

Driving Forces for Changing Attitudes to Immigration in Sweden

– A study of the evolution of attitudes towards immigration: A correlational analysis of driving forces from 2002-2018 with a focus on political trust

Abdulrahman Alnassan

Supervisors: Maria Brandén & Selcan Mutgan
Examiner: Carl Nordlund

Table of Contents

| | |
|--|-----------|
| List of Tables and Figures | 3 |
| Abstract | 4 |
| 1. Introduction | 5 |
| 1.1 Political Polarization and Changing Attitudes Towards Immigration in Europe..... | 6 |
| 1.2 Attitudes Towards Immigration in Sweden: Evolution and Polarization | 7 |
| 1.3 Factors Influencing Attitudes Towards Immigration | 8 |
| 1.4 Aim and Research Question | 9 |
| 2. Literature Review | 10 |
| 2.1 Economic Perception | 12 |
| 2.2 Safety Perception..... | 12 |
| 2.3 Culture Perception | 13 |
| 2.4 Societal Cohesion Perception..... | 13 |
| 2.5 Political Trust Perception | 14 |
| 2.6 Demographic Factors | 14 |
| 3. Data & Methods | 15 |
| 3.1 Variable Construction | 18 |
| 3.1.1 Dependent Variable | 18 |
| 3.1.2 Independent Variables | 18 |
| 3.1.3 Control Variables | 18 |
| 3.2 Descriptive Statistics | 18 |
| 3.3 Analytical Strategy | 19 |
| 3.3.1 Stage 1..... | 19 |
| 3.3.2 Stage 2..... | 19 |
| 3.3.3 Stage 3..... | 20 |
| 3.3.4 Stage 4..... | 21 |
| 3.3.5 Stage 5..... | 21 |
| 4. Results | 21 |
| 4.1 Data Preparation and Variable Checking in R..... | 21 |
| 4.2 Principal Component Analysis and Factor Analysis | 22 |
| 4.3 Pooled Linear Regression Models..... | 25 |
| 4.4 Year-Specific Linear Regression Models..... | 28 |
| 4.5 Trend Analysis..... | 32 |
| 5. Discussion | 36 |

| | |
|--|-----------|
| 5.1 Findings | 36 |
| 5.2 Discussing Changing Trends: The Impact of Political Trust and Societal Cohesion as Influential Factors | 38 |
| 6. Conclusion | 40 |
| Appendix | 42 |
| Appendix 1 | 42 |
| Appendix 2 | 43 |
| References | 44 |

List of Tables and Figures

List of tables

| | |
|--|----|
| Table 1. Summary of European Social Survey Participation and Response Rates | 16 |
| Table 2. List of Variables Utilized & Tested from European Social Survey for the Study | 17 |
| Table 3. Descriptive Statistics for Nine Rounds of European Social Survey..... | 19 |
| Table 4. Survey Items Included in the Study: Principal Component Analysis and Factor Analysis .. | 22 |
| Table 5. Results of the Factor Analysis for the Aggregated Indicators | 24 |
| Table 6. Estimate Coefficients from Linear Regression of Different Models | 26 |
| Table 7. Estimate Coefficients from Linear Regression, Entire dataset (2002-2018) | 27 |
| Table 8. Estimate Coefficients from Linear Regression, 2002, 2004 and 2006 | 29 |
| Table 9. Estimate Coefficients from Linear Regression, 2008, 2010 and 2012 | 30 |
| Table 10. Estimate Coefficients from Linear Regression, 2014, 2016 and 2018 | 31 |

List of figures

| | |
|--|----|
| Figure 1. Migration Policy Preferences Regarding Migrants from Poor Countries outside Europe – Scandinavian Countries. Adapted from Goubin et al. (2022) | 11 |
| Figure 2. Parallel Analysis of Immigration, Political Trust, and Societal Cohesion Items | 23 |
| Figure 3. Trends in Coefficients of Linear Regression Models for Attitudes Towards Immigration. 28 | |
| Figure 4. Trend Direction of Variables in the Attitudes Towards Immigration Data | 33 |
| Figure 5. Variability of Variables in the Attitudes Towards Immigration Data | 34 |
| Figure 6. Trends in Coefficients of Perception on Attitudes Towards Immigration | 35 |

Abstract

Research has shown that attitudes to immigration can change due to various factors. In recent years, immigration has become an increasingly polarizing issue in Sweden, with many politicians and parties framing it as intertwined with other issues. Negative framing of immigrants has contributed to more negative attitudes towards immigration among the public. As a result, political trust has emerged as a new and important topic that had not previously been mainly considered in studies of attitudes towards immigration in Sweden. This thesis examines the driving forces behind changing attitudes to immigration in Sweden between 2002-2018. During this period, we witnessed significant events such as 2008 global financial and 2015 refugee crises. The study used data from the European Social Survey (2002-2018) to analyze the correlation between demographic, economy, safety, culture, societal cohesion, political trust, and changes in attitudes towards immigration to answer the research question: What are the driving forces for changing attitudes to immigration in Sweden? The findings suggested that political trust had the most significant effect. Additionally, societal cohesion and political trust were the most changing trends among all the perceptions explored in this research. The study contributes to understanding changing attitudes towards immigration in Sweden and the driving forces behind them to provide valuable insights to address the challenges of immigration. This research deepens our understanding of the multidimensional nature of immigration and provides another explanation to help tackle the challenges of immigration and integration policies.

Keywords: Attitudes towards immigration, political trust, societal cohesion, polarization, Sweden

1. Introduction

Migration and movement have always been part of human history and have depended on push and pull factors. The push factors are related to the adverse political, economic and social conditions associated with the country they migrate from, such as war, colonization, political and religious turmoil and poverty. People usually try to migrate to countries with better political freedom, work opportunities, and living standards, even because of environmental disasters (Eriksson, Aradhya & Hedefalk, 2016; Urbański, 2022). The receiving country's citizens' behavior regarding the immigration policy may change, as their perception may vary due to economic, security and cultural concerns. This study investigates the driving forces of change in attitudes towards immigration in Sweden. Previous studies have primarily focused on one-dimensional constructs. This research is the first to examine the reasons for the evolution in attitudes to immigration in Sweden over the past two decades and how various factors such as economic, security, cultural, social cohesion, and political trust affect the changing attitude. The study aims to address the gap in the literature by examining the impact of various factors on the evolution of attitudes towards immigration and exploring it based on changing individuals' perceptions, with a specific focus on political trust, which has not been investigated in Sweden before.

Attitudes towards immigration affect many societies and policies today, given the increase in global mobility and conflicts leading to significant streams of refugees. These attitudes have far-reaching implications in various areas, such as labor markets, economic growth, social welfare, cultural diversity, and integration policies. It is a complex topic as individual-level economic status, political trust, life experiences, and political polarization affect attitudes. In the wake of the global financial crisis, despite the challenging socio-economic situation, Sweden was still considered to have a relatively positive public attitude towards immigration (Halapuu, Paas & Tammaru, 2014; Goubin, Ruelens & Nicaise, 2022). However, this perception changed following the 2015 refugee crisis, which brought the issue of immigration to the forefront and became salient (Goubin, Ruelens & Nicaise, 2022).

Research has shown that attitudes to immigration can change over time due to various factors, such as contact with immigrants, political discourse around immigration policy, economic and cultural dimensions, and personal experiences (Citrin, Green, Muste & Wong, 1997; Schneider, 2008; van der Meer & Tolsma, 2014; Halapuu, Paas & Tammaru, 2014; Hainmueller & Hopkins, 2014; Valdez, 2014). Furthermore, political polarization can affect attitudes towards immigration, with negative framing leading to more negative attitudes towards immigrants (Iyengar & Simon, 2000). Many studies linked changes in public attitudes towards immigration to the rise of right-wing populist parties and anti-immigrant rhetoric (Norris, 2019; Goubin, Ruelens & Nicaise, 2022). The far-right parties criticized immigrants for causing high crime levels and undermining national tradition and culture (Mudde, 2013; Goubin, Ruelens & Nicaise, 2022).

Changes in attitudes towards immigration are not always linear or one-dimensional but can be influenced by multiple and sometimes contradictory factors (Minkov & Hofstede, 2011). Economic concerns, cultural values, political and safety concerns, and social norms can influence attitudes towards immigration. Therefore, this study examines the driving forces behind changed attitudes to immigration in Sweden between 2002-2018, which witnessed significant events such as 2008 global financial and 2015 refugee crises. The study uses data from the European Social Survey (2002-2018) to focus on the correlation between demographic, economic, safety, cultural, political trust, societal cohesion, and changes in

attitudes towards immigration. Investigating the evolution of attitudes towards immigration over time can help answer the research question: What are the driving forces for changing attitudes to immigration in Sweden?

A literature search revealed a lack of studies examining the intersection between political trust and attitudes towards immigration in Sweden. Although, it is an essential perception to be investigated as the immigration policy issued by the country's parliament and political parties. The study attempts to elaborate on new insights into the changing attitudes towards immigration by examining the effects of political trust perception. The research highlights the crucial role of political trust in shaping public opinion towards immigration, especially considering the increasing political polarization on this issue. This study investigates the factors driving the changing attitudes towards immigration in Sweden and, specifically, examines the multidimensional aspects of this issue with the assumption that all the factors in the study have a significant effect, including the perception of political trust among individuals, which is expected to have the strongest correlation with attitudes towards immigration and be the most influential factor in shaping them. Supporting the multidimensional aspects, Zubashvili (2020) asserted during a study titled "Deconstructing and reconstructing attitudes towards Immigrants: The case of Sweden" that there is a change in the attitude towards immigration in Sweden, arguing for deconstructing attitudes towards immigrants into different dimensions and reconstructing these dimensions to provide a more nuanced understanding of attitudes towards immigration in Sweden. Moreover, she suggests examining the issue through a multidimensional approach.

It is possible that the inadequate handling of the immigration profile and various other issues in the country by the politicians made it easier to blame immigrants for all the country's problems, which may contribute to an adverse change in the attitude towards immigration in Sweden. Consequently, political trust, an overlooked aspect, now becomes a new and rarely explored topic in understanding migration attitudes, especially as we witness a process of political polarization as a local and global phenomenon, with the issue of immigration turning into a significant political polarization case that can be exploited as hatred speech increases. Furthermore, the study anticipates that political trust and societal cohesion will have experienced the most significant shifts in trends over time, given their interrelated nature and influence on each other, particularly in a political polarization context. By exploring these dimensions in-depth, a more comprehensive understanding can be gained regarding the complex factors driving the evolution of attitudes towards immigration in Sweden.

1.1 Political Polarization and Changing Attitudes Towards Immigration in Europe:

Europe has been known for decades after World War II for its pro-immigrant policies, particularly in Western Europe countries, towards refugees from various parts of the world (Goubin, Ruelens & Nicaise, 2022). This stance changed after the refugee crisis caused by the influx of refugees from Syria, the Middle Eastern, Afghanistan, and African countries (De Coninck, Ogan & d'Haenens, 2021; Goubin, Ruelens & Nicaise, 2022). In recent years, there has been a significant increase in immigration across Europe, resulting in changes in attitudes towards immigration among the European population (Wildros, 2017; Goubin, Ruelens & Nicaise, 2022).

Political polarization has increased in recent decades, with individuals and parties grouping around specific ideologies and criticizing each other in attempts to mobilize the public, which increased extremism between right-wing and left-wing groups (Macy, Deri, Ruch & Tong, 2019). Since the beginning of the new millennium, far-right parties across Europe have seen

an evidenced rise. According to a 2011 report by the European Commission against Racism and Intolerance (ECRI), racism and intolerance are rising because of the global economic crisis. This escalation continued after the refugee crisis, negatively affecting society and leading to a decline in trust and desire to help (ECRI, 2022). Immigration issue following the refugee crisis became more salient and polarized in Europe (Goubin, Ruelens & Nicaise, 2022).

Since the start of the millennium, Europe has faced political and economic instability, coinciding with the rise of far-right parties with an anti-immigration agenda (Wildros, 2017). The emergence of issues such as unemployment and social benefits for immigrants, which have become increasingly politically debated, has polarized public opinion and linked immigration negatively to matters of economy and crime. The far-right parties tend to exhibit a more rigid national and European identity ideology. They have moved away from fascist regimes since the end of World War II, but they may still hold extremist views and seek to promote a nationalist and authoritarian agenda (Prowe, 1994). With public dissatisfaction with the politics of the left and right blocs, the Austrian Freedom Party was able to form a government in 2000 after gaining 27% of the vote (Silberman, 2002), followed by a breakthrough in France with Jean-Marie Le Pen reaching the final round of presidential elections in 2002. Twenty years later, his daughter Marine Le Pen won 42% of the French vote (Mazoue, 2022). Far-right parties have also entered the governments of Denmark, Finland, and Norway in Northern Europe (Orange, 2022). Europe has witnessed a significant shift in attitudes towards immigration, with rising nationalism and political polarization leading to the emergence of far-right parties with anti-immigration agendas. The issue has become a central factor in several European elections, including Sweden. The immigration issue has become a significant factor in the 2018 and 2022 Swedish elections (Pazzanese, 2017; Korewa & Adamson, 2022).

1.2 Attitudes Towards Immigration in Sweden: Evolution and Polarization:

Sweden is known for its tolerance and pluralism, 20% of the total population in the country is foreign-born, and an additional 28% have a foreign background (SCB, 2023). Following the refugee crisis, the integration policy became highly debated and polarized. Hammar's (2021) study argued that immigrants are more likely to assimilate into their new society over time. According to him, Swedes do not need to fear new arrivals. After ten years of living in Sweden, immigrants show similar attitudes and values to the native population, regardless of ethnicity and past customs and traditions. Hammar suggests that over time, cultural differences diminish, and priorities align, leading to a convergence in behavior, including attitudes towards political interests and causes. However, the integration process of immigrants into their host society may not be immediately apparent, particularly in the wake of the refugee crisis, which saw a shift in attitudes towards immigration (Zubashvili, 2020). Swedes' confidence in the success of their country's integration policy appears to be at its lowest level, 14% (Fortroendebarmetern, 2023).

In Sweden, prominent issues such as the economy, healthcare, and security were important in the last election cycle. Still, immigration became a particularly polarizing issue linked and intertwined with all previous issues by several Swedish politicians and parties as they tried to blame immigrants for the country's problems (Korewa & Adamson, 2022). Changes in salience can affect voting behavior and society (Valdez, 2014). With immigration becoming a more salient issue, pro-immigration parties adopted stricter migration laws in Sweden (Euronews, 2021). Changing attitudes is not restricted to immigration only, as individuals change their lifestyles and attitudes in any aspect based on current situations. For example, Sweden changed its position on joining NATO. Only a few political parties supported it for a long time, and most of the public opposed it. When war broke out in Ukraine, there was a change in the

atmosphere as the issue received much attention and became prominent. Parties came together on the issue, and within a few months, Sweden applied to join NATO (Gotkowska, 2022).

In the same way, changing immigration-related conditions and political discourse can influence public attitudes towards immigration. Additionally, the psychosocial dimension plays a vital role in shaping individual decision-making, as people strive to choose the appropriate social identity that provides them with a sense of belonging and safety. Nevertheless, social identity can also lead to the formation of "in-group" and "out-group" divisions, which can fuel political polarization and affect voting behavior (Brewer, 1979).

Sweden is no exception to the rise of nationalism in Europe, which changed the political climate in various ways (Pazzanese, 2017; Euronews, 2021). Sweden has been affected by this trend, with changes in attitudes towards immigration observed within the country (Wildros, 2017), despite the country has a long-standing reputation for its open-door policy towards refugees and has seen a shift in public opinion towards a more restrictive immigration policy (Zubashvili, 2020). The Sweden Democrats, far-right party, entered parliament for the first time in 2010, and since then, the party's support has grown steadily to 20.5% of the vote (Valmyndigheten, 2022). This change in public opinion has forced other parties that had long refused the Sweden Democrats' participation in government formation to publicly announce their readiness to negotiate and form an alliance with the party (Duxbury, 2021). The willingness of several right-wing parties in Sweden to ally with the Sweden Democrats has led to the disintegration of long-standing coalitions, resulting in the formation of new coalitions (Korewa & Adamson, 2022). In the September 2022 elections, the Sweden Democrats became the country's second-largest party, changing the Swedish political map and smashing existing blocs since the 1990s (Valmyndigheten, 2022). Such changes led to the evolution of the attitudes towards immigration in Sweden.

1.3 Factors Influencing Attitudes Towards Immigration:

Cognitive, psychological, and behavioral factors shape attitudes, which can change due to evolving knowledge, experiences, and social norms. These changes can also affect social identity and group dynamics (McGuire, Lindzey & Aronson, 1985). Individual attitude changes lead to large-scale attitude shifts (Ryder, 1965). Individuals may change their beliefs and adopt new attitudes in response to new experiences, statuses, perceptions, or desired group affiliations (Kelman, 1958). Identity plays a significant role in shaping attitudes and influencing individuals to take on new positions. Understanding how these factors interact and shape attitudes is critical to developing and implementing effective policies that address the complexity of immigration issues, which requires a comprehensive and multidimensional approach that considers different dimensions of attitudes to immigration.

