Björn P. Jacobsen (Editor)

The Fixed Fehmarnbelt Crossing Perceptions in Germany 2014 - 2017





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Perceptions in Germany 2014 - 2017

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Chapter 1 The Fixed Fehmarnbelt Crossing: Perceptions in Germany 2014 - 2017

Björn P. Jacobsen¹

The purpose of this document is to identify the perceptions of the Fixed Fehmarnbelt Crossing (FFBC) in Germany - and how these perceptions potentially changed between 2014 and 2017.

The FFBC is a proposed 18-kilometer-long immersed tunnel and part of the Trans-European Transport Network (TEN-T). The TEN-T is a scheme of nine transport axes created by the European Commission; the FFBC belongs to the Scandinavian-Mediterranean axis. The FFBC construction was agreed by bilateral treaty between Germany and Denmark signed in September 2008. Overall the purpose is to establish a faster connection between the two metropolitan regions of Hamburg and Copenhagen.

To identify the perceptions, a media analysis of the German print press was conducted covering the years 2014 to 2016. For the year 2017 a survey on the identity and image of the Fehmarnbelt Region (not the FFBC) was performed.

Media Analysis 2014 to 2016

The objective of the media analysis was to identify the general perception - measuring the effects of the FFBC - of the project in the German print press. It should also be established whether the German print press is influencing the perception of the FFBC project among their readership - or if it takes a rather neutral position.

To approach this task, the six largest daily as well as one of the two largest weekly nation-wide newspapers as well as the six largest daily regional newspapers were

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included in the research. This resulted in a total of 260 articles to be analysed for the time period 2014 to 2016 - 182 of these articles from nation-wide newspapers and 78 published in regional newspapers. The basic research results are presented in the following overview:

Year	No. of Articles	Frequency Positive Words	TOP-3 Positive Words	Frequency Negative Words	TOP-3 Negative Words
2014	110	655 (55.5%)	Economy Chances Connection	524 (44.5%)	Billions Against Costs
2015	130	390 (29.2%)	Connection Competition Economy	945 (70.8%)	Costs Millions Billion\$ Project
2016	20	113 (30.9%)	Tourism Jobs Economy	253 (69.1%)	Against Costs Billions
Total	260	1.158 (40.2%)	Connection Economy Chances	1.722 (69.8%)	Costs Millions Billion\$ Project

Table 1.1 Media Analysis 2014 to 2016

From the detailed analysis a mainly negative connotation of the project could be identified in *Der Spiegel*, *TAZ* and *Ostsee Zeitung* while *Die Welt*, *Hamburger Abendblatt* and *Kieler Nachrichten* were characterised by a rather neutral perspective towards the FFBC project.

On the positive side, nation-wide and regional newspapers reported about various advantages of the FFBC projects, such as a shorter transport and travel time and improved connection between Germany and Denmark. On the negative side, the reports on the costs and the financing scheme of the FFBC project dominated.

The most frequently words mentioned in a positive context were "Verbindung" (= connection), "Wirtschaft" (= economy) and "Chancen" (= chances) while the words most frequently used in a negative context were Kosten" (= costs) - with 247 appearances by far the most mentioned negative word - followed by "Millionen" (= millions) and the term "Milliardenprojekt" (= billion-\$ project).

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Image and Identity Analysis 2017

In addition to the media analysis, an image and identity analysis of the "Fehmarn Belt Region" (not the FBBC) was conducted which focuses on the image about the attractiveness of the region as a workplace as well as the identity and self-perception of the region.

Based on the results of the image and identity analysis, most of the participants could not foresee a clear positive or a clear negative business future for the FBR. Most people simply do not know the term "Fehmarnbelt Region" and cannot associate a defined geographic area with it.

Considering spontaneous associations with the FBR, the four most mentioned words are "Fehmarn", "Germany", "tunnel" and "home" - it seems that in the mind of people, the FBR equals the island of Fehmarn plus the surrounding mainland.

Other frequent comments are related to the aspect of tourism, like "breeze", "island", "beach", "hanseatic", "beautiful" and "summer". This means, that the FBR is rather seen as a tourism spot than a business location. Thoughts concerning the region regarding the FFBC and the corresponding infrastructure project are secondary.

In summary, the image and identity analysis show that the FBR is visited by people inside and outside of the region and perceived as a simple connection to Denmark. The FBR is less (if at all) known for internationally competitive companies, innovation and a competitive labour market.

Learnings

While the purpose of the research was to describe the perception of the FFBC - or in other words: measuring the effects of the (non-)communication about the FFBC - there might also be some learnings to be drawn from the current perceptions:

Communication - as it has been shown, the dominating subject communicated in the German print press is costs and finances. First, it needs to be pointed out that this aspect should be of secondary concern from a German perspective, since the majority of the project is financed by Denmark. This seems to be largely unknown. Secondly, there is little communication about the chances around the project - reduction of travel time, potential economic development and the chance to attract further investments around the infrastructure project. Communication about these aspects needs to be started on the German side with specific facts supporting these arguments. In this context it was interesting to note that in Denmark the improved train connections between Lolland / Falster and Copenhagen were emphasized - which is basically only a "side effect" of the FFBC.

Branding the region - as it has been shown in the image and identity analysis, the FBR as the core region of the FFBC is - if at all - known for tourism. Not more. However, tourism will not be sufficient to support the required traffic volume on the FFBC. It might even be counterproductive to emphasize this topic since tourism - in the understanding of the opponents - might even suffer from the FFBC, especially during the construction time. In this context a focused place branding of the FBR is an imperative to make the FFBC an economic success. Yet, no coordinated activities can be identified to address this point from a cross-country perspective. And therefore, the FBR is - by people aged 25 to 39 - not perceived as an attractive business location.

Overall it can be said that the negative image of the FFBC can be traced back to a lack of target-oriented and fact-based communication which results in a lack of faulty knowledge about the FFBC project and thus creates a mainly negative public image. The research has shown that it is time to change this situation. B.P. Jacobsen (Ed.)

Chapter 2 The Fixed Fehmarnbelt Crossing: Background

S. Gnoth, T.P. Schriever, T. Titel and L.M. Traxel²

The Fehmarnbelt Region (FBR) - in a broad definition - stretches from Schleswig-Holstein in Germany over Lolland and Zealand in Denmark up to the Scania Region in Southern Sweden and has around nine million inhabitants, 5.2 million being Germans, 2.5 million Danes and 1.3 million Swedes, including 21 administrative districts in Germany as well as 29 municipalities in Sweden and Denmark. It is a popular holiday destination, which attracts tourists from all around the world. The FBR also includes two metropolitan areas, Hamburg and Copenhagen. Due to its wide range in nature and historical sites as well as the Baltic Sea coastline, this region is offering something to people with many different interests.

Just like the Baltic Sea Region (Germany, Denmark, Sweden, Norway, Finland, Russia, Estonia, Lithuania, Latvia, Poland), the FBR is not necessarily known for being the home to large enterprises or being an exceptionally political important location in Europe but has the potential to aspire and support the region's growth. The FBR has a favorable location between Central Europe and Scandinavia. This is relevant for logistic businesses in Scandinavia as well as in Germany and Central Europe. But this location is not used to its full potential due to the fact that the way to Scandinavia has to be made either through Flensburg, which costs time, or via ferry, which is cost-intensive due to the farry operator holding a monopoly on this connection.

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In order to promote growth, Germany and Denmark decided on building a fixed link over the Fehmarnbelt. As the island of Fehmarn is already connected to the German main land by the Fehmarnsund bridge, the FFBC would be located between Puttgarden and Rødbyhavn and thus connect two countries, Germany and Denmark.

The Fehmarnbelt Region in a European Context

The European Union is physically linked through the Trans-European Transport Network (TEN-T). The European Commission developed a scheme of nine axes, which go through all European member states and show important logistic connections. The FBR belongs to the Scandinavian-Mediterranean axis, which links Palermo in Italy with Germany and Denmark up to Finland's border with Russia. Together with the Brenner Base Tunnel, one of the two remaining gaps in the Scandinavian-Mediterranean corridor will be closed by the FFBC. At the moment, the FBR is connected to Denmark via the ferry line from Puttgarden to Rødbyhavn or the Autobahn A7 via Flensburg.



