

Taking Off or Grounded: Evaluating the Economic, Environmental and Social Impacts of the Lelystad Airport Expansion



Source image: Brent Cox, 2017.

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Contents

1. Abstract	3
2. Introduction	4
2.1 <i>Research problem</i>	6
3. Theory	8
3.1 <i>Economic attractiveness</i>	8
3.2 <i>Environmental impact assessment</i>	9
3.3 <i>Social impact assessment</i>	11
3.4 <i>Hypothesis</i>	11
4. Methodology	12
4.1 <i>Ethical considerations</i>	14
5. Results	15
5.1 <i>Impacts of the airport expansion</i>	15
5.2 <i>Impacts of the uncertainty</i>	20
5.3 <i>Stakeholder input</i>	21
6. Discussion	22
6.1 <i>Experienced impacts</i>	22
6.2 <i>Uncertainty</i>	23
6.3 <i>Stakeholder input</i>	23
7. Conclusion	25
7.1 <i>Limitations and recommendations</i>	25
8. References	26
9. Appendixes	30

1. Abstract

In 2015, the Dutch government decided that the regional airport of Lelystad would be expanded to relieve the mainport of Schiphol Airport. Nine years of protests and five postponements later, the future of Lelystad Airport remains uncertain. This thesis investigates the economic, environmental, and social impacts of cancelling or further postponing the expansion plans for local businesses in the province of Flevoland through discussions with key stakeholders and experts.

A cancellation of the expansion will result in the loss of economic supply chain effects that are directly related to the operation of the airport. However, the size of these effects is dependent on the number of flights that the airport will accommodate, which is currently unclear. It is unlikely that the expansion will have a significant impact on the regional economy, as it will not substantially improve Flevoland's existing accessibility.

Those opposed to the expansion are concerned about adverse environmental impacts, including damage to the environment, noise and light pollution, both in the immediate vicinity and in the wider area around the airport. These effects are directly related to the social impact of a decrease in living quality, which is a concern for farmers living in proximity to the airport, as well as for those residing at a greater distance.

Overall, a cancellation of the expansion will lead to the loss of potential economic benefits, but will also have positive environmental and social impact. However, the extent of the impacts is dependent on the precise plans for Lelystad Airport, and thus remains uncertain. For future research, it is recommended that the issue be examined from a broader perspective, taking into account the future of Schiphol Airport, as the plans for Schiphol are closely related to those for Lelystad Airport.

2. Introduction

In 2008, the Schiphol Group unveiled plans to utilise the small regional Lelystad Airport for the relocation of vacation flights, thereby facilitating the expansion of Schiphol Airport. Subsequently, in 2015, the Dutch government formalised the expansion of Lelystad Airport (Maat, 2015). Over the intervening period, approximately 243 million euros have been invested in the project by the Royal Schiphol Group and a number of government entities. These investments, including the construction of a passenger terminal, the extension of the runway, and the installation of air traffic control, aimed at rendering the airport suitable for short-distance vacation flights (Omroep Flevoland, 2024).

However, the projected timeline for the airport's commercial operations has encountered significant setbacks. Issues stemming from errors in the environmental impact assessment (EIA), public protests against the social impacts, such as noise pollution, related to low-flying routes, the advent of the Covid-19 crisis, and challenges related to nitrogen emissions have collectively resulted in five postponements of the airport's opening. A time line of this process is presented in Figure 1.

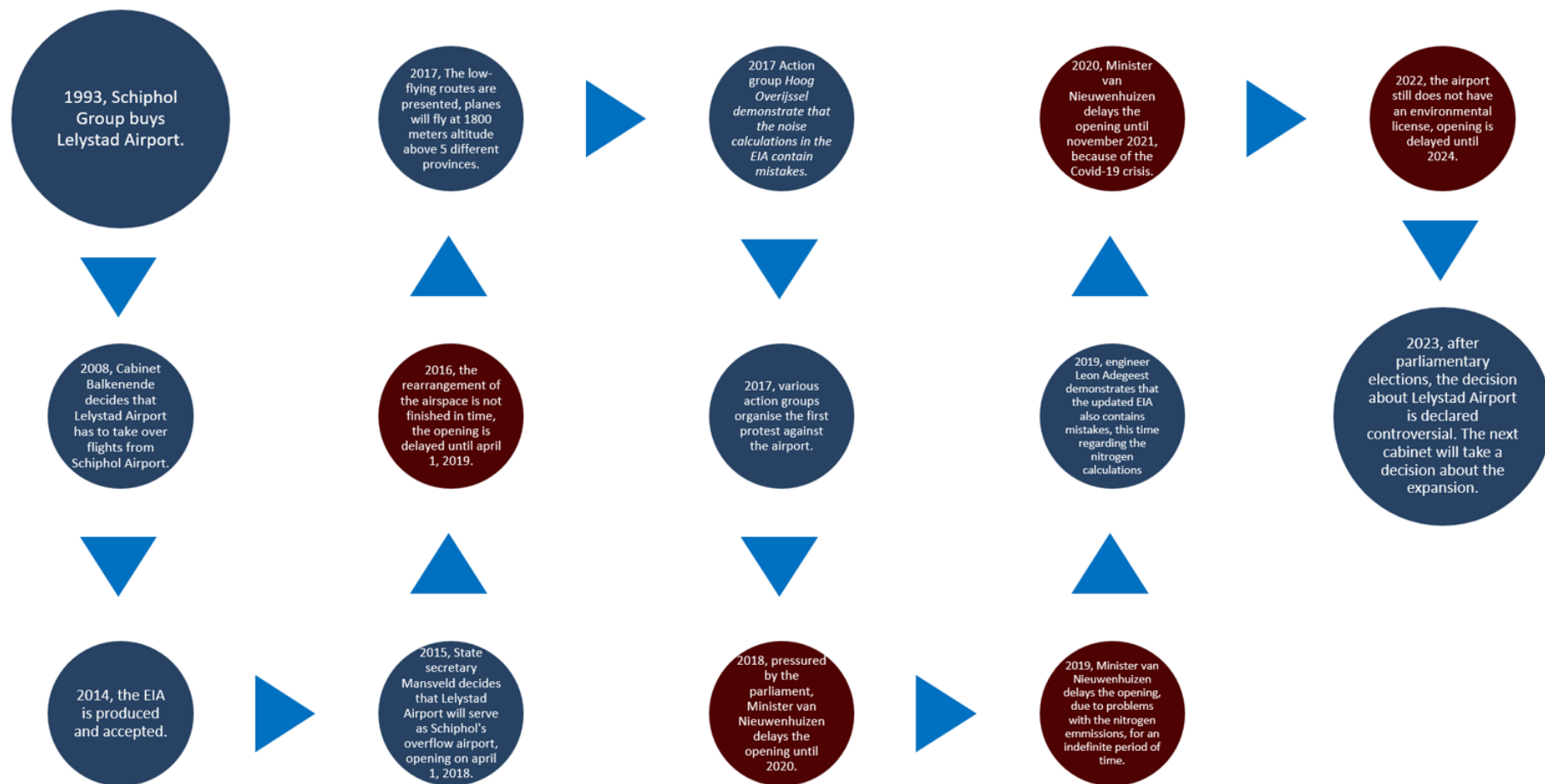


Figure 1: Developments regarding Lelystad Airport (Author, 2024, based on Binnenlands Bestuur, 2020; DPG Media, 2021; NOS, 2019; Omroep Flevoland, 2018; SATL, n.d)

The Dutch parliament has voted in favour of a proposal to cancel the expansion plans. There is a prevailing sentiment that Lelystad Airport may never commence commercial air traffic operations as originally envisaged. Nevertheless, the Dutch government has not yet carried out this proposal. Consequently, the scenario wherein the airport opens for commercial air traffic remains a plausible outcome (Benjamin, 2024), depriving the province of Flevoland of potential positive economic and social benefits.

