjörður, participant 3)

Yet, other stakeholders argue that compared to urban areas, satisfactory job opportunities for younger people are still insufficient. Especially stakeholders from Vopnafjörður and Raufarhöfn highlight the limited alternatives for high-skilled workers and those not interested in fishing, despite indications that fisheries are also getting more high-educated employment opportunities.

Additionally, stakeholders mention that more labor opportunities do not automatically lead to increased satisfaction with labor opportunities (also see 4.2.5 on economic inclusion). Many (new) jobs are seasonal (see paragraph 4.3.1) and involve manual labor (4.3.2), also in communities with more diverse labor opportunities such as Seyðisfjörður. Meanwhile, communities with fewer options can still have good quality jobs; for example, in Vopnafjörður, Brim is seen as a very good employer, creating challenges for other employers to compete.

An advantage of labor diversity is the increased availability of services, stores and amenities. One stakeholder compares Seyðisfjörður to the past, when it was still a fishing community:

> I think most people realize that they have tourism to thank for everything. Pretty much that happens nowadays in the town. Yeah. The reason like we have in the summer, we have one, two, three, four, four to five restaurants and like, back like, in the days when it was still just a fishing village, there wasn't a restaurant. Yeah. Not even a single one, there might be one bar here, and that was it. Now, last summer, I think we had seven places that were, had an alcohol license. (Seyðisfjörður, participant 3)

This 'old situation' of Seyðisfjörður closely resembles the current situation of Vopnafjörður, which has recently opened a restaurant. Before that, the community only had a small fuel station offering pizza, while further having limited services. Meanwhile, Fáskrúðsfjörður has two restaurants at this point. The number of services in the community is somewhat limited, but stakeholders explain that inhabitants enjoy the benefits of services in nearby neighboring communities on the other side of the tunnel. Within the communities stakeholders unanimously refer to the importance of diversity of labor for the viability of services. For instance, the restaurant in Fáskrúðsfjörður benefits from tourism during summer, but can be kept open during winter due to the employment in and collaboration with the fishing industry.

Regarding the quality of food in stores and education, residents in communities with more diverse labor opportunities are generally also more satisfied and have more options. Seyðisfjörður has a (rather expensive) supermarket and a local food coop providing fresh seasonal fruit and groceries, and is relatively close to the cheaper (and larger) Nettó and Bónus in Egilsstaðir. Fáskrúðsfjörður has the same supermarket chain as Seyðisfjörður and is closely located to the larger and cheaper Krónan in Reyðarfjörður, while Vopnafjörður only has a small, expensive local store. In terms of education, both Seyðisfjörður and Fáskrúðsfjörður have nearby high schools, allowing daily commuting of children. Plans also exist to offer higher education at the university level in the area. In Vopnafjörður, children have to move away in order to find a suitable high school, similar to options regarding universities.

Housing, however, can harm the community quality of life in the community, as stakeholders indicate that with more diverse opportunities and more services, communities become more popular. This, in turn, raises housing prices. In case this demand is not properly addressed, a housing shortage with high prices can cause a jammed housing market (see 4.3.4 on infrastructure). Additionally, the question whether inhabitants genuinely benefit from the richness that the community has to offer, will be discussed more thoroughly in paragraph 4.3.5 on individualism and togetherness.

In conclusion, statements of stakeholders consistently highlight a strong connection between diversity of labor and (satisfaction with) the quality and quantity of services, amenities and stores in the community. When diversity of labor is mainly bottom-up, most of the amenities are located within the community, while good infrastructure enables individuals to access nearby additional services. Stakeholders' statements are in line with the spirals of decline and increase: more labor opportunities, population growth and the expansion of services are interconnected elements that increase the attractiveness of a community.

4.2.3 Individual quality of life
Rather than satisfaction with services and amenities in a community, individual quality of life regards the life satisfaction and personal well-being of residents. While the effects on individual quality of life are not unanimously positive, an increase in diversity of labor is generally accompanied with an improvement of life satisfaction. This is most pronounced in Raufarhöfn, which has been experiencing a spiral of decline for several decades, and stakeholders depict the well-being of individuals as being relatively poor. The struggle against further loss of job diversity (and services) takes its toll on the community and its people, as one stakeholder states:

> Yeah. So in the last couple of fifteen, ten, fifteen, maybe twenty years, that's kind of Raufarhöfn's story. We're always fighting back. Fighting to.... Yeah, yeah. So people are tired. It's… it's a fact. People

are tired. They have been fighting for a long time and it's always something, just yeah... You know it's just, yeah it's, it's hard. (Raufarhöfn, participant 1)

The community is fighting, for instance, to keep the post office, the bank and the school. On the other hand, individuals also have financial worries, as mentioned by one stakeholder. Often, multiple jobs are needed to make ends meet, or one needs to put in long hours in the fishing industry. In other communities, stakeholders mention poor well-being less often, and the sentiment regarding life satisfaction of inhabitants is generally more positive. In Fáskrúðsfjörður, long working hours are mentioned as well, but people are in general well-off, as one stakeholder states:

> *Most people are just like… You can almost just drive around the village and see the choices of cars and how their houses look. And that kind of answers the question. Everybody has nice car and doing what they love. They have like, a kayak and bicycle. So it kind of looks like they're just. But they do work a lot.* (Fáskrúðsfjörður, participant 4)

Generally, the availability of labor is beneficial for the well-being of inhabitants in the community. One stakeholder describes the importance of having work on mental health, but also how work leads to more populated communities, which again increases the well-being of the community:

> *Yeah, but we're doing really good. I feel like here, everybody has a job that wants a job. Yeah. And I feel like people are just happy and, and also, like, before I came here, there were so few children. Like in the kindergarten. They were like only 26 or something. And now they're, I think 45 now. But because so many people with kids moved here, so young people came, like we came with two kids and a lot of other people. And that's also like different. It's depressing in a small place when there's no kid coming in school.* (Vopnafjörður, participant 1)

This sentiment is shared in other communities as well, as one stakeholder from Fáskrúðsfjörður (participant 5) shares the following: "*But… most of the people is very happy because it's a strong community and the good work, we have everything here so there's no reason to be not happy*". Stakeholders in Seyðisfjörður mention the additional benefits of the cultural richness (due to the range of jobs and entrepreneurship) of the community on the well-being of the individuals. There is a lot to do and the community is lively: stakeholders agree that most of the inhabitants are generally happy and that Seyðisfjörður is a very good place to live.

However, even though the availability of work seems to be crucial for the well-being of residents, diversity does not unanimously equal more attractive jobs and higher levels of well-being, especially as many of the jobs in the communities involve manual labor with long working hours and/or night shifts, even in communities with a high diversity of labor. Seyðisfjörður (having a lot of jobs in tourism) and Fáskrúðsfjörður (with many jobs in aluminium), do have more diversity than just fishing, but the appeal of those jobs varies. One stakeholder even remarks they know someone who left a job in tourism to work in fishing – a sector that is in particular known for having many physical and time-demanding jobs. New jobs are thus not always good jobs: those working in low-paid, temporary jobs of tourism might facilitate the cultural richness of the community, but might not be able to benefit from it. Diversity may also lead to ongoing (political) discussions between inhabitants, as mentioned by stakeholders. One stakeholder in particular questions whether the prosperity of the community truly benefits all inhabitants, or just the ones that are able to afford it:

> *When I first moved here. The gas station had like a little diner. And it also had a section for with car supplies, things that you could pick up if you were traveling, little packets of toothpaste, shampoo, anything like that. And the owners, they catered to the locals. So the workers that worked in construction, fish factory, wherever in town would buy their meal tickets for the month or whatever and go for lunch. And every Friday was like the Chicken Friday. And, you know, people would go there for lunch. It was affordable and it was hearty, like just home cooked meals. They moved, then we have the gas station now, which is great. It's organic, it's whole. But the majority of the people here can't afford that.* (Seyðisfjörður, participant 2)

A large diversity of labor (especially with regards to temporary and low-skilled jobs), combined with focus on individual agency, can also create large differences in well-being among residents: some may be able to seize

opportunities, while others are unable to, resulting in a situation of 'winners and losers'. Djúpivogur is, in that sense, one step further compared to Seyðisfjörður. The Cittaslow-approach (an approach prioritizing quality of life through slow and sustainable lifestyles) of the community places the inhabitants first, even if it inhibits the further diversification of the local economy and the attraction of more visitors. The stakeholder states this as follows:

> *The biggest thing with Cittaslow is that, in order to, to maintain the Cittaslow-atmosphere is that we put the, we put the people living here first. We welcome guests, but they come second. Yeah. So it's always… Because the idea is that where the inhabitants are happy, people want to visit. So what we do is, the general idea is to always first think of... That's why we have been very opposed to making a lot of parking spaces in the center of the village.* (Djúpivogur, participant 1)

In communities with less diversity, individuals may be less well-off, but individual differences are less pronounced due to shared dependence on the limited opportunities – for instance the fishing industry, as stakeholders from Vopnafjörður indicate. Paradoxically, as the situation of Djúpivogur shows, limiting the seizing of opportunities can help prioritize the well-being of all inhabitants, instead of a specific group. Thus, even though having diverse labor opportunities is generally good for the well-being of inhabitants (which is not in line with a Catch-22 situation), it is important to avoid a situation where only a limited number of inhabitants benefit from the opportunities in the community.

4.2.4 Social capital
The impact diversity of labor on social capital in communities is ambiguous. Given the diversity of labor opportunities, social capital plays a different role in communities. In Vopnafjörður (with fewer opportunities), participation and volunteering are more often due to essential and necessary community tasks, such as volunteering for the school or partaking in events to raise funds in order to ensure the continuity of amenities like the rescue team (Björgunarsveitin) or more general, to foster the togetherness of the community. One stakeholder from Vopnafjörður expresses this as follows:

> *If you live in a small town like Vopnafjörður, you have to give something, you have to find something, because if people don't give that, it all goes down. People only want… Is so important, people, each one are very important in a small town. (…). I always think that I have to do something, I'm in the church, singing in the choir. My husband, he is in the band, is playing music. Yeah. Or sometimes they are playing music for the old people in the nursing home or something like that. We have to, in the small town like this.* (Vopnafjörður, participant 4)

The description of social capital in a community with a low diversity of labor resembles mechanical solidarity, which is informal and based on traditions, kinship and informal ties. Stakeholders in Vopnafjörður agree that, given their size, there is a lot to do regarding sports and activities (for example Zumba, the choir, football, volleyball or badminton). Local matches of the football club Ungmennafélagið Einherji are a highlight for the community, often drawing over a hundred spectators. Similarly, the community works together to ensure there is enough to do for children and the elderly. In Raufarhöfn, stakeholders hold similar opinions: volunteering is needed in order to maintain the most basic needs and services of the inhabitants, and without those efforts the community would become even more vulnerable. As one stakeholder states:

> *I think one of the reasons we are, you know, helping more, and, and volunteering more, it's one part of this is just some stuff that has to be done. (…). It's yeah, we're trying to get more people to be active, but… Because every, every person counts the most (…).* (Raufarhöfn, participant 1)

In communities with high diversity of labor, such as Seyðisfjörður, this mechanical solidarity is still present, yet has less importance. Rather than having the well-being of the community as a common denominator, volunteering is more often considered as an 'extra' (such as the Lunga-festival), or is focused on a more complex web of interdependence ensuring that economic opportunities can be seized as good as possible more closely resembling organic solidarity: the activities, events and 'buzz' around tourism are described as the heartbeat of the community. Both in Djúpivogur and Seyðisfjörður a lot of value is put on 'making the town

look good' to create a good image of the town, both for guests and for the inhabitants. One stakeholder describes this interdependence as follows:

> *You know, there is a sense of, a real sense of community when it comes to that. I mean, I send people to the different places, they come to me and say, 'where can I get this? Where can I, where can I find a nice woolly, you know, jumper, hand-knitted jumper?' I'm like, 'oh, just go down the Rainbow Road'. 'Where's, where's this?' And if I don't have the answers, I send them to the visitor center … and he sends them to me, you know, when, you know, when they need stuff. And there is a sense that everybody knows, okay, we're busy now. It's a busy time. Let's work together. Yeah. I don't think there's anybody that really pushes and, you know, and everybody kind of understands that the better, happier people are, the more they'll come back, even though you might not in some ways want them to come back, you know, because they do… It's, it's a damned if you do, damned if you don't. Yeah. People know that tourism is the lifeblood of this town. Yeah.* (Seyðisfjörður, participant 1)

Furthermore, stakeholders in all communities identify a trade-off between economic inclusion and social capital. Individuals with higher incomes often do so by working long hours, inhibiting the opportunity to participate in the community. This is particularly the case in manual jobs in the fishing industry, but long working hours are also mentioned in both the aluminium and the tourism industry - involving similar manual and low-skilled jobs that can lead to a disturbed work-life balance. Especially when jobs with better working conditions are created, this may lead to a higher participation of residents to the community. This will be discussed more in-depth in paragraph 4.3.2 on 'working conditions'.

In summary, in more labor diverse communities additional social capital is often based on 'extra's' rather than necessities, and already existing positive spirals of increase are further strengthened by mostly income-gathering activities and more formal ties, resembling *organic solidarity*. Conversely, in communities with fewer labor opportunities social capital is more based on togetherness, informal ties and maintaining necessities needed to avoid a spiral of decline. This is more equal to *mechanical solidarity.* Finally, social capital can be hampered by jobs that require long working hours, but in general, communities with a higher diversity of labor do generally not have a higher or lower social capital, unlike expected in a Catch-22 situation.

4.2.5 Economic inclusion

Economic inclusion may be the index closest related to diversity of labor, yet the relationship between diversity of labor and economic inclusion is complex and spurious. Financial worries and joblessness are barely mentioned by stakeholders, and many communities even have a shortage of workforce. When present, financial worries are especially found in 'extreme cases': stakeholders only mention residents having multiple jobs to make ends meet in Raufarhöfn, with a scarcity of employment opportunities, and Seyðisfjörður, with a lot of bottom-up entrepreneurship and many (seasonals) jobs in tourism.

With the fishing industry still as a significant source of employment and economic activity in many communities, limited labor diversity does not automatically lead to low economic inclusion. Stakeholders in Fáskrúðsfjörður, Vopnafjörður and Raufarhöfn highlight that working in fisheries allows people to gather a good income just through working long hours. While the hourly pay differs, shifts of over twelve hours add up to a good monthly salary. One stakeholder even describes not leaving the fish factory in Fáskrúðsfjörður for 32 hours, and recalls a historical situation of an acquaintance not leaving the factory for about 72 hours. This high monthly payout is also highlighted in Vopnafjörður, where the influence of Brim again becomes apparent:

> *Yeah, I think people that are working shifts get a lot of money, but they also have to work long hours and work hard to get it. So yeah, I think we are paying very good salary in Vopnafjörður and Brim. And much more than, and also, I hear it a lot that we take all the stuff, nobody wants to work somewhere else because we are, of course, paying the best salary and we take all the employees. But that's a situation we can't handle.* (Vopnafjörður, participant 5)

This statement shows the difficulties of competing against the fishing industry. Because economic inclusion looks at the employment activity and the payout rather than the *diversity* of the opportunities, additional opportunities apart from fisheries do not enhance the economic inclusion when the pay-out is lower and when

employers are already competing for workforce. While fishing may not be desirable for many inhabitants, it does generate a good income. Stakeholders emphasize that in order to enhance economic inclusion and to get people to move to the community, more skilled jobs with good pay are needed, but also acknowledge that until now further diversification often involved more lower-paid and seasonal jobs, as one stakeholder from Seyðisfjörður states regarding tourism:

> *And I don't think that… Even if it's growing and it's bringing jobs, they're low paying jobs. And most of the time those jobs disappear, disappear because it's seasonal. You know, it's just for the summer.* (Seyðisfjörður, participant 2)

The creation of jobs that do require education is, however, not non-existent. Over time, the number of jobs that require education has been increasingly slowly – even in the fishing industry, as one stakeholder from Fáskrúðsfjörður explains:

> *Yeah, here, I think it's more about, maybe it's getting a little bit better after we had the aluminum factory. Yeah, we maybe have more jobs for educated people. But I think it's not that much change here. Okay. You have the fish factory. It's the biggest. (…). The fish factory is maybe changing a little bit because it's, it's so much technique coming in. Yeah. People working, moving things, they don't have to move it anymore because the robots are doing it. Yeah. Then you have to maybe educated people to take care of the computers and everything. So. So I think. It's changing a little bit.* (Fáskrúðsfjörður, participant 1).

In conclusion, the communities have plenty of jobs, and none of the stakeholders mention joblessness as an issue. Paradoxically, increasing the amount of labor opportunities does not automatically translate into more economic inclusion: added jobs are mostly manual, low-skilled and temporary, and have difficulties competing with jobs in fisheries that generate a good income exactly due to these long work hours. Since fisheries is still prevalent in all communities, they remain an important source of income for inhabitants of the communities. Only below a certain threshold of diversity, as seen in Raufarhöfn, economic inclusion is lower. Above this threshold, however, added diversity in the communities does often not equal less joblessness or higher salaries.

4.2.6 Social inclusion

Finally, social inclusion ('providing support to individuals') shares many similarities with social capital ('volunteering for the community'), making it hard to differentiate between these factors in tight-knit communities. Social inclusion is, however, the only index of social cohesion that tends to decrease as communities get more diverse. Similar to social capital and stakeholders mentioning the high levels of volunteering, stakeholders from all communities depict the communities as places where people generally look after each other well (stating that this is 'normal'), and provide help where needed. However, where more diverse labor opportunities seem to be unrelated to volunteering of inhabitants, providing help is deemed more important in communities with less diverse options. Communities with more diverse options and more organic solidarity may have volunteering as an 'extra', but the more formal ties may replace the informal bonds and kinship ties: 'us versus them' is mentioned vastly more often in Seyðisfjörður compared to other communities.

Because communities with lower diversity of labor are threatened by a negative reinforcement cycle, supporting individuals within the community is crucial. Especially stakeholders from Raufarhöfn emphasize that every individual is important for the community, as the well-being and contribution of every resident counts in order to prevent entering a spiral of decline. Given the lack of amenities and services in communities with less diverse opportunities, stakeholders state that in order to meet (basic) needs, inhabitants are dependent on each other. As one stakeholder states:

> *If I need something, especially during the winter, people will try to help me as soon as they can. You know what I mean? Even, for instance, if you need to, I had a problem with my house, I just call someone and this guy just appeared and did everything he can, you know what I mean? And sometimes they don't even want me to pay, you know what I mean? So because they know that it's*

important to keep people here and keep things that are important for us. For instance, if you live in the south or in other country, for instance, there are a lot of things that you don't really... you don't even think about it. But here you have to think about it. (Raufarhöfn, participant 2)

The added importance of social inclusion when communities face difficulties becomes apparent by one specific statement by a stakeholder from Raufarhöfn, describing the changes after the fishing industry left the community:

I think it's changed after we got this few and, and everyone counts a lot. It's just, every people counts, every, every... I don't know how to explain it. It's just... Example, when I moved back home I got hugs all over the place. I went to the store and people were so happy to get me back. Yeah. And, and every matter, every people matter so much because when we are so few, there is, there's, I don't know. (Raufarhöfn, participant 1)

On the contrary, in Djúpivogur, a sense of self-sufficiency and independence are required for success and acceptance in the community. Inhabitants that lack those qualities, get little sympathy, and getting help is more conditional and not as self-evident as it is in Raufarhöfn, as the stakeholder explains:

People here, they tend to be self-sufficient. Yeah. And there is very little tolerance towards those who are not. There is very little tolerance. There is, I have found, if you're, if you're, if you don't feel like working too much or working very hard, you don't get much sympathy. It's your own fault, if your situation is, is, is your own fault, you get very little understanding. But if you truly need help, you will get it. (Djúpivogur, participant 1)

In similar light, stakeholders in Seyðisfjörður frequently mention tension among inhabitants, including conflicts about the upcoming tunnel, (the future of) fishing, the influence of tourism or other political issues within the community. A diverse local economy also brings a diversity of (potentially conflicting) individual interests. One stakeholder even wishes Seyðisfjörður, their community, would be more like small communities such as Borgarfjörður Eystri, where consensus and collaboration are more prevalent among inhabitants. The stakeholder describes this as follows:

I'm just…. Really would like to have it like it is in small towns where, you know, they just decide to work together. Yeah. Like in Borgarfjördur they have been doing that for ages. That, it's just, they never end a meeting without having agreement about the matter. Yeah, you can agree on not to be, you know, you need to agree on something. (Seyðisfjörður, participant 4)

A key issue regarding social inclusion is the integration of foreign workers. Foreign workers are, according to nearly all stakeholders, not as involved in the social system of the community compared to Icelandic inhabitants. This will be discussed more in-depth in paragraph 4.3.2 on foreign workers.