Fig. 2.1 The Scandinavian-Mediterranean Axis shown in pink (https://ec.europa.eu/transport/themes/infrastructure en)

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The Fixed Fehmarnbelt Crossing Project

The FFBC will be an 18-kilometer-long immersed tunnel linking Puttgarden (in Germany) and Rødbyhavn (in Denmark) or in fact, the metropolitan areas of Copenhagen and Hamburg. It will be the longest tunnel of its type worldwide and comprises a four-lane motorway, allowing cars, busses and trucks to pass with a speed of 110 km/h and trains to drive through at 200 km/h. This will cut down the travel time from Germany to Denmark to ten minutes by car and seven minutes by train.



Fig. 2.2 The Fehmarnbelt Tunnel (Femern A/S)

The FFBC will optimize the European transport network by shortening the land-based travel route between Hamburg and Copenhagen by 160 km or 2 hours via train and one hour via truck/car journeys.

The FFBC is a project financed by Danish investors, these being partially private but also the Danish government as well as the European Union. The tunnel toll is planned to repay the debt to the government and the investors. This repayment plan was also successfully used in the Storebælt bridge project as well as in the Øresund bridge project. In Germany a payment plan like this was also used on various tunnels before, but not on projects of this size.

The bilateral treaty between Germany and Denmark for the construction of the FFBC was signed in September 2008 and is supported by the European Union with € 135

mio. The approval process of the project began in 2009 for both countries. In 2015, the Danish Parliament ratified the law which determines the construction of the FFBC including the connection of the tunnel to the train track and road system on the Danish side. Three years later, in 2018, Germany is still working on the plan approval procedure, holding public hearings and dealing with complaints (Femern A/S).

Opportunities and Challenges of the Fixed Fehmarnbelt Crossing

When a project is affected by the legislations of two countries, possible challenges could complicate the process. An infrastructure project of this size is prone to objections by stakeholders, especially when there is no previous project of such type one can refer to. In the case of the FFBC, the German legislation complicates the process of the project because there are more legal requirements to be met than on the Danish side.

With the construction and the completion of the FFBC, there is definitely going to be change inside the region. People will get used to the faster connection between the two metropolitan regions of Hamburg and Copenhagen, which will be able to work together more closely. But not only the urban agglomerations would benefit from this connection, the German Baltic Sea cost would become a day-trip destination for Danes and even Swedes and vice versa. The local tourism would benefit from this, but there would also be more traffic on the island of Fehmarn as well as in Lübeck, Hamburg and on Lolland. Local residents could complain about noise, busy roads and a disturbance of the natural environment. These conditions would not only arise with the completion of the tunnel but already with the start of the construction and during the entire construction period.

As one can imagine from the present situation, one major opponent of this project is the current ferry operator. The monopolist is concerned about a decrease in passenger numbers once people have an alternative travel route. This dispute could mean a delay of the project.

Due to the legal system in Germany, opponents of this project can file a lawsuit against the construction of this tunnel, which is at the moment estimated to take about two years in court. This time estimation is relatively low compared to the time lawsuits against other infrastructure projects in Germany have taken.

Against this background a media analysis of the German print press as well as an image and identity analysis were performed to gain insights into the perceptions of the FFBC project in Germany - both in the FBR itself as well as outside the FBR. The approach and the results will be presented in more detail in the following chapters.

Chapter 3 Measuring Effects I: Media Analysis 2014 - 2016

F. Froböse, S. Gnoth, T.P. Schriever, T. Titel and L.M. Traxel³

Objective of the Media Analysis

The objective of the media analysis was to identify the general perception (= effects) of the FFBC project in the German print press and to identify the mood of Germans towards it.

With regard to the most common words in the analysed press articles, so called word clouds were created in order to visualize the general perception and to show the general opinion about the FBBC in the media - and thus in the German population. The goal was also to identify whether the German print press is trying to influence the perception of the FFBC within the society and to "guide" them into a certain direction or if they take a rather neutral position. Last but not least it should be identified if there are differences in the perception between nation-wide and regional newspapers.

Research Approach

The research work started by determining the German print media to be included in the analysis. It was decided to concentrate on the six largest daily as well as one of

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the two largest weekly nation-wide newspapers. Furthermore, the six largest daily regional newspapers were included to be able to compare the two groups and identify potential differences that might appear concerning the image and the identity of the region. All newspapers included distribute more than 50,000 copies per day (= circulation).

The nation-wide newspapers were defined as the ones being published and read in whole Germany. Regional newspapers were characterized by their publication in the northern part of Germany. The "northern part" consists of the federal states Mecklenburg-Western Pomerania, Schleswig Holstein and Hamburg. After determining the largest newspapers by their circulation, the purview was researched. To receive the information usually the freely accessible media data of the newspapers was consulted.

The content analysis required the identification of the individual articles. These articles were sourced from the *WISO* database (provided by GBI Genios Deutsche Wirtschaftsdatenbank GmbH). It is a scientific research database which provides millions of news articles, references and market data for different fields including economics and social sciences (GENIOS). To ensure to only include articles concerning the FFBC project, the search string was set to "Fehmarnbelt" and "Tunnel" (Note: For the 2015 analysis the search string also included the terms "Querung", "Brücke" and "Femern A/S"). A total of 260 articles were identified and included in the research. Each article was downloaded, given a standardized file name and stored in a dedicated folder. Furthermore, each newspaper website was re-checked making sure all articles are identified.

All articles identified were added to one single document. With the help of an online analysis tool (https://www.wortwolken.com), different versions of word clouds were created. These word clouds provide an overview of how frequently certain words were used in the articles. The larger the word appears in the word cloud, the more frequently it was used in the articles included in the analysis.

The entire document was uploaded into the analysis tool and a list of the most frequent words was generated. The list included a significant number of words with no additional

value / meaning for the analysis. Consequently, these words were excluded as well as words appearing less than 20 times.

Information on the results will be provided in the following chapters.

Analysis of German Print Press - 2014

In the year 2014 a total of ten nation-wide newspapers published 62 articles on the FFBC. The following table provides an overview of the newspapers including their publication, circulation, purview and the number of articles published.

Newspaper	Frequency	Circulation	Purview	No. Articles
Der Spiegel	weekly	768,498	6.79 mio	7
Die Zeit	weekly	498,439	2.34 mio	1
Süddeutsche Zeitung	daily	358,402	1.48 mio	2
Die Welt am Sonntag	weekly	350,736	0.9 mio	3
Die Welt	daily	171,433	0.673 mio	15
Die Welt kompakt	daily	170,560	0.673 mio	2
Handelsblatt	daily	126,107	0.454 mio	1
Der Tagesspiegel	daily	110,889	0.138 mio	1
Frankfurter Rundschau	daily	87,000	n/a	5
TAZ	daily	50,988	0.39 mio	25
∑=10				∑=62

Table 3.1 Weekly and Daily Nation-wide Newspapers with FFBC Coverage

Not every newspaper reports on the progress of the FFBC as neutral as one would expect. Journalists use certain key words to exaggerate and point out the most negative facts. A closer look was taken at the nation-wide newspapers which published the most articles - *Der Spiegel, Die Welt* and the *TAZ*.

Der Spiegel issued seven articles in 2014 with a rather negative connotation. Words like "against", "opposition" and "billions" were used frequently. Because of the high

circulation, many people read those articles and might share the opinion and hold the opposition to the project.



Fig. 3.1 Negative Connotation Word Cloud based on Der Spiegel 2014

Die Welt reported rather neutral in the 15 articles which were published. Words that do not exaggerate the facts but tend to describe the situation from an outside perspective were frequently used.



Fig. 3.2 Neutral Connotation Word Cloud based on Die Welt 2014

The *TAZ* was the newspaper with the most negative issued articles. The connotation is characterized by an open opposition: "billions", "reserved" and "against" were the words that appeared most frequently.



