

Consequences of Rural School Closures

Peripheralization in Rural Districts in Västra Götaland County, Sweden



Berghemskolan, Mark municipality. Taken by the author 2025-03-13.

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ABSTRACT

Schools are often the last remaining welfare institution in rural areas, serving as both educational centers and community hubs that foster community resilience and social capital. When schools close, the effects on rural communities can be significant, though they remain insufficiently explored in existing research. Additionally, there is a gap between the public perception and political decisions, where locals perceive rural schools as a vital institution, while politicians opt to close them. This in combination with the lack of comprehensive research on the subject creates an opportunity to contribute to the understanding of development in rural areas.

This project therefore aimed to investigate the demographic, social, and political consequences of rural school closures in Västra Götaland County, Sweden, through the lens of peripheralization. A Difference-in-Differences (DiD) analysis of four districts, combined with semi-structured interviews with four local informants, revealed that closures have negative effects on local communities.

The population change was different for each analyzed district, pointing towards that rural areas are impacted differently by closures. The social and political findings help explain these variations, pointing to differing developments in social capital, as well as feelings of powerlessness and exclusion from decision-making processes. School buildings were found to be central in maintaining social capital, and their closure, or even restricted access, threatens long-term community cohesion, particularly when child-centered activities are absent.

Using the framework of peripheralization, this study presents a nuanced understanding of rural development, indicating that rural areas exhibit varying predispositions to depopulation depending on their social context and position within the urban-rural relationship.

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1. Introduction

Rural school closures are often portrayed by the local communities as the end of the village (e.g. VT, 2010). School closures are a common occurrence and in Finland, for example, the last rural school is expected to close by 2030 (Kommuntorget, 2021). There are no prognoses for the development of rural schools in Sweden, but it is evident that they are being closed one after another, and sometimes multiple at the same time. An examination by SVT Nyheter in 2018 showed that over 160 rural schools had closed in the five years of their study, and that 95 out of 290 municipalities states that they had closed at least one school (SVT Nyheter, 2018). Conversely, the question of whether rural school closures actually lead to villages dying is debated. In Sweden, there has been one study by Amcoff (2012) that states that school closures do not lead to population decline. In an interview with SVT Nyheter (2024), Amcoff stated that “There is no reason to believe that the villages that are affected [by rural school] closures are going to die out.”. The reporter asks what the impacts on the lives of those living in rural areas could be when the school is not a natural meeting place anymore, and Amcoff continues:

That it has effects on a declining prerequisite for cohesion in the area. This is usually the only public meeting place that exist [...] Jobs are lost, naturally, both for those who work at the school and for the local business community. So if you want to find arguments, it is probably here one should look rather than in the migration pattern. (SVT Nyheter, 2024)

Amcoff (SVT Nyheter, 2024; Amcoff, 2012) therefore highlights that rural school closures have a negative effect on the local community, but not on population development. At the same time Amcoff (SVT Nyheter, 2024; Amcoff, 2012) also argues that these effects are not widespread enough to actually cause villages to die out. This is supported by the results of Egelund and Laustsen (2006) who found that the closure of a school itself does not have the devastating effect described by local communities in Denmark. The reason for a general negative development was the lack of human capital, and they argue that a closure is a sign of villages dying rather than a cause for it. This view of ruralities as being stuck in a sort of path dependency, that is that they are part of a natural cycle of increase and decrease in population, and that the market will decide if a village lives or dies, is supported by the Swedish author and politician Anders Johnson, who said:

The goal of politics is to guard each human's chances in life – not to guard a territory's population share [...] Places that once emerged and grew for a certain reason may well stagnate, slow down

and possibly disappear without this by definition being considered a defeat for society. (Mattsson, 2010, pp. 193-194)

In light of this, why is it then important to keep welfare institutions and economic activities in rural areas, when they clearly have not been able to sustain themselves from a market or population perspective? In the regional service program for Västra Götaland County, the regional developers state that declining access to services for citizens, businesses, and tourists is directly impacting the regional development opportunities. An area that lacks a gas station or other rural businesses is less attractive, and this has a direct impact on depopulation, which in turn makes it harder to sustain welfare institutions since the tax base is shrinking. The shrinking tax base also makes it very hard to reopen already closed businesses and welfare institutions. The report further states that this chain of events is a direct threat to a stable life in rural areas as well as sustainable development. Rural schools therefore seems to be an important piece of the puzzle in sustaining services and welfare institutions in these peripheral areas, which is in turn also could be important for the development of Västra Götaland County as a whole. (Västra Götalandsregionen, n.d.).

Further, Echazarra and Radinger (2019) argue, with the help of data from the Programme for International Student Assessment (PISA), that universal access to high-quality education, which in turn prompts high performance, helps to enhance the national educational system as a whole. Higher and well-educated citizens contribute more to society and the economy (Baum and Payea, 2005). The PISA data from 2015 show that students in urban schools often perform better than those in rural schools. For example, 50% of students in urban schools were expected to enter higher education, while the rate is only 30% in rural schools. Notably, this ratio is the same for countries where rural schools perform better than urban schools. (Echazarra and Radinger, 2019). The reasons for this uneven development are, for example, longer travel distances to higher education, which Falch et al. (2013) found in Norway. When a rural school closure occurs, it is often due to economic factors, quality concerns, and declining student numbers, but with more effective and customized policies for the rural setting, the school organization in rural areas could become more sustainable, stable, and effective, while at the same time not contributing to urbanization. (Echazarra and Radinger, 2019).

Therefore, this indicates that rural areas could face a domino effect when welfare institutions or local businesses close. Even though access to good education in rural areas is generally

low, the lack thereof could be even worse. When contemplating Anders Johnson's statement: "The goal of politics is to guard each human's chances in life – not to guard a territory's population share", it becomes clear that it actually is to guard the rural population's chances in life by making public investments in local communities that help to sustain the population.

This indicates that the national education system is hurt by uneven quality and access to education, and that the regional development is negatively impacted when the local development is stagnated. What are then the impacts on the local scale? In the existing research, three themes can be identified: demographic, social, and political consequences. The demographic consequences are not clear-cut, as there is conflicting research regarding whether rural school closures causes depopulation (Sørensen et al., 2021; Sageman, 2022; Slee and Miller, 2015), or if population loss would occur regardless of a closure (Amcoff, 2012; Barakat, 2015; Egelund and Laustsen, 2006), or if there is a combination of both (Barber et al., 2023). This project aims to contribute to the understanding of the outcomes from these studies by examining population change on a local district scale.

The social consequences consists of more comprehensive research, that primarily focuses on the impacts and importance of social capital and community resilience (e.g. Autti and Hyry-Beihammer, 2014). However, while these two aspects are important for the outcomes of community cohesion, for example, there have been no studies on this in a rural Swedish context. Lastly, the research on political consequences has mainly explored rural school closures in relation to elections and tends to focus on politicians' perspectives, for example, how citizens change their votes after a school closure has occurred, and which types of parties are impacted (Isaksson, 2023; Mihály, 2022). However, the effects on local communities such as experiences of exclusion, lack of power, and dependency, are voiced in the protests against rural school closures, but have not been adequately researched.

The previous research is therefore divided between different fields, while the revealed consequences seem to be more complex and intertwined. Kühn's (2015) definition of peripheralization contributes with factors and processes that can help point to a structural production of peripheries that further marginalizes rural areas. Thus, this concept contributes to a holistic view of the consequences that rural areas are facing.

Lastly, it is clear that the mentioned actors have contradictory views on the importance of rural schools and investments in peripheral areas. The local communities, (e.g. VT, 2010),

Västra Götaland County (Västra Götalandsregionen, n.d.), and more recent research (e.g. Echazarra and Radinger, 2019) point to rural schools being important for village survival, and that a closure could have devastating effects on the local communities. On the other hand, some politicians (e.g. Mattsson, 2010; Child and Youth Board, 2010), and older research (e.g. Amcoff, 2012; Egelund and Laustsen, 2006), point to that the schools themselves do not hold that much importance. This second set of opinions argues that school closures do not lead to depopulation, or if they do, it is not that relevant, since the path dependency that these areas are on will decide if the village dies either way. This project will try to straighten out the discourses by comprehensively studying the demographic, social, and political consequences that the local communities face through applying the concept of peripheralization.

1.1. Aim and Research Questions

The aim of this project is to examine the consequences of rural school closures and how they affect local communities from population, social, and political perspectives, in Västra Götaland County, Sweden. Furthermore, the study seeks to interpret these consequences within the framework of peripheralization. The following research questions will be used to address this aim:

- How has the population development in the corresponding districts to the schools been impacted by the closures?
- What are the perceived social impacts of rural school closures?
- How was the political dimension of the school closure processes perceived by representatives of the local communities?

These questions will be answered with the help of mixed methods. The population development will be examined with a Difference-in-Difference (DiD) analysis, comparing the development in a district where a school closure has occurred with one where a closure has not occurred. The social and political consequences will be examined by semi-structured interviews with local informants from four chosen districts where a school has closed. The results from these methods will be analyzed with the help of the concept of peripheralization which describes the production of peripheries and involves, according to Kühn's (2015) definition: social, economic, and political processes. Rural areas are defined as districts without a central town or other major towns, thus, areas outside municipal and therefore economic centers. The chosen areas are presented in section 2.3.1. to 2.3.11.

2. National, Regional, and Local Context

This chapter aims to contextualize the study area with information about the Swedish municipal structure, the development and situation in the Swedish countryside, as well as the regional context of Västra Götaland County where the eight chosen municipalities and 11 districts are located. The 11 schools and districts will be presented as well. A summary of all presented scales and issues will be provided at the end of the chapter.

2.1. The Swedish Municipal Structure

In this part the Swedish municipal system and its impact on shrinking, often rural, municipalities will be discussed. This background is needed to understand the processes that the municipalities themselves are exposed to, as well as the communities within the municipalities. The first section will focus on the municipal structure and its challenges, while the second will examine the development of the Swedish countryside, considering both its historical evolution and the challenges it faces today.

2.1.1. Swedish Rural Municipalities

The Swedish political power system is highly decentralized, with 21 regions and 290 municipalities. According to Bergh et al. (2022), municipalities have broad responsibilities within the Swedish welfare system, including elderly care, childcare, schooling, zoning, inspections and permits, as well as recreation and cultural activities.

Furthermore, Swedish municipalities are governed by a certain structure. The municipal council is the highest decision-making body at the local level and is elected by citizens every four years. The council determines which boards should exist and appoints their members. For this project, the board of education (the name varies and can sometimes be called ‘the Youth and Education Board’, for example) is of particular relevance, as it is responsible for the operation of the schools within the municipality. The board of education also prepares proposals and matters for the municipal council and is responsible for implementing the council’s decisions. (Sveriges Kommuner och Regioner, 2024)

In Sweden, the welfare system can be understood as a contract between citizens and the state: the state provides universal welfare services, and in return, citizens accept higher taxation. Welfare is standardized across the country, meaning that requirements are the same regardless of local context. This uniformity poses challenges for smaller municipalities with declining

populations, as their tax revenues are insufficient to finance national standards. Persson and Westholm (1993) argue that the resulting uneven distribution of welfare resources is not intentional but stems from the fact that the system targets individuals rather than regions. Sweden does have several redistributive mechanisms designed to bridge municipal budgetary gaps. However, while many of the welfare struggles in shrinking municipalities are linked to economic limitations, they are also deeply political and organizational. (Syssner, 2018, pp. 30-34).

Therefore, municipalities are in practice under significant pressure to ensure welfare provision and just governance for their local citizens. Larger municipalities with more inhabitants, and thus greater financial resources, are better equipped to meet the requirements set by the central government. In contrast, municipalities experiencing population decline face a number of challenges. For example, urbanization is largely targeted at younger people, making the rural population consist of largely older inhabitants, leading to a skewed balance between the tax base and public expenditures. Retirees do not contribute to the tax base to the same extent as younger people but are more dependent on costly welfare services such as health care. (Andersson, 2004).

Additionally, Syssner (2018) explains that municipal autonomy has been increasingly constrained over the years as well. Notably, municipal responsibilities have expanded and become more stringent. One example that has directly impacted school closures is the 2011 revision of the Swedish Education Act, which began requiring all teachers to hold teaching credentials (*lärarlegitimation*). This has smaller municipalities to often struggle to recruit qualified teachers, due to the lack of them in rural areas. Policies have therefore tightened across nearly all welfare sectors, significantly increasing both administrative burdens and bureaucracy (Karlsson and Montin, 2012). In addition to this general increase in workload, state governance has intensified in terms of quality control and follow-ups to ensure national equity. This state intervention has become increasingly detailed and complex, limiting the flexibility of local politicians. The capacity to meet these requirements has also diminished in shrinking municipalities. (Syssner, 2018, p. 33).

Simultaneously, citizens' expectations of municipal services are increasing. Employees are frequently required to address issues beyond their training or expertise. According to Syssner (2018), municipal staff in shrinking areas are becoming generalized rather than specialized, as they must cover a broad range of responsibilities. This is problematic, as smaller municipalities need specialized staff to devise and implement strategies for complex

challenges (Syssner, 2018, pp. 36–38). Work-related stress is also a significant concern, as the pressures from both the state and citizens create a dual position for municipal workers and politicians. (Asplund et al., 2022; Aasland and Søholt, 2020; Supule and Søholt, 2019)

Furthermore, Syssner (2018) notes that shrinking municipalities often experience a parallel decline in their market sector, which results in reduced economic activity. This makes it difficult for municipalities to rent out business spaces or invest in public meeting places. In most cases, municipalities must focus on maintaining infrastructure established in the 1960s and 1970s, built during decades of economic growth and rural investment driven by post-war industrialization (Alm et al., 2021). Today, the conditions are vastly different, and new investments are difficult to secure. These planning struggles are compounded by increasing complexity and regulatory demands from the central government. Municipalities are legally required to maintain certain standards, including the condition of public facilities. For example, the Swedish Education Act (Skollagen 2010:800) mandates that schools must have adequate and suitable facilities. As a result, many older school buildings no longer meet the standard, forcing municipalities either to renovate them or to transport students to supplementary schools, both of which are costly. Consequently, many municipalities opt to close schools instead. (Syssner, 2018, pp. 35–36).

Closures of welfare institutions often provoke protests and public dissatisfaction. Politicians, caught between financial limitations as well as prioritizations and citizens' expectations, frequently struggle with these decisions. Syssner (2018, pp. 38-40) reports that local politicians feel constrained, stating they often have no real choice but to close institutions due to lack of resources. This can exacerbate public discontent, especially when closures are not adequately communicated or publicly deliberated.

Ultimately, it is clear that these closures are not the result of political indifference or malice. Rather, they are often the only viable option, given the financial constraints many shrinking municipalities face. Ironically, the state's aim to ensure equal-quality welfare nationwide may contribute to reduced access in less populated areas. This presents a democratic dilemma: citizens in shrinking regions have little influence over decisions that profoundly affect their lives, and local politicians are left with no alternatives but to implement them.

2.1.2. The Swedish Countryside

Alongside the struggles between national interests and municipal means, the rural areas within the municipalities are disproportionately affected. Forsberg (2020) explains that there have been implementations of national and regional policies that have impacted the countryside negatively over the years. The most significant transformation occurred in 1952 with the implementation of the ‘large municipality reform’ (*storkommunreformen*). Prior to this, municipalities were based on parishes and enjoyed extensive self-governance. 2 281 parishes were reduced to 816 larger units with the aim of improving governance and managing the large migration to urban areas. However, this restructuring did not lead to the improvements politicians had hoped for in regard to better management, which resulted in another reform in 1971, when the 816 municipalities were instead merged into 282 so-called municipal blocks. The restructuring was based on Christaller’s Central Place Theory, where central towns were identified and the surrounding areas were divided between the different central towns (Malmberg and Korpi, 2000).

After World War II, there was an idea that welfare should reach the entire population, and industries that would otherwise have been located in the Stockholm region were relocated across the country to create new production networks. Cities that received such investments became more urbanized, which caused major outmigration from the countryside nationwide, a problem that was only prevalent in the Stockholm region before. Urbanization was encouraged by the government, who distributed financial incentives to get people to move to more productive areas, so-called localization politics (Enflo et al., 2025). Researchers soon realized that the organized population increase resulted in poorer access to services and lower living standards in rural areas, and what was intended as an investment in welfare and regional equality instead contributed to a general decline of the countryside. (Forsberg, 2020, pp. 30–32).

During the ‘Green Wave’ of the 1970s, a turning point could be observed where people began moving from cities to the countryside. This was attributed to a perception of the countryside as more sustainable and appealing compared to urban life. However, this trend was short-lived, and out-migration resumed in the 1980s. During this period, it also became clear that the growth-focused policies not only depopulated rural areas, but also weakened the entire country’s domestic self-sufficiency, including food production and national defense. In response, the government invested in decentralizing public sector jobs, relocating agencies and industries from Stockholm to other parts of the country. The 1987 Planning and Building

Act included concessions for rural construction, and in 1991 the Swedish National Rural Development Agency (*Glesbygdsverket*) was created to report on rural, sparsely populated, and archipelago areas (Growth Analysis, n.d.). Despite these initiatives and investments, the outmigration continued. However, this time it was less about urbanization and more about societal restructuring. Residents with urban jobs sometimes remained in the countryside thanks to good commuting options, but generally this led to an uneven spatial development of rural areas, which made it clear that one must now speak of multiple countrysides rather than one homogeneous rural landscape. (Forsberg, 2020, pp. 33–36)

When Sweden joined the European Union (EU) in 1994, it was forced to invest further in the countryside due to the EU's cohesion policy, aimed at stabilizing economically lagging regions. This initially worked, but over time, a widespread distrust toward the EU grew among rural residents, who felt that power over their communities had shifted to Brussels (Berg et al., 2019). This distrust and the perception that governing authorities do not recognize or understand the rural context can be illustrated by 'the wolf issue': higher authorities wanted to preserve the wolf population, while farmers and local residents often saw them as a threat and advocated for expanded protective hunting. Immigration is another issue where rural communities often felt unheard, as some municipalities were heavily strained by the refugee influx in 2015, while others welcomed it due to depopulation being a greater threat. In many cases, this led to social tensions. The lack of effective investments can therefore be partially explained by a lack of insight into the reality of rural life. Though well-intentioned, the investments failed to align with what locals felt that they needed (Forsberg, 2020, pp. 38–42).

Stenbacka and Heldt Cassel (2020) further argue that a divide has emerged between the city and the countryside. In addition to the clear division between rural and urban, rural residents have been seen as different from those living in cities. The countryside has been characterized as underdeveloped and plagued by various problems caused by politicians who implement policies without understanding how they affect '*the real country*'. This perception is often rooted in the belief that the industries historically located in rural areas have extracted resources and created economic gain for urban populations. Rural residents see themselves, to some extent, as forgotten and exploited. At the same time, the increased support for the nationalist and right-wing populist political party The Swedish Democrats (*Sverigedemokraterna*) in rural areas has contributed to a perception that rural populations are xenophobic and poorly educated. This results in two opposing views of the countryside: on

one hand, that it has been forgotten and underinvested in, and on the other hand, that its population is problematic in its political behavior, which negatively affects the entire country. (Stenbacka and Heldt Cassel, 2020, pp. 16–17). This can be described as ‘othering’, thus creating a perception of inclusion and exclusion through making a distinction between ‘we’ and ‘them’. This goes both ways in this context where people living in rural areas see people in urban areas with a negative tint and vice versa. (Eriksson, 2010).

Stenbacka and Heldt Cassel (2020) explains this divide as an existing urban interpretative prerogative¹ that has guided the formulation of development strategies. When the urban has been the ideal within development, the urban perspective has been allowed to guide and govern the shaping of rural areas. The problems of rural areas differ significantly from those of urban areas, but this has not been adequately considered in the design of various strategies. The authors see this as a clear example of the power dynamics inherent in the center-periphery division, which has deprived rural areas of power over its own situation. The fundamental issue is that decision-makers have been dependent on the urban norm and have failed to see the countryside in terms of its diversity. As a result, they also do not understand the transformation processes that have occurred. The urban norm and the misconception of peripheries may, according to Stenbacka and Heldt Cassel (2020), in part stem from the values embedded within the concept of periphery itself. Places perceived as remote are attributed qualities that further distance them from urban centers. When a development strategy is to be designed for a community that does not fit into these categories, the urban perspective prevails. (Mitander et al., 2017).

In conclusion, the Swedish countryside has undergone numerous reforms and investments. It is difficult to determine exactly what led to the increased divide, but through exclusive decision-making, rural areas have become alienated from urban centers, the national capital and the municipal central towns. The urban norm and interpretative prerogative have contributed to an urban-rural, or center-periphery, divide in Sweden, and this social process has widened the already existing gap created by policy. Based on these events, it is clear that these communities are often not heard on issues regarding themselves, which contributes to a feeling of neglect. This highlights that when analyzing rural areas, one must view them as multiple countrysides, not as one uniform rural region.

¹ Interpretative prerogative means that a certain group has more right and validity to speak on certain issues.

2.2. Västra Götaland County

In regard to the uneven development that rural municipalities have faced, Västra Götaland County is an interesting case study since it contains many different types of rural municipalities. This section delves into the urban-rural structure of the county and elaborates on the rationale behind its selection as the focus of this project.

Västra Götaland County was selected as the geographical focus since it has a unique position in the Swedish context. Located on the southwestern coast of Sweden, Västra Götaland is the fourth largest county in terms of land area, surpassed only by Norrbotten, Västerbotten, Jämtland, and Dalarna, all of which are located in the northern or northwestern parts of the country, where population density is significantly lower. Notably, Västra Götaland has the highest number of municipalities among all Swedish counties, with a total of 49. For comparison, Skåne County has 33 municipalities, while Stockholm County has 26. In terms of population, Västra Götaland is also significant, being the second most populous county after Stockholm. This puts Västra Götaland County in an interesting position for a case study, since it is much larger than the average Swedish county, but also due to the distribution of different types of municipalities. (Region Facts, n.d.)

Västra Götaland County comprises a diverse range of municipalities, making it particularly suitable for a study of rural school closures and their socio-spatial consequences. To enhance national comparability, the Swedish Agency for Economic and Regional Growth (2021) classifies municipalities into six, types based on population distribution and accessibility to urban centers:

1. **Metropolitan municipalities:** Less than 20% of the population lives in rural areas.
2. **Densely populated mixed municipalities** (dense municipalities close to a city): Less than 50% of the population lives in rural areas, and more than 50% has less than 45 minutes of travel to a larger city.
3. **Sparsely populated mixed municipalities** (dense municipalities remotely located): Less than 50% of the population lives in rural areas and less than 50% has less than 45 minutes of travel to a larger city.
4. **Rural municipalities near urban areas:** More than 50% of the population lives in rural areas and more than 50% has less than 45 minutes of travel to a larger city.

5. **Sparsely populated rural municipalities** (remotely located): More than 50% of the population lives in rural areas and less than 50% has less than 45 minutes of travel to a larger city.
6. **Very sparsely populated rural municipalities**: 100% of the population lives in rural areas with at least 90 minutes of mean travel time to an agglomeration with at least 50 000 inhabitants.

These six municipal types can be aggregated into three broader categories: metropolitan (type 1), mixed (types 2 and 3), and rural (types 4, 5, and 6). In Västra Götaland County, there are three metropolitan municipalities, 21 mixed, and 25 rural. Among the six more detailed classifications presented by Swedish Agency for Economic and Regional Growth (2021), the county consists of:

- 3 metropolitan municipalities
- 9 densely populated mixed municipalities
- 12 sparsely populated mixed municipalities
- 15 rural municipalities near urban areas
- 10 sparsely populated rural municipalities
- 0 very sparsely populated rural municipalities

From the selection process described in section 4.1.1., 11 closed schools emerged. They follow these classifications:

- 1 densely populated mixed municipality
- 1 sparsely populated mixed municipality
- 4 rural municipalities near urban areas
- 2 sparsely populated rural municipalities

In the method, 5 municipalities are treated. In the DiD-analysis, four districts from three municipalities were possible to analyze; Tjörn municipality, Tranemo municipality and two from Mark municipality. Out of these, two were classified as *Rural municipalities near urban areas* (Mark and Tranemo) and one as *Sparsely populated rural municipality* (Tjörn). In the semi-structured interviews, three municipalities and four districts were chosen; one from Vänersborg municipality, two from Mark municipality and one from Lilla Edet municipality.

This added the *Densely populated mixed municipality*-classification to the research (Vänersborg), as well as one additional *Rural municipality near urban areas* (Lilla Edet). Since metropolitan municipalities were not included in the study, and as there are no very sparsely populated rural municipalities in Västra Götaland, these categories were not possible to use. The only municipal class not used in this project's method is therefore *Sparsely populated mixed municipalities*. But, since the classification 2, 4 and 5 are covered, the aggregated categories of mixed and rural types are still sufficiently analyzed. Therefore, the distribution of different rural municipalities in the chosen areas, both mixed and only rural, approximately mirrors the county distribution since there are more rural municipalities than mixed, which increases compatibility. This distribution also highlights this project's highlighting on the differences between rural areas and their underlying abilities to mitigate consequences of a closure, helping to contextualize the school closures within the broader processes of peripheralization. An overview of the distribution of the selected schools and municipalities is provided in Figure 1.

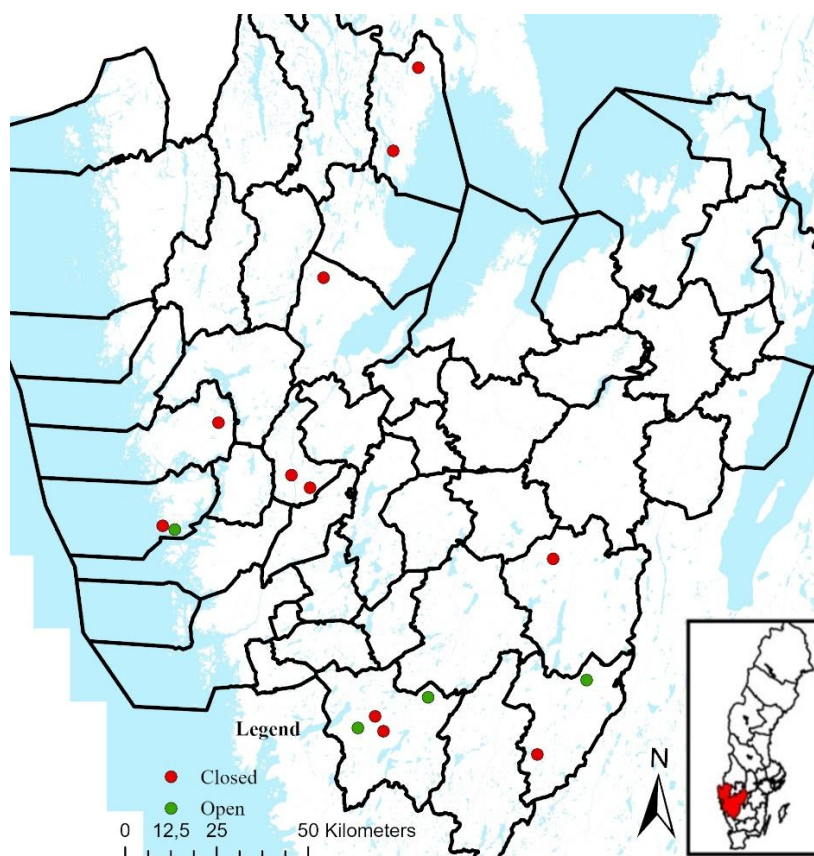


Figure 1: Map over Västra Götaland County, with the locations of each closed school (treatment group) and corresponding open school (control group).

Furthermore, the Swedish Agency for Economic and Regional Growth (2021) has charted population changes across all municipal classifications from 1968 to 2020, along with projections for future development. As shown in Table 1, municipalities categorized as *Very sparsely populated rural municipalities* have experienced and are expected to continue experiencing the highest levels of out-migration. Conversely, *Metropolitan municipalities* have seen, and are projected to continue seeing, the highest levels of in-migration. Although these two classes are not directly applicable to this study, they illustrate broader demographic trends, highlighting which types of municipalities are more prone to centralization and which are more vulnerable to peripheralization. For example, projections for *Rural municipalities near urban areas* indicate stagnating population growth, which may pose long-term challenges for these municipalities. Further, this also visualizes the need to understand the diversity between rural areas and municipalities within the research of rural areas, since there seem to be different processes at work. The next section delves deeper into the schools that came out of the selection process within Västra Götaland County, where the different municipal classifications will be presented in their context.