Several complex factors, such as economic, security, cultural, political trust, and social cohesion, influence attitudes towards immigration. Many theories have been proposed to explain the changes in attitudes towards immigration, including economic, safety, cultural and social identity theories. The economic factor can play a role in influencing the change in attitude towards immigration when there is a change in the perception that immigrants influence, whether it concerns the employment situation in the country or the utilization of social services and the tax system. Perceiving immigrants as a driving force or an obstacle to the economy is crucial in shaping how they behave towards the immigration issue (Sides & Citrin, 2007; Hainmueller & Hopkins, 2014). Similarly, perceptions of national security and safety influence individuals' attitudes towards immigration, and changes in their safety situation can also impact and evolve the attitudes (Chander & Tsai, 2001). Some individuals

see migration as associated with increased crime and unstable safety (Halapuu, Paas & Tammaru, 2014). In the same context, individuals' perceptions of pluralism, fear of weakening cultural identity, and the erosion of native cultural values over time can also influence attitudes towards immigration (Sides & Citrin, 2007; Hainmueller & Hopkins, 2014). Some believe that new cultures, traditions, values, or religions conflict with their beliefs, which may lead to concerns about cultural identity, nationality, language, or religion (Goubin, Ruelens & Nicaise, 2022). Also, negative attitudes towards immigrants reduce social trust (Goldschmidt, 2017). Community trust and cohesion are among society's most important structural forces that bind people together, stimulate solidarity among its members, and encourage helping different people (Simmel, 1950). The evolution of societal cohesion may change attitudes towards immigration, as those who tend to be more socially connected are more likely to take a pro-immigration stance. Additionally, trust in a country's politics and democracy affects the attitude to immigration (Halapuu, Paas & Tammaru, 2014). Attitudes towards immigration can alter with changes in trust towards government policies and political parties. Trust in politicians is unstable, as it is subject to change, which is a natural thing that explains the change of governments and the parties that form them. This is usually related to the crises countries are going through, citizens' trust in politics, and the transparency of how these policies develop and affect their lives (Halapuu, Paas & Tammaru, 2014). Moreover, several demographics are expected to influence attitudes towards immigration directly. Research suggests that younger individuals and females are likelier to hold left-wing political views and have positive attitudes towards immigration (Edlund & Pande, 2002; Ceobanu & Escandell, 2010). Additionally, individuals with higher levels of education are more likely to support immigration (Hainmueller & Hiscox, 2007; Ceobanu & Escandell, 2010; Wildros, 2017).

1.4 Aim and Research Question:

While previous research has focused on mainly comparing attitudes between European countries or examining attitudes without addressing their temporal development, this study further explores the intersection of attitudes with various dimensions over time. With more focus on political trust as a new contextual dimension that has not been extensively studied concerning attitudes towards immigration in Sweden. Sweden is an interesting case to study because it has undergone a significant shift in attitudes towards immigration in recent years (Zubashvili, 2020). There is an apparent lack of trust among Swedes in the immigration policy pursued in the country (Fortroendebarmetern, 2023). Although Sweden still records support for immigration among the highest in Europe (Goubin, Ruelens & Nicaise, 2022), there is a clear shift towards more negative attitudes to immigration, in line with a continuous tightening of immigration laws. The new attitude marks a departure from Sweden's historical image as a country that values diversity, welcomes immigrants, and upholds human rights (Hellström, Nilsson & Stoltz, 2012), which calls for a deeper investigation into the driving forces behind this shift. Furthermore, the context of political trust, which has not yet been explored in attitudes towards immigration in Sweden, is expected to have a crucial role in shaping these attitudes.

An essential advantage of studying a single country rather than making cross-country comparisons is that countries have distinct histories and courses of immigration and policies, making it inappropriate to assume that different countries share the same perception and follow the same course of time regarding attitudes towards migration (Ceobanu & Escandell, 2010; Wildros, 2017). For example, during the refugee crisis that occurred throughout Europe, many governments and political parties tightened their immigration rules. As a result, anti-immigration parties and movements based on populism and nationalism rose across the EU,

heightening ethnic and religious fears and posing a threat to the "in-group" identity of Europeans for many citizens (Pazzanese, 2017). Meanwhile, in Britain, voting behavior was influenced by fears of internal migration from EU countries, leading to a narrower social identity. We can understand that multiple levels of social identity can change attitudes and behavior over time (Stryker & Burke, 2000). The radical evolution of negative attitudes towards immigration opened a wide door for extensive studies, but little research has focused on their evolution over time (Meuleman, Davidov & Billiet, 2009). Although some studies have explored specific aspects of this evolution, such as theories of contact and social identity, socio-economic conditions or demographics (Semyonov, Raijman & Gorodzeisky, 2006; Hopkins, 2010; Wildros, 2017), few have examined the multidimensional context of changing attitudes towards immigration in an integrated manner. They looked at a few dimensions simultaneously, mainly the economic and cultural aspects, while the political trust was overlooked. This study aims to investigate the interplay between attitudes towards immigration and multidimensional perceptions by achieving the following objectives:

- Understand the course of evolution of changing attitudes to immigration in Sweden.
- Identify the underlying factors that shape Swedes' attitudes towards immigration and explore their relationship with the changes in these attitudes over time.
- Examine the impact of external shocks, such as the global financial and refugee crises and political polarization, on the evolution of attitudes towards immigration.

In order to effectively address the complexity of immigration issues, it is necessary to develop a comprehensive and multidimensional approach that considers various factors affecting attitudes towards immigration. Which requires a better understanding of how different factors influence attitudes towards immigration. Thus, this study aims to identify and examine the underlying factors that drive the evolution of attitudes towards immigration in Sweden. Achieving the goals of the study will help answer the research question:

- What are the driving forces for changing attitudes to immigration in Sweden?

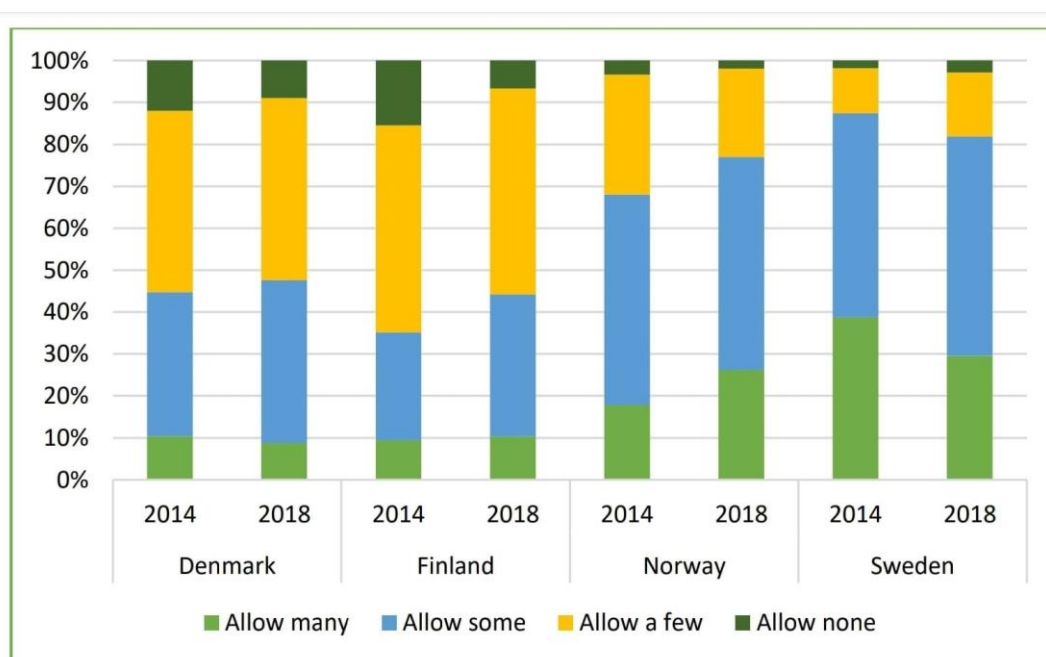
The study expects that attitudes towards immigration will be influenced by individuals' perceptions of the economy, safety, culture, societal cohesion, political trust, and demographic factors. The analysis anticipates that political trust is the most strongly correlated perception with attitudes towards immigration. The study also predicts that perceptions of political trust and societal cohesion will present the most significant changes in trends over time.

2. Literature Review

Migration has become a topic of great discussion and controversy on a global level, and Sweden is no exception. Sweden has seen a large influx of immigrants in recent decades, which has caused many Swedes to change their attitudes, as the country has long been known to be open and welcoming to immigrants from different cultures (Zubashvili, 2020). This literature review examines the driving forces for changing attitudes to immigration in Sweden. Sweden has a long history of immigration, with the first wave of immigrants arriving from neighboring Nordic countries in the late 19th century. The second wave of immigration occurred in the mid-20th century, with the arrival of labor immigrants from southern Europe. The third wave of migration began in the 1990s, with the influx of refugees and asylum seekers from countries experiencing war and conflict, such as the Balkans, Iraq, Syria, Somalia, and Afghanistan

(OECD, 2017). Historically, no research has been found studying the evolution of attitudes to immigration over time in Sweden. The only exception was Wildros's 2017 study which investigated the development of attitudes towards immigration in Sweden based on European Social Survey rounds from 2002 to 2016. The study aimed to understand the changing attitudes of intolerance towards different immigrant ethnicities and to identify potential differences in attitudes between generations. The author found a decline since 2002 in Swedes' tolerance of immigration, with an improvement after the outbreak of the refugee crisis in 2015. However, the study indicated a significant variation in attitudes towards immigrants from different ethnical backgrounds. Specifically, attitudes towards immigrants from outside Europe remained more negative than those from within Europe. This claim is supported by a recent study by Goubin, Ruelens, and Nicaise (2022), which compared the evolution of attitudes towards immigration between European countries. **Figure 1** depicts the attitudes towards immigration policy, "preferences regarding migration from poorer countries outside Europe" before and after the refugee crisis (2014 & 2018), "adapted from Goubin et al. (2022)". The figure reveals that all Scandinavian countries, except for Sweden, demonstrated a positive shift towards open migration policies, regardless of the origin group.

Figure 1. Migration Policy Preferences Regarding Migrants from Poor Countries outside Europe – Scandinavian Countries. Adapted from Goubin et al. (2022).



Note: weighted data reported (dweight).

Source: European Social Survey, 2014 & 2018.

However, these studies only focused on the evolution of attitudes towards immigration without delving deeper into the factors that may be correlated with this evolution. Another study on the European level of evolution of attitudes to immigration by Meuleman, Davidov and Billiet (2009) used a dynamic group conflict theory approach to examine the changing attitudes towards immigration in European countries. The study found that attitudes towards immigration varied across Europe, with countries with higher social identities -more conservative on their social and cultural identity- perceiving migration as a threat and having more negative attitudes towards immigrants. In their study, Meuleman and his colleagues suggested that Sweden was the most tolerant country towards immigration from 2002-2007 in Europe. Sweden was one of the countries with the most positive attitudes towards immigration

in Europe in these studies and is still known for its positive attitudes towards immigration. However, there has been a noticeable shift in recent times. Several studies monitored the evolution of indicators of migration attitudes in Europe but still need to delve into the various causes of this change and examine their intersection with the multiple-dimensional forces that can cause such a trend over time, which only a few studies found in this regard. Understanding the driving forces behind the shifting attitudes towards immigration is a crucial matter to investigate. The emergence and heightened salience of the immigration issue in society can be attributed to various factors, including the refugee crisis and the subsequent surge in political polarization, leading to intense political debates surrounding migration and integration policies, with the media often portraying the issue negatively (Crawley & McMahon, 2016). The shift in the media discourse towards a more negative tune towards immigration became evident in Sweden since the Sweden Democrats, an anti-immigrant political party, appeared in the media and political arena as they managed to frame the issue of immigration in negative terms, contributing to an adverse change in Swedes' attitudes to immigration (Ekman & Krzyżanowski, 2021). This shift makes it essential to investigate multidimensionally into the forces that drove this unprecedented shift in modern times in the attitude to immigration in Sweden and to examine it through a psychological dimension to study which perceptions differed the most among Swedes over time.

2.1 Economic Perception:

Research has found that economic concerns can exacerbate negative attitudes towards immigrants, particularly during economic uncertainty or crisis (Clark, Drinkwater & Robinson, 2014; Storm, 2015). Vogt Isaksen (2019) examined the impact of the financial crisis on European attitudes to immigration. Using data from the European Social Survey, the study analyzed changes in attitudes towards immigration in 23 European countries between 2006 and 2016. The results show that the 2008 financial crisis was associated with increased negative attitudes towards immigration, especially in countries struck by the problem. The author argues that economic uncertainty and a perceived threat to individual resources shaped these attitudes. Clark, Drinkwater and Robinson (2014) argued when examining the effects of the 2008 financial crisis on immigration and employment in the UK that the negative perceptions of immigrants tend to be more prevalent during times of economic downturn. Concerns about redistributing resources during difficult economic times may explain people's perceptions of how their personal resources and household income will be affected and increased negativity toward immigrants. In Sweden, research indicates that concerns regarding the economic impacts of immigration have played a significant role in the changing attitudes towards immigration in recent years (Munobwa, Ahmadi, & Darvishpour, 2021). Analyzing Diversity Barometer surveys conducted between 2005 and 2018, Munobwa, Ahmadi, and Darvishpour (2021) found that Swedes exhibited heightened apprehensions about individual resources following the influx of refugees in 2015. Overall, while economic perceptions are not the only drivers of changing attitudes toward immigration, they are essential to consider (Clark, Drinkwater & Robinson, 2014; Storm, 2015; Munobwa, Ahmadi, & Darvishpour, 2021). Understanding the role of economic perceptions in shaping attitudes to migration can provide insight into the broader social, political, and cultural factors that influence migration attitudes.

2.2 Safety Perception:

Safety perception can significantly impact attitudes towards immigration. Some studies have found that when individuals perceive immigrants as threatening their physical safety, such as concerns about crime or terrorism, they may become more hostile towards immigration (Halapuu, Paas & Tammaru, 2014). The 2022 report from the Swedish National Council for

Crime Prevention (BRÅ) highlights a notable surge in gun violence rates. Sweden is the only country among 22 European countries to record a significant rise in deaths since 2000. Additionally, according to BRÅ, 80% of the population believes that the number of crimes in Sweden has increased over the past three years. With crime on the rise in the country and the neighborhood, people tend to blame immigrants. Such a trend was confirmed by Chandler and Tsai's (2001) study, which investigated the relationship between the sense of safety and attitudes towards immigration in the United States of America. They found a weak correlation between the increase in crime in the neighborhood and blaming immigrants for changing their perception of their safety. Safety perceptions can be critical in shaping attitudes toward immigration, especially when security concerns are prominent in the public debate.

2.3 Culture Perception:

Cultural perception can be crucial in shaping attitudes towards immigration, especially in societies where cultural identity and traditions are highly valued (Fetzer & Soper, 2004; Bhugra & Becker, 2005). Several scholars have examined the role of culture and traditions in shaping attitudes towards immigration (Bhugra & Becker, 2005; Sides & Citrin, 2007; Ekman & Krzyżanowski, 2021). Increasing polarization seems to make the issue of immigration more salient, especially highlighting the differences between different groups, such as ethnicity, culture and language (Zubashvili, 2020), as the anti-immigration parties try to get the advantage of such differences to format them as negative attitudes that translate into anti-immigration voting behavior (Valdez, 2014). In their 2007 study, Sides & Citrin examine the role of identities, interests, and information in shaping European public opinion on immigration. They used data from the first round of the European Social Survey. They analyzed the participants' opinions in 20 European countries to investigate the relationship between various factors and attitudes towards immigration. The results show that people's identity, particularly their national identity and attitudes towards multiculturalism, is the most significant predictor of their opinions on immigration. Several recent studies have shown that Swedes are more open to immigrants of the same ethnic group than immigrants from ethnically different or poorer countries outside Europe (Wildros, 2017; Ekman & Krzyżanowski, 2021). Political polarization fuels populism and creates an us-against-them ideology that makes it easier for politicians to exploit fears and prejudices. The Sweden Democrats claim that multiculturalism is the source of societal problems and a threat to Swedish culture, customs and traditions (Hellström, Nilsson & Stoltz, 2012). Cultural concepts and traditions play an important role in shaping attitudes towards immigration. When individuals perceive that immigration threatens their cultural identity or traditional way of life, they may become more negative towards immigration (Meuleman, Davidov & Billiet, 2009; Zubashvili, 2020).

2.4 Societal Cohesion Perception:

Research indicates that perceptions of social cohesion can be essential in changing attitudes towards immigration (Zubashvili, 2020). Community cohesion refers to the degree to which individuals feel connected and have a sense of belonging to their community. According to Demireva (2019), there is no agreed universal definition of social cohesion, and many broad indicators have been used to measure and analyze social cohesion. The general ones are social trust and standard social norms. Demireva argues that social cohesion is the degree to which people in a society feel connected and committed to each other and their shared values. Societal cohesion is becoming more affected by political polarization. Holtug and Mason (2010) argue that social cohesion has become a political buzzword, often used to promote exclusionary policies and a fear of diversity. They found a positive relationship between social cohesion and attitudes towards immigration.