Fig. 3.3 Negative Connotation Word Cloud based on TAZ 2014

In addition to the nation-wide newspapers, a variety of regional newspapers in northern Germany were included with the aim of evaluating the local attitude towards the FFBC. Six regional newspapers with 48 articles have been analyzed:

Newspaper	Circulation	Purview	No. articles
Hamburger Abendblatt	175,689	0.7 mio	13
Ostsee Zeitung	129,769	n/a	7
Kieler Nachrichten	86,032	0.282 mio	11
Lübecker Nachrichten	85,825	0.238 mio	14
Nordkurier	69,499	0.36 mio	2
Hamburger Morgenpost	68,852	0.21 mio	1
<u>Σ</u> = 6			∑ = 48

Table 3.2 Daily Regional Newspapers with FFBC Coverage

The *Hamburger Abendblatt* published 13 articles which were held in a rather neutral tone. Positive and negative wordings balanced out and enabled the reader to get a non-biased report about the construction of the FFBC.



Fig. 3.4 Neutral Connotation Word Cloud based on Hamburger Abendblatt 2014

In the seven articles which were issued by the *Ostsee Zeitung*, words with a negative attitude toward the FFBC were found more frequently e.g. "concern", "billions", "risk" and "death zones".



Fig. 3.5 Negative Connotation Word Cloud based on Ostsee Zeitung 2014

The *Kieler Nachrichten* published eleven articles about the FFBC. No clear tendency could be identified for this newspaper. The advantages, as well as the disadvantages, were presented over time in a neutral tone.



Fig. 3.6 Neutral Connotation Word Cloud based on Kieler Nachrichten 2014

The overall purpose of the media analysis 2014 was to create a word cloud, which reveals the most frequently used words that appeared in the context of the FFBC.



Fig. 3.7 Word Cloud based on German Pint Press 2014

The word cloud Figure 3.7 represents the overall word cloud for the year 2014 with only a few adjustments. Words like "tunnel", "Denmark", "Femern", "Euro", "Hamburg", "construction", "millions", "Danish", "years", "crossing" describe the frame of the FFBC and appeared most often. These words have a rather general meaning. To get a better impression of the emotions imparted by the press (may it be positive or negative), two additional word clouds were created:



Fig. 3.8 Positive Connotation Word Cloud based on German Pint Press 2014

The green word cloud shows a variety of words that appeared in a positive context. The most frequent ones are: "development", "growth", "positive", "connection", "economic", "importance", "faster", "interest" and "together". Nation-wide and regional newspapers reported about numerous advantages the FFBC brings along e.g. shorter transport and travel times and improved connection between Germany and Denmark.

The dark word cloud reveals a collection of the most frequently used words with a negative connotation in terms of the FFBC e.g. "blocked", "concerned", "risks", "billions", "opponent", "lawsuit", "noise", "expensive", "unclear", "conflict", "prohibit", "pay", "costs":



Fig. 3.9 Negative Connotation Word Cloud based on German Pint Press 2014

Analysis of German Print Press - 2016

The media analysis for the year 2016 included 20 articles from which 13 were published in nation-wide newspapers and seven in regional newspapers.

Newspaper	Frequency	Circulation	Purview	No. Articles
Die Welt Hamburg	daily			3
Die Welt	daily	171,433	0.673 mio	5
Die Welt kompakt	daily	170,560	0.673 mio	3
Die Welt online	daily			2
TAZ	daily	50,988	0.39 mio	3
Ostsee Zeitung	daily			2
Hamburger Abendblatt	daily	50,988	0.39 mio	1
Berliner Zeitung	daily	92,596	0.32 mio.	1
∑=10				∑=20

Table 3.3 Weekly and Daily Newspapers with FFBC Coverage

The analysis took those articles into consideration which contained detailed information about the FBBC, the articles which only consisted of a headline or a short

update regarding the FFBC were excluded. Noticeable was the number of words describing the costs and the financing scheme of the FFBC. It looks like the German media does not fully inform their readers about the plans for the financing possibilities and that German taxes will not be used to support the construction of the FFBC but that the construction is payed for by Denmark.

Since Germany will only be responsible for the hinterland connections in Germany, none of the costs for the tunnel itself will have to be carried by the German taxpayers. There was also a remarkable frequency of words connected to tourism, saving of time and jobs. These were mainly mentioned in a positive context and are a reflection of what is important to most people. Below, the word cloud based on all articles is presented:



Fig. 3.10 Word Cloud based on German Pint Press 2016

The "positive" word cloud included words referring to the time that will be saved using the FFBC, the economical opportunities that will arise as well as possible new jobs being created.



Fig. 3.11 Positive Connotation Word Cloud based on German Pint Press 2016

In the "negative" word cloud, words like "costs" and "opponents", as well as "Millionenprojekt" which relates to the costs of the project are frequently mentioned. Also, "objection" was frequently mentioned because of the many objections that were made to the first planning permission documents.



Fig. 3.11 Negative Connotation Word Cloud based on German Pint Press 2016

In summary, it can be said that the German print press was creating a rather negative assessment of the project in the year 2016. Although there are large number of articles

published that only briefly mention the FFBC, rather less focus on the project and try to inform the readers about the facts. Therefore Germans living about 300 kilometres away from Fehmarn often are not aware of the project.

Summary Analysis of German Print Press 2014 - 2016

The database search resulted in the findings which are summarized and displayed in Figure 3.12:

Year	No. positive words	Frequency positive words	No. negative words	Frequency negative words	No. articles	Top three words in positive context	Top three words in negative context
2014	162	655 (55.5%)	114	524 (44.5%)	110 (62 national, 48 regional)	Economy Chances Connection	Billions Against Costs
2015	22	390 (29.2%)	36	945 (70.8%)	130 (107 national, 23 regional)	Connection Competition Economy	Costs Millions Billion\$- project
2016	36	113 (30.9%)	59	253 (69.1%)	20 (13 national, 7 regional)	Tourisms Jobs Economy	Against Costs Billions
total	220	1158 (40.2%)	209	1722 (59.8%)	260 (182 national, 78 regional)	Connection Economy Chances	Costs Millions Billion\$- project

Fig. 3.12 Summary of Database Research 2014 - 2016

Between 2014 and 2016, a total of 260 articles were published which could be directly connected to the FFBC. 182 of these articles were from nation-wide newspapers and 78 were published in regional newspapers.

There is a noticeable drop in the number of articles which were released per year: In 2014, 110 articles were published, in 2015 130 articles were counted, but in 2016 there were only 20 articles.

In all the articles, 220 different words could be identified which carried a positive attitude or were mentioned in a positive context, while 209 words with a negative association could be identified. At this point, the positive slightly exceeds the negative. When taking the frequency into account with which the terms appeared, the picture changes though. The analysis shows that, although the negative words are less when counting the different terms, the frequency with which they are used is almost 20 per cent higher than the frequency with which the positive words are used.

It has to be mentioned though, that the newspapers which are specialized in the topic tend to report a lot more positively than the general newspapers. These specialized papers include e.g. "Deutsche Verkehrszeitung" and "Täglicher Hafenbericht" both of which could not be included into the analysis as they publish less than 50.000 copies.

Looking at the development over the years, it can be seen that the difference in the percentage of positive/negative words has significantly increased: In 2014, 55.5 per cent of the terms suggested a positive attitude and 44.5 per cent had a negative connotation. This changed in 2015 when the negative connotation increased to 70.8 per cent and only slightly decreased to 69.9 per cent in 2016.



Fig. 3.13 Positive Connotation Word Cloud based on German Pint Press 2014-2016

The most frequently word mentioned in a positive context was "Verbindung" (= connection) with 93 appearances. "Wirtschaft" (= economy, 88 times) and "Chancen" (= chances, 49 times) are ranked second and third. The remaining terms in the top ten are "Großprojekt" (= major project, 35 times), "verbinden" (= connect, 34 times), "Tourismus" (=tourism, 34 times), "Wettbewerb" (= competition, 32 times), "größte" (= largest, 28 times), "Arbeitsplätze" (=jobs, 28 times) and "Nutzen" (= benefit, 27 times).