Table 1: Population development in the six classes of municipalities, from 1968 to 2020, and then 2020 to 2070. (Swedish Agency for Economic and Regional Growth, 2021)

Municipality classification	Population 1968	Population 2020	Change in percent	Population estimate 2070	Change in percent
1. Metropolitan	2 197 790	3 357 620	+ 53%	4 453 384	+ 33%
2. Densely populated mixed	3 008 797	4 129 804	+ 37%	5 008 901	+ 21%
3. Sparsely populated mixed	995 657	1 248 311	+ 25%	1 466 745	+ 17%
4. Rural near urban areas	883 409	801 275	- 9%	811 785	+ 1%
5. Sparsely populated rural	724 266	764 029	+ 5%	814 665	+ 7%
6. Very sparsely populated rural	121 274	78 256	- 35%	72 110	- 8%

2.3. Selected Schools

In this section, the schools chosen through the selection process described further down in the method-section, will be presented in detail. The amount of detailed information for each school may vary depending on the availability of material from the municipality, reports and articles in the media, and supplementary information from the informants when needed. In addition to these sources, some information was also available through Google Maps.

For each school, its geographical location will be outlined, along with information regarding the reasons for its closure and the subsequent use of the school building. Additional contextual data will be provided, including population statistics for the corresponding district, the designated control district, and the municipality's central town, as well as distances to both the central town and the nearest open school. Furthermore, the municipal classification for each school's municipality, as introduced in the previous section, will be specified to better situate the case within the broader regional structure.

2.3.1. Myckleby Skola

Myckleby skola was located in Orust municipality and Myckleby district. The municipality is classified as a sparsely populated rural municipality by the Swedish Agency for Economic and Regional Growth (2021), which indicates that it is remotely located with more than 50% of its population living in rural areas.

The population mean for the district was 1 270 inhabitants between 2004 and 2023 (SCB, n.d.). The school was located 11 kilometers from the municipal central town of Henån, in Röra district. Röra district had a population mean of 2 883 people between 2004 and 2023. The closest open school was located 12 kilometers away from Myckleby Skola. The location of the school is depicted in Figure 2.

The school closed in 2008 for quality and economic reasons, according to Göteborgs-Posten (2008a). When contacting the municipality Börjesson (Orust municipality, Personal communication, March 5th, 2025) states that the school was closed due to the low number of students. The school building has been empty since the school closed, but was bought in 2023 and is planned to be turned into apartments (ST-Tidningen, 2022).

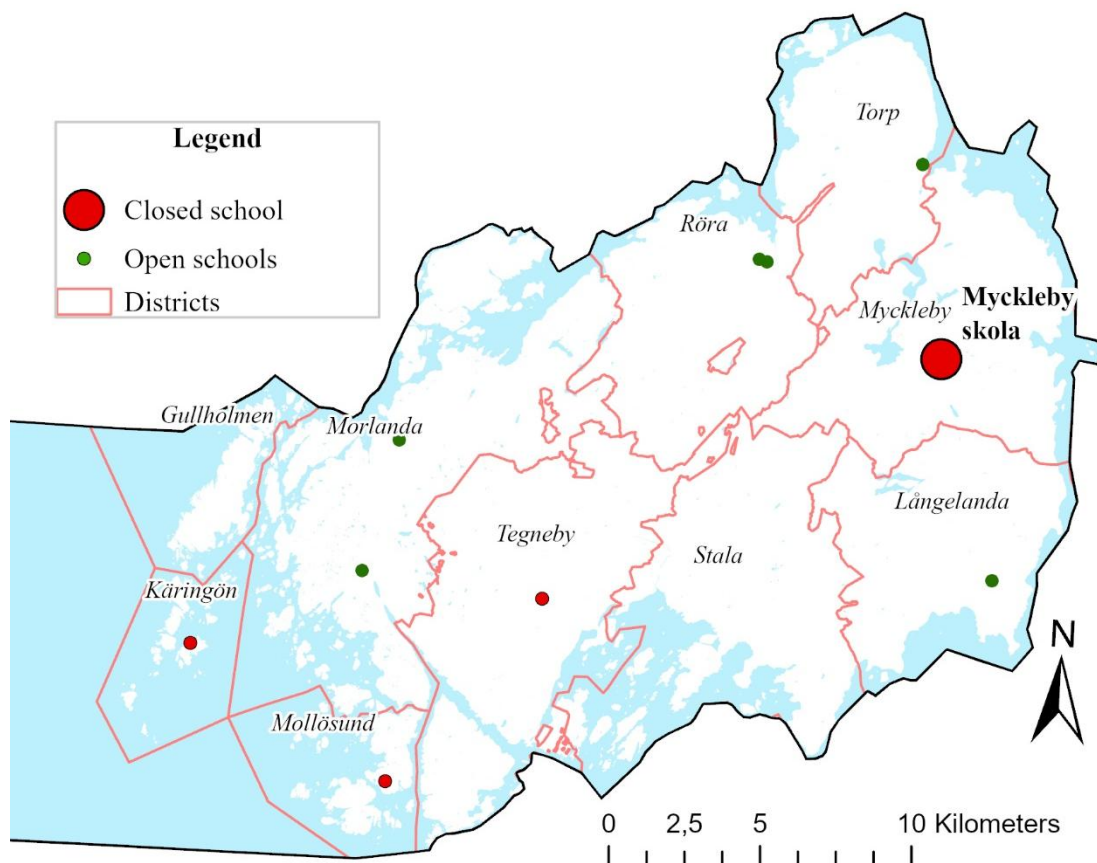


Figure 2: Map over closed and open schools between 1997 and 2017 in Orust municipality and their location in the districts, with the chosen school for this project highlighted.

2.3.2. Sundals-Ryrs Skola

Sundals-Ryrs skola was located in Vänersborg municipality and Sundals-Ryrs district. The municipality is categorized as a densely populated mixed municipality by the Swedish Agency for Economic and Regional Growth (2021), which indicates a high number of urban population.

The population mean of the district between 2004 and 2023 was 532 inhabitants (SCB, n.d.). The school was located 27 kilometers from the municipal central town of Vänersborg in Vänersborg district, which had a mean population of 23 997 people between 2004 and 2023 (SCB, n.d.). The closest open school is located 7.9 kilometers away. The location of the school can be seen in Figure 3.

According to personal communication with Vänersborg municipality, the school was built in 1955 and replaced three other older schools in Bollrud, Lersäter and Bollungsnäs. The school closed in 2009 for mainly financial reasons, but also because of the decreasing number of students. The municipality had financial problems and had to restructure. (Larsson, Vänersborg municipality, personal communication. 18th of December 2024). After several attempts to sell the school to the local community organization and lastly to a private citizen, who the local community deemed to be part of organized crime (Personal communication with the local informant. 19th of March 2025), the school was demolished in 2016 and had not been used since its closure (Ttela, 2016).

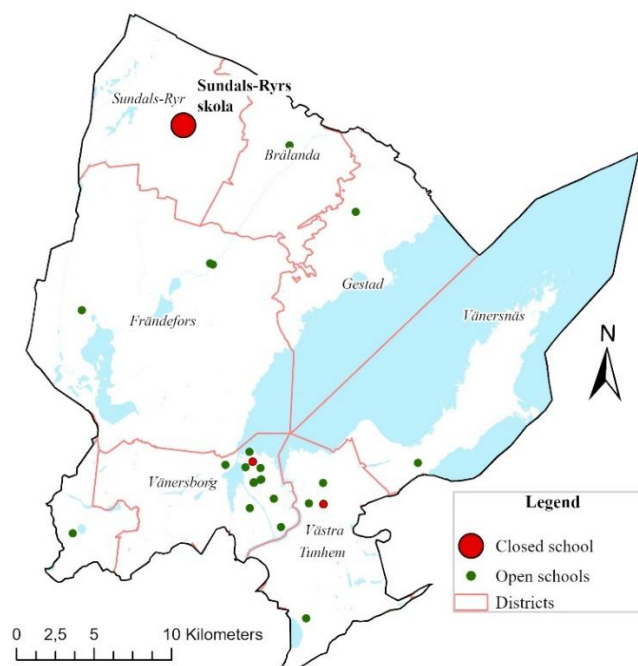


Figure 3: Map over closed and open schools between 1997 and 2017 in Vänersborg municipality and their location in the districts, with the chosen school for this project highlighted.

2.3.3. Mo Skola

Mo skola was located in Åmål municipality and Mo district. Åmål municipality is classified as a sparsely populated mixed municipality by the Swedish Agency for Economic and Regional Growth (2021), which are municipalities that are population dense but are located more remotely.

The mean population for the district was 294 people between 2004 and 2023 (SCB, n.d.). The school was located 7.7 kilometers away from the central town of Åmål, in Åmål district, which has a mean population of 10 113 inhabitants (2004-2023) (SCB, n.d.). The closest open school is located 6 kilometers from Mo skola. The closed school is depicted in Figure 4.

Mo skola closed in 2008 due to the municipal needing to reduce their costs for schools, according to Eriksson at Åmål municipality (Personal communication. 5th of March 2025), and the school was sold in 2023 to a new owner who is a private citizen, but it is unclear who owned it since it closed or what it is used for (Provinstidningen, 2023).

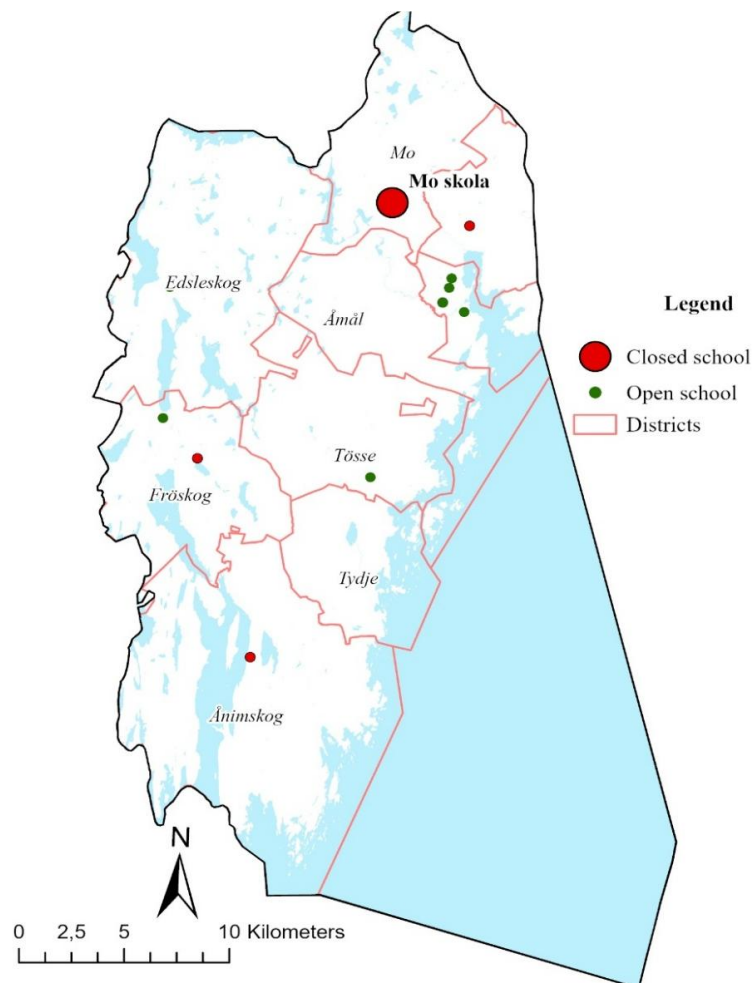


Figure 4: Map over closed and open schools between 1997 and 2017 in Åmål municipality and their location in the districts, with the chosen school for this project highlighted.

2.3.4. Ånimskogs Skola

Ånimskogs skola was located in Åmål municipality and Ånimskog district. The mean population in the district was 414 people (2004-2023) and the school is located 23 kilometers away from the central town of Åmål, in Åmål district which had a population mean of 10 113 inhabitants (2004-2023) (SCB, n.d.). The closest open school was located 12 kilometers away from the now closed school. The closed school is depicted in Figure 5.

Ånimskogs skola closed at the same time as Mo skola, in 2008 as a part of creating better quality and stability within the municipal school structure. A decreasing number of students as well as a lack of teachers prompted this change. The students were placed in Tösse skola (Åmål Municipal Council, 2007). The school building was sold to a private company that remodeled the school into an apartment hotel (Ånimskogs kyrkskola, n.d.).

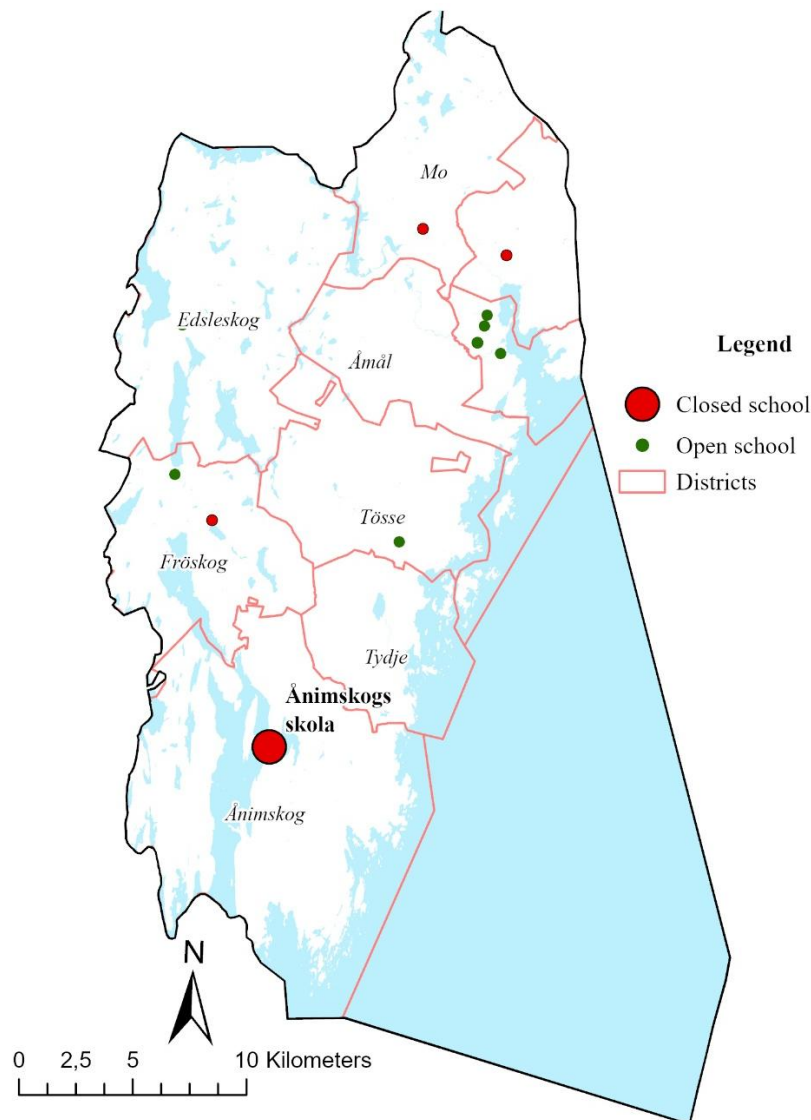


Figure 5: Map over closed and open schools between 1997 and 2017 in Åmål municipality and their location in the districts, with the chosen schools for this project highlighted.

2.3.5. Älmestads Skola

Älmestads skola was located in Ulricehamn municipality and Hällstad district. The municipality is classified as a rural municipality near an urban area by the Swedish Agency for Economic and Regional Growth (2021), which indicates a high number of rural residents, but with good communications to urban areas as well. The district of Hällstad had a population mean of 792 people between 2004 and 2023, and the central municipal town of Ulricehamn in Ulricehamn district, located 16 kilometers away, has a population mean of 10 980 inhabitants (2004-2023) (SCB, n.d.). Lastly, the closest open school was located 9.3 kilometers away, in Dalum district, which can be seen in Figure 6.

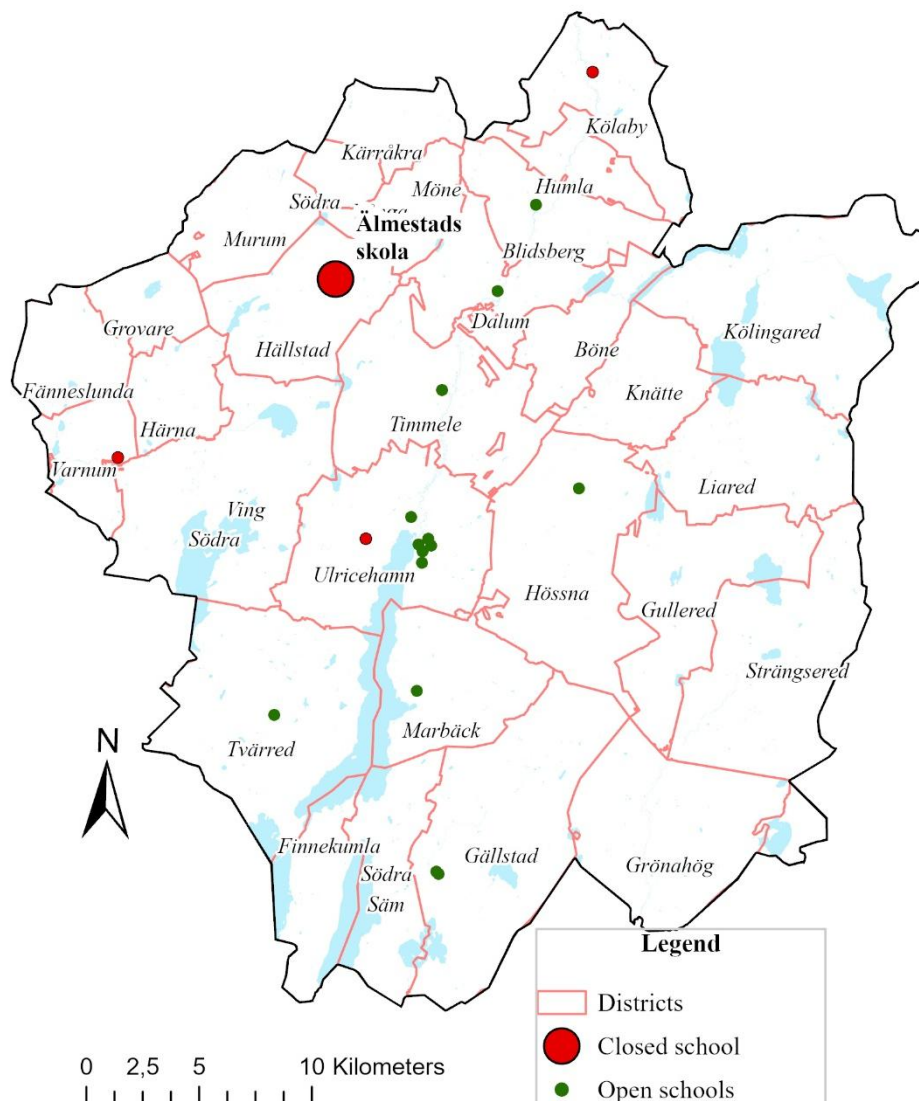


Figure 6: Map over closed and open schools between 1997 and 2017 in Ulricehamn municipality and their location in the districts, with the chosen school for this project highlighted.

The school closed in 2010 due to a decreasing number of students, described as under a critical level, and a need for restructuring due to the municipal economy. The municipality did not see it as viable to keep Älmestads skola open which had seven grades but only 45 students at the time of the discussions. The quality was also an issue since the school only had 3.5 teacher positions which the municipality thought to be strenuous on them. When merging Älmestads skola with Blindsberg, Hökerum and Timmele skola, the municipality anticipated lowered costs by 550 000 to 750 000 SEK, depending on the school transportation costs. The municipality also saw a winning for the student since larger schools can accommodate different needs and are more stable than small schools. And according to the municipality, teachers who are the heart of the education, often chose larger schools due to them being perceived as more stable workplaces. (Child- and Youth Board, 2010). In the basis report for the decision the municipality raises the question of the impact of a school closure on the local community, and they conclude that:

What is worse for a community? No school, or a school of questionable quality? It was initially pointed out that this decision-making basis should focus on the school and not on the community. The community impact must therefore be addressed in political forums. (Child- and Youth Board, 2010, p.21)

One can interpret this as the municipality concluding that the impact on the local community is second to the economic development of the municipality as a whole. Nonetheless, Älmestads skola is still used as a kindergarten today (Ulricehamn Municipality, 2015).

2.3.6. Hajomskolan

Hajomskolan was located in Mark municipality and Hajom district. Mark municipality is classified as a rural municipality near urban areas by the Swedish Agency for Economic and Regional Growth (2021). The population mean in the district was 633 people (2004-2023), and the population mean for the central town of Kinna in Kinna district was 7 877 people (2004-2023) (SCB, n.d.), and is located 15 kilometers away from the school. The closest open school was located 7.9 kilometers away. The control group for the DiD-analysis chosen for this school is Fotskälskolan and Fotskäl district which had a population mean of 645 inhabitants between 2004 and 2023. The locations for these areas are depicted in Figure 7.

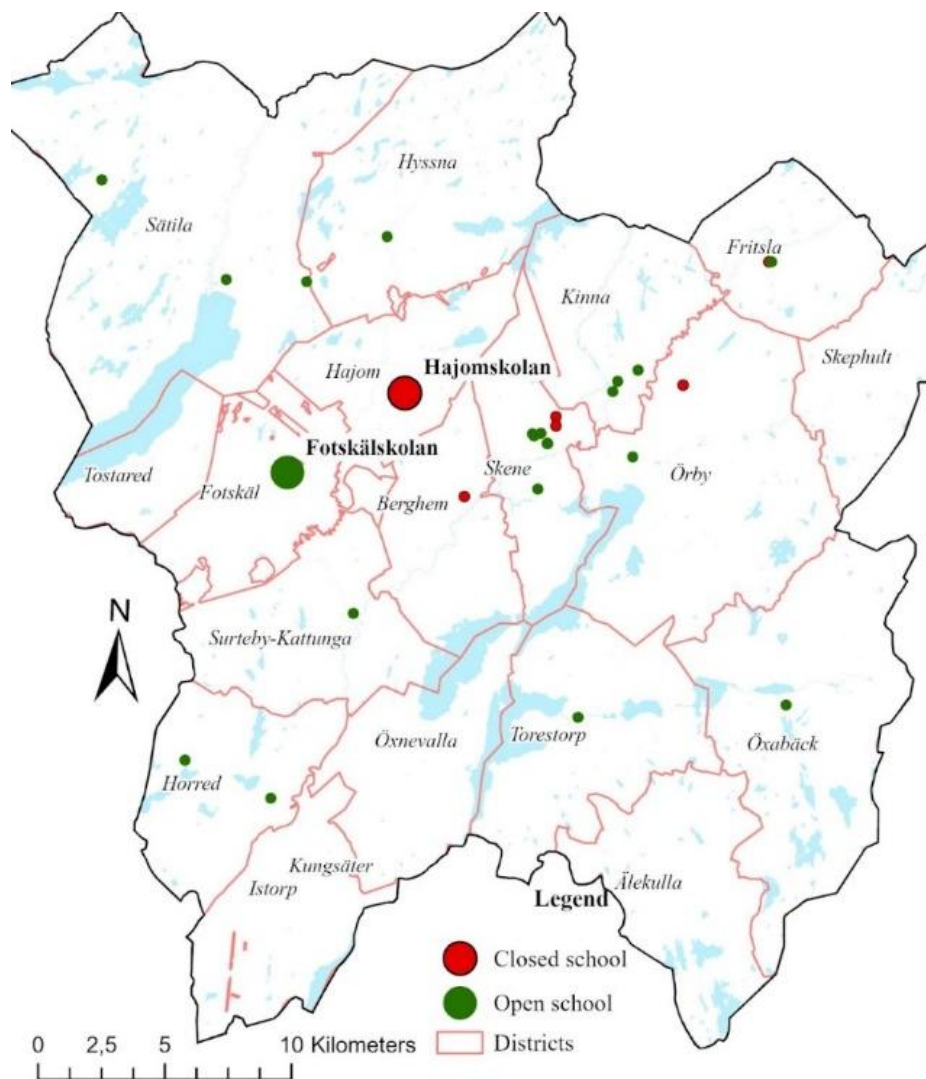


Figure 7: Map over closed and open schools between 1997 and 2017 in Mark municipality and their location in the districts, with the chosen schools for this project highlighted.

Mark municipality reevaluated their school organisation and structure in 2009 and found flaws, for example that they had many smaller schools that needed renovation. The municipality concluded that it would not be economically sustainable to renovate and keep these schools due to economic and quality reasons. The decision to close Hajomskolan came from an economic calculation where a consultant for the municipality found that the costs of school transportation would be cheapest for the students of Hajomskolan. The facility costs were also highest in Hajomskolan compared to other schools that could have been closed. The students were to be placed in Sättilaskolan which was a smaller school that were in need of an extension if all students were to fit. This was still deemed cheaper than closing other schools and would overall save the municipality 1 135 000 SEK. The documents received from the municipality also show that the plan for the facilities after the school closed was for it to be demolished due to the potential high costs of renovation (Child- and Youth Board, 2009)

Further, the municipality described Hajomskolan as a small school with few students and the future development is probable to follow this trend. Small schools are seen as vulnerable due to the instability of few students, and the low number of teachers become inflexible as they struggle to cover for each other and are rarely able to attend seminars and conferences that are also part of the job. Sättilaskolan faced similar problems with few students and unauthorized teachers and a merger of the two schools was therefore seen as logical. When the new students would arrive at Sättilaskolan, the groups or classes could also be formed in an age-homogenous way, which provides a better continuity for the students (Child- and Youth Board, 2009).

Hajomskolan closed in 2011 and aside from the financial arguments, the school only had a kindergarten and a middle school. Some students went to elementary school and high school in Fotskälskolan, depending on where they lived. It therefore made structurally more sense to move the students to Fotskälskolan. (Borås Tidning, 2009). The kindergarten part of the building is still used as a privately financed kindergarten, but the rest of the building is used for multiple purposes and was never demolished as the municipality suggested. One part is offices that can be rented, another part houses the municipal branch that helps people start new businesses, and the old cafeteria is used as a conference hall. Hajoms Utvecklings AB, a local development company, bought the school in 2015 and has been renting out these spaces since (Hajom.se, 2015).

2.3.7. Berghemskolan

Berghemskolan was located in Mark municipality and Berghem district. The district has a population mean of 832 inhabitants (2004-2023), and the central town and district of Kinna has, as previously mentioned, a population mean of 7 877 people (2004-2023) (SCB, n.d.). The central town is located 9.1 kilometers from the school, and the closest open school was located 4.5 kilometers away. The chosen control group is Fritslaskolan in Fritsla district, which has a population mean of 2 590 people (2004-2023) (SCB, n.d.). The locations for the treatment and control group can be seen in Figure 8.