2.1 Research problem

The prolonged delays in the development of Lelystad Airport are primarily attributable to errors in the environmental impact assessment. Numerous discrepancies were identified in the noise calculations of the initial EIA. The report indicated minimal disturbance to residents in Zwolle, in contrast to the excessive noise predicted for those in Ens, despite identical flight altitudes over both locations (Koot, 2017). Further discrepancies were identified in the distribution of flights, where the calculated routes differed from the actual planned routes (Laconi, 2017b; NOS, 2017).

Contrary to the calculations, around 80% of flights were projected to head south, resulting in higher-than-expected noise pollution in the southern region (Laconi, 2017b; NOS, 2017). Furthermore, the engine power assumptions in the calculations, based on 30%, were found to be inaccurately low compared to the anticipated 70% in actual operations, further contributing to heightened noise levels (Koot, 2017). In consequence of these controversies, the airport's expansion was postponed by a year in February 2018 (Hoeks, 2018).

In 2017, public outcry arose when it became evident that aircrafts from Lelystad Airport would traverse large portions of the east and north of the Netherlands, including several nature reserves (Laconi, 2017a). In 2022, the application for a nature permit was rejected due to flawed calculations concerning nitrogen deposition (Tubantia, 2022). Attempts by the Schiphol Group to rectify this issue by purchasing emission rights from farmers have proven insufficient, Lelystad Airport remains without a valid license (Benjamin, 2023; Benjamin and Derbali, 2023).

Moreover, criticism of aviation in general has become a focal point in Dutch politics. The aviation industry is accountable for approximately 2% of global greenhouse gas emissions (Čokorilo, 2016). As Lelystad Airport is designated for short-distance vacation flights, it will be a significant contributor to disproportionate carbon emissions. Consequently, many Dutch politicians view the airport's expansion as undesirable (Laconi, 2024).

Various studies have examined the social and environmental implications of Lelystad Airport's expansion. Rietra and Römken (2014) cautioned against the potential detrimental effects on locally cultivated crops, while Ouwerkerk (2022) underscored the environmental consequences and noise pollution. According to Ouwerkerk, the degradation of nature, particularly in nature reserves such as the Veluwe and the Weerribben, and noise pollution caused by low-flying aircraft are of significant concern to residents of the neighbouring provinces of Overijssel and Gelderland. Furthermore, residents have

expressed concerns about potential social impacts, including diminished tranquillity and property devaluation (Ouwerkerk, 2022).

To date, the negative effects, as well as the positive economic impacts, have not materialised, as the airport has not yet been opened for large commercial air traffic. Nevertheless, the protracted postponement of the airport's opening for commercial air traffic has already resulted in significant financial losses (Omroep Flevoland, 2024), thereby necessitating a decision on whether to proceed with the expansion of the airport.

Despite existing studies (Rietra and Römken, 2014; Ouwerkerk, 2022) and an environmental impact assessment (Ministry of Infrastructure and Water Management, 2018), there is an apparent absence of research exploring the effects of the uncertainty and potential cancellation. This thesis provides a comprehensive analysis of the economic, environmental and social impacts of the uncertainty and potential cancellation of the Lelystad Airport expansion. It also offers insights into how the expansion process impacts public opinion and social dynamics, providing valuable insights for policymakers, academics and society at large. The main research question of this study is:

How do local entrepreneurs in Flevoland experience the uncertainty and potential cancellation of the Lelystad Airport expansion?

The main research question will be answered by the following sub-questions:

1. What impacts do entrepreneurs in Flevoland face as a result of the potential cancellation of the airport expansion?
2. How has the uncertain future of Lelystad Airport affected the perceptions and attitudes of local entrepreneurs towards government policies and planning in Flevoland?
3. How can policy measures benefit from stakeholders input regarding the future of Lelystad Airport?

3. Theory

3.1 Economic attractiveness

The improved economic attractiveness of the Lelystad region and province of Flevoland is frequently cited in the media by proponents of the Lelystad Airport expansion, as is shown by Bakker (2024) and Laconi (2024), but the exact form and extent of the economic impacts remain unclear.

Zhang and Graham (2020) identify four channels of economic impacts from aviation. The first three channels, also referred to as "supply chain effects", represent the effects on the local economy resulting from the operation of the airport. Activities directly related to the operation of the airport, such as traffic control and luggage handling, create "direct impacts" through the employment of individuals for these roles. "Indirect impacts" are generated by businesses that provide goods and services on the airport, such as catering and hotels. The spending of individuals employed by these jobs generates "induced impacts."

In addition to the aforementioned effects related to the operation of the airport, the fourth channel of economic impacts represents the "spillover effects" that are associated with the improved accessibility and connectivity created by an airport. Connectivity can boost productivity, facilitate trade, promote tourism, and attract new economic activities by facilitating more face-to-face contacts (Pot and Koster, 2022; Zhang and Graham, 2020). According to Florida, Mellander, and Holgersson (2015), airports are pivotal components of regional economic development. However, there is conflicting evidence in the literature about the economic impact of the improved connectivity and accessibility that airports create.

For metropolitan areas, the size of an airport is a reliable predictor of regional economic advancement. Green's (2007) research indicates a positive correlation between airport passengers and growth in population and employment, key factors in economic expansion. Green's findings support Brueckner's (2003) research, which suggests that a 10% rise in passenger boardings in a metropolitan area results in a 1% increase in employment in service-related industries. Extensive air service to diverse destinations fosters frequent face-to-face interactions, boosting engagement with businesses in other cities, attracting new companies, and stimulating employment in existing enterprises.

Green's (2007) and Brueckner's (2003) studies pertain specifically to United States metropolitan areas and are not directly transferable to a smaller European city like Lelystad. The results of research by Tveter (2017) on the impacts of airports on regional economic development in Norway are too imprecise to support the findings of studies in North American metropolitan areas. Nevertheless, these studies underscore the potential of an airport to enhance regional economic attractiveness.