Zubashvili (2020) examined attitudes towards immigrants in Sweden against the recent rise in popularity of the right-wing populist party to understand the phenomenon by distinguishing between trends' sociopsychological and economic dimensions. The results indicated that the most significant difference in attitudes stems from examining attitudes' sociopsychological and socioeconomic dimensions. Zubashvili argues that there is more support for sociopsychological theories than socioeconomic ones. Individuals with a strong sense of community cohesion are more likely to accept immigrants and view them as valuable to their community. Research has shown that individuals who prioritize the well-being of others and have a strong sense of empathy towards people who are different from themselves are more likely to have positive attitudes toward immigration (Holtug & Mason, 2010). They see immigration as a way to help people and look after their well-being rather than as a threat to their well-being, which positively affects the integration process.

2.5 Political Trust Perception:

The relationship between perceptions of political trust and attitudes to immigration is complex and multifaceted. Anti-immigration parties can stir and polarize public opinion with their rhetoric to achieve political gains and tighten immigration laws by inciting them to change the country's public behavior towards immigration and make it more negative by portraying immigrants as a threat to the country's identity, security and stability (Iyengar & Simon, 2000). Therefore, it is not possible to ignore the political factors for changing the attitude towards immigration in Sweden. In recent years, the Sweden Democrats' rhetoric has gained tremendous popularity and influenced the political, national and popular discourse against immigration (Ekman & Krzyżanowski, 2021; Munobwa, Ahmadi, & Darvishpour, 2021). The rise of these parties has been linked to concerns about immigrant integration and the impact of immigration on social welfare and crime. Individuals' political trust and perception can also shape their attitudes towards immigration, as was evidenced in McLaren's (2017) study of the relationship between immigration, national identity and political trust in European democracies. She found that more positive attitudes towards immigration are associated with a weaker national identity and higher political trust.

Political trust is not confined to a single political variable but rather a group of variables (Newton, 2001). In 1998, Hetherington proposed that political trust is determined by factors such as one's evaluation of power, institutional performance, policy considerations, quality of policy outcomes, and the media, which disseminates information about the government positively and negatively. Halapuu, Paas, and Tammaru (2014) equalized political trust and institutional trust when examining the correlation between institutional trust and attitudes toward immigrants in 25 European countries using data from the European Social Survey 2008 round. The study finds that institutional trust, measured by trust in parliament, trust in the legal system, and trust in the police, is positively related to positive attitudes towards immigrants. They indicated that the relationship between institutional trust and attitudes towards immigration varies across Europe, arguing that countries such as Sweden with higher institutional trust correlate with more positive attitudes towards migrants. Political perception plays a vital role in shaping attitudes toward immigration and is influenced by various factors, including political leadership, political polarization, and policies pursued.

2.6 Demographic Factors:

The relationship between demographic factors and attitudes towards immigration has been extensively studied in the literature. Several scholars examined the age intersection to attitudes towards immigration (Wildros, 2017; Bentsen, 2017, 2022). Bensten (2017) indicated that

high-quality contact between young people in Swedish schools positively impacted their attitudes towards friendship with individuals from different backgrounds and showed more positive attitudes towards immigration. Moreover, in his follow-up study, Bensten (2022) argued that social interactions and experiences are essential in shaping young people's attitudes towards out-groups, as superficial contact is associated with increased negative attitudes. However, Wildros (2017) suggested a possible cohort effect, arguing that the differences in attitudes between generations exist because of a difference in early life socialization and life experiences at different time points across generations. Contrary to prior research, Wildros's study found that the refugee crisis had a similar impact on attitudes toward immigration across all age groups.

Research indicates that gender plays a role in shaping attitudes towards immigration, with females generally exhibiting more positive attitudes towards immigration than males (Ceobanu & Escandell, 2010). Bensten's (2017) study showed that schoolboys are more negative about immigration in Sweden. The same context showed by Munobwa, Ahmadi and Darvishpour's (2021) study, with females being more supportive of diversity and showing more positive attitudes towards immigration in Sweden. A fact was reasoned by Ceobanu and Escandell (2010) as they suggest that this could be because females are more likely to view immigration as an opportunity to address labor market and demographic challenges, while males may see it as a threat to their job security and social status. Education has also been identified as a factor that influences attitudes towards immigration, with higher levels of education associated with more positive attitudes towards immigration. Ceobanu and Escandell (2010) argue that the relationship between education and attitudes towards immigration is complex and may depend on various factors, including the specific country context and the type of education received. However, several studies conducted in Sweden indicated a more positive attitude towards immigration with a higher level of education (Wildros, 2017; Munobwa, Ahmadi, Darvishpour, 2021).

Previous studies have examined the evolution of attitudes towards immigration by comparing countries without exploring its correlation with other factors or focusing solely on attitudes towards immigration and its correlation with specific dimensions without addressing its temporal evolution. In contrast, this study aims to comprehensively examine the evolution of attitudes towards immigration in Sweden by exploring its correlation to multidimensional aspects and its temporal evolution. It focuses on a new context: political trust, which has not been studied previously in Sweden.

3. Data & Methods

This study utilizes data from the European Social Survey (ESS) conducted between 2002 and 2018 to investigate the driving forces of changing attitudes to immigration in Sweden. The ESS is a global academic survey based in London, which conducts face-to-face interviews with newly selected cross-sectional samples every two years. The European Social Survey started to be conducted in more than 30 countries since its inception in 2001. Incomplete documentation of essential questions and variables for Sweden resulted in excluding the tenth round (2020) of ESS from the study. The European Social Survey data is available free of charge for non-commercial use and can easily be retrieved from: <http://www.europeansocialsurvey.org/data/>. The ESS endorses the Declaration on Ethics of the International Statistical Institute. Although the samples were different random cohorts each

round, they had similar balanced demographics with clear slight trends over the years. To ensure high-quality survey results, ESS aims to achieve high response rates to minimize non-response bias. In 2002, the response rate for respondents asked to participate in Sweden was 70%, but this rate declined steadily over time, reaching 39% in 2018. **Table 1** summarizes European Social Survey participation and response rates in each round in Sweden.

Joining the nine rounds of ESS data from Sweden resulted in 151 identical questions. Of these, many were administrative, such as edition, the production date, respondent's identification number, interview date, time that started and ended, what were you doing the last seven days, and what the partner was doing the last seven days. These questions are not usually included in the analysis of the leading research questions but rather serve as additional information that can be used to describe the sample and to adjust for any demographic differences that may affect the results.

Table 1. Summary of European Social Survey Participation and Response Rates

| Year | Participants | Response Rate |
|------|--------------|---------------|
| 2002 | 1999 | 70% |
| 2004 | 1948 | 65% |
| 2006 | 1927 | 66% |
| 2008 | 1830 | 62% |
| 2010 | 1497 | 51% |
| 2012 | 1847 | 52% |
| 2014 | 1791 | 50% |
| 2016 | 1551 | 43% |
| 2018 | 1593 | 39% |

Data from ESS 2002-2018, Sweden

Twenty items were identified as relevant to the research across all rounds related to the required variables of the study; immigration, economy, safety, culture, societal cohesion and political trust—moreover, the required demographics; gender, age, and education, and round year. For the economy, one survey item was found suitable to measure the direct perception of the economic situation across all the data (Feeling about household's income nowadays). Similar to safety perception (Feeling of safety of walking alone in a local area after dark) and culture perception (Important of following traditions and customs). Attitudes towards immigration, societal cohesion, and political trust are complex constructs that cannot be adequately measured by only one question in the European Social Survey (ESS) or any other survey (Halapuu, Paas & Tammaru, 2014; Demireva, 2019; Zubashvili, 2020). These constructs are multidimensional, and different questions may capture different aspects of these constructs. Attitudes towards immigration include questions about immigrants' contributions to society, the economic impact of immigration and the perceived threat of immigration. Different questions can measure each of these aspects, and a single question may not be able to capture the complexity of attitudes towards immigration. **Table 2** presents all survey items related to the study in European Social Survey data from 2002-2018.

Table 2. List of Variables Utilized & Tested from European Social Survey for the Study

| Variable | Survey item |
|-------------------------------------|---|
| Migration Attitudes | Immigration bad or good for the country's economy Immigrants make the country worse or a better place to live A country's cultural life undermined or enriched by immigrants |
| Economic Perception | Feeling about household's income nowadays |
| Safety Perception | Feeling of safety of walking alone in local area after dark |
| Culture Perception | Important to follow traditions and customs |
| Political Trust Perception | Trust in politicians Trust in the legal system Trust in country's parliament *Trust in the police |
| Societal Cohesion Perception | Important to help people and care for others well-being Important to understand different people Important to be loyal to friends and devote to people close *Important that people are treated equally and have equal opportunities *How often socially meet with friends, relatives or colleagues *Take part in social activities compared to others of same age |
| Demographics | Gender Age Education |

Data from ESS 2002-2018, Sweden

Note: * "Excluded Survey Items after Factor Analysis (FA)"

Similarly, societal cohesion is a complex construct that includes social connectedness, shared values, and social trust. Different questions may measure these different aspects of societal cohesion, and a single question may not be sufficient to capture the complexity of this

construct. Political trust is another complex construct that includes trust in political institutions, politicians, and the political process. Therefore, using multiple questions to measure these constructs in the ESS data can provide a more comprehensive understanding of attitudes towards immigration, societal cohesion, and political trust. Three questions were identified identically across all rounds of ESS data related to attitudes towards immigration, six related to societal cohesion and another four related to political trust.

3.1 Variable Construction:

3.1.1 Dependent Variable:

The dependent variable in this study is attitudes towards immigration in Sweden, derived from a dimension reduction of three survey items from ESS data (2002-2018) that reveal how individuals perceive the impact of immigration on the country's economy, safety, and culture (see **Table 2**). Principal component analysis (PCA) and factor analysis (FA) created an aggregated indicator for attitudes towards immigration. Both techniques helped to identify the underlying dimensions or factors that explain the variation in the three survey items. **Appendix 1** contains the selected items' code names and scales in ESS data.

3.1.2 Independent Variables:

The independent variables hypothesized to influence attitudes towards immigration are economy, safety, culture, societal cohesion and political trust (see **Table 2**). Societal cohesion and political trust are derived from survey items in the ESS data using a dimension reduction technique to create aggregated indicators using PCA and FA. **Appendix 1** contains the selected items' code names and scales in ESS data.

3.1.3 Control Variables:

The study utilized covariates, gender, age, and education, in the statistical analysis to enhance the understanding of the relationship between the independent and dependent variables (see **Table 2**). **Appendix 1** contains the selected items' code names and scales in ESS data. **Appendix 2** lists the code names and available options for the education variable across various rounds of ESS data.

3.2 Descriptive Statistics:

All European Social Science (ESS) data rounds underwent several preprocessing steps before analyzing to ensure data quality and consistency. Data checked for any missing values or errors. Data cleaning and preparation involved selecting survey items of interest and including only complete cases in the final dataset before performing any variable recoding. Descriptive statistics was essential to separately summarize each survey year's dependent, independent, and control variables distribution.

The results of only including the complete cases was a sufficiently balanced dataset of a sample size of 13274 observations in which each round consists of 10-12% of the entire dataset. Gender was almost equally split in the sample size between females and males, with the proportion of females in each round between 48%-51%. The minimum age for participants was identical in all rounds, 15 years, the maximum age between 90 and 97, and the average age between 47 and 53. The proportion of people who studied after upper secondary school was higher in 2014, 2016, and 2018. **Table 3** shows the descriptive statistics for the nine rounds with complete cases.

Table 3. Descriptive Statistics for 9 Rounds of European Social Survey

| Year | n | % | Mean Age | sd | Female% | Higher Education% |
|-------------|----------|----------|-----------------|-----------|----------------|--------------------------|
| 2002 | 1497 | 11% | 47 | 742 | 50% | 34% |
| 2004 | 1503 | 11% | 47 | 739 | 49% | 32% |
| 2006 | 1429 | 11% | 48 | 718 | 50% | 37% |
| 2008 | 1418 | 11% | 48 | 710 | 50% | 38% |
| 2010 | 1336 | 10% | 48 | 675 | 51% | 38% |
| 2012 | 1658 | 12% | 49 | 796 | 48% | 41% |
| 2014 | 1623 | 12% | 49 | 808 | 50% | 46% |
| 2016 | 1402 | 11% | 51 | 687 | 49% | 48% |
| 2018 | 1408 | 11% | 53 | 694 | 49% | 52% |

Data from ESS 2002-2018, Sweden

3.3 Analytical Strategy:

Different methods were used in the study to answer the research question, and the analyses were done in R language programming using stats, FactoMineR, psych, DescTools, stargazer, ggplot2 and broom packages. The analysis process consisted of five stages.

3.3.1 Stage 1:

First, the data was cleaned and prepared for analysis. Only the identical survey items, asked in all rounds and related to the attitudes towards immigration and direct perception of individuals' economy, safety, culture, societal cohesion and political trust, were used in the study and examined qualitatively. Items were then selected based on relevance to the required variables identified in the literature (see **Table 2**). The reason for selecting multiple survey items for each attitude towards immigration and political trust and societal cohesion perceptions construct is to ensure the reliability and validity of the measures because they depend on several psychological aspects. There is no single direct question for a person's perception of his situation, as is the case in economic, safety and cultural perceptions, with direct questions related to the psychological feeling of individuals around these perceptions. The multiple survey items used as a single item alone cannot reliably measure attitudes as they are considered psychometric constructs (Berntson et al., 2016).

3.3.2 Stage 2:

The variance of the selected survey items was analyzed using principal component analysis (PCA) and factor analysis (FA) for three variables. As there are multiple survey items for each of attitudes towards immigration and political trust and societal cohesion perceptions, PCA and FA have been used to get aggregated indicators of variables to act as indices variables for each category. Confirmatory and exploratory factor analysis and principal component analysis are common in attitude studies and have been used in several immigration studies to get aggregated indicators (Halapuu, Paas & Tammaru, 2014; Zubashvili, 2020). The differentiation between FA and PCA can sometimes be unclear, with exploratory techniques used to confirm hypothesized results. Given the similarities, they are often used interchangeably (Pallant, 2010). PCA extracts fewer new variables from many inter-correlated original variables while

retaining most of the variation in the data (Abdi & Williams, 2010). PCA and FA are different techniques with distinct goals and interpretations. PCA explains the maximum variance in the original data, whereas FA aims to identify latent factors. The preference for a single factor as the aggregated variable necessitated the inclusion of factor analysis (FA). The FA results were instrumental in guiding the selection of survey items for each category and assessing the appropriateness of the aggregated variable derived from PCA for subsequent analysis. In other words, FA helped determine which items to include in the PCA by ensuring no potential for additional factors to be incorporated. This process ensured that the resulting aggregated variable captured the desired underlying construct without the influence of extraneous factors.

The principal component analysis technique produced a single index aggregate variable for each, capturing the overall variability in each variable while reducing the number of variables to be analyzed. Then several tests were used under the factor analysis technique to ensure the reliability and validity of the aggregated variables. The steps followed in this stage; First, performing PCA separately on each category (immigration attitudes, political trust, and societal cohesion). Then the proportion of variance explained by each principal component was extracted for each category to understand how much each component captures the total variation in the data. Separately, FA was conducted for each category to determine the number of factors representing the survey items and assess their intercorrelations, providing valuable insights into the underlying constructs within each category and enhancing understanding of the relationships among the variables. The factor scores summarized the information from the observed variables into a single measure. Similarly, FA parallel analysis was also performed to confirm the optimal number of factors to retain in each category by comparing the eigenvalues obtained from the actual data with the eigenvalues from randomly generated data, which confirmed that one factor for each category is statistically significant for further interpretation. Moreover, Kaiser-Meyer-Olkin (KMO) test is used to measure the sampling adequacy. The test determines whether the variables within each category are appropriate for further factor analysis and the proportion of variance explained by each factor. Finally, to assess the internal consistency, Cronbach's Alpha Score was used to measure the internal consistency of the items within each factor.

At the end of this stage, we had six dependent and independent variables, immigration, economy, safety, culture, societal cohesion and political trust, and scaling was performed for all variables as the survey items were answered on different scales (see **Appendix 1**).

3.3.3 Stage 3:

The next stage of the analytical strategy was performing several linear regression models for the entire dataset, including the year variable as a predictor to account for the time trend. Comparing linear regression models helped identify the most influential independent variables on attitudes towards immigration and their changing effects over time. The models include the year variable as a predictor for the time trend and compare attitudes towards immigration across different years to the baseline year (2002). By employing this approach, the study identified the factors contributing to changes in attitudes towards immigration by estimating five distinct linear regression models. This analysis provided valuable insights into the drivers of attitude changes over time. Moreover, comparing different models assessed the relative importance of different independent variables and their interactions in predicting attitudes towards immigration. These models used the dependent and independent variables as continuous variables. Binary control variables were used for gender and education, female and male, and school who studied up to upper secondary school and higher education. At the same time, Age was used as a continuous control variable.

3.3.4 Stage 4:

This stage involves using a regression model of the full model used in the previous stage to allow all the variables to have effects that differ by year to investigate the impact of external shocks, such as the global financial and refugee crises, on the evolution of attitudes towards immigration. In this stage, all dependent, independent and control variables are investigated together between 2002-2018. This analysis helped determine the significant effect of each factor over the years, whether it was influential or if its impact fluctuated, particularly before and after the crises. Linear regression at this stage is used for each of the nine rounds in the dataset to study the relationships between different variables of driving forces for changing attitudes towards immigration and measure significant effects separately for each round.

3.3.5 Stage 5:

It was essential to investigate the changing trends in attitudes towards immigration and the independent variables over time, providing a comprehensive understanding of how these trends change direction and facilitating the identification of critical factors contributing to the changes in attitudes towards immigration.