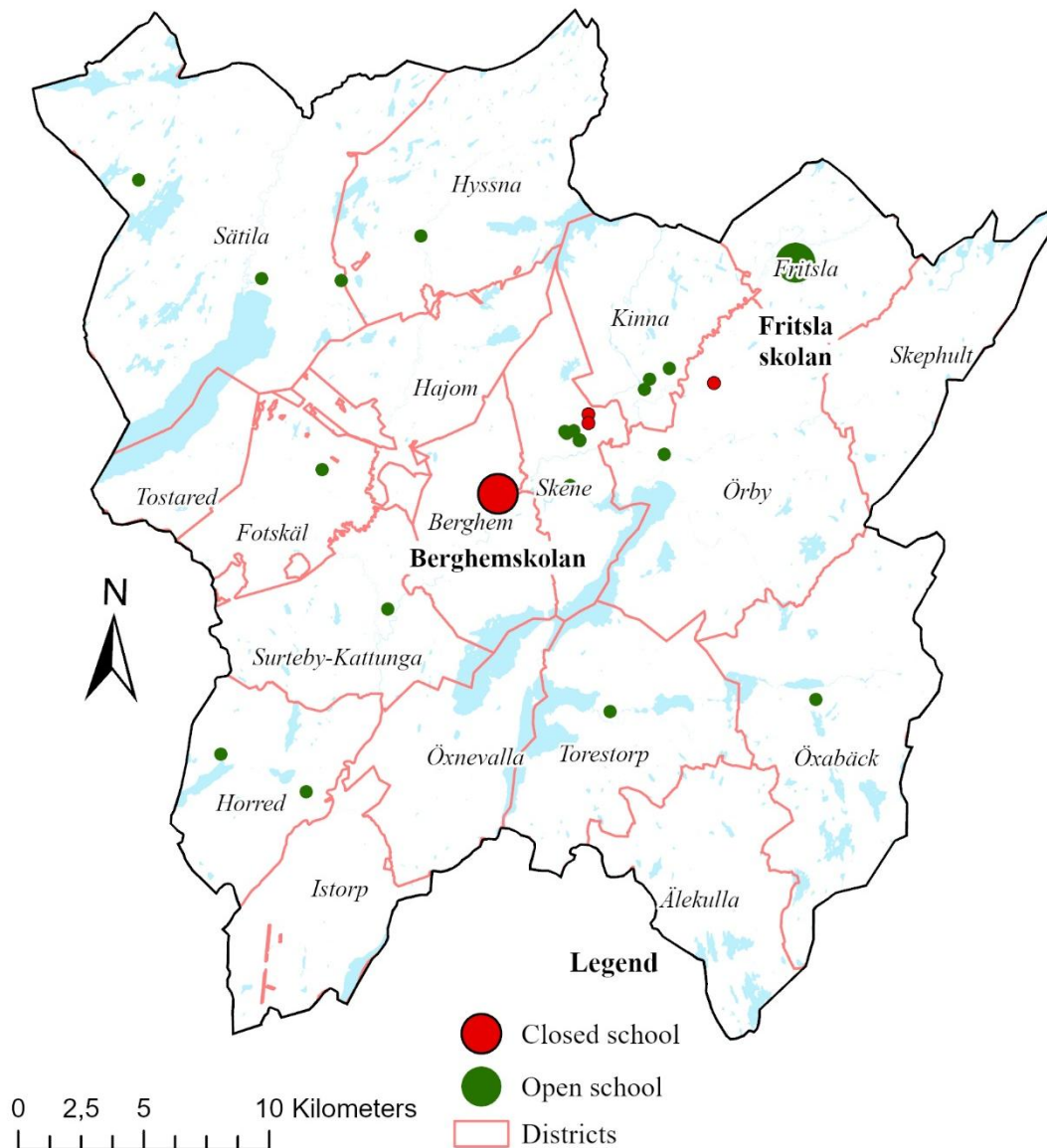


Figure 8: Map over closed and open schools between 1997 and 2017 in Mark municipality and their location in the districts, with the chosen schools for this project highlighted.

Berghemskolan was a part of the same restructuring process as Hajomskolan, but was closed one year prior to Hajom, in 2010. The sources from the municipality on the closure of Berghemskolan are fewer than Hajom, but the arguments seem to be similar. There were three smaller schools and kindergartens in the area of Berghem, Haby and Björketorp, and a reorganization would lower the costs for the municipality, especially when it comes to the facilities. The school transport costs would also be lower if the students from Berghem were placed in Björketorpskolan. The consultant for the municipality calculated savings to around 851 000 SEK per year for the municipality. The main reason for closing Berghemskolan was due to the need for renovation and the few number of students. As in Hajomskolan, the team of teachers would be more resilient and flexible in the event of a merger, and the students could attend age-homogenous groups instead of the blended that they had previously. The student-pool would therefore become more resilient and stable as well. (Child- and Youth Board, 2009).

After the schools' closing after the spring semester in 2010, the child and youth council (similar to a board of education) decided to give back the school building to the municipal council. The council did also not see any use for the facility since it was located near the railway that emitted a lot of noise pollution and was therefore not optimal for housing development. It was also not possible to develop any loud industries since there was a lot of housing in the area. They argued that the cost of demolishment was greater than the costs the lot could generate, but that it was still possible to sell the building so that another developer could upgrade the facility to another sort of business and therefore the facility would be sold in its current condition. (Mark Municipal Council, 2010). When visiting the area in 2024 it can be seen that the school building has been redeveloped into apartments. A large mechanical shop seems to be located at the back of the building as an extension, which was later confirmed by the local informant (Interview with local informant. 27th of March 2025). It is likely that a private citizen bought the building, remodeled it into rental apartments and has their own business in the same location. The municipality could not provide any documents on the sale of the building.

2.3.8. Västerlandaskolan

Västerlandaskolan was located in Lilla Edet municipality and Västerlanda district. Lilla Edet municipality is classed as a rural municipality near urban areas by the Swedish Agency for Economic and Regional Growth (2021). The mean population for the district was 1 429 (2004-2023), and the mean population for the district of Fuxerna, where the central town of Lilla Edet is located was 5 010 inhabitants (2004-2023) (SCB, n.d.). Lilla Edet is located 7.2 kilometers from Västerlandaskolan, and the closest open school was located 11 kilometers from the closed school. See Figure 10 for Västerlandaskolan's location.

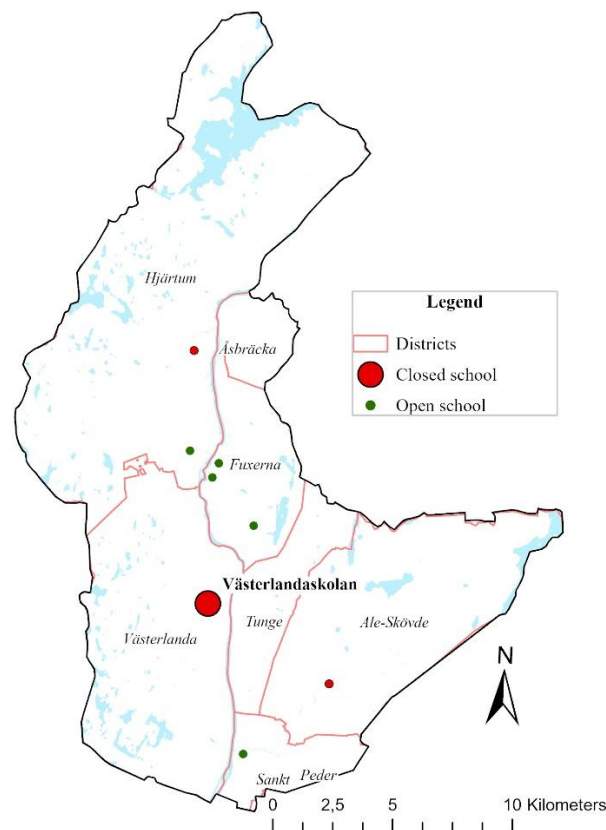


Figure 9: Map over closed and open schools between 1997 and 2017 in Lilla Edet municipality and their location in the districts, with the chosen schools for this project highlighted.

Västerlandaskolan was closed in 2015 due to the worn-out facility and due to the lack of certain facilities as well. The municipality did a restructuring in the first quarter of 2015 due to increasing costs and fewer students in rural schools, but also because of the poor grades in the overall municipality. (Lilla Edet Municipal Council, 2017). The school restructuring aimed to divide the municipality into four main school sections where Västerlanda belonged to the western parts. Strömskolan was developed into the main school in this area, and therefore served as the new school for the students of Hjärtumsskolan, Västerlandaskolan and the kindergarten to sixth graders of Strömskolan. (Child- and Education Board, 2015).

It is worth noting here that Västerlandaskolan and Nygårdsskolan, that will be presented in the next section, was deemed unlawfully closed by the Swedish Administrative Law Court. The problem was that the municipal council took the decision to close the schools (Västerlandaskolan, Hjärtumsskolan and Nygårdsskolan), and not the board of education who actually has the mandate to close schools. The ruling of the court was that the schools were closed wrongfully and that the decision should be repealed. This decision was taken in 2015, but the schools closed in 2016. (SVT Nyheter, 2015). Both schools continued as kindergartens.

2.3.9. Nygårdsskolan

Nygårdsskolan was located in Lilla Edet municipality and Ale-Skövde district, in the village of Nygård. The population mean for the district was 1 506 people between 2004 and 2023 (SCB, n.d.). The central town of Lilla Edet in Fuxerna district is located 15 kilometers away, and had a mean population of 5 010 inhabitants (2004-2023) (SCB, n.d.). The closest open school was located 5.1 kilometers away from Nygårdsskolan. The school was a kindergarten to third grade-school before closing. The school's location is shown in Figure 10.

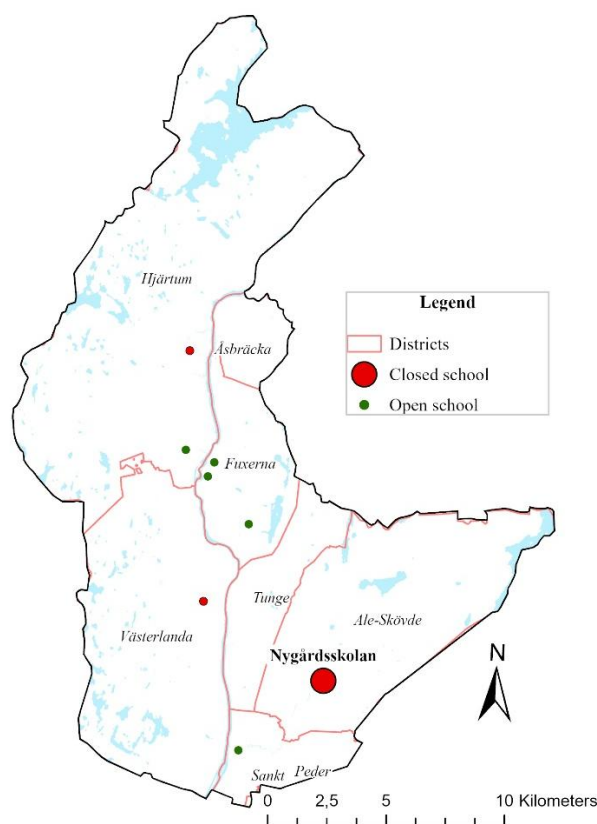


Figure 10: Map over closed and open schools between 1997 and 2017 in Lilla Edet municipality and their location in the districts, with the chosen schools for this project highlighted.

The turbulent closing of Nygårdsskolan and two other schools, is presented in the section above but the main reason argued by the municipality for the closure was the streamlining of the school structure in the municipality as well as acquiring better quality of education. As previously mentioned, a big part of the restructuring was based on creating four new main school sections in the municipality. Nygårdsskolan belonged to the southern section, where a new school (or a new version of Tingbergsskolan using the same name) was built to accommodate students from Nygårdsskolan and the old Tingbergsskolan. As a part of this restructuring, the municipality saw the need for additional kindergartens, which is probably why both Västerlandaskolan and Nygårdsskolan was converted into that. (Child- and Education Board, 2015)

2.3.10. Klädesholmens Skola

Klädesholmens skola was located in Tjörn municipality and Klädesholmen district. Tjörn is classed as a sparsely populated rural municipality by the Swedish Agency for Economic and Regional Growth (2021), which means that it is a remote area with a high number of the population living in rural areas.

The mean population of Klädesholmen district between 2004 and 2023 was 365 inhabitants (SCB, n.d.). The school is located 8.5 kilometers from the municipal central town of Skärhamn located in Stenkyrka district, which had a mean population of 6 775 people between 2004 and 2023 (SCB, n.d.). The closest open school is located 2.1 kilometers away. The chosen control group for this district is Rönnängs skola in Rönnäng district, which had a population mean of 1 927 inhabitants between 2004 and 2023 (SCB, n.d.). See Figure 11 for the mentioned locations.

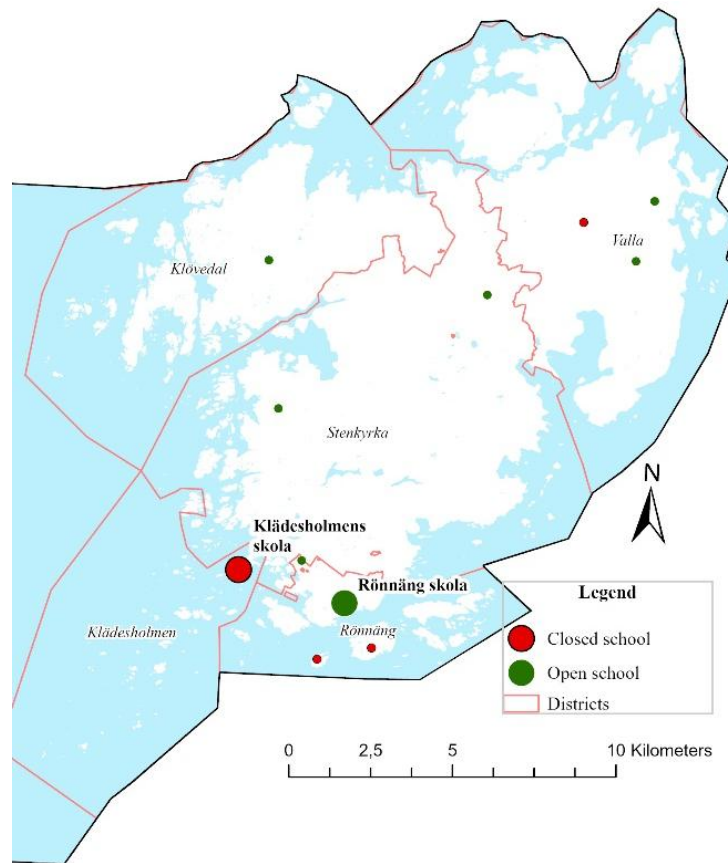


Figure 11: Map over closed and open schools between 1997 and 2017 in Tjörn municipality and their location in the districts, with the chosen schools for this project highlighted.

The school closed in 2012 due to financial reasons. The municipality had some financial problems at this time and needed to cut the budget of multiple welfare institutions. They had also recently agreed to invest and build a couple of new schools scattered around the island. (Göteborgs-Posten, 2008b). The school was an elementary and middle school with a kindergarten, and the students were moved to Rönnäng skola, the merge would result in the municipality saving 1 700 000 SEK every year (Child- and Education Board, 2012). The school continued on as some sort of daycare center or a youth recreation center.

2.3.11. Ambjörnarskolan

Ambjörnarskolan was located in Tranemo municipality, and Ambjörnarp district. Tranemo municipality is classed as a rural municipality near urban areas by the Swedish Agency for Economic and Regional Growth (2021), which means that more than half of the population lives in a rural area but that the population usually has less than 45 minutes of travel to an urban area.

The mean population of the Ambjörnarp district was 543 people, between 2004 and 2023 (SCB, n.d.). The school is located 8.8 kilometers away from Tranemo in Tranemo district, which is the central town of Tranemo municipality. The central town district had a mean population of 4 217 inhabitants between 2004 and 2023 (SCB, n.d.). The closest open school is located 9.6 kilometers away from the school. The control group for the DiD-analysis chosen for this school is Dalstorpskolan in Dalstorp district, which had a population mean between 2004 and 2023 of 1 060 inhabitants. The mentioned locations are depicted in Figure 12.

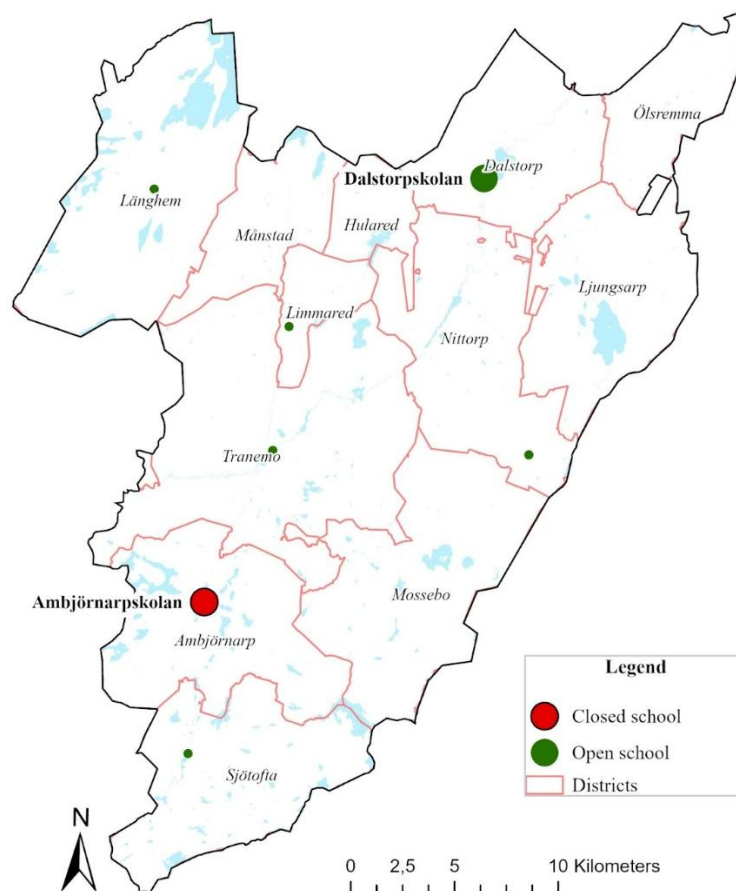


Figure 12: Map over closed and open schools between 1997 and 2017 in Tjörn municipality and their location in the districts, with the chosen schools for this project highlighted.

The school in Ambjörnarp was also closed to financial reasons in 2015 (Tranemo Municipal Council, 2012). The school had a need for renovation, which the municipality could not cover. (Borås Tidning, 2012). The building served as a kindergarten until the end of 2024, and the school was demolished in the early spring of 2025. (Arbetsmiljöverket, 2025). It is unclear why it was demolished, but it could be because of the costs of the facilities. The sports hall was not demolished and is still used by the locals. In personal communication with the village association it was revealed that there might be plans from the municipality to build a new school or kindergarten in the village to keep up with the demand, but also due to the worn-out facilities in Sjötoftaskolan where the students and kindergarteners were moved (Ambjörnarp byalag, personal communication. 26th of March 2025). These are rumors and the municipality has not answered my request for additional information on what has happened or will happen.

2.4. Summary of Contextualization

In the three previous sections, comprehensive information about the municipal structure, the Swedish countryside, the main study area of Västra Götaland County, and the 11 closed schools emerging from the selection process, including the control districts for the DiD-analysis have been presented. To provide a concise overview of the key aspects relevant to the forthcoming results a summary is offered below.

The Swedish decentralized municipal structure is complex and faces many obstacles from the perspective of shrinking rural municipalities. The municipalities have the main responsibility for welfare provision, but the shrinking taxbase and the uniformity of the national system makes it hard to sustain these responsibilities. As Syssner (2018) explains, the autonomy and flexibility for all municipalities have shrunk leaving less room to navigate. At the same time, the pressures from the citizens for the municipality to keep a good welfare infrastructure is increasing. The struggles with welfare provision is therefore a universal problem, not only confined to rural areas, but they are impacted disproportionately due to shrinking populations.

Furthermore, the Swedish countryside itself has been an object of investments and attempts to mitigate the issues of out-migration since the 1950s. One key issue is the division of municipalities that was last redone in 1971 that still to some extent follows the old parish-borders. The existing borders does therefore not take population density or development into account, which is problematic in relation to the shrinking tax bases in depopulated municipalities. Additionally, multiple of the reforms have been perceived as affecting the countryside disproportionately. These types of gaps have contributed to a political and social divide between the urban and rural population, mainly caused by the perceived urban interpretive prerogative.

Västra Götaland County was selected as the study area due to the diversity of its municipalities. With three classified as metropolitan, 21 as mixed, and 25 as rural, the region offers a valuable context for exploring processes of peripheralization. The relationship between urban and rural areas becomes particularly relevant when examining the development of social capital, as well as the various push and pull factors that influence both population and social dynamics. Mixed municipalities often feature a strong central town surrounded by more dispersed rural settlements, making Västra Götaland County an ideal setting for investigating both regional (metropolitan-rural) and intermunicipal (urban-rural) dynamics of peripheralization.

The 11 selected schools share several commonalities in the reasons cited for their closure. All were shut down due to restructuring initiatives driven primarily by financial concerns within the municipalities. Declining student enrollment and aging or inadequate facilities were the main arguments put forward. Of the 11 schools, five were sold to private individuals or companies, four were converted into kindergartens (one of which was demolished in early 2025), one was demolished outright, and the final case remains unclear though it may now house a daycare or youth recreation center, whether municipal or private. Thus, in at least six cases, the municipality either sold or demolished the school building, excluding the kindergartens that may now be privately operated. These closures appear to be driven more by the cost and condition of the facilities than by student numbers alone, but these aspects are also intertwined as fewer students means higher costs for facilities that the per-student founding (*skolpeng*) does not cover.

These contexts provide a better understanding of how urban-centered national policies negatively impact the municipalities ability to ensure welfare provision to all citizens. Rural school closures is only one example of how these policies trickle down the system. In the next chapter, the consequences of these closures found in earlier literature as well as central concepts will be presented in order to better understand this full process.

3. Central Concepts and Earlier Literature

To understand the consequences faced by local communities in Sweden, this chapter outlines several key aspects from earlier literature. First, the theories of peripheries and peripheralization central to this project will be defined and discussed. Second, a review of existing literature on the consequences of rural school closures and the knowledge gaps in the research will be presented. Lastly, a summary of the definitions of important concepts and description of the knowledge gaps will be highlighted.

3.1. Peripheries and Peripheralization

The urban-rural relationship is central for understanding the decline of public investments in rural areas. Another way of looking at this is through a center-periphery perspective, which contributes to the understanding of geographical power dynamics within and between regions. When discussing peripheries, it is important to distinguish between two key concepts: *peripheries* and *peripheralization*. Kühn (2015) drawing from earlier research, defines the difference between periphery and peripheralization as follows: Peripheries are pre-given spaces with social implications, whereas peripheralization describes social relations with spatial implications. These concepts will be discussed in greater depth throughout this section.

Kühn (2015) describes that periphery as a term started to be used in geography in the beginning of the 1900s, and was later adopted by other disciplines such as sociology to describe outskirts or fringes. The author argues that the concept has undergone a transformation in the sense of what a periphery is, or the destiny to become a periphery, has gone from a static to a flexible definition. Stenbacka and Heldt Cassel (2020) agrees that the term has become more flexible, but highlights that a consistent theme is that the periphery always exists in relation to a center. What this center is, or can be, has changed over time. Rural areas or spaces outside cities are not necessarily peripheral, and that for example urban outskirts also can be considered peripheral. Whether an area is or is not a periphery depends on the relationship to the center. Stenbacka and Heldt Cassel (2020, pp. 9-10) further argue that the countryside, which has historically symbolized the periphery, may also include centers in the form of central localities. Thus, the periphery is not a self-evident or fixed entity but rather an elastic concept that can be defined across various geographical scales. It can exist both globally and locally, and what qualifies as a periphery may change over time. A central locality in a rural area, for instance, may shift in status depending on changes in

economic activity, among other factors. (Stenbacka and Heldt Cassel, 2020, pp. 9-10). Kühn (2015) also challenges the idea that peripheries only emerge as the opposite of centers, arguing that the underlying factors driving this spatial differentiation are not clearly established. (Stenbacka and Heldt Cassel, 2020, pp. 9-10)

Stenbacka and Heldt Cassel (2020) go on to discuss the concept of ‘internal peripheries’, which is the idea that peripheral spaces can exist within areas generally regarded as central (Kühn, 2015). They cite Nolte’s (1990) definition, in which the state is viewed as the producer of spatial hierarchies, favoring central areas at the expense of peripheral ones (ESPON, 2018; Copus et al., 2017). Internal peripheries therefore depend on dominant centers, and that the state often contributes to uneven spatial development through unequal power structures. (Stenbacka and Heldt Cassel, 2020, pp. 10-11).

Internal peripheries opens up to a dimension of power in the development of peripheries. Further, peripheralization refers to the dynamic process through which a periphery is formed and transformed, including the dimension of power and other processes. This concept points to a further development of the traditional understanding of the periphery. By gaining deeper insights into the processes, social, economic, political, and communicative, that influence specific areas, a better understanding of the varying conditions for development across different regions can be gained (Stenbacka and Heldt Cassel, 2020, p. 12). In this project Kühn’s (2015) definition of peripheralization is used due to its comprehensiveness and usefulness in regard to rural school closures.

Kühn (2015) describes peripheralization in contrast to centralization through three dimensions: economic polarization, social inequality, and political power. The *economic polarization* theory (or rather a combination of theories) suggests that peripheries are often perceived as less innovative due to a less qualified workforce than that found in economic centers. This perception is supported by the reality that rural or fringe areas often experience deindustrialization and a corresponding loss of specialization, making innovation more difficult, which directly has an effect on decline in employment. However, Kühn (2015) emphasizes that this is a static view of the process, and that economically polarized areas are not doomed and innovation can still occur, particularly through targeted investments. Notably, this model does not explain why some economic centers decline or why some peripheral areas experience economic growth.

The dimension of *social inequality* is grounded in theories of marginality and poverty. While the term periphery is not commonly used in sociology, it correlates with the concept of marginality, which Kühn (2015) treats as interchangeable. Both describe social relations with spatial consequences where marginalized groups, those on the fringe of society, can be excluded in cultural, social, or structural ways. These groups are often characterized by limited participation and a lack of power within society, shaped by broader structural conditions. Poverty is a key manifestation of this marginalization, often reflected in low educational attainment, high unemployment, and other disadvantages. This marginalization leads not only to stigmatization but also to out-migration. Thus, the social aspect of depopulation is that people living in marginalized communities want to escape them. This dimension is therefore useful for understanding the social disparities experienced by individuals and communities in peripheralized areas, but also why depopulation might be more persistent in these areas than others. (Kühn, 2015)

The *political power* dimension of Kühn's (2015) model addresses dependency and exclusion within peripheralized regions. The author argues that the center-periphery relationship is fundamentally one of domination and control. Power, in this context, is defined as the ability to shape the agenda (including through non-decision-making) and to influence people to the point where they accept their subordination. This perspective aligns with dependency theories, which attribute uneven regional development to capitalism's centralizing tendencies. In this view, some regions remain economically underdeveloped because capitalist centers monopolize power and resources. This concept is closely linked to internal peripheries as they both highlight the domination of power of centralized areas. Another key concept in this dimension is exclusion, referring to the condition of those who lack political power or the means to obtain it. Kühn (2015) notes that political exclusion is particularly problematic in democratic systems and calls for further research on the topic.

In summary, the concept of periphery has evolved from a static idea to a more flexible or elastic one. It is no longer applicable only to areas in direct opposition to a center, and this shift is supported by the concept of internal peripheries, which shows that peripheral spaces can also exist within cities. The concept of peripheralization further illustrates how various processes can produce peripheries, contributing to a more nuanced understanding of what a periphery can be through social, political and economic processes. When presenting the earlier literature, it will become clear that these processes emerge again in relation to school closures.

3.2. Literature Review of Rural School Closures

The earliest research on rural school closures can be traced to Williams' (1934) account of the effects of the Great Depression on rural education in the US. The author found that rural schools were disproportionately affected compared to their urban counterparts. In the Swedish context, schools have continued to close, and notably independent of major economic crises.

The aim of this section is to review existing literature on consequences of rural school closures and to identify gaps in knowledge. The discussion is organized around four key themes that emerge in the literature: first, *depopulation*, second, the *social impacts*; third, the *economic consequences*, and lastly the *political consequences*. These themes align closely with the three socio-spatial processes of peripheralization identified by Kühn (2015): economic, political, and social.