Moreover, the literature remains inconclusive regarding the direction of the relationship between economic growth and air transport. Zhang and Graham (2020) and Green (2007) conclude that the relationship between air transport

can impact economic growth, but economic growth can also impact aviation. However, it does appear that this bi-directional relationship is especially prevalent in less-developed countries. Pot and Koster (2022) conclude that the impact of small airports on the regional economy is not evident, as improved air accessibility is often a result of regional economic growth, rather than a driver. Additionally, their role in the total accessibility of a region is limited, particularly in densely populated areas. As such, the relationship between air traffic and economic growth can be seen as a 'chicken and egg situation'.

As such it is expected that the expansion of Lelystad Airport will generate positive economic "supply chain effects" related to the operation of the airport, thereby also generating positive social impacts such as increased job and business opportunities and expanded travel options. However, the extent to which the accessibility and connectivity of the region are improved and the magnitude of the "spillover effects" related to this improved accessibility and connectivity are unclear. Consequently, it is challenging to predict the extent to which the province of Flevoland will be deprived of positive economic and social impacts should the expansion of the airport be cancelled.

3.2 Environmental impact assessment

Environmental Impact Assessment (EIA) is a tool employed to identify the environmental impacts of a project. It is closely related to Social Impact Assessment (SIA), with EIA historically developing as the more extensively developed instrument, particularly as a regulatory tool. The development of SIA as a social counterpart to EIA has resulted in SIA often constituting a minor component within the broader impact assessment framework (Dendena and Corsi, 2015). Slootweg, Vanclay, and van Schooten (2001) proposed the integration of environmental and social impacts into a unified framework, because these impacts are interlinked. Ouwerkerk (2022) observed this interconnectedness in the case of Lelystad Airport, with the environmental impact of noise pollution also considered a direct social impact.

In light of the intricate nature of this relationship and the necessity to prioritise social impacts, a new framework, the Environmental and Social Impact Assessment (ESIA), has emerged since the early 2000s. This framework has gained widespread application from international stakeholders, gradually superseding traditional EIA practices (Dendena and Corsi, 2015; Vanclay, 2019). Nevertheless, EIA remains a regulatory instrument in various countries, including the Netherlands, necessitating comprehensive assessments of environmental impacts for significant infrastructure projects (Vanclay, 2019).

As research indicates that the negative environmental impact of airport expansion correlates with negative social impacts, cancelling the airport project is anticipated to yield positive social effects by mitigating the associated environmental drawbacks. However, cancelling the expansion will also result in the loss of the anticipated economic benefits, which will result in negative social impacts. Consequently, the anticipated social impacts of

cancelling the expansion of the airport are expected to be a complex interplay of positive and negative effects. A summary of this can be found in Figure 2.

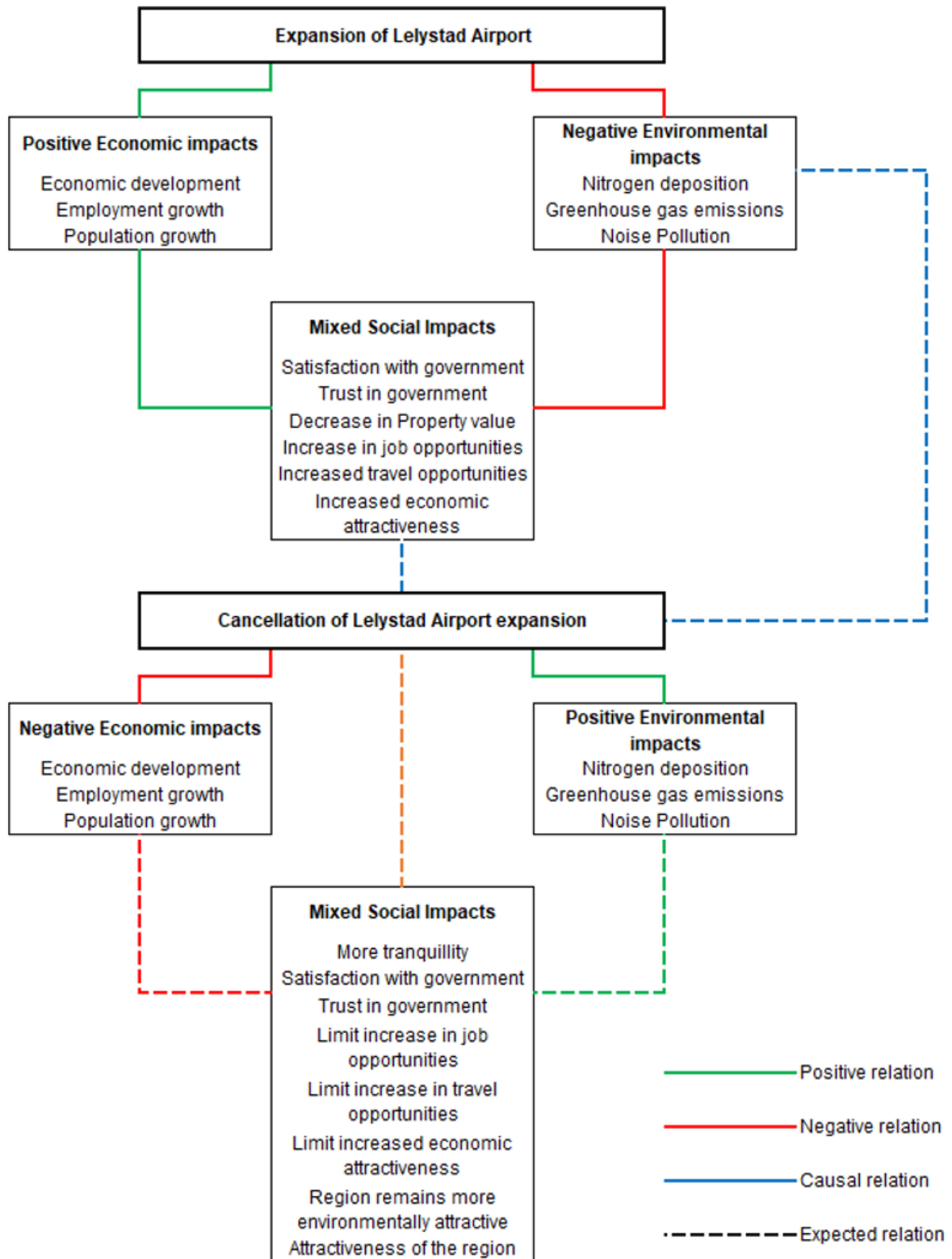


Figure 2: Conceptual model (Author, 2024)

3.2.1 Environmental impact assessment in the Netherlands

In the Netherlands, an EIA is compulsory if a plan or project establishes frameworks for future decisions on projects in the planning area that would require a EIA, or when developments within the plan can lead to significant effects of Natura 2000 areas. The new Environment Act (Omgevingswet), which came into effect on the first of January 2024, has not yet defined what constitutes a plan. However, they include at least the following: an environmental vision (*omgevingsvisie*), a program (*programma*), an environmental plan (*omgevingsplan*), and a preferential decision (*voorkeursbeslissing*) (Commissie mer, 2024).