Fig. 3.14 Negative Connotation Word Cloud based on German Pint Press 2014-2016

"Kosten" (= costs) was - with 247 appearances - by far the most mentioned negative word in the three years. This was followed by the word "Millionen" (= millions) with 137 appearances, and the term "Milliardenprojekt" (= billion-\$ project) which was used 104 times. The words "gegen" (= against, 88 times), "Gegner" (= opponents, 59 times), "Jahre" (= years, 49 times), "Umweltschutz" (= environmental protection, 48 times), "Baukosten" (= construction costs, 46 times), "Kritiker" (= critics, 43 times) and "Kostensteigerung" (= cost increase, 42 times) conclude the list of the top ten most frequent negative terms.

The prevailing subjects throughout the three years can be categorized into three topics which are

• the costs,

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- the schedule/completion of the project and
- its impact on the economy.

These topics are presented in Figure 3.15 which shows the most frequently used words overall in the specified time frame. The cost-topic includes words such as "Millionen", "teurer" (= more expensive), "Baukosten", "Milliardenprojekt", "Kredite" (= loans) and "Finanzierung" (= financing). The topic "Fertigstellung" (= completion) covers, among others, the terms "Zeitplan" (= time schedule), "Baubeginn" (= construction start), "Jahre", "verzögert" (= delayed). The last prevailing topic "Wirtschaft" is made up of the words e.g. "Chancen", "Nutzen", "Verbindung", "Wettbewerb" and "Arbeitsplätze".



Fig. 3.15 Word Cloud based on German Pint Press 2014-2016

Primarily Negative Perceptions - Why?

As has been shown, the negative news reporting increased between 2014 and 2015. It seems that in 2014 the news concentrated more on informing the public about the project and analyzing the overall situation. Pros and cons were discussed in context of the public hearings which started in 2013.

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Then, in 2015 the project's completion was postponed for the third time and the cost debate exploded. This is mirrored in the use of the word "Kosten": 195 of the total 247 references were in 2015. The news coverage focused more on the negatives now, as the benefits of the projects had already been discussed and no new aspects came up. But the problems increased and many complaints were filed which might be why this dominated the news. To compare, in Denmark a little more than 40 objections were handed in, while there were more than 3,000 in Germany. The second round produced even more than 12,000 (Femern A/S). That the cost-topic is so prevailing in Germany, seemed to be surprising and unjustified for the responsible institutions which were interviewed by the authors.

The reason seems to be that the financing model is not sufficiently communicated to the German public. Most articles only state the costs or elaborate on how expensive the project is. What is rarely said though, is that the tunnel itself will be completely paid for by Denmark and EU subsidies, and refinanced through the tolls (Incentive 2017, p.6). The bilateral treaty states that Denmark is responsible for the planning, construction, financing and operating of the tunnel as well as for the development of the hinterland connection on the Danish side. This amounts to costs of about \in 7.4 bn. which will be carried by Denmark (Landesportal Schleswig-Holstein, 2017). According to Femern A/S, the tunnel will be amortized after a period of 36 years which is one third of its expected lifetime of at least 120 years.

Germany will "merely" carry costs of \in 1.7 bn. to develop the hinterland connection on the German side (FBBC 2016, p.11). The majority of the Germans does not seem to be aware of these facts and is therefore opposed to the thought of spending billions of taxpayers' money for the tunnel.

What people also don't seem to be aware of, is that the FFBC is not just an idea by a minority group of Danish and German politicians but it is part of a European Commission policy, the Trans-European Transport Network (TEN-T). It was designed to develop and implement a comprehensive network connecting all European regions. The FFBC will be part of the core-network and represents a main connection between the major nodes (European Commission, 2017).

In Germany, large-scale infrastructure projects tend to be seen as a threat by the public as the country has made some bad experiences (e.g. Elbphilharmonie, Stuttgart 21 and the Berlin BER airport) with it and the projects often come with major delays and massive cost increases in the end.

In the beginning, the Elbphilharmonie was supposed to finance itself through the sale of apartments and a hotel in the building. Then the costs were estimated at a \in 186 mio, they rose to \in 241 mio, increased to \in 400 mio and in the end \in 789 mio were spent (Hagen, 2017).

The new airport in Berlin produces negative reports as well. Apart from the underestimated costs for the construction, it will also be opened with a major delay. The original plan was to open the airport in 2011. Just recently, the opening date was postponed again, now to late summer 2019. It was the seventh postponement (HAZ, 2017).

Experiences like these stick with people. And at some point, it probably doesn't matter anymore what causes the delays or cost increases, all what people hear is that they exist. Therefore, a large part of the German public might not be aware that the current delays of the FFBC project are not a sign of failure before it even began. In the contrary; the Danish side seems to be ready to go. The delays right now are on the German side and owed to the complex German approval process, which is being even more bedeviled by the nature of the project (Schacht, 2017).

In summary it can be said that a lot of the negative image of the FFBC can be traced back to a lack of communication which results in a lack of or faulty knowledge about the project and thus creates a mainly negative public image.

In addition, it has not been successful to bring across what the FFBC is really about and what possible benefits it brings (Femern Belt Development, 2017). With the upcoming plan approval decision in mind, the focus now needs to be on creating a positive environment and acceptance for the project (Femern A/S, 2017).

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Chapter 4 Measuring Effects II: Image and Identity Analysis 2017

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Objective

In addition to the media analysis, an image and identity analysis of the "Fehmarn Belt Region" (not the FBBC) was conducted which focuses on the place image about the attractiveness of the region as a workplace as well as the identity and self-perception of the region.

Research Approach

To do so, a questionnaire about the image (Germany without the FBR) and the identity (FBR) was designed and implemented. With the help of an online survey it should be investigated how people living inside and outside the FBR perceive the region and their feelings / opinions to the building of the FBBC and the expected changes regarding the economic structure and quality of life in the region.

As part of the analysis, the FBR had to be defined more precisely. In this research, it includes the county of Nordwestmecklenburg, the city of Schwerin, the counties of Ostholstein, Stormarn, Herzogtum Lauenburg and Segeberg, the city of Lübeck and the city of Hamburg. In the next step all post codes of the area had be researched in order to divide the participants of the online survey into people who live in the region

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and people who live outside the region. The questionnaire was then published on the website www.umfrageonline.com which met all methodological requirements.

Definition: Place Image - Place Identity - Place Branding

Place images are "the sum of beliefs, ideals, and impressions people have towards a certain place." (Haider, Kotler and Rein, 1996, p.3). People's reflections are often too vague which could lead to a wrong picture of this place. (O'Shaughnessy and O'Shaughnessy, 2000) This means, that a few wrong clichés of one place "form the background of our opinions." (Anholt, 2007, p.1)

Furthermore, it often happens that images of one place become accepted by many people which could create a stereotypical opinion. (Boisen, Terlouw and Bouke, 2011) Therefore, "even when we hear something new and surprising about another country, this may not affect our mental image of the country at all, which remains securely stowed in the mental compartment marked fundamental beliefs" (Anholt, 2011, pp.29-30)

But, "clichés, stereotypes or prejudices are likely to gradually change if the people and organizations in those places start to change what they do and how they behave." (Placebrandobserver). "Place images are further shaped by culture, history and locality." (Placebrandobserver).

The image is the brand knowledge or the knowledge of a place in the case of place image. It will develop through unbiased sources and reflects how the external audience sees a place.

Place and identity are indiscerptible bound to one another. The place identity is the self-picture and refers to a cluster of ideas about place and its identity. It relates to the history and the politics. Furthermore, it concerns the meaning and significance of places for their inhabitants and users. "The two are co-produced as people come to identify with where they live, shape it, however modestly, and are in turn shaped by their environments, creating distinctive environmental autobiographies, the narratives

we hold from the memories of those spaces and places that shaped us." (Gieseking, Mangold, Katz, Low and Saegert, 2014)

The place identity builds many environment relations as it is occurring through experiences and attitudes of places. "Place makes memories cohere in complex ways. People's experiences of the urban landscape intertwine the sense of place and the politics of space."

