DEPARTMENT OF POLITICAL SCIENCE

THE REALITY AND DETERMINANTS OF STABLE ATTITUDES

A Panel Data Analysis of Immigration Attitudes in Sweden 2011-2018

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Abstract

Although the stability of attitudes is crucial for the understanding of public opinion, the literature is ambiguous regarding how individual attitudes change over time. This thesis asks the research question of how stable attitudes are and tests whether issue-saliency and political awareness determines stable attitudes. As the case, the thesis uses immigration attitudes in Sweden during the past decade. The case of immigration attitudes offers the opportunity to test the stability of an attitude over a period when the attitude-object been subject to turbulent changes. The analysis follows the attitudinal development of the Citizen panel participants, covering the period 2011 to 2018 over nine panel-waves. Additionally, the analysis also studies the stability of attitudes according to the cross-sectional national SOM-surveys. By examining the attitude stability at the aggregated-level, the individual level, and using structural equation models to estimate the relative stability, the results show that attitudes are very stable over time. The results do not indicate that issue-saliency nor political awareness determines stable attitudes. The supplementary test of another attitude confirms the results. The results imply that public opinion is of better quality than scholars have argued, that people's evaluations are robust, and that people are capable of having stable attitudes, also towards less salient issues and without being entirely politically aware.

Keywords: *Attitude stability, Public opinion, Immigration attitudes, Panel data analysis*

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Preface

Let me start by thanking the people whose support, help and encouragement made it possible for me to write and complete this thesis.

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1. Introduction

This thesis poses the research question of how stable attitudes are over time. The temporal stability of attitudes is a crucial question for public opinion research. First, the stability of attitudes indicates the quality of public opinion. If peoples' attitudes are not reflecting meaningful evaluations consistent over time, but rather brief statements in constant fluctuation, attempts to measure public opinion merely capture random responses. Second, the stability of attitudes indicates the strength of peoples' evaluations, and how inclined people are to change attitudes. By studying how individuals' attitudes develop over time, we are allowed to reveal the factors that can change how people evaluate reality.

Despite the importance of the research question, the literature is ambiguous regarding the empirical reality of attitudes' stability over time. The different positions range from Converse's (1964; 1970) arguments stating that the majority of the public have so-called non-attitudes and respond randomly to survey questions, to the findings of Achen (1975) and Erikson (1978; 1979) suggesting that response instability primarily is due to random measurement errors. In the Swedish context, studies indicate attitudes being stable (e.g., Andersson, Bendz & Stensöta, 2018; Demker, 2013) However, few studies base their conclusions on panel data that follow individuals' attitudinal development over time.

The thesis also tests two hypotheses regarding the factors that determine attitudes to be stable. The first hypothesis proposes that attitudes towards an issue are more stable when the issue is salient than when the issue is less salient. The second hypothesis proposes that politically aware individuals have more stable attitudes than individuals less politically aware. Both expectations rely on findings showing that attitudes that are cognitively accessible to retrieve from memory are more stable than less accessible attitudes (Blankenship et al., 2015; Fazio et al., 1982; Feldman & Zaller, 1995; Huckfeldt & Sprauge, 2000; Miller & Peterson, 2004; Pfau et al., 2004; Zaller, 1992). The literature has two explanations of what determines attitudes to be accessible. The first explanation is that attitudes towards an issue become accessible when the specific issue is salient (Feldman, 1995; Feldman & Zaller, 1992; Iyengar & Kinder, 1987; Krosnick, 1989; Lavine et al., 1996; Zaller, 1992). The second explanation is that political awareness determines attitude accessibility and that politically aware individuals have more accessible attitudes than individuals less politically aware (Bartle, 2000; Feldman, 1995; Feldman & Zaller, 1992; Zaller, 1992). Consequently, the thesis expects that stable attitudes is a function of issue-saliency and political awareness mediated through attitude accessibility.

Immigration attitudes in Sweden during the past decade is a good case for answering the research question and test the hypotheses of the thesis. The reason is the recent years' development of the immigration issue in Sweden. Over the past ten years, immigration to Sweden has been on high levels. Both when comparing with previous levels (Migrationsverket, 2020) and with the levels in other countries (Eurostat, 2020). Due to a drastic shift in immigration policy in 2015, immigration levels decreased during the latter part of the decade (Holmberg & Holmin, 26 October, 2015; Holm & Svensson, 24 November, 2015; Migrationsverket, 2020). The descrived development makes immigration attitudes a case that allows the thesis to test the stability of an attitude over a period when the attitude-object been subject to unique development and turbulent changes. Furthermore, as immigration has varied in saliency over the period (Martinsson & Weissenbilder, 2018), the case offers excellent opportunities for the analysis to test the first hypothesis of the thesis.

The thesis uses the material of Citizen panel from the Laboratory of Opinion Research (LORE) at the University of Gothenburg to answer the research question and test the hypotheses. The material offers a unique opportunity to study the stability of individual immigration attitudes over nine panel-waves measured between 2011 and 2018. The thesis also uses the national SOM-surveys to study the aggregated-level stability of immigration attitudes within a sample representative of the Swedish population. These two materials also allow the thesis to test another attitude's stability, namely people's concern for environmental deterioration (Appendix A).

As to the research question, the results indicate that attitudes are very stable over time. The analyses of the participants' immigration attitudes reveal stable attitudes at both the aggregated-level and the individual level. The picture of stable attitudes is further confirmed by the analyzes, which also considers the presence of measurement error in individual survey responses. Furthermore, the stability of attitudes does not appear to be affected by either issue-saliency or political awareness. The results cannot find support for any of the hypotheses. The test of the first hypothesis cannot assert statistically significant differences in attitude stability between the periods when immigration was more and less salient among the public. The same holds for the second hypothesis, as the tests cannot find that political awareness moderates how stable immigration attitudes are. The additional test of the stability of people's environmental deterioration concerns supports these conclusions (Appendix A).

The results imply that public opinion is of better quality than some scholars argue, that peoples' evaluations are robust and not easily changed, and that research should seek new explanations for what causes attitudes to be stable. The thesis suggests that future

research should aim to strengthen the validity of the results by using panel data with more comprehensive information on the individual level. Research should also investigate another determinant of stable attitudes, as the results imply that elite messages influence public opinion. The path towards answers to these questions is through the study of individuals. As panel surveys become more available and comprehensive, the opportunities to broaden our understanding of how individuals think and act politically will increase.

The thesis is structured as follows. First, the thesis reviews the literature on the empirical reality of attitudes' temporal stability and the factors determining attitudes to be stable. The literature review ends up with one research question and two hypotheses. The thesis then presents the case of Swedish immigration attitudes, followed by an account of the used materials, operationalizations, and methodological strategies. The analysis first examines the research question and then tests the two hypotheses. Finally, the discussion section addresses the implications and limitations of the results and proposes paths for future research to continue.

2. Literature Review

2.1. The Reality of Attitudes' Stability

The scholarly debate on the empirical reality of attitudes goes far back in time. In Converse's (1964; 1970) seminal works, he argues that few people have meaningful attitudes consistent over time. Instead, most of the public have so-called non-attitudes towards most issues, which they express randomly in surveys. If the statement of non-attitudes is true, it has severe consequences for the study of public opinion. It would not only devalue the quality of public opinion but also disqualify any attempt to measure citizens' attitudes. Essentially, the implication of Converse's (1964; 1970) statements is that public opinion scholars are interpreting random responses and give false meaning to non-attitudes.

In response to Converse's (1964; 1970) theory of non-attitudes, scholars came to criticize his assumption of no errors in the data (Feldman, 1989). With the statistical techniques developed by Heise (1969) and Wiley and Wiley (1970), Achen (1975) and Erikson (1978; 1979) re-examined attitudes' temporal stability while accounting for measurement errors in the survey responses. In contrast to Converse's (1964; 1970), Achen (1975) and Erikson (1978; 1979) found that attitudes are very stable over time. The researchers ascribed the observed response instability to measurement errors instead of non-

attitudes (Achen, 1975; Erikson, 1978; 1979; Feldman, 1989). Feldman (1989) reviews the two mutually exclusive interpretations of what causes response instability and concludes that neither model adequately accounts for the attitude instability. On the one hand, he finds evidence supporting that measurement error accounts for a large proportion of the variation (Feldman, 1989). However, he also finds that factors such as political information and education also determine levels of attitude stability that measurement error cannot explain (Feldman, 1989).

Several studies confirm Achen's (1975), Erikson's (1978; 1978), and Feldman's (1989) conclusions that attitudes are rather stable over time when accounting for measurement errors (e.g., Alwin & Krosnick, 1991; Ansolabehere, Rodden & Snyder, 2008; Green & Palmquist, 1994; Jenning & Markus, 1984; Kustov, Laaker & Reller, 2019; Prior, 2010; Ringlerova, 2019; Sears & Funk, 1999). Kustov et al. (2019) show that immigration attitudes on the individual-level are very stale over time and not substantially affected by external shocks such as 2008's financial crisis or 2015's European immigration crisis. Their material consists of six different panel surveys with multiple panel waves (Kustov et al., 2019). Their findings are consistent with the study of Lancee and Sarrasin (2015) that shows that the well-documented relationship between educational level and immigration attitudes (e.g., Ceobanu & Escandell, 2010; Coender & Scheepers, 2008; Demker, 2013; Semoyonov, Raijman & Gorodzeisky, 2006) is not due to liberalizing effects of education but rather the result of selection effects. Studies examining other attitudes' temporal stability also show that people have stable attitudes. Examples are party identification (Green & Palmquist, 1994; Jenning & Markus, 1984), political interest (Prior, 2010), support for the European Union (Ringlerova, 2019), and other attitudes and ideology positions (Alwin & Krosnick, 1991; Sears & Funk, 1999).

The literature also suggests that immigration attitudes in Sweden are stable over time (Andersson, Bendz & Stensöta, 2018; Demker, 2013). Demker's (2013) anthology provides comprehensive information about the development of Swedish immigration attitudes since the SOM-institute started their questioning in 1990. Although the opinion has shifted over time, the development of immigration attitudes at the aggregated-level in figure 1 indicates a high degree of attitude stability over time.

Andersson, Bendz, and Stensöta (2018) find support for a thermostatic model when it comes to Swedish immigration attitudes in Sweden. The study uses the cross-sectional national SOM-surveys and finds that immigration attitudes are contingent on immigration levels (Andersson et al., 2018). The relationship between immigration levels and

immigration attitudes is, however, dependent on immigration being salient in the news media (Andersson et al., 2018). Media is thus an informing actor that enables the public to change their attitudes because of policy outputs, in this case, immigration levels.