3.3 Social impact assessment

The recognition that social issues present distinctive challenges compared to environmental concerns, coupled with notable differences in legal requirements between EIA and SIA, has led to a transformation of the role of SIA – from the regulatory counterpart of EIA to more of a management tool. This shift emphasises the effective handling of social issues throughout all phases of a project (Vanclay et al., 2015). The International Principles for Social Impact Assessment defines SIA as: “the processes of analysing, monitoring, and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions” (Vanclay et al., 2015, p1).

3.4 Hypothesis

In light of the research on the economic implications of airport development, it is anticipated that the expansion of Lelystad Airport would yield positive effects on the province of Flevoland. Nevertheless, the prevailing uncertainty and potential cancellation of the expansion project are likely to result in a reduction or even the complete elimination of the aforementioned positive economic outcomes. Consequently, it is anticipated that the uncertainty and prospective cancellation of the airport expansion will result in adverse economic consequences, while also producing positive environmental impacts, thereby generating nuanced social impacts. Such outcomes may include a decline in public trust in the government, alongside an improvement in local living quality.

4. Methodology

The study employed a qualitative data collection approach, comprising semi-structured interviews, document analysis and media analysis, to provide the opportunity to obtain detailed and nuanced responses, capturing the complexities and subtleties of participants' experiences and perspectives. The potential interviewees were identified through desk research. A total of six interviews were conducted with key stakeholders.

Rather than engaging in individual interviews, the researcher has opted to conduct interviews with representatives of organisations that represent multiple stakeholders. Although the individual perspectives within these organisations may diverge, this method enables the capture of the shared stance and arguments of multiple individuals and businesses in a single conversation. Table 1 provides an overview of the stakeholders interviewed, as well as their principal interests.

Number	Name	Role	Stake/interest	Method	Duration
1	Interviewee 1 (I-1)	CEO of OMALA NV	Company owned by the province of Flevoland and municipalities Almere and Lelystad, responsible for the spatial development of Lelystad Airport Business park, which is located next to the airport	Online	53
2	Interviewee 2 (I-2)	Director of <i>De Lelystadse Boer</i> ,	Direct neighbours of the airport. Strongly against the airport expansion, mainly because of noise pollution near the airport	Face-to-face	56
3	Interviewee 3 (I-3)	Volunteer and economic expert of SATL	Volunteer for action group SATL, strongly opposes the expansion because of noise concerns near his home in Gelderland, but also because of economic reasons.	Face-to-face	65
4	Interviewee 4 (I-4)	Post-doc researcher Economic Geography at University of Groningen	Expert on the topic of economic viability of small airport. Neutral stance regarding expansion. Is not directly impacted by expansion.	Face-to-face	28
5	Interviewee 5 (I-5)	CEO Lelystad Airport	CEO of the airport, employed by the Royal Schiphol Group, the owner of Lelystad Airport, strongly in favour of expansion because of economic reasons and business interests Schiphol.	Online	23
6	Interviewee 6 (I-6)	Alderman municipality of Lelystad	Alderman that is responsible for matters regarding Lelystad Airport. Strongly in favour of expansion because of economic reasons.	Face-to-face	28

Table 1: Overview of stakeholders (Author, 2024)

The research could have benefitted from more interviews with key stakeholders, particularly with businesses and people involved in the planning process, to capture more opinions and perspectives. Nevertheless, the data collected has yielded valuable insights that enable the formulation of general conclusions. The data has been analysed using ATLAS.ti software.

4.1 Ethical considerations

To mitigate the power dynamic between the researcher and interviewees, interviews have been recorded. This way, the original recording and the transcript can be consulted in case interviewees feel their words have been misrepresented, in the event of disputes about the precise content of the discussion, or if interviewees wish to alter their words. Recordings have only been taken after the interviewee has stated informed consent, either in words or text. Additionally, the collected data is accessible and utilised solely by the researcher and the thesis supervisor.

The researcher currently lives in an area that is expected to be impacted by the proposed low-flying routes of Lelystad Airport. However, this ensures that the researcher personally benefits from a reliable and objective study, based on which policymakers can make an informed decision that takes the interests of all stakeholders into account. The researcher has maintained objectivity by forming opinions based solely on the gathered data and other relevant and reliable sources, and reports no conflicts of interest. During and after the research, data has been and will be stored securely on a personal computer to ensure it cannot be accessed or seen by other people.

5. Results

5.1 Impacts of the airport expansion

5.1.1 Economic impacts

The positive economic effects of the expansion of Lelystad Airport for the province of Flevoland are a frequently cited argument by proponents of the expansion. The CEO of Lelystad Airport argues that the expansion will result in more jobs in the region, given that the operation of the airport itself creates jobs. However, stakeholders are doubtful about the extent of these effects. According to interviewee 3, the majority of these jobs will be low-paying roles. Interviewee 2 concurs, adding that highly-paid employees such as pilots will not relocate from the Schiphol region to Lelystad, given the proximity of the two locations.

The CEO of Lelystad Airport also expects the expansion to have a spillover effect, particularly in the innovation and sustainability sectors. This is a trend that is already underway. There are already some companies located on the airport that are engaged in the development of innovative and sustainable aviation solutions. Innovation is also a key argument for the municipality to support the expansion:

“In Lelystad you can work on the electrification of aviation. We have the space, we have the opportunity.” (I-6, 2024)

Furthermore, interviewee 6 expresses concern that businesses may relocate, and economic developments will stall. Nevertheless, other stakeholders express scepticism regarding the economic spillover effects of the expansion. Some agreements have been reached with local farmers, but according to interviewee 2, the economic effects are minimal.

The CEO of OMALA NV, the developer of Lelystad Airport Business Park, believes that the expansion will impact the surrounding area of the airport, including the business park. Consequently, he does not oppose the expansion. However, he also states about the business park that:

“It is called Lelystad Airport Business Park. The link with Lelystad Airport actually purely has to do with location. Namely, it is the business park next to Lelystad Airport. (...) So (...) you would (...) be able to land your own plane at Lelystad Airport next to the company. But then that's really the only direct relationship, functionally that there is between the two.”

The business park does have one area designated for airport-related businesses. In case of a cancellation of the expansion, this cannot be developed as originally planned, which will be unfavourable for OMALA NV and Schiphol Real Estate. Nevertheless, the plot is likely to be repurposed without causing significant losses to the stakeholders involved.

Interviewee 4, a postdoctoral researcher in Economic Geography, does not believe that the airport will have high spillover effects either, as the expansion of the airport does not significantly add to the current accessibility and connectivity of Flevoland:

“You could argue that it is actually pretty well established (...), because within an hour you have one of the largest airports in the world. With one of the most extensive networks in the world [Schiphol Airport]. (...) So they are basically improving a little bit on accessibility, but they already have very good accessibility.”

