

MACKEREL PROCESSING IN VOPNAFJÖRÐUR, ICELAND: ADAPTATION TO CHANGES

**SIGMAR ARNARSSON
INTERNATIONAL FISHERIES MANAGEMENT
UNIVERSITY OF TROMSÖ**

Abstract

The fishing industry in Iceland has been changing during the last years and that have affected fisheries dependent communities in Iceland. In addition to anthropogenic changes, there have been natural changes occurring that have affected fisheries dependent communities. In this social and adaptation study the changes that have affected the municipality of Vopnafjörður will be examined. The study is based on statistical data about the community along with interviews of local people and leaders. The article is based on the author's M.Sc. thesis.

VOPNAFJÖRÐUR AND MACKEREL

The municipality of Vopnafjörður is a small village of almost 700 people and is dependent on fisheries processing. The town has experienced cutbacks in fishing and processing over the years. In 2002 the locals in Vopnafjörður lost control of the local fishing and processing company Tangi to a neighboring company Eskja. After losing control of Tangi, the locals feared that the processing factory and the local trawler would be laid down and sold from the municipality. Municipality officials, along with other community leaders, decided to buy up the share of the company to secure processing in the town. The municipality put itself in high debt and the company became quite weak. In order to secure ongoing processing in the town the company had to merge into a large fishing company called HB Grandi, which has main base in the capital of Iceland, Reykjavík. With the merge, the processing factory in Vopnafjörður was able to develop further.

In the recent years mackerel has been migrating more northwest into Icelandic waters. This has benefitted the town of Vopnafjörður and has come as an addition into the processing of HB Grandi. All previous investment made by the company was mainly made for processing of pelagic species, herring and capelin, with addition of blue whiting and bristlemouth fish for fish meal processing. The mackerel came as addition into the previous established processing and only little changes to the facilities were needed for to adapt the fish to the processing line. This has become a very important addition for the company and the municipality. It has resulted in a longer processing period, creating

employment for the people in the municipality and enhanced stability. The mackerel processing is labor intensive and the staff doubles during the mackerel season, resulting the company having to rely on outside labor. This has led to better economic prosperity in the community as well as increasing revenue for the municipality.

Mackerel fisheries in Iceland started as bycatch with herring fisheries in 2006 but has since then grown significantly. The fishery peaked in 2011 with close to 159 thousand tons caught (Benónisdóttir, 2013). The division of the catch between the coastal states (European Union, Norway, Faroe Islands and Iceland) is disagreed, where Iceland and the Faroe Islands have unilaterally issued quota for their catch against EU and Norway consent. The Icelandic fishery takes place entirely within the Exclusive Economic Zone, allowing Iceland to issue a catch unilaterally, which is the reason for the dispute. The reason for the migration of the mackerel more north-west is unclear and one aspect of the dispute between the arguing partners is if the migration is permanent or not.

Disregarding the dispute, the mackerel fishing and processing has had a positive impact on the Icelandic economy. In 2011 the mackerel was the second most valuable exported species in Iceland, after cod. This is close to 10% of the export value of fish and fish related products of Iceland. The export of fish and fish related products are roughly 40% of the total export of the country (Statistics Iceland, 2012). This has had positive effect on the municipality of Vopnafjörður. In 2011 the total landings of mackerel was more than 16 thousand tons with the catch value of 1,040,386 million ISK or almost 6.5 million € (Exchange rates and prices of 2012 (Central Bank of Iceland, 2013a & 2013b)). This leaves significant value within the community in form of wages for the staff, increased tax income for the municipality, increased income through harbor fees and increased other fees related to the activity of HB Grandi.