The analysis began by calculating the central tendency of attitudes towards immigration from 2002 to 2018. These attitudes were then compared to trends in perceptions of the economy, safety, culture, political trust, and societal cohesion. Furthermore, visualizing the standard deviations of the independent variables provided insights into the consistency of the data around that trend as did they remained stable or changed over time. The standard deviation plot helped to interpret trends in the evolution of these variables over time. Trends in perception coefficients of the linear regression of the full model on attitudes towards immigration were also examined. The coefficients graph enabled the interpretation of trends in developing the effects of perception on attitudes towards immigration. Measuring the coefficients allowed determination of the strength and direction of relationships between attitudes towards immigration and perceptions of the economy, safety, culture, political trust, and societal cohesion, and any changes in these relationships over time.

4. Results

The European Social Survey (ESS) is a large-scale survey that collects data on social, economic, and political issues from individuals in Europe. To use this data over nine rounds of study for research purposes, it was essential to clean and prepare it properly and then go step by step:

4.1 Data Preparation and Variable Checking in R:

The European Social Survey related to Sweden over the nine rounds were loaded using the “haven” package. This data was cleaned and appropriately merged, and prepared for research purposes. Nineteen survey items were identical; only the education variable needed to be matched, cleaned and prepared manually.

Sixteen identical survey items related to the study were identified, one for each of the economy, safety and culture individuals’ perceptions. Moreover, three items related to attitudes towards

immigration, six related to societal cohesion and four related to political trust perceptions. The year variable is also included. Three demographic variables were relevant and included in the study; two were identical. The Education variable posed a challenge due to coding, levels, and language variations across the nine rounds. **Appendix 2** lists the code names and available options for the education variable across various rounds of ESS data. To address this, the variable “edlvds” was used for rounds between 2010-2018, “edlvase” for rounds 2006-2008, and “edlvse” for rounds 2002-2004. Due to the complexity of the education variable, the newly created education variable for the research was divided into two precise levels; the first is the school level which includes those who have not studied more than twelfth grade, i.e. they studied up to upper secondary school. Moreover, the second level is higher education, the individuals who continued their studies after upper secondary, that is any study after high school. On the other hand, the gender variable was consistently coded as “gndr” across all rounds, which presented as a binary variable with female and male being the only categories. The age variable code across the data is “agea”. Additionally, the ESS round was identified as a control variable. Any NA and unnecessary variables were removed.

4.2 Principal Component Analysis and Factor Analysis:

The analysis focused on the variation explained by Principal Component Analysis (PCA) and Factor Analysis (FA) in three categories: immigration attitudes, political trust, and societal cohesion. After performing PCA and FA, three survey items were retained for attitudes towards immigration, while three were selected for societal cohesion and political trust. **Table 4** presents the final survey items in each category, excluding four items removed based on the result of factor analysis tests conducted.

Table 4. Survey Items Included in the Study: Principal Component Analysis and Factor Analysis

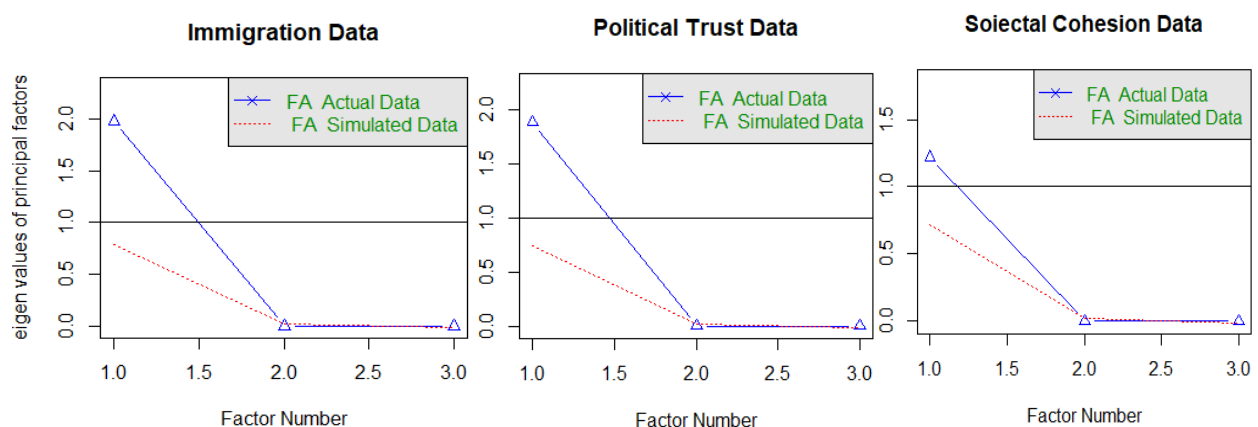
| Variable | Survey item |
|-------------------------------------|--|
| Migration Attitudes | Immigration bad or good for the country's economy Immigrants make the country worse or a better place to live A country's cultural life undermined or enriched by immigrants |
| Political Trust Perception | Trust in politicians Trust in the legal system Trust in country's parliament |
| Societal Cohesion Perception | Important to help people and care for others well-being Important to understand different people Important to be loyal to friends and devote to people close |

Data from ESS 2002-2018, Sweden

PCA was conducted using the "prcomp" function, yielding three principal components (PCs) for each category. For the immigration category, the variance explained by the PCs was 77%, 14%, and 9%, respectively. In the political trust category, the variance explained by the PCs was 75%, 15%, and 10%, respectively. Lastly, for the societal cohesion category, the variance explained by the PCs was 60%, 22%, and 18%, respectively. The principal components were extracted using the singular value decomposition method. Hair and colleagues (2019) mentioned the commonly used rule of thumb to retain components with eigenvalues greater than 1. Only one component was with eigenvalues greater than 1 in each. As a result, one component with eigenvalues exceeding 1 was retained for each category: Immigration (PC = 77%), Political Trust (PC = 75%), and Societal Cohesion (PC = 60%).

Since the preference was to have a single factor as the aggregated variable, the factor analysis (FA) results were considered. FA was performed separately for the three categories of variables using the "factanal" function; for each category varimax rotation was chosen. It is important to note that the differences in variance explained between PCA and FA arose from the contrasting objectives of the two techniques. PCA aims to maximize the explained variance by deriving linear combinations of variables, while FA seeks to identify latent factors that capture the shared variance among observed variables. The parallel analysis determined the optimal number of factors in each category. The "fa.parallel" function was used to calculate the proportion of variance explained by each factor as it compares the eigenvalues obtained from the actual data with those from randomly generated data, and factors with eigenvalues higher than the random data eigenvalues are considered meaningful, and retained. The analysis revealed a clear presence of one factor in each category, as shown in **Figure 2**. Based on the parallel analysis results, each category's first factor was deemed significant, explaining a substantial amount of the variance. This finding indicated no compelling evidence to include additional components beyond the identified factor. The eigenvalues for the second and third factors were 0.00, indicating minimal contribution to the overall variance.

Figure 2. Parallel Analysis of Immigration, Political Trust, and Societal Cohesion Items



Data from ESS 2002-2018, Sweden

The data quality was evaluated by the Kaiser-Meyer-Olkin (KMO) test using "cor" and "KMO" functions, which were performed separately for each indicator to assess the sampling adequacy of the variables. Moreover, Cronbach's alpha coefficient was computed using the "CronbachAlpha" function for each category of variables to measure the internal consistency of the items. **Table 5** presents the factor analysis results. The results showed that the three selected survey items for immigration attitudes have the highest FA, variance, and factor

loadings scores. Political trust with three items scored high and very reliable for each test. One item excluded from the political trust category that was chosen at the beginning, trust in police, and the reason for excluding this item; however, it reduced the KMO from 0.73 to 0.70 but did increase the variance of the items from 57% to 63%. Also, the factors loadings of trust in parliament and political parties were very high with only three items, which is favourable considering that the study focuses on political trust perception. Additionally, selecting only three survey items showed good results for Cronbach's alpha score for the reliability test for the category scale, which scored 0.83.

Table 5. Results of the Factor Analysis for the Aggregated Indicators

| Survey Item | Factors Loadings | | |
|---|---------------------|----------------------------|------------------------------|
| | Migration Attitudes | Political Trust Perception | Societal Cohesion Perception |
| Immigration bad or good for country's economy | 0.75 | | |
| Country's culture life undermined or enriched by immigrants | 0.77 | | |
| Immigrants make country worse or better place to live | 0.91 | | |
| Trust in country's parliament | | 0.86 | |
| Trust in the legal system | | 0.68 | |
| Trust in politicians | | 0.82 | |
| Important to understand different people | | | 0.54 |
| Important to help people and care for others well-being | | | 0.73 |
| Important to be loyal to friends and devote to people close | | | 0.63 |
| KMO, Measure of Sampling Adequacy | 0.71 | 0.70 | 0.65 |
| % of Variance | 66 | 63 | 41 |
| Cronbach's Alpha Score, Reliability Statistics | 0.85 | 0.83 | 0.66 |
| Results | Reliable | Reliable | Acceptable |

Method: Principal Components weighted by DWEIGHT
Data from ESS 2002-2018, Sweden

The reason for including only three survey items in the societal cohesion perception instead of the six inserted from the start (see **Table 2**) is that the results are better with only these three as they showed better correlation with each other and higher variance and reliability. Although this index scores lower than attitudes toward immigration and political trust perception, its effects are reliable and acceptable. Using one factor as an aggregated indicator is generally acceptable if it captures a meaningful amount of variance-measured variables. As the three items included have factors loadings higher than 0.5 (Hair et al., 2014), and Cronbach's alpha score of higher than 0.6 is considered acceptable, which case for the societal cohesion perception scale, and higher than 0.8 is reliable (Hair et al., 2014; Hajjar, 2018), as in attitudes towards immigration and political trust. Moreover, Hair et al. (2014) stated that a KMO value of 0.6 or higher is considered acceptable for factor analysis, and the KMO test for the societal cohesion index scored 0.65 (see **Table 5**). Considering all factor analysis test results for the societal cohesion index, a variance exceeding 40% can be accepted. According to Hair et al. (2019), 40% and 70% variance can be justified if acceptable values are obtained on other tests. Hair and his colleagues suggest that researchers should not only focus on the percentage of variance explained by the factors but rather evaluate the results of all tests to determine the appropriateness of the measurement model (Hair et al., 2019).

4.3 Pooled Linear Regression Models:

The aggregated variables resulting from PCA and FA were combined with the remaining variables: economy, safety, and culture. The dataset was scaled to ensure consistency since these variables were on different scales (see **Appendix 1**). Then Five linear regression models were estimated to analyze the data, with attitudes towards immigration as the dependent variable. The regression analysis using the `lm()` function was repeated, including the ESS round from 2002-2018 as a predictor variable in all models. Model 1 estimated only years, with 2002 as the base for comparison. The Model explained less than 1% of the variation, with only 2004 showing a significant positive effect ($p < 0.01$). The effect of years decreased steadily until 2010 when it had a significant negative effect ($p < 0.01$). It continued to be negative, with only 2014 showing a significant effect ($p < 0.01$). Model 2, political trust, was added to the estimation, which explained 15% of the variation in attitudes towards immigration. The political trust had a significant positive effect ($p < 0.01$) on attitudes towards immigration, and the Model showed almost similar trend correlation for the years which was in Model 1, with only the years 2010 having significant effects ($p < 0.05$) and 2014 with ($p < 0.01$). Model 3 included the addition of societal cohesion and culture factors, resulting in the Model explaining 20% of the variation. Both factors showed significant effects ($p < 0.01$), with culture having an adverse effect and societal cohesion having a positive effect. Political trust remained a significant factor ($p < 0.01$) in this Model, while all years became positive, with 2012 having significant effects ($p < 0.05$) and 2016 and 2018 showing significant effects ($p < 0.01$). In Model 4, all independent variables, including economy and safety, were included alongside the year rounds, which explained more than 21% of the variation. All independent variables showed significant effects ($p < 0.01$). Moreover, 2012, 2016 and 2018 continued to have a similar positive significant effect as in the previous Model. **Table 6** presents the results of Models 1, 2, 3, and 4.

The last Model was estimated by adding the control variables; gender, age and education—this significantly increased the explanation of the variation to more than 25%. **Table 7** presents the regression results of determinants of attitudes towards immigration in Sweden from 2002 to 2018, which included 13,274 observations. The results indicate that the independent variables explain a significant proportion of the variance in attitudes towards immigration in Sweden, as noted in an R-squared value of 0.253. In the last Model, the coefficients for all factors variables were positive and statistically significant ($p < 0.01$). Except for culture, which was negative and statistically significant ($p < 0.01$). The demographics (gender, age, education) were highly significant also ($p < 0.01$). Finally, only the coefficients for 2012, 2016 and 2018 were statistically significant ($p < 0.01$), suggesting that these highly affect trending towards immigration. The results showed that the economy, safety, societal cohesion, and political trust variables were positively associated with attitudes towards immigration. A one-unit increase in the economy was associated with a 0.044 increase in attitudes towards immigration ($t = 5.741$), a one-unit increase in safety was associated with a 0.083 increase in attitudes towards immigration ($t = 10.340$), a one-unit increase in societal cohesion was associated with a 0.152 increase in attitudes towards immigration ($t = 18.620$), and a one-unit increase in political trust was associated with a 0.329 increase in attitudes towards immigration ($t = 41.803$). On the other hand, the cultural variable negatively affected attitudes towards immigration. A one-unit increase in culture was associated with a 0.154 decrease in attitudes towards immigration ($t = -19.398$). Furthermore, for demographics, each unit, the male compared to the female category, was associated with a -0.161 decrease which suggests that female attitudes towards immigration are approximately 16% more positive compared to male attitudes. Regarding age, a one-year older was associated with a 0.001 increase in attitudes towards immigration. For the variable "School," a one-unit decrease in the level of education, compared to the higher

education level, was associated with a -0.367 decrease. This result is statistically significant, suggesting that individuals with higher education are approximately 37% more positive towards immigration.

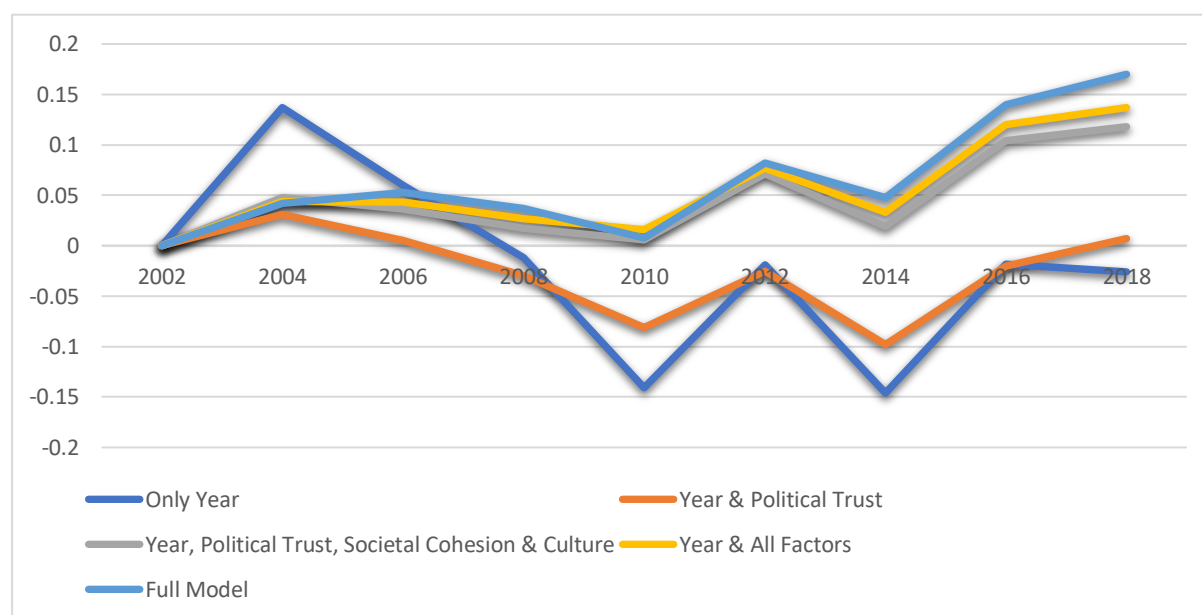
| Table 6. Estimate Coefficients from Linear Regression of Different Models for Attitudes towards Immigration in Sweden | | | | |
|--|------------------------------|-------------------------------|--------------------------------|--------------------------------|
| | Model 1 | Model 2 | Model 3 | Model 4 |
| Political Trust | | 0.388 t = 48.301*** | 0.381 t = 48.791*** | 0.363 t = 45.845*** |
| Societal Cohesion | | | 0.180 t = 22.060*** | 0.185 t = 22.747*** |
| Culture | | | -0.176 t = -22.190*** | -0.167 t = -21.065*** |
| Economy | | | | 0.055 t = 6.938*** |
| Safety | | | | 0.068 t = 8.589*** |
| ESS_Round2004 | 0.137 t = 3.751*** | 0.031 t = 0.922 | 0.048 t = 1.479 | 0.044 t = 1.363 |
| ESS_Round2006 | 0.060 t = 1.635 | 0.005 t = 0.157 | 0.036 t = 1.090 | 0.043 t = 1.322 |
| ESS_Round2008 | -0.012 t = -0.334 | -0.030 t = -0.887 | 0.017 t = 0.506 | 0.027 t = 0.828 |
| ESS_Round2010 | -0.141 t = -3.750*** | -0.081 t = -2.329** | 0.006 t = 0.181 | 0.016 t = 0.479 |
| ESS_Round2012 | -0.019 t = -0.528 | -0.025 t = -0.764 | 0.071 t = 2.198** | 0.077 t = 2.403** |
| ESS_Round2014 | -0.146 t = -4.075*** | -0.098 t = -2.969*** | 0.019 t = 0.577 | 0.033 t = 1.031 |
| ESS_Round2016 | -0.018 t = -0.475 | -0.020 t = -0.579 | 0.104 t = 3.089*** | 0.120 t = 3.575*** |
| ESS_Round2018 | -0.026 t = -0.711 | 0.007 t = 0.209 | 0.118 t = 3.511*** | 0.137 t = 4.104*** |
| Observations | 13,274 | 13,274 | 13,274 | 13,274 |
| R ² | 0.007 | 0.155 | 0.204 | 0.213 |
| Adjusted R ² | 0.006 | 0.155 | 0.204 | 0.212 |
| Residual Std. Error | 0.997 (df = 13265) | 0.919 (df = 13264) | 0.892 (df = 13262) | 0.888 (df = 13260) |
| F Statistic | 11.547*** (df = 8; 13265) | 271.286*** (df = 9; 13264) | 309.850*** (df = 11; 13262) | 275.469*** (df = 13; 13260) |
| <i>Note:</i> <p style="text-align: right;">*p<0.1; **p<0.05; ***p<0.01 Data from ESS 2002-2018.</p> | | | | |