The small improvement in accessibility is illustrated in Figure 3, which shows the locations of Schiphol and Lelystad Airport, as well as their scale in flights per year.

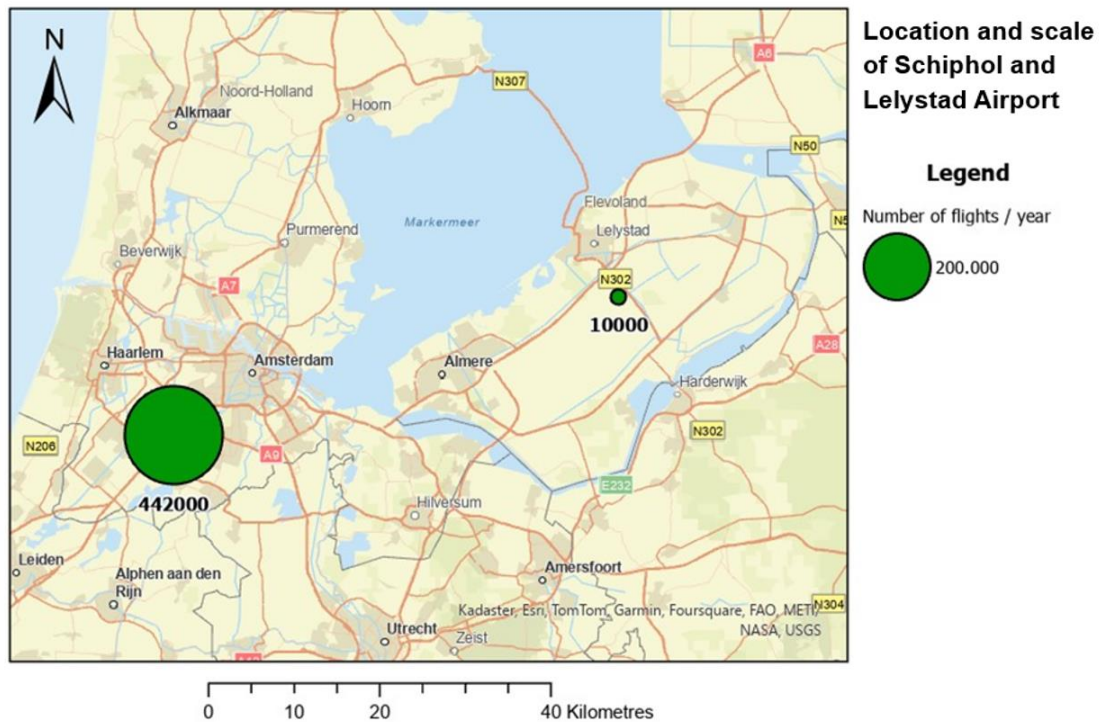


Figure 3: Schiphol and Lelystad Airport, location and scale (Author, 2024)

In addition to the very marginal improvement in accessibility, he is also concerned about the type of accessibility and connectivity that the airport expansion will bring:

“It will be mostly vacation flights (...). So for the local business community, the ambition that Lelystad expresses, which is to take over those vacation flights, is not really going to have a catalytic effect, I expect.

As such, the spillover effects are heavily disputed. Some stakeholders argue that the expansion is important for innovation and sustainability, while others argue that it will mostly create low-quality jobs without significant economic impact.

5.1.2 Environmental impacts

Contrary to the economic impact, there is consensus that the expansion of the airport will have a significant environmental impact. For the farmers of De Lelystadse Boer, the immediate neighbours of the airport, noise and light pollution are the main concerns:

“Look, you're used to it being quiet here (...) It's dark here in the evening and at night. Well, that will be over. That's actually partly over now with all those lights already in the fields, say, and trees that have been cut down.” (I-2, 2024)

The CEO of Lelystad Airport acknowledges these concerns and their importance, but also notes that the airport tries to mitigate these negative impacts:

“Flying has noise and you have to deal with that. (...) We are surrounded by 70 farmers who are united in De Lelystadse Boer, and they will (...) be most affected by us. And we have made agreements with them about the insulation of the homes”

Interviewee 2 recognises these agreements as a good mitigation measure, but also nuances this by saying that only a small proportion of the houses have been insulated.

Stakeholders in Flevoland do not see the environmental impacts as a concern from a business standpoint. Neither De Lelystadse Boer nor OMALA NV expect that businesses will be affected by the pollution caused by the airport. However, the volunteer for the action group SATL, an action group that opposes the expansion of the airport, mainly on environmental and social grounds, fears that the tourism sector in Gelderland and Overijssel will be damaged by the noise pollution caused by the low-flying routes:

“It is economically very important (...), that those core values [tranquillity, nature, and silence] are maintained. (...) It's not just the residential recreation, but also the hospitality industry around it (...). That's being blown to bits.”

5.1.3 Social impacts

The negative environmental impacts and the scepticism about the extent of the positive economic impacts result in mixed but mostly negative social impacts. A reduction in the quality of life due to noise and light pollution, emissions and spoiled views is the main concern of the farmers living near the airport and of interviewee 3:

“Look, it's beautiful, lovely, peaceful and quiet here now, but if 10 times an hour a plane comes over here at 1800 meters, that's less fun, isn't it? So the quality of life in the wide area around the airport is severely affected by introducing that noise pollution.”

As mentioned above, the airport has tried to mitigate the negative impacts in the immediate vicinity of the airport by entering into agreements with farmers to allow them to benefit from the airport. Although these agreements do not have a significant economic impact, they have had a positive social impact:

“It does a lot with the neighbourhood, because farmers are actually always only concerned with themselves and their own business, but in this they really have to operate as a team. On top of that also with the airport. (...) That creates a bond, as crazy as it may sound.” (I-2, 2024)

Although the farmers see the increased social cohesion as a positive development, interviewee 2 also notes that this would not be reversed if the airport expansion were cancelled. Moreover, these positive social impacts can be seen as mitigation measures, but they would not be necessary if there were no negative environmental and social impacts.

Overall, the various impacts are more complex than the conceptual model suggests. A detailed illustration of the impacts of a possible cancellation, as well as the negative social impacts of the uncertainty discussed in the next section, is shown in Figure 4.