A brand is not only a logo or a slogan, even if most people think of that. A brand could be a smell, sound, colour, design, number or sign, pictures or market designation. With a brand one connects good or bad memories. "Place branding is about influencing people's perception, the image they hold of a particular place, be it a city, region, country or tourist destination." (placebrandobserver)

Place branding is an important part of the identity which arises from a network from associations, but only a few are used to create a place brand. (Zenker, 2017)

The place brand whose promises are communicated by the brand and which shape an image according to the identity is created by the place identity and the place image. Distinctive attributes for the place identity, which is the origin of the brand, are vision, place, scope, essence, positioning, mission and culture. The place image consists of the contemporary perception and the perceived now. (Jacobsen, 2017)

To create an appealing place brand there is often not only one city branded but a whole metropolitan region such as Hamburg. A metropolitan region has more inhabitants which leads to a higher impact on the near surrounding or even the whole country.

When it comes to branding the "word-of-mouth" is worth more than most other ways of advertising. First of all, it is for free and most people are likely to visit countries, cities or regions because friends recommended them. (Zenker, 2017)

"Essential for this definition is that a brand is not the communicated expression or the "real" place, but the perception of those expressions in the mind of the target group(s)." (Zenker, 2017)

The 2017 Online Survey

This chapter will focus on how the online survey was created and on what was considered.

The target group was set to people of 25 to 39 years of age. This is because they are those who will most likely start a family soon and are looking for places where they can live, work and settle.

The meeting with Rüdiger Schacht from IHK zu Lübeck gave some interesting and helpful information for the online survey. He presented a survey regarding the attitude towards the Fehmarnbelt Tunnel from people in the region. That survey included a broader target group and used a more precisely defined topic which resulted in a clear evaluation. Comparing the age groups with the survey presented here, more responses have been made from participants aged 30 to 59.

When setting up the questionnaire, an introduction for the participants was written to inform them what the survey is about and what it contains.

Turning to the questions of the survey - they start with five questions on socio demographics: age, postal code, educational achievement, current occupation and in which state of his / her studies (semester) the individual is. The other questions have been specific about the FBR:

- What do you spontaneously think about the Fehmarn Belt Region?
- Do you know any other term of the Fehmarn Belt Region?
- How would you rate the image of the Fehmarn Belt Region as a business location?

The question regarding the business location needed to be rated by the numbers 1-5, for 1= bad and 5=good. The last three questions have been more complex. In question nine the participants were asked whether they agree or absolutely disagree on certain given assumptions. Those have been the following:

- The FBR is a friendly and welcoming region.;
- The FBR is young and dynamic.;
- The FBR is a symbol for honesty and down-to-earth people.;
- The FBR is cultural.;
- The FBR has a high quality of life.;
- The FBR is the connection between Denmark and Germany.;
- The FBR is a synonym for sea and briskness.;
- The FBR stands for tradition.;
- The economy in the FBR offers modern technology.;
- In the FBR the time stands still.;
- The FBR offers the possibility of international career.;
- The FBR offers international networking.

The last two questions consisted of the same content, similar established as the previous question. The participants had the possibility to rate again on a scale from 1 to 5. For question 10 ("What is important for a region in general?") it has been 1= not important and 5=very important and for question eleven ("What is the FBR known for?") it has been 1= not known and 5= quite known for. For those assumptions a SWOT analysis was made using the information given from the websites:

- official website of Femern Sund Belt;
- Dialogforum Feste Fehmarnbeltquerung;
- official Schleswig Holstein website and the
- official website of the Deutsche Bahn.

In addition, the German and English Wikipedia websites regarding the topic "Fehmarn Belt Fixed Link" were analyzed and included the threats and opportunities in the research. Many different and controversial opinions have been provided which could not all be included in the survey. Therefore, the questions were separated into subgroups, similar assumptions built one group. Those groups were mainly identified by the major components which comprise the project such as "environment", "security", "economy", "tourism", "traffic" and "internationality". The following statements have been used for the online-survey and are the results of the SWOT analysis:
- ...has / having a fast and easy connection to the neighbouring country;
- ...maintains / maintaining international cooperation;
- ...has / having a good transport infrastructure;
- ...has / having internationally competitive companies;
- ...is / being liked by visitors;
- ...has / having a diverse culture;
- ...is / being innovative;
- ...is / being interested in sustainable traffic solutions;
- ...is/ being attractive for investments;
- ...strengthen / strengthening the growth of the labor market;
- ...offer / offering a wide range of education possibilities.

Specific results of the SWOT analysis which have not been included in the survey are:

- attractiveness of Scandinavia and North Germany;
- reduce of energy consumption;
- more workplaces and possible internships;
- archaeological studies;
- development and new techniques for trains;
- fewer construction risks;
- Fehmarnsundquerung needs to be renewed;
- building of new train stations and many more.

Overall the online survey took around 5 to 8 min but not more than 10 min to complete. To avoid incomprehensiveness regarding the questions, a test run with colleagues was carried out.

For the calculation of the required number of responses, it was identified how many people would comprise the target group in general. Out of federal statistics it was known there around 15.51 million people in the age of 25to 39 years living in Germany. (Statista, Bevölkerung - Zahl [..], December 2015). To subtract the amount of people of the age 25 to 39 living within the FBR from the 15.51 million, the inhabitants in this region needed to be analyzed. The cities Schwerin, Hamburg and Lübeck and the counties of Ostholstein, Stormarn, Herzogtum Lauenburg, Segeberg and Nordwestmecklenburg comprised around 600,000 people (= identity target group),

calculated with the 18.87 per cent. For the Image target group, the 600,000 needed to be subtracted from the 15.51 million and resulting in 14.90 million for the Image analysis. Those are just the possible amounts of people that can be asked overall. It is more important to calculate the needed quantity for a representative result. (City Population, Suche in Deutschland, latest update 31.12.2015).

In this case we calculated the representative quantity including a confidence coefficient of 90 per cent and an error margin of 5 per cent, which resulted into the representative amount of 280 people each (Image and Identity).

The FBR as a Business Location

Today the German part of the FBR is characterized by two main economic drivers. On the one hand the city of Hamburg and on the other hand the tourism along the Baltic Sea coast.

According to the survey-based image and identity analysis, most of the participants could rather see a clear positive nor a clear negative business future for the FBR: 45 per cent have answered with neutral (no.3), while approximately 32 per cent see the potential of the region as rather negative or negative (no. 1 and 2). At the same time, approximately 21 per cent see a business-related chance in the region (no. 4 and 5). Here the inhabitants have a small tendency to see the potential of their region slightly more positive than outsiders do. But in general, there is no significant difference between image and identity.

The reasons for the results are most probably a lack of knowledge and information in different dimensions.



■ Total Region in % ■ Image in % ■ Identity in %

Fig. 4.1 FBR perceived as a Business Location in 2017

Most people do not know the term "Fehmarnbelt Region" and cannot associate a defined geographic area with it. One problem here might be the large disparities between Hamburg as an urban business center and the rural areas up to the Baltic Sea coast and Fehmarn. On account of this, it is hard to define the region that will be affected by the FFBC as a business location as a whole.

Another critical point for the unclear results may be a lack of the general publicity of the region itself, especially under the term "Fehmarnbelt". If the term "Ostholstein" or "Hamburg" would have been used instead, more people could have articulated their opinion or answered more precisely.

The IHK zu Lübeck has also initiated a representative survey (conducted by Ipsos) about the people's attitude and expectations towards the Fehmarnbelt tunnel. Because the surveyed people have a Hamburg or Schleswig-Holstein background, it is similar to the identity analysis presented here. There are two major results regarding the present survey and the Ipsos analysis:

- Firstly, the attitude towards the project is more positive if the people know more about the project and the region.
- Secondly, the attitude towards the project and the consequent economic benefits increases with the age of the respondents. Because most of the participants in the present survey are in the age between 20 and 24 and due to insufficient knowledge of the region and the project, there is a slightly negative trend regarding the FBR as a business location.