Figure 1. Proposal: Sweden should accept fewer refugees
National SOM-surveys 1990-2018

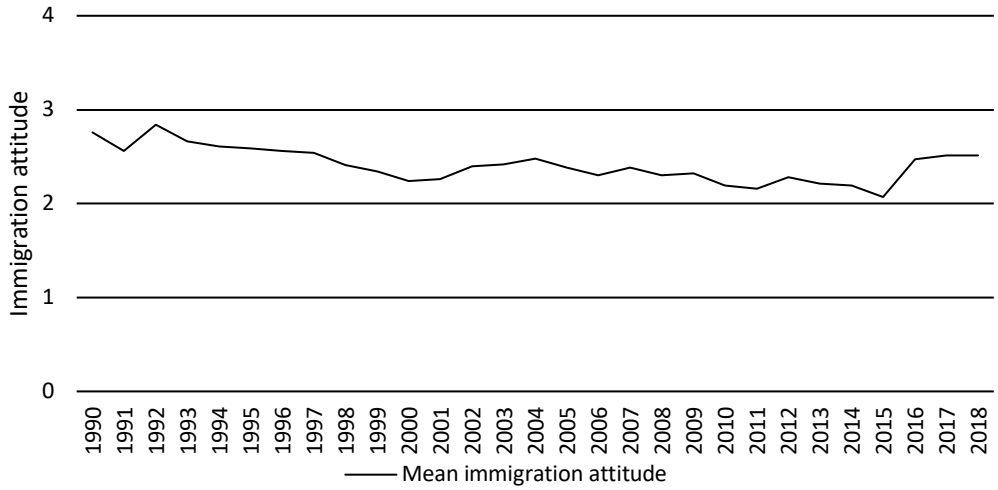


Figure 1. Comment: The results report the development of mean immigration attitude over time. The question is "proposal: Sweden should accept fewer refugees". The alternatives are "very bad proposal" (0), "fairly bad proposal" (1), "neither good nor bad proposal" (2), "fairly good proposal" (3), and "very good proposal" (4). *Source:* National SOM-surveys 1990-2018.

While the literature on immigration attitudes in Sweden offers valuable insights into individual variations in attitudes, the research question on the stability of individual attitudes requires measurements of individuals over multiple times. Cross-sectional surveys, like the national SOM-survey, renew their sample for each measurement. Thus, the results are multiple snapshots of the opinions of different samples at different times. The lack of individual measurements, and temporal sequencing, hinders conclusions regarding stability at the individual-level and causal inference. Consequently, our research question requires that we examine the stability of attitudes using panel data with multiple measurements of the same individuals' attitudes.

2.2. Attitude Accessibility Determines Stable Attitudes

A notion that came to change the way scholars view attitudes is that attitudes vary in their strength (Miller & Peterson, 2004). Strong attitudes are stable over time, hard to change,

guide political behavior, and impact information processing (Miller & Peterson, 2004; Petty & Krosnick, 1995). Weak attitudes are, on the contrary, unstable and poor predictors of political behavior and the interpretation of information (Miller & Peterson, 2004). The distinction between different types of attitudes changed the focus of the study of political attitudes (Miller & Peterson, 2004). From having looked at all attitudes among the whole public at once, scholars began to study the specific conditions under which attitudes could influence decision making (Miller & Peterson, 2004).

A factor shown to be important to explain attitude strength is attitude accessibility (Fazio, Chen, McDonel & Sherman, 1982). The concept of attitude accessibility refers to the ease by which an evaluation is recalled from memory and expressed as an attitude (Fazio et al., 1982; Higgins & King, 1981). The definition builds on a view of attitudes as associations between a specific object and an evaluation of that object (Fazio et al., 1982). In contrast to Converse's (1964; 1970) dichotomic distinction between attitudes and non-attitudes, the accessibility theory instead model attitudes as evaluative knowledge along a continuum scale (Fazio, 1995). As the evaluative knowledge varies in strength, accessibility of attitudes also varies.

The literature suggests attitude accessibility to be an influential determinant of stable attitudes (e.g., Blankenship, Wegener & Murray, 2015; Fazio et al., 1982; Feldman & Zaller, 1995; Huckfeldt & Sprauge, 2000; Miller & Peterson, 2004; Pfau et al., 2004; Zaller, 1992). Accessible attitudes are more stable, harder to change, and guides political behavior to a greater extent than less accessible attitudes (Miller & Peterson, 2004). Accessible attitudes towards abstract values also increase the stability of attitudes towards implicitly related policy areas and enhance the resistance to change attitudes when faces with messages challenging these abstract values (Blankenship et al., 2015). Thus, attitudes that are cognitively accessible to retrieve from memory are more likely to be stable over time than less accessible attitudes.

The popular operationalization of attitude accessibility is the time it takes for respondents to express their attitudes (Miller & Peterson, 2004). A pioneer work using this method is the study of Bassili and Fletcher (1991), which finds that respondents with more crystallized attitudes took less time to answer and were more likely to have stable attitudes. Another strategy is to use an indirect measurement of accessibility by letting respondents identify strings of letters to words related to the attitude (Miller & Peterson, 2004). There are also studies using subjective measures of accessibility by letting respondents evaluate the ease by which they recalled the attitude from memory (Holbrook & Krosnick, 2005).

2.3. Issue-Saliency Determines Stable Attitudes

A second influential determinant of the strength of attitudes is issue-saliency (Judd & Krosnick, 1989; Rabinowitz, Prothro & Jacoby, 1982; RePass, 1971; Sears & Funk, 1999). The concept of issue-saliency refers to the notion that issues vary in their importance to individuals (Miller & Peterson, 2004). People have stronger attitudes towards issues they perceive as important than towards less critical issues (Miller & Peterson, 2004). Similar to the accessibility theory, theories on issue-saliency developed in response to Converse's (1964; 1970) dichotomic distinction between attitudes and non-attitudes (Miller & Peterson, 2004). By distinguishing between issues depending on their importance for voters, scholars came to identify previously hidden mechanisms of issue-voting (Krosnick, 1988; Rabinowitz et al., 1982; RePass, 1971). Moreover, studies show that attitudes towards salient issues are stable and harder to change (Krosnick, 1988; Prisin, 1996).

The literature measures issue-saliency differently depending on the specific conceptualization. The most common measurement of issue-saliency is to ask respondents about their most important political issues (Miller & Peterson, 2004). A commonly used method for this task is to ask respondents to list the most important political issues (Miller & Peterson, 2004; Krosnick, 1988). Another approach is to operationalize issue-saliency by analyzing how prominent the specific issue is on the national agenda (Lavine et al., 1996). From this perspective, news media is a central unit of analysis, which relates to the notion of mediatized politics, that is, politics primarily occurring via news media (Iyengar, 2016; Strömbäck, 2008).

2.4. Issue-Saliency Determines Attitude Accessibility

The determinants of attitude accessibility and issue-saliency are, to a large extent, identical. Frequent and recent thinking about an issue, expression of attitudes towards that issue, and close relations to self-interest all contribute both to issue-saliency (Boninger, Krosnick & Berent, 1995; Fazio et al., 1982; Judd & Krosnick, 1989) and attitude accessibility (Higgins & King, 1981). More importantly, studies show a causal relationship between the two concepts where issue-saliency determines the attitude accessibility (Feldman, 1995; Feldman & Zaller, 1992; Iyengar & Kinder, 1987; Krosnick, 1989; Lavine et al., 1996; Zaller, 1992). People have more accessible attitudes towards issues that are salient for them than towards less salient issues.

Krosnick (1989) finds support for the causal relationship in a study that uses response latency to measure attitude accessibility. As a measurement of issue-saliency, the study uses respondents' subjective perceptions of the importance of political issues (Krosnick, 1989). According to the results, the response time for expressing attitudes towards important issues is significantly less than for less critical issues (Krosnick, 1989). Lavine et al. (1996) use a similar approach as Krosnick (1989) but also distinguishes between whether issues are perceived as important personally or nationally. The results are in line with Krosnick (1989) in that salient issues render more accessible attitudes (Lavine et al., 1996). Additionally, the results show that the personal importance of issues is more substantial related to attitude accessibility than the perception that issues are of national importance (Lavine et al., 1996).

Let us now recite two conclusions from the literature, which leads to our first hypothesis regarding what determines stable attitudes. First, accessible attitudes are more likely to be stable than less accessible attitudes (Blankenship, Wegener & Murray, 2015; Fazio, Chen, McDonel & Sherman, 1982; Feldman & Zaller, 1995; Huckfeldt & Sprauge, 2000; Miller & Peterson, 2004; Pfau et al., 2004; Zaller, 1992). The ease by which an object's evaluation is retrieved from memory and expressed as an attitude determines the likelihood of expressing the same attitude over multiple times. Second, salient issues are more likely to give rise to accessible attitudes than less salient issues (Feldman, 1995; Feldman & Zaller, 1992; Iyengar & Kinder, 1987; Krosnick, 1989; Lavine et al., 1996; Zaller, 1992). Thus, the perceived importance of an issue is likely to determine the ease by which individuals retrieve attitudes from memory. Consequently, we should expect the saliency of an issue to affect the stability of attitudes towards that specific issue, mediated via attitude accessibility. Together, the findings make the first hypothesis:

Hypothesis 1: Attitudes towards an issue are more stable when the specific issue is salient than when the issue is less salient.

2.5. Political Awareness Determines Attitude Accessibility

The previous literature argues that by distinguishing between issues, we can determine the temporal stability of attitudes. Another line of work proposes a distinction between individuals instead. From this perspective, accessible attitudes are a stable individual characteristic (Fazio, 1995; Fazio & Williams, 1986; Lau, 1989; Lavine et al., 1996; Miller & Peterson, 2004; Zaller, 1992). Depending on whether individuals possess accessible attitudes or not, attitudes vary in their stability (Bartle, 2000; Lau, 1989; Fazio et al., 1982).

In the distinction between individuals' varying attitude accessibility, political awareness is a central concept (Bartle, 2000; Feldman, 1995; Feldman & Zaller, 1992; Zaller, 1992). The concept of political awareness refers to the "extent to which individuals pay attention to politics and understand what he or she has encountered" (Zaller, 1992: p. 21). Solhaug, Denk, Olson, and Kristensen (2018) proposes a three-dimensional understanding of Zaller's (1992) concept. The first dimension is political attentiveness, which refers to the extent that individuals pay attention to politics (Solhaug et al., 2018). The second dimension is political knowledge, which is the natural consequence of paying attention to politics (Solhaug et al., 2018). The third dimension is political understanding, which requires individuals to know how different political elements relate to each other (Solhaug et al., 2018).

The literature proposes that politically aware individuals have more accessible attitudes, and more stable attitudes, than individuals less politically aware (Bartle, 2000; Feldman, 1995; Feldman & Zaller, 1992; Zaller, 1992). The mechanism to the relationship is that politically aware individuals receive and understand political messages to a greater extent than individuals less politically aware (Zaller, 1992). Since attitude accessibility refers to the strength of the evaluative knowledge of an object, attitude accessibility increases by the amount of political information that individuals receive and understand (Fazio, 1995; Zaller, 1992). There is also evidence of a direct relationship between political awareness and attitude stability (Zaller, 1992). By understanding political messages, individuals are less inclined to accept political messages in conflict with previous messages and their values (Zaller, 1992).