3.2.1. Population Decline: A Driving Force or Consequence?

In the existing research, it is not clearly established whether depopulation is a driver of school closures, meaning that a general decline in inhabitants leads to fewer students making the school less economically viable to maintain, or whether population decline is a consequence of rural school closures, in the sense that schools are essential services. The possible combination of the two causes is not fully established either. When a school closes, the village may become less attractive to potential residents, prompting a decline in population. Generally speaking, there are two approaches in the existing research to determine if population decline can be detected after a school closure, looking at the regional scale or the local.

Regional scale studies compare population development between either municipalities or larger regions. For example, Amcoff (2012) found no evidence of population decline after a school closure in Sweden studying differences between estimated catchment areas², and Barakat (2015) did not find it in Germany studying differences between municipalities. Since this project is situated in a Swedish context, let us take a closer look at Amcoff's (2012) study which remains the only research on the population impacts of rural school closures in Sweden. Amcoff (2012) realized the issues with comparing populations between municipalities since the local dynamics probably influence where people move. The author

² The geographical divisions within the municipality that assign students to a particular school they should attend.

adopted a different methodological approach by using Voronoi polygons to approximate each school's catchment area. These were supplemented with 500-meter buffers around each closed school, representing the estimated walking distance. Using these methods, the author constructed a national network of Voronoi-polygons, each containing one closed school. This allowed for the analysis of population changes at both local and more regional scales. (Amcoff, 2012).

However, this method still simplifies rural spatial structures since it uses an estimate of the catchment areas. The Voronoi-polygons do not account for the presence of open schools, other public services, or even urban settlements. Additionally, the 500-meter buffer as a proxy for walking distance reflects an urban-centric perspective, which does not align with the realities of rural communities, where settlements more dispersed and these distances can vary. Amcoff's (2012) study thus highlights a significant knowledge gap in the Swedish context. While the methodology is suitable for large-scale analysis, it fails to accurately capture the structure of rural areas where the changes most likely occur.

Local studies, on the other hand, are conducted in areas within municipalities. Sørensen et al. (2021) found evidence for population decline after a school closure in Denmark, as did Sageman (2022) in the U.S. Conversely, Slee and Miller (2015) found that rural school closures might not be the main catalyst for population decline in Scotland, but that rural areas might already have an unstable base and creating job opportunities in the basic economic sector for example, might be more important for the population development than having a school.

When comparing the two perspectives, Sørensen et al. (2021) highlights an important point: the scale of the study area matters for the result. Which Amcoff (2012) agrees with when the author problematizes that the larger scales are inherently misleading. The historical catchment areas as well as the division of different villages are important contexts that, if they are disregarded, might have population changes that go undetected. As the authors focusing on the local scale found evidence of depopulation, but those studying it on a regional scale could not find it. Slee and Miller (2015) also importantly highlight that different rural areas are affected differently by a school closure. As the authors found that some areas are already a part of a depopulation process before the school closure occurred. These previous studies on population decline illustrate that rural areas are not homogenous and should be studied in greater detail.

The studies that have been mentioned up to this point debate whether school closures have an effect on population decline or not, but it is also important to understand whether school closures occur because of already declining populations, as Slee and Miller (2015) point to. Schools are often closed due to declining student enrollment, which can be interpreted as a sign of depopulation. Barber et al. (2023) found that school closures are disproportionately occurring in areas that are already experiencing population decline in Ontario, Canada. Furthermore, the authors found that these closures occur more frequently in areas that Kühn (2015) define as marginalized and therefore peripheralized, with lower education and income for example. This means that declining public investments might occur more frequently in areas that are experiencing peripheralization.

Additionally to the scale-approach differing between the studies, a general methodology for studying population decline in relation to school closures has not yet been established, as each study takes a different approach. For example, Barakat (2015) performed both univariate and inferential analyses at the municipal level, comparing multiple municipalities in Saxony; Sørensen et al. (2021) conducted a DiD-analysis on eight rural communities within one municipality; Sageman (2022) applied a DiD-analysis between school districts in rural counties. Note that Barakat (2015) did not find depopulation after a school closure, while those who conducted a DiD-analysis did find it. A DiD-analysis compares population trends before and after a closure in a treatment and control group, which visualizes the potential impact that a closure could have had on the population development. Since a DiD-analysis has not yet been conducted in Sweden, this study used it as a baseline to try to understand if the school closure itself is a driver for depopulation, or if the analysis will show conflicting results, indicating that other factors might be playing in.

The time period over which population changes are studied is also important. Sørensen et al. (2021) examined a 20-year period (10 years before and after each closure), Sageman (2022) covered 29 years (1990–2019, divided into pre-treatment, treatment, and post-treatment periods), Barakat (2015) studied 13 years (1994–2007), and Amcoff (2012) analyzed 14 years (1990–2004). These periods overlap to some extent, making comparisons in the context of global events more feasible. Most importantly, each study spans a period before and after school closures, allowing for comparison of population trends over time. This is also why the DiD-analysis is often used, as it compares trends before and after an event in both a treatment and a control group to determine whether the event had an impact.

In conclusion, studies on depopulation as a consequence of rural school closures have not reached a consensus. Research suggests that population decline may not be observable at a regional scale but can be detected at a local scale. No local scale studies have been conducted in Sweden. The only Swedish study on this topic, by Amcoff (2012), is conducted in a constructed rural setting which does not take the real rural structures into account. These areas are more sparsely populated and dispersed, distinguishing them from urban areas and necessitating a different analytical approach. Slee and Miller (2015), as well as Barber et al. (2023), point to more contributing factors for population decline than just school closures. In the next section, the social consequences will be discussed, which will cover other potential long-term reasons for depopulation after a rural school closure.

3.2.2. Social Consequences

In the previous part, it was opened up to that depopulation might be a secondary effect from other consequences after a rural school closure. Effects such as low social capital, less job opportunities and powerlessness in decision-making are examples of social, economic, and political consequences of rural school closures, which in turn could contribute to depopulation. This section will focus on the social consequences of rural school closures. The presentation is divided into two points of view; community consequences and consequences for the individual and families.

Consequences for the Community

Rural schools are often perceived as symbols of resilient and thriving communities. Thus, a school closure can represent the symbolic end of a village. This section presents research indicating that despite the closure of local schools, rural areas can still thrive through the collected development of social capital and the creation of community resilience. Social capital is defined by Kłoczko-Gajewska (2020) as the capacity of a community to act collectively. Resilience is closely related to a community's ability to withstand and recover from destabilizing events, thereby exhibiting greater tolerance to external threats. (Oncescu, 2014; Haartsen and Van Wissen, 2012; Autti and Hyry-Beihammer, 2014).

In rural areas, community meeting places are key to maintaining a healthy and cohesive community. Haartsen and Van Wissen (2012), who studied multiple school closures in the Netherlands, found that the presence of meeting places, where residents could produce social

capital, was a distinguishing factor between villages that “survived” and those that were devastated by school closures. Similarly, Oncescu (2014) found that such meeting places contributed significantly to community resilience in Canada. The school building itself often served as a hub for parents and children, hosting events that helped strengthen social bonds. When a school closes, these activities often come to an end. However, in Oncescu’s (2014) study, villagers responded by organizing their own events post-closure, as they valued the communal aspects. These self-initiated activities further strengthened community ties and contributed to resilience.

Autti and Hyry-Beihammer (2014) builds on this perspective in their Finnish study, emphasizing that social capital is particularly enriched through intergenerational interactions. They argue that the school building is valuable not just as a facility but also as a symbolic and functional meeting place that fosters such interactions. Kłoczko-Gajewska (2020) examined the consequences of either maintaining or losing school buildings in Polish communities. The study found that a loss of social capital is inevitable following school closures. However, the decline was less severe in communities that repurposed the school building for other activities. The author also notes that the burden of sustaining these new structures and organizing community events can have long-term effects, particularly on younger generations, who may face increased responsibility for maintaining community life.

Further, the closure of an important community institution can create feelings similar to grief. Christiaanse and Haartsen (2017) found this in Ulrum, Netherlands, following the closure of a convenience store. The store held symbolic, social, and emotional value in the community, contributing significantly to local identity. The sense of loss was not about the store’s practical function, but about the role it played in representing shared values and community cohesion. Conversely, Gieling et al. (2019) found that community centers and primary schools in rural areas did not contribute strongly to social place attachment, while cafés and supermarkets did in the Netherlands.

This research provides a deeper understanding of the importance of the school as well as how the negative effects of rural school closures can be mitigated through social capital and community resilience. In communities that are close-knit and proactive, the impact of depopulation may be less pronounced. However, maintaining social activities and meeting spaces places significant demands on local residents. In urban settings, social capital is often fostered through commercial venues such as cafés, gyms, or stores. In contrast, rural areas lacking such infrastructure rely heavily on the initiative and engagement of the local

population. Social capital and resilience might also be a dampening force of the peripheralization process, which creates exclusions from networks (Kühn, 2015). By being tight-knit, the community might have a stronger voice in the political decision-making process, in comparison with communities without such means.

Consequences for the Individual and Families

School closures have a direct impact on individuals and families' everyday lives, particularly through the changes they cause in daily travel patterns. When the new school is located in another village, children's activities associated with school move with it, which shifts the rhythm and geography of family life. Research from the Netherlands, Canada, and Sweden, shows that while the social lives of both parents and children can be broadened by these changes, they also face a challenging position, being part of a new community while maintaining ties to their original one. This often leads to divided engagement between two places. (Haartsen and Van Wissen, 2012; Oncescu and Giles, 2012; Cedering, 2012).

Cedering (2012) studied the community of Ydre, Sweden, and found that residents' daily routines changed significantly after a local school closure. With the new school located farther away, families spent more time driving between home, school, and various activities. Parents noted that their children had been more independent when the school was nearby, but now relied heavily on being driven. This increase in car travel also raised costs for families, disproportionately affecting those with fewer financial resources. (Cedering, 2012, pp. 78–79; Haartsen and Van Wissen, 2012).

In addition, parents expressed concern that their ties with the local community were weakening. Some noted that they now did their shopping in the new area, which threatened the survival of the local convenience store. (Cedering, 2012, pp. 78–79). Oncescu and Giles (2012) observed similar patterns in Canada, noting that the local store served as a symbolic space where children and elderly residents frequently interacted, often during off-peak hours. When the store closed, these intergenerational encounters diminished, weakening both social ties and interpersonal relationships. While relationships and meeting places in the original village faded, some were strengthened in the new community. Parents appreciated the opportunity to meet others their own age, yet also acknowledged that the increased travel distance between villages created strain on these new relationships (Oncescu and Giles, 2012).

Place identity and local patriotism also play a crucial role in shaping perceptions of belonging. Place identity is built through sensory and experiential connections like tastes, smells, memories, while local patriotism amplifies this by viewing one's home place as superior. These feelings can foster both pride and isolation (Cedering, 2012, pp. 30–35). In Cedering's (2012) study, parents initially feared that merging their local school with a larger, more distant one would lower educational quality and harm the social environment. They believed that smaller schools allowed for more attentive teachers and a stronger sense of community. However, several years after the closure, those concerns were largely unfounded. (Cedering, 2012, p. 87). In this case, the school symbolized the perceived quality of rural life, both as a matter of place identity and as a form of local patriotism. This also shows that social capital can be multifaceted, it is not only binding where it creates cohesion, but also excluding and contributing to 'othering', as Eriksson (2010) points to.

In conclusion, school closures in rural areas can have both positive and negative effects on individuals and families. On the negative side, increased travel distances and relocated social activities strain family routines, finances, and community relationships. This shift can also reduce the time spent in the local village, weakening community social capital. On the positive side, parents may form new connections in the new location. Still, this can also lead to a sense of dissonance with their original place identity and feelings of local patriotism. As these outcomes are a part of broader socio-spatial processes, they are important to consider within the context of peripheralization to fully grasp the implications of school closures. To build on the understanding of the intricate social processes, the economic socio-spatial process will be discussed in the next section.

3.2.3. Economic Consequences

Slee and Miller (2015) found that lack of job opportunities are often a bigger driving force for depopulation than school closures in Scotland. In Sweden, most rural areas have experienced job loss as a direct result of deindustrialization (Lind, 2011), which is further noted by Syssner (2018) who found that shrinking municipalities often have a declining market sector, which makes it difficult for the municipality to rent out business spaces. However, Amcoff (SVT Nyheter, 2024) also states that a general loss of jobs can be observed in these areas after a school closure, not only jobs related to the school itself. This indicates that municipalities in Sweden that are experiencing depopulation are also experiencing job loss, and that a school closure might accelerate this negative economic development.

Further, Kroismayr (2019) found that economic development did not follow population decline as clearly, in their study of Austrian rural regions, economic development improved in most areas that had experienced a school closure. Kroismayr (2019) highlights the importance of the agricultural sector in remote areas, which appears to have a positive effect on both economic and demographic trends. A well-functioning agriculture sector might therefore mitigate the effects of a school closure.

In the previous section, the importance of the school building for social capital and resilience was discussed. The school building also appears to have an impact on local economic development. Semczuk (2020) found that positive economic activity was more prevalent in communities where the school building was reused for local activities, compared to those where it had closed down and not been reused in Małopolska Voivodeship, Poland. This indicates that social capital, and the resilience it fosters, is also important for sustaining local economic development.

There have been few studies on the direct economic consequences of rural school closures. The studies mentioned in this section suggest a connection between economic and demographic development. Thus, a stable population base, both in numbers and in terms of social capital, is important for future economic development. Even though Kroismayr (2019) did not find a connection between depopulation and declining economic activity, the importance of agriculture remains evident. As agriculture can create more job opportunities and potentially bring the population together through shared activities, this serves as a further example of the importance of social capital. Agriculture is also largely concentrated to rural areas in Sweden, which means that qualified workers might seek out these job opportunities, and which in turn might dampen the economic process contributing to peripheralization. Investments in economic activity as well as investments in opportunities for social capital, are in many cases the politicians responsibility as these areas are unfavored by market forces, which will be discussed in the next section.

3.2.4. Political Consequences

As local politicians and local politics are at the core of school closures, they also face consequences. Isaksson (2023) examined political support in Swedish municipalities before and after school closures. The study found a notable decline in support for left-wing parties when they closed a school, while support for radical right-wing parties in opposition either stagnated or, in some cases, increased. Isaksson (2023) explains this trend by noting that left-wing parties in Sweden are often associated with welfare investments. As such, they may be *punished* by voters for closing welfare institutions like schools. Radical right-wing parties, often perceived as anti-establishment or parties of discontent, was shown to benefit from the school closure when in opposition as voters perceived that they were *betrayed* by the left-wing parties.

There is only one paper on the connection between political discontent and peripheralization that I can find. Written by Mihály (2022), the author found that the rise of right-wing populist parties in Hungary and Germany was directly connected to the rise in precarity in rural areas after the 2008 financial crisis. By applying the concept of peripheralization and further study the effects of these political decisions in Sweden from a locals perspective, other processes that are driving this distrust can be further understood.

School closures are therefore often politically costly for local politicians. Facing public protests and electoral repercussions makes the situation even more difficult. Nevertheless, school closures continue to occur. Depopulation and a shrinking tax base present significant budgetary challenges for municipalities, often forcing them to restructure welfare services, including schools, to maintain financial stability. (Syssner, 2018)

The sense of distrust pointed towards politicians, that Isaksson (2023) found in Sweden, is comparable to the political shift in Hungary and Germany that Mihály (2022) found. The feeling of abandonment and political discontent is a direct sign of peripheralization. Thus, Isaksson's (2023) study contributes to the understanding of the political consequences of areas being peripheralized. But a qualitative study examining the political dynamic after a closure in direct connection with peripheralization has not yet been conducted in Sweden. Through interviews, this project aims to contribute to that gap by gaining a deeper understanding of how community perceptions of politicians shift when a school closure occurs.

3.3. Summary of Earlier Research and Knowledge Gap

In the literature review on the existing research on rural school closures four main themes have been identified. Generally, population and social consequences have been studied the most, but there is also research on economic and political consequences. The research highlights processes that indicate peripheralization, but the concept has not been widely used to explain all these consequences.

Within the theme of depopulation, it is not clear if school closures lead to population decline, if it is prompted by it, or both. The only study on population development after school closures in Sweden has been conducted by Amcoff's (2012), who studied the population on a regional scale, and thus no study on the local scale has been conducted in Sweden. The local scale is important to research further because of the diverse spatial structures in rural areas. In this project I intend to fill this knowledge gap by analyzing if depopulation occurs after a school closure on a district scale in Västra Götaland County in Sweden, which roughly follows the historical village boundaries and catchment areas. This is hoped to create a more just picture of the depopulation process after a school has closed in Sweden.

The social consequences of rural school closures have been widely researched and the understanding of the importance of social capital is well understood. From what I can find, social capital and the resilience it can create has not yet been studied in correlation to peripheralization in Sweden. By researching this connection, a better understanding of which villages survive a school closure and which perform worse depending on social capital can be highlighted.

The economic consequences have been scarcely studied, but they point to a correlation with social capital. For example, depopulation does not necessarily lead to negative economic development, and retaining the school building for social activities has been shown to have a positive effect on local economic development. As long as it is possible to attract highly qualified workers, the effects of peripheralization do not appear to be as comprehensive.

The theme of political consequences finds that school closures occur regardless of if the decision leads to decreased political support. The main arguments from the local politicians is that the budgetary constraints and slim economic margins often make it undefendable to keep rural schools. By applying geographical concepts such as peripheralization in a Swedish context one can contribute to a deeper understanding of the political processes and its perception by the local inhabitants.

In the earlier literature, and in the background for this project there are several key concepts that have been presented. Table 2 includes definitions for these concepts that are useful to understand the results and context for this project.

Concept	Definition
<i>Rural area</i>	<i>Districts/areas without a central town or other major towns. Thus, areas outside municipal and therefore economic centers.</i>
<i>Center-periphery division</i>	<i>The center has deprived power from peripheral areas by being e.g. economic and political centers that the peripheries depend on.</i>
<i>Urban norm</i>	<i>That for example policy biases towards urban settlements are used in the rural context, often failing to understand the countryside, treating it as homogenous and inflexible. Often thereby applying the same outlook on rural and urban areas. Which is why many policies could be constraining to shrinking municipalities, when they are guiding in urban.</i>
<i>Periphery</i>	<i>Pre-given fringe spaces with social implications.</i>
<i>Peripheralization</i>	<i>Social relations with spatial implications, and the production of peripheries.</i>
<i>Marginalization</i>	<i>Those on the fringe of society, excluded in cultural, social and or structural ways. Treated as interchangeable with peripheralization by Kühn (2015).</i>
<i>Social capital</i>	<i>The capacity of a community to act together. This can be both including and excluding, able to create both cohesion and isolation.</i>
<i>Community resilience</i>	<i>A community's ability to withstand and recover from destabilizing events, exhibiting greater tolerance to external threats. Strong social capital is a key aspect of this.</i>

Table 2: Definition of central concepts to the project.

To summarize, all these consequences and findings are important themselves, but together they may point to a range of processes that contribute to a broader understanding of population change and the development in rural areas. Thus, the explanation may lie in a combination of socio-spatial processes such as economic, political, and social. To identify these patterns, mixed methods will be used to first study if population change can be attributed to school closures through a DiD-analysis, and second with the help of semi-structured interviews delve into the social and political experiences from informants living in an area where a school closure has occurred.

4. Method and Materials

The methodology of this project consisted of two parts: one quantitative part with an analysis of population data using a DiD-analysis, and one qualitative part with interviews with local informants. The use of mixed methods enables the exploration of peripheralization from a broader perspective, mainly in understanding the measurable consequences such as population change but also knowledge about social and political consequences that is held by the locals living in the affected areas. The method builds on gaps in previous research, where researchers have focused on either one of these parts but rarely combines them, especially in a study this comprehensive that studies multiple cases.

The methodology in previous studies can be divided into two groups: the first group are quantitative studies on a national, regional, or local scale. Amcoff (2012) for example, studied population development nationally with regional divisions in Sweden, and Sørensen et al. (2021) on a local scale in Denmark. The second type of study that could be identified consists of qualitative interviews with the affected locals, policymakers and local politicians. These studies aim to describe the social consequences of rural school closures and have been conducted by Cedering and Wihlborg (2020) in Sweden for example. Both these types of studies are important, but the advantage in combining them is that one can gain a broader understanding of the processes at large. By combining these methods, this project gains a comprehensive picture of the consequences in different areas, which also goes hand in hand with the idea of peripheralization as it describes consequences as simultaneous processes.

The outline of the quantitative part of the method will be presented first in section 4.1., describing the data collection and selection, and how the DiD-analysis was conducted. The qualitative part, thus the interviews with local representatives, will be presented in section 4.2., describing how schools and informants were chosen as well as the interview structure. The chapter will end with a discussion of the method in section 4.3.

4.1. *Quantitative Method*

To answer the question regarding population change after a school closure, a DiD-analysis was conducted. The workflow for the analysis will be presented in this section, beginning with the data collection and selection, and ending with a presentation and discussion of the DiD-analysis.

4.1.1. Data Collection and Selection

To prepare for the analysis two sets of data were required: data on all schools, both open and closed, in Västra Götaland County, and population data from the congregations and districts within the county. The school data, covering the period from 1997 to 2017, was provided by the Swedish National Agency for Education (Skolverket). Schools located in Västra Götaland County were extracted from the dataset and combined with their respective addresses to enable geocoding and mapping in ArcGIS Pro. It is important to note that data for the municipality of Uddevalla was missing from the dataset and was therefore excluded from the analysis. To enhance the spatial analysis, municipal and district boundaries were added to the map. The municipal borders helped visualize the geographic distribution of schools within each municipality, while the district shapefile was used to determine the specific district to which each school belonged.

Districts were chosen as the local scale for this project partly because they roughly correspond to the school catchment areas. Although school catchment areas may have been restructured over time and therefore vary between municipalities, as well as the administrative issue with all municipalities not having the catchment area maps left in their systems, the district scale still represents the most realistic local area likely to be affected by a school closure.

The population data at the district scale had some flaws, which were mitigated as far as possible. The districts were established in 2015 by the Swedish Bureau of Statistics (SCB), based on the earlier congregation boundaries, which were historically governed by the Church of Sweden (*Svenska kyrkan*). Over time, the Church had made some adjustments to these boundaries, often merging multiple congregations for administrative purposes. When SCB adopted this scale for population data, they reversed many of these mergers, splitting most congregations back to their original size. As a result, the population data available from SCB spanning from 2004 to 2014, and then again from 2015 to 2023, contains some inconsistencies and gaps.

To ensure a reliable analysis of population trends, certain schools were excluded from the dataset. A minimum of three years of population data before and after a school closure was required to support an overall plotting of population trends as well as a robust DiD-analysis, which relies on mean population data for the periods before and after an event. For example, the district of Ambjörnarp in Tranemo municipality had sufficient data for three years before and after the school closure. However, between 2009 and 2014, it had been merged with another parish, resulting in an artificial spike in the population figures. To correct for this, the affected data was removed, and the analysis was still considered viable since it contained enough data points.

After the schools that had lacking data were removed from the data set, districts that had multiple schools were also excluded because of the problems of measuring population change with two points of impact. For example, some districts had two school closures and some had one open school and one closed, which could cause problems with the analysis and were therefore chosen not to be used. This could also pose problems with the qualitative method since it could impact the comparability between districts. Even though there were some problems with the data, the use of old congregation borders is logical, since the church was historically responsible for education in their congregations (e.g. Johansson, 1987). After the processing of data 11 schools remained.

4.1.2. Difference-in-Difference-Analysis

In this section, the DiD-analysis conducted in this project will be outlined. The first section will present the basic model for conducting a DiD-analysis to introduce how the more complex model used in this project works, which is presented in the second section. The third and last section outlines the key-parts of this analysis: the assembly of control groups as well as the adaptation and consideration of parallel trends.

Basic DiD-model

A DiD-analysis makes it possible to understand if an event, in this case a school closure, was the main factor contributing to a population change. By measuring from one specific point in time for both the treatment group and the control group, other possible factors can be disregarded to a certain extent. In the context of school closures, which often happens due to poor municipal economy, other forms of saving in public investment could have been implemented at the same time, which in some cases can make the analysis unreliable. For example, some schools that have been chosen for the analysis were closed between 2007-2010, which could have been affected by the 2008 financial crisis, since the national and county economy also plays a role in the economic situations of the municipalities. The results of the analysis is still reliable, but it is important to keep other factors in mind, which is where the interviews with the local representatives becomes important.

The basic DiD-analysis is structured as follows:

$$DiD = (\bar{Y}_{T,after} - \bar{Y}_{T,before}) - (\bar{Y}_{C,after} - \bar{Y}_{C,before}) = \Delta Y_T - \Delta Y_C$$

$\bar{Y}_{T,after}$: The population mean in a district where a school closure has occurred (treatment group) after the closure.

$\bar{Y}_{T,before}$: The population mean in the treatment group before the closure.

$\bar{Y}_{C,after}$: The population mean in a district absent of a school closure (control group) after the closure in the treatment group.

$\bar{Y}_{C,before}$: The population mean in a control group before the closure in the treatment group.

If $DiD = 0$ The closure has not had an effect on the population, thus the potential decrease or increase of population has been the same in both the control and treatment group.

If $DiD < 0$ The closure has had a negative effect on the population because the population has decreased more in the treatment group than the control group.

If $DiD > 0$ The population has decreased more in the control group, which means that the closure has not had an effect on the population, or that the impact might have been an increase in population.

The DiD-analysis is often performed as a regression to achieve the best possible results, which follows this model:

$$y = \beta_0 + \beta_1 * D^{Post} + \beta_2 * D^{Tr} + \beta_3 * (D^{Post} * D^{Tr}) + (\beta_4 * X) + \varepsilon$$

y : The change in population size over time.

D^{Post} : Time dummy (measured before (0) or after (1) closure).

D^{Tr} : Treatment group (1) or control group (0) dummy.

$(D^{Post} * D^{Tr})$: The interaction of the two dummy variables.

β_0 : The constant and gives the mean population change in the control group before the closure.

β_1 : Presents the difference in mean population between the groups before the closure.

β_2 : Shows the mean population change in the overall time period in the control group.

β_3 : The DiD-estimate and captures the effect that the school closure had on the population.

$(\beta_4 * X)$: Effect of control variables, but are not used in this basic model.

ε : Error term (unexplained variation in population change).

D^{Post} , D^{Tr} , and $(D^{Post} * D^{Tr})$ are the independent variables, while the population for each year is the dependent variable in this case. This framework and use of variables is still relevant for the more complex model used in this project.

The Callaway and Sant'Anna (2021) DiD-Model

The basic model is designed to only examine two groups (control and treatment), but to gain further statistical relevance, multiple groups are often studied. It is possible to conduct this basic model by hand, but it is unreliable and when multiple areas that have experienced an event at different times, and a more complex model needs to be used. The DiD-model for multiple time periods established by Callaway and Sant'Anna (2021) was deemed the best model for this type of project. This model uses the following equation:

$$ATT(g, t) = E[Yt(1) - Yt(0) | G = g]$$

$ATT(g, t)$: The group-time average treatment effect, thus the DiD-estimate.

$Yt(1)$: The observed outcome if the group was treated at time t .

$Yt(0)$: The estimated outcome if the treated group would not have been treated.

$G = g$: Establishes the treatment starting point in period g .

$t \geq gt$: Is the assumption or condition that establishes that the model only looks at periods after the treatment has started.

Callaway and Sant'Anna (2021) develops this model by suggesting that the model should start with an estimation of all **$ATT(g, t)$** , then computing a mean for this, and lastly weighing the mean for these to get a collected effect of the DiD-estimation. To simplify, this DiD-model creates a DiD-estimate for all years after the closure that exists in the data set. Since the model is designed to run with multiple time periods, it gives sufficient data to gain a more detailed understanding of the population development over time after the school has closed.

The model was run in R (a data manipulation software and language (The R Foundation, n.d.)), since the model's DiD-package is based on the Callaway and Sant'Anna (2021) article. There are three main advantages with this model as it, first, allows for variation in treatment time, second, allows for multiple periods of time being studied, and third, allows for the parallel trends assumption to hold in relation to covariates, all these therefore mitigate the disadvantages with the basic DiD-model. Thus, it is better to conduct a comprehensive model like the Callaway and Sant'Anna (2021) DiD-analysis, rather than conducting a standard regression-analysis in this case.