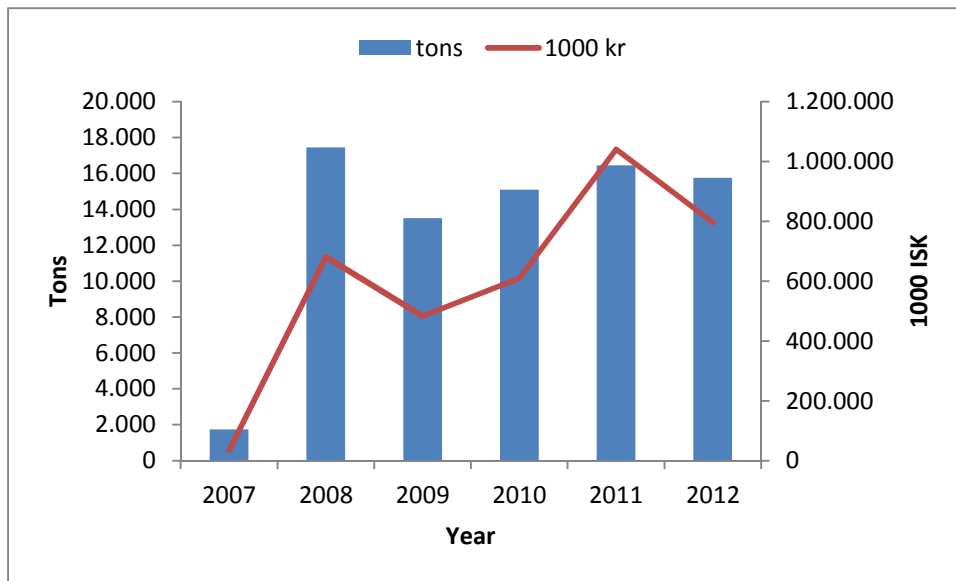


Figure 1. Mackerel landings and value in Vopnafjörður (Benónisdóttir, 2013)

LOCAL EFFECTS IN VOPNAFJÖRÐUR

Employment

The mackerel processing has had good economic effect on the society of Vopnafjörður. There is high employment and tax revenue from the employees registered at Vopnafjörður has increased, which has had a good effect to the society. In addition the mackerel season lengthens the seasonal work in the municipality and there are more options for jobs throughout the year, creating more job security. In total there are 82 full positions on a yearly basis at HB Grandi in Vopnafjörður. Majority of those positions are at the processing factory or 70. The fishmeal factory employs 12 full time positions on a yearly basis. Those 82 positions add up to 17.5% of the total workforce in the municipality of 468 persons at the age from 16 – 74 (Statistics Iceland, 2013b). This number grows considerable if indirect jobs from contractors that work mainly for HB Grandi are taken into consideration. It is estimated by HB Grandi that 20 – 25 full time positions on a yearly basis are worked by contractors exclusively for HB Grandi. That sums up to 107 positions, or close to 23% of the total workforce, which is a significant proportion. During mackerel season the need for labor doubles. The processing needs around 160 person's during the season, which is almost the double the amount of workers on a yearly basis. In comparison, the Vopnafjörður municipality has only 71 employees on their payroll, in 47 full time positions on a yearly basis. Those 71 employees make up for 15% of the total workforce (Jónsson, 2012). The establishment of HB Grandi has had positive effects on employment in Vopnafjörður, even during the Icelandic economic crisis that started in 2008. The crisis did not have so much effect in the municipality since there was so much work and investment in the

community. If HB Grandi and their processing facilities would not be in Vopnafjörður, then there would be very little activity in the municipality. The municipality is in fact very dependent on the company (Steinsson, pers. comm.). The processing creates a considerable value, especially in such small community and it generates additional value into the community, such as increased salary to the workers and increased tax income revenue for the municipality.