The literature arguing that attitude accessibility varies between individuals depending on political awareness leads us to the second hypothesis of the thesis. The hypothesis builds on two conclusions. First, that attitudes are more stable when attitudes are accessible than when attitudes are less accessible (Blankenship, Wegener & Murray, 2015; Fazio, Chen, McDonel & Sherman, 1982; Feldman & Zaller, 1995; Huckfeldt & Sprauge, 2000; Miller & Peterson, 2004; Pfau et al., 2004; Zaller, 1992). Secondly, that politically aware individuals have more accessible attitudes than individuals less politically aware (Bartle, 2000; Feldman, 1995; Feldman & Zaller, 1992; Zaller, 1992). Following from this, we should expect politically aware individuals to have more stable attitudes than individuals less politically aware. Consequently, the second hypothesis is:

Hypothesis 2: Politically aware individuals have more stable attitudes than individuals less politically aware.

3. The Case of Immigration Attitudes in Sweden

The thesis uses immigration attitudes in Sweden during the last decade as the case for answering the research question of how stable individual attitudes are, and to test the hypotheses regarding what determines stable attitudes. Over the last years, both Sweden's levels of immigration and immigration policy have been subject to turbulent changes. Between 2010 and 2019, over a million people applied for asylum in Sweden (Migrationsverket, 2020). These are higher levels than Sweden has ever experienced (Migrationsverket, 2020), and is more than most other European countries during the same period (Eurostat, 2020). Sweden's immigration levels peaked during the European immigration crisis in 2015 when over 160,000 people applied for asylum in one year (Migrationsverket, 2020). Over the years after 2015, the number of asylum seekers decreased substantially, varying between 21,000 and 28,000 per year (Migrationsverket, 2020).

A prominent consequence of the last decade's levels of immigration is the demographic development. In ten years, Sweden's population increased by almost a million people, with immigration explaining approximately 73 percent of the growth (SCB, 2020). The population growth rate in Sweden over the past ten years is thus the highest measured in the country since 1960, and also stands out in comparison with the European Union and the Nordic countries (Figure B1 & B2, Appendix B; World bank, 2020).

Swedish immigration policy has also been subject to turbulent changes in recent years. During the first half of the decade, there was a considerable consensus among most parties on liberal immigration policy. In 2011, the center-right government agreed with the oppositional green party on liberal immigration policy to exclude the Sweden Democrats from influence over the policy area (Svd, 3 March, 2011). In the previous general election 2010, the Sweden Democrats managed to get parliamentary representation for the first time by advocating a stricter immigration policy. The liberal agreement between the center-right government and the green party came later to be accepted by the Social Democrats and remained unchanged after the change of government in 2014 (Regeringskansliet, 2014).

The 2015 immigration crisis came to break the liberal consensus towards immigration rapidly. In September 2015, the Swedish prime minister stated on a manifestation organized by the refugee welcome movement[1] that "my Europe builds no wall" (Regeringskansliet, 2015). A month later, however, did six out of the eight parliamentary

[1] For more information about the Refugee Welcome movement see: https://refugees-welcome.se/

parties agree upon several policies aimed to reduce Sweden's levels of immigration (Holmberg & Holmin, 26 October, 2015). After another month, the government introduced even stricter policies, including internal border controls (Holm & Svensson, 24 November, 2015). In the following years, many parties came to reconsider their positions on immigration and adopted a stricter immigration policy than before (Demker, 2019).

The turbulent development of the immigration issue makes immigration attitudes during the last decade, a good case. When it comes to the research question of how stable individual attitudes are, the case offers the opportunity to study the stability of an attitude over a period when the attitude object has been subject to a unique and turbulent development. The case also offers the opportunity to test the first hypothesis that expects stable attitudes to depend on issue-saliency. The shifting levels of immigration, the European refugee crisis, the electoral successes of Sweden Democrats, and the changed policy positions towards immigration among the major parties are just some reasons to suspect that we should find variation in the perceived importance of immigration over the period. Variation in issue-saliency would enable an analysis of whether the perceived importance of immigration affects immigration attitudes' level of stability.

4. Data, Measurements, and Methods

4.1. The Citizen Panel (LORE)

The thesis uses the Citizen panel from the Laboratory of Opinion Research (LORE)[2] at the University of Gothenburg as the primary material for the analysis. The Citizen panel is an internet-based panel survey that has carried out a total of 35 panel-waves since 2010 (LORE, 2020). The panel contains more than 60,000 active participants and uses random probability samples of about 9,000 participants (LORE, 2020). The panels are usually conducted twice a year, during the spring and autumn. The analysis uses nine panel-waves of the Citizen panel to study the over-time stability of immigration attitudes. These panel waves result in a period of almost seven years, ranging between autumn 2011 to spring 2018. See table 1 for details of the analyzed panel-waves.

The participants of the Citizen panel are self-recruited, which makes it not a representative sample. The Citizen panel contains more men, educated, and politically interested people than the Swedish population (Andreasson et al., 2018). The

[2] For more information about Citizen panel and Laboratory of Opinion Research see: https://lore.gu.se/

overrepresentation of specific groups is a potential risk to the external validity of the results (Esaiasson, Giljam, Oscarsson & Wängnerud, 2012). Given that higher education is related to attitudes in favor of liberal immigration policy (Demker, 2013), we should expect the average immigration attitude to differ between the Citizen panel and the Swedish population.

Table 1. Overview of Citizen panel

Name	Autumn 2011	Spring 2012	Autumn 2012	Spring 2013	Spring 2014	Spring 2015	Autumn 2015	Autumn 2016	Spring 2018
Start date	2011/10/17	2012/03/26	2012/11/12	2013/06/12	2014/06/05	2015/05/11	2015/11/30	2016/12/09	2018/06/12
End date	2011/10/30	2012/04/15	2012/12/13	2013/07/07	2014/07/15	2015/06/02	2016/01/04	2017/01/04	2018/08/01
n	3,208	3,384	3,557	3,023	4,379	5,609	5,618	5,085	4,421

However, the representativeness of the sample is subordinate to the importance of variation in the analyzed variables. Mullnix et al. (2015) show that self-recruited samples generate effects very similar to population-based samples. However, the answer to the research question and the tests of the hypotheses require variation in the analyzed variables. Immigration attitudes not varying between participants would hinder the analysis of stability over time, and if political awareness is equal between participants and immigration is equally salient over time, we could not make causal inferences regarding the causes and effects. Therefore, the operationalization will ensure variation in the analyzed variables.

The primary value of a representative sample is that we can generalize attitudes to the population. For that purpose, the analysis also includes the results of a representative cross-sectional sample. By comparing the aggregated-level stability of immigration attitudes according to the Citizen panel with the results of the national SOM-surveys, the analysis can detect how the panel data participants differ from a random probability sample.

Another potential risk with panel data is the so-called panel effects. Panel effects refer to people's varying tendencies to remain in panel surveys (Prior, 2010). This tendency may relate to other factors, such as stable attitudes (Prior, 2010). The strategy to detect panel effects is straightforward. By comparing the attitude stability between those participants answering all panel-waves with those participants only participating in some, the

analysis can estimate whether there are any significant differences in stability between the two groups.

4.2. The National SOM-Surveys

The analysis of the aggregated-level stability uses the national SOM-surveys[3] as supplementary material. The national SOM-survey is a cross-sectional survey that the SOM-institute at the University of Gothenburg annually conducts since 1986 to measure the attitudes, political behavior, and media habits of the Swedish population (SOM-institute, 2018). The national SOM-surveys consists of a random probability sample of 3,500 individuals with Sweden as their country of residence.

That the survey is cross-sectional with new respondents each year makes the material not well suited for an analysis of the individual-level stability, or causal inferences. However, since the sample is representative of the Swedish population and offers long time-series of how immigration attitudes developed over time, the material offers the opportunity to compare the aggregated-level stability of attitudes.

4.3. Immigration Attitude

The attitude in focus is peoples' attitudes towards immigration. As a measurement of immigration attitudes, the analysis uses a question where the participants consider the proposal that Sweden should accept fewer refugees. There are five alternatives, ranging between "very bad proposal", "fairly bad proposal", "neither bad nor good proposal", "fairly good proposal", and "very good proposal". The question is identical in both the Citizen panel and the national SOM-surveys, which allows for comparisons between the two materials. The analysis code the variable for both samples as ranging between "very bad proposal" (0) to "very good proposal" (4).

That the measurement used to capture the concept of immigration attitudes are relative could influence the validity of the results when examining the development over time. The question implies that respondents should express their preferred level of immigration compared with today's actual immigration levels. Since immigration levels are changing, could also the meaning of the question varies over time.

[3] For more information about the national SOM-surveys and the SOM-institute see: https://som.gu.se/

This measurement of immigration attitudes has proven fruitful in previous research (Andersson et al., 2018; Demker, 2013). However, other operationalizations are possible. Ansolabehere et al. (2008) advocate that studies of attitude stability should use multiple indicators for an underlying concept to reduce the amount of measurement error. Kustov et al. (2019) follow Ansolabehere et al. (2008) and use multiple indicators to measure participants' immigration attitudes. Examples of indicators are attitudes towards other cultures, subjective perceptions of the consequences immigration have for the economy, and other policy attitudes related to immigration (Kustov et al., 2019). However, as the Citizen panel material does not include additional measures of attitudes towards immigration, the analysis is limited to using only one indicator.

4.4. Saliency of Immigration

The thesis conceptualizes issue-saliency as the perceived importance of the specific issue. Thus, the measurement aims to capture the perceived importance of immigration among the participants. For that purpose, the thesis uses the national SOM-surveys, which annually asks its respondents to list up to three issues or societal problems that are the most important today. The question is open-ended, and the free-text answers are coded manually and sorted into categories depending on their content.

The variable captures the proportion of respondents mentioning at least on of five subjects related to immigration. The thesis codes the responses mentioning at least one of the five subjects as 1, and the responses not mentioning any of the subjects as 0. The five subjects are:

1. *Migration policy*
2. *Integration policy*
3. *Refugee- and asylum policy*
4. *Immigration and immigrants*
5. *Segregation*

The lack of individual measurements on the saliency of immigration is unfortunate. The analysis would benefit from knowing how the saliency of immigration varies among the participants of the Citizen panel. Such measurements would allow better opportunities for testing the hypothesis regarding the effect issue-saliency has on stabilizing attitudes. However, as the Citizen panel does not include this measurement, the analysis must

rely on aggregated-level data. However, the excellent representativeness of the national SOM-surveys improves the chances of testing the hypothesis. As the national SOM-surveys provide a viable picture of how the saliency of immigration has changed over the period among the Swedish population, it is reasonable to assume this development to be generalizable for the participants of the Citizen panel as well. Although the measurement is not ideal, the chosen operationalization is potentially a viable strategy to test the first hypothesis.