In addition to that, the IHK-based study also investigated the expected effects of the tunnel, among others, the economic effects. In general, the influence of the tunnel concerning the economy and the business location Fehmarnbelt is high, especially in the sector of tourism.

Influenced economic drivers are for example more daily tourists and more tourism attractions, positive effects on retailer's business, the creation of a new business location and "a closer Europe". Although the effects on these drivers are high, the degree of agreement is not equal to them. The highest agreement towards an economic driver is "the closer Europe" with 42 points. That is still a third less than highly agreed influences of the facilitations of traffic. According to the IHK survey, people look mainly at the traffic facilitation, for example better conditions for commuters and a shorter travel time to Scandinavia instead of the consequent relations to business.

Because there is a high relation between commuting, tourism, a good traffic infrastructure and positive economic effects for the region, the effects with an already high degree of agreement could be used as arguments in order to promote the Fehmarnbelt tunnel and the belonging business location Fehmarnbelt.

In addition to that, it might be useful to promote those arguments, which are particularly relevant for younger people. Like already mentioned, they are the most critic age group. Issues concerning the younger generation are probably exchanges in different educational levels, sustainability and a cultural growing together. This could be built on the point of "a closer Europe", which already has a high degree of agreement.

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Place Branding the Fehmarnbelt Region

The most familiar terms concerning the FBR are most likely the city of Hamburg, the city of Lübeck and the island of Fehmarn. Looking in particular at the two cities, the terms have at least a nationwide reputation. With the survey the familiarity and the image of the FBR by asking the respondents about spontaneous thoughts and terms which they associate with the region could be analyzed.

The two questions dealing with this subject were answered by 219 people. This is only 50 per cent of the whole number of participants and a third less than in the questions before, which concerned the region as a business location. According to interviews with some participants, it could be found that people who do not know the region or the term itself have stopped the survey at this point. In addition to that, many people who actually answered the questions have answered with "no"; "I don't know"; et cetera. Consequently, it is a first indication of a lack of knowledge the respondents had of the FBR as a whole.

Looking at spontaneous thoughts associated with the FBR, the four most mentioned words are "Fehmarn", "Germany", "tunnel" and "home". On the basis of these words, several aspects which concern the degree of publicity and the effectiveness of communication could be identified. It seems that in the mind of people, the FBR equals the island Fehmarn plus the belonging mainland. Moreover, a broad majority only thinks of the German side of the FBR. At the first thought, there is no association with Denmark or Northern Europe, even though the FFBC as a construction project is fairly realized. The word "home" tends to explain further mentioned terms which stand in relation to tourism and nature. Subsequently, it can be rather seen as a feeling of being home.

Other frequent comments relating to the aspect of tourism are "breeze", "island", "beach", "hanseatic", "beautiful" and "summer". In contrast to that, words like "Rødby", "Scandinavia", "bridge", "waterway" but also "waste of money" appear. After analyzing all words in the word cloud by number, the amount of words dealing with the vacation and tourism aspect predominates.

This means, that the FBR is rather seen as a tourism spot. Thoughts concerning the region regarding the FFBC and the corresponding infrastructure project are secondary. Nevertheless, the fact that the idea of the FFBC has arrived the people can be seen positively.



Fig. 4.2 Associations with the FBR in 2017

Apart from the question on spontaneous thoughts relating to the FBR, respondents were also asked about other terms for the region. Through this procedure it was possible to see substitutional words which are not only related to the FBR but also stand for it. During the evaluation of our analysis we found out that the participants answered with symbols in addition to substitutional words.



Fig. 4.3 Additional Associations with the FBR in 2017

Looking at the most frequent terms, a similar picture as in the questions to the relating thoughts of the people can be identified. Tourism and the idea of the landscape stand out. "Island" is the most frequently mentioned word. Here again the strong connection of the FBR to the island of Fehmarn instead of the whole area can be seen. Further dominating words are "sea", "beach" and "tourism". The nature as a whole seems to be one symbol for the region and the island which lead to much touristic visits.

Not as often named as nature and tourism items are terms under the category relating to the peripherical region of the island for example Lübeck, Ostholstein and Scandinavia. In addition to that, terms dealing directly with the FBR and the FFBC could be identified, for example "water road", "infrastructure project", "economy" and "belt". This shows that the awareness of the project relating to the FBR is existing to a certain extend.

Two other physical symbols associated with the island region is the Fehmarnsund bridge and the ferries crossing the belt. These symbols are an important comparison to the FFBC and how it could act as a symbol for Fehmarn as an island and the Danish and German FBR, because both are traffic options in order to cross water. Moreover, they are the leading physical symbols which were created by humans in the region.

By analysing the results and categorizing them into symbols, one could elaborate the current place branding aspects, because according to Kokemuller is "branding the use of various promotional tools and messages to convey an intended image of your company and products to customers (...)", whereas "(...) symbols are extremely important to the effective entrenchment of your brand. Promotional symbols include various words, phrases, images, characters and other visual depictions or sounds that connect customers to your brand."

Consequently, symbols are one of the most important aspects of place branding. In order to easily get a common picture in the mind of the people, symbols should be physically visible. As one can see in our term analysis, the Fehmarnsund bridge and the ferries perform well in being publicly known besides the well-established tourism and the nature given phenomena. This leads to the assumption that the degree of publicity concerning the project itself as well as the connected FBR will increase, when

the tunnel will be built. Nevertheless, there is a difference between the tunnel and the bridge or the ferries. The fact that a tunnel is built under the earth's surface will probably bring not as much publicity as a comparable bridge for example.

Therefore, it could be useful to promote the idea, how the tunnel is supposed to look like and the advantages of the tunnel concerning the nature in comparison to a bridge or especially the ferries, such as an undisturbed flow of the sea, habitat for fish or new green train tracks, because the value of the symbols of the nature and the sea for the place brand Fehmarn and FBR will decrease, while other newly created symbols relating to infrastructure, economic aspects and the standard of living will increase.

From a marketing perspective it might be useful to promote the already existing crossborder cooperation of Denmark and Germany which will lead to the mentioned effects of a modernization of the region. Furthermore, it is important that existing symbols which are not mentioned in the word cloud, because people do not think of them in context of the FBR yet, will be promoted more on the German side. Those symbols include especially the city of Hamburg and its closer metropolitan area, because Hamburg has a good, international reputation and plays a distinctive role if the connection or even fusion of greater Hamburg metropolitan area and the greater Copenhagen metropolitan area is the goal.

Image and Identity Analysis of the FBR

The FBR is characterized by huge differences because it includes three different states (Sweden, Denmark, Germany). Sixty percent of the regions' inhabitants are residents of Northern Germany. Additionally, the sub-areas (Germany: Schleswig Holstein, Mecklenburg-Western Pomerania and Hamburg) of these states are quite different in culture and behaviour. Northern Germans have a strong identity to their home place. Nevertheless, the identity to the FBR is not yet rooted in the people's' mind and is not now brought in connection to their homelands (Wichmann Matthiessen, 2016).

However, a large project like the FFBC has an impact on the people living inside and outside of the FBR and could strengthen the identity (as well as the image) in a positive way. To create an all-embracing picture of the FBR the participants of the survey were asked for what the region is known for by giving them eleven sentences which they could rank from 1 (not known) to 5 (well known). The goal is to identify strengths and weaknesses of the FBR.

Summarizing the analysis shows the result that the FBR is likely visited by people inside and outside of the region and perceived as simple connection to Denmark. The FBR is less known for internationally competitive companies, innovation and a strong labor market by people within and outside of the region.

The image is a little more positive about these characteristics than the identity. Also, the survey shows an almost neutral opinion of the people to questions regarding the FBR. This make it hard to give a recommendation. What is sure that there is a high need for public relations and an enlarged and open communication about the procedure and especially the benefits the fixed link will offer.