Municipality Income

HB Grandi is fully manned when it comes to permanent positions but the demand for labor increases during seasons, such as the mackerel season. The problem is that the season is temporary and that does not give enough incentive for people to move to Vopnafjörður. Therefore the municipality loses tax income from those workers, since they are not registered residents in Vopnafjörður. In addition the revenue from the company goes away from the municipality for their headquarters are in the south. There is however an increase in the municipality income from each year, since 2004 or the year when HB Grandi was established in Vopnafjörður. The income increases from 147 - 150 million ISK in 2004 and 2005 to 258 million ISK in 2012 (Steinsson, 2013a). All the work and investment that has been created by HB Grandi has had positive effects on the income of the municipality. Harbor fees, income tax and property taxes have all increased since HB Grandi started its activity in Vopnafjörður. Income of the municipality is at its highest in 2012, even when corrected for inflation. The general outcome of the municipality operations has been fluctuating during the period of 2004 – 2012. The municipality was in large debt for quite some time, especially after securing the fishing industry in the community where they had to take loans to buy the company back. On top of that the financial crisis increased the capital cost of the municipality considerably. Even though there had been increased economic activity in the community, the municipality was still operated at a loss. It was not until 2010 when the municipality turned their operations around and that was mainly due to the fact that they sold their shares in HB Grandi which they got after the merger in 2004. With the sale, the municipality was able to pay down loans and therefore decrease capital cost. From 2010 to 2012 the municipality has generated profit.

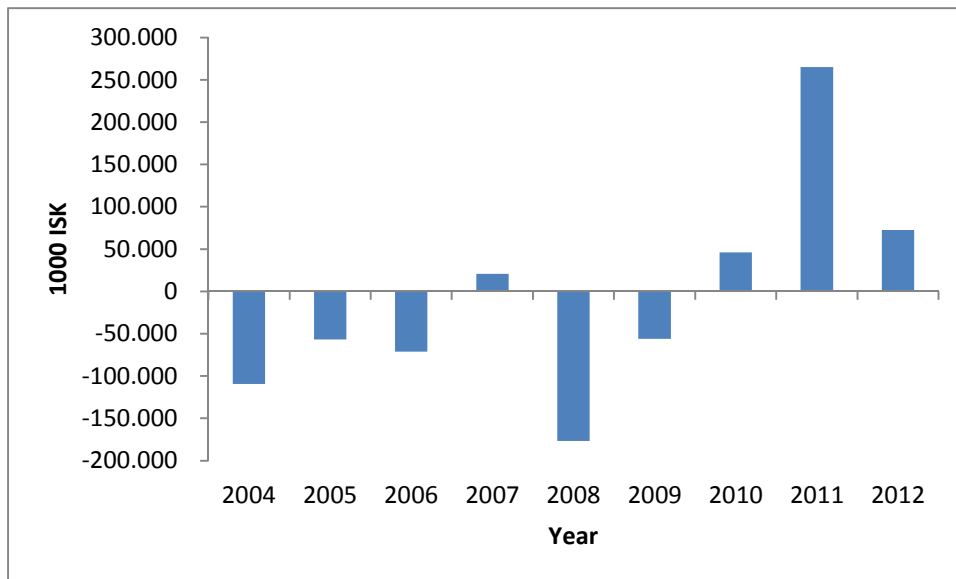


Figure 2. Vopnafjörður municipality operations (Steinsson, 2013a)

There has been huge investment by HB Grandi in the community since their establishment. Their investment has totaled to 31 million € since 2006 to 2012, where 6 million € are directly linked to mackerel processing. This totals to almost 5 billion Icelandic kronur (4,982,762,680 ISK) and thereof almost 1 billion for direct investment for the mackerel processing (964,405,680 ISK) (1€ = 160.7 ISK on a 2012 mean rate ("Central Bank of Iceland," 2013b).

Private Income

There have been positive effects on private income with increased activity of HB Grandi in Vopnafjörður. Signs of prosperity are in the community where people, especially those that work at HB Grandi, go abroad quite often, take good care of their properties, and are buying new cars and other luxury goods. This is noticed in the community and workers at HB Grandi do not keep their earnings a secret. This creates some jealousy in the society. People in the community feel that the average worker at HB Grandi is one of the highest paid workers in the country. It was for example mentioned that people can even earn more monthly during a mackerel season than a university teacher in Iceland. There are though many hours, day and night, behind their earnings. The general effect is that people are getting more income and more stable work throughout the seasons. The total payment of salaries of HB Grandi in 2012 was around 740 million ISK. Half of this amount is due to the mackerel and autumn herring season (Andrésson, 2013). It can be assumed that the amount for 2011 was similar. In comparison, the municipality of Vopnafjörður paid 210 million ISK in wages in 2011 (Jónsson, 2012).