Assembling Control Groups and Parallel Trends

Before the model could be run in R, control groups needed to be assembled. The purpose of the control group was to enable a comparison of population change, helping to determine whether a population trend would have continued without a school closure. The control group is therefore a key component to the DiD-analysis. When choosing control groups, the parallel trend assumption is the most important factor for the model to properly work. The assumption states that if the event would not have happened, the differences between the control group and the treatment group would have been constant over time. The trends are therefore parallel. A violation of this could lead to faulty results, as the pre-treatment development could impact the post-treatment development more than the event itself. (Columbia University Mailman School of Public Health, 2025)

With this important aspect in mind, the population developments pre-treatment of the previous 11 selected treatment districts was compared to districts within the same municipality that had not experienced a school closure and had an open school. To establish parallel trends, a regression was conducted in Excel, which further secured this trend, and is more reliable than a visual examination of the plotted population developments (Riveros-Gavilanes, 2023). The regression was first conducted between the ‘pairs’, thus, a treatment and a control district within the same municipality, and then a regression was conducted for all treatment and control groups. This last regression combines all control groups and all treatment groups and evaluates the parallel trend between them, which is necessary for the model to run properly.

The Riveros-Gavilanes (2023) model was followed to test for parallel trends, but a regression was conducted instead of a *t*-test. The independent variables ‘years’ and ‘treatment/control groups’ were coded as dummies, and a multiplication of the two presented the interaction. Population was the dependent variable. The control groups were chosen if they had a coefficient lower than 10 or higher than -10 and a *p*-value for that coefficient greater than $p > 0.1$, as it shows that the differences between the groups are small and insignificant, which points to parallel trends. In some cases, there were multiple qualified districts. To determine the best fit, the pre-treatment population developments were plotted, and a linear equation was applied. The coefficient, reflecting the overall trend, was then used to choose the most suitable candidate.

This reflects the multiple steps taken to ensure the parallel trend assumption. Due to the low number of candidate-districts fitting the selection profile, as well as the already high

depopulation in many of the selected areas, only four district out of 11 had a corresponding control district with parallel trends in population. The number of districts for the DiD-analysis were therefore on the low-side. To gain a better base for the analysis, multiple districts where a school had closed in the same year would have been preferred. To gain a better analysis in future research, the area of study should be broadened, either to multiple counties or nationally, to create a more stable base. Control groups over municipal borders was not an option in this case due to the geographical contexts of the districts. Regardless of this issue, it was still possible to conduct the DiD-analysis within R.

The *Group-Time Average Treatment Effects*-tool was used to conduct the analysis, and the script used can be found in Appendix A. There are two important points to mention regarding the script. The first was that the mode of the control groups in the analysis had to be changed from *nevertreated* to *notyettreated*, which had an impact on the results, but is seen as both an advantage and a disadvantage in this case. This command determines how the control groups are chosen in the model. Since there were too few control groups to use *nevertreated* (which is the traditional model for a DiD-analysis; thus, a control group that has not and will not be effected by the school closure), *notyettreated* had to be used instead. This command sets the control group to the groups that have not yet had or will not have a school closure. For example, for the year 2012, the treatment group of Ambjörnarp and its control group of Dalstorp will be used in the analysis as control groups even though the school in Ambjörnarp closed in 2015 and is traditionally considered a treatment group. This method adds more data to the analysis and makes it more statistically significant. To prepare for this mode of control groups, the data was sorted out so that every control and treatment year in the data-set covered the same years, since there were few candidates for several of the years, this ensured statistical reliance. Further, regressions to ensure parallel trends were made for all combinations of treatment and control groups that the model was going to run. (Callaway, n.d.). The combinations and illustration of the *notyettreated*-mode can be seen in Table 3.

Table 3: *notyettreated-combinations*.

Treatment district	Desionated control district	Year of closure	Control groups in <i>notyettreated-mode</i>
A_T	A_C	2012	$A-D_C$ and B_T
B_T	B_C	2015	$A-D_C$
C_T	C_C	2010	$A-D_C$, A_T , B_T and D_T
D_T	D_C	2011	$A-D_C$, A_T and B_T

The second note is that the model was run three times with different methods to compute the DiD-estimate. The first method was the OR (Outcome Regression), that relies on high precision in modelling the pre-treatment developments between the treatment group and the control group, which makes it explicitly tied to the parallel trends assumption. Thus, the higher accuracy in ensuring parallel trends, the better this estimator will perform. The second one, the IPW (Inverse Probability Weighting) avoids the reliance on parallel trends as much as possible, instead it depends on the conditional probability that the variables in the model are correct. Thus, if the prosperity score of the model is correct, this estimator will be more accurate. This makes the estimator vulnerable to faulty data or classifications, but is more flexible when it comes to parallel trends. The last estimator used in this method is the DR (Doubly Robust), which combines the previous two estimators. The estimator becomes more flexible as it is not as strict as the OR, but does not fall short as much as the IPW. This makes the estimator more robust and effective than the previous two. (Callaway and Sant'Anna, 2021). The strength in combining these three estimators is that more detailed results of the model emerges. By comparing the outputs one can examine the strengths and weaknesses of the model. The OR and the IPW therefore acts as more detailed results to the DR-model, which produces the main results in this case.

4.2. *Qualitative Method*

In addition to the DiD-analysis, semi-structured interviews with local informants were conducted to gain further insights into processes that can be hard to measure or understand from an outsider's perspective. The background to why this method is important in this type of study, how schools were sampled to be interviewed, and who were chosen to be interviewed, will be presented in this section.

4.2.1. Choosing Schools

Four areas were chosen for interviews out of the 11 cases. These areas represent a variety of outcomes from the DiD-analysis as well the information from the background research for each school, which contributes to a greater knowledge about different rural cases. Before the interviews, it was useful to visit the school areas subject to the interviews, to get a better understanding of the specific situations. Four school cases were seen as enough to gain knowledge saturation from these particular informants as similar themes and thoughts emerges during these four interviews. To gain a broader knowledge about the development in each area, additional informants with different backgrounds could have been interviewed. But, due to the budgetary constraints of the project, the number of schools were kept down, and these four are seen as sufficient for the aim of this study.

The selection of schools for interviews was based on the following four criteria: *what happened to the school building*, *the results from the DiD-analysis*, *distance to the central town* and *the closest open school*. The use of the school building is interesting for understanding different outcomes in development of social capital and community resilience, since the previous research pointed to that the production of social capital is tied to the building. The distance to the central town and nearest open school can impact travel patterns and feeling of isolation, which is interesting to investigate in relation to the social aspect of peripheralization. As well as the results from Cedering's (2012) study that showed that both negative and positive outcomes can be seen with new travel patterns. The results of the DiD-analysis show the development in population after a school closure, where it is interesting to understand the differences between districts with decreased and increased population. A short presentation of the chosen schools and the criteria can be seen in Table 4.

Table 4: Information about the schools/areas to be interviewed.

District, municipality	School	The school building	Distance to the central town	Distance to closest open school	Results from DiD-analysis
<i>Sundals-Ryr, Vänersborg</i>	<i>Sundals-Ryrs skola</i>	<i>Demolished in 2016</i>	<i>27 km</i>	<i>7.9 km</i>	<i>NA</i>
<i>Mark, Hajom</i>	<i>Hajomskolan</i>	<i>Rental office spaces</i>	<i>15 km</i>	<i>7.9 km</i>	<i>Long term increase</i>
<i>Mark, Berghem</i>	<i>Berghemskolan</i>	<i>Apartments and a mechanical shop</i>	<i>9.1 km</i>	<i>4.5 km</i>	<i>Long term decrease</i>
<i>Lilla Edet, Ale-Skövde (Nygård)</i>	<i>Nygårdsskolan</i>	<i>Kindergarten</i>	<i>15 km</i>	<i>5.1 km</i>	<i>NA</i>

Sundals-Ryrs skola was chosen because of its localization in relation to the central town as well as the demolition of the school building. Only one other school had been demolished, Ambjörnarskolan in the early spring of 2025, which would have been an interesting comparison to make to see the direct as well as long term effects of demolishment. I was not able to contact anyone willing to participate in the interview from Ambjörnarp, which was part of the DiD-analysis, and thus Sundals-Ryr would have to suffice.

Hajomskolan was chosen due to the use of the school building as well as the long term decrease in population, revealed in the DiD-analysis. The municipality wanted to demolish the building, but it was bought instead by a private company who is now renting out office spaces in the building. Berghemskolan was chosen for the main reason that the school building was redeveloped into apartments and a mechanical shop, making the building inaccessible to the locals. The results from the DiD-analysis showed a long term population decrease, which is interesting in relation to Hajom. Both these schools are located in the same municipality, but show opposite results from the analysis, which makes them interesting cases.

Västerlandaskolan and Nygårdsskolan were closed at the same time for the same reasons, and were redeveloped into kindergartens. To get comparable answers in regard to the question surrounding political consequences, these are interesting schools as the closure process was turbulent. This poses two reasons for informants from the school areas to be interviewed; political turbulence and the continuous use of the school building as care for children. In the end, an informant from Nygård was chosen to be interviewed, since the village was located

further away from the central town, posing an opportunity to further examine the impact of greater travel distances.

To summarize, these chosen schools represent different outcomes from the background research on the closures, as well as the DiD-analysis. Most schools also fit into a combination of criteria, which can be both a negative and positive aspect, as it can be hard to determine which is most important. For example, if it was the demolition of the school building or the distance to the central town that contributed to declining social capital. Simultaneously, a combination of criteria is positive as it can be used to identify the interaction between factors, which in turn helps to analyze the results with the help of peripheralization. Thus, the chosen schools and districts represent both the individual results, and the potential interplay of multiple aspects that the local informants have insight into and can explain.

4.2.2. Choosing Informants and Interview Structure

In this section, the mode of selection of local informants will be presented as well as a description of the interview questions and why they were chosen. When it comes to smaller communities, and especially those who are more rurally located, it is important to find the right informants, in this case it was central to get informants who had a long-term insight of the local area. Who these are can vary depending on the social structure of the community. The questions for the interviews also need to be flexible and somewhat tailored to the rural situation. Accessibility to services as well as struggles to organize community events, for example, needed to be considered and discussed so that valuable and detailed descriptions of the different areas could create a picture of the differences and similarities.

Local Informants

The informants chosen to be interviewed came from the four districts where the selected schools were located, and they were individuals with long-term experience of the local development. While the DiD-analysis provides insight into population changes in quantitative terms, the interviews offer a deeper understanding of the underlying factors that influence these changes as well as the social and political processes.

The local representatives were contacted through local heritage associations (*hembygdsföreningar*), community associations (*byalag*), and in one instance through the local Facebook-group. The primary aim of these associations is to foster local engagement by creating meeting places and activities for residents. The chosen informants can be seen in Table 5, which illustrates that all informants had some close connection to the local school, either as former teachers, or close relatives of staff or students.

Table 5: Presentation of the local informants.

District, municipality	School	Gender	Occupation	Connection to the school	Connection to the area	Connection to local associations
<i>Sundals-Ryr, Vänersborg</i>	<i>Sundals-Ryrs skola</i>	<i>Male</i>	<i>Retired</i>	<i>Wife was a teacher and their children attended the school</i>	<i>Moved there in the 1990s</i>	<i>Community association</i>
<i>Hajom, Mark</i>	<i>Hajomskolan</i>	<i>Male</i>	<i>Retired</i>	<i>Teacher</i>	<i>Moved there in 1965 to work at the school</i>	<i>Community association</i>
<i>Berghem, Mark</i>	<i>Berghemskolan</i>	<i>Male</i>	<i>Part-time teacher, soon to be retired</i>	<i>Children attended the school</i>	<i>Lived there his whole life</i>	<i>Heritage association</i>
<i>Ale-Skövde (Nygård), Lilla Edet</i>	<i>Nygårdsskolan</i>	<i>Female</i>	<i>Retired</i>	<i>Teacher</i>	<i>Lived there almost her whole life</i>	<i>None other than attending some events</i>

Their long-standing familiarity with the area positioned them well to provide insights into the local development both before and after the school closures. Social capital and community resilience are difficult to grasp without insider perspectives, which makes these interviews a valuable component to the project. For an outsider, it is often hard to grasp which social institutions hold the most significance or what symbolic and practical role the school building played. One potential limitation of interviewing individuals tied to local associations is the risk of a somewhat biased view, possibly overstating the importance of community activities. Nonetheless, these informants provide essential insights into the long-term development of the areas. Another aspect to consider when analyzing the results from the interviews is that there were only four representatives in total, thus one from each area. These cannot provide a full picture of the development, but can point to experiences and larger trends that they have perceived.

Semi-Structured Interviews

The interviews were semi-structured and organized around four main themes, each with two to four subthemes. The interview guide can be read in Appendix B. The format of a semi-structured interview revolving around themes was chosen partly due to the limited existing research using mixed methods on this subject, particularly research that examines local informants' perspectives in relation to peripheralization. As there was no established framework for conducting such interviews across different regions, a semi-structured format was deemed most appropriate.

The interviews were structured around four main themes: social consequences, depopulation, political consequences, and economic development. Within the theme of social consequences, sub-themes included village cohesion and local activities before and after the school closure. These aspects aimed to capture the development of social capital, where a lack of cohesion and limited activities would suggest weaker village resilience and lower levels of social capital, making the community more vulnerable (e.g. Kłoczko-Gajewska, 2020). This theme partially overlaps with the population-related questions, where issues of local attractiveness and reasons for residents moving away were explored. Notably, out-migration is also one of the social process indicators of peripheralization according to Kühn (2015).

The political consequences theme focused on sub-themes such as the informants' involvement in the school closure process and their perceptions of the political decision-making surrounding it. Questions explored their trust in political processes and their willingness for future involvement. These relate to Kühn's (2015) political process dimension of peripheralization, where a lack of trust or perceived abandonment can indicate dependency in decision-making and a feeling of exclusion from influential networks.

Kühn's (2015) economic dimension of peripheralization is marked by a lack of innovation, low-skilled employment, and deindustrialization. These aspects were examined through the economic development theme, including sub-themes related to for example the housing market, the presence of businesses, and local employment opportunities. In this part of the interview, an oral questionnaire was conducted. Informants were presented with seven types of local institutions, healthcare center, rescue service, kindergarten, grocery store, dentist, gas station, and restaurant or pizzeria, and asked whether these institutions existed or had previously existed in the area and if the potential closure had a connection to the school closure. They were also asked to describe the location of the nearest one they currently used. This helped to understand the level of economic activity as well as both social and physical

infrastructure in the area, providing a concrete sense of the rurality and its development over time.

With these general themes and subthemes, it created a natural opportunity for the informants to speak freely and reflect on topics in a way that was relevant to their specific contexts. Not all questions would be applicable in every case, and by encouraging an open discussion the interviews offered an opportunity to uncover new insights, perspectives that might have been overlooked either by me or in the literature. This flexibility was especially important given that the circumstances and motivations behind school closures were not uniform across the studied areas. By constructing open-ended questions designed to prompt discussion and following up with subtopic-specific queries, the interviews maintained a balance between structure and openness. This method also ensured that the responses were comparable across cases, while also providing space for informants to highlight what they considered most important. By keeping the interviewer's influence limited and allowing the informants to steer the conversation, the aim was to minimize confirmation bias and allow genuine, grounded reflections to emerge. (Bryman and Nilsson, 2018, s.565).

The interviews were conducted via a digital video meeting tool, as in-person interviews were not feasible due to time and logistical constraints. Through this format the interviews were able to be recorded, aiding the transcription process and allowing the interviewer to be more engaged during conversations. While digital interviews can limit the interpretation of body language and facial expressions, this did not present an issue when the interviews were conducted, and the informants spoke freely. After the interviews were conducted, they were transcribed and translated by me, the author, to the best of my ability. Prior to the interviews, visits were made to each area, especially around the schools, to build a better understanding of the physical and social environment. This proved valuable during the interviews, as informants often referenced specific places I had visited, which helped deepen the discussion and made the exchanges more concrete.

The only notable challenge encountered during the interviews was related to the economic development section. Specifically, the first set of questions intended to collect ratings on local development from one to five, were misunderstood by all informants and I failed to redirect them effectively. Instead, the question evolved into a more open discussion on how the area had developed and whether the school closure played a role. Although this deviation made the responses less quantifiable than intended, the resulting discussions still provided valuable and comparable. This resulted in not enough information to being able to keep the economic

dimension free-standing in this project. The knowledge gained from the informants was instead used to back-up the other claims since it still pointed to a general development that is relevant.

The interviews were also useful since the municipal documentation of the closures were rarely detailed enough to get a full picture of the closure process and its aftermath. Important aspects such as who purchased the school building or what became of it was hard to find in some instances. The informants alongside with a site-visit, helped uncover many of the unknowns.

4.3. Method Discussion

Through the use of mixed methods, a comprehensive understanding of the consequences of rural school closures can be attained. The DiD-analysis contributes to the knowledge about local demographic developments, and the interviews with local informants gains detailed knowledge about the local processes behind the statistics that are hard for an outsider to find.

The Callaway and Sant'Anna (2021) DiD-analysis is more comprehensive and fitting when analyzing multiple groups, especially if these have been affected at different times, in comparison to the basic DiD-model. The use of The Group-Time Average Treatment Effects enables higher precision and statistical significance. But the restrictiveness of the parallel trends assumption created difficulties in gathering enough data to be able to perform the intended mode of analysis; the use of control groups that were never going to be treated. This was mitigated by the use of treatment groups that had not yet been treated as control groups as well. This meant that this data had to be controlled for parallel trends in all outcomes that the tool was going to use. These controls still pointed to the existence of acceptable parallel trends within each combination. The assurance of the parallel trend assumption is the most important part of the analysis, but since it is restrictive, another method could likely be used to do a similar analysis. Due to the limitation of the scope of this project, further districts from other counties could not be added, but a broader scope should be considered to gain more data points. For future research on this subject, it could be useful to tailor the project to the availability of data, instead of the other way around. This will most likely produce more reliable results.

The semi-structured interviews with themes and sub-themes was a good method to gain nuanced information about the areas and their development. The only failure was the misinterpretation of the economic theme by the informants, but at the same time, the informants seemed to struggle to answer these types of questions at all since they did not have that kind of insight. When delving into the economic development, it might be better to take on a different approach and interview other types of informants. As previously mentioned, most of these informants were active in local social organizations, which means that they have great insight in this particular area and might therefore not be as invested in the local business organizations or sectors such as agriculture. Some informants were also reluctant to discuss some political aspects, and with another approach to this theme as well, more insights could be gained. It could be useful, for example, to talk to different types of informants or frame the themes differently. With access to more time and means, this type of interview could be even

more helpful if it was conducted in person with the informant in the local area. The informants often pointed in a direction when they spoke about a place which was hard for the interviewer to interpret and sometimes hard for the informant to explain.

As the informants had similar types of backgrounds, their experiences are probably similar, which can be partly seen by the few number of interviews needed to gain knowledge saturation. This is positive in the sense of comparability between the districts, but negative when it comes to nuance. With the use of multiple informants with different backgrounds, a more just grasp of the development of different aspects in the areas could probably be achieved.

To ensure reliability, validity, and replicability in this study, multiple aspects were considered. The DiD-analysis was conducted through a tailored model to the conditions of this study. The model also produced data about significance and standard deviation for each value, which is important for comparability and validity. By using an established model, reliability is increased, but this mostly contributes to the replicability of the study. For the qualitative part of the method, the themes, sub-themes, and open-ended questions posed as an interview-guide that enabled comparability and standardization for each interview, contributing to reliability and replicability. Content and construct validity were enhanced through alignment of interview topics with the study's focus on population, social, (economic), and political consequences. Triangulation of findings by using both methods strengthened overall validity by linking observed population trends with participants' lived experiences, providing a deeper understanding of the impacts of school closures on rural communities. (Bryman, 2018, pp. 98, 207-214)

5. Results

As presented in the previous chapter, the method consisted of two parts: a DiD-analysis and semi-structured interviews with local informants. The results from these methods will be presented separately in this part as well, with the results from the DiD-analysis pertaining to population development after a school closure first, and the findings from the interviews relating to the social and political consequences will be presented in the second part. After each section, a discussion of the results will be conducted in relation to earlier literature and peripheralization. In the last section of the results, a collected discussion of all results will be presented.

5.1. *Population Development*

In this section, the results from the DiD-analysis will be presented. First, the results from the regression for parallel trends will be presented to show which districts could be used in the DiD-analysis. Second, the results from the DiD-analysis will be presented first altogether and then separately with graphs of the population development. Lastly, a discussion of these results will be provided. The section aims to answer the following research question: *Has the population development in the corresponding districts to the schools been impacted by the closures?*

5.1.1. Regression For Parallel Trends

Before the DiD-analysis could be conducted, parallel trends needed to be established. As described in the method-chapter regarding the quantitative part, a regression was done to ensure parallel trends between the control groups and treatment groups. Table 6 shows the results from the different combinations of regressions. The first part of the table shows the results from the ‘paired’ regression, used to identify control groups within municipalities, and the second part shows the results from the combinations of control groups used in the DiD-analysis, as illustrated in Table 3.

Table 6: Results from the regression for parallel trends.

Closure year	Treatment group	Control group	Interaction coefficient	p-value
<i>Identification of control groups</i>				
2012	Klädesholmen district	Rönnäng district	7.70	0.11
2015	Ambjörnarp district	Dalstorp district	5.60	0.16
2010	Berghem district	Fritsla district	-1.50	0.64
2011	Hajom district	Fotskäl district	-1.29	0.65
<i>Combinations used in DiD-analysis</i>				
-	All treatment	All control	4.65	0.97
2012	Klädesholmen district	Rönnäng district	-6.52	0.98
		Dalstorp district		
		Fritsla district		
		Fotskäl district		
		Ambjörnarp district		
2010	Ambjörnarp district	Rönnäng district	13.22	0.96
		Dalstorp district		
		Fritsla district		
		Fotskäl district		
2010	Berghem district	Rönnäng district	2.97	0.99
		Dalstorp district		
		Fritsla district		
		Fotskäl district		
		Klädesholmen district		
		Ambjörnarp district		
		Hajom district		
2011	Hajom district	Rönnäng district	2.77	0.99
		Dalstorp district		
		Fritsla district		
		Fotskäl district		
		Klädesholmen district		
		Ambjörnarp district		

The interaction coefficient and its p-value are key indicators for identifying parallel trends in this regression. Although the R-squared and F-value are typically used to assess the overall significance of a model, they are not particularly relevant in this context, as they do not provide insight into the interaction term, which is the main focus of the analysis. Furthermore, it can be seen in Table 6 that all p-values are greater than 0.1, which indicates insignificance for different trends, thus pointing to them being parallel. The interaction coefficient also holds the threshold of +/-10, in all cases except for when Ambjörnarp district is the treatment group

in the DiD-analysis. An exception was made in this case to keep Ambjörnarp district due to the high p -value. The interaction coefficient describes the pace that the treatment group increases/decreases in population in relation to the control group, a lower coefficient is therefore preferred, but not vital in this case. Perfect parallel trends are hard to attain in this type of study.

5.1.2. DiD-Analysis

After the control groups as well as combination of control groups, was tested for parallel trends, the DiD-analysis was possible to be conducted. This section will begin by presenting results for all districts to illustrate an overview of the results. It will then continue on to describe the results in more detail.

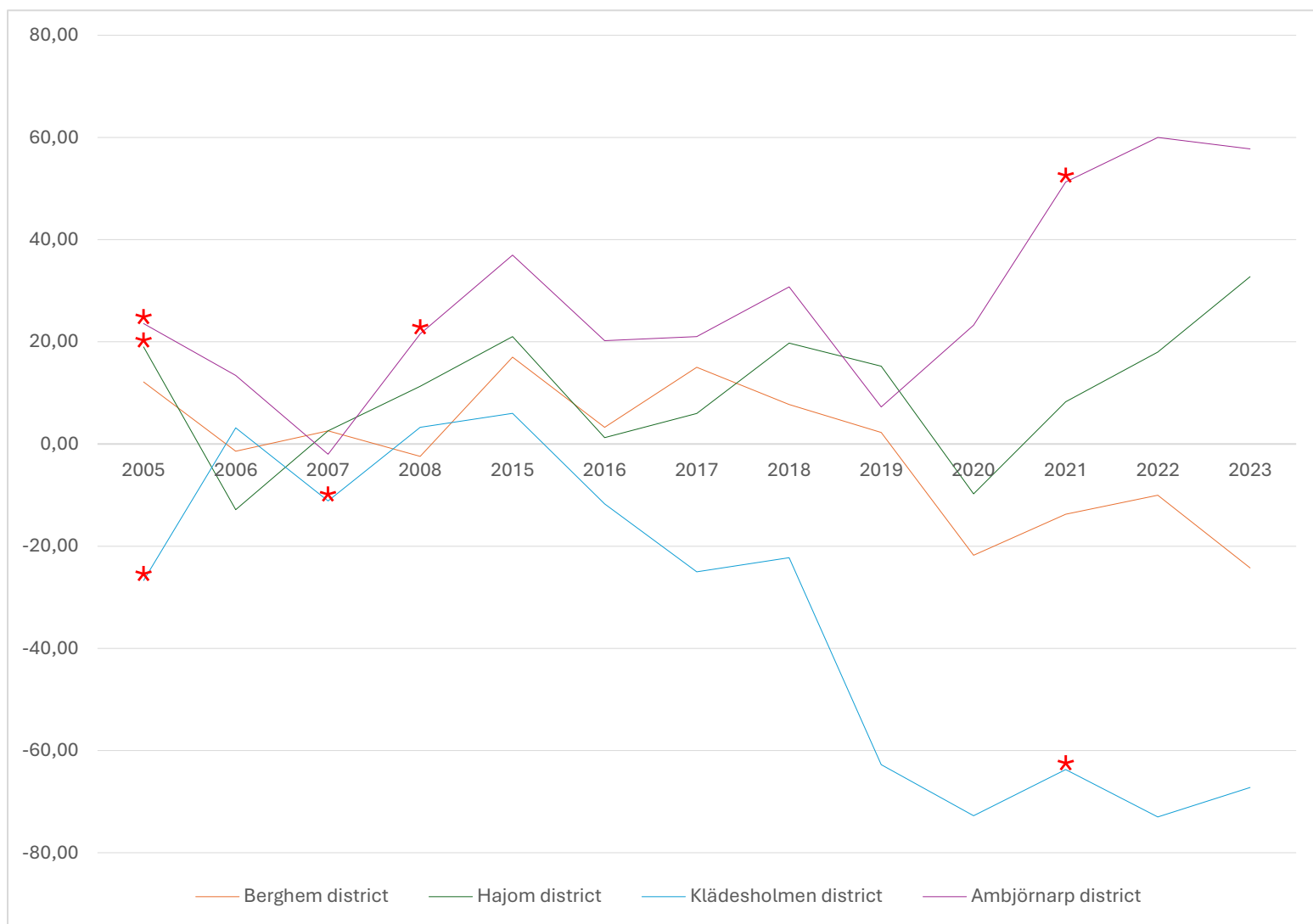
All Trends

The outputs from the OR, IPW and DR-method of analysis all showed the same trendlines, but with different standard errors and upper and lower limits of the confidence bands. This led to differences in significant results. All outputs from the three methods can be seen in Appendix C. Since the DR-method is a combination of the OR and IPW, this is the main method that is going to be presented. The DiD-estimate-development for all four districts are visualized in Chart 1.

As can be seen in the Chart as well as in Appendix C, very few results were significant. This is because the majority of the outputs did not cover the 95% simultaneous confidence band. There could be more results that actually are significant, only that they are located near the 0-point on the confidence band. For example Berghem in 2006 could have been considered a significant result, but since the output does not show a clear positive or negative location, the results are seen as insignificant. All results are still presented to get an overview of the general developments. Note that no results were significant for Berghem district.