In conclusion, social inclusion stands out compared to other indices of social cohesion and is in line with the Catch-22 situation, as more diversity in labor opportunities often equals more diverse interests of inhabitants, which in turn may lead to tension within the communities. In communities that have less diverse opportunities, the provision of help to all inhabitants is important to meet the resident's needs, and to steer away from a spiral of decline and losing even more jobs, services and amenities.

4.3 Embedded characteristics

It is important to consider the role of embedded characteristics of the communities that shape the relationship described in 4.2 to learn more about the 'how' and 'why'. In this paragraph, six such characteristics are presented. Among the six included characteristics, three regard work (*seasonality*, *working conditions* and *foreign workers*), and three are unrelated to work (*infrastructure*, *individualism and togetherness* and finally *leadership and agency*).

4.3.1. Seasonality

Seasonality was often mentioned by stakeholders as having a large influence regarding both work and social cohesion in the communities. Not only are a large share of the jobs seasonal in nature, but the seasonality of

jobs also seeps into the communities, creating vibrant communities during summer while the amount of employment, inhabitants, activities, events and engagement declines during winter.

Peak seasons are, however, not new. While currently especially tourism is seasonal, earlier the fishing industry was the most seasonal industry. Many stakeholders mention their community having peak seasons back in their fishing eras, well before fisheries became more year-round and focused on several species of fish. Now, ironically, fishing is the industry that provides year-round employment; even though additional workers are still needed during peak seasons, the influx of temporary workers is not comparable to previous decades.

Fáskrúðsfjörður has more access to year-round employment with access to jobs in aluminium and jobs in other communities. Alcoa lacks the seasonal nature of both fisheries and tourism and tunnels reduce dependence on weather conditions - seasonality is therefore one of the main differences between Fáskrúðsfjörður and Seyðisfjörður. Both have a relatively diverse local economy and offer employment in fisheries, but Seyðisfjörður offers more seasonal jobs that involve the peak of visitors in summer. One stakeholder even describes Seyðisfjörður as a 'ghost town' in winter. Another stakeholder describes this as follows:

> *Yes, it has changed it a lot, because in the winter it's mostly closed down. Yeah. During the summer they open up, like the five, five little shops open up just for the summer to sell some touristic things and, you know, Icelandic stuff and well, there are seven shops open in the summer and also like seven, eight restaurants. We have only one during winter … so in the summer it's just like bloom.*
> (Seyðisfjörður, participant 4)

The impact of seasonality on the cohesiveness of the communities is large, particularly in communities that have peak periods. During summer, many temporary workers enter the community. However, these employees are mostly focused on gaining as much income as possible during their stay, and their embeddedness in the community is limited (see paragraph 4.3.3 on foreign workers). Economic inclusion may increase, but they are unlikely to volunteer (social capital) or become active in providing help to others (social inclusion). Still, high seasons can improve the social cohesiveness by enhancing community quality of life and social capital through the generation of services, events, stores and restaurants, but during low seasons this richness of amenities and vibrant atmosphere disappears, just the seasonal workers. As a result, the remaining inhabitants suddenly live in a community that offers little to do, decreasing both the demographic stability, the community- and individual quality of life. Stakeholders in Seyðisfjörður even state that many people make sure they gather enough income during the summer to 'survive' the winter months, and that several inhabitants even move abroad in winter. In communities with less pronounced seasonality, such as Vopnafjörður and Fáskrúðsfjörður, social cohesion is more stable compared to Seyðisfjörður: lacking the peaks, but avoiding the troughs.

In short, having a diverse local economy is generally beneficial for the social cohesion of a community (see 4.2), but if a community is largely dependent on seasonal industries like tourism, inhabitants can experience vibrant 'peak seasons' and glooming 'ghost seasons' creating highs and lows in social cohesion.

4.3.2. Working conditions
Closely related to seasonality are the working conditions of the jobs. Stakeholders from all communities mention how a lot of jobs (in the three main industries) have tough working conditions with long hours, which inhibits opportunities for participating in the community. One stakeholder from Vopnafjörður describes how people that work in the fishing industry feel when they are not working:

> *Tired. Yeah, yeah, yeah. I think maybe also that… I mean, people are working 12-hour shifts, sometimes in the night and then all they do is work, when there's like, when there's fish. So then they are not, they're not participating and everything.* (Vopnafjörður, participant 1)

Stakeholders describe similar working conditions in the tourism industry, while the aluminium industry has shift work that requires employees to work at irregular times. Working conditions seem to contain a certain trade-off; while the community gains jobs and (temporary) residents, these jobs cause challenges for the new employees to participate in the community. Workers need to have time and energy in order to join events, become a member of associations, spend money in one of the stores or build a network within the community.

Finally, stakeholders indicate that regular (night) shifts or twelve hours of manual work disturb the work-life balance, potentially harming the well-being of individuals as they are unable to relax or spend time with their family. As a result, both the community and the individual may suffer from the tough working conditions of the main sources of employment.

Even though one might expect that individuals have more choice in high-quality employment in communities with more diverse opportunities, all three main industries in the communities generally offer low-educated jobs with limited working conditions. One stakeholder states that for every job that requires higher education, the fishing industry has around four low-skilled, manual jobs. As many of the 'new' jobs in tourism and aluminium have similar working conditions compared to fishing, increasing diversity in labor opportunities is not guaranteed to improve the working conditions of employees in the community, but will lead to 'more of the same'.

Improving the working conditions is, however, difficult. Typically, jobs with unfavorable working conditions would cease to exist if no individuals were interested in doing this work. However, foreign workers play an important role in preventing change in working conditions. This is discussed in the next paragraph.

4.3.3. Foreign workers

Related to seasonality and working conditions is the topic of foreign workers. The influence of foreign workers on the communities is underscored by the fact that stakeholders from all communities mention their large impact on the (social life in the) communities. When Icelandic people are unwilling to fulfill certain positions (because it is below their education level or because it does not match their preferences) employers can turn to individuals from abroad. One stakeholder from Fáskrúðsfjörður even describes a certain stigma attached to jobs in fisheries, stating that during their youth, work in the fishing industry was seen as unappealing and that inhabitants of the communities were urged to pursue higher education (even though this has recently become less denounced, according to the same stakeholder):

> There was a teacher that told us, if you don't try hard and make these exams, you will be working in the fish factory for the rest of your life. This was, this was literally said to us. And at the point of the teacher saying this, most of us, the kids had relatives, parents or grandparents working in the fish factory. (Fáskrúðsfjörður, participant 4).

The lack of Icelandic workers in low-skilled jobs leads to a clear division of labor in all communities; manual jobs that require little formal education are undertaken by foreign workers, while the jobs that do not require manual work are filled in by Icelandic people. As the same stakeholder states:

> It's basically… All the higher jobs have Icelandic people in them. Or, the good jobs. Yeah, everything else that's kind of more 'labor': that's just being filled by foreign people. (Fáskrúðsfjörður, participant 4)

The reason that foreign workers tolerate the working conditions is the monthly income: the pay is more than they could earn in their original country of residence, and these workers only fulfill the positions seasonally or for a limited number of months or years in order to send money back to their home country or to safe up money for an eventual return. During this time, they are mainly focused on gathering income, and apart from working their participation in the community is limited. Yet, stakeholders indicate that their participation in the community usually increases as they stay longer in the community and when they build relationships or get children. One stakeholder from Raufarhöfn emphasizing the divide this causes:

> They, instead of, I got one term, they do two terms, you know, like twenty hours or something like that. Or eighteen hours. So they almost do not go to meet local people, you know what I mean? Probably on, on the bar they're going to meet few, to drink a beer or something like that. But they are not considered part of the community by the people that live here. If you ask me if I know someone from the fisheries, I just know two or three person that work here all year round. But then the rest, that, these people that come in the summer just for fishing, then just go away. They almost never go outside of the factory, only to go sleeping. (Raufarhöfn, participant 2)

The influence of foreign workers on the relationship between diversity of labor and social cohesion is important. A lack of labor diversity in a community hampers social cohesion (see 4.2), but when supply and demand of labor are not in balance due to employers enabling foreign people to work in jobs that Icelandic people are unwilling to fulfill, the social cohesion can be hampered as well. With both foreign money-oriented workers that lack participation in the community and employers that have little need to diversify or improve the labor conditions for the inhabitants, the situation in the communities is unlikely to improve, and a significant part of the population of the community may add little to the social cohesiveness of the communities.

4.3.4. Infrastructure

Apart from characteristics regarding work, the infrastructure of communities was also repeatedly mentioned as an important factor, especially with regards to three factors: roads and tunnels, internet for remote work and housing.

Better roads have mostly been a blessing for communities, as it allows commuting to work and increases access to services. Regarding the influence of diversity of labor on social cohesion, better interconnectedness creates one large economic area instead of multiple communities acting as 'islands', enabling new jobs to come into fruition. These jobs, that would not be viable in one community, are in many cases skilled jobs that require education. Except for increasing economic inclusion and demographic stability as communities have more attractive jobs to fulfill, they also increase community quality of life due to the increase of services and amenities.

Especially stakeholders from Fáskrúðsfjörður mention the benefits of better infrastructure, as it is already connected to more populated communities by a tunnel. This reduces the travel time to Reyðarfjörður from forty-five to twenty minutes, while the number of road closures is reduced as well. Previously, the road was frequently closed or dangerous during winter, but the tunnel allows people to travel to other communities all year long regardless of road conditions. Seyðisfjörður will receive a tunnel to Egilsstaðir around 2030, and stakeholders have similar expectations compared to Fáskrúðsfjörður. A stakeholder from Vopnafjörður also wishes for similar tunnel to Egilsstaðir. However, no such plans exist.

Improving roads and building tunnels also comes with a cost beyond the high financial cost, as becomes apparent in Fáskrúðsfjörður: services and amenities (and, with that, jobs) within the community are lost as improved connectedness makes jobs redundant. Not every community needs to have a bank, a post office and a doctor – exactly the services that a less diverse community like Raufarhöfn is eager to keep. While improving social cohesion through improving the options in 'close proximity', the options within 'closest proximity' are diminished, as stakeholders mention the loss of several services after the tunnel in Fáskrúðsfjörður was finished. As tunnels can make communities part of a larger whole, anonymity in the community may also increase, weakening social inclusion as for instance residence only sleep in a community, but spent their time working elsewhere.

Good internet connection for remote work is also important for the communities. With opportunities for remote work, individuals and families can move to a community while working for an employer elsewhere. According to stakeholders this brings high-educated workers to the communities and increases opportunities for inhabitants. Strikingly, until now only communities with an already high amount of diversity of labor have been using this strategy to create more diverse work opportunities, for instance in renting out office spaces. This is again in line with the negative- and positive reinforcement cycles: communities that are doing well will seize further opportunities, and expanding the options for remote work seems an effective and viable way of diversifying jobs that require higher education.

Finally, the housing situation of the communities is an important reason that an increase of opportunities does not always enhance social cohesion. Stakeholders mention housing shortages regardless of the employment opportunities. Meanwhile, communities paradoxically have fewer inhabitants compared to decades ago. One stakeholder explains how houses that once contained an entire family are now often inhabited by just an elderly couple. Lacking smaller housing options in their community, the choice is either to stay in their oversized house or to move to another place with suitable housing. Because many elderly inhabitants prioritize

their connection to the community, the housing market in the communities becomes jammed. While this affects the well-being of inhabitants due to living in unsuitable houses, it also leads to an increase of the average age and the shortage of employees, as elderly inhabitants take space that could be used by young, working families.

In communities with limited labor diversity, the influence of large employers is of such extent that they can bypass the jammed labor market by buying or constructing houses themselves to house employees, which is mentioned in both the fishing and tourism industries, across the three main communities. As the stakeholder from Brim explains:

> So we have also been considering, I don't think I'm telling any secrets, because we have, Brim, we have also been considering of building our own houses. So yeah, but time will tell. (Vopnafjörður, participant 5)

Instead of solving the jammed labor market, this only enhances the influence of the largest employers. This may, in turn, further decrease the diversity of labor opportunities in communities that already have one dominant labor sector, hampering social cohesion.

4.3.5. Individualism and togetherness

The amount of individualism and togetherness in a community can be depicted by having a 'we versus the problem'-approach or a 'you versus me'-approach. Theory suggested that having one large labor sector (historically fishing) creates a common denominator that enhances feelings of togetherness. However, stakeholders do not necessarily describe the culture of the communities as being dependent on fishing, although togetherness and unity were more often mentioned in less diverse communities. Sharing a common denominator helps to avoid having too many different interests (like in Seyðisfjörður), and less diverse communities are also more likely to be in a cycle of decline and thus require unity to meet needs and avoid further dwindling. Tackling problems together and being socially inclusive (rather than having conflict that may hamper social cohesion) are valued within less diverse communities. As one of the stakeholders from Raufarhöfn states:

> And you can see that it's a small place, so everyone just knows each other for years and years. And even me, I'm here for two years, and now I, well, I can call friends because I know a lot of these people because I know if I'm going to need them, I will need them for sure. And the same. So it's important people here to count on each other because in the winter it's really tough to live here and sometimes shit happens and people have to leave each other and help each other. (Raufarhöfn, participant 2)

In more labor diverse communities, stakeholders mention how diversity of labor can create different interests between people, losing the common denominator and creating a 'you versus me'. Especially in Seyðisfjörður tension between inhabitants is mentioned, and when accompanied by an entrepreneurial spirit this can further create a division between 'winners' and 'losers'. Winners have good jobs and high incomes, and can afford and enjoy everything that the community offers, while 'losers' miss out on both the good jobs and the richness of services. In Seyðisfjörður, one stakeholder states how businesses started focusing on tourists rather than on the inhabitants of the community, leading to inflated prices:

> These businesses, you have to also take care of your people. Hotel Aldan, great restaurant. But the prices, you know, hahaha. It's not, it used to be where teenagers on Friday, they would go to the gas station, have burgers and fries, buy some candy there. And they had a little place to hang out. Teenagers could afford that. Yeah, teenagers can't afford Hotel Aldan. No. Teenagers used to afford the pizzas, but the pizza parlor is gone now. Yeah. So I'm not sure where some of these business owners, where their track mind is going. Yeah. Are we going to cater tourists? Are we going to cater locals? Are we going to cater both? (Seyðisfjörður, participant 2)

Even though Fáskrúðsfjörður has quite diverse labor opportunities, the community shows less individuality compared to Seyðisfjörður. Rather than catering to tourists, a stakeholder explains that residents are the main priority:

The backbone of this company is the customers. Yeah, it's the village. I always say I'm not marketing for tourists. I'm marketing for the village. I want them coming back, back again. Yeah. I'm not trying to get most of one guy that never comes back. No. If I would do that, I would lose my regulars. They will see the price going up. (Fáskrúðsfjörður, participant 4)

In Djúpivogur, the Cittaslow-approach prioritizes the well-being of inhabitants to tourists or visitors, and therefore diminishes the differences between winners and losers: the collective well-being is more important than the seizing of economic opportunities that creates prominent negative spillover effects such as overcrowding or inflated prices.

In short, different experiences of stakeholders suggest a trade-off. Less diverse communities have more common denominators, increasing togetherness in terms of inclusion and volunteering, while more diverse communities may have less common denominators, but individuals enjoy more options in terms of employment, services and amenities. Paying attention to minimizing these differences can help, as will be explained in the following paragraph.

4.3.6 Leadership and agency

Finally, the interviews show that leadership and agency, regarding to the 'we need' versus the 'we do'-question, are important for the communities. While communities can only change their situation to a limited extent, they can still create and seize opportunities and change direction to improve resilience or avert a spiral of decline. The ability the inhabitants (perceive) to have in order to do so, is the agency of the community. A community with both a low diversity of labor and low agency is Raufarhöfn; clear 'we need' perspectives can be identified, as one stakeholder remarks what the community needs in order to grow:

So what I think it will be important is that the municipality or the government try to bring young people here, teachers, researchers, whatever, you know what I mean? Artists, because now there is some artists around also. (Raufarhöfn, participant 2)

In Vopnafjörður, stakeholders state the shift that the community has recently made from 'we need' to 'we do'. Earlier, inhabitants had more pessimistic views, but over time agency has increased and more often inhabitants take the initiative to improve the community themselves, for instance by creating a CrossFit. Regarding tourism, however, stakeholders still debate who should be in charge of seizing the opportunities, and stakeholders mention the role that the municipality plays in enabling inhabitants to take action.

Fáskrúðsfjörður has limited agency given the diversity of labor opportunities. Although the main employer, Loðnuvinnslan, supports both the social in terms activities, events, associations and the economy in terms of start-ups and new ideas, diversity of labor was historically mainly *deus ex machina* concerning the tunnel and the aluminium factory. The lack of social life in the community especially becomes apparent with regards to the younger inhabitants. A committee used to exist that organized events, while currently there is little to do in the community:

That's actually kind of not that great because there's not much to do. We don't have a bar. We don't have any activities at all. We don't even have a place to... we have a community hall. But they raised the price on it to a point where people can't even like, they kind of don't want to rent it anymore. And then there's no place that really hosts events. (Fáskrúðsfjörður, participant 4)

Seyðisfjörður and Djúpivogur, finally, have both a high diversity of labor opportunities and a high agency. In these communities, the role of leadership becomes apparent. Leadership can not only stimulate agency of the community and what is paid attention to, but leadership also involves creating inclusion and preventing differences in agency causing a division in the community. This is the difference between Seyðisfjörður and Djúpivogur; Seyðisfjördur is objectively well-off regarding opportunities, but for some tourism has more negative spillover effects than benefits, while in Djúpivogur, the Cittaslow-approach ensures that tourism doesn't grow out of proportion, negative spillover effects are not surpassing the positive spillover effects and that inhabitants are always put first. Leadership can thus both increase agency while fostering inclusion by

paying attention to the loss of well-being of inhabitants due to negative spillover effects as well. The role of leadership becomes apparent when comparing Raufarhöfn and Djúpivogur. Both lost access to fishing, however, Djúpivogur has managed to enter a spiral of increase, while Raufarhöfn had more issues remaining resilient:

> *In 2014, we lost 90% of our fishing quota in one day. They went from here to another. And we sat down, deciding what to do. And this was a perfect opportunity for us to start crying on the radio and TV. How badly, blah, blah, blah. What we did is we went the opposite. We decided we're not going to whine or complain. We're never going to mention the company that sold away the quota. We never used the name and we never found, we never blamed anyone. We just put our attention to what we were going to do and what we could do. Yeah. And this creates an atmosphere. It's like. It's like the, it's like a, it's like an atmosphere inside of a company. I mean, you need to create it. It doesn't just happen. You need to set your priorities and so forth. And I think I think that is very important that those who are in charge of the different communities, they pay very close attention to what they are going to pay attention to.* (Djúpivogur, participant 1)

5. Conclusion

The findings section demonstrates the complex ways that the diversity of labor opportunities shapes social cohesion, as shown in the renewed conceptual model in figure 7. In paragraph 5.1, conclusions on the diversity of the communities are presented. To what extent a Catch-22 situation is present in the communities will be answered in paragraph 5.2, while 5.3 makes conclusions about the embedded characteristics while presenting an alternative model.
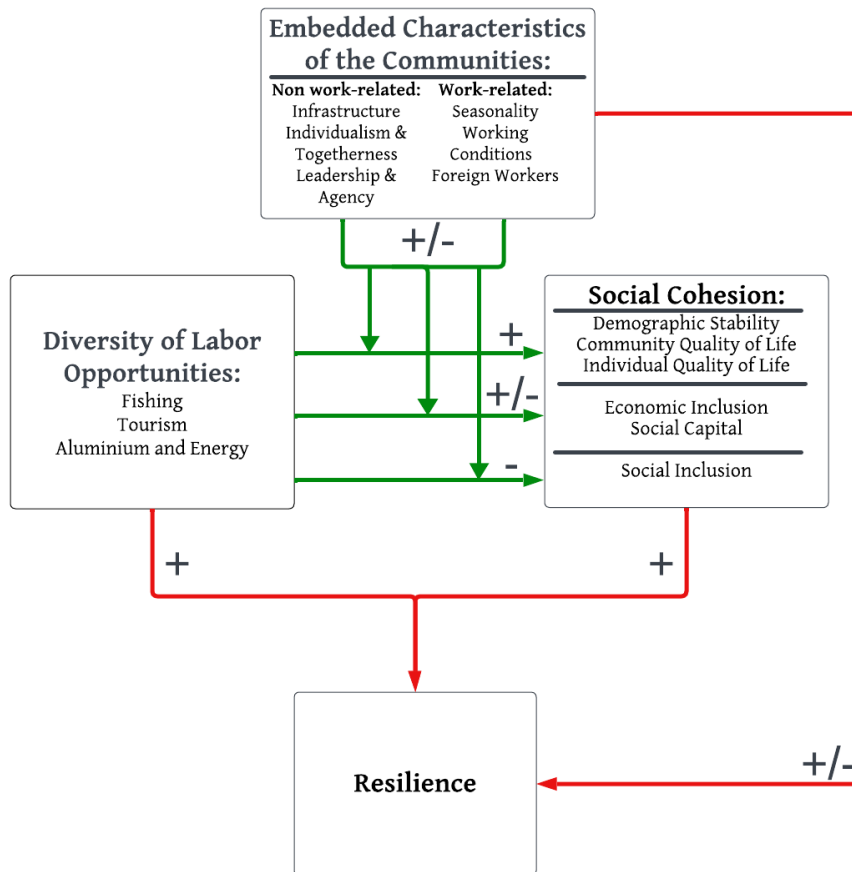
Figure 7: a renewed version of the conceptual model in figure 5, incorporating the findings of chapter 4.