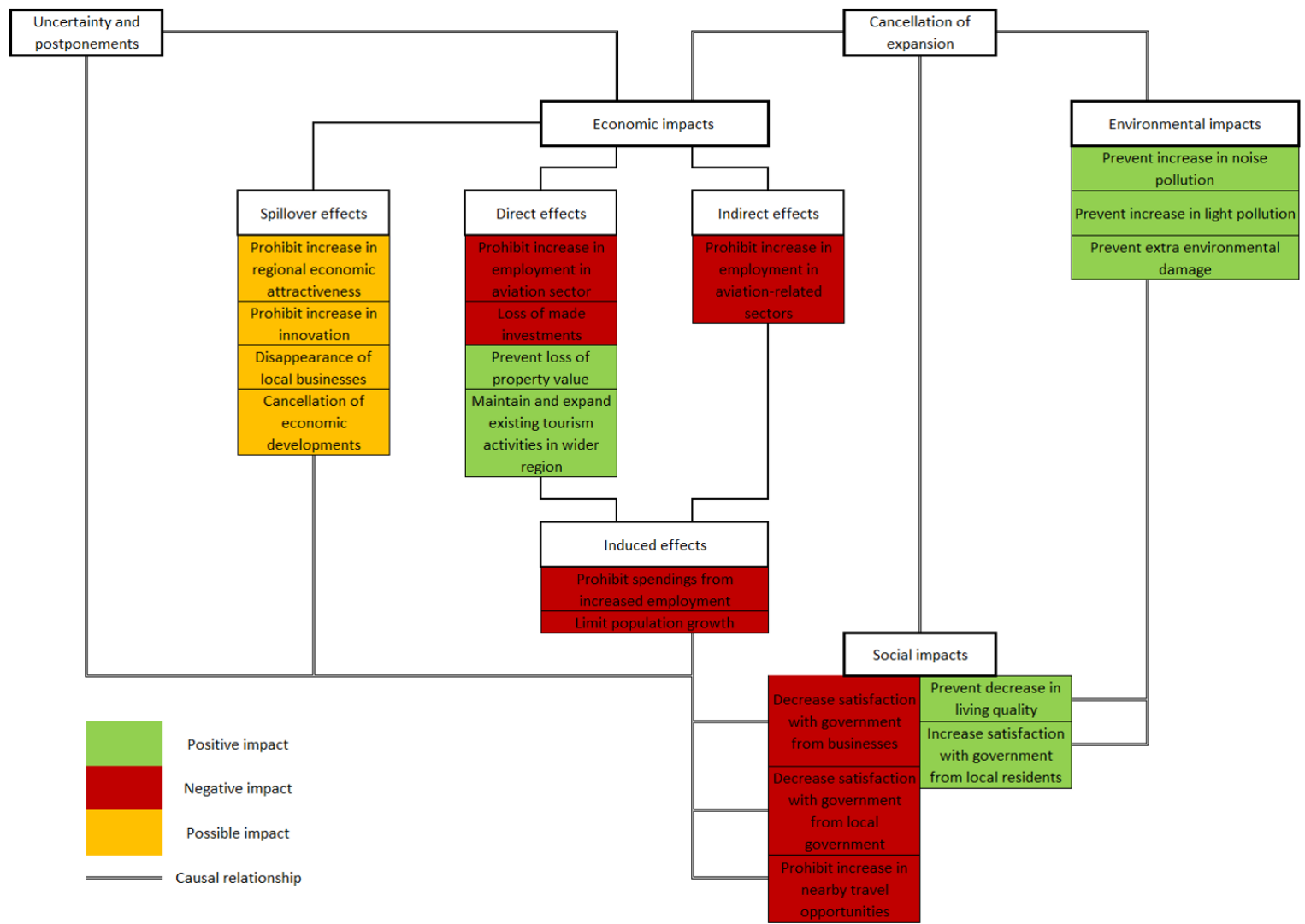


Figure 4: Schematic overview of uncertainty and cancellation impacts (Author, 2024)

5.1.4 Impacts for Schiphol Airport region

Although the province of Flevoland is the scope of this research, it is important to recognise the wider context of the expansion of Lelystad Airport. Sharing the negative impacts of aviation and airports is an important argument for the proponents of the expansion. The original plan to transfer holiday flights to Lelystad Airport aimed at facilitating more high quality flights and strengthening the network of Schiphol Airport. However, it's also possible that flights could be transferred to Lelystad without new flights being added at Schiphol.

This means that the expansion of Lelystad airport will not only affect the province of Flevoland, but also the area around Schiphol Airport. Both positive economic and negative environmental impacts will shift from the Schiphol area to the Lelystad area. However, this shift is not linear, especially in the case of noise pollution, according to interviewee 3:

“Look, if you're going to move up to 45,000 (...) flights to Lelystad Airport, then you have a noise reduction of 0.0 percent. So why is that? Well, because there are a lot of flights, there is a lot of noise. (...) If you transfer those 45,000 flights to Lelystad Airport, where (...) it is quiet, (...) you get increases to (...) 10 times as much noise as there was.”

However, interviewees 5 and 6 point out that the transfer of flights to Lelystad Airport will allow Schiphol Airport to stop night flights without harming the airlines that currently fly at night.

5.2 Impacts of the uncertainty

The uncertainty surrounding the future of Lelystad Airport and the continuous postponement of the expansion have considerable effects on the stakeholders who have an economic interest in the expansion. The negative impact is greatest for the Schiphol Group. As the owner of Lelystad Airport, they have to pay the operating costs of the airport and also have to depreciate the new extended runway. These costs amounted to approximately 22 million euros between 2020 and 2022. Air traffic control added another 17.4 million euros in operating costs (Omroep Flevoland, 2024). These costs will continue to rise until a final decision on the expansion is made.

Interviewee 6 states that the residents are disappointed with the lack of decisiveness on the part of the national government. For OMALA NV, the speed of the decision is more important than the outcome, as part of the development of Lelystad Airport has been put on hold until a decision is made on the expansion:

“If you don't want it, please say it (...), because then we can take that scarce land that we have and which is scarce throughout the Netherlands, we can start tying it back up usefully. (...) That is also good for the economy and perspective in the area and in Lelystad and Flevoland, because all this procrastination and nagging and lingering, that's not going to get jobs.”

Uncertainty about the expansion has also raised suspicions among stakeholders about a future decision. Stakeholders see politicians as

unpredictable. The CEO of Lelystad Airport agrees with the CEO of OMALA NV that uncertainty is bad for businesses:

“Speaking of politics, I personally find it quite troublesome myself that it changes so often. (...) I also think that business does need clarity and consistency, and that is not just for aviation, but that is a broader issue as far as I'm concerned.”

5.3 Stakeholder input

In the discussion about Lelystad Airport, information, communication and trust are key. According to the SATL volunteer, they have a very good relationship with the municipalities and provinces that are opposing the airport expansion. However, the Ministry of I&W, the province of Flevoland and the municipality of Lelystad do not want to talk to them.

It is important that the opposing parties communicate properly. The cooperation between De Lelystadse Boer and Lelystad Airport is a good example of this. However, this cooperation is also used strategically by the airport to create a positive image of support for the expansion. The CEO of Lelystad Airport states that the opposition to the expansion comes mainly from Gelderland and Overijssel, but this is not entirely true, as the farmers around the airport are also against the expansion. According to interviewee 2, this kind of communication leads to a lack of trust:

“it is always kind of a thin line that we walk on. We're the positive club, so (...) we have to be very careful that if there is a request of "Do you want to participate in this or that? (...) That is tricky, because if we are there, it can give the impression of '(...), all the farmers are behind us'. It is sometimes suggested that way.”