Table 7. Coefficient Estimates from Linear Regression Model including all Variables for Attitudes towards Immigration in Sweden

| | |
|---|-----------------------------|
| Political Trust | 0.329 t = 41.803*** |
| Societal Cohesion | 0.152 t = 18.620*** |
| Culture | -0.154 t = -19.398*** |
| Economy | 0.044 t = 5.741*** |
| Safety | 0.083 t = 10.340*** |
| Male | -0.161 t = -9.918*** |
| Age | 0.001 t = 3.129*** |
| School | -0.367 t = -22.870*** |
| ESS_Round2004 | 0.042 t = 1.319 |
| ESS_Round2006 | 0.053 t = 1.640 |
| ESS_Round2008 | 0.037 t = 1.141 |
| ESS_Round2010 | 0.008 t = 0.230 |
| ESS_Round2012 | 0.082 t = 2.630*** |
| ESS_Round2014 | 0.048 t = 1.524 |
| ESS_Round2016 | 0.140 t = 4.270*** |
| ESS_Round2018 | 0.170 t = 5.197*** |
| Observations | 13,274 |
| R ² | 0.253 |
| Adjusted R ² | 0.252 |
| Residual Std. Error | 0.865 (df = 13257) |
| F Statistic | 280.270*** (df = 16; 13257) |
| <i>Note:</i> <p style="text-align: right;">*p<0.1; **p<0.05; ***p<0.01 Data from ESS 2002-2018.</p> | |

Figure 3 illustrates the coefficients of the year variable in five different models: (1) a basic model with only years, (2) a model including political trust, (3) a model further including societal cohesion and culture, (4) a model adding safety and economy, and (5) a full model incorporating demographics. The graph shows how the year coefficients change when these variables are added. The results indicate that controlling for political trust reduces the dip in attitudes, and after adjusting for all factors, attitudes towards immigrants have become more positive over time. This suggests that if individuals had remained unchanged regarding these perceptions, attitudes towards immigrants might not have become more negative.

Figure 3. Trends in Coefficients of Linear Regression Models for Attitudes Towards Immigration



Data from ESS 2002-2018, Sweden

4.4 Year-Specific Linear Regression Models:

Separate linear regression of the full model analysis was conducted for each year from 2002 to 2018 to examine the relationship between immigration and its predictors over different years. This approach allowed for a detailed examination of the factors influencing attitudes towards immigration each year.

Table 8 presents the regression results of determinants of attitudes towards immigration in Sweden for 2002, 2004, and 2006. The coefficient for the economy is positive in all years, indicating that a strong individual household economy is associated with more positive attitudes towards immigration. However, the effect was only significant ($p < 0.1$) in 2002. The coefficient for safety is positive and statistically significant in 2004 and 2006 at ($p < 0.01$), suggesting that feelings of safety and security are positively related to attitudes towards immigration. Culture has a negative coefficient in all years, which implies that cultural concerns have a negative effect on attitudes towards immigration, and the effect is significant in all years ($p < 0.01$). Societal cohesion has a positive coefficient, meaning that people who feel more connected to their community are more likely to have positive attitudes towards immigration; the effect is significant in all years ($p < 0.01$). Political trust has a positive coefficient in all years, indicating that trust in political institutions is positively associated with attitudes towards immigration. The effect is significant in all years ($p < 0.01$).

| Table 8. Effects on Attitudes towards Immigration, Sweden Estimate Coefficients from Linear Regression | | | |
|--|--------------------------|--------------------------|--------------------------|
| | 2002 | 2004 | 2006 |
| Economy | 0.044 t = 1.931* | 0.031 t = 1.361 | 0.015 t = 0.616 |
| Safety | 0.034 t = 1.454 | 0.105 t = 4.556*** | 0.090 t = 3.698*** |
| Culture | -0.151 t = -6.544*** | -0.135 t = -5.507*** | -0.132 t = -5.394*** |
| Societal Cohesion | 0.143 t = 6.577*** | 0.125 t = 5.175*** | 0.128 t = 5.326*** |
| Political Trust | 0.314 t = 13.934*** | 0.334 t = 14.718*** | 0.288 t = 11.860*** |
| Male | -0.149 t = -3.179*** | -0.085 t = -1.725* | -0.042 t = -0.854 |
| Age | 0.002 t = 1.730* | 0.001 t = 0.520 | -0.0005 t = -0.342 |
| School | -0.322 t = -6.833*** | -0.398 t = -7.906*** | -0.494 t = -10.058*** |
| Observations | 1,497 | 1,503 | 1,429 |
| R ² | 0.232 | 0.245 | 0.238 |
| Adjusted R ² | 0.228 | 0.241 | 0.234 |
| Residual Std. Error | 0.830 (df = 1488) | 0.876 (df = 1494) | 0.859 (df = 1420) |
| F Statistic | 56.343*** (df = 8; 1488) | 60.487*** (df = 8; 1494) | 55.436*** (df = 8; 1420) |
| <i>Note:</i> <p style="text-align: right;">* p<0.1; ** p<0.05; *** p<0.01 Data from ESS 2002, 2004 and 2006</p> | | | |

Male has a negative coefficient in all years, meaning that females tend to have more positive attitudes towards immigration than men. In 2002 the effect was highly significant ($p<0.01$), and in 2004, the effect was less significant ($p<0.1$). Age has a positive coefficient in 2002, the only year with a significant effect ($p<0.1$), implying that younger people had more negative attitudes towards immigration in that year. However, the coefficient becomes negative in 2006, indicating that younger people in that year had more positive attitudes towards immigration, but it is not significant. The school has a negative coefficient in all years, suggesting that higher

education levels are associated with more positive attitudes towards immigration. The effect is significant in all years ($p < 0.01$).

Table 9 presents the regression results of determinants of attitudes towards immigration in Sweden for 2008, 2010, and 2012. The economy coefficient only had a significant effect ($p < 0.5$) in 2012. Safety, societal cohesion and political trust variables have a significant positive effect ($p < 0.01$) in all years. In contrast, culture has a significant negative effect ($p < 0.01$) in all years. Age has no significant effect in any of these years. Male and school education have a significant negative effect ($p < 0.01$) in all years, meaning females and higher education with a significant positive effect ($p < 0.01$).

| Table 9. Effects on Attitudes towards Immigration, Sweden Estimate Coefficients from Linear Regression | | | |
|---|-----------------------------|-----------------------------|-----------------------------|
| | 2008 | 2010 | 2012 |
| Economy | 0.001 t = 0.065 | -0.004 t = -0.180 | 0.053 t = 2.556** |
| Safety | 0.135 t = 5.823*** | 0.114 t = 4.558*** | 0.081 t = 3.276*** |
| Culture | -0.115 t = -4.956*** | -0.173 t = -7.106*** | -0.160 t = -6.744*** |
| Societal Cohesion | 0.195 t = 8.630*** | 0.155 t = 6.096*** | 0.147 t = 5.876*** |
| Political Trust | 0.279 t = 11.976*** | 0.349 t = 13.221*** | 0.260 t = 11.205*** |
| Male | -0.143 t = -3.023*** | -0.202 t = -4.036*** | -0.143 t = -2.968*** |
| Age | -0.001 t = -1.165 | 0.001 t = 0.538 | 0.001 t = 0.725 |
| School | -0.439 t = -9.468*** | -0.424 t = -8.507*** | -0.369 t = -7.680*** |
| Observations | 1,418 | 1,336 | 1,658 |
| R ² | 0.262 | 0.270 | 0.191 |
| Adjusted R ² | 0.258 | 0.266 | 0.187 |
| Residual Std. Error | 0.817 (df = 1409) | 0.844 (df = 1327) | 0.915 (df = 1649) |
| F Statistic | 62.596*** (df = 8; 1409) | 61.492*** (df = 8; 1327) | 48.542*** (df = 8; 1649) |
| <i>Note:</i> <p style="text-align: right;">* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$ Data from ESS 2008, 2010 and 2012</p> | | | |

Table 10 presents the regression results of determinants of attitudes towards immigration in Sweden for 2014, 2016, and 2018. The coefficient for the economy is significantly changed in these years with a positive effect ($p < 0.01$) in all years. Safety was not significant in 2016 but had a significant positive effect in 2014 ($p < 0.5$) and a more positive significant effect in 2018 ($p < 0.01$). Culture has a significant negative effect ($p < 0.01$) in all years. In contrast, societal cohesion and political trust variables continue to have a significant positive effect ($p < 0.01$) in all years. Age had a positive effect in 2014 and 2018 with a significant effect ($p < 0.01$). Females and higher education continued the trend in all these years to have a positive effect compared to males and school education, with a significant effect ($p < 0.01$).

| Table 10. Effects on Attitudes towards Immigration, Sweden Estimate Coefficients from Linear Regression | | | |
|--|-----------------------------|-----------------------------|-----------------------------|
| | 2014 | 2016 | 2018 |
| Economy | 0.085 t = 3.946*** | 0.072 t = 2.862*** | 0.082 t = 3.091*** |
| Safety | 0.052 t = 2.215** | 0.042 t = 1.628 | 0.096 t = 3.794*** |
| Culture | -0.181 t = -8.265*** | -0.162 t = -6.728*** | -0.159 t = -6.565*** |
| Societal Cohesion | 0.159 t = 6.634*** | 0.146 t = 5.355*** | 0.178 t = 6.671*** |
| Political Trust | 0.329 t = 14.789*** | 0.408 t = 17.091*** | 0.418 t = 17.164*** |
| Male | -0.199 t = -4.426*** | -0.210 t = -4.149*** | -0.264 t = -5.171*** |
| Age | 0.005 t = 4.050*** | -0.001 t = -0.526 | 0.004 t = 2.953*** |
| School | -0.368 t = -8.331*** | -0.275 t = -5.579*** | -0.223 t = -4.510*** |
| Observations | 1,623 | 1,402 | 1,408 |
| R ² | 0.280 | 0.281 | 0.307 |
| Adjusted R ² | 0.276 | 0.276 | 0.303 |
| Residual Std. Error | 0.852 (df = 1614) | 0.879 (df = 1393) | 0.878 (df = 1399) |
| F Statistic | 78.392*** (df = 8; 1614) | 67.890*** (df = 8; 1393) | 77.440*** (df = 8; 1399) |
| <i>Note:</i> * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$ Data from ESS 2014, 2016 and 2018 | | | |

The R-squared values for all years are consistently high, indicating that they explain a good proportion of the variance in attitudes towards immigration. The R-squared value has been increasing steadily in recent years and reached over 30% in the 2018 data, indicating that the model is becoming more effective in explaining the variability in the data over time. The F-statistic is statistically significant for all years, indicating that the variables are significantly related to attitudes towards immigration. These results indicate that these factors are essential in shaping attitudes towards immigration. However, the strength and direction of these relationships vary across time, suggesting that immigration attitudes are dynamic and can be influenced by changing factors.

Political trust, societal cohesion, culture perceptions, and education were found to have a significant effect ($p < 0.01$) across all years. However, it is noteworthy that the coefficients for political trust showed a substantial increase, particularly after the refugee crisis, indicating that political trust became more influential in shaping attitudes during that period. Another interesting finding is related to the impact of higher education. Before the refugee crisis, individuals with higher education exhibited significantly higher positive coefficients, reaching more than 40%, compared to those who completed only secondary education. However, starting from the refugee crisis, these coefficients decreased significantly and continued to decline steadily, reaching 22% in 2018.

Furthermore, the results reveal that the coefficient for the economy displayed a significant effect ($p < 0.01$) following the aftermath of the financial crisis in 2012, suggesting that economic factors played a vital role in shaping attitudes towards immigration during that specific period.

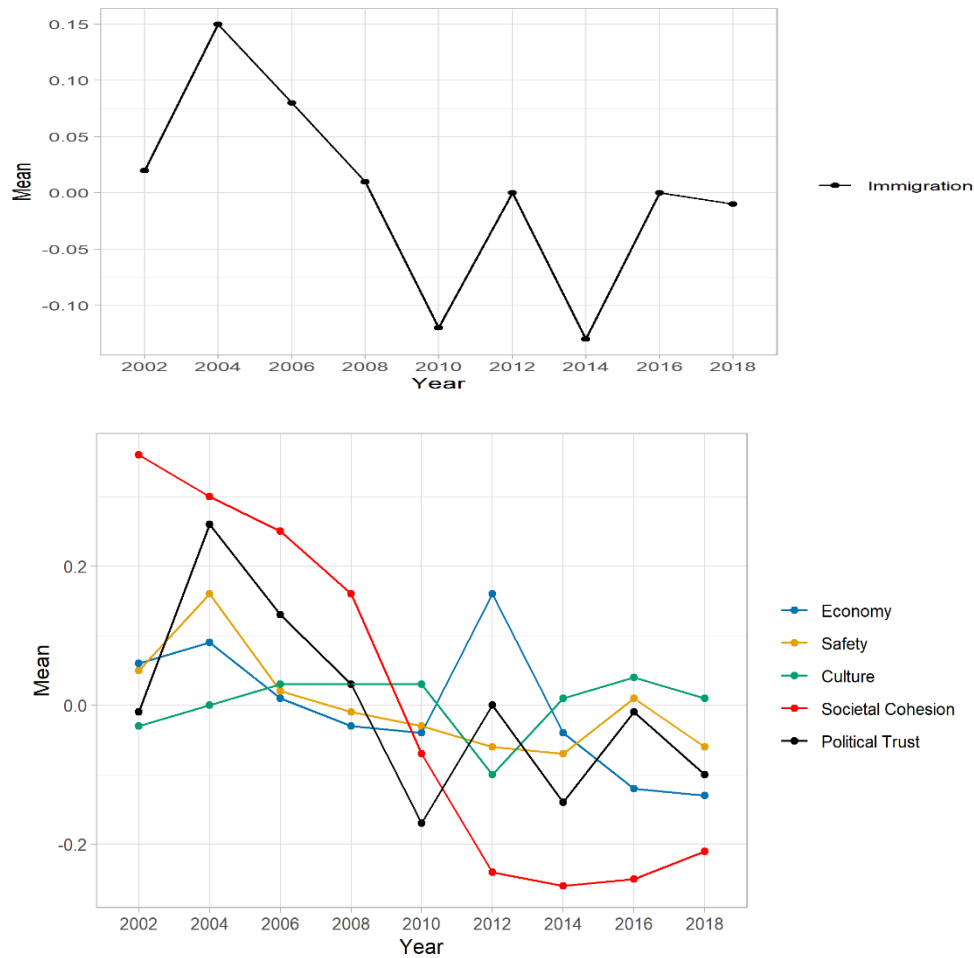
These findings highlight the dynamic nature of the factors influencing attitudes towards immigration over time. The refugee and financial crises appear to have triggered notable shifts in the significance of certain factors, emphasizing the importance of considering historical context when examining immigration attitudes.

4.5 Trend Analysis:

Measuring the mean, standard deviation, and coefficients was crucial for analyzing trends and directions in the variables and understanding the relationships between them. These measurements provided insights into the trends in attitudes towards immigration, the variability of variables, and the factors influencing changes over time.

Figure 4 depicts the changing attitudes towards immigration in Sweden and other perceptions from 2002 to 2018. By scaling and standardizing the variables, their range of values was transformed into a set of rules ranging from -1 to +1. The exceptional cases represent respondents with extremely low (negative) or very high (positive) scores of attitudes. The average level of attitudes is indicated by a score of zero. The mean immigration has fluctuated from -0.13 to 0.15, with 2002 to 2008 reflecting more positive attitudes. The highest mean attitude score was observed in 2004, with 0.15. However, 2010, 2014 and 2018 were negative and neutral in 2012 and 2016. Notably, the results reveal that the most negative attitudes were reported in 2014, with -0.13. The relationship between attitudes towards immigration and political trust perception shows remarkable consistency, as they tend to rise and fall together in the same years and direction. This strong association is unique compared to the trends observed in other variables, indicating distinct compatibility between the two factors.