5.1 Diverse communities?

Before looking at the Catch-22 scenario, the diversity of labor in the communities needs to be assessed (sub-question 1). The distinction based on Sæþórsdóttir & Hall (2019) was partly right. Indeed, Vopnafjörður turned out to be a more traditional fishing community with little investments in tourism and none in the energy industry. During recent years, however, the diversity of labor opportunities (apart from fisheries) has been increasing slightly, in line with what Mohammed (2017) describes as 'struggling between the old and the new world'. In Fáskrúðsfjörður and Seyðisfjörður, however, findings did not completely align with expectations. Seyðisfjörður was mainly dependent on both (seasonal) tourism and the fishing industry, but the community breathes tourism and has an entrepreneurial spirit, leading to an extensive creative industry with opportunities in arts, culture and even some in science.

Given the tension between tourism and fishing, the fishing industry seems to draw the short straw: recently, the groundfish production plant of the community has closed down, resulting in the loss of thirty jobs (Bates, 2023), while residents oppose the plans of Fiskeldi Austfjarða to build salmon farms in the fjords as it would spoil the experience of tourists (Ćirić, 2020). Over time, the community seems to lose the traditional fishing identity more and more.

In Fáskrúðsfjörður, fishing still plays a large role in the community, while the neighboring aluminium smelter also provides job opportunities. Tourism is, however, smaller than expected. Even though tourism has a central place in the community, as the culturally significant old hospital for French fishermen from the 19th century was turned into a hotel around a decade ago, the economic significance is limited: residents are unhappy with the disuse and the lack of maintenance of the hotel (Adam, 2024). Additionally important for this community is the tunnel that connects the community to nearby communities (allowing communing). Broader than the distinction of Sæþórsdóttir & Hall (2019), this tunnel allows inhabitants to commute to work.

Djúpivogur, in many ways similar to Seyðisfjörður, has a diverse local economy with bottom-up entrepreneurship and focus on self-sufficiency. However, the community is adamant on not letting tourism grow out of proportions by taking pre-emptive measures. Finally, Raufarhöfn is still more of a fishing community, like Vopnafjörður, albeit smaller. Even though the community relies on the fishing industry, it is aware of the opportunities in arts, science and tourism. Until now, however, the community has had difficulties with seizing those opportunities, and the diversity of labor opportunities remains limited.

5.2 Catch-22?

To answer both the main research question and sub-question 2, little evidence can be found for a Catch-22 scenario. More diverse labor opportunities are generally not accompanied with lower levels of social cohesion that may create difficulties in achieving long-term resilience in the communities. Statements of stakeholders are more in line with an opposite situation, where more diverse labor opportunities go together with improvements in social cohesion, even though the relationship is not univocal.

The dilemma that communities face of either diversifying the local economy or focusing on the viability of fisheries, stated by Symes and Phillipson (2009), can clearly be observed, as well as the difficulties communities encounter in actually trying to diversify the local economy and seize opportunities (Kokorsch & Benediktsson, 2018a; Kokorsch & Benediktsson, 2018b). Yet, communities with more diverse labor opportunities tend to be more socially cohesive (and attractive), especially regarding three indices: *demographic stability, community quality of life and individual quality of life* tend to be better in more diverse communities. Labor diversity helps to form a strong buffer against the loss of inhabitants and the decline of individual well-being due to lack of opportunities and attracts newcomers, while – especially when combined with an entrepreneurial spirit – maintains, expands and improves crucial services and amenities (Kokorsch & Benediktsson, 2018b; Symes & Phillipson, 2009).

Interestingly, findings were mixed for both *economic inclusion* and *social capital.* Regarding economic inclusion, fishing may not be particularly appealing, but the pay is good due to the long working hours. High quality jobs could boast economic inclusion (as well as more indices of social cohesion), but the majority of new jobs have been low skilled or temporary (Demurtas, 2018; Pétursson, 2018), unable to improve the community in the long term. Social capital moves from mechanical solidarity to organic solidarity as opportunities diversify; while Vopnafjörður 'thrives off of community engagement (Mohammed, 2017), increased interconnectedness, increased diversity of interests and an increase in foreign and/or seasonal workers have formed more advanced and complex communities.

Finally, the provision of help and support *(social inclusion)* seems (in line with the Catch-22 situation) to decline as a community gets more diverse opportunities, although stakeholders from all communities describe theirs as being tight-knit. However, many of the current inhabitants have not actively participated in fisheries in the years prior to the ITQ system, and are thus only acquainted with the less egalitarian and less reciprocal way of fishing. Therefore, rather than this importance of inclusiveness being due to sharing a common dependency on fisheries (Brookfield et al., 2005; Chambers, 2016), residents of fisheries-dependent communities seem to have a shared dependency based on the survival of the community and meeting needs.

5.3 Complex communities

In turn, an improvement of an index of social cohesion may further improve other indices, as well as labor diversity, leading to a situation of positive- and negative reinforcement cycles – in line with earlier research of for instance Bjarnason and Thorlindsson (2006) and the Byggðastofnun (Baldursdóttir & Halldórsson, 2018). In

Seyðisfjörður and Djúpivogur, a culture of bottom-up entrepreneurship fuels a positive reinforcement cycle where social cohesion and a more diverse local economy are mutually enhancing (Bjarnason & Edvardsson, 2017). In such a 'culture of being active' participating in the community often creates more formal ties regarding income-generating activities, for instance the yearly buzz surrounding the tourism season or the LungA Art Festival in Seyðisfjörður, increasing the attractiveness of the communities (Bjarnason & Edvardsson, 2017). More attractive communities may, in turn, gain even more entrepreneurial residents, making the town increasingly lively.

Communities can also be stuck in a negative reinforcement cycle – a situation many of the communities have historically experienced, but which is currently mostly present in Raufarhöfn. Stakeholders indicate outsiders having negative views on the community while lacking a sense of agency and entrepreneurship to effectively improve the current situation. Having less diverse economic opportunities, outsiders may have more difficulties finding suitable work and many children that left the community to pursue higher education may not return. With limited diversity in employment and attractiveness to newcomers, entrepreneurship and agency are unlikely to increase, possibly leading to a less active cultural and social life in the community (Aquino & Burns, 2021; Bjarnason & Edvardsson, 2017). In turn, this may not only harm the community, but also the well-being of residents: in line with the theory, social inertia, apathy and learned hopelessness are lurking, making it even more unlikely that change will occur (Ardila, 1979; Cidade, 2012; Góis, 2012). Therefore, growth may cause even more growth, while decline may lead to further decline.

Including the embedded characteristics nuance this all-or-nothing view – answering sub-question 3. Six embedded characteristics were identified: three regarding work (seasonality, working conditions and foreign workers) and three not related to work: infrastructure, individualism and togetherness and leadership and agency. The characteristics of work (seasonality, working conditions and foreign workers) are closely related; tourism and (currently to a lesser extent) the fishing industry share a dependence on peak seasons with (manual) work, creating 'highs' and 'lows' in the communities: booming during summers, but ghost towns during winter. This seasonality also influences the willingness of Icelandic inhabitants to fulfill these temporary positions with long working hours and limited hourly pay. Those who do, may find their work-life balance disrupted and are only able to participate in the community to a limited extent, weakening the social cohesion of communities. These seasonal positions, but also other unappealing positions in all three industries, are consequently filled by foreign workers, and over time communities have become dependent on foreign workers. These (mostly temporary) workers do not mind working long hours to earn money, but their participation in the community is limited: they have limited incentive to invest in the community due to their short stay, and after workdays of around twelve hours, they are mostly resting.

This shows that diversifying the local economy does not always produce better jobs, as (for Icelandic people) undesirable jobs may be added to a community with already undesirable jobs. The employment of foreign workers in these unattractive jobs does however not only limit community engagement, but the appointment of foreign workers also takes away the urge to improve the attractiveness of jobs and cater to the local labor supply.

Infrastructure is also important, consisting of roads and tunnels, internet (for remote work) and housing. With a tunnel, previously closed-off communities can become part of a 'larger whole' with new labor opportunities, services and leisure – in line with Bjarnason (2021). In this larger economic zone, new (high-educated) thin-market jobs may become viable that could not exist in just one community. On the other hand, jobs, services and leisure within the community may be lost: improved connectedness decreases the need of having the same service in every community. While improving options in 'close proximity', options within 'closest proximity' are diminished. More commuting may in turn lead to more anonymity in the community, weakening social inclusion and feelings of having a common denominator and identity, while diversifying the local economy through 'digital roads' - remote work - is promising as well. This also has few negative spillover effects: stakeholders identify this as a good opportunity to attract newcomers or families by renting out office spaces.

Regarding housing, many communities suffer from a jammed housing market due to seasonality, summer houses and a decreased number of inhabitants per house. Elderly inhabitants are unable to move to more

suitable housing and involuntarily occupy houses that could be used for newcomers. As large employers have a stronger financial position, they are able to buy and construct houses to accommodate their workers, strengthening their position without addressing the root cause of the shortage. Housing can thus decrease labor diversity, while the negative consequences of the housing shortage remain unaddressed.

Individualism and togetherness are important concepts: focus on individual entrepreneurship can foster and create a culture of being active which may lead to new job opportunities, events, amenities or stores that strengthen social cohesion. However, as some are better able to seize the opportunities than others, individualism may lead to inequality and tension if conflicting interests arise, limiting the togetherness in the community. Finding a right balance between fostering togetherness and equality and the possibility for individuals to take advantage of chances is therefore important. Leadership can help reaching such a balance. This is the case in Djúpivogur; the community is actively learning when 'enough is enough', and when to limit the number of tourists that can enter the community. Leadership is also closely tied together with the agency of residents. Communities that have been dependent on fisheries for generations seem to be 'locked-in', but good leadership can promote innovation, entrepreneurship and especially agency: recent changes in Vopnafjorður are a good example of this.

In conclusion, resilience is hard to achieve, even without a Catch-22 situation, and turning a spiral of decline into a positive reinforcement cycle is difficult: diversity of work and social cohesion are interwoven and shaped by embedded characteristics of communities, forming a complex web where one change can lead to several other changes, creating a range of spillover effects: like roads in Iceland, the road from a spiral of decline to a positive reinforcement cycle is not straight, but contains bumps, potholes, turns, shortcuts and turnarounds.

6. Discussion

Finally, it is good to discuss and reflect on the findings of the research. First of all, the strengths and weaknesses of the research are identified (6.1), after which the results are interpreted in the light of the theoretical framework. Finally, the consequences for Icelandic communities and resilience in general are discussed.

6.1 Strengths and weaknesses

The research has several strengths and weaknesses that require specific attention in order to add the right value to the findings. Regarding strengths, interviewing stakeholders increased the validity of the research in multiple ways. First of all, the stakeholders did not only share their own experiences, but their central position in the community gives them access to experiences of a wide range of residents. Additionally, they have knowledge and visions regarding the topic of research. This depth made it easier to form a complete picture of the communities. Secondly, the use of stakeholders helped to create more reliable inductive themes – as presented in 4.3. Stakeholders are not only aware of patterns of beliefs, behaviors and opinions, but also shaped these patterns, as they have a central position in the community and are often in influential positions. This allows new important themes to come to light easier, adding strength to the research. Finally, many of the stakeholders had a good oversight of historical changes in the community, allowing not only comparisons between communities at this moment but also the identification of changes within communities over time, creating a historical overview of how diversity of labor shaped social cohesion, adding additional depth to the findings.

On top of that, interviews were at first conducted in three communities with many similarities. Communities had more or less the same size, were located in the same area of Iceland and all had access to the ocean. As the main variation in the communities was labor diversity, specifically the role of diversity of labor opportunities could be analyzed, strengthening internal validity. Later, two additional communities ('extreme cases') were added (with fewer interviews) to see if similar or different results were found between those communities, forming a qualitative 'difference-in-differences'. This, in turn, enhanced the external validity, allowing this research have both internal and external validity.

The research, however, also has its limitations. First of all, the complexity of the research needs to be addressed: the research consisted of three steps, including both deductive and inductive analyses, and (consequently) the interviews had a high information density. As a result, a relatively high amount of both deductive and inductive themes were identified, consisting of many codes and quotations. Even though the six steps from Braun and Clarke (2006) were run through thoroughly in order to create clear, coherent and distinguishable findings, presenting the findings in such a manner proved to be difficult. To prevent further complexity, no sub-themes were used.

Secondly, stakeholders may have flawed insights as they literally hold a stake in the community. Consequently, they might (unknowingly) be overly positive to make their community look better. Furthermore, several stakeholders indicated having limited contact with foreign workers. It is the question to what extent stakeholders are aware of all inhabitants' experiences rather than a select group. Efforts were made to reduce this bias by interviewing a variety of stakeholders within the local governments, within the private sector and within the public sector.

Thirdly, the research may be subject to bias as only stakeholders holding positive views on the community might agree to participate. Meanwhile people with a negative opinion could be less eager to share their opinion, for instance due to not liking the sensitive topic or being afraid to be identified and face negative consequences in the community. Additionally, views of stakeholders are multivocal and consist of positive, negative and neutral statements that can add up to being for instance 'mainly positive'. However, 'mainly positive' does not equal the absence of negative relationships within an index of social cohesion, or that some residents hold opposing views to the majority. While trying to do justice to all views, not all nuances could be taken into account.

Fourthly, 'diversity of labor' was assessed through the fishing, tourism and aluminium industry; three industries that have a high number of low-skilled jobs. While indeed those sectors are important, the findings show that especially diversity of labor in more higher-educated jobs is important. However, in the selection of the communities, no attention was paid to the diversity of high-educated jobs in particular.

Finally, this research can only assess which indices of social cohesion improve or decline (and why), but not to what extent. Therefore, it is not possible to measure net gain or loss of cohesiveness through changes in diversity of labor. All six indices were given the same value, while for some communities certain indices of social cohesion might be more important compared to others, which could shift the findings. For instance, if social inclusion is deemed the most important index, improvements of labor diversity would more closely resemble a Catch-22 situation. Meanwhile, if demographic stability (such as having a stable population) is deemed the most important index, the findings may underestimate the importance of diversity of labor on social cohesion, underestimating the notion of negative and positive reinforcement cycles.

6.2 Interpretation of the findings

While the 'pathway of fisheries' and the 'pathway of diversification' can both be identified, they do not lead to a Catch-22 situation. Diversification does not equal less cohesiveness, while fisheries-dependent communities at times have higher quality jobs and more year-round stability compared to those that focus on tourism. Yet, even though no Catch-22 situation is present in the communities and the interplay between diversity of labor and social cohesion does not impede the creation of resilient communities, for many communities long-term resilience is difficult to achieve.

According to the pathway of fisheries (mainly common in Vopnafjörður and Raufarhöfn), the shared 'fishing identity' of the inhabitants will be lost in diverse local economies (van Ginkel, 2001). Findings show, however, that fishing is not necessarily the glue that holds communities together. Where Symes and Frangoudes (2001) state that the fishing industry generates ties and interactions among inhabitants that can foster both egalitarian and reciprocal economic and social relationships, communities are already in a post-egalitarian fishing era. The ITQ system not only turned fishing from a common good into a private good, but also shifted the focus from mechanical to organic solidarity.

Currently, rather than fishing providing an identity, it provides jobs. Brookfield et al. (2005) differentiate between 'real' and 'virtual' fishing dependency. Within real dependency, the community is dependent on the products of fishing, while virtual dependency is more image-based and regards an 'idea' of being a fishing community. The real dependency is still visible: in all communities, the fishing industry is (one of) the most important employer(s) and fishing provides year-round jobs and a stable population. However, many of the jobs are seen as unattractive and unappealing. Already twenty years ago, residents held these conflicting views: while emphasizing the importance on the national economy, those working in fishing discourage their own children from working the same jobs (Ráfnsdóttir, 2004). To this day, this holds true.

As a solution, foreign workers are employed in manual jobs in large, globalized fishing companies, while Icelandic inhabitants only fulfill scarce higher positions in the office. These foreign workers, however, contribute little to the social fabric of the communities, as their primary focus is on working many hours to gain a good income. Their spare time is used to rest instead of participating in the community, as well as facing cultural and language difficulties in integrating in the communities, thus forming 'two communities in one' – in line with research of Skaptadottir et al. (2024).

The pathway of diversity (of the local economy) is more common in Seyðisfjörður (bottom-up), Fáskrúðsfjörður (top-down) and Djúpivogur. Without diverse labor opportunities, inhabitants may leave the community in search of better job opportunities, while similarly creating difficulties in attracting newcomers, in turn creating the risk of losing inhabitants, services, amenities and eventually even more jobs, according to Symes and Phillipson (2009). Especially when communities lack high-skilled residents, innovation and entrepreneurship may be limited, which is in line with earlier findings from Bjarnason and Edvardsson (2017). Indeed, the findings show that the pathway of diversity forms a better buffer against a negative reinforcement cycle compared to the pathway of fisheries: communities with more diverse labor opportunities were described as

having a more stable and young population (demographic stability), a broader range of services and amenities in the community and, finally, on average higher well-being of inhabitants – similar findings to Kokorsch (2017).

Yet, this pathway also has limitations. Labor diversity is no 'holy grail' as increased diversity does not always equal more attractive labor opportunities. In tourism, many of the new jobs are seasonal, low skilled and involve low pay. As much research focuses on the benefits of labor diversity, these findings were counterintuitive and have so far received little attention. Similarly, focus on individualism and entrepreneurship may create 'winners' and 'losers': some residents being better at seizing opportunities than others, and are more able to benefit from all the opportunities the community has to offer. These findings were, again, not expected, forming another topic that has so far been understudied.

6.3 The future of resilience and resilient communities

Even though communities may differ, similar patterns are identified. The differences between the three main communities are mostly identical to differences between the two 'extreme cases'. Not only does the diversity of labor shape social cohesion in similar ways between Vopnafjörður, Seyðisfjörður and Fáskrúðsfjörður and between Raufarhöfn and Djúpivogur, the same embedded characteristics were mentioned in all communities. Yet, small differences exist. In Raufarhöfn, both labor diversity and social cohesion were more limited compared to Vopnafjörður, with more worries about the future of the community. Djúpivogur had many similarities to Seyðisfjörður, but the community seems to be ahead in actively limiting economic growth when negative spillover effects (of tourism) start to exceed the benefits.

To put the findings in perspective, Kokorsch and Benediktsson (2018b) use twelve components for resilience-building strategies. Rather than looking at a variety of elements, this research has aimed to specifically uncover the complex interrelatedness between two main drivers: diversity of labor opportunities and social cohesion. This had until now not received much attention, but is needed to create a holistic approach for resilience (Kokorsch, 2022). However, the six inductively derived embedded characteristics that in turn play a role in this interrelatedness, show great resemblance to the components of both Berkes and Ross (2013) and Kokorsch and Benediktsson (2018b) (stated in paragraph 2.2.) that were purposely left out. However, rather than concluding that 'everything is related to everything', the research still offers distinguishable patterns for building resilient communities.

In short, there is a trend for communities to move from 'collaborative durability' to 'independent entrepreneurship'. Communities with lower amounts of diversity are, in general, more tight knit in terms of providing help and volunteering to meet basic needs and ensuring the well-being of the individual and the community, and residents in these communities have more common denominators: 'collaborative durability'. On the other hand, communities with more diversity of labor are generally more well-off and have a richness of labor opportunities, services and amenities, although the sense of togetherness can be lost, creating more individualism and conflict within the communities, becoming communities with 'independent entrepreneurship'.

Ironically, this situation in a way resembles a Catch-22: losing out on social inclusion as individual opportunities increase. While the importance of social inclusion versus individual opportunities is relative, the findings indicate that more entrepreneurial communities are more 'resilient', as they have both more diverse labor opportunities and increased social cohesion. Yet, achieving a positive reinforcement cycle through diversifying the local economy and increasing cohesiveness is not as straight-forward as it may seem.

First of all, fishing still plays a key role in all the communities, even though the majority of jobs have a limited appeal. Most positions are fulfilled by foreign or temporary workers with limited integration in the communities, while community engagement is crucial for the isolated, rural communities. Icelandic residents are only employed in the scarce positions that require higher education: for every four manual jobs, there is around one 'skilled job'. The creation of high-skilled labor through employing foreign workers to fulfill unwanted positions seems hardly resilient. However, diversification is difficult when suffering from a 'brain drain' that pushes individuals towards places with more diverse opportunities. With 73% of jobs in fisheries at risk of being lost or automated - mainly the manual jobs (Þorsteinsson et al., 2019), communities may 'go down with the ship' if no alternatives are found.