Population Changes

There have been some changes in population in the municipality during the last 15 years. From 1998 to 2013 there has been a decrease in the population, from 852 in 1998 down to 687 in 2013, or by 165 people. This is a 19% reduction over this period. In addition the population is growing older (Statistics Iceland, 2013a). For such small community the change is significant. The reason for population and demographic change is not known and reasons for people migrating away from smaller settlements can vary. The main reason is however usually considered to be economical. People move away in the pursuit of better job opportunities into more diversified economies. If there is a lack of job opportunities in the smaller communities then people simply move away. Another issue is that young people move away in pursuit of higher education, e.g. high school and college and don't come back. In the recent years the economy has been changing, moving away from primary industry into more service orientated economy. That affects smaller communities that do not have diversified or service orientated economy. There are also social factors that affect the migration pattern. Larger towns often have more to offer than small societies, such as in terms of cultural life, services, transportation and education (Herbertsson & Eypórsson, 2003). The community officials hope that this demand for labor will lead to people will move to Vopnafjörður but they understand though that it takes time for the population to grow. Most of the people that move to Vopnafjörður do it temporarily during seasonal work, such as at mackerel season. But there is an understanding that there is a need for a population growth in the society, but they know that this is a slow process. HB Grandi is more or less fully manned when it comes to permanent positions but the demand for labor increases during seasons, such as the mackerel season. The problem is that the season is temporary and that does not give enough incentive for people to move to Vopnafjörður. In addition, there is a housing scarcity in the community. Houses are not used to their full capacity due to aging population, making it harder for people to migrate to the municipality and find suitable housing.

Social Life and Perception

There are indicators in that the community activity is less after the establishment of HB Grandi in Vopnafjörður and especially during mackerel season. People mention that there is too much work which decreases social innovation. Social and cultural events in the community suffer from too much work since people rather chose to work or rest from work than attend to such events. It has been noticed that young people that come again to the village during summer breaks are too busy working and they do not participate in the social and the cultural live. There is little interest when there is so much work. There is little initiative to participate and to be innovative, since there is little interest in the events. People get the perception that the community looks like labor camps rather than

anything else. The locals have mentioned that social and cultural events were best organized by the schedule of vessels coming to Vopnafjörður. The town might though be full of people during seasonal work, especially during mackerel season, but they are not visible in the community, they just go to and from work.

The majority of the people seem to be positive towards HB Grandi. People understand what the company has done for the society. There is also this belief that the more the company invests in the municipality the longer they will stay there. Many also assume that the company has established itself in Vopnafjörður permanently. People do not believe that the company will go away, even though it could be a possibility in the future.

ADAPTABILITY OF THE COMMUNITY

The fishing industry has played a large role in the economy and the culture of Vopnafjörður. In the late 19th century, the fishery started to grow considerably and many people came to Vopnafjörður to fish. However, the story of the fisheries industry in Vopnafjörður has been a story of struggle. The fishing industry, processing and fishing, started as a cooperative but was later owned largely by the municipality. In 1984 the ownership of all the processing facilities and the vessels was merged into one local company, Tangi, where the majority of the company was owned by the municipality. By this action the municipality had full control of the majority of the fishing industry in Vopnafjörður, which was both pelagic and groundfish processing. From 1983 to 1987 there was a constant growth in the industry, until the total allowable catch (TAC) of cod was lowered. The TAC reduction came right after major investment in the company, both in the pelagic and the groundfish sector, along with some renovations of the local trawler. This was the first major shock that faced the company. The company, which was owned by the municipality, had to adapt to these changes in order to secure the industry in the community.