4.5. Political Awareness

The analysis uses political interest as the measurement for Zaller's (1992) concept of political awareness. Fortunately, the Citizen panel offers individual-level measures of the political interest among the participants of the panel. In each panel-wave, the survey asks its participants to answer, "how interested are you in general bout politics?" with four alternatives ranging between "very interested", "fairly interested", "fairly uninterested", and "very uninterested". The national SOM-surveys use identical questions with the same alternatives. The operationalization codes the two samples identically and divides the participants into two cohorts depending on their political interest. The first cohort represents the participants less politically aware includes participants answering, "very uninterested" (0), "fairly uninterested" (1), and "fairly interested" (2) in politics. The second cohort representing the very politically aware includes the participants answering they are "very interested" (3) in politics. The cohort that is less politically aware is assigned the coding of 0, and the thesis codes the cohort very politically aware as 1.

The asymmetric coding stems from the overrepresentation of political interest in the Citizen panel. A more rational operationalization would include a distinction between the two respective categories of participants with the highest and lowest political interest. Such distinction would require a normal distribution of political interest, which the sample does not offer (i.e., figure B3, Appendix B). The skewed distribution due to the overrepresentation requires asymmetric coding. For this reason, the more rational coding would result in too small of a sample of participants with less political interest, a sample size that would hinder a viable comparison of the groups.

We should also address how well political interest captures the concept of political awareness. The concept of political awareness refers to the "extent to which individuals pay attention to politics and understand what he or she has encountered" (Zaller, 1992). Zaller (1992) advocates factual tests about politics to best capture the concept (p. 21f.).

Other studies use media exposure, educational level, or subjective evaluations of political knowledge to measure political awareness (Zaller, 1990).

However, the literature provides evidence suggesting political interest to be a viable proxy for political awareness. The reason is that political interest is closely related to individuals' attentiveness, knowledge, and understanding of politics (Delli, Carpini & Keeter, 1996; Dimitrova, Strömbäck, Shehata & Nord, 2014; Prior, 2007; Strömbäck, 2008; 2015; Strömbäck & Shehata, 2010; Strömbäck, Djerf-Pierre & Shehata, 2013). First, political interest is a determinant of news media exposure and therefore indicates the level of attention individuals pay to political matters (Prior, 2007; Strömbäck & Shehata, 2010; Strömbäck et al., 2013). Second, political interest and exposure to news media are closely related to political knowledge (Dimitrova et al., 2014; Strömbäck, 2015). Third, political interest affects the understanding of information in a positive direction (Delli et al., 1996).

4.5. Methodological Strategy

The thesis follows the methodological strategy of Prior (2010) and Ringlerova (2019) to answer the research question of how stable individual attitudes are. The strategy includes an assessment of the temporal stability of attitudes from three perspectives. First, the analysis examines the aggregated-level stability of the attitude. By studying how the average immigration attitude has changed over the analyzed period, the analysis can answer how public opinion has changed over time. This initial analysis also makes use of the representative cross-sectional sample from the SOM-institute as a point of comparison.

Second, the analysis examines the attitude stability at the individual-level by showing how frequent participants change their initial attitude and how substantial attitude changes are. Third, the analysis addresses the presence of measurement error in individual survey responses and employs a measurement error model to distinguish between real attitude change and variation in attitudes caused by measurement error. The measurement error model is a type of structural equation model, allowing the estimation of the relative stability of latent attitudes while controlling for measurement errors.

After examining the research question, the analysis moves on to test the first hypothesis that expects issue-saliency to determine stable attitudes. The analysis aims to test for significant differences in attitude stability between periods with different levels of issue-saliency. In other words, support for the hypothesis requires that immigration attitudes are significantly more stable during periods when the public perceive immigration as important

than during periods when the public perceives immigration as less critical. This section first presents how the saliency of immigration has developed over the analyzed period and relates this development to the aggregated-level and individual-level stability of immigration attitudes. Then, the analysis tests for significant differences in the relative stability of immigration attitudes between the period with high respective low saliency of immigration.

The second hypothesis expects that political awareness determines stable attitudes. Thanks to the individual-level data of the respondents' political interest, the analysis can test whether political awareness moderates the temporal stability of immigration attitudes. The first part of the analysis examines whether the aggregated-level and individual-level, stability is different between the two groups with different levels of political awareness. Then, the analysis employs a multigroup structural equation model aiming to distinguish whether political awareness moderates the relative stability of latent immigration attitudes.

5. Analysis and Results

5.1. Descriptive Statistics

Table 2. Descriptive statistics

Concept	*Variable*	*Source*	*N*	*Mean*	*Standard Deviation*	*Min*	*Max*
Attitude	Immigration attitude	The Citizen Panel	35,523	1.88	1.49	0	4
		National SOM-surveys 2011-2018	33,015	2.26	1.33	0	4
Political awareness	Political interest	The Citizen Panel	94,554	2.25	.71	0	3
		National SOM-surveys 2011-2018	52,515	1.69	.81	0	3
Issue-saliency	Perceived importance of immigration	National SOM-surveys	32,925	.33	.47	0	1

Table 2 provides an overview of the variables included in the analysis. The results reports expected differences between the self-recruited sample of Citizen panel and the population-based sample of the national SOM-surveys. The average participant of the Citizen panel is more favorable to liberal immigration policy and more politically interested, than the average respondent of the national SOM-surveys. However, we mentioned earlier that the

representativeness of the sample is subordinate to the variation of the variables (Mullinix et al., 2015). The distribution of immigration attitudes within both samples offers variation along with the five values of the variable (Figure B4 & B5, Appendix B). As mentioned earlier, the overrepresentation of politically interested within the Citizen panel's sample results in a skewed distribution of the variable (Figure B3, Appendix B).

5.2. How Stable are Attitudes?

5.2.1. The Aggregated-Level Stability of Immigration Attitudes

The first step in examining the research question of how stable attitudes are is to assess the stability of immigration attitudes at the aggregated-level. Figure 2 reports how the over-time development of mean immigration attitude. The lines with the squared markers represent the mean immigration attitude of the participants of the Citizen panel, and the line with the triangular marker represents the respondents of the cross-sectional national SOM-surveys. Additionally, the dotted line represents the participants of the Citizen panel that answered all nine panel-waves, whereas the solid line represents the entire sample of the Citizen panel.

Figure 2. Aggregated stability of immigration attitudes
Sweden should accept fewer refugees

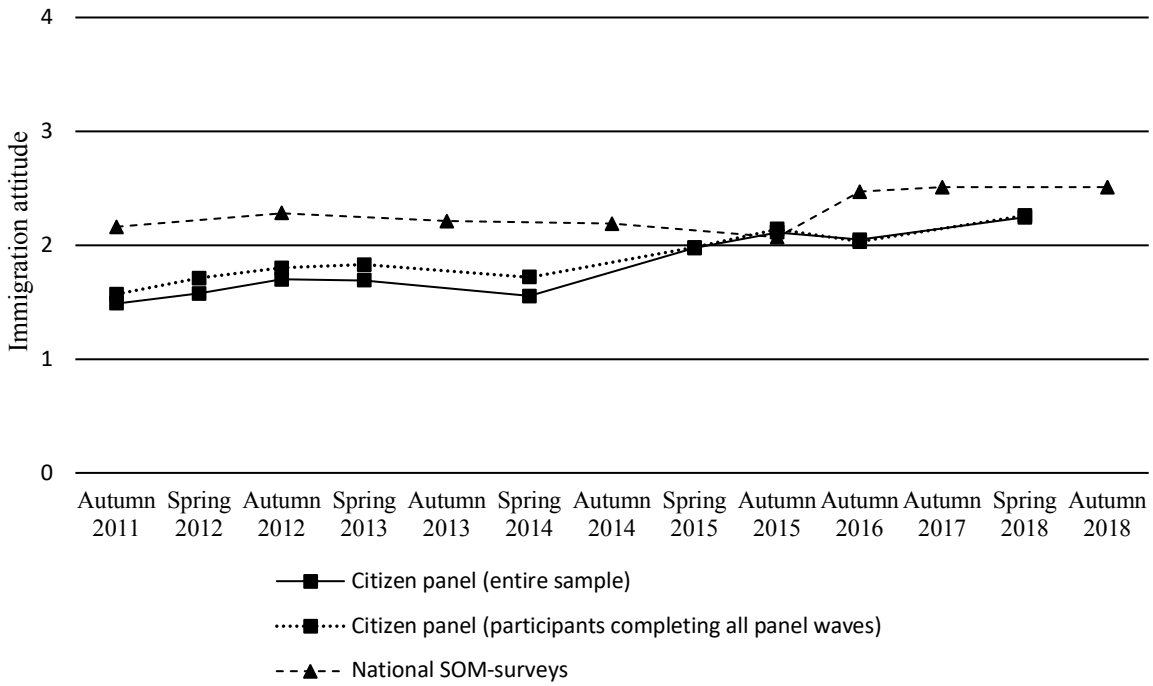


Figure 2. Aggregated stability of immigration attitudes. *Comment:* The results report the development of mean immigration attitude over time. The question is "proposal: Sweden should accept fewer refugees". The alternatives are "very bad proposal" (0), "fairly bad

proposal" (1), "neither good nor bad proposal" (2), "fairly good proposal" (3), and "very good proposal" (4). *Source:* Citizen panel & national SOM-surveys 2011-2018.

Figure 2 reports that immigration attitudes are very stable at the aggregated-level. Both the panel data of the Citizen panel and the cross-sectional sample of the national SOM-surveys report small over-time differences in average immigration attitudes. The results neither indicate effects on the aggregated-level stability of remaining in the panel throughout the analyzed period.

Both samples do, however, report an exception to the attitude stability when the average immigration attitude becomes more favorable to stricter immigration policy. For the Citizen panel, we note the substantial change of attitudes in the two panel-waves from spring 2015 and autumn 2015. According to the national SOM-surveys, the attitude shift occurs only in the survey from autumn 2016. In the following period, after the attitude shift, immigration attitudes seem to stabilize at the new level.

5.2.2. The Individual-Level Stability of Immigration Attitudes

The second step in answering the research question of how stable attitudes are is to estimate how frequent participants change their initial immigration attitude and how substantial the attitude changes are. Figure 3 reports the results. The lines with triangular markers represent the proportion of participants with the same immigration attitude they had in the first panel-wave in autumn 2011. The lines with squared markers represent the proportion of participants that did not change their initial immigration attitude by more than one unit. The solid lines represent the entire sample, whereas the dashed lines represent only the participants that completed all panel-waves.

The results suggest that immigration attitudes be very stable also at the individual level. Between 2011 and 2014, the probability of holding on to an identical immigration attitude is more than .60. In 2015, the stability dropped in two successive panel waves and stabilized at the new level around .50. In spring 2017, the probability was .44 of having an identical immigration attitude as almost seven years before.

The results further show that the vast majority of participants do not substantially change their immigration attitudes. During the initial four years, the probability is over .90 for participants not changing their immigration attitude by more than one unit. When looking over the entire period, the probability is never lower than .79.