Secondly, it is difficult to expect entrepreneurship and agency in communities that are still very much dependent on fishing and have been for generations, and where characteristics of the communities (like housing, working conditions, pay rates and foreign workers) complicate rather than ease entrepreneurship, agency and the diversification of the local economy. Even though grants of the Byggðastofnun focus on the bottom-up improvement of the local economy and Kokorsch (2022) indicates that local empowerment and the realization of local ideas are powerful tools to increasing job opportunities, breaking a negative reinforcement cycle is difficult. In communities like Fáskrúðsfjörður, Vopnafjörður and Raufarhofn, individuals identify the opportunities, but who is there to seize them?

Additionally, even when the local economy is diversified, that does not always lead to resilient communities. The question is whether tourism or aluminium are suitable alternatives for the fishing industry, although it is important to place the industries and the communities in perspective. Even if the three industries may not lead to the desired resilience, communities are significantly more resilient compared to a few decades ago: even though negative reinforcement cycles are present, in no case the depopulation and loss of jobs comes close to spirals of declines during the second half of the twentieth century. Meanwhile, more high-skilled labor opportunities appear in these communities, which can be summarized as slowly increasing, but so far not enough to create long-term stability and resilience. Tourism is still highly seasonal, involves low pay and creates negative spillover effects for residents, while research of Seyfrit et al. (2010) shows that the construction of the aluminium smelter did not halt outmigration of youth, even though this research shows that the smelter (combined with the tunnel) did increase both the number of inhabitants and the labor opportunities.

In terms of interconnectedness, tunnels and improved roads may help the much-wanted transition towards creative- and knowledge-based industries - in line with research of Bjarnason (2021). As communities are getting increasingly better connected, communities may behave like one larger area instead of 'islands of individual communities', leading to further economic opportunities. Some jobs may not be feasible for just one community, but are feasible when communities are more connected, although tunnels can take a decade of work and can cost hundreds of millions of euros. While the importance of better infrastructure is getting more recognized recently, not every community can expect a tunnel to be built in the next decades. For now, a tunnel may be the solution for one community, but only in the future inhabitants of East-Iceland may feel more connected to one large, interconnected area that has characteristics of one resilient community rather than a range of fragile ones.

However, envisioning long-term resilience for communities is at this point only speculative, and assumes an ideal scenario. The past has shown that communities are subject to sudden and unpredictable changes. Even though no Catch-22 situation was identified, achieving resilience has proven to be and will likely remain a difficult task for rural Icelandic communities.

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Annex 1: Interview guide

Questionnaire

Hello, again pleased to meet you. Thank you for participating in the interview and having me here. I am Bauke, a Master's student in Labor- and Lifecourse Sociology from the University of Groningen in the Netherlands, while I am currently doing an internship at the Research Centre East-Iceland in Egilsstáðir of the University of Iceland. This interview is part of the research for my Master's Thesis, which will cover the subject of work, the community and the attractiveness of villages in East-Iceland. The village that you live and work in, is one of the three villages that will be researched. For each village, namely [village 1, 2 and 3] I tried to find people that have the same job, in your case, the job of [job 1, 2, 3, 4, 5 or 6].

In case of employee of municipality (job 1, job 6): *Your job as a [job 1 or job 2] in the municipality means that you are involved with the topic of the interview, and have knowledge and experiences regarding the topic of work, the community and the attractiveness of the village.*

In case of other employee (job 2, 3, 4, 5): Your position within the village is important, as you have a job in a very central position within the village, namely [job 2, 3, 4 or 5]. This means that you most likely have a seen a lot of the developments and chances in the village over the years, and sharing those experiences could benefit the research on [village x].

The answers you give during the interviews will be stored in line with the guidelines set out by the University of Groningen, and only I will have access to the data. The information will be anonymized for the research, that means that in the report your name will not be used. In case a factsheet is made for every village, no quotes or singular statements will be used to secure that every answer is confidential.

Before this interview, I investigated the history of East-Iceland, of work and the communities. This interview will help me get a better picture of how everything is connected with each other, and what the current trends and changes are in the village.

If you do not know the answer to a question, have to think about it for a bit longer or do not understand the question, feel free to tell this. The interview will take around 45 minutes to one hour.

If you want to stop the interview, feel free to tell me that: in that case, we will stop the interview, and you can always request the information of all collected information to be removed. Are you okay with the questions being audio-recorded? By recording, I can listen to the interview again and this will make it easier to effectively use the answers you give for the research. Now finally, I have this informed consent form that we both need to sign before starting this interview, in which everything that I have told before is written down, and to make sure that you agree with that.

[if yes]:

Thank you, let's begin, then.

1. A. Could you describe to me, as a [job x], how are you involved in the village?

   B. In what ways do you participate in the community, both professionally and personally?

   C. How does working as [job x] enable you to see things that are happening in the village?

I want to ask some questions about [village x], the community and the trends over the past few years.

2. A. During the past decade, which changes have taken place in the village?

   B. Which changes did you notice in the services and stores in the village?

C. Which changes did you notice in the community?

D. Which changes did you notice in the village regarding work and jobs?

3. A. What is (or are) the main sources of employment in [village x]? (*check whether assumption of Vopnafjörður, Seyðisfjörður and Réyðarfjörður are right*)

   B. How diverse are the jobs in [village x]? (by education level, by sector)

   C. How good are the job opportunities in [village x] for the people that live there, and also for potential newcomers?

   D. Do people with certain jobs contribute more to the community then others? Why do you think that is?

   E. In what ways do new jobs, for instance in tourism, influence the community and the identity of the village? How is this different than the fishing industry?

4.

   A. To what extent, would you say, do people perceive life as good in [village x]?

   B. Are people in [village x] generally happy?

   C. Which reasons do people have to live/move in this villages, and which reasons do they have to leave?

   D. Who leave and who enter the village?(young people, educational attainment, do they come back later?)

   E. What effect does the leaving and entering from villagers have on the life in the village?

5. A. People say about Flateyri, in the Westfjords, that because of a lack of diversity in labor and troubles with job security the community is also suffering. It is said that people get a 'financial mindset', and therefore there are less events, less supporting your neighbors and volunteering, but if things go well, the people participate more in the community and there are more things to do in the village. Do you notice this in [village x] as well?

If yes;

   B. What exactly do you notice about the community when things go well or worse?

● Regarding services?

● Regarding volunteering?

● Regarding trust in others and in politics?

● Regarding the general positivity?

6. A. At the same time, there are also people who say quite the opposite. They say that as the fishing industry shrinks, and the village and the villagers lose their historical and cultural identity that has been in the village for many years, and that the community is declining when the fishing industry gets

smaller. Do you think this is the case in [village x], does the identity of fishing have an influence on the community?

If yes;

B.   What exactly do you notice in the community when that historical and cultural sense of identity changes?

● Regarding services?

● Regarding volunteering?

● Regarding trust in others and in politics?

● Regarding the general positivity?

7. *In case of job 1 or 2:*

A. What has the municipality done regarding policies to improve life in the village?

B.   What are the successes, and what could still be improved?

C.   What do you think is necessary for the municipality to do?

In case of job 3, 4, 5 or 6:

A.   What has the municipality done to improve life in the village?

B.   Do you notice the effects of their work and their plans, and are you happy with it?

C.   What do you think is necessary for the municipality to do?

That's it. Thank you for participating and the insights you gave, the answers were very helpful. Do you have any questions, either about the research-topic, or about the research itself or what will happen next?

If you come up with any questions, you have my e-mail address. Feel free to contact me if anything comes up.

Annex 2: Informed consent form

Informed consent form
Vopnafjörður, Seyðisfjörður, Fáskrúðsfjörður

INFORMATION SHEET: *The relationship between work, social cohesion and fragility*

Dear stakeholder of in East-Iceland,

Thank you for your interest in participating in this research. This letter explains what the research entails and how the research will be conducted. Please take time to read the following information carefully. If any information is not clear kindly ask questions using the contact details of the researchers provided at the end of this letter.

WHAT IS THIS STUDY IS ABOUT?
In the study, three villages will be researched; Vopnafjörður, Seyðisfjörður and Fáskrúðsfjörður. Even though the villages are more or less similar in size, there are differences in the work and jobs, the community and the fragility of the village. Work and the community are both important for the resilience of a village, but what the influence of work on the community is, is still largely unknown, especially in East-Iceland, where the role of the fishing industry is under pressure while the tourism industry is growing larger. It is the question whether the community will suffer when the cultural identity surrounding the fishing industry gets smaller, or whether the community will grow stronger if new job opportunities arise that turn the village into an attractive place to live, and whether those two things can happen at the same time.

In total, six stakeholders from each village are asked to participate in this research by being interviewed about their knowledge and experiences regarding the recent and coming changes in the jobs and in the community. The six stakeholders are chosen because of their central position within the village due to the job they hold. Since you are one of those, you were contacted to participate in the interview.

WHAT DOES PARTICIPATION INVOLVE?

The participation in the research for all stakeholders means being interviewed on the topics of this research. During the interview, questions will be asked about the most recent changes in the village regarding jobs and the community and the relationship between jobs and the community, for instance the role of the fishing industry in the village, or how many people are leaving and entering the village. The interview will take around one hour, after which there is no further commitment or obligation for the stakeholder.

DO YOU HAVE TO PARTICIPATE?

Participation in this interview is voluntary at all times. It is possible to withdraw from the study at any moment. You are also free, at any times, to choose not to give an answer to a question without consequences or providing a reason for that. Even after the interview, participation can be withdrawn just by contacting the researcher. Then, all the answers will be removed without being asked to provide a reason for withdrawing.

ARE THERE ANY RISKS IN PARTICIPATING?

All the data will be anonymized, meaning that only the researching team, consisting of the person conducting the research and the supervisor from the University of Groningen, know which answer belongs to which person. In the final report, all the results from the interviews will be written down in such a way that no individual response can be traced back to one of the stakeholders. The person conducting the interview will not use statements used by other stakeholders in upcoming interviews – so nothing you will say will be used in interviews with other stakeholders from the same or from another village.

In case any of your answers is, in hindsight, not the answers you would have wanted to give, or if something has changed in the meantime, you are free to contact the researchers.

ARE THERE ANY BENEFITS IN PARTICIPATING?

There are no direct benefits in terms of money. However, those who participate in the research, are by any means able to get the results of the research. Since the participants are stakeholders, for some of them the results are interesting and useful to see. How are other villages doing, and what is the state of their own village? With this information, it is also possible to see what the strengths of the villages are, and what can be improved. Best practices of other villages can be taken to see what the possibilities are to implement those changes in the own village. In participating, the stakeholder also gets a small gift as a thank you for participating.

HOW WILL INFORMATION YOU PROVIDE BE RECORDED, STORED AND PROTECTED?

The recordings of the interviews will be transcribed and anonymized, and only the researchers know which transcript belongs to which person. In doing this, it is secured that individuals answers of respondents cannot be traced back to participants of the interviews, and outside of the researchers, nobody will what exact answer was given by a participant. Transcripts of the interview will be stored according to the GDPR rules of the university and will be placed in a secure place provided by the University of Groningen – only the researchers have access to this data. When the voice recordings are transcribed, they will be removed and only the transcripts will be used for analyses. This data will not be used for any other research purposes than the current research, and will be stored in line with the guidelines by the University of Groningen.

WHAT WILL HAPPEN TO THE RESULTS OF THE STUDY?

The results of the study will be shared with all the participants on request. Because they are stakeholders, it is up to them to do with the result what they want. When there are questions about the results, it is possible to contact the contact person. The Research Centre of East Iceland will also get the result of the research, just like the supervisor of the University of Groningen. The report itself will be placed inside a repository within the University of Groningen and is publicly available to look at for students and staff of the University of Groningen.

ETHICAL APPROVAL

All of the researchers will uphold themselves to relevant ethical standards. This means that both the interviewer and the supervisor are aware of ethical standards and are committed to adhere to these standards. Previous to the interviews, the Ethics Committee was asked to provide any input regarding the research to make sure that the research adheres to all standards.

INFORMED CONSENT FORM
If you intend to participate in this research, I would like to ask you to sign the informed consent form on the next page. After signing the form, you can still always withdraw from the research and stop participating, by signing the form you only state that you have been informed about the research, the interview and the confidentiality.

WHO SHOULD YOU CONTACT FOR FURTHER INFORMATION?

Bauke van der Kooij, interviewer and primary contact person: b.i.van.der.kooij@student.rug.nl
Wike Been, supervisor Rijksuniversiteit Groningen: wike.been@rug.nl
Unnur Birna Karlsdóttir, supervisor Research Centre East-Iceland: unnurk@hi.is

Annex 3. Description of indices of social cohesion in the interview guide

Index	Definition (Duhaime et al., 2004)	Examples of measurement	In which question is this element considered typically?
Social Capital	'The existence of trust, confidence and willingness to participate in civic institutions and voluntary associations' (p.305)	• Volunteering for a community organization; • Attending or participating in a sports event; • The level of satisfaction one has in the regional government.	• Question 0a (participation in the community) • Question 0b (participation in community) • Question 1c (participation in community) • Question 4b (trust, volunteering) • Question 5b (trust, volunteering) • Question 6b (happiness with civic institutions)
Demographic Stability	'Measures of in- and outmigration of individuals as well as the population growth rates of Arctic communities' (p.306)	• Population growth or decline in recent decades; • Reasons inhabitants have for either moving to this community; • Reasons to want to leave the community.	• Question 3c (in- and outmigration) • Question 3d (in- and outmigration) • Question 3e (in- and outmigration, growth rates)

Social Inclusion	'Access to affective, cognitive and material forms of social support (1); and level of participation in the subsistence economy (2)' (p. 306)	● Quality of access to support, like friendships, advice or assistance; ● Participation in cleaning, repairing or taking care of children and seniors.	● Question 0b (support, participation in subsistence economy) ● Question 1c (support, participation in subsistence economy) ● Question 2d (support, participation in subsistence economy) ● Question 4b (volunteering support) ● Question 5b (volunteering: support)
Economic Inclusion	'Variables that measure an individual's involvement in the market economy through labor activity, employment insurance, social assistance, pension cheques and/or other forms of transfer payments' (pp. 307-308)	● Employment activity in the last twelve months; ● Individual income per capita; ● Sources of capita.	● Question 1d (labor activity, social assistance, pension cheques) ● Question 2a (labor activity) ● Question 2b (labor activity, employment insurance, social assistance) ● Question 2c (labor activity, employment insurance, social assistance, other forms of transfer payments)) ● Question 2d (labor activity) ● Question 2e (labor activity, employment insurance, social assistance, pension cheques, other forms of payment) ● Question 3c (labor activity) ● Question 3d (labor activity) ● Question 6c (labor activity, social assistance)

| **Community Quality of Life** | Satisfaction with various conditions and services identified as key domains of satisfaction for Inuit and Inuvialuit living in the Canadian Arctic' (p. 309). | • Satisfaction with conditions and services like job opportunities, education, health services, quality and cost of housing, quality of food in stores and the quality of recreational facilities
• Suggestions for improving the community. | • Question 1b (satisfaction with services and stores)
• Question 1d (satisfaction with current job and job opportunities)
• Question 2b (satisfaction job opportunities)
• Question 2c (satisfaction with current job and job opportunities)
• Question 3a (general satisfaction with conditions and services)
• Question 3b (general satisfaction with conditions and services)
• Question 3c (general satisfaction with conditions and services)
• Question 4b (general satisfaction with conditions and services))
• Question 5b (general satisfaction with conditions and services)
• Question 6b (general satisfaction with conditions and services)
• Question 6c (general satisfaction with conditions and services) |

Individual Quality of Life	'A standardized subjective well-being measure as well as a five-item screening instrument used to detect the presence of clinical depression as well as affective and anxiety disorder disorders' (p. 310)	● Well-being of an individual.	● Question 3a (perceiving life as good) ● Question 3b (happiness) ● Question 4b (general positivity) ● Question 5b (general positivity) ● Question 6b (happiness) ● Question 6c (happiness)

Annex 4: Codebook

All deductive codes are: Catch-22 – culture, Catch-22 – financial, Labor diversity, Aluminium industry, Fishing industry, Tourism industry, Activities and events, Associations and clubs, Community, Contributing to the community, Education, Happiness & mental health, Housing, Human settlement environment, Labor, Labor quality, Population increase or decrease, Providing help, Togetherness and Volunteering.

Theme	Code	Type	Description	Example
Labor Diversity		Deductive		
	Aluminium industry	Deductive	Interviewee describes the aluminium industry.	Interviewee: "Yeah, here, I think it's more about, maybe it's getting a little bit better after we had the aluminium factory. Yeah, we maybe have more jobs for educated people. But I think it's not that much change here. Okay."
	Aluminium industry importance	Inductive	Interviewee describes the importance of the aluminium industry on the community.	Interviewee: "I think it was just the economy pushing people out of Reykjavík, get a better life. Cheaper housing. Less dependent on their car and also the aluminium factory opening next door and the tunnel being made, made a huge difference. We were suddenly connected to the other villages."
	Art	Inductive	Interviewee mentions (the role of) art in the community.	Interviewee: "And then, obviously one of the things that causes is that the housing prices went down. So that meant that people like... It became a bit of an in place for like artists and people that wanted just a cheap place to get out of Reykjavík, stay somewhere else for the summer and yeah. And I think that just led to the town becoming a bit more interesting for young people again."
	Business settlement environment	Inductive	Interviewee mentions the settlement environment for businesses in the community.	Interviewer: "So but this is understandable. And when the companies and the businesses do not see the how or are not or do not believe that this will happen, they will wait. They will wait in putting money into to development. Yeah. And that's understandable."
	Creativity	Inductive	Interviewee mentions creativity (of inhabitants) (needed) within the community.	Interviewee: "And then on the outside, you also have the image of 'all these are, these are. creative people living there'." Interviewer: "Like people that are smart and they have they have active and yeah..." Interviewee: "So so you need to have, you need to be able to cater to different tastes." Interviewer: "Yeah?" Interviewee: "You know, so. Yeah, yeah. Yeah, it's as I said, it's diversity. Yeah." Interviewer: "So that there's a place for different opportunities" Interviewee: "Yeah, yeah, yeah."

	Education	Deductive	Interviewee mentions (the role of) education.	Interviewee: "Then we are also working here in, in Mulaþing, on a project that we are hoping that will be starting soon. But the Covid and many other things has affected that, or has had that effect that it has delayed, and that is a cooperation with the University of Highlands and Islands in Scotland."
	Entrepreneurship	Inductive	Interviewee mentions (the role of) entrepreneurship for communities.	Interviewee: "But now we have a gym here, but it's really small and it's only open like after work and you can't go on Sundays or anything. Yeah, but now you can, just like, I feel like this is something like that people were like 'we want to have this, let's do this'. Let's find like a gym and let's build this together."
	Finances	Deductive	Interviewee mentions finances.	Interviewee: "And what we have been working on during the last years for some years now is to, to have a tunnel through the mountain and of course it is not a.... It is, it costs money. Yeah. But it also costs money to operate the route as it is. Yeah. And this will be Iceland's longest tunnel because it will be almost 13km."
	Fishing industry	Deductive	Interviewee mentions the fishing industry.	Interviewee: "But of course when I when I talk about the fishing, the fishing industry has, of course, been a huge industry in Seyðisfjörður for many, many years. But you cannot rely or you cannot expect that it will stay like that forever."
	Fishing industry, importance	Inductive	Interviewee mentions the role and importance of the fishing industry in the community.	Interviewer: "So if the fishing industry would close here. What would happen?" Interviewee: "To Vopnafjörður? I think it's very difficult to say. But I am very afraid because, you know, 70 people would lose their job that live in Vopnafjörður. That means around 130, would influence around 130 people, families and also children. And so it would be very difficult for Vopnafjörður to survive that. Yeah, we would need another company to step in and just do something. But if, if no company would come, then Vopnafjörður would just..."
	Labor - multiple jobs	Inductive	Interviewee mentions having or needing to have multiple jobs to get by.	Interviewer: "So how many how many people work at the fish factory? You have any idea?" Interviewee: "I am really... There's quite a few. Yeah. I mean, I have two people that work at my shop. They work at night or a couple hours at my shop, and then in the daytime they work in the factory. So, I mean, the good thing there is there's a lot of housing. So if people need, if people come here to work, they've got a house."
	Labor diversity	Deductive	Interviewee describes the (importance of) diversity of labor for communities.	Interviewee: "That would help. Yeah. And obviously, if. I don't know, I mean, there are some spots here that are, I see a potential for people if they brainstorm to open up some type of business. If you create those businesses where locals can actually work there full time. I don't know.