Figure 4. Trend Direction of Variables in the Attitudes Towards Immigration Data



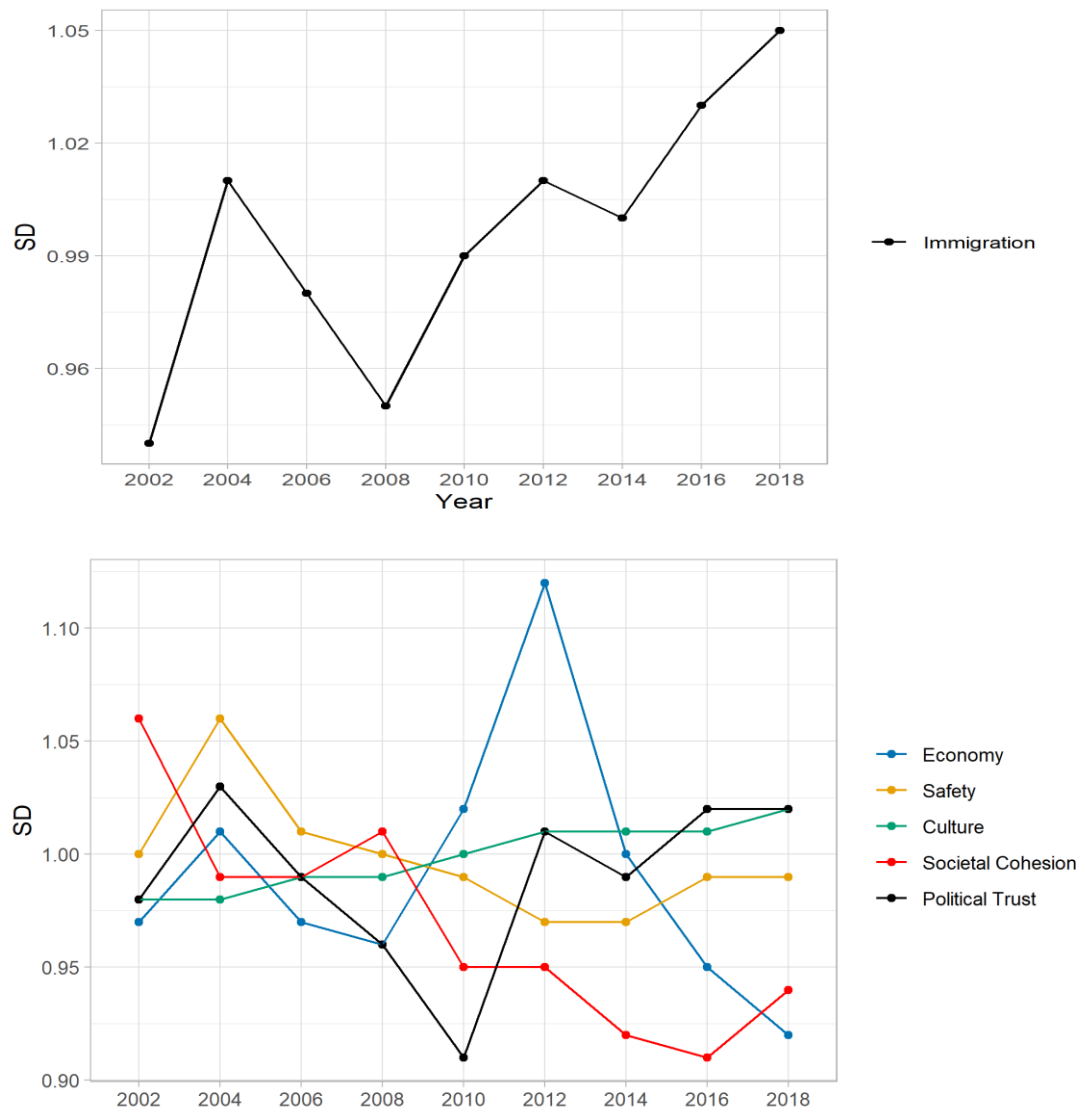
Data from ESS 2002-2018, Sweden

Societal cohesion shows a steady decline in positive attitudes from 2002 to 2018, while political trust shows a mixed trend, similar to attitudes towards immigration, with means ranging from -0.17 to 0.26. Societal cohesion and political trust have decreased the most over time. These variables have become more negative over time, indicating a decline in social cohesion from 0.36 in 2002 to -0.21 in 2018. The economy has been negative since 2008, except in 2012; since then, it is decreasing significantly. Culture and safety perceptions are more stable compared to other variables.

The Standard deviation (SD) is measured for the variables to indicate how much dispersion of values and the presence of diverse or contrasting views within the dataset and to indicate which variables are more polarized over time. **Figure 5** presents the SD of the variables. The plot reveals that attitudes varied for all variables, though some dimensions remained relatively stable compared to others. The standard deviation values provide insights into attitude variability or heterogeneity. Higher SD values indicate more significant variability or diversity of opinions among individuals regarding immigration, whereas lower SD values suggest more agreement or similarity in attitudes. Analyzing the trends in the SD of these variables, it is evident that immigration has become a more polarized issue since 2010, and attitudes towards immigration experienced the highest level of polarization in 2016 and 2018 compared to other variables, with a score of 1.03 and 1.05, respectively. Also, in 2016 and 2018, political trust

SD values were the second highest, with a score of 1.02, as they became more polarized compared to the years from 2006 to 2014. The economy presents an increase in the value of the SD only in 2012, indicating that in this year, the economy was the most polarized compared to the rest of the years. Culture is the most stable over time, and safety was a pick in 2004 with a score of 1.06 and more stable following that. Societal cohesion was the most declined in polarization from 2002 to 2018, from an SD value of 1.06 to 0.94.

Figure 5. Variability of Variables in the Attitudes Towards Immigration Data

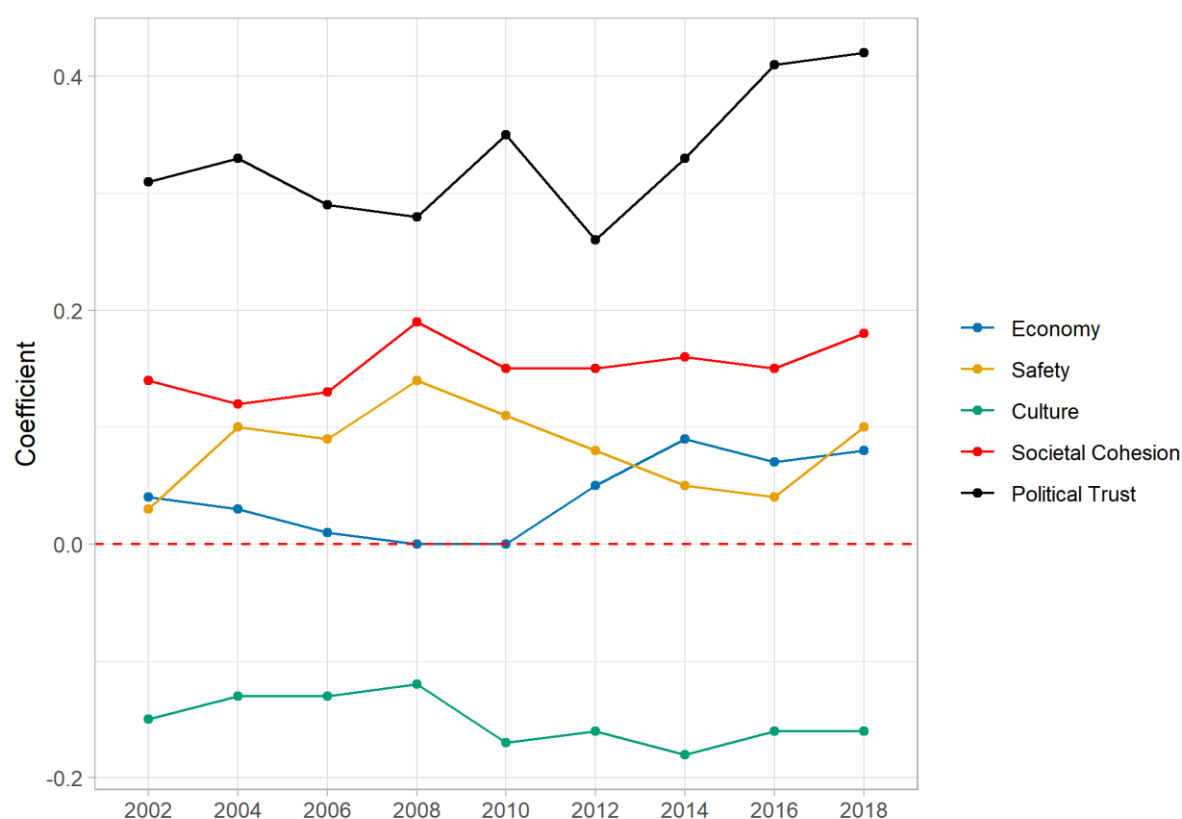


Data from ESS 2002-2018, Sweden

The linear regression results of the full model were presented as coefficients to measure the change in attitudes towards immigration for each unit change in the perception variables. The coefficients showed that the factors that had the most significant impact on attitudes towards immigration were political trust, followed by cultural and societal cohesion perceptions. A positive coefficient indicates that higher levels of political trust were associated with more positive attitudes towards immigration, indicating that individuals with higher trust in political parties and their policies are more likely to view immigration positively. **Figure 6** presents the

coefficients for each variable over time using a line graph. The results show fluctuations in correlation with attitudes towards immigration over time.

Figure 6. Trends in Coefficients of Perception on Attitudes Towards Immigration



Data from ESS 2002-2018, Sweden

The results from **Figure 4** show that attitudes towards immigration were significantly positive in 2004, but following the financial crisis, they started to decline significantly compared to before the crisis. Since 2010, attitudes never became positive; in 2010, 2014 and 2018, they showed negative attitudes. Overall, the results suggest that attitudes towards immigration in Sweden have been volatile, with fluctuations related to major events such as financial crises and refugee influxes. Based on **Figure 4**, it is evident that there is a strong correlation between the trend of attitudes towards immigration and political trust. Both variables display a negative trend during the 2010, 2014, and 2018 election years, followed by an increase in the post-election years. It is important to note that since the Sweden Democrats party entered the parliament in 2010, there has been a growing political polarization against immigrants, particularly during election years. The economic perception was the most stable, and it witnessed the most sudden change in trend in 2012. The perception of societal cohesion showed a significant shift in the trend from the most positive to the least negative compared to the other variables between 2002 and 2018.

Figure 5 indicates that societal cohesion shifted from the most polarized issue in 2002 to the least in 2018, and following the refugee crisis, immigration and political trust became Sweden's most polarized issue. The higher SD values in 2016 and 2018 emphasize the significance of these years in terms of the polarization regarding attitudes towards immigration, distinguishing it as a prominent and contentious topic during those periods. The higher SD values in 2016 and

2018 suggest a significant heterogeneity in attitudes towards immigration during those years, emphasizing the divisive nature of the issue which followed the refugee crisis. The increasing SD values for political trust indicate more significant variability and heterogeneity in individuals' attitudes towards trust in the political system. This polarization suggests that individuals held more divergent and contrasting opinions regarding political trust in 2016 and 2018.

Figure 6 The results showed that economic perception is the least influential among all other perceptions correlating to attitudes towards immigration and not significant during 2004-2010, which means that during this time, the relationship between economic perception and attitudes towards immigration was not strong enough to be statistically significant. Furthermore, it started to have a significant correlation starting in 2012. The figure indicates that the relationship between immigration and political trust increased significantly following the 2015 refugee crisis, and the correlation between them is much more significant compared to the remaining variables.

The results indicate that attitudes towards immigration in Sweden have been volatile, influenced by major events such as financial and refugee crises. There is a strong correlation between attitudes towards immigration and political trust, with negative trends during election years. The refugee crisis heightened polarization and made immigration and political trust the most contentious issues. Following the refugee crisis, the correlation between immigration and political trust became more significant compared to other variables.

5. Discussion

Following the study aims, an attempt was made to interpret and discuss the results of multidimensional perceptions that shape attitudes towards immigration and analyze which are more closely correlated to these attitudes and which have witnessed changes and fluctuations from 2002-2018. The results were analyzed by examining the different perceptions that influence immigration, followed by a methodological contribution to provide a deeper understanding of the changing influence on attitudes towards migration.

5.1 Findings:

The regression analysis revealed that the factors investigated in the study significantly influenced attitudes towards immigration according to the study expectation and confirmed that a multidimensional approach is crucial for understanding attitudes towards immigration in Sweden, aligning with Zubashvili's (2020) recommendation.

The trend analysis corroborates Vogt Isaksen's (2019) study, which observed a more negative trend towards immigration in European countries heavily impacted by the financial crisis. The results of this study indicate a positive increase in the coefficients between economy perception and immigration since 2012. The economy perception witnessed the most sudden change in trend in 2012, and since it has become continuously significant. One of the main factors could be the impact of the global financial crisis, which occurred in 2008, and its aftermath, which lasted for several years. During this time, the Swedish economy was affected, and there were high levels of unemployment and economic uncertainty (IMF, 2012). However, the economy started to revive in 2013, with GDP rising to 1.2% (World Bank, n.d.). The safety correlation

with attitudes towards immigration increased in 2018 compared to 2014 with the rise of violence and crime in Sweden (BRÅ, 2022), which confirms Chandler and Tsai (2001) that safety concerns are crucial in shaping attitudes towards immigration. Culture perception results showed a significant stable correlation with immigration over time, indicating that it consistently plays a vital role in shaping attitudes towards immigration in Sweden. The stability over time may reflect the persistence of certain beliefs and values among Swedes regarding their cultural identity and heritage, shaping their views on immigration, aligning with Zubashvili's (2020) findings. The results also showed that gender and education are essential variables regarding attitudes towards immigration since gender has been a significant effect since 2008, that is, since the global financial crisis. Females showed more positive attitudes in the aftermath of the refugee crisis, as they showed 20% more positive attitudes towards immigration in 2016 and 2018 than males. Moreover, individuals who pursue post-secondary education are significantly more positive towards immigration by 37%, consistent with the results of Ceobanu and Escandell (2010) regarding the correlation of gender and education to immigration. Age was found to have a limited impact on attitudes towards immigration in most years; however, it generally exhibited a small but positive effect. The results indicated that with each increasing year of age, there was a 0.01% increase in positive attitudes towards immigration, which suggests a tendency for older individuals to be more supportive of immigration compared to younger individuals. This finding contradicts the commonly held notion that young people are generally more supportive of immigration. It aligns more closely with the results of Wildros (2017), who argued that the variations in attitudes towards immigration among different generations could be attributed to differences in early life socialization and life experiences occurring to varying periods across generations, and the refugee crisis had a similar impact on attitudes toward immigration across all age groups.

The trend analysis supported the study's anticipation that societal cohesion and political trust experience the most significant shifts in trends over time. Societal cohesion has experienced the most significant decline since 2002, suggesting that people may feel less connected to each other and less trusting in others. This decline may be related to various factors, including political polarization (Holtug & Mason, 2010). This perception significantly correlated with attitudes towards immigration in all years, indicating that it consistently plays a vital role in shaping attitudes towards immigration in Sweden. It confirms Zubashvili's (2020) findings, who argued that there is more support for sociopsychological theories than socioeconomic ones.

Political perception has also played a role in changing attitudes towards immigration in Sweden. According to the study results, it has been the most correlated factor to attitudes towards immigration, indicating that political trust is the most significant connection with the attitudes towards immigration in Sweden, and even the correlation increased more following the refugee crisis, which supports the study hypothesis regarding the correlation between the political trust and immigration attitudes to be the most influential. Additionally, it was observed that it followed a trend direction almost identical to the attitudes towards immigration, which means that people's beliefs about politics, i.e., their trust in the government's ability to handle immigration issues, strongly relate to their opinions about immigrants. This finding is in line with the study conducted by Halapuu, Paas, and Tammaru (2014), where they examined attitudes towards immigration in European countries. Their research demonstrated that countries with higher institutional trust tended to have more positive attitudes towards immigration in 2008. The current findings support their results, indicating a consistent and parallel trend between political trust and attitudes towards immigration and suggesting a persistent relationship between these factors over time.

5.2 Discussing Changing Trends: The Impact of Political Trust and Societal Cohesion as Influential Factors

As already stated, the findings suggested that political trust had the most significant effect. Additionally, societal cohesion and political trust were the most changing trends among all the perceptions explored in this research, and political polarization could be a primary reason for this. The polarization of political leaders on the issue, including the adoption of stricter immigration policies by pro-immigration parties, has contributed to Swedes' lack of confidence in the country's immigration and integration policy. Especially since, in the past, before the rhetoric of the anti-immigration parties came to prominence, there was good harmony on immigration policy between the right and left parties in the country, giving Sweden a reputation for being a tolerant and open society (Zubashvili, 2020). Many political parties have had to reassess their policies and make changes. The political discourse around immigration has become more polarized. Some political leaders advocating a stricter immigration policy led many parties to change their policy and accept this change as essential (Euronews, 2021). In the past decade, immigration policy has undergone many fluctuations and continuously changing attitudes and policies. Swedish Prime Minister Fredrik Reinfeldt of the conservative party (Moderaterna), who led a right-wing government, welcomed refugees in 2014 and backed German Chancellor Angela Merkel's position to open the European borders to refugees fleeing war zones (Crouch, 2014). Prime Minister Stefan Löfven of the Social Democratic party, which led a left-wing government in his first year in office, supported open borders also, before witnessing the highest year on record of immigration, 163,000 in 2015 (OECD, 2017), led his government to tighten immigration policies while ending the granting of permanent residence permits to immigrants.