Figure 3. Individual-level stability of immigration attitudes

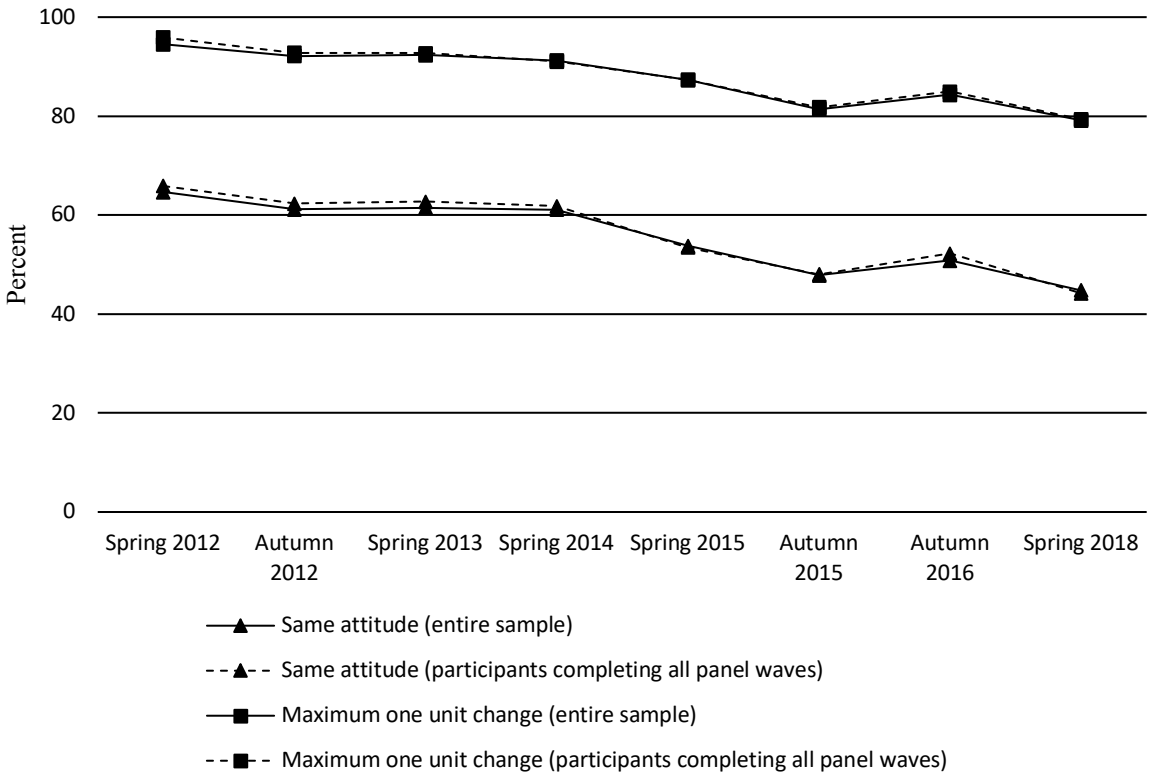


Figure 3. Individual-level stability of immigration attitudes. *Comment*: The lines with triangular markers report the proportion of participants answering the same immigration attitude as in autumn 2011. The lines with squared markers report the proportion of participants answering an immigration attitude with maximum one-unit difference as in autumn 2011. The solid lines report the results for the entire sample. The dotted lines report the results for the participants completing all panel waves. *Source*: Citizen panel.

Finally, the analysis of the individual-level stability of immigration attitudes does not indicate any effects on the stability of remaining in the panel. The results show an almost identical development between the sample with participants completing all panel-waves and the entire sample.

5.2.3. The Relative Stability of Immigration Attitudes

The third step in answering the research question of how stable attitudes are is more complex than previous analyses and requires a detailed account before presenting the results. So far, the analyses have not addressed the presence of measurement errors in individual survey responses and how this might influence the temporal stability. However, we should expect a certain amount of measurement errors in the individual survey responses. The reasons may be several. The attention to the questions could vary over time or between participants. The

interpretation of the same question may vary. Participants may also perceive that their genuine attitude lies between two alternatives and therefore switch between these two between the panel-waves. If we do not take measurement errors into account, we may then mistakenly give a picture of attitudes that are more unstable than they are.

First, the analysis follows Ansolabehere et al. (2008) and estimates the attitude stability by study how the attitudes over the analyzed period correlate with each other. Table 3 reports the Spearman correlation between the respective immigration attitude. Looking at the first column, reporting the correlations between the first immigration attitude in autumn 2011 and the subsequent attitudes, we note that the attitude stability declines over time. While the correlation between the first and second immigration attitude is .843, the correlation between the first and last immigration attitude is .733. The other columns show a similar pattern, where the correlation decreases over time. However, the drops in correlations are not substantial. After almost seven years, the correlations between attitudes of .733 suggest that immigration attitudes are stable over time.

Table 3. Spearman correlation of immigration attitudes

	Autumn 2011	Spring 2012	Autumn 2012	Spring 2013	Spring 2014	Spring 2015	Autumn 2015	Autumn 2016	Spring 2018
Autumn 2011	1.000								
Spring 2012	.843	1.000							
Autumn 2012	.823	.850	1.000						
Spring 2013	.828	.829	.840	1.000					
Spring 2014	.793	.820	.839	.837	1.000				
Spring 2015	.779	.801	.811	.831	.847	1.000			
Autumn 2015	.747	.748	.764	.774	.784	.849	1.000		
Autumn 2016	.749	.769	.767	.784	.790	.848	.855	1.000	
Spring 2018	.733	.752	.748	.762	.765	.823	.837	.866	1.000

Table 3. Comment: The table reports the Spearman's rank correlation coefficients between each of the panel waves. The Spearman's rank correlation coefficients report how strong correlation there is between two variables. The value ranges between +1 (perfect positive correlation) and -1 (perfect negative correlation). *Source:* Citizen panel.

Second, the analysis follows Prior (2010) and Ringlerova (2019) and employs a model that distinguishes real attitude change from variation caused by measurement errors. For that purpose, the thesis employs a type of structural equation model developed by Wiley and Wiley (1970) that allow estimating attitude stability while controlling for measurement errors. The structural equation model views the attitude as a latent, unobservable concept

(Wiley & Wiley, 1970). The observed survey responses function as indicators of the latent concept (Ringlerova, 2019). Consequently, defines the model the observed immigration attitude *X* at time *t* as the function of the latent immigration attitude *Y* at time *t* and an error term ε_t:

$$X_t = \alpha_t Y_t + \varepsilon_t \text{ (for t = 1, 2, 3,…T)}$$

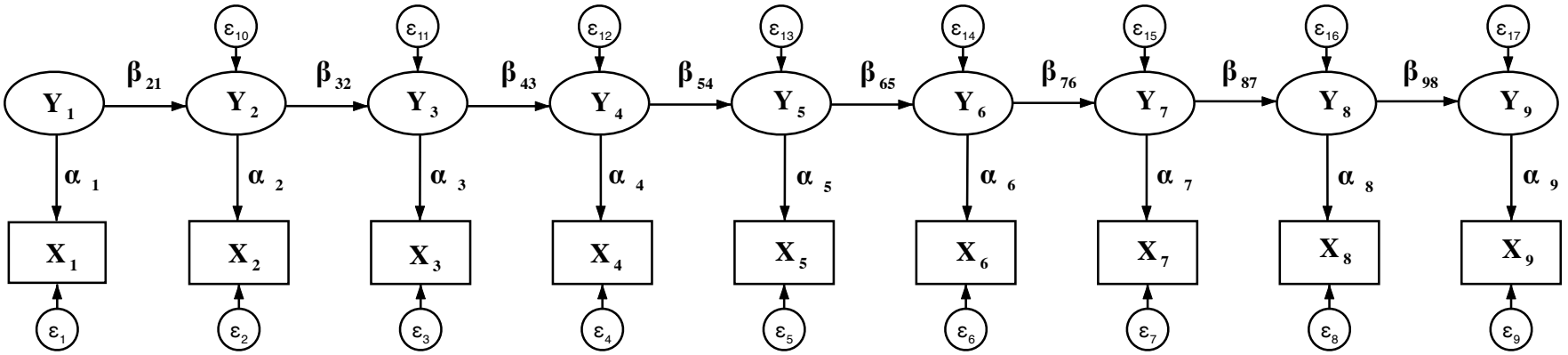
α_t represents the loading of the latent immigration attitude on the observed immigration attitudes. The loading is fixed to one since the model only includes one observed indicator. The model further conceptualizes attitude stability as the strength of the relationship between previous and present attitudes. Therefore, the model defines a lag-1 process:

$$Y_t = \beta_{t-1} Y_{t-1} + \varepsilon_t \text{ (for t = 2, 3,…T)}$$
$$Y_t = \varepsilon_t \text{ (for t = 1)}$$

Figure 4 illustrates the logic of the model. The circles represent the latent immigration attitudes Y_t, and the boxes represent the corresponding observed survey responses used as indicators X_t. The initial immigration attitude from autumn 2011 is exogenous, that is, determined outside the model. The subsequent immigration attitudes are endogenous and modeled as functions of the previous immigration attitude Y_{t-1} and an error term ε_t.

The coefficients $\beta_{21\text{-}98}$ are the estimates of primary interests. These coefficients are the stability estimates that reports the strength between the latent immigration attitudes. Values close to one indicate that attitudes are stable between two points of time, whereas values close to zero instead indicate unstable attitudes. In more detail, the stability estimates provide information about the relative stability of participants' immigration attitudes. Therefore, values close to one indicate stability because participants remain on their relative position to the time-specific mean (Ringlerova, 2019). On the other hand, values close to zero indicate unstable attitudes since participants at time *t* has another relative position to the average immigration attitude as they did at time *t-1* (Ringlerova, 2019).

Figure 4. Causal model of the measurement error model



Perfect stability thus requires that the relative stability coincides with stability at the aggregated-level. If the structural equation model estimates coefficients close to one for a period when the average attitude changes substantially, the results could indicate a case of perfect instability instead (Prior, 2010). That is that a large share of the participants changes their attitude to the same extent (Prior, 2010). Therefore, the analysis must interpret the structural equation model results in connection with the development of attitudes at the aggregated level.

The final point to address is the assumption of equal measurement error variance over time. The original Wiley and Wiley model (Wiley & Wiley, 1970) uses three panel-waves to estimate the stability of the variable. Identifying the six parameters in that model requires constraining the measurement errors to have equal variance over time (Wiley & Wiley, 1970). When the number of panel-waves exceeds three, Feldman (1989) shows that researchers can relax the assumptions of equal measurement error variance. Prior (2010) further demonstrates that relaxing the constraints on some of the measurement errors improves the model fit.

Therefore, the analysis conducts two models. The first model follows Wiley and Wiley (1970) and constraints the measurement error variance to be equal over time. The second model follows Prior (2010) and only constraints the measurement error variances to be equal for the panel-waves necessary for model identification. That is the measurement error variance for the first two and the last panel-wave ($\varepsilon_{1\text{-}2}$ and ε_{9}).