► The FBR is known for being liked by visitors.

More than 2/3 of the participants of the survey perceived the FBR as being liked by visitors. A median of 3.88 shows the most positive result of the region's characteristics. The result is not surprisingly since the FBR offers a variety of tourist attractions ranging from cultural city trips to holidays at the beach. Nearly 60 million overnight visits a year speak for themselves. Five out of ten tourists in Schleswig-Holstein are from Scandinavia and around 60 percent of tourists in Denmark are from Germany (Femern Sund Bælt, 2017).

With the construction of the FFBC both destinations brought closer together and attracts new vacationists. Vacations in Fehmarn can be combined with a short trip to Copenhagen or a stay in Lolland can be combined with a trip to Hansa Park, Fehmarn or Hamburg.

► The FBR is known for having a fast and easy connection to the neighbouring country.

The median of this question showed a value of 3.45, which is the second highest result of the survey. 50 percent of the participants perceived the FBR as easy and fast connection to Denmark. The fixed link offers additional advantage because travel time will decrease by an hour when driving by car or lorry and two hours when travelling by train between Hamburg and Copenhagen. This will not only simplify journeys between the neighbouring countries but also will make it possible to take cheap flight from Copenhagen to international destinations (Femern Sund Bælt 2017).

► The FBR is known for having a diverse culture.

Slightly 35 percent of the participants saw the FBR as cultural diverse (median 3.13). The FBR is not known for its culture from the outset. Many people see a lack of cultural potential outside of the big city centers like Hamburg or Lübeck. This is mainly caused by the low population rate in rural areas. Ideas for an increasing culture could be cross-border expositions and events, which are faster to reach due to the tunnel and the hinterland connection. However, culture is not only to be compared to art. Culture is also part of a society and can strengthen the identity of the whole region (Aulin, Petra a.o. 2016).

► The FBR is known for maintaining international cooperation.

Nearly half of the participants did not know whether the FBR maintaining international cooperation. The remaining 50 percent were split into two categories. Half of them thought they are known for such international cooperation; the other half thought the region is not known for it. In total we got a median of 3.07.

The FFBC is an European infrastructure project which connects North and South and East and West of Europe, which gives national as well as international companies the opportunity to make transport more easily or even increase the attractiveness for cooperation to settle down in the region (Femern Sund Bælt 2017). However, the project itself strengthens not only the ties of Denmark, Germany and Sweden, but also to the neighboring countries like Poland and the Netherlands. Such a big project requires different experienced companies and skilled workforce, which are not only possible to acquire in Denmark (Aulin, Petra a.o. 2 2016).

► The FBR is known for having a good transport infrastructure.

The most neutral position could be found for the question if the FBR has a good infrastructure. A median of 3.0 confirms this position.

By constructing the tunnel, the whole infrastructure will be getting more efficient. A barrier between Denmark and Germany will be eliminated. The travel time between the Danish island Lolland and the German island Fehmarn, between the metropolitan area Copenhagen and Hamburg and therefor between Scandinavia and central Europe will be clearly reduced (Fehmarnbelt Business Council, 2016). Sweden, Denmark and Germany trade among for centuries. Germany is Sweden and Denmark's biggest partner for trading. Not only the tunnel, but also the extension of the Hinterland will facilitate trade and transport for all partners. Cargo trains will safe 160 km and two hours travel time (Femern Sund Bælt, 2017).

► The FBR is known for having internationally competitive companies.

The most negative opinion resulted in asking the participants whether the FBR is known for internationally competitive firms. A median of 2.66 shows that the region is not known for it. Only ten out of 270 gave a ranking of 5. Three times as much gave a ranking of 1.

The FBR will increase the potential for business segments like green technology, health, food products, IT, logistics, media and tourism. The attractiveness for settlement of companies will grow due to the good infrastructure of the region and the strengthen ties between both countries (Herrmann & Wichmann Matthiessen, 2016).

Companies are more competitive when saving time and cost. Due to the Hinterland they have more opportunities for new employees, suppliers and customers. This is especially important if a company have production sites in Denmark as well as in Germany. However, logistic companies also benefit from the better flexibility, particularity by the improvement to rail transport (Fehmarnbelt Business Council, 2017).

► The FBR is known for being innovative.

Second poorest opinion prevailed for the innovativeness of the FBR. The median is 2.82. Only ten out of 270 gave a ranking of 5. Nearly three times as much gave a ranking of 1.

In the narrow sense the tunnel itself stands for a big innovation and can be seen as the region's flagship. It will be one of the safest tunnel in the world. There will be no contraflow, and weather and daytime will have no influence. The whole tunnel will be monitored with modern traffic observation and guidance equipment (Femern Sund Bælt, 2017). 150 experts from different sectors, including engineers, landscape planners, biologist and geographers, work on the project (Hansen, 2017). In the wider sense the tunnel can also be associated with innovation. Borders will be overcome, economy will be promoted, connections will be created, and new horizons will open up (Schacht, 2017).

► The FBR is known for being interested in sustainable traffic solutions.

Participants of the survey had no clear position whether the region is interested in sustainable traffic solution or not. A median of 3.06 consists of 40 percent neutral positions. The remaining 60 percent are split into almost the same amount of positive and negative opinions.

The construction of the tunnel does not only concentrate on efficiency. Simultaneously, some ecological aspects appear. New and diverse natural areas like beaches and lagoons will be formed of the seabed from the tunnel (Femern Sund Bælt, 2017).

During the construction, negative environmental effects will be reduced to a minimum, since there are strict requirements to meet, i.e. maximum construction noise, narrower industrial emissions, no blurring of the water and limited change of the scenery (Femern Sund Bælt 2 2017). After completion, the tunnel will bring positive environmental effects, since the usage of trains will emerge. Railways are more

environment friendly than lorries. The energy consumption, air pollution and CO² emission are lower (Femern Sund Bælt, 2017).

► The FBR is known for being attractive for investments.

If it is possible to speak of a direction, the FBR is rather unattractive for investments. The median is at 2.92. Whereby ten people more had the perception that the region is not known for good investments rather than they thought that it is good known for it. Respectively, 20 percent gave a ranking of 2 and 4, 45 percent had a neutral opinion.

The fixed link offers the opportunity to reach more skilled people, who are able to commute between work and home more easily. Additionally, trade and transport are faster and at lower cost. Existing companies of the region might become more profitable or new remunerative companies might settle down. They become attractive for additional investments of various stakeholders in both the enterprises as well as in the region itself.

► The FBR is known for strengthening the growth of the labour market.

Likewise, second poorest result with a median of 2.82 resulted in asking the participants whether the FRB is known for strengthening the growth of the labor market. 33 percent thought that the region is not known for strengthening the labor market, only 20 percent thought that the region is known for it.

The fixed linked make the FBR to a transborder and an even more wealthy region. Quality of living increases since a new region for living, culture and as well job quality will develop. Job possibilities will arise regionally while longer distanced firms across the borders can faster be reached. People living within the FBR are classed as highly qualified and form a large sales market of nine million people (Fehmarnbelt Business Council 2016). Commuting between Denmark and Northern Germany become more attractive. However, this is even applicable within Northern Germany, for example between Ostholstein and Lübeck or Hamburg, since the hinterland expands. The unemployment rate will decrease since companies can enlarge the hinterland and people are more willing to commute between cities, regions and both countries (Femern Sund Bælt 2017).

► The FBR is known for a huge offer of education possibilities.

Nearly the same distribution of answers provided the question whether the FRB is known for offering good education possibilities. A median of 2.87 is slightly better. However, many people think that the education possibilities are rather bad than good (31 vs 22 percent). In the FBR 48 universities and 20 research centers exist. An exchange can be done easily since students can reach the education facility with less barriers. Cooperation and communication between the facilities will be stronger (Fehmarnbelt Business Council 2016).

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Chapter 5 Some Learnings from the 2014 - 2017 Survey

L.-M. Hoyer, A.M. Peters, T.P. Schriever and L.M. Traxel⁵

Both being members of the European Union, located in the North of Europe, Germany and Denmark share many values but there are still some differences, which are significant regarding governmental decisions and the perception towards infrastructure projects.