Research highlights the complexities of migration policies and their impact on migrant integration, advocating for reform and addressing tensions between national and EU sovereignty (Zaslove, 2008). Although anti-immigration parties managed to exploit the crises in various European countries and effectively emerged on the political scene for almost a quarter of a century, including in the neighboring Scandinavian countries, they did not gain prominence and enter the parliament in Sweden until after the global financial crisis. Moreover, they followed a policy like other far-right parties by trying to achieve electoral gains by blaming the politics of other parties and framing all country's problems with immigration (ECRI, 2022). The confusion of traditional party politics and crises contributed to the ease of creating a state of division and registering electoral votes for Sweden Democrats, making them the second-biggest party in Sweden (Valmyndigheten, 2022). History and current events repeatedly prove that nothing is constant in politics, not opinions on salient issues (Holmberg, 1997; Carsey, Geoffrey & Layman, 2006). Opinion dynamics and voting behavior may change from one election to another. The most prominent and relevant issues to the public during an election can significantly impact voting behavior. Political parties may alter their policies and orientations to secure their political survival, which can also influence public attitudes towards immigration.

Parties play a vital role in the polarization process, reflecting public trust in politicians and their policies and attitudes towards immigration. Integration, according to Hammar's (2021) study, is possible. However, the paradox of the integration policy trust issue lies in that citizens require convincing evidence of the effectiveness of the implemented policies to achieve successful integration. This may justify the emergence of a new far-right party and the decline in trust in traditional parties. This polarization has contributed to an increasingly divided society, with some Swedes feeling more hostile towards immigrants and others advocating for greater

inclusivity. The far-right parties criticized immigrants for causing high crime levels and undermining national tradition and culture. Recently, Sweden's immigration minister, Maria Malmer Stenergard, has been at the center of controversy over the validity of the data she cited, which claimed that more than half of immigrants in Sweden could not support themselves. Stenergard highlighted the government's commitment to reversing the current trend in immigration and resolving the issues plaguing Sweden. The minister emphasized that Sweden can no longer be immigrants welcoming country and must acknowledge its limitations (Kazmierska, 2023).

In recent decades there has been much polarization between the right and left blocs, which has caused a great divide based on the differences in ideas and ideologies due to the inequality in society and the differences in income and wealth, as well as the issue of immigration (McCarty, Poole & Rosentha, 2008). The succession of crises and the confusion of traditional parties in Sweden with their immigration policies opened the way for anti-immigration parties to play blame politics for achieving electoral gains, blaming the parties' policies, especially those related to immigration, and blaming immigrants for causing Sweden's problems. This caused a significant decline in citizens' trust in political parties and the immigration policies they follow. Polarization revolves around criticizing the other party's ideologies, policies, and orientations, questioning the morality of the other camp, and trying to incite the public against each other, converting rivalry into voting behavior (García-Guadilla & Mallen, 2018). For voters, they will not be overly concerned with the chronology of the success or failure of the policy. They are interested in a salient issue at the time and the parties' positions on it, which can be explained from a psychological point of view, where we tend to use immediate and present feelings about a salient issue that prompts us to make our decisions based on situations imprinted in our near memory (Healy & Lenz, 2014). Blaming immigrants for societal issues has become a popular tactic for some politicians to gain votes, even though immigrants are not responsible for creating laws and policies. Politicians scapegoating vulnerable groups divert attention from the root causes of problems, further damaging the integration process and social cohesion and promoting division.

The study's results indicate a pronounced decline in societal cohesion since 2002. This decline can be attributed to the negative influence of political discourse, which shapes people's perception of cooperation and reduces their inclination to help others. This phenomenon resembles Coleman's Boat, highlighting the interconnectedness of social structures and reciprocal behavior (Ylikoski, 2016). That is what we see in the apparent change in the political parties' immigration position in Sweden. Increasing negative attitudes towards pluralism cause an increase in political polarization and tension between different groups in society, disrupting the process of integration and societal cohesion in Sweden (Monopwa, Al-Ahmadi & Darvishpur, 2021).

Despite the emergence of far-right parties and their efforts to normalize anti-immigration rhetoric in Sweden, such views remain widely disliked in the country, both among the general population and in political spheres. A recent example of massive support for Murhaf, an 11-year-old Swedish asylum seeker whom far-right supporters targeted after a Sweden Democrats politician posted on Facebook attacking the child on ethnic grounds for his success in raising charity proceeds by selling the (Mayflower). The support led to a broken fundraising record at the sale of (Mayflower) (SBS News, 2023), highlighting the importance of social cohesion and the division surrounding it in Sweden. The current political climate in Sweden has become increasingly polarized on the issue of immigration, leading to a shift in attitudes towards immigrants. The recent controversy surrounding Swedish singer Carola, who made

controversial remarks blaming immigrants for the country's problems and raising fear for Swedish culture, religion and identity, highlights how this issue has become politicized. It is worth noting that Carola previously supported open immigration policies and even hosted refugees in her home (Månsson & Dahlgren, 2023).

Research shows that immigrants do better in labor markets; however, native peoples' economic and health situation is usually relatively better than immigrants' (OECD, 2018). Despite this fact, more attention is given to immigrants supposedly benefiting from Sweden's welfare and social assistance system rather than acknowledging the positive contributions and figures of immigration. In his recent article, Feldbaum (2023) pointed to the neglect and disregard towards the benefits of immigration in the labor market in Sweden and highlighted the official statistics from Statistics Sweden. According to the report, since 2005, approximately 600,000 people born outside of Sweden have entered the labor market, compared to around 100,000 people born within Sweden (Feldbaum, 2023). It is essential to highlight and focus on such figures to enhance societal cohesion.

Research indicates an increasing number of interpretations of personal security and neighborhood safety by blaming immigrants even without any direct contact with them (Halapuu, Paas & Tammaru, 2014). The rise in crime and violence concerns all society members, leading to a demand for policies that deter such behavior. It is essential to avoid generalizing and scapegoating specific groups and ethnicities as the sole source of the problem. There is a need to create more effective policies that benefit everyone in the community by addressing the root causes of these issues, such as poverty, lack of education, and mental health. It is crucial to promote unity and collaboration among all members of society to achieve a safer and more prosperous future for all. The increasing negative sentiment towards immigration in Sweden has prompted Bengt Westerberg, the former head of the Liberal Party, one of the right-wing parties forming the government supported by the Sweden Democrats, to defend immigrants. He questioned why there is little discussion of the positive aspects of immigration and immigrants in the country and why there is an attempt to generalize the criminal behavior of 1200 immigrants who are suspected of involvement in criminal networks by police to hundreds of thousands of immigrants in the country (Dagens Nyheter, 2023). Political trust and societal cohesion are essential factors influencing attitudes towards immigration in Sweden. A lack of trust in political policies and social disunity can contribute to negative attitudes towards immigrants. In contrast, a strong sense of societal cohesion and political trust can promote more positive attitudes towards immigration.

6. Conclusion

This study aimed to investigate the factors driving changing attitudes towards immigration in Sweden using European Social Survey data from 2002-2018. The historically welcoming and open immigration policy of Sweden made it a compelling case to study, given the recent shift towards tighter policies and decreased public trust in integration policies. The study sought to highlight the significant effect of political trust perception on attitudes towards immigration, which has not been explored in previous research in Sweden, particularly in the context of increased political polarization surrounding immigration. The findings revealed that factors such as economy, safety, culture, societal cohesion, and political trust perceptions significantly correlate and drive attitudes towards immigration alongside demographic factors such as

gender, age, and education. Political trust was found to have the most significant effects. While there is a dip in attitudes towards immigration, this dip is largely explained by the changes in political trust in the country. Once we control for political trust, the trend in the attitudes towards immigrants largely disappears. Additionally, the analysis highlights societal cohesion and political trust as the most dynamically changing trends which affect attitudes towards immigration.

This study comprehensively analyzes how attitudes to immigration have evolved over two decades and span various crises, what driving forces correlated with changing attitudes towards immigration, and which are more influential. However, the analysis is limited to 2018 due to incomplete data for later years. Therefore, further research with more recent data is recommended, which is particularly important given the growing polarization around immigration issues in Sweden in the years since, as the 2022 election has highlighted the deep divide between the country's right and left blocs. The Sweden Democrats' contribution to forming the government for the first time makes it interesting to monitor the political and voters' trust in immigration and integration policies. It should be noted that the neighboring Scandinavian countries witnessed a sharp decline in political trust in anti-immigration parties after they participated in the formation of various governments. The anti-immigrant far-right parties in Denmark and Norway have been influential in their respective political arenas for over 25 years. The Danish People's Party has been helping form multiple governments since 2001 and winning 27% of the 2014 European Parliament election vote. In the 2015 general election, it became the second-largest party, with 21% of the vote. However, recent years have seen a decline in public trust for the party, with a sharp drop in the 2022 general election, as they gained less than 3% (Barrett, 2022).

Similarly, the Progress Party of Norway has been a significant presence in the Norwegian parliament since the 1980s. It was a partner in the governing coalition from 2013 to 2020, and in the 2009 and 2013 elections, it emerged as the second-largest party in the country, with over 22% of the vote. However, in the 2021 elections, its vote share fell by half, indicating a significant decline in popularity among the electorate (Sulehria & Usman, 2021). These examples highlight that political trust is subject to regression for all parties. Far-right parties' effective participation in forming governments gives them a platform to implement their policies and makes them vulnerable to criticism. Their track record of implementing such policies further casts doubt on their level of political trust. Therefore, a more recent analysis of political trust and attitudes to immigration and monitoring the development in the upcoming years is necessary to deeply understand the correlation between political trust and attitudes towards immigration in Sweden. Furthermore, research is needed to gain a more nuanced understanding of the complex relationship between political trust, social cohesion and attitudes to immigration, including the effects of political polarization. Specifically, future studies could examine the consequences of reduced political trust in democracy and governance and its impact on public attitudes toward immigration. Examining the role of media and political discourse in shaping public perceptions can provide insight into the complex dynamics of this relationship.

Appendix

Appendix 1. Variables used in the analyzes

| Variables & ESS Survey Item and Code | Information on Coding |
|---|--|
| Migration Attitudes imbgeco - Immigration bad or good for the country's economy imwbent - Immigrants make the country worse or a better place to live imueclt - A country's cultural life undermined or enriched by immigrants | On a scale of 0-10 would you say: 0 – Bad for the economy ... 10 – Good for the economy 0 – Cultural life undermined ... 10 – Cultural life enriched 0 – Worse place to live ... 10 – Better place to live |
| Economic Perception hincfel - Feeling about household's income nowadays | Which of the descriptions comes closest to how you feel about your household's income nowadays? 1. Living comfortably on present income 2. Coping on present income 3. Finding it difficult on present income 4. Finding it very difficult on present income |
| Safety Perception aesfdrk - Feeling of safety of walking alone in local area after dark | How safe do you, or would you, feel walking alone in the area you live in after dark? 1. Very safe 2. Safe 3. Unsafe 4. Very unsafe |
| Culture Perception imptrad - Important to follow traditions and customs | Tradition is important to her/him. She/he tries to follow the customs handed down by her/his religion or her/his family. 1. Very much like me 2. Like me 3. Somewhat like me 4. A little like me 5. Not like me 6. Not like me at all |
| Political Trust Perception trstplt - Trust in politicians trstlgl - Trust in the legal system trstprrl - Trust in country's parliament | On a scale of 0-10 how much do you personally trust each of: 0 – No trust at all ... 10 – Complete trust |
| Societal Cohesion Perception ipudrst - Important to understand different people iphlppl - Important to help people and care for others well-being iplylfr - Important to be loyal to friends and devote to people close | Now I will briefly describe some people. How much of the following is important to her/him: 1. Very much like me 2. Like me 3. Somewhat like me 4. A little like me 5. Not like me 6. Not like me at all |
| Demographics gndr - Gender agea - Age Education (see Appendix 2) | Respondent: 1. Male 2. Female Age 1. School 2. Higher Education |

Data from ESS 2002-2018, Sweden

Appendix 2. Education Variable Used in the Study from Different Rounds of the ESS

| ESS Code, Question & Rounds | Information on Coding |
|--|--|
| edlvds - Highest level of education, Sweden <ul style="list-style-type: none"> 2010, 2012, 2014, 2016 & 2018 | <ol style="list-style-type: none"> 1. Ej avslutad folkskola/grundskola skolår 1-6 2. Avslutad Folkskola, Grundskolan skolår 7-8 3. Avslutad Grundskola skolår 9 4. Fackskola (1963-1970) - 2-årig gymnasielinje, 2-årig yrkesskola 5. Studieförberedande gymnasieprogram (3 år) 6. Gamla gymnasieutbildningar på två år 7. Yrkesinriktade gymnasieprogram (3 år) 8. 4-årig gymnasielinje (före 1995)/Tekniskt basår 9. Universitet/Högskola, 1 år, med examen 10. Eftergymnasial utbildning, ej Universitet/Högskola, 1 år (t ex KY-utbildning, militärutbildning) 11. Universitet/Högskola, 2 år, med examen (högskoleexamen) 12. 2-3 år KY-utbildning, Eftergymnasial utbildning, ej Universitet/Högskola 3 år 13. Kandidat och/eller yrkesexamen från Högskola, 3-4 år 14. Kandidat och/eller yrkesexamen från Universitet, KTH, CTH, Handelshögskolan, 3-4 år 15. Magisterexamen och/eller yrkesexamen från Högskola, >4 år 16. Masterexamen från Högskola 17. Magisterexamen och/eller yrkesexamen från universitet, KTH, CTH, Handelshögskolan >4 år 18. Masterexamen från Universitet, KTH, CTH, Handelshögskolan 19. Forskarutbildning: Licentiatexamen 20. Forskarutbildning: Doktorsexamen |
| edlvase - Highest level of education, Sweden <ul style="list-style-type: none"> 2006 & 2008 | <ol style="list-style-type: none"> 1. Ej avslutad folkskola/grundskola 2. Folkskola 3. Grundskola/Enhetsskola 4. Realskola/Flickskola 5. Fackskola (1963-1970) 6. 2-årig gymnasielinje, 2-årig yrkesskola 7. 3- eller 4 årig gymnasium (före 1995) 8. Yrkesinriktat gymnasium (efter 1992) 9. Teoretiskt gymnasium (efter 1992) 10. Universitet/högskola utan examen 11. Universitet/högskola, kortare än 3 år, med examen 12. Universitet/högskola, 3 år eller längre, med examen 13. Forskarutbildning |
| edlvse - Highest level of education, Sweden <ul style="list-style-type: none"> 2002 & 2004 | <ol style="list-style-type: none"> 1. Not finished elementary school 2. Elementary school, old 3. Elementary school 4. Lower secondary and elementary school, old 5. Vocational school 1963-1970 6. 2 year high school 7. 3-4 year high school prior 1995 8. Vocational high school after 1992 9. Theoretical high school after 1992 10. University, no exam 11. University, exam less than 3 years 12. University, exam more than 3 years |

Data from ESS 2002-2018, Sweden

References

- Abdi, H. and Williams, L. J. (2010), "Principal component analysis". *WIREs Comp Stat*, 2: 433-459. <https://doi.org/10.1002/wics.101>
- Barrett, M. (2022, February 22). Is the Danish People's Party chaos a sign of the far-right party's impending collapse? *The Local*. Retrieved April 29, 2023, from: <https://www.thelocal.dk/20220222/is-danish-peoples-party-chaos-sign-of-far-right-partys-impending-collapse>
- Bentsen B.M.A. (2017). Attitudes Towards Immigrants among Youth in Sweden. *MIM Working Paper Series*. Accessed February 12, 2023. <https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,uid&db=edswe&AN=edsswe.oai.DiVA.org.mau.12926&site=eds-live&scope=site>
- Bentsen, B.M.A. (2022). Intergroup Contact and Negative Attitudes Towards Immigrants Among Youth in Sweden: Individual and Contextual Factors. *Int. Migration & Integration* 23, 243–266. <https://doi.org/10.1007/s12134-021-00837-x>
- Berntson, E., Bernhard-Oettel, C., Hellgren, J., Näswall, K., & Sverke, M. (2016). *Enkätmetodik* (1. utg.). *Natur & kultur*.
- Bhugra, D., & Becker, M. A. (2005). Migration, cultural bereavement and cultural identity. *World psychiatry : official journal of the World Psychiatric Association (WPA)*, 4(1), 18–24.
- Brewer, M. B. (1979). *In-group bias in the minimal intergroup situation: A cognitive-motivational analysis*. <https://doi.org/10.1037/0033-2909.86.2.307>
- BRÅ (Brottsförebyggande rådet). (2022). *Swedish crime survey*. Retrieved April 15, 2023, from: <https://bra.se/bra-in-english/home/crime-and-statistics/swedish-crime-survey.html#:~:text=A%20total%20of%2080%20percent,but%20with%20some%20annual%20variations>.
- Carsey, T. M., & Layman, G. C. (2006). Changing Sides or Changing Minds? Party Identification and Policy Preferences in the American Electorate. *American Journal of Political Science*, 50(2), 464–477. <http://www.jstor.org/stable/3694284>
- Ceobanu, A. M., & Escandell, X. (2010). Comparative Analyses of Public Attitudes Towards Immigrants and Immigration Using Multinational Survey Data: A Review of Theories and Research. *Annual Review of Sociology*, 36, 309–328.