Since 1987 to 2004 the industry has been facing challenges and most of them have not been anticipated. From then, the community has been going through a reactive adaptation process, as explained by Smith et. al (2000). There has been a strong consensus in the community to secure the fishing industry, and in the way, the economic wellbeing. The municipality was closely tied to the private sector as the major owner of the fishing industry in the community. The adaptation measures of the community focused on economic efficiency along with objectives to secure the industry and therefore livelihood in the community. The Vopnafjörður adaptation strategy has been securing the

settlement in the community and the goal for that is securing the fishing industry. The community took a high risk in order to secure ongoing processing in the community and they succeeded, but with a cost. The municipality lost control of the industry and now relies on an outside actor which does not necessarily act with Vopnafjörður best intentions in mind. HB Grandi does what is best for them and does not have to take consideration the needs of the community. Adger et al. (2005) identify that as a negative externality in the adaptation process.

The aims and the decisions of the municipality in the adaptation process were in favor of the well-being of the community and not purely economical. In the case of Vopnafjörður, the emphasis was on securing the settlement by being able to provide the people with job opportunities. They took action and risk to do so, for, as the director of the municipality stated “there was a thin line between life or death for the community”(Steinsson, pers. comm.). The action was collective, as the majority of the community leaders agreed upon what needed to be done. The social capital of those leaders was important in the adaptation process, as they knew what needed to be done and took action. Such action and process has been described by Folke et al (2005), Pike et al. (2010) and Walker et al. (2004). The municipality took a chance by buying up their shares in the company from Eskja that resulted in a merger with HB Grandi. The introduction of the mackerel processing came as an addition and has been very positive for the community, something that might not have happened without a merger to HB Grandi.

The community has experienced both social and ecological changes during the recent years. It is debatable if the natural changes are induced by climate change or not. Still, there are changes and the community of Vopnafjörður, with the help of HB Grandi, have adjusted their behavior in response to the changes. They grabbed the opportunity that arose with those current positive changes, climatic or not. They have started processing mackerel that has changed its migration for the benefit of the community.

This is an adaption that takes advantages of opportunities that might arise with climatic change and involves adjustments to enhance the viability of social and economic activities, such as with utilizing a new species like mackerel. As for the case of Vopnafjörður, then the adaptation has been reactive for the changes were not anticipated. The planning horizons were short and the capital turnovers were high. HB Grandi adjusted relatively easily and quickly, which reflects the investment flexibility of the private sector, something that the municipality might not been able to do, something that has been identified by Adger et. al (2005) and Einarsson (2009). The response to the natural changes was rapid and it took the processing company short time to adapt their processing to mackerel. HB Grandi had

already made decisions of investing in Vopnafjörður and the processing facilities, both for freezing and fish meal production were up to date. When HB Grandi officials saw an opportunity in mackerel processing they responded quite quickly. Relatively little adjustments were needed in order to process mackerel for human consumption. The fish meal factory could process the species right away, as it did in the beginning. All investment that has been done to adjust for mackerel processing has already paid off and it did so in two seasons. HB Grandi had (and has) in addition control over a pelagic fleet with a high fishing capacity. The company has also good access to markets and the director has mentioned that they get good prices for their product (Vilhjálmsson, pers. comm.). HB Grandi had in fact all that was needed to start the processing; fleet, processing facilities, capital and access to markets. They showed a great deal of adaptive capacity. The same could be said about the community, for the people working in the processing company were fast to adjust to new processing methods and people were willing to work during the mackerel season. Young people came back during summer time in order to help and to get a well-paid summer job. The municipality has also aided the company by assisting them with infrastructure changes that were necessary for the production, such as by replacing and updating the water system to the processing. There has been a strong collective action in the community in order to respond to the changes and to take as much benefit as possible from them. The community adapted to change and such adaptation has been explained by Adger et al (2005), Einarsson (2009) and Watson et al (1996).