Table 4 presents the final test of the research question asking how stable individual attitudes are over time. The table reports the results of two structural equation models. Model 1 is the constrained model proposed by Wiley and Wiley (1970), and model 2 is the less constrained model proposed by Prior (2010). Overall, the results indicate that immigration attitudes are very stable over the analyzed period. Both models report stability coefficients very close to one. Only 3 out of 16 structural coefficients have a 95 percent confidence interval that does not include one. Consequently, the results suggest that participants, to a great extent, hold on to an immigration attitude with the same relative position to the average immigration attitude between all the panel-waves.

Table 4. Structural equation models of the relative stability of immigration attitudes

	Model 1	*Model 2*
β *Autumn 2011, Spring 2012*	.97*** (.02)	.96*** (.02)
β *Spring 2012, Autumn 2012*	.99*** (.02)	.98*** (.02)
β *Autumn 2012, Spring 2013*	.99*** (.02)	.99*** (.02)
β *Spring 2013, Spring 2014*	1.01*** (.02)	1.01*** (.02)
β *Spring 2014, Spring 2015*	.99*** (.02)	1.00*** (.02)
β *Spring 2015, Autumn 2015*	.95*** (.01)	.94*** (.02)
β *Autumn 2015, Autumn 2016*	.97*** (.01)	.98*** (.02)
β *Autumn 2016, Spring 2018*	.96*** (.02)	.96*** (.02)
var	$\varepsilon_{1\text{-}9}$: .27 (.02)	$\varepsilon_{1\text{-}2}$: .27 (.01) ε_3: .29 (.02) ε_4: .29 (.02) ε_5: .28 (.02) ε_6: .22 (.02) ε_7: .33 (.02) ε_8: .23 (.02) ε_9: .27 (.01)
x^2	52.620	31.564
df	27	21
p-value	.002	.065
CFI	.997	.999
RMSEA	.035	.025
[90 % confidence interval]	[.020; .049]	[.000; .042]
SRMR	.008	.006
N	786	786

Table 4. Comment: Structural coefficients with standard errors in parenthesis (estimated using Stata 16 sem command). *** = p > .001. x^2 is the chi-squared value, df is the degrees of freedom of the chi-squared value, followed by its p-value. CFI is confirmative fit index. RMSEA is root mean square error of approximation. SRMR is the standardized root mean squared. *Source*: Citizen panel.

Figure 5. Relative- and aggregated-level stability of immigration attitudes

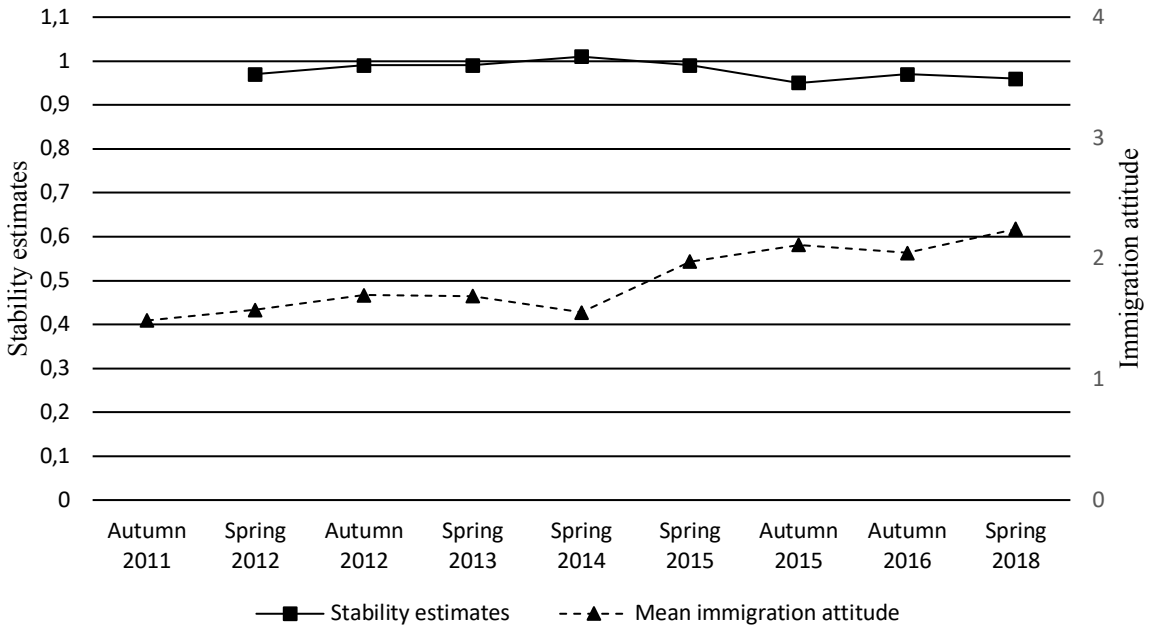


Figure 5. Relative- and aggregated stability of immigration attitudes. *Comment 1:* The primary y axis reports the structural coefficients as reported in model 1, table 4. *Source:* Citizen panel. *Comment 2:* The secondary y axis reports development of mean immigration attitude over time. The question is "proposal: Sweden should accept fewer refugees". The alternatives are "very bad proposal" (0), "fairly bad proposal" (1), "neither good nor bad proposal" (2), "fairly good proposal" (3), and "very good proposal" (4). *Source*: Citizen panel.

A meaningful interpretation of the results must also acknowledge the development of immigration attitudes at the aggregated level. Figure 5 reports the stability estimates at the primary axis, along with the mean immigration attitude changes at the secondary axis. From figure 5, we note a .5 unit change in the average immigration attitude between the panels from spring 2014 and spring 2015. Although we know that the average immigration attitude substantially changed during this period, model one reports a stability coefficient of .99 and model two a stability coefficient of 1.00. The discrepancy is probably best understood as a case of perfect instability (Prior, 2010: p. 750). During this period, immigration attitudes were less stable, and most participants changed their attitudes towards immigration to the same extent. In the following period, between spring 2015 and autumn 2015, we note a minor drop in the stability coefficients to .95 and .94, respectively. Together the results provide evidence that immigration attitudes were less stable during the year of 2015.

The thesis posed the question of how stable individual attitudes are over time and based on the results on the case with immigration attitudes in Sweden during the past

decade. The results suggest that attitudes are very stable, with one exception. During the year 2015, immigration attitudes changed towards favoring a stricter immigration policy resulting in less stable immigration attitudes. However, the results suggest this instability to be minor and to occur simultaneously within the sample.

Before proceeding with the tests of the two hypotheses, lets us briefly assess how well the model fits the data. Thanks to the model's overidentification that follows from using more than three panel-waves, we can assess the model fit using several post-estimation tests (Prior, 2010). Beginning from the top of table 4, the x^2 reports the chi-squared value from a test that compares the current model with a saturated model with zero degrees of freedom (Acock, 2013). The p-value indicates whether we can reject the null-hypothesis of the two models having an equally good (Acock, 2013). From table 3, we note that we only can reject the null-hypothesis for model 2. However, chi-squared values tend to be significant when using large samples (Schermelleh-Engel & Moosbrugger, 2003). The comparative fit index (CFI) compares the current model with a model in which there is no relationship between the immigration attitudes over time (Acock, 2013). Usually is a CFI value above .95 seen as a good model fit, and neither model in table 4 report values below .997, which is promising (Acock, 2013). The Root mean squared error of approximation (RMSEA) tests whether the errors substantially influence the degrees of freedom (Acock, 2013). No model in table 4 reports RMSEA values above .08, which is the commonly used benchmark for a good model fit (Acock, 2013). The final test is the standardized root mean squared (SRMR), which tests how close the correlations between the variables are the predicted correlations (Acock, 2013). Values should be as close to zero as possible and not exceed .08 (Acock, 2013). Neither model is close to exceeding that value, indicating a good model fit.

The test results indicate a somewhat better model fit for the second model with relaxed constraints on the measurement error variance than for the first model that assumes equal measurement error variance over time. The results are in line with the findings of Feldman (1989) and Prior (2010), showing that model fit improves of allowing the measurement errors to vary. However, the stability coefficients of the two models never differ more than .01. The small differences indicate that improving test statistics does not change the conclusions about stable immigration attitudes.

5.3. Does Issue-Saliency Lead to More Stable Attitudes?

The first hypothesis expects issue-saliency to determine stable attitudes. The hypothesis suggests attitudes towards an issue to be more stable during periods when individuals perceive the specific issue as important than when individuals perceive the issue as less important. The first foundation of the expectation relies on the findings showing that individuals have more accessible attitudes towards issues that are salient for them (Feldman, 1995; Feldman & Zaller, 1992; Iyengar & Kinder, 1987; Krosnick, 1989; Lavine et al., 1996; Zaller, 1992). The second foundation builds on the findings showing that accessible attitudes are more stable over time (Blankenship et al., 2015; Fazio et al., 1982; Feldman & Zaller, 1995; Huckfeldt & Sprauge, 2000; Miller & Peterson, 2004; Pfau et al., 2004; Zaller, 1992).

Figure 6. Saliency of immigration 2011-2018

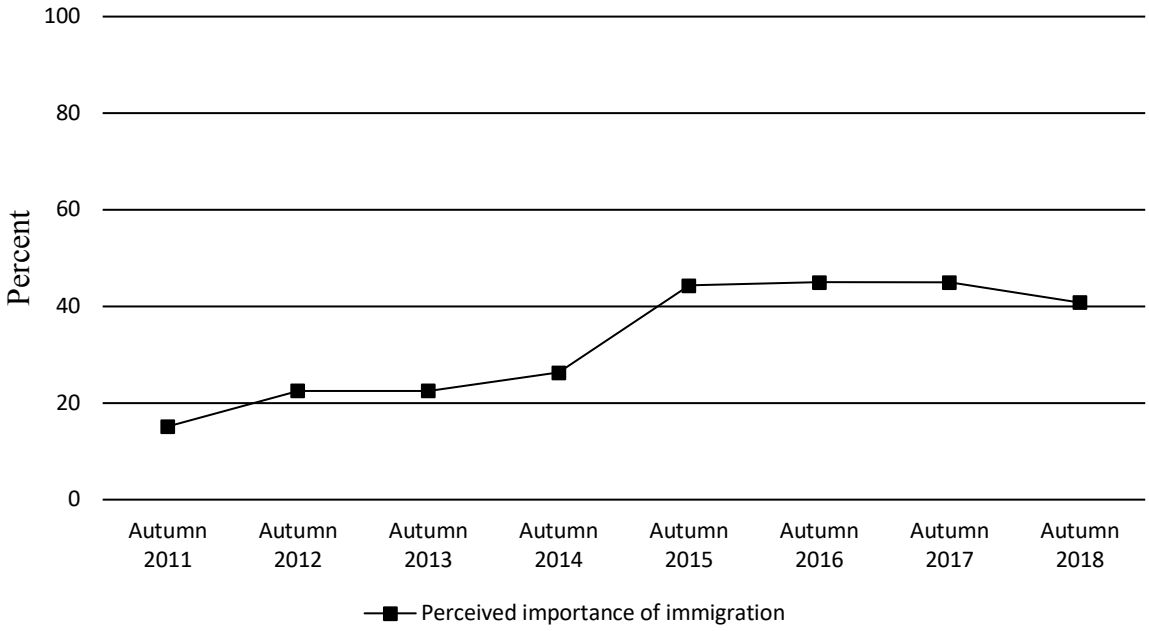


Figure 6. Saliency of immigration 2011-2018. *Comment*: The line reports the proportion of respondents mentioning immigration as one of the most important issues or societal problems. The question is "which issue(s) or societal problem(s) do you think is/are the most important in Sweden today?". The question is open-ended, and respondents can mention up to three answers. The answers are manually coded. The percentages are based on all respondents. *Source*: National SOM-surveys 2011-2018.