- Chander, C., & Tsai, Y. (2001). Social factors influencing immigration attitudes: an analysis of data from the General Social Survey. *SOCIAL SCIENCE JOURNAL*, 38(2), 177–188.
- Citrin, J., Green, D. P., Muste, C., & Wong, C. (1997). Public Opinion Towards Immigration Reform: The Role of Economic Motivations. *The Journal of Politics*, 59(3), 858–881.
- Clark, K., Drinkwater, S., & Robinson, C. (2014). *Migration, Economic Crisis and Adjustment in the UK*. IZA Discussion Papers.
- Crawley, H., & McMahon, S. (2016). Beyond fear and hate: Mobilising people power to create a new narrative on migration and diversity. *Centre for Trust, Peace and Social Relations*. <https://pureportal.coventry.ac.uk/en/publications/beyond-fear-and-hate-mobilising-people-power-to-create-a-new-narr>
- Crouch, D. (2014, September 12). Rift Emerges Before Vote in Sweden as Immigration Tests a Tradition of Openness. *The New York Times*. Retrieved April 27, 2023, from: <https://www.nytimes.com/2014/09/13/world/europe/rift-emerges-in-sweden-over-immigration.html>
- Dagens Nyheter. (2023, April 11). *Bengt Westerberg: Dags för paradigmskifte i invandringsdebatten*. Retrieved April 27, 2023, from: <https://www.dn.se/kultur/bengt-westerberg-dags-for-paradigmskifte-i-invandringsdebatten/>
- De Coninck, D., Ogan, C., & d’Haenens, L. (2021). Can ‘the Other’ ever become ‘One of Us’? Comparing Turkish and European attitudes towards refugees: A five-country study. *International Communication Gazette*, 83(3), 217–237. <https://doi.org/10.1177/1748048519895376>
- Demireva, N. (2019). *Immigration, Diversity and Social Cohesion*. Migration Observatory briefing, COMPAS, University of Oxford, UK, December.
- Diethelm Prowe. (1994). ‘Classic’ Fascism and the New Radical Right in Western Europe: Comparisons and Contrasts. *Contemporary European History*, 3, 289–314.
- Duxbury, C. (2021, March 25). Sweden’s far right takes a step closer to power. *Politico*. Retrieved March 27, 2023, from: <https://www.politico.eu/article/sweden-far-right-jimmie-akesson-election-2022-step-closer-to-power/>
- Edlund, L., & Pande, R. (2002). Why Have Women Become Left-Wing? The Political Gender Gap and the Decline in Marriage. *The Quarterly Journal of Economics*, 117(3), 917–961.

- Ekman, M., & Krzyżanowski, M. (2021). A populist turn? News editorials and the recent discursive shift on immigration in Sweden. *Nordicom Review*, 42(1), 67–87. <https://doi.org/10.2478/nor-2021-0007>
- Eriksson, B., Aradhya, S., & Hedefalk, F. (2016). *Pushing and Pulling : Determinants of migration during Sweden's industrialisation*.
- Euronews. (2021, April 9). Swedish government proposes tightening immigration laws. *Euronews*. Retrieved May 2, 2023: <https://www.euronews.com/2021/04/09/swedish-government-proposes-tightening-immigration-laws>
- European Commission against Racism and Intolerance (ECRI). (2012). Annual Report on ECRI's Activities. *Council of Europe*.
- European Commission against Racism and Intolerance (ECRI). (2022). Annual Report on ECRI's Activities. *Council of Europe*.
- Feldbaum, M. (2023, April 14). Invandrare fortsätter rädda svensk arbetsmarknad. *Arbetsvärlden*. Retrieved April 27, 2023, from: <https://www.arbetsvarlden.se/ledare/invandrare-fortsatter-radda-svensk-arbetsmarknad/>
- Fetzer, J., & Soper, J. (2004). *Frontmatter. In Muslims and the State in Britain, France, and Germany* (Cambridge Studies in Social Theory, Religion and Politics, pp. I-Viii). Cambridge: Cambridge University Press.
- Fortroendebarmetern 2023. (2023). *Medieakademin*. Retrieved April 2, 2023, from: https://medieakademin.se/wp-content/uploads/2023/03/Presentation_fortroendebarmetern_2023-WEBB-Final.pdf
- García-Guadilla, M. P. and Mallen, A. (2018). Polarization, Participatory Democracy, and Democratic Erosion in Venezuela's Twenty-First Century Socialism. *The ANNALS of the American Academy of Political and Social Science*. 681(1):62-77. doi:10.1177/0002716218817733
- Goldschmidt, T. (2017). Immigration, social cohesion, and the welfare state : studies on ethnic diversity in Germany and Sweden. *Department of Sociology, Stockholm University*.
- Gotkowska, J. (2022, May 24). Sweden and Finland on the threshold of NATO membership. Retrieved March 2, 2023: from: *OSW Commentary*. <https://www.osw.waw.pl/en/publikacje/osw-commentary/2022-05-24/sweden-and-finland-threshold-nato-membership>

- Goubin, S., Ruelens, A., & Nicaise, I. (2022). Trends in attitudes towards migration in Europe. A comparative analysis. *HIVA – Research Institute for Work and Society*.
- Hainmueller, J., & Hiscox, M. (2007). Educated Preferences: Explaining Attitudes Towards Immigration in Europe. *International Organization*, 61(2), 399-442. doi:10.1017/S0020818307070142
- Hainmueller, J., & Hopkins, D. J. (2014). Public attitudes towards immigration. *Annual Review of Political Science*, 17(1), 225-249. doi/pdf/10.1146/annurev-polisci-102512-194818
- Hair, J.F., et al. (2014). *Multivariate Data Analysis*. New Jersey: Pearson Education
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi-org.e.bibl.liu.se/10.1108/EBR-11-2018-0203>
- Hajjar, S. (2018). Statistical analysis: internal-consistency reliability and construct validity. *Int. J. Quan. Qualit. Res. Meth*; 6(1):46–57.
- Halapuu, V. Paas, T. & Tammaru, T. (2014). Is institutional trust related to the attitudes towards immigrants in Europe? A study of majority and minority population. *Norface Discussion Paper Series 2013014*, Norface Research Programme on Migration, Department of Economics, University College London. Doi: https://www.norface-migration.org/publ_uploads/NDP_14_13.pdf
- Hammar, O. (2021). Migranterns attityder och värderingar. *SNS Research Brief 80*. Retrieved from <https://ec.europa.eu/migrant-integration/system/files/2021-12/Hammar%202021%20sns-analys-80-migranterns-attityder-och-varderingar.pdf>
- Healy, A. and Lenz, G. (2014). Substituting the End for the Whole: Why Voters Respond Primarily to the Election-year Economy. *American Journal of Political Science*. 58(1): 31-47.
- Hellström, A., Nilsson, T., & Stoltz, P. (2012). *Nationalism vs. Nationalism: The Challenge of the Sweden Democrats in the Swedish Public Debate*. Government and Opposition, 47(2), 186-205. doi:10.1111/j.1477-7053.2011.01357.x
- Hetherington, M. J. (1998). The Political Relevance of Political Trust. *The American Political Science Review*, Vol. 92, No. 4, pp. 791-808.
- Holmberg, S. (1997). Dynamic Opinion Representation. *Scandinavian Political Studies*, 3. Retrieved from https://tidsskrift.dk/scandinavian_political_studies/article/view/32902

- Holtug, N., & Mason, A. (2010). Immigration, diversity and social cohesion. *ETHNICITIES*, 10(4), 407–414.
- Hopkins, D. (2010). Politicized Places: Explaining Where and When Immigrants Provoke Local Opposition. *American Political Science Review*, 104(1), 40-60. doi:10.1017/S0003055409990360
- IMF. (2012, July 6). *IMF Survey: Cloudy Outlook for Sweden After Years of Success*. Retrieved April 26, 2023, from: <https://www.imf.org/en/News/Articles/2015/09/28/04/53/socar070512c>
- Iyengar, S., & Simon, A. F. (2000). New perspectives and evidence on political communication and campaign effects. *Annual Review of Psychology*, 51(1), 149. <https://doi.org/10.1146/annurev.psych.51.1.149>
- Kazmierska, N. (2023, May 2). Kritiserad mening om invandrare i regeringens kampanj. *Aftonbladet*. Retrieved May 3, 2023, from: <https://www.aftonbladet.se/nyheter/a/7646mv/scb-kritiserar-mening-i-regeringens-kampanj-fallgropar>
- Kelman, H. C. (1958). Compliance, Identification, and Internalization: Three Processes of Attitude Change. *The Journal of Conflict Resolution*, 2(1), 51–60.
- Korewa, A. and Adamson, E. (2022, September 8). Your guide to Sweden’s fringe-driven general election. *Atlantic Council*. Retrieved March 3, 2023, from: <https://www.atlanticcouncil.org/blogs/new-atlanticist/your-guide-to-swedens-fringe-driven-general-election/>
- Macy, M., Deri, S., Ruch, A., & Tong, N. (2019). *Opinion cascades and the unpredictability of partisan polarization*. <https://doi.org/10.1126/sciadv.aax0754>
- Månsson, A., & Dahlgren, S. (2023, April 11). Carolas svar efter kritikstormen: "Jag var helt oförberedd". *Aftonbladet*. Retrieved April 27, 2023, from: <https://www.aftonbladet.se/nojesbladet/a/8JjxEx/carola-bemoter-kritiken-om-framlingsfientlighet>
- Mazoue, A. (2022, April 21). Marine Le Pen: A political animal vying to win the Élysée Palace. *France 24*. Retrieved February 27, 2023, from: <https://www.france24.com/en/france/20220421-marine-le-pen-a-political-animal-vying-to-win-the-%C3%A9lys%C3%A9e-palace>
- McCarty, N., Poole, K. T. and Rosenthal, H. (2008). Polarized America: The Dance of Ideology

and Unequal Riches. *MIT Press Books*, The MIT Press, edition 1, volume 1, number 0262633612, April.

McGuire, W.J. (1985) Attitudes and Attitude Change. In: Lindzey, G. and Aronson, E., Eds., *Handbook of Social Psychology*, 3rd Edition, Vol. 2, Random House, New York, 233-346.

McLaren, L. (2017). Immigration, national identity and political trust in European democracies. *Journal of Ethnic & Migration Studies*, 43(3), 379–399. <https://doi.org/10.1080/1369183X.2016.1197772>

Meuleman, B., Davidov, E., & Billiet, J. (2009). Changing attitudes towards immigration in Europe, 2002–2007: A dynamic group conflict theory approach. *Social Science Research*, 38(2), 352–365. <https://doi-org.e.bibl.liu.se/10.1016/j.ssresearch.2008.09.006>

Minkov, M., & Hofstede, G. (2011). *Is National Culture a Meaningful Concept?* <https://doi.org/10.1177/1069397111427262>

Mudde, C. (2013). Three decades of populist radical right parties in Western Europe: So what? *European Journal of Political Research*, 52(1), 1-19.

Munobwa, JS, Ahmadi, F, Darvishpour, M. (2021). Diversity Barometer 2020: Attitudes towards Immigration and Ethnic Diversity in Sweden. *Social Sciences*. 10(10):401. <https://doi.org/10.3390/socsci10100401>

Newton, K. (2001). Trust, Social Capital, Civil Society, and Democracy. *International Political Science Review*, Vol. 22, No. 2, pp. 201-214.

Norris, P. (2019). Cultural backlash : Trump, Brexit, and authoritarian populism. *Cambridge University Press*.

OECD. (2017). International Migration Outlook 2017. *OECD publishing*, Paris. http://dx.doi.org/10.1787/migr_outlook-2017-en

OECD/ILO. (2018). How Immigrants Contribute to Developing Countries' Economies, *OECD Publishing*, Paris. <http://dx.doi.org/10.1787/9789264288737-en>

Orange, R. (2022, September 16). What have the Sweden Democrats learned from other Nordic

far-right parties? *The Local*. Retrieved March 27, 2023, from: <https://www.thelocal.se/20220916/what-can-the-sweden-democrats-learn-from-other-nordic-far-right-parties/>

Pallant, J. (2010). *SPSS Survival Manual: A Step by Step guide to Data Analysis Using*

SPSS. Berkshire: Open University Press

Pazzanese, C. (2017, February 27). In Europe, nationalism's rising. *Harvard Gazette*.

Retrieved March 27, 2023, from: <https://news.harvard.edu/gazette/story/2017/02/in-europe-nationalisms-rising/>

Ryder, N. B. (1965). The Cohort as a Concept in the Study of Social Change. *American Sociological Review*, 30(6), 843–861.

Schneider, S. L. (2008). Anti-Immigrant Attitudes in Europe: Outgroup Size and Perceived

Ethnic Threat. *European Sociological Review*, 24(1), 53–67. <https://doi-org.e.bibl.liu.se/10.1093/esr/jcm034>

Semyonov, M., Raijman, R., & Gorodzeisky, A. (2006). The Rise of Anti-foreigner Sentiment in European Societies, 1988-2000. *American Sociological Review*, 71(3), 426–449. <https://doi.org/10.1177/000312240607100304>

Sides, J., & Citrin, J. (2007). European Opinion about Immigration: The Role of Identities, Interests and Information. *British Journal of Political Science*, 37(3), 477–504.

Silberman, M. G. (2002). Austria. *The American Jewish Year Book*, 102, 434–444.

<http://www.jstor.org/stable/23604552>

Simmel, G. (1950). *The Sociology of Georg Simmel*. Edited by K. H. Wolff. Translated by K. H. Wolff. *New York: Free Press*.

SBS News. (2022, April 26). *Racists targeted this young Swedish asylum seeker. Now, he has*

broken a fundraising record. Retrieved April 27, 2023, from <https://www.sbs.com.au/news/article/racists-targeted-this-young-swedish-asylum-seeker-now-hes-broken-a-fundraising-record/amamyw7vn>

SCB (Statistiska centralbyrån). (2023). Summary of population statistics. *SCB*. Retrieved from

<https://www.scb.se/en/finding-statistics/statistics-by-subject-area/population/population-composition/population-statistics/pong/tables-and-graphs/population-statistics---summary/summary-of-population-statistics/>

Storm, I. (2015). *Do hard times increase concerns about immigration?* The University of

- Manchester. <https://blog.policy.manchester.ac.uk/featured/2015/10/do-hard-times-increase-concerns-about-immigration/>
- Sulehria, F., & Usman, T. (2021, September 15). Green left: Norway turns left. *Green Left Weekly*, (1319). Retrieved April 29, 2023, from: <https://www.greenleft.org.au/content/norway-turns-left>
- Stryker, S., & Burke, P. J. (2000). The Past, Present, and Future of an Identity Theory. *Social Psychology Quarterly*, 63(4), 284–297.
- Urbański, M. (2022). Comparing Push and Pull Factors Affecting Migration. *Economies*, 10(21), 21. <https://doi.org/10.3390/economies10010021>
- Valdez, S. (2014). Visibility and votes: A spatial analysis of anti-immigrant voting in Sweden. *Migration Studies*, 2, 162–188.
- Valmyndigheten. (2022). *Election results 2022*. Retrieved from: <https://www.val.se/servicelankar/otherlanguages/englishengelska/electionresults/electionresults2022.4.14c1f613181ed0043d5583f.html>
- van der Meer, T., & Tolsma, J. (2014). Ethnic Diversity and Its Effects on Social Cohesion. *Annual Review of Sociology*, 40, 459–478. <https://doi.org/10.1146/annurev-soc-071913-043309>
- Vogt Isaksen, J. (2019). The impact of the financial crisis on European attitudes toward immigration. *CMS* 7, 24. <https://doi.org/10.1186/s40878-019-0127-5>
- Wildros, C. (2017). *The evolution of attitudes towards immigration in Sweden*. doi: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,uid&db=edsndl&AN=edsndl.339011&site=eds-live&scope=site>
- World Bank. (n.d.). *GDP growth (annual %) - Sweden*. Retrieved May 4, 2023, from: <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=SE>
- Ylikoski, P. (2016). Thinking with the Coleman boat. *Linköping University Electronic Press*. doi: <http://www.diva-portal.org/smash/get/diva2:1048216/FULLTEXT02.pdf>
- Zaslove, A. (2008). Migration, citizenship and the European welfare state: A European dilemma, by Carl-Ulrik Schierup, Peo Hansen and Stephen Castles, Oxford. *Oxford University Press*, 2006, 328 pp., £20.00, ISBN 0 19 828052 1. *Modern Italy*, 13, 233–235. <https://doi.org/10.1017/s1353294400011005>

Zubashvili, N. (2020). Deconstructing and Reconstructing Attitudes Towards Immigrants - The Case of Sweden. (*MSc in Development Studies*), *Lund University*, Retrieved from <https://lup.lub.lu.se/luur/download?func=downloadFile&recordId=9020672&fileId=9020832>