All schools were closed between 2010 and 2015, which coincides with the years that lacked enough common data for all district to be analyzed (2009-2014). This means that the trends before 2008 are the pre-treatment period for all districts, and 2015 forward is the post-treatment period. Directly after 2015, there is a decrease in population growth for all districts, but all areas recover from this except for Klädesholmen district that experienced high levels of depopulation in the full post-treatment period. Berghem district has a period of increased

population between 2015 and 2019, but after that, the district experienced depopulation. This indicated a lagged depopulation effect. Ambjörnarp district on the other hand, only experienced population growth after the closure with an especially high yearly increase after 2019. Hajom district follows a similar but milder trend in relation to Ambjörnarp district, but with a year of depopulation in 2020.



* Significant results

Chart 1: Population development results from DR-method DiD-analysis.

These results point towards different trends in population development for all districts. Common trends can be found in the years 2015 and 2018, when all districts experienced decreased population growth or depopulation, as well as in 2017 when all districts experienced increased population growth or less depopulation. Overall, it is clear that the districts are developing differently over time, pointing to individual factors influencing population development. In the following section, the individual results will be presented to delve deeper into these possible factors.

Klädesholmen District

As previously stated, not all results were significant. The DiD-estimation year for year for Klädesholmen district can be seen in Chart 2, where the intervals for the 95% simultaneous confidence band is wider in the post-treatment period. To determine significance, the intervals needs to cover the same side, positive or negative. Since some of the values are closer to showing no or low change in population development, this mode of determination might be too strict, especially in the pre-treatment period where the interval are smaller. Either way, it is clear that there is uncertainty regarding the overall developments. What is clear in the results from Klädesholmen district, is that the area has experienced depopulation in relation to the school closure between the years 2019 to 2023, which is seven to 11 years after the closure, pointing to a long-term depopulation pattern.

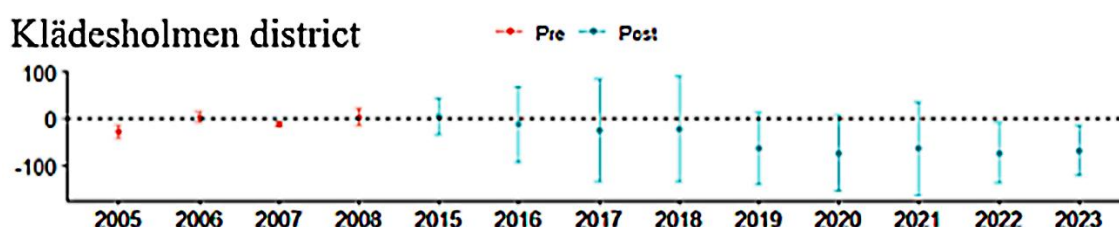


Chart 2: The DiD-estimation year for year and 95% simultaneous confidence band-results for the DR-method in Klädesholmen district.

When comparing these results to the population development numbers in Chart 3, the population decline is evident. There is also a decline in population in the designated control district, but it is not as pronounced. The central town of Skärhamn in Stenkyrka district, in comparison, has experienced population growth.

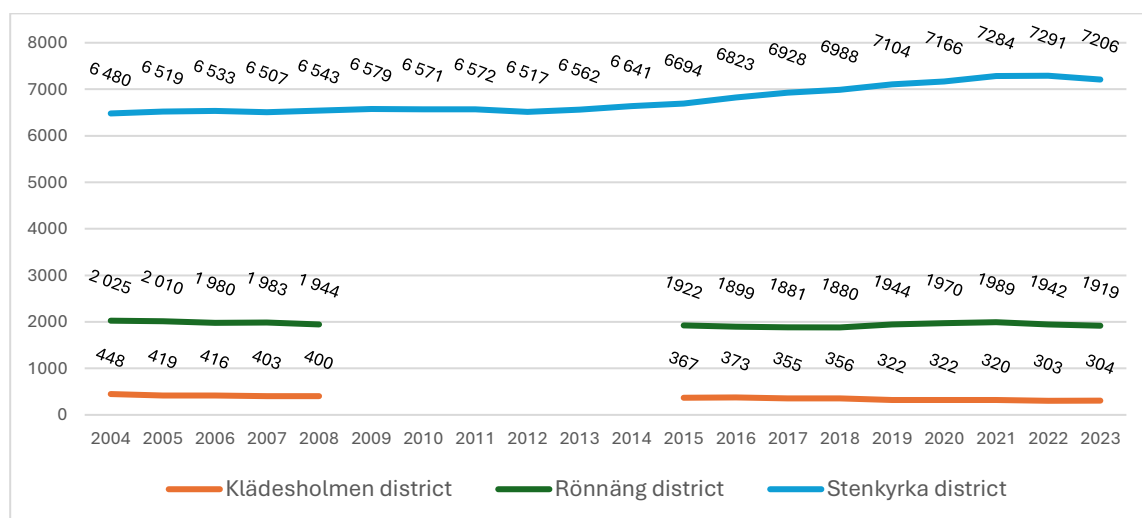


Chart 3: Population development in Klädesholmen district (treatment group), Rönnäng district (control group) and Stenkyrka district (central town) between 2004 and 2023.

Ambjörnarp District

The DiD-estimation year for year for Ambjörnarp district shows a positive trend (See Chart 4). This district has (with reservation for some uncertainty) almost exclusively experienced population growth as a result of the school closure or due to some other factor.

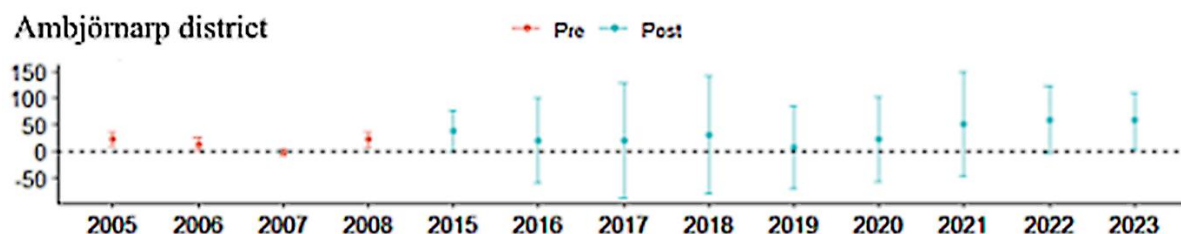


Chart 4: The DiD-estimation year for year and 95% simultaneous confidence band-results for the DR-method in Ambjörnarp district.

The positive population trend can also be seen in Chart 5, where the district is shown to have a mild increase in population over time. The control district of Dalstorp, on the other hand, experiences a mild depopulation, and the central town of Tranemo experiences population increase as well.

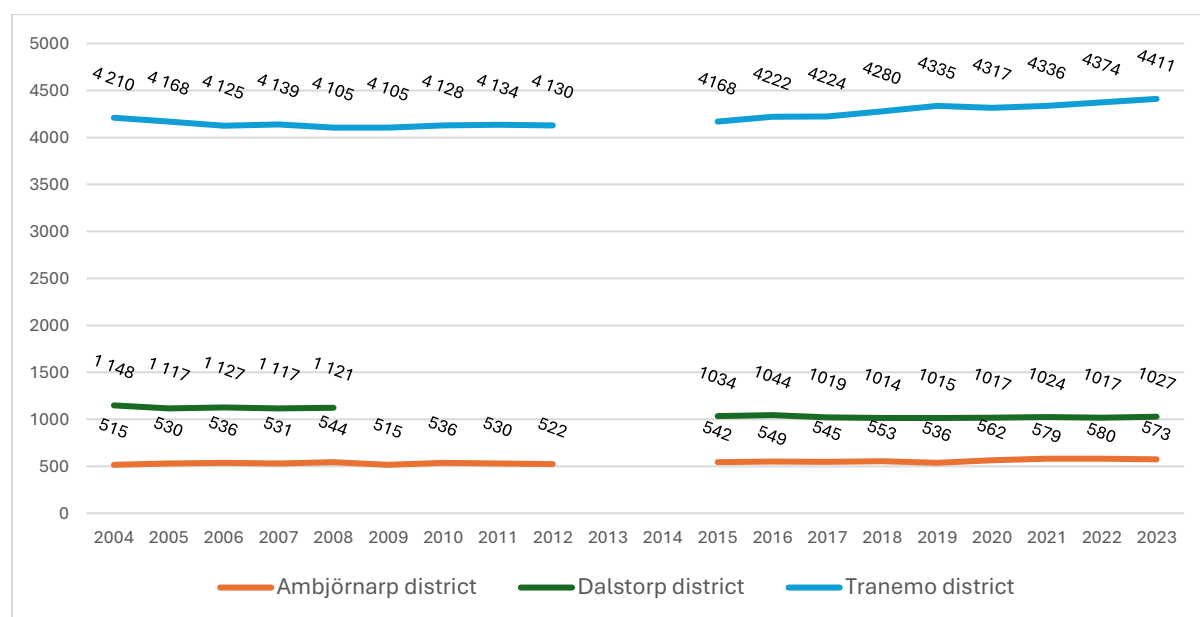


Chart 5: Population development in Ambjörnarp district (treatment group), Dalstorp district (control group) and Tranemo district (central town) between 2004 and 2023.

Thus, the district has experienced population growth since the school closure. Since it is almost certainly clear that people have not moved to the village because the lack of a school, the explanation for this likely lies in other factors, such as housing development, which will be discussed later on.

Berghem District

Berghem district has experienced both depopulation and increase in population after the school closure (see Chart 6). There is population growth between 2017 and 2018 (seven to eight years after the closure), and then depopulation between 2020 and 2023 (10 to 13 years after the closure). The overall trend point towards long-term mild depopulation in this case.

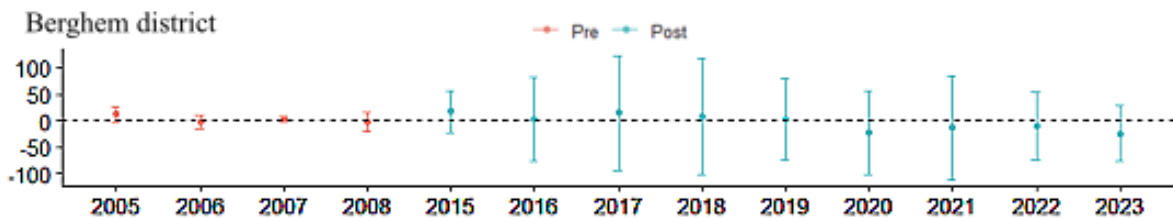


Chart 6: The DiD-estimation year for year and 95% simultaneous confidence band-results for the DR-method in Berghem district.

When examining the population development in Chart 7, this mild decrease in population is evident after the closure as well. There is a gradual increase in population for Kinna district, while the control group of Fritsla generally remains stable.

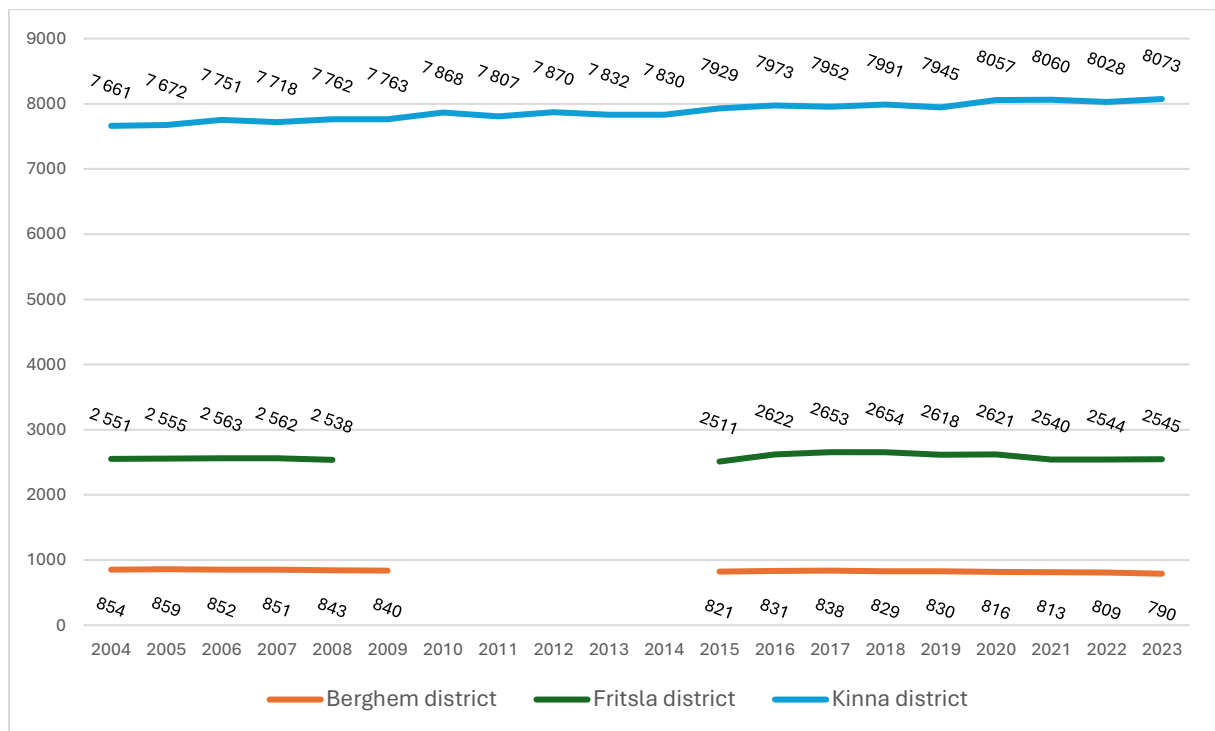


Chart 7: Population development in Berghem district (treatment group), Fritsla district (control group) and Kinna district (central town) between 2004 and 2023.

Hajom District

The DiD-estimate seen in Chart 8, as well as the population development, illustrated in Chart 9, both show a constant population development for Hajom district. There are mild fluctuations in the development, which point to that the school closure has not had an impact on the population development, neither positive nor negative. The control group of Fotskäl district has also had a constant population development, while there is a constant mild increase in Kinna district.

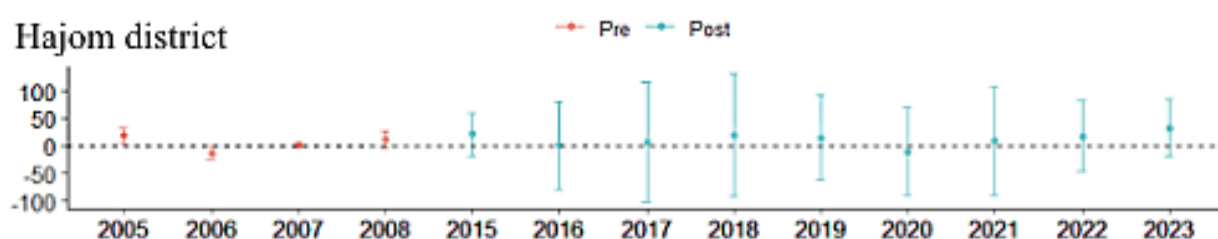


Chart 8: The DiD-estimation year for year and 95% simultaneous confidence band-results for the DR-method in Hajom district.

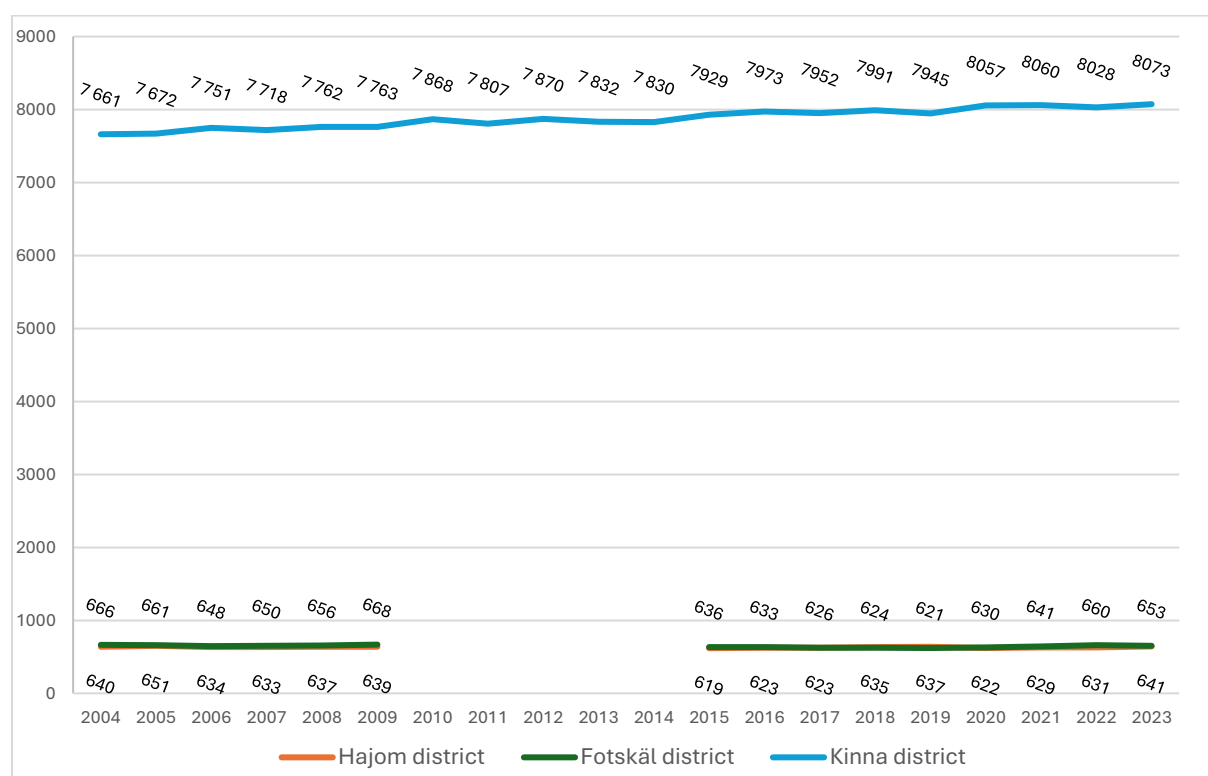


Chart 9: Population development in Hajom district (treatment group), Fotskäl district (control group) and Kinna district (central town) between 2004 and 2023.

5.1.3. Discussion of Population Development Results

By studying school closures on a local district-scale in three municipalities and four districts in Västra Götaland County, Sweden, it could be observed that all cases had different outcomes. Out of these one district showed depopulation as a direct cause of the school closure, one had an increase in population, one had no change in population, and the last pointed to long-term depopulation in the area. A summary of the results can be seen in Table 7.

Table 7: Summary of the population development in each district as well as the municipal classes provided by Swedish Agency for Economic and Regional Growth (2021)

School	District, municipality	Municipal classification	Development of DiD-estimate
Hajomskolan	Hajom, Mark	Rural municipality near urban areas	Constant
Berghemskolan	Berghem, Mark	Rural municipality near urban areas	Increase 7-8 years after closure and decrease 10-13 years after closure
Klädesholmens skola	Klädesholmen, Tjörn	Sparsely populated rural municipality	Decrease
Ambjörnarp skola	Ambjörnarp, Tranemo	Rural municipality near urban areas	Increase

According to the Swedish Agency for Economic and Regional Growth's (2021) classifications and statistics of municipalities in Sweden the *Sparsely populated rural municipalities*-classification have generally experienced population growth. Klädesholmen district in Tjörn municipality, belonging to this classification, has experienced depopulation as a result of the school closure. This indicates that rural areas within this municipal type, that have experienced a school closure are more likely to go against the trend of population growth, pointing to differences within municipalities. This further adds to that population changes after a school closure should be studied at a local scale, such as district, to understand the internal developments in these issues, as Amcoff (2012) theorized and Sørensen et al. (2021) proved as well. Simultaneously, Tjörn municipality is located in the archipelago-area of Västra Götaland County, which could put it in a furthermore precarious position with high tourism and summer residences and therefore a decreasing number of permanent residents, followed by decreasing tax revenue for the municipality. Tourism could therefore be contributing to peripheralization in these particular areas.

The other three districts, Hajom, Berghem, and Ambjörnarp, are located in two municipalities classified as *Rural municipalities near urban areas*. The results point towards both increased and stagnated population development in these areas. In the Swedish Agency for Economic and Regional Growth's (2021) population development estimations it showed that this

category of municipalities experienced population decline between 1968 and 2020, but are estimated to grow about 1% nationally to 2070 (See Table 5). Since the results from the analysis are diverse, this could point to a bigger diversity among districts and municipalities within this category. This further points to strong county central towns (e.g. Gothenburg) and municipal central towns having different conditions and means for developing and impacting rural areas. This category fits in similarly to Barber et al. (2023) and Slee and Miller's (2015) findings that population decline is not always tied to a school closure, and that other factors such as less job opportunities, lower education, and lower income could be underlying factors to out-migration. Thus, the differences in this municipal type could be because of different possibilities created by the surrounding economic centers. This is also connected to peripheralization as economic, political, and social spillover effects from nearby centers could dampen the effects of peripheralization vice versa. Some might benefit from the central towns or more active areas, while others are neglected.

The clear increase in population in Ambjörnarp district could be explained by the municipal policies and legislation regarding to new housing developments. While no one was interviewed from Ambjörnarp, the informants from Berghem and Hajom explains that there are few new developments in the areas:

The change is that there haven't been any new homes built. [...] in Berghem, there are no empty houses. Of course, the houses change owners, but those who live here, whose children move out, have to move to other towns; Kinna, Skene, and so on, right? If there were apartments, maybe they'd want to stay close to their parents, at least for their first place, with everything that entails; going home for lunch or dinner. But no, nothing is being done. Nothing is being built. There hasn't been anything built in Berghem for over 50 years. [...] No, not much is happening, and my children probably wouldn't move back to Berghem again. (Informant from Berghem, 2025-03-27)

I think people would move here if there were more housing, because there's a long waiting list as soon as an apartment becomes available in the existing buildings. And the same goes for when someone finds a plot of land; they build on it right away. [...]. (Informant from Hajom, 2025-03-18)

The informant from Berghem further explains that houses are rather being renovated than built, which could be because of the municipal policies on development:

There's one available plot, I think. And then it's about whether you can get permission to build on agricultural land, but the entire municipality is against that, fortunately perhaps. So, there is a municipal plot available where water, sewage, and electricity have been laid out, but they haven't

started building anything. The houses that are near that plot, though, are probably at least 30 years old, maybe even older. So, no new houses are being built, and people are renovating them. The houses are there, and when a new owner comes in, they rip out the kitchen and toilet and build new ones. They might also re-clad the house, change the roof. Right now, in the municipality, we're having a problem because the municipality is going around inspecting all the septic systems, the individual ones, so we had a cost two years ago of 160,000 [SEK] for a new system. But now we have a separate system because the municipality doesn't bring the pipes to a municipal sewage system. It's too sparse and expensive [for the municipality]. (Informant from Berghem, 2025-03-27)

In comparison to Ambjörnarp, wherefrom an informant was initially intended to be interviewed, it was clear when visiting the site that new developments were emerging. From just one location visit, I saw multiple new houses being built, and the older ones being renovated. These were privately owned houses, and the municipal-owned buildings (e.g. the old gymnastics hall) seemed to need renovation. Thus, the opportunity to build a new house to one's liking might be more important in sustaining or increasing population in these areas. Since many of these areas are located with good communications to urban areas, these areas have an opportunity to gain inhabitants in those who are willing to commute, if there are housing available.

These results become interesting when contemplating the second set of research in the earlier literature: those who found that depopulation would occur regardless of a school closure and that other factors are more important. Deindustrialization in rural areas has led to a general loss of jobs, and the inaccessibility to higher education (Echazarra and Radinger, 2019) has led to an unqualified work force that has lower income, stagnating the local economic development (Baum and Payea, 2005). This is part of the peripheralization mechanisms that Kühn (2015) describes, that theorizes that this type of marginalization leads to out-migration since people seek out better opportunities. These types of underlying factors are explained by Slee and Miller (2015) and Barber et al. (2023) to be the root cause for depopulation as well. The unavailability of housing or the unattractiveness of the areas therefore could have a domino-effect on the population development.

Lastly, one out of four areas had depopulated as a result of the school closure. This is contrary to Amcoff's (2012) findings, and points to that depopulation is detected on the local scale rather than the regional or national. The other three areas either showed stagnated or increased population, which is explained by other factors rather than the school closure, and therefore

agreeing with Slee and Miller (2012) and Barber's et al. (2023) findings. The results from this project has therefore shown that both sides in the discussion about whether school closures are a direct cause for depopulation, and that depopulation would occur regardless of a school closure, are true. The local context and where the rural area is located in relation to welfare institutions and economic centers, for example, probably plays a role in the depopulation process. In some areas it might be enough to close a school to cause a wave of depopulation or increased in-migration, in others there might be other underlying causes that have drawn people away from the village for some time, as part of peripheralization. To understand which of these cases are true, and how they interact, more information is needed regarding social and political processes within the areas. These will be further explored in the next section when the results from the interviews with local informants will be presented.

5.2. Interviews With Local Informants

The establishment of one case of depopulation as a result of a school closure is only one piece of the puzzle when it comes to depopulation. People do not generally move because there is no school in the area. There are other processes that make an area unattractive so that people move from there, or contributes to a discouragement for people moving in, vice versa, as could be the case for the other three areas in the DiD-analysis. In the following two sections, the social and political processes and consequences pertaining to depopulation after a school closure will be presented. The last section is a summary, and a further discussion of the results will be provided.

When presenting the social consequences the following research question will be answered:
What are the perceived social impacts of rural school closures?

The results pertaining to the political consequences will answer the following research question: *How was the political dimension of the school closure processes perceived by representatives of the local communities?*

The information about the informants can be found in Table 4 in section 4.2.2.

5.2.1. Social Consequences

In the interviews conducted with the local informants about the social and economic processes that have occurred in the village after the school closure, four main changes have been found pertaining to the social consequences: A) the loss of meeting places; B) issues with cooperation and cohesion; C) the impacts on travel patterns.

A. Loss of Meeting Places

The informants from Nygård, Berghem and Sundals-Ryr all pointed towards that the village cohesion was degrading due to the loss of the school as a meeting place, mainly because activities moved to another village after the school closure. When, for example, the informant from Hajom was retired, and the informant from Sundals-Ryr did not have children at the school, they did not have a natural meeting place with other parents. This had further consequences for the village, as the informant from Berghem put it:

Well, [the village] has been affected in the sense that we don't really meet anyone other than the people we saw back then. I find it really frustrating when I'm out walking in the village, and I wave at someone and I don't know who they are, and they don't know who I am. They don't know I've lived in this village for almost 70 years. It's quite frustrating. But then?... And some children, I think, felt [moving to a new school] was perfectly fine because they didn't have trouble meeting new friends, and maybe it was exciting to be at a new, bigger school. [...] But today, when you look back, you realize we might have lost the last meeting place, and that has made the village very anonymous. As I said earlier, we meet [each other] on the road and don't know who we are. [...] It's tough. (Informant from Berghem, 2025-03-27)

This illustrates how some people get somewhat left behind in the social context when the village loses a meeting place. This is supported partly by Oncescu and Giles (2012), that the social relations weakened in the original village when the school and the belonging activities were moved to the new village, those who were outside of this circle got left behind. This contributed to this lack and loss of cohesion, and the feeling of unfamiliarity with other villagers is a clear example of the loss of social capital. On the other hand, the informant from Berghem highlights that the children in the village probably were better off than the parents socially, indicating that children are less negatively impacted, since they get a new and broader social life. When the social ties of the children are moved to another village, the social capital is not produced in the old village, which could have long term effects of the community resilience and survival. These losses of ties with the original village as a result of

school closures are highlighted by Cedering (2012) as well as Oncescu and Giles (2012). An example of the long-term effect of participation in the village can be given by the informant from Nygård who explains the loss of the school, and the following merger of the football club, has led to an absence of children playing in the area:

Fewer kids [in the area] I don't know, but it has sort of become that there haven't been enough kids, so we've merged with Lödöse which is seven kilometers from here, and then it's not the same situation. So sometimes they've been in Lödöse and sometimes they've been here at Alevi, as it's called, the football field. So I think maybe it has become... Not as inspiring, maybe? Otherwise, you would see that there were loads of kids on the football field and when they were at the school and the schoolyard, then they would be on the football field. It's not really like that anymore, not at all. (Informant from Nygård, 2025-04-07)

Further, the same informant explains that the school that now is a kindergarten, is located near the football club and they used to have activities in connection to the football club. The younger children could play in the school while the older children played football, which disappeared after the school closed. Other types of meeting places that exist seem to mostly focus on adult-activities such as hiking and bingo for the seniors, which is the case in all villages that were interviewed. This lack of meeting places for children could further pose a long-term problem with place attachment and therefore in turn out-migration.