				I think... I don't know. I'm not a fan of all these tourists simply because I don't see the benefit.”
	Labor diversity - high educated jobs	Inductive	Interviewee describes the (importance of) diversity of high educated jobs for communities.	Interviewee: “Okay. You have the fish factory. It's the biggest. You have the school here. We are are big here in the small village. Of course we need educated people here, but. But I think, for example, the the fish factory is maybe changing a little bit because it's it's so much technique coming in. Yeah. People working, moving things, they don't have to move it anymore because the robots are doing it. Yeah. Then you have to maybe educated people to take care of the computers and everything. So. So I think. It's changing a little bit.”
	Labor lack of opportunity	Inductive	Interviewee mentions a lack of opportunity in labor for the community.	Interviewer: “Yeah it's also. Yeah. So. Is it then that the higher educated stay away more and the more lower educated, they come back here.” Interviewee: “Yeah. This is the story of here…” Interviewer: “Is that also so hard to see? Because you maybe you also want the higher educated to also like higher education here, here, here.” Interviewee: “Yeah. I think it's often like that. And we also have people who have higher education and he have work here, like very well. And okay and it's not more, not many no job for people with high education. Not many, it's teacher, doctors, nurse.”
	Labor, creation of new labor	Inductive	Interviewee mentions (a way of) creating new labor in the community.	Interviewer: “Has it helped the town here? The aluminium factory?” Interviewee: “Yeah, I think so. Because the. We have more jobs to choose from. Yeah. Because. Here, maybe in the in the factory you have 2 or 3 people working with electricity, but maybe there you have maybe 20 or something. Or. Maybe. Here in the factory, you have maybe two carpenters, but in Reyðarfjörður you can have maybe ten, you know?” Interviewer: “Yeah, yeah. So, yeah, yeah.” Interviewee: “The tunnel and the factory. You have more options. Yeah, for sure.”
	Mismatch between education and job	Inductive	Interviewee mentions a mismatch in the community of people doing work they were not educated for.	Interviewee: “And I have some really educated friends, actually. I have one that's really educated and works for as electrician, so he's not doing what he well, he learnt electrician as well, but he has a like a business degree or something like that. He doesn't work with that.”
	Reinforcement cycle	Inductive	Interviewee describes (part of) a positive or negative	Interviewee: “And that's that has this ball effect. You know, a couple of young

			reinforcement cycle that the community is in.	people who are gathering, then someone is a singer, someone plays guitar and they can do something for the community and it all helps. That's a good idea. Yeah." Interviewer: "Yeah. And you can also do it with people who work here half a year, or just work a few and months and yeah, it's a smart idea, actually. Yeah. Yeah." Interviewee: "So I think projects like that is something that could help us, uh, but I don't have the answers. If I had."
	Resources	Inductive	Interviewee mentions the resources that the community (does not) have.	Interviewee: "No, there's nothing really like you'll see on the south coast and the north coast, there's all these signs and ads and you get all these locations on the maps. A lot of stuff to see and do. But when you enter this zone, it's kind of it's not much."
	Survival	Inductive	Interviewee mentions the survival of either the community or an individual in the community, or how this survival has been or can be achieved.	Interviewee: "Yeah, yeah. So people are tired. It's. It's a fact. People are tired. There have been fighting for a long time and it's always something, just yeah... You know it's just, yeah it's, it's hard."
	Tourism industry	Deductive	Interviewee mentions the tourism industry.	Interviewee: "And what the main business in in the Seyðisfjörður are always connected to the fishing and otherwise it is at the other is connected to, to the traveling industry. And the fishing industry, it is a business that is operating and and is working all year round. Yeah. While traveling industry is more limited."
	Tourism industry dependence and importance	Inductive	Interviewee mentions the role and importance of the aluminium industry in the community.	Interviewee: "The Smyril Line ferry has a huge effect on, on the business life in Seyðisfjörður. And on, on the, on the harbour. On, on, on what we are actually doing in the harbour. Yeah. Because you have a solid income." Interviewer: "Yeah. It's like this. Yeah." Interviewee: "And during the summers of course we have a lot of, a lot of ferries, we have a lot of boats like cruise..."
Seasonality		Inductive		
	Art	Inductive	Interviewee mentions (the role of) art in the community.	See example under 'Diversity of Labor'.
	Atmosphere	Inductive	Interviewee describes the atmosphere in the community.	Interviewee: "So they just don't stay here. Yeah. You know what I mean? So it's quite complicated. And one of the things that we are trying is this to bring these students and, because they bring different type of, of, of life to this town that now you cannot see, you can see old people. Yeah. Then people around their 35's/40's and 50's then only small kids. You lack this young people. People like you."
	Capacity	Inductive	Interviewee describes the (limited) capacity a	Interviewee: "In this town, I think it's going to be a stabilised. Yeah, like it is

			community has for a certain labor sector.	now. It is mostly because this company is on the top. They can't do more. You can't. Yeah. Because regulations, you only can have this much quota of fish and we are on the top so we can not have, have more."
	Cultural life	Inductive	Interviewee mentions the cultural life of the community.	Interviewee: "And from these two years that I'm here, I know that people have to have two jobs to survive here, Otherwise they just have to leave. Since I arrived here, I know a lot of people just moved away, especially if they have small kids. They want two things: one to because of a better schools, and second, some of them says like the kids don't have nothing to do after the school, so they just go to Reykjavík or to Akureyri, and kids can have music or can have sports or other different activities."
	Finances	Deductive	Interviewee mentions finances.	See example under 'Labor Diversity'.
	Financial worries	Inductive	Interviewee describes (a lack of) financial worries of itself or others in the community.	Interviewee: "I've heard. That a lot of people live on credit. Meaning they use their credit cards a lot. Um. I think some of the foreigners, I think we have a different mindset. Like don't touch the credit card. Yeah. So, many foreigners have no problem working 2 or 3 jobs. Yeah. Saving up that money and only just being wise. Since moving here, I've noticed, yeah, Iceland is expensive."
	Fishing industry	Deductive	Interviewee mentions the fishing industry.	See example under 'Labor Diversity'.
	Fishing industry, importance	Inductive	Interviewee mentions the role and importance of the fishing industry in the community.	See example under 'Labor Diversity'.
	Housing	Deductive	Interviewee mentions the topic of housing in the community.	Interviewee: "We were discussing this for many years that what we need in this village is small flats on one level with the cars next to it where people can drive into the grass, walk in the living room, because every house in this village is a two, three story house with an incline with the stairs."
	Optimization	Inductive	Interviewee describes ways or the need to optimize a certain source of employment.	Interviewee: "But, but because the status quo isn't, you, you 'oh this is how it's always been. So we're fine but I think, I think it could be a bit better if they, if they wanted to maximize the tourism. And I know you don't want to too much because you don't want to destroy the balance, do you? You don't want you don't want a whole bunch of irresponsible tourists going out and breaking their legs and, and the, you know, the search and rescue. There's problems with people thinking 'oh, we've climbed mountains in the Swiss Alps' or something. 'We'll go climb here and we'll be fine.' But it's different kind of mountains and different kind of thing. And they fall in a crevice and yeah, you know, I think somebody died."

	Population increase or decrease	Deductive	Interviewee mentions an increase or decrease in population.	Interviewee: "So in the in the winter time, the population goes down so much. Yeah. But in the summer they all pour back in and you know, you've got, I don't know, there's maybe 1 or 2 Icelandic people working here. The rest of them are from out of town or out of the country. So if there was no tourism this town, it would be a ghost town. You would have the fish factory. The hospital? Yeah. You know, you'd be lucky to keep the shop. Yeah. Because there'd be no, nobody."
	Seasonality	Inductive	Interviewee mentions (the influence of) seasonality in (or on) the community.	Interviewee: "So that is a positive effect that this has. Even though this is only creating jobs during maybe 3 or 4 months of the year. But it has a clearly a positive effect. Yeah."
	Services and stores	Deductive	Interviewee mentions services or stores.	Interviewee: "And then we had advertised when they quit two years ago or two years ago. We advertised, or three years ago, advertised the coffee house like who wants to run a coffee house? And then one lady applied and it was never open. But now we have like a nice restaurant and I think that's so nice. Like that was missing here. Like we only had like when somebody came to visit, we were like 'oh, let's go have a pizza at that gas station.'"
	Services and stores - decline / lack of	Inductive	Interviewee mentions a growth or availability of services or stores.	Interviewee: "We've had some, like, towels and some stopping, some bleeding and serious stuff that we kind of have to like and waiting in the car when you have this issue that's not comfortable. Yeah. So it would be nice to have a doctor on like we used to have before we had the tunnel. That's the only this problem with the tunnel probably. It kind of so it used to be individual towns on its own. Yeah. And it still had everything. We had the bank, we had the post office, we had the doctor, everything else. But when they opened the tunnel, we kind of made it all into one. They started picking these things away because you can get it in Reyðarfjörður. you can get next town. That's probably the issue. But it hasn't affected me yet because I still can't drive between the villages and I know how to use a computer to do the bank, but there are people that can't."
	Services and stores - growth / availability	Inductive	Interviewee mentions a decline or lack of services or stores.	Interviewer: "So I have all these shops, have they increased or have they decreased, like have the amount of shops and stores grown larger or smaller during the last few years or have it remained about..?" Interviewee: "No, it's getting bigger. Yeah. The camping site and, hérna, yes."
	Similarities / symbiotism between tourism and fishing	Inductive	Interviewee mentions similarities between tourism and fishing.	Interviewer: "People who work in their restaurants, for instance. I heard that they are mostly from other countries and they only work here during the summer. I

				think, is it also hard for the town to see them enter and then leave again? Or is it like it's just how it is?" Interviewee: " t's yeah, we are very well, we are very used to this. And I would say that this is very normal to this town because before, it was the fish industry and we had people coming here for the high seasons in that, that was also seasonal. Yeah, but now we have one fish factory which is very steady." Interviewer: "It's over there, over there." Interviewee: "And but in the older days we had this seasons with the herring seasons, with the cabling. You know, over a season we needed more people, so we got them in. For example, the youth hostel is an old dormitory for the fishing, you know, for the herring area, from the herring era. Yeah. So we have had this different eras. Yeah."
	Too much	Inductive	Interviewee mentions negative spillover effects from a certain source of labor to be dominant.	Interviewer: "Is the tourism growing too large for the town here?" Interviewee: "Me personally, I think so. I don't think we have the infrastructure. You know, these tours, they come and they go to the store and they need the bathroom. Yeah, there's no access there for a bathroom in the..."
	Tourism industry	Deductive	Interviewee mentions the tourism industry.	See example under Labor Diversity.
	Tourism industry jobs	Inductive	Interviewee mentions jobs in the tourism industry.	Interviewee: "Because you have more shops and and bars and other things that are open during the summer time and there is a lot of work for young people and others who like to work during summer time in Seyðisfjorður, much more than it was before, even though the fishing industry was was great and a lot of people came to work in this industry, and it's still going like that. But the tourist industry has added a lot there, and and it has also have has also the effect the that the. Okay. That's just what I'm thinking is that that those who are living there decide to, well, 'we like to look good', 'the village has to look good'. Yeah, it is. We want our visitors to...."
	Winter	Inductive	Interviewee mentions the (influence of) winter.	Interviewee: "The shop. The gift shop is open every day. That closes except for the special celebrations and weekends and the restaurant over here in winter, they are only open when you maybe you experienced they open at 11:00 and they have open until two. So but now it's open all day. So it's. It is highly seasonal, but things don't close down."

				Interviewer: "Which is important as well to have a restaurant that's open all year. Yeah. Also for everyone that lives here, they need a place to, you know." Interviewee: "To gather, to meet. Yeah."
Working Conditions		Inductive		
	Aluminium industry - working conditions	Inductive	Interviewee describes ((the consequences of) working in) the aluminium industry.	Interviewer: "Have the jobs here changed that also, because I heard you say that working in shifts makes it harder." Interviewee: "It kind of doesn't affect maybe the children themselves or what they're doing. It just affects that. Usually there's only one parent there or like the other one would be at work or sleeping or doesn't have time because he has shifts during that weekend, because it means that some people are working on weekends every second week or whatever. Always."
	Contributing to the community	Deductive	Interviewee mentions (the difficulties) of an inhabitant participating in the community.	Interviewee: "Especially in this small town like this." Interviewer: "Do you have to... give something back?" Interviewee: "I think so, yeah. If you live in a small town like Vopnafjörður, you have to give something, you have to find something, because if people don't give that, it's all go down. People only want, is so important. People, each one are very important in a small town. Yeah, well, more and more, they don't take... just go home and then all go down, it's so sad..."
	Contribution to family and children	Inductive	Interviewee mentions (the difficulties) of an inhabitant contributing to their family.	Interviewee: "So many children have parents who work hard. Yeah I can find that, in the school. Have not enough time to take care of children, the homework and things like that." Interviewer: "Then they also do a bit less..." Interviewee: "I can sometimes find that. Yeah. The teacher are telling me, maybe is not reading home or just. Yeah."
	Finances	Deductive	Interviewee mentions finances.	See example under 'Labor Diversity'.
	Fishing industry; labor division	Inductive	Interviewee describes the division in fisheries between manual jobs and office jobs.	Interviewee: "It's basically all the higher jobs have Icelandic people in them or the good jobs. Yeah, everything else that's kind of more labor: that's just being filled by foreign people."
	Fishing industry; working conditions	Inductive	Interviewee describes ((the consequences of) working in) the fishing industry.	Interviewee: "My father did this as well. Like he's been. He's been working for this company, this factory since 1978. And he's been there like 12 hours a day every day of the week, excepting some days for... most of this time. At least my whole life."

	Happiness & mental health	Deductive	Interviewee describes the happiness or mental health (of inhabitants) of the community.	Interviewee: "Yeah, It makes you really confused. And I don't. I didn't like that long time, and it messed up my sleep schedule completely, and I'm still fixing that problem today."
	Labor - multiple jobs	Inductive	Interviewee mentions having or needing to have multiple jobs to get by.	See example under 'Labor Diversity'.
	Labor quality	Deductive	Interviewee mentions the quality of a certain job or sector.	Interviewee: "And I don't think that even if it's growing and it's bringing jobs, they're low paying jobs. And most of the time those jobs disappear, disappear because it's seasonal. You know, it's just for the summer. And who's working these jobs? It's a lot of foreigners and a lot of foreigners that are coming to Iceland to work and then go back home. Yeah. They don't stay year round. You know."
	Labor, remote work	Inductive	Interviewee mentions remote (online) labor.	Interviewee: "Yeah, yeah, yeah, that's true. That's what happens. Yeah. So I think well, we really would like to have more, um, jobs like for the, you know, since we got the digital, um, possibilities you can just work here even though you have the company is in Reykjavík. So we have some of that here and I would love to increase that. So people that has good education can come here and live here. Yeah."
	Labor, work in another town	Inductive	Interviewee mentions work that involves commuting.	Interviewer: "It is, yeah. And then they will return here, or is it like goodbye, and then you..." Interviewee: "I think the return rate is getting better every year." Interviewer: "Why is that?" Interviewee: "There's more variety of things to do here." Interviewer: "Yeah. Like work in arts, work..." Interviewee: "Yes. Just I mean, it's no longer just 1 or 2 things. Yeah. And there's people here that are working in Egilsstaðir and living here. Stuff like that. Yeah. People that can actually work a lot from home or..."
	Labor, work next to home	Inductive	Interviewee mentions work that is in the same town as the inhabitants lives in.	Interviewee: "It's only a few years since most of the people went home in the lunch, and went to work. This is not many places you could do that. But today we have a food center and freezing plants where people can have a lunch and then start to rest a little bit. And then. But. No, I don't see it influenced the people on some different way. This is just a work and people go to work and home again and. Yeah."
	Tourism industry jobs	Inductive	Interviewee mentions jobs in the tourism industry.	See example under 'Seasonality'.

	Work-life balance	Inductive	Interviewee describes work-life balance (of a certain sector) (of a certain group of people) in the community.	Interviewer: "What do you think that should be changed here. Here in the town?" Interviewee: "In the town? I think with it would be better if people in this factory would work only eight hours a day. It's, it's enough. Yeah it's more than enough." Interviewer: "And what would then change?" Interviewee: "Whatever time with their families." Interviewer: "And with the..." Interviewee: "Then they have to hire some more people. Yeah, and that's more expensive for them."
Foreign Workers		Inductive		
	Barrier between foreigners and Icelandic people	Inductive	Interviewee describes the barriers between foreign and Icelandic inhabitants in the communities.	Interviewee: "Sometimes in the summer, I don't know, more than 20 for sure. I don't really know. But they told me that they don't want to be part of the community. They just want to work as a Portuguese, I know a lot of Portuguese people that go to the US or France, it's the same. They just go to a Portuguese community, work over there and don't, are not part of other community except the ones that they are used to."
	Barrier between foreigners and Icelandic people - attempts to inclusion	Inductive	Interviewee describes attempt to inclusion of the foreign workers in the community.	Interviewer: "Are there like any initiatives to try to keep them like 'in here'?" Interviewee: "Well, that is we have been putting a lot of effort into getting them to learn Icelandic, that's one thing. And we had certain, um, you know, cultural events where we urge them to..."
	Connections	Inductive	Interviewee describes (the importance of) having a personal network in the community.	Interviewee: "I think it's just because it's such a small town, we just know each other that closely. Yeah, I think that's the thing. Either just family. It's like this, is, like my friends family in this village is huge. It's a huge portion of the whole village. So the relationships and how we know each other is just to a point where we are pretty good friends. So I know everyone personally."
	Contributing to the community	Deductive	Interviewee mentions (the difficulties) of an inhabitant participating in the community.	See example under 'Working Conditions'.
	Finances	Deductive	Interviewee mentions finances.	See example under 'Labor Diversity'.
	Finances - only buying necessities / saving	Inductive	Interviewee mentions (someone) only buying necessities.	Interviewee: "Yeah, yeah, yeah. So they don't really like because they are saving money and they are trying to send it back home usually to their family. They're, they are not wasting like they are really...."