The community was facing changes and needed to react. From 1987 the municipality and the local fishing company had been striving to stability, which they managed not to do. The company of Tangi was weakened, but it had the municipality as a backup. Tangi and the municipality got weaker over the years and in the end lost control of the company to a neighbouring company, Eskja. Soon after they lost control they realized that there was a possibility that Eskja would split up Tangi and leaving little activity in Vopnafjörður. The locals responded to this threat, even though they were in quite weak position to do so. They took a chance by taking loans and giving up capelin quota in exchange of gaining control of Tangi again. This chance paid off in the end, as it led to a stable situation where they merged into HB Grandi.

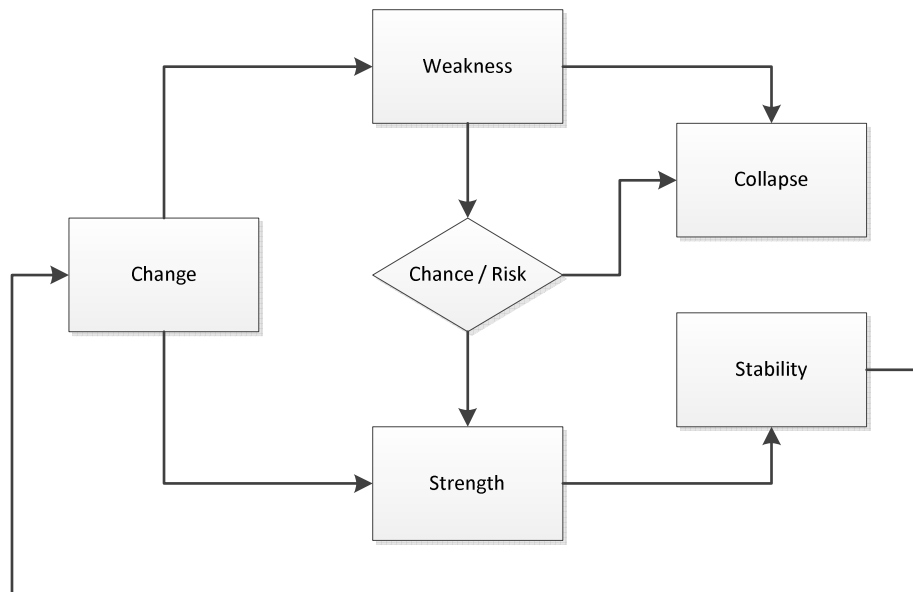


Figure 3. Adaptation process in face of change where strength leads to stability and weakness to collapse. Taking a chance in a weak situation can turn it into strength and therefore stability. Chance can also lead to collapse (Arnarsson, 2013)

HB Grandi has in turn invested hugely in the processing facilities of Vopnafjörður. Currently the processing is doing well and both municipality and HB Grandi officials are satisfied. But with a changing environment this might not become the case, as the municipality and the community has no bargaining power anymore. They have lost control of the fishing industry, which at the moment is prospering. If a shock would occur again, then the community would perhaps be too weak to face changes.

DISCUSSION

The story of the fishing industry in Vopnafjörður has been a story of struggle over the years. The industry has been facing challenges since its establishment, both natural and anthropogenic. The municipality was in threat of losing the industry from the community because the locals lost control of the local company Tangi. The locals knew that the existence of the settlement in Vopnafjörður was largely dependent on the fishing company Tangi and therefore they were willing to take a large risk to secure its continued existence. The risk that the community took led to financial operating troubles in the company. Two alternatives were in the position for securing the industry; either sell parts of processing away from the company and make it more weaker, or to get a large investor with mutual interests of the community to operate in Vopnafjörður. They were fortunate enough that the fishing company HB Grandi was seeking for a location for their pelagic operations and saw their

interests in building up the sector in Vopnafjörður. This resulted in a merger of the two companies, which was a successful and easy process, where both partners were satisfied.