Before testing the hypothesis, the analysis provides an overview of how immigration has varied in saliency over the analyzed period. Figure 6 reports the proportion of respondents perceiving immigration as one of the most important issues according to the national SOM-surveys 2011-2018. Figure 6 suggests that immigration has become more

salient for the public during recent years. In 2011, only 15 percent of the respondents mentioned immigration as one of the three most pressing issues. Over the following three years, the proportion varied between 23 and 26 percent. In 2015, however, the perceived importance of immigration increased by 18 percentage points, which meant that almost half of the public perceived immigration as a critical issue. In the following years, immigration has continued to be an essential issue for the public.

According to the results, immigration became more salient for the public after the autumn of 2015. When we relate this notion to the first hypothesis, we should expect immigration attitudes to be more stable during the period after autumn 2015 than before immigration increased in saliency. However, when we compare how the saliency of immigration develops over time with the results of the previous analyses of immigration attitudes' stability, few factors indicate that expectation of being correct. Instead, the results report very stable immigration attitudes throughout the analyzed period, also when immigration was the least salient among the public (i.e., figure B6; B7; B8, Appendix B).

Although the descriptive analysis does not suggest that stable attitudes are dependent on the saliency of the issue, the analysis now continues with a statistical test of the first hypothesis. The test aims to detect whether the attitude stability significantly differs with varying levels of issue-saliency. The method for the test is straightforward. If issue-saliency gives rise to stable attitudes, there should be statistically significant differences in the stability coefficients when comparing the period before autumn 2015 with the period from autumn 2015 onwards.

Table 5 reports the results of a test examining the difference in the stability coefficients from the structural equation model in table 4. In detail, the test shows the differences between the first six and the last two structural parameters estimating the relative stability of immigration attitudes, as the two structural equation models in table 4 reports. From the results, we note that the minor differences in relative stability are not statistically significant. Thus, the analysis cannot find evidence for the first hypothesis expecting that individuals have more stable attitudes towards salient issues than less salient issues.

Table 5. Test for equal structural coefficients

Model 1 Constrained model			Model 2 Unconstrained model		
Structural coefficient difference	*p-value*	*95 % confidence interval*	*Structural coefficient difference*	*p-value*	*95 % confidence interval*
-.020	.599	[-.096; .055]	-.055	.190	[-.137; .027]

Table 5. Comment: The test compares the differences of the structural coefficients between the period autumn 2011 to spring 2015 with the period autumn 2015 to spring 2018. Table 4 reports the two models used for the comparisons. *Source:* Citizen panel.

We should, however, temper our interpretations regarding how the results speak to the first hypothesis. The discussion section will highlight the reasons for this in-depth, but two main issues are useful to bear in mind to the next part of the analysis. First, we do not have individual data on how salient immigration is among the Citizen panel participants. The first hypothesis test relies on the assumption that the national SOM-surveys reflect the participants of the Citizen panel. This implicit assumption is questionable and brings us to the second issue. Without individual-level data, we cannot test for moderating effects. Although the results point in the direction that issue-saliency does not determine stable attitudes, the available material prevents the analysis from testing this statistically.

5.4. Does Political Awareness Lead to More Stable Attitudes?

The material fits better to test the second hypothesis. The test of this hypothesis can use individual data of political awareness and thus test for moderating effects on attitude stability. The hypothesis suggests that politically aware individuals have more stable attitudes than individuals less politically aware. The expectation relies on the findings showing that political awareness increases the accessibility of attitudes (Bartle, 2000; Feldman, 1995; Feldman & Zaller, 1992; Zaller, 1992) and that accessible attitudes are more stable than less accessible attitudes (Blankenship et al., 2015; Fazio et al., 1982; Feldman & Zaller, 1995; Huckfeldt & Sprauge, 2000; Miller & Peterson, 2004; Pfau et al., 2004; Zaller, 1992). Additionally, the literature advocates a direct relationship between political awareness and attitude stability, as the understanding of political information reduces the individual susceptibility to political influence (Zaller, 1992).

The analysis tests the second hypothesis from two perspectives. First, the analysis examines the temporal stability of attitudes within the two groups with different levels of political awareness. Secondly, to see whether political awareness moderates the stability of attitudes, the analysis tests for statistically significant differences between the groups with different levels of political awareness.

Let us begin with the aggregated-level stability of attitudes. According to Citizen panel and the national SOM-surveys, figures 7 and 8 report the development of mean immigration attitudes depending on political awareness. The solid lines represent the participants less politically aware, and the dashed lines represent the participants that are very politically aware.

Figure 7. Aggregated-level stability of immigration attitudes by political awareness
Citizen panel

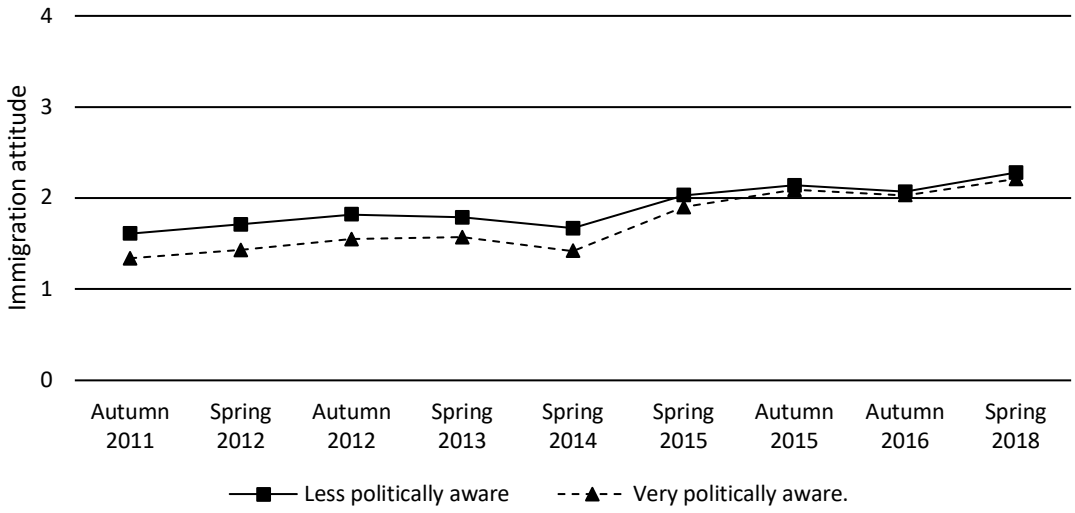


Figure 7. Aggregated stability of immigration attitudes by political awareness. Citizen panel. *Comment*: The results report the development of mean immigration attitude over time. The question is "proposal: Sweden should accept fewer refugees". The alternatives are "very bad proposal" (0), "fairly bad proposal" (1), "neither good nor bad proposal" (2), "fairly good proposal" (3), and "very good proposal" (4). The solid line with squared markers reports the results of the less politically aware (0) and the dashed line with triangular markers reports the results of the very politically aware (1). *Source*: Citizen panel.

Figure 8. Aggregated-level stability of immigration attitudes by political awareness
National SOM-surveys

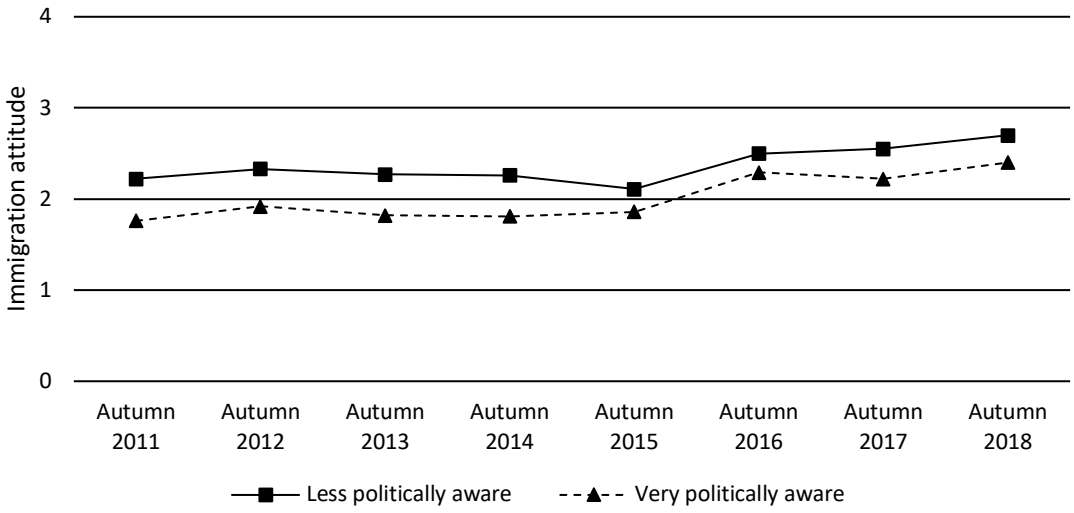


Figure 8. Aggregated stability of immigration attitudes by political awareness. National SOM-surveys. *Comment*: The results report the development of mean immigration attitude over time. The question is "proposal: Sweden should accept fewer refugees". The alternatives are "very bad proposal" (0), "fairly bad proposal" (1), "neither good nor bad proposal" (2), "fairly good proposal" (3), and "very good proposal" (4). The solid line with squared markers reports the results of the less politically aware (0) and the dashed line with triangular markers reports the results of the very politically aware (1). *Source*: National SOM-surveys 2011-2018.

Political awareness also does not distinguish the individual-level stability of the participants' immigration attitudes. Figure 9 reports the proportion of participants that did not change their initial immigration attitude in subsequent panel-waves, and the proportion that did not change their initial attitude by more than one unit. Although the less politically aware participants have slightly less stable immigration attitudes, there is still a probability of .42 for this group to hold on to an identical attitude over almost seven years.