				Interviewer: "They like work, work, work, work."
				Interviewee: "Oh yeah, 12 hours a day every day of the week. And they don't spend unless like they are not wasting money. So it's not benefiting the companies like in a huge way. It's just they only buy the necessities. Yes."
	Fishing industry; labor division	Inductive	Interviewee describes the division in fisheries between manual jobs and office jobs.	See example under 'Working Conditions'.
	Foreign workers	Inductive	Interviewee mentions foreign workers.	Interviewee: "And stuff like driving the trucks and operating maybe the crane and equipment, forklifts, everything. That's kind of convenient. It's occupied by Icelandic people running the fish smelting factory, for example. Yeah. But everything that involves hard labor is, is manned by foreign people. But that's like 80% of the whole company that do the hard labor."
	Foreign workers; dependence	Inductive	Interviewee mentions the dependence of the community on foreign workers.	Interviewee: "And they don't really, they're not in the way, we don't really feel them that much. They kind of stay away or they stay at work." Interviewer: "Yeah. And if they wouldn't be here then the fishing industry would also, you know." Interviewee: "Yeah, definitely finding people to do this kind of work for this kind of salary probably would..."
	Integration	Inductive	Stakeholders describes the (lack of) integration of foreign workers in the community.	Interviewee: "You know, foreigners may get frustrated with the Icelanders and misinterpret them and say 'oh no they're racist'. 'Oh no, they don't like us.' I don't think it's that."
	Labor diversity - high educated jobs	Inductive	Interviewee describes the (importance of) diversity of high educated jobs for communities.	See example under 'Labor Diversity'.
	Labor quality	Deductive	Interviewee mentions the quality of a certain job or sector.	See example under 'Working Conditions'.
	Migration	Inductive	Interviewee mentions internal and external migration of Icelandic inhabitants.	Interviewee: "But I always told her, like in the future, when I get old, I probably will want to and my kids have left. I will probably want to migrate into an apartment building somewhere in Akureyri. Same with my parents. They are considering the same thing, just wanting to be close to all the necessities that you need when you're older. Yeah."
	Seasonality	Inductive	Interviewee mentions (the influence of) seasonality in (or on) the community.	See example under 'Seasonality'.
	Tension in the village	Inductive	Interviewee mentions tension in the village between inhabitants.	Interviewee: "Or just you know, I think it's really important that we open up the east part of Iceland just that we be we will be able to travel through tunnels just to Neskaupstaður, and you know where the main hospital is of course and so it is just

				that we, it's really hard that we need to fight about it, you know, between us. Yeah. Because we need everybody has the their own, their own aspect on it."
	Tourism industry jobs	Inductive	Interviewee mentions jobs in the tourism industry.	See example under 'Seasonality'.
Infrastructure		Inductive		
	Aging population	Inductive	Interviewee mentions the aging of population in the community.	Interviewer: "It's really bad. But yeah. How is the financial situation here? Are most people doing financially well? Or is it like..?" Interviewee: "I think most people are doing financially well because, we have, uh, we have actually we have maybe a lot of, uh, quota owners who are in little ships, little boats, and those people have quota and they have a good salary on that. Just working two, three months a year and, and getting by like that. And maybe it's also because we are older community, so not that much struggling." Interviewer: "Because everyone has their pension income." Interviewee: "Yeah, yeah, yeah."
	Dangers	Inductive	Interviewee mentions a danger that the community can run, has run or runs into.	Interviewee: "So that's been the second thing, the weather. The tunnel. Are we going to get the tunnel or not? I mean, we had so many days that the Fjarðarheiði was closed when the avalanche was happening, the avalanche threats. And what do we do if there's an emergency here?"
	Elderly	Inductive	Interviewee mentions elderly (in the community).	Interviewee: "We were discussing this for many years that what we need in this village is small flats on one level with the cars next to it where people can drive into the grass, walk in the living room, because every house in this village is a two, three story house with an incline with the stairs."
	Future	Inductive	Interviewee describes the possible, wanted or needed future for the community.	Interviewee: "We have a lot. We had, we had very many cruise ships last year and we are seeing far more cruise ships arriving this year. And that is something that I believe will continue. Okay. Not to raise rates as much as it has done through the last two years, but I don't believe it will go down."
	Geographical location	Inductive	Interviewee mentions the geographical location of the community.	Interviewee: "The, we are far away from the other place. Far away from Reykjavík. Far away from Akureyri. Not so far away from Egilsstaðir, but alone in, it's a long way to go. We cannot change that."
	Housing	Deductive	Interviewee mentions the topic of housing in the community.	See example under 'Seasonality'.
	Infrastructure	Inductive	Interviewee mentions one of the elements of	Interviewee: "But one of the ways to to to create more possibilities in Seyðisfjörður is to have more secure travel connection

			infrastructure in the community.	or transport connection between Seyðisfjörður and the other areas."
	Interconnectedness	Inductive	Interviewee mentions the interconnectedness of inhabitants and communities.	Interviewee: "Or just you know, I think it's really important that we open up the east part of Iceland just that we be we will be able to travel through tunnels just to Neskaupstaður, and you know where the main hospital is of course and so it is just that we, it's really hard that we need to fight about it, you know, between us."
	Labor - arranged housing	Inductive	Interviewee mentions arranged housing for some employees in the community.	Interviewee: "And, but if you, if one, the factory is in use, the fish factory, then you need more people... Then you don't get, they get, don't get the people here. Yeah. There is people from here that works, but it's not enough. So they have bought houses here." Interviewer: "Here in the...?" Interviewee: "Yeah. And and it's like yeah. Home for the that people. Yeah. But no one in this house is in between."
	Labor, remote work	Inductive	Interviewee mentions remote (online) labor.	See example under 'Working Conditions'.
	Labor, work in another town	Inductive	Interviewee mentions work that involves commuting.	See example under 'Working Conditions'.
	Labor, work next to home	Inductive	Interviewee mentions work that is in the same town as the inhabitants lives in.	See example under 'Working Conditions'.
	Road closure	Inductive	Interviewee mentions the closing of a road (due to weather).	Interviewee: "And also the road here, before that... is.. it can be very dangerous because of, uh stones falling from the cliffs there and also from avalanches. And in the wintertime, sometimes this road is full of avalanches. Takes some days to open it again. Yeah. So this is a dangerous road."
	Summer houses	Inductive	Interviewee mentions (the consequences of) summer houses in the community.	Interviewee: "We have also a lack of housing here, but it's a problem that can be actually fixed if there was a willing because we have here around 10, 10, 11, 12 houses who are now like summer houses and only used for summer." Interviewer: "Yeah." Interviewee: "So if we could get that houses on the market, we would be better off. Yeah. You know, the big house in the middle of the town."
	Tunnel	Inductive	Interviewee mentions (the benefits and caveats of) a tunnel.	Interviewee: "So that's been the second thing, the weather. The tunnel. Are we going to get the tunnel or not? I mean, we had so many days that the Fjarðarheiði was closed when the avalanche was happening, the avalanche threats. And what do we do if there's an emergency here?"
	Winter	Inductive	Interviewee mentions the (influence of) winter.	See example under 'Seasonality'

Individualism and Togetherness		Inductive		
	Collaboration	Inductive	Interviewee describes collaboration within communities.	Interviewee: "Yeah, yeah. And nobody took over, so it's kind of dying down again. But we thought at the time this was necessary. This is like 12 years ago or ten years ago, so it's not been going better since then."
	Community	Deductive	Interviewee describes (something that goes on in) the community.	Interviewee: "Everyone knows. So. And you can see that it's a small place, so everyone just know each other for years and years. And even me, I'm here for two years, and now I, well, I can call friends because I know if a lot of these people because I know if I'm going to need them, I will need them for sure. And the same. So it's important people here to count in each other because in the winter it's really tough to live here and sometimes shit happens and people have to leave each other and help each other."
	Finances	Deductive	Interviewee mentions finances.	See example under 'Labor Diversity'.
	Importance of the individual	Inductive	Interviewee mentions that importance that inhabitants have for/in the community.	Interviewee: "I think it's changed after we got this few and, and everyone counts a lot. It's just, every people counts, every every... I don't know how to explain it. It's just... Example, when I moved back home I got hugs all over the place. I went to the store and people were so happy to get me back. Yeah. And and every matter, every people matter so much because when we are so few, there is, there's, I don't know. I think it's changed for the better that way."
	Independence	Inductive	Interviewee describes the (needed) independence of inhabitants in a community.	Interviewee: "There is, I have found, if you're, if you're, if you don't feel like working too much or working very hard, you don't get much sympathy." Interviewer: "No, it's like." Interviewee: "It's your own fault, if your situation is, is, is your own fault, you get very little understanding. But if you truly need help, you will get." Interviewer: "Every one..." Interviewee: "But as soon as you in any way, you know, due to your own fault..." Interviewer: "Yeah." Interviewee: "And there is very little tolerance towards that."
	Intellectual peers	Inductive	Interviewee mentions (the importance of having) intellectual peers in the community.	Interviewee: "It used to be in the old days that the priest, the doctor and the schoolmaster, they were friends. And then there was the rest. But now you need to. Yeah, you need to. You need to

				create the atmosphere. Yeah. To find your intellectual peers. Yeah. To, yeah.”
	Interconnectedness	Inductive	Interviewee mentions the interconnectedness of inhabitants and communities.	See example under 'Infrastructure'.
	Interconnectedness - disadvantages	Inductive	Interviewee mentions the disadvantages that interconnectedness can have.	Interviewee: “It's. This is my team and this is his team. Yeah, but. But that's just how it is in small villages. And you are friends, or no friends.” Interviewer: “Yeah. Yeah.” Interviewee: “And sometimes they don't know why. Because maybe it is because his grandfather and his grandfathers, they were not friends, haha.”
	Interests and agreements	Inductive	Interviewee mentions interests and agreements that people inside the community have.	Interviewee: “Pay attention to what I have to say. Stop just cutting me out just because I don't agree with you. It's not the end of the world if we can't agree with each other, you know? Yeah. It's like you either are for something or 'no'. And don't shove it up my face that I have to agree with you? Like, for example, the whole thing with the what's it called? The salmon farming, whether, whether we're going to have that. So there's a divide there. And it's just like, wow.”
	Leadership	Inductive	Interviewee mentions (the importance of) leadership.	Interviewee: “You… If you, if you're only going to sit, and tell people that there's not enough health service, that you need more teachers, that the roads are bad, then people, they get, they get the, the, the image that they live in an absolutely horrible place. Yeah. And from the outside, it looks like a horrible place. So nobody wants to live there and nobody wants to move there. Yeah. So I think it's a matter of... Interviewer: “You know, having the...” Interviewee: “And those who are in charge, they need to have the ability to point people towards those things that are really going on. Yeah. And when people are saying within reason, of course. Within reason.” Interviewer: “Yeah. Yeah.” Interviewee: “So I think that's the. I think that's the that's the most important thing. Okay?”
	Opinionatedness	Inductive	Interviewee mentions (effects of) opinionatedness of inhabitants of the community.	Interviewer: “Having an opinion also helps in the end because ,if no one has an opinion at all, then nothing changes and everything will just remain the same. And yeah, yeah.”

				Interviewee: "Many people say that we have a big difference between politics. Yeah, the politics can be very hard here. Yeah. So it's the left and the right, so it can be a big fight when we are. Yeah, we have elections. So I think the only thing I would really want to change is that the politics would go away because politic sometimes ruins everything. Yeah. So that's my opinion."
	Providing help	Deductive	Interviewee mentions (the amount of) help given to inhabitants within the community (or the lack of).	Interviewee: "You can almost guarantee that you'll get help from someone. If you need something borrowed or something breaks down, your car is out of electricity. Within minutes you will have something else. And that's because we have the Facebook website for the community and you post there and somebody will answer."
	Tension between locals and fishing	Inductive	Interviewee mentions tension between the local community and the fishing industry.	Interviewee: "And don't shove it up my face that I have to agree with you? Like, for example, the whole thing with the what's it called? The salmon farming, whether, whether we're going to have that. So there's a divide there. And it's just like, wow."
	Tension between tourism and fishing	Inductive	Interviewee mentions tension between the tourism industry and the fishing industry.	Interviewee: "I mean, if the ferry still came, you'd have a little bit. Yeah, but without the tourists on the ferry, they don't spend the money. The craftspeople. What would they have? Yeah. And right now there's a big fight going on because of the salmon farming. I'm sure you probably, I don't know who heard about it. Yeah, but. Yeah, yeah, but they want to put salmon farms in their fjord. Yeah. And I, I've not been here long enough to form to have an informed... But my first thing is 'no'. Yeah." Interviewer: "Because it would be horrible for all the tourists, but on the other hand it would help the fishing."
	Tension between tourism and locals	Inductive	Interviewee mentions tension between the local community and the tourism industry.	Interviewee: "It would be it would be hard. It's hard even if you live here. Again, see, I can tie it to my shop. Yeah. One of the women that works there, she's not from here. She was renting a place over the white building over there. Yeah, but the people that own it want to give it for tourists in the summer. So she's losing it at the end of May."
	Tension in the village	Inductive	Interviewee mentions tension in the village between inhabitants.	See example under 'Foreign Workers'.
	Togetherness	Deductive	Interviewee mentions the amount of togetherness in the community.	Interviewee: "So the only way to change that is just to stop thinking the worst of people and start putting yourself in other people's shoes. Try to understand what they might feel. Because I bet you some of these foreigners, if they were back home and they had foreigners in their country. How would they feel? Yeah. I just

				wish that they would just put their pride aside, both sides and just. Hey, okay. And just, you know. Yeah. At the end of the day, we're all human. At the end of the day, you bleed, I bleed. You hurt, I hurt. You cry. I cry. You get sick. I get sick. Yeah." Interviewer: "Yeah." Interviewee: "There's only one race. The human race. Yeah. If you put those boundaries aside and forget for a moment that this was an Icelander, this was a French guy, Italian or whatever. Come on."
Leadership and Agency		Inductive		
	Business settlement environment	Inductive	Interviewee mentions the settlement environment for businesses in the community.	See example under 'Labor Diversity'.
	Contributing to the community	Deductive	Interviewee mentions (the difficulties) of an inhabitant participating in the community	See example under 'Working Conditions'.
	Contribution from municipality for community	Inductive	Interviewee mentions the contribution from the municipality in order to improve or maintain the community.	Interviewee: "Well, actually, the Rif field station started in 2014, and it was like the municipality and the government wanted to be the nature center from the northeast in Húsavik because this is an important place for biodiversity and Arctic research and because population was decreasing a lot, as you already know."
	Contribution labor in community	Inductive	Interviewee mentions the ways that labor (or employers) (does not) benefit the community.	Interviewee: "Yeah. And even though it is paid. It is low. Yeah, because we use most of the money to build up... most of the money go into the company itself to build up. And even though we pay a small amount to each shareholder, most of the amount going to the company here on the place and it use it to, you can say give it to the sports here and the youngsters to the elder home or to the school or to build up something for the people in the place. Yeah. That's how it works. And because of this, there is not so much money going out. Yeah, because the ownership is all here and we can use it here. And there is not so much... we can say not so much. Well, the shareholders is not knocking at the door 'we want more'. Yeah, it work like that."
	Coping with adversities	Inductive	Interviewee mentions the way the individuals or the community copes with adversities.	Interviewee: "Yes, like here. After the mudslide, we had support from the government just to rebuild the economy, rebuild the the, the companies that got damaged during this, and, so we had this few entrepreneurs that really wanted to start up some new small companies like we have this. A print workshop that is on for like an artist print workshop. There

				are, they make like, prints, with silk and more. It's just it's not print with…" Interviewer: "No, no no. Yes." Interviewee: "And maybe, posters and things like that. Yeah. And there are few on that and it's connected to the Skaftell, and we have people working on the technical museum to rebuild that. There are few jobs that have been established there just to rebuild the a new new museum. And they are all very well educated. You know, who are working there."
	Creativity	Inductive	Interviewee mentions creativity (of inhabitants) (needed) within the community.	See example under 'Labor Diversity'.
	Entrepreneurship	Inductive	Interviewee mentions (the role of) entrepreneurship for communities.	See example under 'Labor Diversity".
	Future	Inductive	Interviewee describes the possible, wanted or needed future for the community.	See example under 'Infrastructure'.
	Identity	Inductive	Interviewee describes the identity of the community, or the shared identity of the inhabitants of the community.	Interviewee: ": So it's almost in the back of people's heads. Oh, yeah, it used to be… No, we still have the factories here, but it's not the first thing that people think about, I think, these days."
	Labor lack of opportunity	Inductive	Interviewee mentions a lack of opportunity in labor for the community.	See example under 'Labor Diversity'.
	Labor, creation of new labor	Inductive	Interviewee mentions (a way of) creating new labor in the community.	See example under 'Labor Diversity'.
	Leadership	Inductive	Interviewee mentions (the importance of) leadership.	See example under 'Individualism and Togetherness'.
	Optimism	Inductive	Interviewee mentions an optimistic attitude (within the community).	Interviewee: "But even though terrible things happen, that tells you or tells me that this is a community or this is an area that that you have to secure into the future because people loves to live there."
	Ownership	Inductive	Interviewee mentions either the factual ownership of a company, service or amenity or the more subjective and general feelings of inhabitants of ownership of things in the community.	Interviewee: "And the owner, or part owner. I think it's a partnership. I'm not sure what the status is now, but one of the owners of Hotel Aldan, he lives in Reykjavík or Denmark? I don't know. I think Reykjavík. But then he comes for the season when the restaurant and the sushi, both restaurants and the hotel are open. I think he owns', or part owns all three. Sushi restaurant. Hotel Aldan. The Nordic Bistro, whatever it's called now, and the hotel."
	Pessimism	Inductive	Interviewee mentions a pessimistic attitude (within the community).	Interviewee: "We're stuck. We had an incident where someone in town had an accident. The road was closed and a helicopter had to fly in. But it's just. I don't know. I'm weary about the weather, what might happen. And I'm also wary about the pollution from the ships and

				from all that traffic coming in from tourists. Yeah."
	Priorities	Inductive	Interviewee mentions (the need to have) priorities in the community regarding labor sectors.	Interviewee: "It's like the it's like a it's like an atmosphere inside of a company. I mean, you need to create it. It doesn't just happen. You need to set your priorities and so forth. And I think I think that is very important that those who are in charge of the different communities, they pay very close attention to what they are going to pay attention to." Interviewer: "Yeah." Interviewee: "What discussion are they going to partake in? Yeah. You need to be very selective."
	Survival	Inductive	Interviewee mentions the survival of either the community or an individual in the community, or how this survival has been or can be achieved.	See example under 'Labor Diversity'.
	Too much	Inductive	Interviewee mentions negative spillover effects from a certain source of labor to be dominant.	See example under 'Seasonality'.
	Tourism industry benefitting	Inductive	Interviewee mentions the way inhabitants of the community (do not) benefit from the tourism industry.	Interviewee: "Yeah, I'm not a fan of it. I think it's great, but I don't benefit from it. I don't think the everyday people that live here benefit. The town may benefit, but I'm not, I don't know how. Like the municipality, okay. If you are, why don't you fix the roads and the potholes? Why don't you put up more lights?"
	Tourism industry opportunities	Inductive	Interviewee mentions the opportunities the community (does not) have in tourism.	Interviewee: "So we could. We really would like to use it better and we will get more tourists to come here to stay longer and all that. So, but there are people here that believes in in the potential of Seyðisfjördur and they are building up like small um, companies, like a boat here is opened. Young, two young brothers who started that. And there is two young guys who are really interested in, in winter tourism and they are they are focusing on like skiing, mountaineering and, you know, hiking. And we have also a young couple here that are doing the climbing." Interviewer: "The...?" Interviewee "Hill climbing, climbing in the in the cliffs." Interviewer: "Oh, the hand climbing." Interviewee: "Yeah, yeah, yeah. They have put up some."
	Tourism industry who is responsible	Inductive	Interviewee mentions who should or who is (not) responsible for the tourism industry in the community.	Interviewee: "So in my opinion, I think, in my opinion, the hotel should be, the people are running it now or we have we have had a lot of people running this

				hotel. But I think the, the hotel would need to be the center of tourism." Interviewer: "Yeah." Interviewee: "Because I'm not agreeing with many people that that the town should do it itself. Of course, the town should make the right platform for everybody to work in this direction. But it's in my opinion, the town is not supposed to be in tourism. No, you need something else. And and hotel is the biggest, have the biggest potential to take in tourists. So so I think the hotel should be in center. And then you have the farm businesses and everybody who has interest in tourism, they should work more together. Yeah, at least I would do that, if I was in the hotel business. Yeah."
	Unhappiness with politics	Inductive	Interviewee mentions unhappiness with the political situation (in the community).	Interviewee: "Sitting back and watching. I'm always questioning whether is anybody in Mulaþing, think, is anybody in the council? Are any of these business owners really thinking ahead?" Interviewer: "Yeah." Interviewee: "You know, they talk that they want to grow the town. They want to bring a tunnel. They want to bring housing, more businesses, more employment opportunities. But I'm like, how? And who is your target? Because I don't think that is clear. Yeah. From what I see, as trying to observe and not take sides, trying to listen to both sides, but it's like, 'what are you doing?'"
Index of Social Cohesion: Community Quality of Life		Deductive		
	Activities and events	Deductive	Interviewee describes activities and events in the community.	Interviewee: "But when you live here and get involved, there is a lot to do. Like there's a lady that teaches yoga twice a week and, but now she's on maternity leave, and there's now we have a dance school here in the village and people the kids can go to dance school, they can go to the football school. There's so much for them to do. There's like so many activities, like considering how small we are. So if you like, in my opinion, it's a nice place to be. Yeah."
	Aluminium industry - working conditions	Inductive	Interviewee describes ((the consequences of) working in) the aluminium industry.	See example under 'Working Conditions'.
	Art	Inductive	Interviewee mentions (the role of) art in the community.	See example under 'Diversity of Labor'.
	Associations and clubs	Deductive	Interviewee describes associations and clubs in the community.	Interviewee: "I mean, we also have like, what do you say, Björgunarsveitin. Like the rescue team. Yeah, they, they they

				have a lot of people in that. We have a golf, people play golf. So it's like, there's a golf club, that, like you can be in."
	Community	Deductive	Interviewee describes (something that goes on in) the community.	See example under 'Individualism and Togetherness'.
	Cultural life	Inductive	Interviewee mentions the cultural life of the community.	See example under 'Seasonality'.
	Dangers	Inductive	Interviewee mentions a danger that the community can run, has run or runs into.	See example under 'Infrastructure'.
	Education	Deductive	Interviewee mentions (the role of) education.	See example under 'Labor Diversity'.
	Financial, cost of living	Inductive	Interviewee mentions the cost of living either inside or outside of the community.	Interviewee: "But what pisses me off, they always say Iceland, 'Iceland is horrible', 'you can't live in Iceland' and 'there's no work in Iceland' and 'it's too expensive to live in Iceland'. But that's not reality." Interviewer: "It's just Reykjavík. Yeah." Interviewee: "It's like they don't know that the rest of the country exists. Yeah."
	Fishing industry; working conditions	Inductive	Interviewee describes ((the consequences of) working in) the fishing industry.	See example under 'Working Conditions'.
	Housing	Deductive	Interviewee mentions the topic of housing in the community.	See example under 'Seasonality'.
	Human settlement environment	Deductive	Interviewee describes the settlement environment of the community for individuals or families.	Interviewee: "Better life, cheaper housing, that it's more quiet. It's just relaxing and it's they just don't like the city life. And also, I think they only got an education because they were kind of pressed to it. There's a lot of 'you need to get an education in school'."
	Human settlement environment - reason not to come back	Inductive	Interviewee mentions a reason (for children) not to come back to the community after moving away.	Interviewee: "Because if you are 25 and you want to buy a house in Vopnafjörður, you have to buy a house that was built 30, 40 years ago and need maintenance and we need houses for young people that want to live in Vopnafjörður, so they can buy just a small, small, one bedroom, two bedroom. Not a big old house."
	Image	Inductive	Interviewee describes the image that the community has to the outside.	Interviewee: "Because you have more shops and and bars and other things that are open during the summer time and there is a lot of work for young people and others who like to work during summer time in Seyðisfjorður, much more than it was before, even though the fishing industry was was great and a lot of people came to work in this industry, and it's still going like that. But the tourist industry has added a lot there, and and it has also have has also the effect the that the. Okay. That's just what I'm thinking is that that those who are living there decide to, well, 'we like to look good', 'the