This way of exploiting the good intentions of the farmers creates a sense of mistrust and power distance between the parties. Interviewee 2 is also critical of the lack of empathy with the farmers and advocates more communication from the airport. This is illustrated by an example where the airport decided to remove trees, which impaired a farmer's view:

“So now he [the farmer] is looking right at the landing lights and runway, whereas there was a line of trees there. (...) Why not inform him about that? And (...) is it really necessary that those trees go away? Or can we (...) still put something there?”

6. Discussion

6.1 Experienced impacts

6.1.1 *Economic impacts*

The study shows that the cancellation of the expansion of Lelystad Airport will have significant economic, environmental and social impacts. The most direct effect of cancelling the expansion will be the loss of the money that has already been invested. According to Omroep Flevoland (2024), at least 243 million euros have been invested in the airport since the expansion plans were first established. The cost of investments that are already in use, such as the extended runway and professional air traffic control, continues to rise. Otherwise, it is difficult to determine the exact economic impact of cancelling the expansion.

In line with Zhang and Graham (2020), the airport expansion will create jobs which are direct and indirect economic impacts of the airport. This would also trigger induced effects, as the employees of the airport and aviation-related companies spend money in the Lelystad area. However, the size of these 'supply chain effects' is uncertain because it depends on the number and type of jobs created. The spillover effects related to the improved accessibility that the airport will bring (Pot and Koster, 2022; Zhang and Graham, 2020) are highly controversial. The expansion could be important for some companies, especially those focused on innovation and sustainable aviation, but it is unlikely that there will be significant spillover effects and the developments will be in line with the findings by Brueckner (2003) and Green (2007) because the expansion does not significantly increase the accessibility of Flevoland, which is now provided by Schiphol Airport.

6.1.2 *Environmental and social impacts*

Dendena and Corsi (2015) note that SIA is often a minor component of EIA, which is also the case for Lelystad Airport, as no SIA was made for the expansion project. Although, the environmental and social impacts of the airport are unlikely to have a significant impact on local businesses or limit their activities, they are still important for this study. In Flevoland, farmers are the most affected businesses as they live on their farms and are more affected than businesses that only operate for part of the day. They are particularly concerned about a reduction in the quality of life due to noise and light pollution. The airport states that they consider social and environmental impacts, but when looking at the definition of SIA (Vanclay et al., 2015), some improvements can be made. Farmers are unsatisfied with the management of the social consequences of the expansion, and feel the airport lacks empathy.

Noise pollution is also likely to affect recreational businesses in Gelderland and Overijssel, which are popular for their tranquillity and high quality of life. This noise pollution would seriously affect the attractiveness of these recreational businesses. These concerns are not limited to farmers and recreational businesses. Ouwkerk (2022) and Van de Craats (2022) concluded that noise pollution is a major concern for residents in Overijssel, Gelderland and Flevoland. Therefore, many people in a large area around the

airport see a cancellation of the expansion as a positive thing, as it will prevent noise pollution and other related effects, such as loss of property value, decrease in quality of life and decrease in tourism activity.

6.1.3 Schiphol Airport Region

The future of Schiphol Airport plays a crucial role in the expansion of Lelystad Airport. This expansion aims to transfer flights from Schiphol to Lelystad, creating opportunities for economic development and reducing the impact on the Schiphol region. However, it is difficult to predict these impacts due to the uncertainty of the exact plans. The current plan is to transfer 10,000 flights to Lelystad Airport, which would result in a slight reduction in noise around Schiphol, but a significant increase in noise in the Lelystad area due to the difference in current noise levels. If night flights at Schiphol are shifted to day flights at Lelystad, the noise impact would be more significant, as night flights contribute more to the noise level around Schiphol because it is relatively quiet at night compared to during the day.

The economic impact also depends on the specific plans for Schiphol Airport. If flights are simply relocated, the associated jobs will move from Noord-Holland to Flevoland, creating around 50-60 new jobs and relocating around 2,400 jobs (Bus and Manshanden, 2019; I-3, 2024). However, if these relocated flights are replaced by higher value flights at Schiphol, this could lead to more job creation and strengthen Schiphol's network and hub function. Interviewee 4 (2024) noted that this is “the most plausible route to economic growth linked to aviation”, which corroborates Brueckner (2003) and Green (2007). The province of Flevoland could also benefit from this economic growth, because of its' close proximity to Schiphol. Understanding the future plans for Schiphol Airport is therefore essential for policy makers, as the economic, environmental and social impacts are all interlinked.

6.2 Uncertainty

Uncertainty is perceived as negative by all stakeholders. The postponement of the expansion has resulted in high costs. The Schiphol Group has already invested €243 million in the expansion and will continue to face rising costs as long as the airport cannot be opened for commercial air traffic. Stakeholders agree that the uncertainty and postponements are also bad for future business because they lead to a loss of confidence in government and politicians. It is likely that many businesses will be sceptical when a decision is made to develop the airport and will be reluctant to invest because they suspect that the decision will be changed. The government has not kept its promise to expand the airport in the past, and businesses do not trust that it will do so in the future. The uncertainty is therefore not only hampering current development, but is also likely to hamper future development because of the mistrust created by the process of airport expansion.

6.3 Stakeholder input

If the expansion continues, clear communication, trust and fair interaction will be crucial. Van de Craats (2022) concluded that the national government has used the existing rules and regulations to expand the airport, instead of using

them to create the best situation for everyone involved. This feeling is shared by the farmers, although the situation has improved in recent years. The fact that the airport uses the cooperation between the farmers and the airport to create an image that the farmers support the expansion creates a lack of trust and a feeling of power distance between the farmers and the airport, and it is not a good example of SIA as described by Vanclay et al (2015). The national and local government and the airport should show more empathy towards the farmers and other residents instead of using false calculations to justify their decisions (Koot, 2017) in order to build a better relationship with them. Therefore it is crucial to follow the advice given by from Ouwerkerk (2022) to further improve communication and consultation with parties affected by a decision. This is a crucial aspect to improve the relationship and develop mitigation measures.

7. Conclusion

The expansion of Lelystad Airport is a complex issue. Cancellation would mean a loss of investments and the province of Flevoland would be deprived of the supply chain effects associated with the expansion, but the exact impacts are unknown and partly dependent on the development of Schiphol Airport. Most local businesses see the possible cancellation of the airport expansion and the ongoing uncertainty as negative, as it deprives them of potential positive economic impacts, while the negative environmental and social impacts are hardly felt by them.

The opposite is true for farmers and many residents in Flevoland, Gelderland and Overijssel. They fear the negative environmental and social impacts, in particular the noise pollution caused by increased air traffic. Furthermore, they believe that they will not benefit from the potential economic advantages of the airport, or are sceptical about any positive economic effects at all.