In the case of Berghem and Hajom, both schools were sold to private individuals, and the school in Sundals-Ryr was demolished. In Berghem, the informant explains that there are not really any meeting places except the church since the school and community hall had been shut down, which made it really hard to keep community cohesion with those moving into the village. In Hajom, the school was sold to a local developer who rents out the facilities to different businesses. The informant explains that the school never really was a great gathering place, but that there sometimes were activities in the in the school, especially the cafeteria. Even though there are possibilities for the community to have activities in the school, it is not used by the public, since they have the community center (*bygdegård*). The school in Sundals-Ryr was partially demolished since there already were meeting places, such as a community hall in the village, and there was no need or funds for another one. The school did not seem to hold as an important value as in the other villages as the facilities were old and the teachers were seen as low quality. The decreasing student enrollment was, according to the informant, due to that the school in the bigger neighboring village of Brålanda was seen as better. When

the school closed, there were not really that many left to advocate for the school, as the informant puts it:

[...] And a little bit of it was about defending the school and keeping it open, there were teachers who had been there for so long that it became very insular, and then some people chose not to send their children to the school, which made it even harder to defend the school. Essentially, when the village's children don't want to go to the school, there's really no reason to keep it open. [...]
(Informant from Sundals-Ryr, 2025-03-19)

Lastly, even though most of these villages have other meeting places than the schools, such as local community centers, the activities that are mostly focused towards adults. The schools seems to have produced a more diverse output of activities pertaining to both adults and children. As Haartsen and Van Wissen (2012) explain, meeting places that produce social capital are important for the village to survive a closure, and Kłoczko-Gajewska (2020) describe that the decline in social capital is less severe when keeping the school as a meeting place. It becomes clear that different activities produce different types of social capital, as activities pertaining to adults and seniors will probably foster place attachment for these people. Children are more vulnerable in this situation, since their social capital is naturally reproduced in their new school context, with new social relations and activities in the new village. When the children are not part of the local social community, their place attachment is formed elsewhere, which poses a long-term risk of out-migration. The school building as a meeting place therefore holds a special position in that it can produce social capital for both adults and children, whereas local community centers struggle to produce it for children.

B. Issues with Cooperation and Cohesion

The number of associations has been steady or decreased in the studied areas. In relation to the school closure, the shooting rifle club in Hajom got merged with the larger regional association since they did not have any spaces left when they could not rent them from the school. The same thing happened in Berghem, where the local gymnastics organization that used to rent the gymnasium at the school is struggling to find sufficient facilities. In Nygård there is also a lack of facilities since the school closed, where the football club house is the only meeting place left for local associations.

Additionally to the lack of spaces there is also a struggle to find people to participate in the association boards. In Sundals-Ryr the informant explained that the local sports organization got merged with Brålanda (a nearby bigger village) since there were not a sufficient number of children to keep the organization locally. It is also hard upholding the community organizations in Sundals-Ryr and Hajom, where people are not as willing to take on responsibilities in local associations. The lack of participation in local association board could be a sign of dwindling place attachment, where people chose to organize themselves in other places rather than in the village. This is a negative development since social capital cannot be produced without these meeting places that the organizations take care of, which in turn could harm the community resilience. The issues with cohesion and social capital seem to have political implications as well, as the informant from Hajom put it:

[...] However, I was quite disappointed because we tried to get some sort of parent council going, or perhaps a parent revolt against this, but everyone was working on their own, so to speak. Many wrote letters, but it was very difficult to come together on something collective. There were a lot of people with opinions, but it's much more effective when you can unite as a group. (Informant from Hajom, 2025-03-18)

This illustrates how there was a will in the community to keep the school, and that it actually created a common goal, but that the community struggled to cooperate. Further, it is also possible that the lack of cohesion and social capital in the village made it harder for the villagers to cooperate, which in turn could have had a negative impact on the outcome of the school closure. If the village would have had a stronger social capital and cohesion, the level of cooperation could have been higher, and the voice stronger against the closure. This is also an example of how social capital creates resilience within the village, as Oncescu (2014) found, since weak social capital contributed to an inability to organize against the closure.

C. The Impacts on Travel Patterns

In the interviews, the informants were asked to point out where the nearest social and welfare institutions from a list were located. Seven institutions were listed: healthcare center, rescue service, kindergarten, grocery store, dentist, gas station, and restaurant or pizzeria. Most informants had a hard time connecting this to the school closure, as many of these institutions were closed long before the school. They still point to interesting results involving investments in rural areas and are visualizing a broader picture of what happens when an institution or service closes, which also relates to schools.

For Hajom, the nearest dentist, health care center, and rescue service and ambulance, were located in Skene and Sättila. They have a kindergarten and a smaller grocery store locally, but the bigger grocery store and restaurant or pizzeria is located in either Skene or Hyssna. The nearest gas stations are located in Fotskäl, Hyssna or Skene depending on how you travel. These locations are depicted in Figure 13.

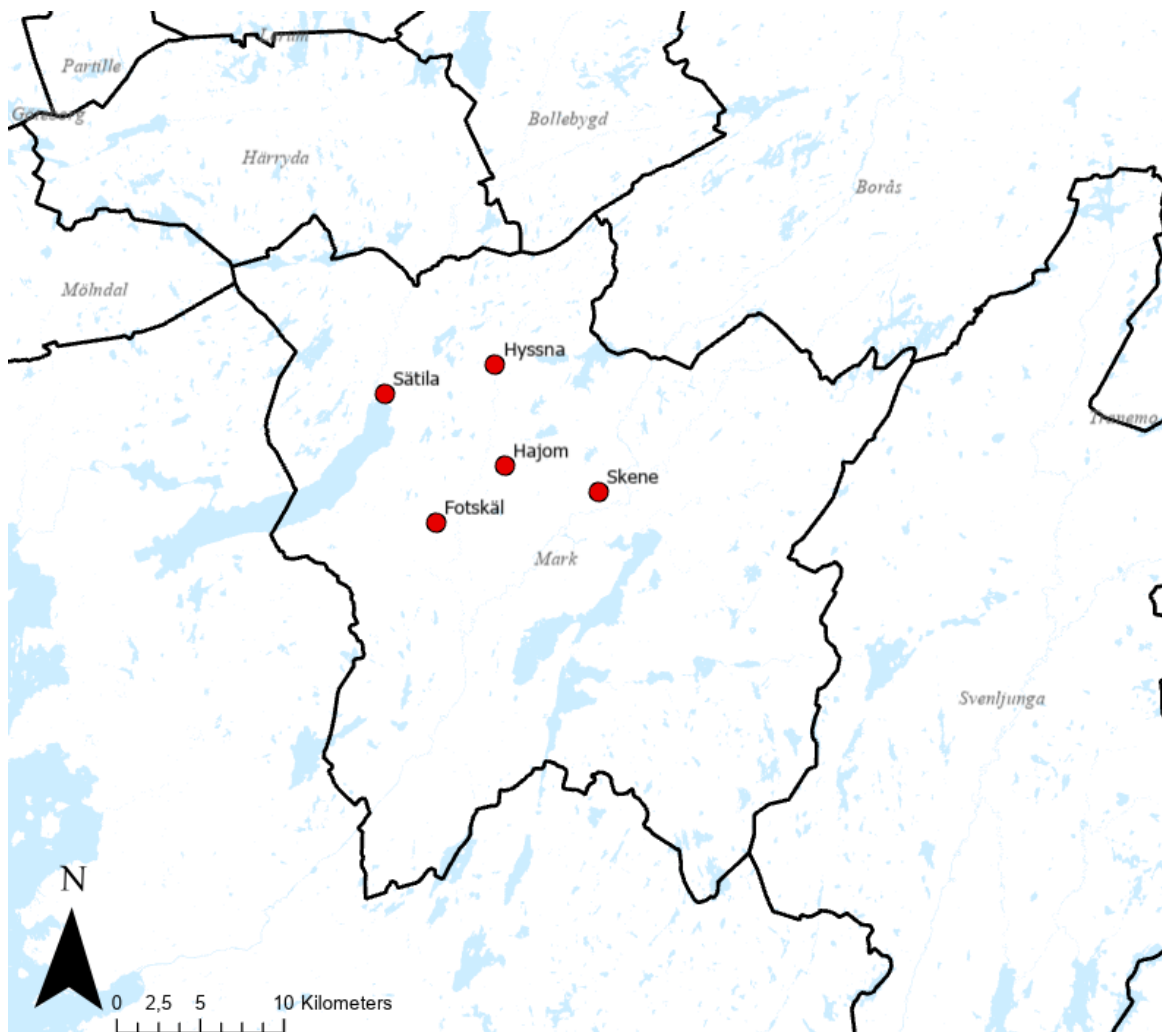


Figure 13: Locations of social and welfare institutions for the informant living in Hajom, Mark municipality

In Sundals-Ryr the informant said that the closest smaller grocery store, gas station and restaurant or pizzeria is located in Brålanda, and that there is a health care center in Brålanda, Vänersborg and Trollhättan depending on your needs. The nearest rescue service is located in Brålanda and Trollhättan. The closest kindergarten is also located in Brålanda, but also in Frändefors. There is also a dentist in Brålanda and Färgelanda. Lastly, the bigger grocery store is located in Vänersborg and Uddevalla. In this case, no stores or services are available locally in the village, but Brålanda is located about a 10-minute car ride from Sundals-Ryr, but there is no public transport in the area. The localizations that the informant mentioned can be seen in Figure 14.



Figure 14: Locations of social and welfare institutions for the informant living in Sundals-Ryr; Vänersborg municipality

For the informant living in Berghem, the closest health care center, kindergarten and bigger grocery store is located in Skene. Skene together with Kinna has the closest restaurant or pizzeria, and Skene, Kinna and Sätla has the closest dentist. The rescue services in the area are located in Horred, Sätla, Fritsla and Skene. These mentioned towns and villages are depicted in Figure 15. Interestingly Kinna is the central town of the municipality, but most services are located in Skene, that has according to the informant grown into something of a competing central town to Kinna (Informant from Berghem, 2025-03-27).

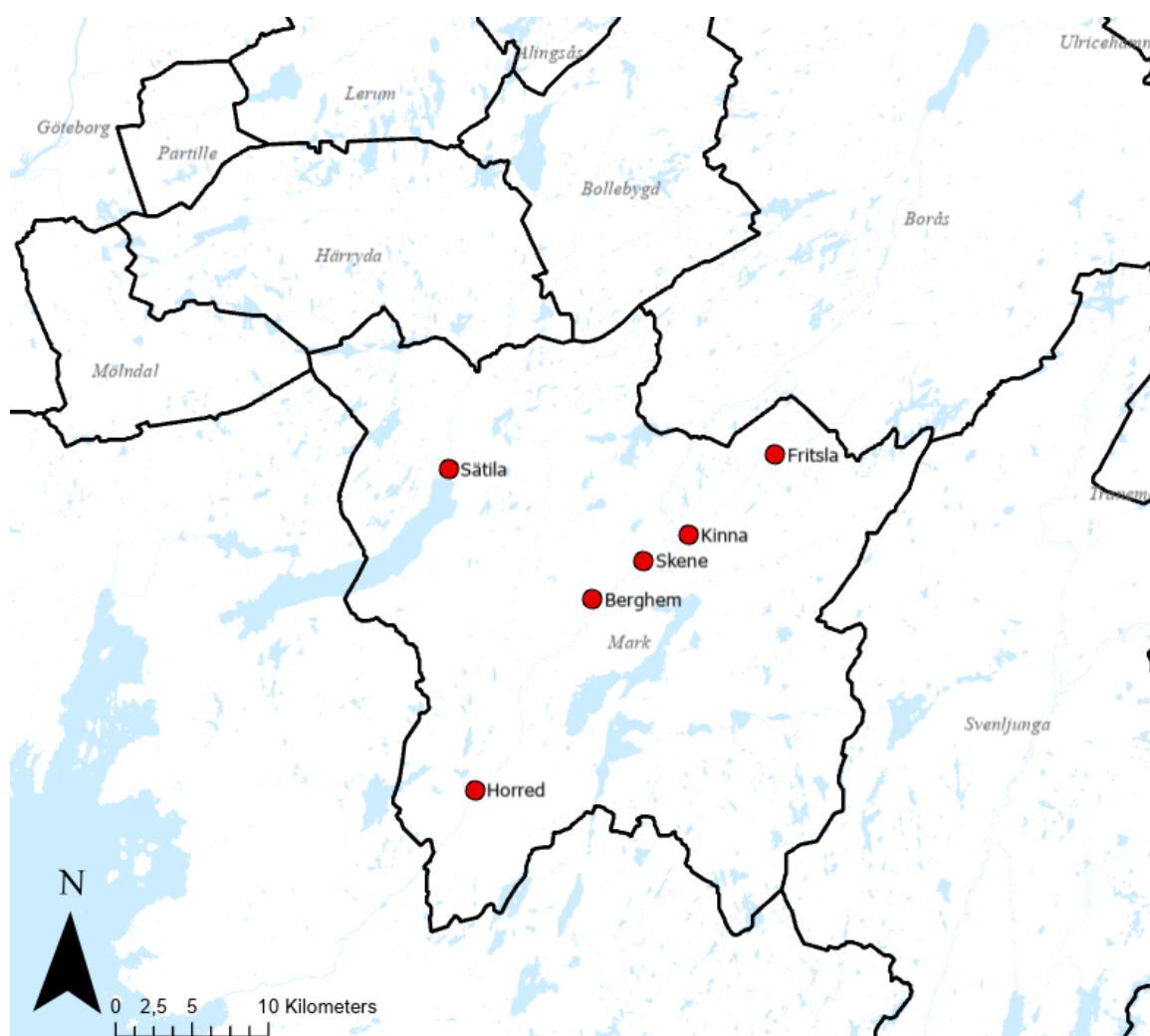


Figure 15: Locations of social and welfare institutions for the informant living in Berghem, Mark municipality

Lastly, for the informant living in the district of Nygård, but in the village of Nygård, the closest health care center is located in both Lilla Edet and Lödöse. In Lödöse there is also a smaller grocery store, gas station as well as restaurant or pizzeria (which also can be found in Lilla Edet or Älvängen). There is also a larger grocery store in Lödöse and Älvängen. In Lilla Edet there is also the closest dentist and rescue service, but the ambulance is located in Trollhättan. The village has a local kindergarten in Nygårdsskolan's old facilities. The localizations mentioned are depicted in Figure 16.

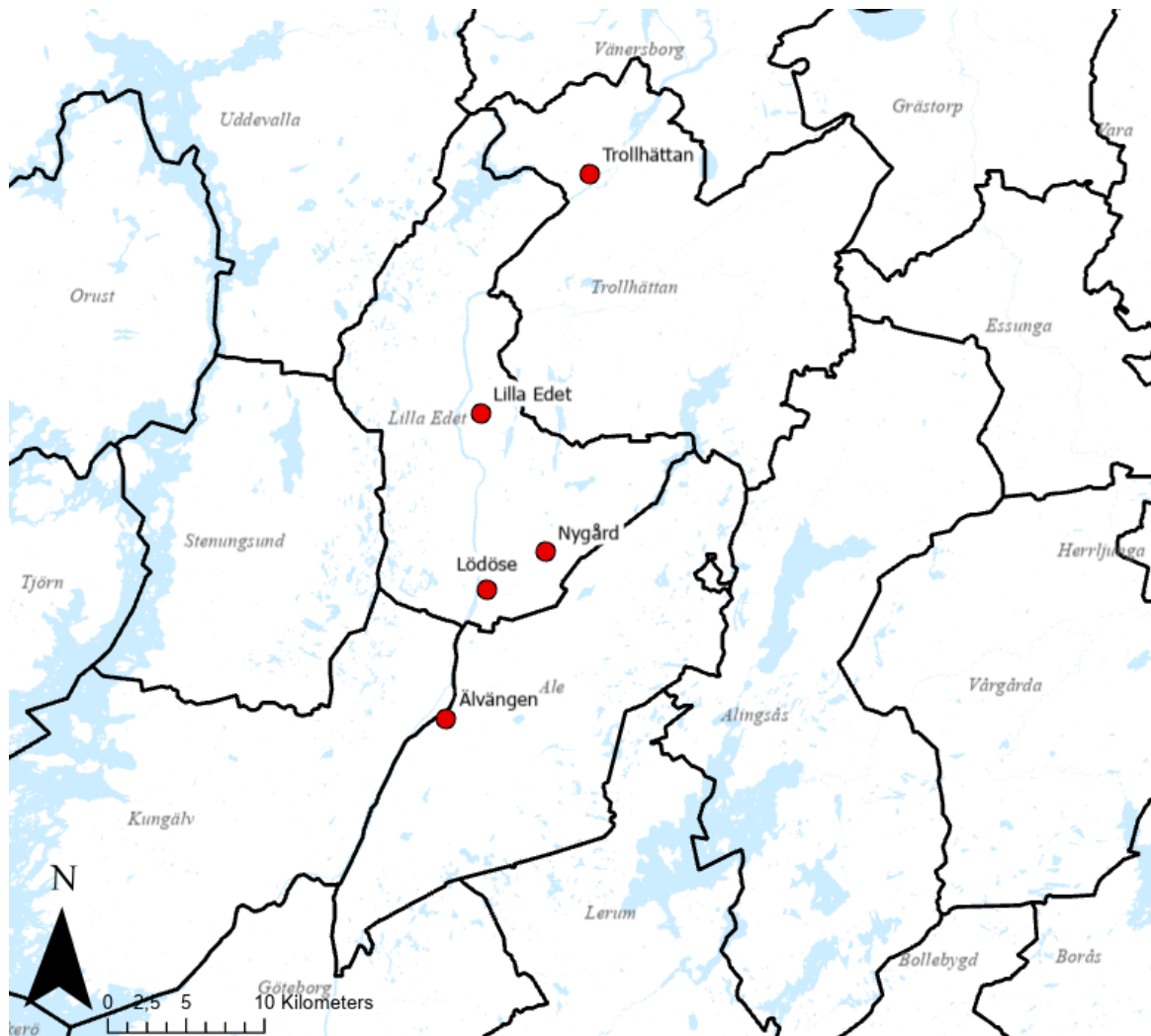


Figure 16: Locations of social and welfare institutions for the informant living in Nygård, Lilla Edet municipality

Some informants said that many of these services had previously existed in the local village, but that they had closed a long time ago. The longer travel distances in their everyday lives to get access to these important services is not something that they claim to be something bad, but they sometimes expressed annoyance with services being closed in the bigger villages that they travel to like for example the informant from Nygård who said that the health care center has closed and reopened in Lödöse. Or the informant from Sundals-Ryr who said that the health care center in Brålanda is unreliable since they have problems with getting enough doctors. The informants did not mention it, but school closures follow the same unreliability. What is not to say that the new school in another village will not close in the next restructuring? The school also seems to hold a special value in regard to welfare institutions, since it is often the last municipal institution left in the area. As the informant from Sundals-Ryr explained: "[...] But what suffers the most is the community and the cohesion in the village when there's nothing left. I mean, the shop and everything else had disappeared long before [the school closure]." (Informant from Sundals-Ryr, 2025-03-19)

Thus, the loss of institutions does not only impact travel patterns and these people's everyday lives, but also the community as a whole. The lack of investments in these rural areas therefore has widespread impacts: the economic activities become less stable, the welfare institutions are at risk of closing, and the community cohesion degrades. With these impacts it is not hard to imagine the life on the countryside of being unstable, which Västra Götalandsregionen (n.d.) points to in their regional service program. For example, if a health care center or a bank office close in an urban area, the nearest one is probably still in the same town not that far away, but for these villagers these new locations might be in a different municipality. These unreliable welfare systems, including schools, are more problematic to those who are most dependent on these institutions of course, for example elderly people in need of health care. Falch et al. (2013) also attributed the longer travel distances to schools in Norway as impacting the general education in rural areas, since the distance to higher education is too far.

Furthermore, the lack of public transport is also an issue for accessibility. In Hajom, the informant explains that the connections by public transport are good if you live by the bigger main road, otherwise it can be a struggle. It is impossible to only depend on public transport since the bus only stops a couple of times per day in the area. The informant from Nygård, experienced the same types of unavailability since the bus only stops there a couple of times per day as well, but the informant said that people still commute with the bus since it connects

to the train station in Lödese, where one can take the train to Gothenburg. There actually is a train station in Berghem, that connects to larger towns such as Varberg, Herrljunga and Borås. In Sundals-Ryr on the other hand, there is no public transport at all, but the informant claimed that there might be plans for a train station in Brålanda, which would make the area more attractive and available to travel to. Since public transport is lacking in these areas, children become dependent on their parents to get around to their schools and activities, directly impacting the families' everyday lives. The informant from Berghem highlighted this issue in relation to environmental unsustainability as well:

Yes, Marks municipality once called itself an environmental [friendly] municipality. Thirty years ago, we were far ahead in waste management and environmental thinking and all that, right? But now? All these miles driven with children, with a little one in the back seat, taking them to school, where they draw strict lines [for school transportation] saying you're 300 or 100 meters from a bus stop? They are outside the boundary then. So, they have to ride on a bike lane, and there aren't any good ones. There's a new bike lane from Berghem to Skene, it's quite newly built, yes. But when this decision was made [the school closure], it was really dangerous for children, maybe ten years old, to go out on the road. (Informant from Berghem, 2025-03-27)

The closure, and therefore relocation, of welfare institutions and schools in particular therefore inflicts a number of consequences on the local community and individuals: travel distances become longer impacting the whole family, the closures are demoralizing for the local communities, and the rural lives become unreliable as well as unstable when the permanency of these new relocations are not certain. Furthermore, these collected processes are pointing towards a marginalization of rural inhabitants, making them isolated and dependent on political decisions and investments, contributing to peripheralization (Kühn, 2015). These processes reduce the villages attractiveness, risking to not attract new residents, as people are less likely to want to live in these unstable conditions.

5.2.2. Political Consequences

Political decisions are intertwined with the development of social capital and prevalence of public investments. The previous results already point towards a dependency on political decision-making in rural areas, but with the two identified themes in these results, the precarious situation that rural areas are in becomes even more evident. The two themes are: A) perceived unfounded arguments for closures, and; B) a powerlessness in decision-making.

A. Perceived Unfounded Arguments for Closures

When deciding to close a rural school, the municipality often points to economic and quality reasons. Out of the informants from the four interviewed villages, three stated that they did not see why these reasons were used as main arguments for the closures. From a quality of education-perspective in Hajom, the informant stated that there were sufficient facilities in the old school that the new school lacked:

[...] Here in Hajom, we had a gymnasium, we had textile crafts, and we had several different craft rooms, like wood and metal. In Fotskäl, there was none of that when the students were moved there. So, they had to travel to Sättila for their craft classes, sports, music, and art. It was really tough for them; they had all the theory in Fotskäl and all the practical subjects in Sättila, so it took up whole days. Before, we tried to break up the theory with practical work. So, they had everything packed into two days a week: sports, crafts, and music. Plus, someone had to travel with them to make sure it wasn't chaotic on the buses. (Informant from Hajom, 2025-03-18)

The informant concludes that it was not really the lacking facilities that were the reason for closing, but financial factors that decided to keep the other school that were risking to be closed, Fotskälskolan. The informant thought that they kept that school partially to it being more centrally located as well. In Berghem, the informant did also not understand the rationale for closing when it comes to quality, and pointed to that their children and their classmates who had attended the school were highly educated which they thought was that the base of the education in this school was high quality. The informant from Nygård who had worked as a teacher at the school was surprised by the social development and self-esteem that the students held at the smaller school. Since the classes were mixed grades due to the low number of students, the children learned to read at a very young age:

[...] They started school at age six. And we were amazed when the preschoolers suddenly knew how to read, no one had taught them, but it was the older kids who read to the younger ones, and then they could read. If they'd started in the fall, by Christmas some of them could read. Fantastic! So yes, it worked really well. [...] (Informant from Nygård, 2025-04-07)

Furthermore, the informant expressed some helplessness when it came to the economic arguments from the municipality, instead of saving money the informants saw it as a more efficient use of taxpayer money to invest in the school instead. In Sundals-Ryr, the informant explained that there was talk of investing and renovating the school, but when closing the school came up on the agenda, this idea fizzled out. The informant said that the investments were focused on the nearby bigger village of Brålanda instead. The informant from Berghem also pointed out that the investments and expansions that had to be done in Fotskälskolan, which the children from both Hajom and Berghem were placed in must have cost more than what the municipality saved by closing Berghemskolan. The informant also said that it was on the agenda recently to close Björketorpskolan as well, which the municipality had invested a lot in. Further, he brings up the contradictoriness of closing schools and expanding them without a clear long-term plan, since there were 81 children in Berghemskolan at its peak, but only 13 or so when it closed. Now, the 81 of those at its peak are parents that have their own children that could have filled the school later on, but instead other more central schools are getting overcrowded. The informant from Sundals-Ryr also discussed the spatial unjustness in investments, both in relation to the central town of Vänersborg and the bigger village of Brålanda:

Just to give you an example: a politician or official came down here to describe the situation, and there was a big arrow from Brålanda showing how people could travel, but in the other direction, there was basically nothing. That arrow was so thin you couldn't even see it. I mean, it's further from Vänersborg to here than it is from here to Vänersborg. That equation has always been like that, and I don't know why. I don't know if they measure it differently or how it comes about. There was a time when [...] They used to bus students from Brålanda to Sundals-Ryr, just to balance things out and match the number of teachers and so on. This was years ago, before my time, but it wasn't even considered... [...] It has always been like this, where the number of students in schools goes up and down, and it can vary in different places. And then you could balance it out, instead of shutting it down and expanding in Brålanda so everyone could fit. They could have built a couple of schools in our direction for a few years until it evened out here. But no, that didn't happen. (Informant from Sundals-Ryr, 2025-03-19)

Finally, in Nygård, the informant also questioned the municipality's choices:

[...] They didn't see the possibilities in a newly built place like this, built in '92. And for the village, it was a really big deal to get a new school back then. So I feel like there was no pride in the school from the municipality. That's when you feel it's really sad to have politicians without visions for the future. (Informant from Nygård, 2025-04-07)

The idea that rural schools are worse in quality and something not worth investing in, is disputed by the informants living in the area. It is of course not surprising that if you could choose between getting investments in the area you live in or in a neighboring area, you would probably want investments to go to the places you yourself value. This could be a sign of the local patriotism that Cedering (2012) found among parents in Ydre municipality, Sweden, when a school closed. Interestingly, these concerns that the informants from Hajom, Nygård, and Sundals-Ryr bring up are often not considered by the municipal investigations done prior to the closures. For example, smaller and age-mixed groups are perceived in municipal documents as unsustainable, and that age homogenous groups are better since they provide more continuity for the students (e.g. Child- and Youth Board, 2009). But by the account of the informant who was a former teacher at Nygårdsskolan, the mixed groups probably did better since they got more attention and could socialize over age-boundaries. The same goes for the declining student enrollment numbers, a declining trend is not necessarily a proof of future development. As Isaksson (2023) and Mihály (2022) concludes, it is important to have a clear discussion and dialogue with those affected by the school closure to settle these disputes. The informants that have been interviewed all expressed in some way a hopelessness when it comes to changing the politicians minds.