While Germany is a much bigger country than Denmark and the German government is structured in a two-chamber system, Denmark has a single-chamber system, which obviously accelerates the decision-making process. Furthermore, there is to say that Germany has a larger population as well as a larger set of laws to be passed in order for a project like the FFBC to be approved.

Despite the close geographical location, some cultural differences occur between the two countries. Danes are usually very open minded and action oriented which might lie in relation to the good experiences they have made with successful projects in the past, whereas Germans tend to have a rather negative perception especially towards infrastructure projects. History shows a number of failed projects such as the Elbphilharmonie in Hamburg, Berlin Airport or the submerged train station project Stuttgart 21 on the German side and several successful ones in Denmark, such as the Øresund Bridge, which connects the Danish capital Copenhagen to the Swedish city of Malmö. These two cities have shown the Danes that they are promoted better as a region than separately. Another example for a successfully completed project is the

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Storebælt Bridge by which the Danish islands are connected to each other. These positive experiences lead to a positive perception towards similar projects such as the FFBC.

An often-occurring problem is also the lack of understanding of the Danes for the German governmental structures and the time it takes for an approval to be obtained.

Danes are also more aware of the finance plan worked out for the tunnel, whereas Germans are used to taxpayer money being used for this type of projects. This is also reflected in the German print press, often there is little to no information included in the articles mentioning the FFBC. This shows a significant lack of communication and might have lead readers to make false assumptions or to a misinterpretation of the given facts.

Media Analysis

In conclusion it can be said that the perception of the FFBC in the German print press is rather negative which is due to a lack of information. When the plan approval procedure started, the press was thoroughly interested in covering the process. This interest decreased during the on-going process, which is common in journalism because the highest interest lies in polarizing news. It usually decreases after the first introduction of a project and only resurfaces when changes or fails happen during the project. Because this project takes several years in planning as well as in production, there is not much new information the press can report about, other than delays and costs which sparks the negative connotation of the articles. Thereby, the press influences the readers, who obtain their only information about the project from the press rather than from involved parties as for example Femern A/S.

An interesting fact is that some newspapers had a more negative view on the topic than others. For example, *Die Ostseezeitung* had a rather negative view, since Mecklenburg-Western Pomerania will not benefit as much as Schleswig-Holstein or Hamburg. The *Hamburger Abendblatt* communicated a rather positive perception towards the project, this may be due to the business opportunities mentioned before which will arise for Hamburg. In addition to that, almost all newspapers mentioned the

expensive hinterland connections that Germany has to pay for, and the increasing traffic these will bring for inhabitants of Fehmarn as well as Ostholstein and Lübeck. Although Denmark paying for the tunnel is a positive aspect, this is also connected to Germany paying for their hinterland connections with tax money in the analysed articles.

Perception of large infrastructure projects in Denmark and Germany

The perception of large infrastructure projects in Germany differs from the one in Denmark, the cause for this lies in the predominantly negative outcomes of previous large infrastructure projects. Although these projects are not in any form linked to the FFBC, it is frequently mentioned in relation to the FFBC in the German print press. In Denmark on the other hand, there were several successful projects like the Storebælt and Øresund project. As a result, the basic attitude that Germans and Danes have when being told about such a project varies widely. The Danes are enthusiastic about the FFBC and are eager to see the construction start, whereas the Germans are rather hesitant about the project in general.

Estimation of the future situation

In order to enhance a positive opinion of this project, the communication with the media is to be improved regarding openness about the financing plan and a closer look at the project itself. Publishing more images of the construction plan and of what the tunnel will look like on social media might increase the interest and improve the general view on the project. This could result into more Germans being aware of the project and its outcome as well as them forming their own opinion about it.

For the future it can be said that the media's interest will rise again when there is a construction site or even during the lawsuits, which the opponents will file. It is also of great importance that the parties involved in the construction communicate the advantages and possibilities of the FFBC, not only with regard to the immediate neighbourhood but also for the whole country to see the bigger picture. Through social media, information about new possible job opportunities as well as new vacation options could be spread across the country and especially the affected region.

B.P. Jacobsen (Ed.)

Image and Identity Analysis

As the "Fehmarnbelt Region" includes with Sweden, Denmark and Germany three different countries, are there some cultural differences. Furthermore, Germany is working different to Denmark especially regarding applications for large project. The Danish and Swedish part of the "Fehmarnbelt Region" know how to handle large projects as they collected experiences with the Storebælt Bridge and the Øresund Bridge. It was not clear to them, that Germany never build a big bridge or tunnel projects like this. Germany needs to handle all processes for the first time now and especially the environmental activists are hard opponents of the tunnel.

With the help of our online survey did we find out that most of the people did not know about the "Fehmarnbelt Region, even if their hometown is located there. Furthermore, most people answered questions regarding the "Fehmarnbelt Region" neutral which makes clear that most people are not informed enough about the region. A lot of people still talk negative about the costs, but those do not know, that Denmark is paying the whole tunnel project and Germany only needs to pay for the new infrastructure on the German side. New infrastructure would be even needed without the tunnel as this distance is getting more interesting for retailers.

After our analysis of the survey did we realize, that especially the German part of the region needs to get better informed. They still think they must pay for a billion Euro project, but could use their tax money for a lot of different and more important things. A documentation or a series of articles about the "Fehmarnbelt Region", the planned tunnel, the payment and more only, would be a good way to inform the inhabitants of the region and bring the topic more down south, as most below south from Hamburg never heard about the planned crossing, which will be the largest of its kind.

What Germany can learn from Denmark - suggestions to change the situation

This part is a summary of the expert interviews conducted by the authors in November 2017 (20.11. to 23.11.2017 with IHK zu Lübeck, Femern Belt Development, Femern

A/S, Lennart Damsbo-Andersen from the Folketinget and Sebastian Zenker of Copenhagen Business School).

During the presentation of Femern A/S about Project Management and Communication it was stated that the company was aware of the differences in perception and culture to the Germans, but that there was a major difficulty to translate this knowledge into their own actions at first. This is an issue that can only improve over time, if there has not been any previous experience with the participating partners, but it should not be underestimated in any case.

The little things are the ones that can hinder a smooth communication, and it should also be taken into account that, if not known or not deemed important enough, the whole basis for a proper dialogue can be sabotaged from within. This is of course not the case here, but since the Danish side has always given it all towards the project, the German usually are more like "Don't change it, we don't like change."

The openness and state of being informed into detail about each and everything involving a certain topic is something the Germans could go for more than they do at the moment. It won't be achievable in the amount at which it is possible in Denmark, because they have a lot less people to take into account, but would be an admirable start to be better informed from the beginning on, and if there are questions to actually ask them.

Concerning the misinformation challenge in the German media, it is to be mentioned that there is a major malfunction in the journalistic sector – namely there are way too few at work overall. They generally do not have time to research in depth about the topics anymore, and therefore go with whatever they find first about a project. It might be easier if the information would be given to them easier, even though that is barely possible in this case. It would be easier for them if they had more people – and therefore individually more time – to get to the ground of the topics, and maybe they then would be able to participate in the events they are invited to. How would anyone get to know anything if they never show up when the communication could be there – and they are actually invited in, just to not show up in the end?

Another point was the politics, and honestly, where to start at this point. It would be easier if the Germans would not always have the need to be overly perfect from scratch. They could learn a lot in adapting to the Danish way to do things: to get started first, and eliminate problems that come up along the way on the way towards the goal, to have in the end saved time. It would also help to look outside the box of the own small affairs, namely to look at the big picture that's at stake, and not only the small ones. For example, that it would be a great infrastructural improvement to go through with the FFBC, which opens up a ton of new opportunities in the future. Not to mention that there is a future in the long run, that is also allowed to be considered.

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The authors, here together with *Lennart Damsbo-Andersen*, Member of the Danish Parliament (Folketinget), during an excursion to Zealand Region and Copenhagen.

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