				village has to look good'. Yeah, it is. We want our visitors to...."
	Infrastructure	Inductive	Interviewee mentions one of the elements of infrastructure in the community.	See example under 'Infrastructure'.
	Labor - multiple jobs	Inductive	Interviewee mentions having or needing to have multiple jobs to get by.	See example under 'Labor Diversity'.
	Labor diversity	Deductive	Interviewee describes the (importance of) diversity of labor for communities.	See example under 'Labor Diversity'.
	Labor diversity - high educated jobs	Inductive	Interviewee describes the (importance of) diversity of high educated jobs for communities.	See example under 'Labor Diversity'.
	Labor lack of opportunity	Inductive	Interviewee mentions a lack of opportunity in labor for the community.	See example under 'Labor Diversity'.
	Labor quality	Deductive	Interviewee mentions the quality of a certain job or sector.	See example under 'Working Conditions'.
	Labor security	Inductive	Interviewee mentions the (perceived) job security of jobs in the community.	Interviewee: "But it has already started before because the town was not enough big to keep up the possibility to have the shops and the people who are owner of the shops could live on it. So most of the shops was already dead, yeah."
	Labor shortage	Inductive	Interviewee mentions (the lack of) a shortage of labor in the community.	Interviewee: "Yes, we... if we need something, it is more people. Yeah, because like, like this restaurant. Very difficult to have people to work here. Yeah. About the summertime."
	Mismatch between education and job	Inductive	Interviewee mentions a mismatch in the community of people doing work they were not educated for.	See example under 'Labor Diversity'.
	Services and stores	Deductive	Interviewee mentions services or stores.	See example under 'Seasonality'.
	Tourism industry benefitting	Inductive	Interviewee mentions the way inhabitants of the community (do not) benefit from the tourism industry.	See example under 'Leadership and Agency'.
	Tourism industry jobs	Inductive	Interviewee mentions jobs in the tourism industry.	See example under 'Seasonality'.
	Work-life balance	Inductive	Interviewee describes work-life balance (of a certain sector) (of a certain group of people) in the community.	See example under 'Working Conditions'.
Index of Social Cohesion: Demographic Stability		Deductive		
	Aging population	Inductive	Interviewee mentions the aging of population in the community.	See example under 'Infrastructure'.
	Children	Inductive	Interviewee mentions (the role of) children (in the community).	Interviewer: "And the children. They leave school at age 16, 18, and they go to Höfn or Egilsstaðir?" Interviewee: "They go wherever. They go to Reykjavík, Akureyri. There is a tendency

				for kids from the same village to go to the same schools and there is a difference what place is trendy at each time. From here, for a number of years everyone went to Akureyri. Uh, then for a few years, everyone went to Egilsstaðir, then maybe to Reykjavík. My kids went to Akureyri. So it differs. Yeah.”
	Children - maintaining	Inductive	Interviewee mentions the difficulty of maintaining children in the community.	Interviewer: “Oh wow, yeah, that's a smart way of keeping the younger people here, because in some other places you heard that once the young people leave that they don't come back.” Interviewee: “Yeah, Yeah. But of course, when they finish school. Yeah. Then maybe they don't work anymore with us. Learn something else. But we try to support young people if they want to learn this. It's called Sjávarútvegsfræði in Icelandic. It's the fishing industry in university. So we are very keen of taking people that are educated themselves in this business. Yeah, so we try as long as we can to have job, jobs for them.”
	Community - good place to raise children	Inductive	Interviewee mentions that the community is a good place to raise children (or not).	Interviewee: “Yeah. I think it's people who have children, they are happy. Yeah. And if you are alone and you're not, I don't know, maybe you want more... a place to meet the people.”
	Elderly	Inductive	Interviewee mentions elderly (in the community).	See example under 'Infrastructure'.
	Family	Inductive	Interviewee mentions (the role of) family (in the community).	Interviewee: “So we've been trying. Sometimes they maybe come to the bar or, or dance or something like that if it's free, but not....” Interviewer: “If it's any money, then they won't go.” Interviewee: “So it's not because they're foreigners or nothing like that. It's just this kind of people, they're just, you know, they just it's just they are focusing on this peak time together, money. And they don't want to spend anything else. So. So I get that. But if people come with families, they're just, and they're going to school, the kids are going to school and stuff like that. Then we get them to the community because then they just have to.”
	Foreign workers	Inductive	Interviewee mentions foreign workers.	See example under 'Foreign Workers'.
	Homesickness	Inductive	Interviewee mentions homesickness of people that left the community.	Interviewee: “I didn't expect that my daughter would return. She went away. She found a husband in Denmark and they lived in Copenhagen. And when they got the first child, they came here. They just wanted to be with Grandma was and Grandpa. Yeah. And just, you know, I think, yeah. People come back when they

				were having children. Yeah. Because they really remember how it was."
	Housing	Deductive	Interviewee mentions the topic of housing in the community.	See example under 'Seasonality'.
	Human settlement environment	Deductive	Interviewee describes the settlement environment of the community for individuals or families.	See example under 'Index of Social Cohesion: Community Quality of Life'.
	Human settlement environment - reason not to come back	Inductive	Interviewee mentions a reason (for children) not to come back to the community after moving away.	See example under 'Index of Social Cohesion: Community Quality of Life.
	Infrastructure	Inductive	Interviewee mentions one of the elements of infrastructure in the community.	See example under 'Infrastructure'.
	Labor lack of opportunity	Inductive	Interviewee mentions a lack of opportunity in labor for the community.	See example under 'Labor Diversity'.
	Migration	Inductive	Interviewee mentions internal and external migration of Icelandic inhabitants.	See example under 'Foreign Workers'.
	Mismatch between education and job	Inductive	Interviewee mentions a mismatch in the community of people doing work they were not educated for.	See example under 'Labor Diversity'.
	Population increase or decrease	Deductive	Interviewee mentions an increase or decrease in population.	See example under 'Seasonality'.
	Reinforcement cycle	Inductive	Interviewee describes (part of) a positive or negative reinforcement cycle that the community is in.	See example under 'Labor Diversity'.
	Seasonality	Inductive	Interviewee mentions (the influence of) seasonality in (or on) the community.	See example under 'Seasonality'.
	Summer houses	Inductive	Interviewee mentions (the consequences of) summer houses in the community.	See example under 'Infrastructure'.
Index of Social Cohesion: Economic Inclusion		Deductive		
	Aluminium industry - working conditions	Inductive	Interviewee describes ((the consequences of) working in) the aluminium industry.	See example under 'Working Conditions'.
	Aluminium industry	Deductive	Interviewee describes the aluminium industry.	See example under 'Labor Diversity'.
	Aluminium industry importance	Inductive	Interviewee describes the importance of the aluminium industry on the community.	See example under 'Labor Diversity'.
	Entrepreneurship	Inductive	Interviewee mentions (the role of) entrepreneurship for communities.	See example under 'Labor Diversity".
	Finances	Deductive	Interviewee mentions finances.	See example under 'Labor Diversity'.
	Finances - finding alternatives	Inductive	Interviewee mentions (inhabitants) having to find	Interviewee: "But, um, my daughter and I, we go pick blueberries, we make jam, we

			alternatives to avoid the high cost of living.	save that. Um. My in-laws, the relative of the, of my in-laws has a farm. We may buy meat and everyone just divvies up like, okay, and we'll share this, freeze it. And you just try to, I mean, things are expensive. Gas is expensive, food is expensive. Cost of living is expensive. Going out to eat...” Interviewer: “Housing is expensive.” Interviewee: “Really expensive. Going out to eat, that's a treat. I mean, there's no way I'm going to go and. No, no, no.”
	Financial - luxuries	Inductive	Interviewee mentions financial luxuries.	Interviewee: “I don't really hear or feel anything like that. Most people are just like, you can almost just drive around the village and see the choices of cars and how their houses look. And that kind of answers the question. Everybody has nice car and doing what they love. They have like a kayak and bicycle. So it kind of looks like they're just. But they do work a lot.” Interviewer: “Yeah, it's like a house and car and another one. And then the houses here are like, boom. And then there's just a ship, a car, a thing.” Interviewee: “That's kind of a clue to like. I wouldn't say that they are like, they don't own everything, but at least it's within affordable, you know, you can pay this stuff and you can actually have a decent life and your kids can do whatever they want.”
	Financial worries	Inductive	Interviewee describes (a lack of) financial worries of itself or others in the community	See example under 'Seasonality'.
	Financial, cost of living	Inductive	Interviewee mentions the cost of living either inside or outside of the community.	See example under 'Index of Social Cohesion: Community Quality of Life'.
	Fishing industry	Deductive	Interviewee mentions the fishing industry.	See example under 'Labor Diversity'.
	Fishing industry, importance	Inductive	Interviewee mentions the role and importance of the fishing industry in the community.	See example under 'Labor Diversity'.
	Fishing industry; working conditions	Inductive	Interviewee describes ((the consequences of) working in) the fishing industry.	See example under 'Working Conditions'.
	Labor	Deductive	Interviewee mentions labor (in the community).	Interviewee: “Yeah, but it's just a project we have had for many years and I won't change it, at least when, while I'm here. We always give them job if they want because we know they get a much more money from us than the community working, working, mowing lawns, lawns and yeah, so. But they are of course they can choose if they want to work for us and but usually they all come.”

	Labor - multiple jobs	Inductive	Interviewee mentions having or needing to have multiple jobs to get by.	See example under 'Labor Diversity'.
	Labor lack of opportunity	Inductive	Interviewee mentions a lack of opportunity in labor for the community.	See example under 'Labor Diversity'.
	Labor security	Inductive	Interviewee mentions the (perceived) job security of jobs in the community.	See example under 'Index of Social Cohesion: Community Quality of Life'.
	Labor shortage	Inductive	Interviewee mentions (the lack of) a shortage of labor in the community.	See example under 'Index of Social Cohesion: Community Quality of Life'.
	Labor, creation of new labor	Inductive	Interviewee mentions (a way of) creating new labor in the community.	See example under 'Labor Diversity'.
	Mismatch between education and job	Inductive	Interviewee mentions a mismatch in the community of people doing work they were not educated for.	See example under 'Labor Diversity'.
	Seasonality	Inductive	Interviewee mentions (the influence of) seasonality in (or on) the community.	See example under 'Seasonality'.
	Tension between tourism and fishing	Inductive	Interviewee mentions tension between the tourism industry and the fishing industry.	See example under 'Individualism and Togetherness'.
	Tourism industry	Deductive	Interviewee mentions the tourism industry.	See example under Labor Diversity.
	Tourism industry dependence and importance	Inductive	Interviewee mentions the role and importance of the aluminium industry in the community.	See example under 'Labor Diversity'.
	Tourism industry jobs	Inductive	Interviewee mentions jobs in the tourism industry.	See example under 'Seasonality'.
Index of Social Cohesion: Individual Quality of Life		Deductive		
	Adversity & unhappiness	Inductive	Interviewee mentions adversity or unhappiness (of inhabitants in the community).	Interviewee: "It was awful. I mean, last December, I think twice. Two ships, or a trawler got stuck here, the mountain was closed and the harbor master and his crew had to come to the store late at night when the store had already closed. The manager had to open so that they could get food, to take to the..." Interviewer: "Yeah." Interviewee: "Yeah. Okay. Empty our shelves. Why don't you?"
	Happiness & mental health	Deductive	Interviewee describes the happiness or mental health (of inhabitants) of the community	See example under 'Working Conditions'.
	Identity	Inductive	Interviewee describes the identity of the community, or the shared identity of the inhabitants of the community.	See example under 'Leadership and Agency'.

	Optimism	Inductive	Interviewee mentions an optimistic attitude (within the community).	See example under 'Leadership and Agency'.
	Pessimism	Inductive	Interviewee mentions a pessimistic attitude (within the community).	See example under 'Leadership and Agency'.
	Tension between locals and fishing	Inductive	Interviewee mentions tension between the local community and the fishing industry.	See example under 'Individualism and Togetherness'.
	Tension between tourism and fishing	Inductive	Interviewee mentions tension between the tourism industry and the fishing industry.	See example under 'Individualism and Togetherness'.
	Tension between tourism and locals	Inductive	Interviewee mentions tension between the local community and the tourism industry.	See example under 'Individualism and Togetherness'.
	Tension in the village	Inductive	Interviewee mentions tension in the village between inhabitants.	See example under 'Foreign Workers'.
	Too much	Inductive	Interviewee mentions negative spillover effects from a certain source of labor to be dominant.	See example under 'Seasonality'.
	Uncertainty	Inductive	Interviewee describes present or future uncertainty about the community.	Interviewee: "Well. Obviously with a town like Seyðisfjörður being this isolated, it's extremely unpredictable. I mean, any small change, another Covid, a bad fishing winter or something like can have an enormous effect. But I think without any disasters, we're obviously we're not going to have a big rise in population because we can't fit. But I think. Yeah. Barring any disasters, I think Seyðisfjörður is going to blossom through the next few years because, because of the tourism increase. Yeah. And, people sort of being more interested in, becoming more interested in the area outside of the south west corner and Reykjavík. Yeah. That is just, that area has become too crowded really."
Index of Social Cohesion: Social Capital		Deductive		
	Activities and events	Deductive	Interviewee describes activities and events in the community.	See example under 'Index of Social Cohesion: Community Quality of Life'.
	Associations and clubs	Deductive	Interviewee describes associations and clubs in the community.	See example under 'Index of Social Cohesion: Community Quality of Life'.
	Barrier between foreigners and Icelandic people	Inductive	Interviewee describes the barriers between foreign and Icelandic inhabitants in the communities.	See example under 'Foreign Workers'.
	Barrier between foreigners and Icelandic people - attempts to inclusion	Inductive	Interviewee describes attempt to inclusion of the foreign workers in the community.	See example under 'Foreign Workers'.

	Collaboration	Inductive	Interviewee describes collaboration within communities.	See example under 'Individualism and Togetherness'.
	Committees and boards	Inductive	Interviewee mentions committees or boards.	Interviewee: "We used to have a... Because of this problem we actually formed like a committee ten years ago, like 12 years ago, and some of my friends, so we would we used to take we called it Danslunefnd, which means the party committee. And we just collected some money, mostly through charity, like just asking people to contribute to the cause. And then we would host like a ball or dance maybe once, twice a year. Then we would take it off the fisherman's day. And host events that we do, all these things just to try to do some some events. Yeah. And every time people would just contribute some money and we put them into the bank and we own this. We did it for a few years, but then we just kind of got tired of it and nobody kind of took over."
	Community	Deductive	Interviewee describes (something that goes on in) the community.	See example under 'Individualism and Togetherness'.
	Contribution from municipality for community	Inductive	Interviewee mentions the contribution from the municipality in order to improve or maintain the community.	See example under 'Leadership and Agency'.
	Contribution labor in community	Inductive	Interviewee mentions the ways that labor (or employers) (does not) benefit the community.	See example under 'Leadership and Agency'.
	Entrepreneurship	Inductive	Interviewee mentions (the role of) entrepreneurship for communities.	See example under 'Labor Diversity".
	Integration	Inductive	Stakeholders describes the (lack of) integration of foreign workers in the community.	See example under 'Foreign Workers'.
	Opinionatedness	Inductive	Interviewee mentions (effects of) opinionatedness of inhabitants of the community.	See example under 'Individualism and Togetherness'.
	Unhappiness with politics	Inductive	Interviewee mentions unhappiness with the political situation (in the community).	See example under 'Leadership and Agency'.
	Volunteering	Deductive	Interviewee mentions volunteering of inhabitants of the community.	Interviewer: "Yeah, because there's no sports association, right? Or is there?" Interviewee: "There is, yes. It is called Ungmennafélagið Austri Raufarhöfn, but, in a couple of last, maybe ten years or so, we are because am in that... sport. I quit last year, but I've been on this side. We are mostly, we're mostly trying to get someone to, you know, work with children during the summer time. And we also pay the parents if they want to go, you know, to Kopasker or to Þorshöfn or

				Akureyri, maybe. So we use the money for that just to pay them to get something else elsewhere."
Index of Social Cohesion: Social Inclusion		Deductive		
	Barrier between foreigners and Icelandic people	Inductive	Interviewee describes the barriers between foreign and Icelandic inhabitants in the communities.	See example under 'Foreign Workers'.
	Barrier between foreigners and Icelandic people - attempts to inclusion	Inductive	Interviewee describes attempt to inclusion of the foreign workers in the community.	See example under 'Foreign Workers'.
	Community	Deductive	Interviewee describes (something that goes on in) the community.	See example under 'Individualism and Togetherness'.
	Connections	Inductive	Interviewee describes (the importance of) having a personal network in the community.	See example under 'Foreign Workers'.
	Importance of the individual	Inductive	Interviewee mentions that importance that inhabitants have for/in the community.	See example under 'Individualism and Togetherness'.
	Independence	Inductive	Interviewee describes the (needed) independence of inhabitants in a community.	See example under 'Individualism and Togetherness'.
	Integration	Inductive	Stakeholders describes the (lack of) integration of foreign workers in the community.	See example under 'Foreign Workers'.
	Interconnectedness	Inductive	Interviewee mentions the interconnectedness of inhabitants and communities.	See example under 'Infrastructure'.
	Interconnectedness - disadvantages	Inductive	Interviewee mentions the disadvantages that interconnectedness can have.	See example under 'Individualism and Togetherness'.
	Norms	Inductive	Interviewee mentions norms that people in the community have.	Interviewee: "And also, I think they only got an education because they were kind of pressed to it. There's a lot of 'you need to get an education in school'."
	Providing help	Deductive	Interviewee mentions (the amount of) help given to inhabitants within the community (or the lack of).	See example under 'Individualism and Togetherness'.
	Togetherness	Deductive	Interviewee mentions the amount of togetherness in the community.	See example under 'Individualism and Togetherness'.
Community: services, amenities and things to do		Inductive		
	Activities and events	Deductive	Interviewee describes activities and events in the community.	See example under 'Index of Social Cohesion: Community Quality of Life'.

	Art	Inductive	Interviewee mentions (the role of) art in the community.	See example under 'Diversity of Labor'.
	Associations and clubs	Deductive	Interviewee describes associations and clubs in the community.	See example under 'Index of Social Cohesion: Community Quality of Life'.
	Children	Inductive	Interviewee mentions (the role of) children (in the community).	See example under 'Index of Social Cohesion: Demographic Stability.
	Committees and boards	Inductive	Interviewee mentions committees or boards.	See example under 'Index of Social Cohesion: Social Capital'.
	Culture	Inductive	Interviewee describes (the role of) culture (in the community).	Interviewer: "And why isn't it here? Because there's too many different..."