B. A Powerlessness in Decision-making

Another struggle that the informant from Hajom, who is both a former teacher at the school and a part of the heritage association, raised was the loneliness in trying to fight the municipality's decision. When it became clear that Hajomskolan was supposed to close instead of Fotskälskolan, the parents protesting the closure in Fotskäl stopped attending protests and meetings since they were in the clear. The informant explained that they tried to influence the politicians as well as the teachers at the receiving school about it being worse for them having that many new students and that there was better to have two separate schools. But they had already made up their minds and the situation became hopeless for those at Hajomskolan. The informants from Berghem and Nygård also felt like it did not

matter which arguments were brought forward because the decision was already made to close the school. The informant from Berghem further expresses a powerlessness about not being able to influence the situation:

[...] But what's really sad is that it's all a political decision. Politicians are elected by us, the people, so we think they should represent our interests. But many times, politicians have their own agendas... You get this feeling in the community that they come up with ideas like 'This is how things should be!' but it costs us a lot of money. 'Yeah, but now we're going to do it this way!' and you're powerless against them. I feel like all the parents in Berghem who wanted to keep the school should have had the power to decide. But when a group up in Kinna, a mile away, decides for us, it feels like they're abusing [our] trust by closing something we wanted to keep. I think that's how many people feel about a lot of things that affect us. [...] (Informant from Berghem, 2025-03-27)

This is a clear example of Kühn's (2015) political power theories of dependency and exclusion in peripheralization, as the villagers no matter how they vote, do not feel like they have the power to change their situation. The political and municipal need to save money exceeds the need and value of the local school. The informant from Hajom expressed that other rural areas where local politicians were living, did not have their schools jeopardized by closure, and felt that it was important to have representation in the local government to actually keep the local public institutions. This further shows that the villagers in rural areas that are not represented politically have a dependency on the local government when it comes to decision-making. Additionally, this is an example of internal peripheries, as those areas who have elected officials are those who have the power to keep their public institutions, whether if it is the central town of Kinna or it is another rural area, the uneven political representation creates uneven power balance between rural areas. In the Swedish democratic system this is of course a big problem, since the whole point of democracy is to have elected officials representing the politics they advocate for, and the misuse of power of favoring their local areas is a threat toward the democratic system.

Interestingly, the earlier research on political consequences of rural school closures mainly focused on the election outcomes, where both Isaksson (2023) and Mihály (2022) found that left-wing parties often get less votes after a school closure, while radical right-wing parties gain votes. When asked about the party political impacts, the informants all said that the school closure was not enough to vote differently in the next election, indicating that they still felt like they had no power to change the situation in their area. This further points to how the

political system drives peripheralization and impacts the villagers' view on their own political agency, reducing it to a dependency and a marginalization.

5.2.3. Summary and Discussion of the Social and Political Consequences

The results from the qualitative part of this project can be divided into five sub-results and changes that the informants brought up. In the social consequences, the informants experienced: 1) the loss of meeting places; 2) issues with cooperation and cohesion; and 3) the impacts on travel patterns. The political consequences surrounded two themes: 1) perceived unfounded arguments for closures, and; 2) a powerlessness in decision-making.

All informants experienced a loss of meeting places, but if it was a physical or a social meeting place varied. The physical meeting place for children locally was the football field and club in Nygård, and when the school moved, the football club got merged with the receiving village which meant less activities locally. As for social meeting places, the informants from Sundals-Ryr and Berghem, who both had children at their respective schools, explained that the school was a natural meeting place for parents and that it now is harder to meet people their own age without this space. The school as a meeting place therefore reproduces social capital in two ways: directly and indirectly, deepening the understanding of social capital in relation to the school building. Further, evidence was found for that different groups are impacted differently depending on the upholding of activities. For example, children's activities are often moved to the new village, while the responsibility adult's activities fall on the local organizations. Failure to organize activities for all ages could negatively impact place attachment and increase out-migration in the long-run.

Social capital also played a central role with the issues of cooperation and cohesion for village organizations, including mobilizing against the closure. The informants from Hajom and Sundals-Ryr voiced concerns that it is hard to get people involved in the village associations these days. If this is a general trend within younger generations, or if it is a result of loss of meeting places, is impossible to say without further research. But, without these associations that organize events for the whole village, it is hard to maintain social capital. The connection between social capital and community resilience can be visualized by the struggle to organize mobilization against the closure in Hajom due to the lack of cooperation. This visualizes the political implications of low social capital, and therefore decreases community resilience.

The last social impact found was the changes in travel patterns, where the closures of vital welfare institutions and services causes the villagers to travel more outside the village. All services and institutions covered in this study, except for the smaller grocery store in Hajom, where located in other villages and towns. These distances have multiple impacts on the local communities such as degradation of community cohesion, less economic activities, and inaccessibility to welfare institutions. Furthermore, the longer distances to the receiving schools could impact the possibility for children attaining higher education (Falch et al, 2013; Echazarra and Radinger, 2019), as well as having straining consequences on families' everyday lives as the children often are dependent of parents driving them by car to activities due to the lack of public transport (Cedering, 2012). Since the local communities have low influence in whether a welfare institution closes or not, these processes point to a marginalization of rural inhabitants as well as peripheralization, that could have a long-term impact on depopulation.

The first negative political perception that the informants noticed was the problems with the arguments for the school closure presented by the municipality. The first main argument was low quality, which the informants perceived not to be true, except for in Sundals-Ryr. In Hajom the school had better access to adequate facilities than in the receiving school of Sättila, but it was closed anyhow. And in Nygård, the informant claimed that the children developed reading skills at a younger age, due to the age-mixed classes. Decreasing student enrollment is also an argument that is often used, but as the informant from Berghem explained, the decreasing numbers could be a temporary effect of a population cycle. The informant from Sundals-Ryr brings up the issue of closing schools instead of relocating students and dividing them between the existing schools while the student numbers are lower. In the municipal documents read for this project, for example by the Child- and Youth Board (2009), these counter-arguments are often not considered by the municipality. By having more constructive citizen dialogues, making the local community feel heard, the decisions by the municipality can be more anchored.

The last political consequence and process found in this project was the feeling of powerlessness in the decision-making process. All the informants in one way or another felt like their arguments were not heard by the municipality, and that the decision to close the school was taken before meeting the citizens. This generated a feeling of hopelessness in that no matter how one votes, the politicians will not represent the local interests in these cases. Therefore there was no evidence that the informants voted differently after the closure, but the

trust in the politicians was somewhat lower. This was a further example of dependency and exclusion from power that is a part of the peripheralization process.

When contemplating the results from both methods, it is clear that the processes are overlapping. Peripheralization that is furthered by political decisions, and amplified through social implications, illustrates a complex situation that causes long-term depopulation. Because, by making the rural context too inaccessible for new people to move into, or to move children's activities to a new bigger town or village, causing them to produce social capital in the new area instead; politicians are causing struggles with securing future rural inhabitants.

As social capital and community resilience can influence how severe the political and social consequences turn out, they are vital to maintain through activities and associations. This could also answer the issues of whether school closures directly cause depopulation, or if school closures are happening in already depopulated areas. Strong social capital can be degraded by a school closure, and weak social capital can be further damaged. This is similar to what Kłoczko-Gajewska (2020) found when researching the different outcomes after a school closure when whether the school building was kept or not. Social capital therefore seems to have a dampening effect on peripheralization.

5.3. Summary and Discussion of Results

This thesis set out to examine the consequences of rural school closures in Västra Götaland County through a mixed methods approach, exploring demographic trends, social impacts, and political perceptions. Using the concept of peripheralization as an analytical lens, the research contributed to the understanding of how these closures reflect and reinforce processes of marginalization of rural areas.

The results from the DiD-analysis showed different results over time for all four analyzed districts. Even though not all results were significant, they still pointed to differences between different rural areas. One district in the *Sparsely populated mixed municipality*-classification showed clear signs of depopulation in relation to the school closure. The three districts from the *Rural municipalities near urban areas*-class showed different results, one had an increase in population, one had constant population development, and the last had increased first and then decreased. These results are diverse, making it hard to claim unanimously what the verdict is, but this diversity is a result in itself as it points to rural areas not being homogeneous, but different. This diversification is laid out in basic by the Swedish Agency for Economic and Regional Growth (2021) and their classification of different municipalities. In this study, it has become clear that there are differences within these classifications as well.

Three experiences and issues emerged from the results of the social consequences. The first was the loss of meeting places, that entails both physical and social. The school building played a central role in reproducing social capital through events where the community came together. With the loss of the school, people did not meet as much, especially the children found other meeting places, which in turn could have a long-term effect of out-migration of the younger generations. The second issues with cooperation and cohesion, which also is tied to the reproduction of social capital in the school building. When social capital was not reproduced, the cohesion degraded which impacted the ability to cooperate. Lastly, closure of welfare and vital basic institutions impacts travel patterns, making the rural residents travel over great distances to access these institutions. This in the combination with a general lack of public transport makes the rural life precarious and the residents heavily depend on the municipality in keeping vital welfare institutions open. This also poses as an obstacle for new residents to move to the countryside. Thus, the inaccessibility can contribute to out-migration and inhibit in-migration.

Within the theme of political consequences, two main perceptions emerged. The first was the perceived unfounded arguments for closure, where the local informants did not agree with the arguments used by the municipalities to close the schools. One argument used is the lower quality of education, for example the ineffectiveness with mixed grades, which the informants argued were unfounded arguments for closure since the students often did better than their ‘urban’ peers. The second argument used by the municipality was economic, as they wanted to save money by closing schools with few students. The informants saw this as a form of betrayal, as investments in rural areas would be better than taking away an important part of the community. The issue with too few students was also something that the informant saw as a non-issue, since students could be redistributed among schools to fill them, and that the decreased student number could be temporary. The second theme was the powerlessness in decision-making, which ties together with the first experience. The informants explained that they felt like the decision to close the school was already made up before the process started. Information meetings and citizen dialogues felt like formalities, and that they had no power to impact the decision. This is a worrying issue in regard to Sweden’s representative democracy.

There are clear ties with the social and political outcomes of this study and Kühn’s (2015) definition of peripheralization. Marginalization and poverty, and the dependency on economic and political centers, together contribute to peripheralization of these rural areas and a long-term out-migration. This study underscores how school closures are contributing to this dynamic, as it accelerates the loss of social capital, for example. Thus, even though rural school closures themselves are not the cause of out-migration in most cases, they are a symptom of an overall and historical unhealthy relationship between urban and rural areas.

6. Conclusion

The aim for this project was to examine the population, social, and political consequences of rural school closures through the lens of peripheralization in Västra Götaland County, Sweden. The lack of comprehensive research on this subject in Sweden created an opportunity to gain a better and broader understanding of the processes involved.

This thesis has contributed with the approach of researching rural school closures locally by applying mixed methods. Through the historical understanding of the Swedish municipal structure and historical context of rural investments, as well as the school system, the choice to examine the local scale was natural. Rural school closures are a local occurrence and should therefore impact villages locally. Interviews with local residents are therefore vital to understand the processes and impacts on the community. While the DiD-analysis contributed to a quantitative understanding of population changes over time, the interviews contributed to a deeper understanding and contextualization of the results.

Further, another key contribution to the research on rural school closures are the nuancing of Amcoff's (2012) population development-results. As the author's findings were that there was no significant connection between depopulation and rural school closures, this project found that the effect is different in different types of rural areas, and is more complex than a simple 'there is' or 'there is not'. Depopulation as a result from a rural school closure was identified in one case, while the other either had stagnated population development or increased in the post-closure period. This pointed to that the local contexts and processes determine whether depopulation will occur, which relates to for example Slee and Miller's (2015) findings; that it is not the school closure itself that causes depopulation.

The last contribution that emerged from this project is the highlighting of the role of social capital in relation to the peripheralization process. When a community has a strong cohesion, they are able to organize themselves against closures, or organize villagers to maintain social gathering places. This has been shown in this project to be vital to the long-term social survival of rural villages, where the lack thereof creates an 'uninspiring' atmosphere, as one informant put it.

For future research, the municipal classifications is a helpful and important tool to establish national comparability and generalization of different types of rural areas. These classifications should be examined further, as this project found that there might be variations within them. Additionally, a more comprehensive DiD-analysis with districts as scale, should

be conducted to further examine depopulation over time. When it comes to the social consequences, the children who are placed in a new school after a closure, have their social activities move with them. Studies into long term depopulation of this group should be conducted to further understand how and where place attachment and production of social capital is impacted by a school closure.

Lastly, when examining the consequences of rural school closures through the lens of peripheralization it becomes clear that rural areas on the Swedish countryside are still in a precarious position. The closure of a welfare institution is only a symptom of an overall unhealthy relationship between urban and rural areas, where investments have historically been wrongfully directed, and policies not customized to the rural context. Demographic, social, and political impacts, are not being considered or mitigated from the rural dweller's perspective, which might be why rural areas are disproportionately impacted by multiple processes at once. Simultaneously, the shrinking rural municipalities where these problems are more prevalent also have budgetary problems where they struggle to keep the municipal economy afloat, while they are pressured by the state to ensure equal welfare provision for all citizens. This poses a catch-22 problem that only can be solved through national reforms aiming to better redistribute means among municipalities and incentivizing people to move to rural areas. To add to the problem there is also a time pressure to reverse this trend of dismantlement, as Västra Götalandsregionen (n.d.) put it in their regional service program for 2023 to 2030: it is hard to reopen already closed welfare institutions.

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Appendix

Appendix A

Script for The Group-Time Average Treatment Effects in R

The following script was used to conduct the DiD-analysis in R. The model starts with defining the data frame that is in this case an Excel-sheet with the column names ‘Year’ (for the year that the population is measured), ‘District’ (the number assigned to each district, e.g. Berghem = 5 to be able to differentiate between them), ‘Treat’ (dummy for if the district is a treatment group or not), ‘Bef/Aft’ (if it is the pre-treatment period or post), ‘Population’ (the exact population for that year), and lastly ‘TreatmentYear’ (the year the district was treated, NA was assigned to the control groups). In the `att_gt_obj <- att_gt()`-command not all categories were defined, and therefore used the default setting. For more information see Callaway (n.d.).

```
{
  library("did")
  library("readxl")
  library("writexl")
  library("tidyverse")
  library("fauxnaif")
}

DiD_data <- read_excel("/Users/P/Downloads/DiD_data.xlsx")

df<- DiD_data
head(df)

str(df)

table(df$District)

df_balanced <- df %>%
  group_by(District) %>%
  filter(n_distinct(Year) == length(unique(df$Year))) %>%
  ungroup()

df <- df %>%
  mutate(Treated = ifelse(is.na(TreatmentYear), 0, 1))
df$TreatmentYear[is.na(df$TreatmentYear)] <- 0

att_gt_obj <- att_gt(
  yname = "Population",
  tname = "Year",
  idname = "District",
```

```

gname = "TreatmentYear",
xformula = ~1,
data = df,
control_group = "notyettreated",
bstrap = TRUE,
est_method =          # use "ipw" or "dr" or "reg"

)

summary(att_gt_obj)

table(table(df$District))

ggdid(att_gt_obj)

res1<-data.frame(
  group = att_gt_obj$group,
  period = att_gt_obj$t,
  att = att_gt_obj$att,
  se = att_gt_obj$se,
  lower = att_gt_obj$att-(att_gt_obj$c[[1]][1]*att_gt_obj$se),
  upper = att_gt_obj$att+(att_gt_obj$c[[1]][1]*att_gt_obj$se)
)

write.csv(res1, file = "/Users/P/Downloads/did.csv", row.names = FALSE)

```

Appendix B

Interview guide

The following semi-structured interview guide was used to interview local informants in rural districts where a school closure occurred. The interviews were conducted via digital video meetings, through Teams and Zoom, and recorded. Each of the four interviews lasted from 45 minutes to 1.5 hours.

<i>Theme</i>	<i>Main question</i>	<i>Subtheme</i>
Social consequence	How was your experience of the closure?	Village cohesion before and after
		Activities in the village before and after
Depopulation	Have you noticed any change in the population since the closure?	Reasons to move away
		Who moves away?
		How attractive is the village?
		What could have made people stay?
Political consequences	How did you experience the closure process itself seen to the political side of it?	Have the closure process impacted your view of the political decision-making process?
		Trust in politicians and the process
		Your role in the process
		Future involvement in political processes
Economic development	Grade the economic development in the following areas from 1 to 5, where 1 is very negative economic development and 5 is very positive economic development, with the school closure as a middle point. Grade it from your experiences and feelings.	Housing prices
		Number of corporations
		Commute to work
		Number of associations
	To get a greater picture of how the village looks, tell me whether the following institutions exist. Please discuss if there have been one of these in your village and when it closed.	Health care center
		Rescue service (fire brigade/ambulance)
		Kindergarten
		Grocery store (bigger/smaller)
		Dentist
		Gas station
		Restaurant or pizzeria

Appendix C

Output from DiD-regression in R

The DiD-estimate, 95% simultaneous confidence bands and standard errors for all districts and OR, IPW, and DR-methods are presented below.

	Year	DiD-estimate							OR standard error	IPW standard error	DR standard error
District			OR down	OR up	IPW down	IPW up	DR down	DR up			
<i>Berghem</i>	2005	12.14	-2.29	26.58	-1.33	25.61	-8.31	32.59	6.51	6.35	7.32
<i>Berghem</i>	2006	-1.43	-15.26	12.40	-14.64	11.78	-16.39	13.53	6.23	6.23	5.36
<i>Berghem</i>	2007	2.57	-2.67	7.81	-2.69	7.83	-3.85	8.99	2.36	2.48	2.30
<i>Berghem</i>	2008	-2.43	-17.34	12.48	-18.14	13.29	-23.73	18.87	6.72	7.41	7.62
<i>Berghem</i>	2015	17.00	-22.48	56.48	-12.86	46.86	-43.04	77.04	17.79	14.08	21.50
<i>Berghem</i>	2016	3.25	-78.39	84.89	-74.73	81.23	-124.60	131.10	36.79	36.79	45.78
<i>Berghem</i>	2017	15.00	-96.05	126.05	-91.07	121.07	-154.78	184.78	50.04	50.04	60.79
<i>Berghem</i>	2018	7.75	-105.56	121.06	-100.48	115.98	-168.76	184.26	51.06	51.06	63.20
<i>Berghem</i>	2019	2.25	-76.10	80.60	-72.59	77.09	-154.07	158.57	35.30	35.30	55.97
<i>Berghem</i>	2020	-21.75	-102.98	59.48	-99.34	55.84	-161.51	118.01	36.60	36.60	50.04
<i>Berghem</i>	2021	-13.75	-80.17	52.67	-77.20	49.70	-54.13	26.63	29.93	29.93	14.46
<i>Berghem</i>	2022	-10.00	-75.81	55.81	-57.14	37.14	-113.53	93.53	29.65	22.24	37.07
<i>Berghem</i>	2023	-24.25	-77.92	29.42	-75.52	27.02	-98.27	49.77	24.18	24.18	26.50
<i>Hajom</i>	2005	19.00*	4.43*	33.57*	5.53*	32.47*	0.66*	37.34*	6.57	6.35	6.57
<i>Hajom</i>	2006	-12.86*	-25.35*	-0.37*	-24.59*	-1.12*	-28.07	2.35	5.63	5.54	5.45
<i>Hajom</i>	2007	2.57	-2.60	7.74	-2.37	7.51	-4.36	9.50	2.33	2.33	2.48
<i>Hajom</i>	2008	11.29	-4.49	27.07	-4.11	26.68	-8.24	30.81	7.11	7.26	6.99
<i>Hajom</i>	2015	21.00	-18.48	60.48	-8.86	50.86	-39.04	81.04	17.79	14.08	21.50
<i>Hajom</i>	2016	1.25	-80.39	82.89	-76.73	79.23	-126.60	129.10	36.79	36.79	45.78
<i>Hajom</i>	2017	6.00	-105.05	117.05	-100.07	112.07	-163.78	175.78	50.04	50.04	60.79
<i>Hajom</i>	2018	19.75	-93.56	133.06	-88.48	127.98	-156.76	196.26	51.06	51.06	63.20
<i>Hajom</i>	2019	15.25	-63.10	93.60	-59.59	90.09	-141.07	171.57	35.30	35.30	55.97
<i>Hajom</i>	2020	-9.75	-90.98	71.48	-87.34	67.84	-149.51	130.01	36.60	36.60	50.04
<i>Hajom</i>	2021	8.25	-58.17	74.67	-55.20	71.70	-32.13	48.63	29.93	29.93	14.46
<i>Hajom</i>	2022	18.00	-47.81	83.81	-29.14	65.14	-85.53	121.53	29.65	22.24	37.07
<i>Hajom</i>	2023	32.75	-20.92	86.42	-18.52	84.02	-41.27	106.77	24.18	24.18	26.50
<i>Klädesholmen</i>	2005	-26.71*	-40.82*	-12.61*	-39.86*	-13.57*	-44.80*	-8.63*	6.35	6.20	6.48
<i>Klädesholmen</i>	2006	3.14	-10.29	16.57	-9.36	15.65	-12.15	18.44	6.05	5.90	5.48

<i>Klädesholmen</i>	<i>2007</i>	<i>-11.14*</i>	<i>-15.17*</i>	<i>-7.11*</i>	<i>-14.80*</i>	<i>-7.49*</i>	<i>-15.96*</i>	<i>-6.33*</i>	<i>1.82</i>	<i>1.72</i>	<i>1.72</i>
<i>Klädesholmen</i>	<i>2008</i>	<i>3.29</i>	<i>-13.30</i>	<i>19.87</i>	<i>-13.26</i>	<i>19.83</i>	<i>-17.00</i>	<i>23.57</i>	<i>7.47</i>	<i>7.81</i>	<i>7.26</i>
<i>Klädesholmen</i>	<i>2015</i>	<i>6.00</i>	<i>-33.48</i>	<i>45.48</i>	<i>-23.86</i>	<i>35.86</i>	<i>-54.04</i>	<i>66.04</i>	<i>17.79</i>	<i>14.08</i>	<i>21.50</i>
<i>Klädesholmen</i>	<i>2016</i>	<i>-11.75</i>	<i>-93.39</i>	<i>69.89</i>	<i>-89.73</i>	<i>66.23</i>	<i>-139.60</i>	<i>116.10</i>	<i>36.79</i>	<i>36.79</i>	<i>45.78</i>
<i>Klädesholmen</i>	<i>2017</i>	<i>-25.00</i>	<i>-136.05</i>	<i>86.05</i>	<i>-131.07</i>	<i>81.07</i>	<i>-194.78</i>	<i>144.78</i>	<i>50.04</i>	<i>50.04</i>	<i>60.79</i>
<i>Klädesholmen</i>	<i>2018</i>	<i>-22.25</i>	<i>-135.56</i>	<i>91.06</i>	<i>-130.48</i>	<i>85.98</i>	<i>-198.76</i>	<i>154.26</i>	<i>51.06</i>	<i>51.06</i>	<i>63.20</i>
<i>Klädesholmen</i>	<i>2019</i>	<i>-62.75</i>	<i>-141.10</i>	<i>15.60</i>	<i>-137.59</i>	<i>12.09</i>	<i>-219.07</i>	<i>93.57</i>	<i>35.30</i>	<i>35.30</i>	<i>55.97</i>
<i>Klädesholmen</i>	<i>2020</i>	<i>-72.75</i>	<i>-153.98</i>	<i>8.48</i>	<i>-150.34</i>	<i>4.84</i>	<i>-212.51</i>	<i>67.01</i>	<i>36.60</i>	<i>36.60</i>	<i>50.04</i>
<i>Klädesholmen</i>	<i>2021</i>	<i>-63.75</i>	<i>-130.17</i>	<i>2.67</i>	<i>-127.20*</i>	<i>-0.30*</i>	<i>-104.13*</i>	<i>-23.38*</i>	<i>29.93</i>	<i>29.93</i>	<i>14.46</i>
<i>Klädesholmen</i>	<i>2022</i>	<i>-73.00*</i>	<i>-138.81*</i>	<i>-7.19*</i>	<i>-120.14*</i>	<i>-25.86*</i>	<i>-176.53</i>	<i>30.53</i>	<i>29.65</i>	<i>22.24</i>	<i>37.07</i>
<i>Klädesholmen</i>	<i>2023</i>	<i>-67.25*</i>	<i>-120.92*</i>	<i>-13.58*</i>	<i>-118.52*</i>	<i>-15.98*</i>	<i>-141.27</i>	<i>6.77</i>	<i>24.18</i>	<i>24.18</i>	<i>26.50</i>
<i>Ambjörnarp</i>	<i>2005</i>	<i>23.57*</i>	<i>9.67*</i>	<i>37.47*</i>	<i>10.29*</i>	<i>36.85*</i>	<i>4.98*</i>	<i>42.16*</i>	<i>6.26</i>	<i>6.26</i>	<i>6.66</i>
<i>Ambjörnarp</i>	<i>2006</i>	<i>13.43*</i>	<i>0.94*</i>	<i>25.92*</i>	<i>1.50*</i>	<i>25.36*</i>	<i>-0.85</i>	<i>27.71</i>	<i>5.63</i>	<i>5.63</i>	<i>5.11</i>
<i>Ambjörnarp</i>	<i>2007</i>	<i>-2.00</i>	<i>-7.64</i>	<i>3.64</i>	<i>-6.94</i>	<i>2.94</i>	<i>-8.51</i>	<i>4.51</i>	<i>2.54</i>	<i>2.33</i>	<i>2.33</i>
<i>Ambjörnarp</i>	<i>2008</i>	<i>21.57*</i>	<i>7.60*</i>	<i>35.54*</i>	<i>6.95*</i>	<i>36.20*</i>	<i>2.56*</i>	<i>40.59*</i>	<i>6.29</i>	<i>6.90</i>	<i>6.81</i>
<i>Ambjörnarp</i>	<i>2015</i>	<i>37.00</i>	<i>-2.48</i>	<i>76.48</i>	<i>7.14*</i>	<i>66.86*</i>	<i>-23.04</i>	<i>97.04</i>	<i>17.79</i>	<i>14.08</i>	<i>21.50</i>
<i>Ambjörnarp</i>	<i>2016</i>	<i>20.25</i>	<i>-61.39</i>	<i>101.89</i>	<i>-57.73</i>	<i>98.23</i>	<i>-107.60</i>	<i>148.10</i>	<i>36.79</i>	<i>36.79</i>	<i>45.78</i>
<i>Ambjörnarp</i>	<i>2017</i>	<i>21.00</i>	<i>-90.05</i>	<i>132.05</i>	<i>-85.07</i>	<i>127.07</i>	<i>-148.78</i>	<i>190.78</i>	<i>50.04</i>	<i>50.04</i>	<i>60.79</i>
<i>Ambjörnarp</i>	<i>2018</i>	<i>30.75</i>	<i>-82.56</i>	<i>144.06</i>	<i>-77.48</i>	<i>138.98</i>	<i>-145.76</i>	<i>207.26</i>	<i>51.06</i>	<i>51.06</i>	<i>63.20</i>
<i>Ambjörnarp</i>	<i>2019</i>	<i>7.25</i>	<i>-71.10</i>	<i>85.60</i>	<i>-67.59</i>	<i>82.09</i>	<i>-149.07</i>	<i>163.57</i>	<i>35.30</i>	<i>35.30</i>	<i>55.97</i>
<i>Ambjörnarp</i>	<i>2020</i>	<i>23.25</i>	<i>-57.98</i>	<i>104.48</i>	<i>-54.34</i>	<i>100.84</i>	<i>-116.51</i>	<i>163.01</i>	<i>36.60</i>	<i>36.60</i>	<i>50.04</i>
<i>Ambjörnarp</i>	<i>2021</i>	<i>51.25</i>	<i>-15.17</i>	<i>117.67</i>	<i>-12.20</i>	<i>114.70</i>	<i>10.88*</i>	<i>91.63*</i>	<i>29.93</i>	<i>29.93</i>	<i>14.46</i>
<i>Ambjörnarp</i>	<i>2022</i>	<i>60.00</i>	<i>-5.81</i>	<i>125.81</i>	<i>12.86*</i>	<i>107.14*</i>	<i>-43.53</i>	<i>163.53</i>	<i>29.65</i>	<i>22.24</i>	<i>37.07</i>
<i>Ambjörnarp</i>	<i>2023</i>	<i>57.75*</i>	<i>4.08*</i>	<i>111.42*</i>	<i>6.48*</i>	<i>109.02*</i>	<i>-16.27</i>	<i>131.77</i>	<i>24.18</i>	<i>24.18</i>	<i>26.50</i>

**Values outside the confidence band and therefore significant*