This was a huge challenge for the community and there was a thin line between life and death. Fortunately for Vopnafjörður, they managed, but with a cost. In this process they lost control over the fishing industry for the second time. Vopnafjörður is a fisheries dependent community and they took action to secure their dependent resource. The fishing industry had been facing many challenges and they needed to adapt. The adaptation had always been reactive, except when the company was bought again from Eskja, where they took an anticipated action. The community took its path towards the fishing industry and it has been adapting towards it ever since, with direct help of the municipality. Now the municipality is free in way to focus on other matters and might perhaps work on diversifying the economy. But losing control over the industry might increase the vulnerability of the community since they cannot control the fate of the industry anymore. The company is run from Reykjavík and it can only be assumed that they run it in their best interests, not for the sake of Vopnafjörður. The social perception will be quite different, where access to company was easier before. The community is however resilient. They have managed to adapt to changes and maintained basic structure and functional integrity in face of outside disturbances. The community seems to be resourceful and has strong leadership.

Mackerel has had positive social- and economic impact on the community of Vopnafjörður. More jobs are available and out migration seem to have leveled off. Mackerel processing has led to general positive economic effects and people seem to notice that as the future perceptions in the community are bright. Not many negative aspects rise, except for less interest of the community to participate in social events. There is some competition for labor and innovation seems to be low. Those issues could though only be temporal since the mackerel processing has not been ongoing for long and the community might be in some kind of transition. The introduction of mackerel will increase the stability in the community since it lengthens the processing season. In addition, more species available for processing will result in a better stability for HB Grandi due to the fluctuating nature of pelagic species. Mackerel might also decrease the vulnerability of the community, since it promotes stability. Mackerel processing strengthen the status of HB Grandi in Vopnafjörður as it comes as an addition into their operations. With that, the company has more reason to stay in the area. The processing of mackerel is lucrative and creates revenue for the company and HB Grandi adapted relatively easy to the processing.

If the new migration pattern of mackerel is permanent then it will have positive effects on the processing in Vopnafjörður. The community could start to prepare itself better for the season in order to face the inflow of workers during that time. It would promote more stability in the operations of the company and better planning could be done. The same stability could be reached if division of quota between the coastal states could be agreed upon. With an agreement, a long term planning could be made. That would promote stability, both in the community and for the processing company, even if the migration patterns changes. Reaching an agreement would therefore be very positive for a community such as Vopnafjörður.

The establishment of HB Grandi and the start of mackerel processing in Vopnafjörður are seen as positive. Without the establishment of HB Grandi in the community there might have been a possibility that Vopnafjörður would not have been able to participate in mackerel processing, at least not at the same capacity as with the support of HB Grandi. The municipality put itself heavily into debt by buying the share of the company back from Eskja and the actions were not as successful as originally thought. The large debt and difficult operating conditions of the company made it clear that further actions were needed. The financial capacity of the company of that time was extremely low and all the local benefactors had already put themselves in huge debt. The only solution without outside investment was some kind of reformation of the company, where either the groundfish or the pelagic part would have been sold. Even after such action it is doubtful that Tangi would be able to adapt their processing facilities to mackerel processing. They would have been able to process the fish into meal in the start, but in 2011 a new regulation was imposed that states that at least 70% of all mackerel landed should be processed for human consumption. They might have been able to adapt their facilities, but it is hard to say if it would be up to the same capacity as HB Grandi did. Providing the processing with material would also been a question mark, as the capacity of the local vessels might not be the same. Without any radical changes, there might not have been as significant mackerel processing in the municipality. It can therefore be speculated that the adaptation process of securing the fishing industry in the community, with the income of HB Grandi has therefore been a long going process to adapt to mackerel processing in Vopnafjörður. Without changes, there might not have been any mackerel processing and therefore not the same positive social and economic effects.

The important issue is to gain more stability in fisheries dependent communities such as Vopnafjörður. Therefore it is important to be able reach agreement on utilization of species that become available, such as with the mackerel. The impact of processing the newly established species of mackerel in Vopnafjörður has been positive and it would be interesting to see if similar

communities share the same experience. There might be different cases and situations in other places but further research would give better insight of the changing environment for fisheries dependent regions and communities.

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