Interviewee: "Difference of cultural differences, beliefs, political standpoints, I guess. And then you have the foreigners, and then you have the Icelanders. And what the foreigners fail to realize about Icelanders is that the Icelandic community is a tight knit, it's a... they're introverts. They it's such a young country that's been exposed to the outside world from 2008 that, to have this influx of foreigners come in, I can understand that they might be apprehensive. Like, 'who are you?'." |
	Cultural life	Inductive	Interviewee mentions the cultural life of the community.	See example under 'Seasonality'.
	Elderly	Inductive	Interviewee mentions elderly (in the community).	See example under 'Infrastructure'.
	Ownership	Inductive	Interviewee mentions either the factual ownership of a company, service or amenity or the more subjective and general feelings of inhabitants of ownership of things in the community.	See example under 'Leadership and Agency'.
	Resources	Inductive	Interviewee mentions the resources that the community (does not) have.	See example under 'Labor Diversity'.
	Seasonality	Inductive	Interviewee mentions (the influence of) seasonality in (or on) the community.	See example under 'Seasonality'.
	Services and stores	Deductive	Interviewee mentions services or stores.	See example under 'Seasonality'.
	Services and stores - decline / lack of	Inductive	Interviewee mentions a decline or lack of services or stores.	See example under 'Seasonality'.
	Services and stores - growth / availability	Inductive	Interviewee mentions a growth or availability of services or stores.	See example under 'Seasonality'.
	Tourism industry benefitting	Inductive	Interviewee mentions the way inhabitants of the community (do not) benefit from the tourism industry.	See example under 'Leadership and Agency'.
Community: (subjective) atmosphere and image		Inductive		
	Adversity and unhappiness	Inductive	Interviewee mentions adversity or unhappiness (of	Interviewee: "I can compare it a little bit like, um, these birds or the plants because

				they have to, to live a very tough life. Yeah. And for me, it was easy because I just came here because I have the job. But some people just love it and want to come here and they try for months or years and sometimes they just give up."
	Atmosphere	Inductive	Interviewee describes the atmosphere in the community.	See example under 'Seasonality'.
	Community - good place to raise children	Inductive	Interviewee mentions that the community is a good place to raise children (or not).	See example under 'Index of Social Cohesion: Demographic Stability'.
	Coping with adversities	Inductive	Interviewee mentions the way the individuals or the community copes with adversities.	See example under 'Leadership and Agency'.
	Experience of the town	Inductive	Interviewee describes the (wanted) image the inhabitants or visitors of the community.	Interviewee: "And, and I managed to get them to them. You know, there is a sense of, a real sense of community when it comes to that. I mean, I send people to the different places, they come to me and say, where can I get this? Where can I, where can I find a nice woolly, you know, jumper, hand-knitted jumper? I'm like, 'oh, just go down the Rainbow Road'. Where's, where's this? And if I don't have the answers, I send them to the visitor center where my husband runs it. Yeah. And they, and he sends them to me, you know, when, you know, when they need stuff. And there is a sense that everybody knows, okay, we're busy now. It's a busy time. Let's work together. Yeah. I don't think there's anybody that really pushes and, you know, and everybody kind of understands that the better, happier people are, the more they'll come back, even though they might not in some ways want them to come back, you know, because they do. It's it's a damned if you do, damned if you don't. Yeah. People know that tourism is the lifeblood of this town. Yeah."
	Financial worries	Inductive	Interviewee describes (a lack of) financial worries of itself or others in the community.	See example under 'Seasonality'.
	Happiness & mental health	Deductive	Interviewee describes the happiness or mental health (of inhabitants) of the community.	See example under 'Working Conditions'.
	Identity	Inductive	Interviewee describes the identity of the community, or the shared identity of the inhabitants of the community.	See example under 'Leadership and Agency'.
	Image	Inductive	Interviewee describes the image that the community has to the outside.	See example under 'Index of Social Cohesion: Community Quality of Life'.
	Interconnectedness	Inductive	Interviewee mentions the interconnectedness of inhabitants and communities.	See example under 'Infrastructure'.

	Interconnectedness – disadvantages	Inductive	Interviewee mentions the disadvantages that interconnectedness can have.	See example under 'Individualism and Togetherness'.
	Norms	Inductive	Interviewee mentions norms that people in the community have.	See example under 'Index of Social Cohesion: Social Inclusion'.
	Opinionatedness	Inductive	Interviewee mentions (effects of) opinionatedness of inhabitants of the community.	See example under 'Individualism and Togetherness'.
	Optimism	Inductive	Interviewee mentions an optimistic attitude (within the community).	See example under 'Leadership and Agency'.
	People-place connection	Inductive	Interviewee mentions the people-place connection (that inhabitants of the community have).	Interviewer: "And if you create a situation like that, then you also see the younger people after they graduate, they come here and....?" Interviewee: "It, also if you are successful at this, it creates a different image of the place. What sort... you know. This happens through this happens through media. Yeah. And, it also has to do with it creates an identity both within among the people who live here, they they feel within themselves 'I live in a village that's like this'."
	Togetherness	Deductive	Interviewee mentions the amount of togetherness in the community.	See example under 'Individualism and Togetherness'.
	Too much	Inductive	Interviewee mentions negative spillover effects from a certain source of labor to be dominant.	See example under 'Seasonality'.
	Uncertainty	Inductive	Interviewee describes present or future uncertainty about the community.	See example under 'Index of Social Cohesion: Individual Quality of Life'.
	Unhappiness with politics	Inductive	Interviewee mentions unhappiness with the political situation (in the community).	See example under 'Leadership and Agency'.
Settlement		Inductive		
	Business Settlement Environment	Inductive	Interviewee mentions the settlement environment for businesses in the community.	See example under 'Labor Diversity'.
	Community - good place to raise children	Inductive	Interviewee mentions that the community is a good place to raise children (or not).	See example under 'Index of Social Cohesion: Demographic Stability'.
	Context of Iceland	Inductive	Interviewee describes the broader context of Iceland.	Interviewee: "And then I hear a lot of complaining about Iceland being horrible, but it's always over the radio by people that live in Reykjavík or news articles. You see it constantly."
	Education	Deductive	Interviewee mentions (the role of) education.	See example under 'Labor Diversity'.
	Financial, cost of living	Inductive	Interviewee mentions the cost of living either inside or outside of the community.	See example under 'Index of Social Cohesion: Community Quality of Life'.

	Foreign workers	Inductive	Interviewee mentions foreign workers.	See example under 'Foreign Workers'.
	Homesickness	Inductive	Interviewee mentions homesickness of people that left the community.	See example under 'Index of Social Cohesion: Demographic Stability'.
	Human settlement environment	Deductive	Interviewee describes the settlement environment of the community for individuals or families.	See example under 'Index of Social Cohesion: Community Quality of Life'.
	Human settlement environment - reason not to come back	Inductive	Interviewee mentions a reason (for children) not to come back to the community after moving away.	See example under 'Index of Social Cohesion: Community Quality of Life.
	Labor lack of opportunity	Inductive	Interviewee mentions a lack of opportunity in labor for the community.	See example under 'Labor Diversity'.
	Migration	Inductive	Interviewee mentions internal and external migration of Icelandic inhabitants.	See example under 'Foreign Workers'.
	Mismatch between education and job	Inductive	Interviewee mentions a mismatch in the community of people doing work they were not educated for.	See example under 'Labor Diversity'.
	Population increase or decrease	Deductive	Interviewee mentions an increase or decrease in population.	See example under 'Seasonality'.
	Seasonality	Inductive	Interviewee mentions (the influence of) seasonality in (or on) the community.	See example under 'Seasonality'.
	Summer houses	Inductive	Interviewee mentions (the consequences of) summer houses in the community.	See example under 'Infrastructure'.
Tension, capacity and conflict of interests		Inductive		
	Capacity	Inductive	Interviewee describes the (limited) capacity a community has for a certain labor sector.	See example under 'Seasonality'.
	Entrepreneurship	Inductive	Interviewee mentions (the role of) entrepreneurship for communities.	See example under 'Labor Diversity".
	Future	Inductive	Interviewee describes the possible, wanted or needed future for the community.	See example under 'Infrastructure'.
	Identity	Inductive	Interviewee describes the identity of the community, or the shared identity of the inhabitants of the community.	See example under 'Leadership and Agency'.
	Interconnectedness – disadvantages	Inductive	Interviewee mentions the disadvantages that interconnectedness can have.	See example under 'Individualism and Togetherness'.
	Opinionatedness	Inductive	Interviewee mentions (effects of) opinionatedness of inhabitants of the community.	See example under 'Individualism and Togetherness'.

	Optimization	Inductive	Interviewee describes ways or the need to optimize a certain source of employment.	See example under 'Seasonality'.
	Priorities	Inductive	Interviewee mentions (the need to have) priorities in the community regarding labor sectors.	See example under 'Leadership and Agency'.
	Tension between locals and fishing	Inductive	Interviewee mentions tension between the local community and the fishing industry.	See example under 'Individualism and Togetherness'.
	Tension between tourism and fishing	Inductive	Interviewee mentions tension between the tourism industry and the fishing industry.	See example under 'Individualism and Togetherness'.
	Tension between tourism and locals	Inductive	Interviewee mentions tension between the local community and the tourism industry.	See example under 'Individualism and Togetherness'.
	Tension in the village	Inductive	Interviewee mentions tension in the village between inhabitants.	See example under 'Foreign Workers'.
	Too much	Inductive	Interviewee mentions negative spillover effects from a certain source of labor to be dominant.	See example under 'Seasonality'.
Reinforcement Cycles		Inductive		
	Activities and events	Deductive	Interviewee describes activities and events in the community.	See example under 'Index of Social Cohesion: Community Quality of Life'.
	Adversity & unhappiness	Inductive	Interviewee mentions adversity or unhappiness (of inhabitants in the community).	See example under 'Index of Social Cohesion: Individual Quality of Life'
	Associations and clubs	Deductive	Interviewee describes associations and clubs in the community.	See example under 'Index of Social Cohesion: Community Quality of Life'.
	Atmosphere	Inductive	Interviewee describes the atmosphere in the community.	See example under 'Seasonality'.
	Business settlement environment	Inductive	Interviewee mentions the settlement environment for businesses in the community.	See example under 'Labor Diversity'.
	Community	Deductive	Interviewee describes (something that goes on in) the community.	See example under 'Individualism and Togetherness'.
	Contributing to the community	Deductive	Interviewee mentions (the difficulties) of an inhabitant participating in the community.	See example under 'Working Conditions'.
	Coping with adversities	Inductive	Interviewee mentions the way the individuals or the community copes with adversities.	See example under 'Leadership and Agency'.
	Creativity	Inductive	Interviewee mentions creativity (of inhabitants) (needed) within the community.	See example under 'Labor Diversity'.

	Cultural life	Inductive	Interviewee mentions the cultural life of the community.	See example under 'Seasonality'.
	Culture	Inductive	Interviewee describes (the role of) culture (in the community).	See example under 'Community: services, amenities and things to do'.
	Entrepreneurship	Inductive	Interviewee mentions (the role of) entrepreneurship for communities.	See example under 'Labor Diversity".
	Financial worries	Inductive	Interviewee describes (a lack of) financial worries of itself or others in the community.	See example under 'Seasonality'.
	Fishing industry - dangers	Inductive	Interviewee describes the dangers that the fishing industry poses to the community.	Interviewee: "I hope I understand you correctly. I think. In order to maintain. You know, the atmosphere, within the, you have to, you have to be selective to what gets your attention? And, in 2014, we lost 90% of our fishing quota in one day. They went from here to another."
	Happiness & mental health	Deductive	Interviewee describes the happiness or mental health (of inhabitants) of the community.	See example under 'Working Conditions'.
	History of community - negative	Inductive	Interviewee describes the history of the community negatively.	Interviewee: "It's a lot cleaner. It used to be a lot of just debris, old cars. The shoreline used to be way more kind of junk."
	History of community - positive	Inductive	Interviewee describes the history of the community positively.	Interviewee: "And it changed a lot. This aluminium smelter for people. People was coming, they didn't went from the places where the towns here and they stayed. We got more young people into the area. It changed a lot with the aluminium smelter and also the number of inhabitants stopped declining and started rising again. Yeah, so. It was the, you can say, the big changes on this area."
	Human settlement environment	Deductive	Interviewee describes the settlement environment of the community for individuals or families.	See example under 'Index of Social Cohesion: Community Quality of Life'.
	Identity	Inductive	Interviewee describes the identity of the community, or the shared identity of the inhabitants of the community.	See example under 'Leadership and Agency'.
	Image	Inductive	Interviewee describes the image that the community has to the outside.	See example under 'Index of Social Cohesion: Community Quality of Life'.
	Labor diversity	Deductive	Interviewee describes the (importance of) diversity of labor for communities.	See example under 'Labor Diversity'.
	Labor lack of opportunity	Inductive	Interviewee mentions a lack of opportunity in labor for the community.	See example under 'Labor Diversity'.
	Labor, creation of new labor	Inductive	Interviewee mentions (a way of) creating new labor in the community.	See example under 'Labor Diversity'.
	Optimism	Inductive	Interviewee mentions an optimistic attitude (within the community).	See example under 'Leadership and Agency'.

	Pessimism	Inductive	Interviewee mentions a pessimistic attitude (within the community).	See example under 'Leadership and Agency'.
	Population increase or decrease	Deductive	Interviewee mentions an increase or decrease in population.	See example under 'Seasonality'.
	Reinforcement cycle	Inductive	Interviewee describes (part of) a positive or negative reinforcement cycle that the community is in.	See example under 'Labor Diversity'.
	Rock bottom	Inductive	Interviewee mentions the community hitting rock bottom.	Interview: "But then something changed here. Maybe like a stronger focus on tourism?" Interviewee: "Yeah, I think that that didn't happen right away. It took quite a bit of time too." Interviewer: "Yeah." Interviewee: "But I think it's sort of once I'm not quite sure when, but it sort of reached the rock bottom where they just were not keeping young people in the town anymore. Yeah. And then, obviously one of the things that causes is that the housing prices went down. So that meant that people like... It became a bit of an in place for like artists and people that wanted just a cheap place to get out of Reykjavík, stay somewhere else for the summer and yeah. And I think that just led to the town becoming a bit more interesting for young people again."
	Services and stores - decline / lack of	Inductive	Interviewee mentions a decline or lack of services or stores.	See example under 'Seasonality'.
	Services and stores - growth / availability	Inductive	Interviewee mentions a growth or availability of services or stores.	See example under 'Seasonality'.
	Survival	Inductive	Interviewee mentions the survival of either the community or an individual in the community, or how this survival has been or can be achieved.	See example under 'Labor Diversity'.
	Tourism industry opportunities	Inductive	Interviewee mentions the opportunities the community (does not) have in tourism.	See example under 'Leadership and Agency'.
Context of the current situation		Inductive		
	Children - maintaining	Inductive	Interviewee mentions the difficulty of maintaining children in the community.	See example under 'Index of Social Cohesion: Demographic Stability'.
	Context of Iceland	Inductive	Interviewee describes the broader context of Iceland.	See example under 'Settlement'
	Financial, cost of living	Inductive	Interviewee mentions the cost of living either inside or outside of the community.	See example under 'Index of Social Cohesion: Community Quality of Life'.

	Future	Inductive	Interviewee describes the possible, wanted or needed future for the community.	See example under 'Infrastructure'.
	Geographical Location	Inductive	Interviewee mentions the geographical location of the community.	See example under 'Infrastructure'.
	History of community – negative	Inductive	Interviewee describes the history of the community negatively.	See example under 'Reinforcement Cycles'.
	History of community - neutral	Inductive	Interviewee describes the history of the community neutrally.	Interviewee: "Well, if. If I look at Seyðisfjördur. Mulaþing is not an old community."
	History of community – positive	Inductive	Interviewee describes the history of the community positively.	See example under 'Reinforcement Cycles'.
	Infrastructure	Inductive	Interviewee mentions one of the elements of infrastructure in the community.	See example under 'Infrastructure'.
	Laws, regulations and grants	Inductive	Interviewee describe the context of the community in terms of laws, regulations or grants.	Interviewee: "Because regulations, you only can have this much quota of fish and we are on the top so we can not have have more."
	Modernization	Inductive	Interviewee describes the modernization of the communities.	Interviewee: "No. Yeah, they can see the change now. We are putting everything in separate bins and trying to take care of the environment. And if we see something on the shoreline, we really get and we pick it up like. But only my lifetime ago, we dumped it in like, everything for weeks in the ocean. That's just ridiculous. Yeah. So that's kind of the biggest impact we've seen is just everything is way more clean. And then you have technology and social media, which brings everyone kind of now you can actually live here and still communicate with your family really easily in other parts of the country so you feel maybe less lonely and motivates you more."
	Resources	Inductive	Interviewee mentions the resources that the community (does not) have.	See example under 'Labor Diversity'.
	Uncertainty	Inductive	Interviewee describes present or future uncertainty about the community.	See example under 'Index of Social Cohesion: Individual Quality of Life'.
	Winter	Inductive	Interviewee mentions the (influence of) winter.	See example under 'Seasonality'.
Globalization and upscaling		Inductive		
	Business settlement environment	Inductive	Interviewee mentions the settlement environment for businesses in the community.	See example under 'Labor Diversity'.
	Collaboration between villages	Inductive	Interviewee describes collaboration within communities.	Interviewer: "Yeah. I think Djúpivogur is an hour and a half if the are roads open and Borgarfjörður for goes around one hour I think. Yeah. Yeah." Interviewee: "But this will be only 20 minutes. Yeah. So I say we, we will be able

				to develop the organization, the services like it's one village. Yeah. That's as I see it."
	Context of Iceland	Inductive	Interviewee describes the broader context of Iceland.	See example under 'Settlement'.
	Diversity	Inductive	Interviewee mentions (the role of) diversity in the community.	Interviewee: "And then on the outside, you also have the image of 'all these are, these are. creative people living there'." Interviewer: "Like people that are smart and they have they have active and yeah..." Interviewee: "So so you need to have, you need to be able to cater to different tastes." Interviewer: "Yeah?" Interviewee: "You know, so. Yeah, yeah. Yeah, it's as I said, it's diversity. Yeah." Interviewer: "So that there's a place for different opportunities" Interviewee: "Yeah, yeah, yeah."
	Flexibility	Inductive	Interviewee mentions (the role of) flexibility in the community.	Interviewee: "Yeah I think another thing that. That is valuable, it's the fact that given how, you know, in a in a in a place like this in order to in order to prosper, you need to be flexible. And you need to be able to help yourself. You need to be independent. Because there's nowhere else to go."
	Fishing industry - dangers	Inductive	Interviewee describes the dangers that the fishing industry poses to the community.	See example under 'Reinforcement Cycles'.
	Foreign workers	Inductive	Interviewee mentions foreign workers.	See example under 'Foreign Workers'.
	Foreign workers; dependence	Inductive	Interviewee mentions the dependence of the community on foreign workers.	See example under 'Foreign Workers'.
	Human settlement environment - reason not to come back	Inductive	Interviewee mentions a reason (for children) not to come back to the community after moving away.	See example under 'Index of Social Cohesion: Community Quality of Life.
	Infrastructure	Inductive	Interviewee mentions one of the elements of infrastructure in the community.	See example under 'Infrastructure'.
	Intellectual peers	Inductive	Interviewee mentions (the importance of having) intellectual peers in the community.	See example under 'Individualism and Togetherness'.
	Labor diversity - high educated jobs	Inductive	Interviewee describes the (importance of) diversity of high educated jobs for communities.	See example under 'Labor Diversity'.

	Labor, remote work	Inductive	Interviewee mentions remote (online) labor.	See example under 'Working Conditions'.
	Modernization	Inductive	Interviewee describes the modernization of the communities.	See example under 'Context of the current situation'.
	Municipalities merging	Inductive	Interviewee describes (the consequences) of municipalities merging to the community.	Interviewer: "They're all like, Yeah, all is great here. Everything is great here. Yeah, yeah." Interviewee: "'We don't need anything'. So, so that was the reason for. And also I believe that in order, but in order for all the villages and towns to benefit. They need to unite so they don't put all their effort into competing with their next neighbors regarding funding and support from the government. I mean, we would go from this municipality and there would be another group of people from another municipality who took the same plane, met the same minister fighting for the same money instead of being able to go together. And yeah. And it's on a on a on a bigger scale. And I think it's, it's beneficial for everyone. Yeah."
	Tunnel	Inductive	Interviewee mentions (the benefits and caveats of) a tunnel.	See example under 'Infrastructure'.
Catch-22		Deductive		
	Catch-22 culture	Deductive	Interviewee mentions the Catch-22 situation, regarding the 'culture' mechanism.	Interviewee: "My father did this as well. Like he's been. He's been working for this company, this factory since 1978. And he's been there like 12 hours a day every day of the week, excepting some days for... most of this time. At least my whole life."
	Catch-22 financial	Deductive	Interviewee mentions the Catch-22 situation, regarding the 'financial' mechanism.	Interviewee: "So what are sometimes talking with my wife is like here people, they just go around. Maybe they can come back again and go away, depend of the opportunities. But normally, at least from my experience, except the people that live here for a long time now, but especially young people, they just move around and they don't stay here for lack of opportunities for sure. Yeah, you know what I mean? So this is, for me, the major problem of these small towns where even they could do much more. But, you know, it's a small country and people just have to go away because if you don't want to go to fisheries..."
	Opposite of Catch-22	Inductive	Interviewee describes what is considered the opposite of the Catch-22 situation.	Interviewee: "We weren't really, there was a teacher that told us, if you don't try hard and make these exams, you will be working in the fish factory for the rest of your life. This was this was literally said to us. And at the point of the teacher saying this, most of us, the kids had relatives, parents or grandparents working in the fish factory."
Other				

	Sustainability & climate		Interviewee mentions sustainability or climate with regards to the community.	Interviewee: "And, and what we are working on is to to create the possibility to use the electricity instead of oil. When you come to the harbor, then you can close down the oil machine and get connected with the electricity."
	Gender differences		Interviewee mentions gender differences with regards to the community.	Interviewee: "They come, this is a, this has been a little bit men's world, meaning the bosses and the CEOs. And we would gladly want to see more of young women." Interviewer: "To make it more diverse yeah." Interviewee: "Men and women, female and male, they are totally different in mindset. So yeah, I think it's good to mix it together as much as we can." Interviewer: "Is that something that you're actively trying to change?" Interviewee: "Yeah, at least of course, we can't make women to go to study fish business, but if they do, we try to take them open arms."