This thesis provides an overview of the impacts on which politicians and policy makers can base their decision about the expansion of Lelystad Airport. It is clear that the decision should be taken quickly, regardless of the outcome, as postponements only have negative effects. It leads to increased costs and decreased trust in government. Stakeholders feel that the government and politicians change their minds too often, which means that they will be sceptical about a future decision and suspect that it will be changed in the future. This means they will be reluctant to act on decisions and make investments based on them, which will hinder future development.

If expansion does take place, it is important that there is good trust, cooperation and communication between stakeholders in order to jointly develop mitigation measures and achieve the best possible outcome for all parties. The cooperation between the airport and De Lelystadse Boer is a good example of collaboration, but it should not be misused to create an overly positive image, as sometimes happens now.

7.1 Limitations and recommendations

The main limitations of this research are its scope and timeframe, which meant that only six stakeholders could be interviewed. Although all interviewees were close to the issues and brought different perspectives, the research would have benefited from more data input, especially from businesses at Lelystad Airport and the local action group supporting the expansion.

The discussion about Lelystad Airport is part of a wider discussion about the future of Schiphol Airport. This study has briefly touched on the possible impact of the expansion of Lelystad Airport on Schiphol Airport and the surrounding area, but it would be valuable to carry out more in-depth research on this. Future research could further investigate the relationships between the future of Schiphol and Lelystad Airport.

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9. Appendixes

9.1 Appendix 1 | Indicative interview guide government

Introduction

Good morning/good afternoon how are you?

Can you talk briefly about who you are and what you do?

Stakeholder involvement

How did you experience the **process** surrounding the **expansion** of Lelystad Airport?

Were you **actively involved** in this process?

What has been done to **inform citizens and others concerned about** the plans?

Were **citizens actively involved** in the plans?

How?

How could **involvement** in enlargement have been **improved**?

How important is that **involvement** in a project like this?

Challenges and concerns

Do you think the airport should **expand**?

Why?

In your opinion, what are the **biggest benefits** of any **expansion**?

Have there been **investments** from the province and municipality?

What **impacts** (social, economic, environmental) should be considered when making a decision on Lelystad Airport?

Should these **effects** all be **given equal weight**?

Are there certain impacts that should be weighted more heavily than others?

Which one and **why**?

What are your main **concerns** about the (negative effects of) enlargement?

What **impact** would any **cancellation** of the plans have on **Lelystad** municipality and **Flevoland** province?

What are the **effects** of all the **uncertainty** surrounding enlargement?

Has the **uncertainty** also had an **impact** on **you personally**?

How?

What do you think is the **impact** of this **uncertainty** on **trust in government**?

How can this **trust** be **improved**?

What would be your **reaction** to a **cancellation** of the expansion plans?

How would a **cancellation be received** by the **people of Flevoland**?

Mitigation possibilities

Do you think **Flevoland province** deserves **compensation** if the expansion does not go ahead?

What should this **compensation look like**?

Do you think any **compensation** would **improve trust in the government**?

Closing

How likely do you think it **is** that the **plans will still go ahead**?

Do you have any comments or things I haven't covered?

Would you like to receive the transcript of this interview?

9.2 Appendix 2 | Indicative interview guide companies and action groups

Introduction

Good morning/good afternoon how are you?

Can you talk briefly about who you are and what you do?

Stakeholder involvement

How did you experience the **process** around the **expansion** of Lelystad Airport?

Were you **actively involved in** this process?

How were you **informed** about the expansion?

How did you **experience** this?

Has this **affected** your opinion of the government?

How could **involvement** in enlargement have been **improved**?

How important is that **involvement** in a project like this?

Challenges and concerns

Do you think the airport should **expand**?

Why?

In your opinion, what are the **biggest benefits** of any **expansion**?

Have there **been investments** based on these **expected benefits**?

What **impacts** (social, economic, environmental) should be considered when making a decision on Lelystad Airport?

Should these **effects** all be **given equal weight**?

Are there certain impacts that should be weighted more heavily than others?

Which one and **why**?

What are your main **concerns** about the (negative effects of) enlargement?

What **impact** would any **cancellation** of the plans have on your **business/organisation**?

What are the **effects** of all the **uncertainty** surrounding enlargement?

Has the **uncertainty** also had an **impact** on **you personally**?

How?

Has the **process** around enlargement changed your **view of the government**?

Has it also had an **impact** on your **trust in the government**?

How can this **trust** be **improved**?

What would be your **reaction** to a **cancellation** of the expansion plans?

How would a **cancellation be received** by the **people of Flevoland**?

Mitigation possibilities

Do you think **Flevoland province** deserves **compensation** if the expansion does not go ahead?

What should this **compensation look like**?

Do you think your **organisation** also deserves **compensation**?

Would this **improve** your **confidence in** (or position towards) **the government**?

Closing

How likely do you think it **is** that the **plans will still go ahead**?

Do you have any comments or things I haven't covered?

Would you like to receive the transcript of this interview?

9.3 Appendix 3 | Indicative interview guide CEO Lelystad Airport

Can you briefly tell me who you are and what you do?

What are the biggest benefits of opening Lelystad Airport for civil aviation?

How will the expansion of Lelystad Airport benefit the province of Flevoland?

What are the biggest negative consequences of the expansion for Flevoland?

What are the effects of continuously postponing the expansion of Lelystad Airport?

How would a cancellation of the expansion plans affect the Royal Schiphol Group?

What would a cancellation of the expansion do to confidence in the government in the Netherlands?

Do you think Lelystad Airport will ever open for vacation flights and why?

9.4 Appendix 4 | Informed consent form research participants

INFORMED CONSENT FORM (adapted from University of Groningen CF Ethics Committee)

Title study: Social Impacts of Lelystad Airport cancellation

Name researcher: Stefan Heida, student University of Groningen | s.heida.1@student.rug.nl

Name supervisor: Philippe Hanna de Almeida Oliveira, PHD MA MSc, University of Groningen | p.hanna@rug.nl

Name participant:

Assessment

- I am well informed about the study and was able to ask any additional question to the researcher.
- I understand I may ask questions about the study at any time.
- I understand I have the right to withdraw from the study at any time without giving a reason.
- I understand that at any time I can refuse to answer any question without any consequences.
- I understand that I will not benefit directly from participating in this research.
- I understand that I can contact both the researcher and the research supervisor in case there are any issues.

Confidentiality and Data Use

- I understand that none of my individual information will be disclosed to anyone outside the study team and my name will not be published.
- I understand that the information provided will be used only for this research and publications directly related to this research project.
- I understand that data (consent forms, recordings, interview transcripts) will be stored safely and not be shared by anyone outside the University of Groningen

Future involvement

- I wish to receive a copy of the scientific output of the project.
- I consent to be re-contacted for participating in future studies.

Having read and understood all the above, I agree to participate in the research study: yes / no

Date

Signature

To be filled in by the researcher

- I declare that I have thoroughly informed the research participant about the research study and answered any remaining questions to the best of my knowledge.
- I agree that this person participates in the research study.

Date

Signature