Figure 9. Individual-level stability of immigration attitudes by political awareness

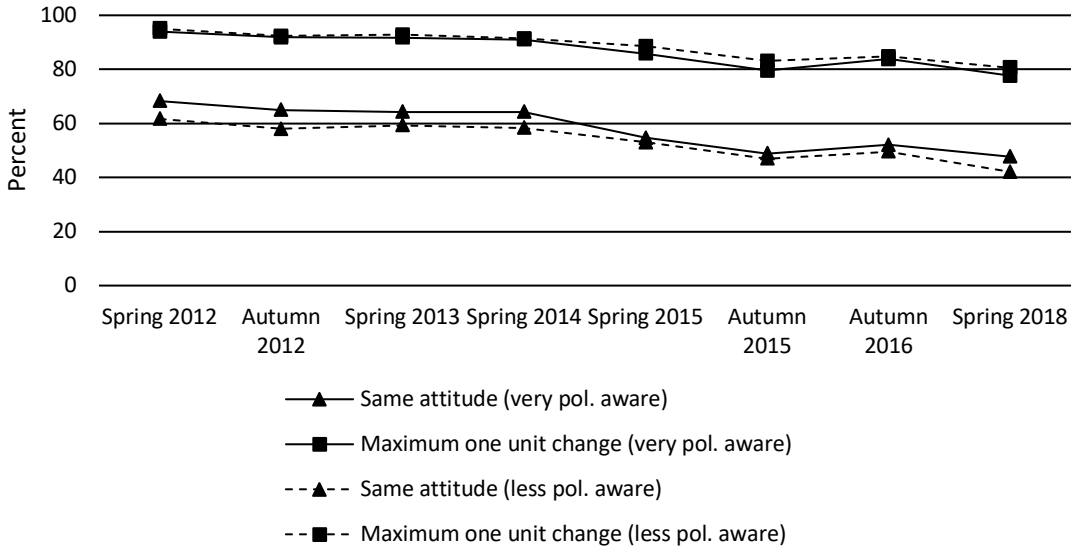


Figure 9. Individual stability of immigration attitudes by political awareness. *Comment*: The lines with triangular markers report the proportion of participants answering the same immigration attitude as in autumn 2011. The lines with rectangular markers report the proportion of participants answering an immigration attitude with maximum one unit difference as in autumn 2011. The dotted lines report the results for the respondents that are less politically aware (0). The solid lines report the results for the respondents that are very politically aware (1). *Source*: Citizen panel.

Before proceeding to test for moderating effects, we shall also assess the relative stability of immigration attitudes within each group. Table 6 reports the results of four structural equation models. Model 1 reports the results of the Wiley and Wiley model (1970), and model 2 reports the results of the models with relaxed constraints on the measurement error variances.

According to the results of table 6, both groups have very stable immigration attitudes. All structural coefficients are very close to one, and only 4 out of 36 coefficients have a 95 percent confidence interval that does not include one. The results tell us that the participants in both groups tend to hold on to an immigration attitude with the same relative position to the average attitude between eight different points of time. Again 2015 is the exception to the stability, where the stability slightly drops in two subsequent panel-waves. The decreased stability does not seem to differ between the two groups when comparing their respective stability coefficients.

Table 6. Structural equation models of relative stability of immigration attitudes by political awareness

	Very politically aware		*Less politically aware*	
	Model 1	*Model 2*	*Model 1*	*Model 2*
β *Autumn 2011, Spring 2012*	.96*** (.03)	.94*** (.03)	.98*** (.03)	.98*** (.03)
β *Spring 2012, Autumn 2012*	1.01*** (.03)	1.00*** (.03)	.97*** (.03)	.96*** (.03)
β *Autumn 2012, Spring 2013*	.98*** (.03)	.97*** (.03)	1.00*** (.03)	1.02*** (.03)
β *Spring 2013, Spring 2014*	1.01*** (.03)	1.03*** (.03)	1.00*** (.03)	.99*** (.03)
β *Spring 2014, Spring 2015*	.97*** (.03)	.96*** (.03)	1.03*** (.03)	1.04*** (.03)
β *Spring 2015, Autumn 2015*	.95*** (.03)	.95*** (.03)	.95*** (.03)	.93*** (.03)
β *Autumn 2015, Autumn 2016*	.98*** (.03)	.99*** (.03)	.95*** (.03)	.97*** (.03)
β *Autumn 2016, Spring 2018*	.99*** (.03)	.98*** (.03)	.94*** (.03)	.94*** (.03)
var	$\varepsilon_{1\text{-}8}$: .27 (.01)	$\varepsilon_{1\text{-}2}$: .21 (.03) ε_3: .24 (.03) ε_4: .39 (.04) ε_5: .26 (.03) ε_6: .24 (.04) ε_7: .30 (.03) ε_8: .19 (.03) ε_9: .21 (.03)	$\varepsilon_{1\text{-}9}$: .27 (.01)	$\varepsilon_{1\text{-}2}$: .25 (.03) ε_3: .34 (.03) ε_4: .21 (.02) ε_5: .28 (.03) ε_6: .18 (.02) ε_7: .35 (.03) ε_8: .27 (.03) ε_9: .25 (.03)
x^2	54.449	28.941	53.990	25.248
df	27	21	27	21
p-value	.001	.115	.002	.237
CFI	.994	.998	.994	.999
RMSEA	.053	.032	.049	.022
[90 % confidence interval]	[.032; .073]	[.000; .058]	[.030; .068]	[.000; .049]
SRMR	.011	.009	.011	.007
N	368	368	418	418

Table 6. Comment: Structural coefficients with standard errors in parenthesis (estimated using Stata 16 sem command). *** = p > .001. x^2 is the chi-squared value, df is the degrees of freedom of the chi-squared value, followed by its p-value. CFI is confirmative fit index. RMSEA is root mean square error of approximation. SRMR is the standardized root mean squared. *Source*: Citizen panel.

The assessment model fit report results similar to those of the analysis of the research question. Overall, the post estimation tests report an excellent model fit according to the commonly used benchmarks (Acock, 2013). We also note that by relaxing the constraints

on the measurement errors, we improve the model fit. Improving the model does not, however, results in substantially changed estimations of the relative stability of immigration attitudes.

So far, the analysis shows that both participants with less political awareness and those with high political awareness have stable attitudes towards immigration. However, an adequate test of the hypothesis requires that we statistically test whether political awareness moderates the stability of attitudes. Therefore, the analysis employs a multigroup structural equation model that allows for detecting group differences in the relative stability of participants' immigration attitudes.

The first test focuses on the measurement part of the structural equation model to determine whether political awareness moderates participants' attitudes towards immigration. The measurement part refers to the relationship between the observed survey responses and the latent variables (Acock, 2013). By testing for invariant measurement error variances, covariances, intercepts, and means, we detect significant differences between the two groups with different levels of political awareness. Since the interpretation of the chi-squared difference test is not entirely intuitive, we should first mention how the test is to be understood. The chi-square difference test compares an unconstrained model with a constrained nested model and tests the null-hypothesis of the two models having an equally good fit. If the chi-squared difference is statistically significant, the tests reject the null hypothesis, and consequently, group differences in the constrained parameter are likely.

Table 6 reports the results of three chi-square difference tests together with model fit indices for each model. The results indicate group differences in measurement error variances and covariances. However, the model fit indices report slightly worse model fit compared with the unconstrained model 1. The test cannot, however, reject the null hypothesis that constraining the two groups' intercepts improves the model. In other words, the test cannot show significant differences in the intercepts between the very politically aware and less politically aware participants.

Table 7. Comparison of multigroup structural equation models

Model	Chi-squared(df)	Comparison	Chi-squared(df) diff	RMSEA	CFI
1. Unconstrained model	55.33(43), p = .099		Not applicable	.027	.999
2. Equal errors model	86.17(49), p > .001	2 v 1	30.85(6), *p = .001*	.044	.996
3. Equal errors, and covariances model	93.78(50), p > .001	3 v 2	7.61(1), *p =.006*	.047	.995
4. Equal intercepts	66.09(52), p = .091	4 v 2	10.77(10), *p = .292*	.026	.999

Table 7. Comment: Table 7 reports the chi-squared value, degrees of freedom, RMSEA and CFI for 4 multigroup structural equation models that estimate the relative stability of immigration attitudes for participants very politically aware (1) and less politically aware (0). Model 1 do not constrain any parameters to be equal across the two groups. Model 2 constrain measurement error variances to be equal across the two groups. Model 3 constrain measurement error variances and covariances to be equal across the two groups. Model 4 constrain intercepts to be equal across the two groups. The chi-squared(df) diff reports the likelihood-ratio chi-squared test of compared nested models. *Source:* Citizen panel.

The next step is to test for invariant means of the exogenous latent variable. That means that the analysis tests whether the average latent immigration attitude from autumn 2011 differ between the two groups. By constraining the intercepts to be equal for the groups and assign the less politically aware participants as the point of reference with a value of 0, the test can assert for statistically significant differences in the mean value. The result reports a non-significant[4] mean value of .037. Consequently, we cannot assert significant differences in immigration attitudes between the two groups with different levels of political awareness.

So far, the second hypothesis tests have shown that both the very politically aware and less politically aware participants have stable attitudes and that neither the intercept nor the mean immigration attitude differ significantly between the groups. The remaining question is now to assess whether the two groups significantly differ in their relative stability of immigration attitudes. The analysis focuses on the structural part of the multigroup structural equation model to answer this question. That is, the relationship between the latent immigration attitudes that estimates the extent participants hold on to an attitude with the

[4] p = .712

same relative position to the time-specific mean. By testing for invariant structural relationships between the groups, the analysis can assert whether political awareness moderates the stability of immigration attitudes.

Table 8. Wald test for group invariance of parameters

	Unconstrained model		Constrained model	
Structural parameters	x^2(df)	p>x^2	x^2(df)	p>x^2
β Autumn 2011, Spring 2012	.194(1)	.6599	.175(1)	.6755
β Spring 2012, Autumn 2012	1.381(1)	.2400	.884(1)	.3471
β Autumn 2012, Spring 2013	1.672(1)	.1961	.322(1)	.5703
β Spring 2013, Spring 2014	.860(1)	.3537	.071(1)	.7893
β Spring 2014, Spring 2015	3.083(1)	.0971	2.279(1)	.1311
β Spring 2015, Autumn 2015	. 261(1)	.6092	.000(1)	.9848
β Autumn 2015, Autumn 2016	.138(1)	.7106	.221(1)	.6382
β Autumn 2016, Spring 2018	.890(1)	.3454	1.785(1)	.1816

Table 8. Comment: The Wald test tests for invariant structural parameters between the participants very politically aware (1) and those less politically aware (0). The x^2 (df) is the chi-squared difference between the two groups.
Source: Citizen panel.

The analysis uses the Wald test to test for invariant structural relationships between the two groups. Significant values indicate group differences in the attitude stability between the two groups, whereas insignificant values indicate that the test fails to find significant differences. Table 6 reports the results of two multigroup structural equation models. The unconstrained model allows all parameters to vary between the groups, and the constrained model assumes the measurement error variances, covariances, and intercepts to be equal.

The result indicates that immigration attitudes are equally stable regardless of the level of political awareness. None of the structural parameters in table 6 significantly differs between the two groups. Consequently, do not the results support the second hypothesis that expected attitudes to be more stable among politically aware individuals than for individuals less politically aware.

6. Concluding discussion

Although the temporal stability of attitudes is crucial for our understanding of public opinion, few studies address how individual attitudes develop over time. This thesis addresses the ambiguity by answering the question of how stable attitudes are, and test whether issue-saliency and political awareness determines attitudes to be stable. Analyzing immigration attitudes in Sweden on the material from Citizen panel allowed for studying the individual development of an attitude over nine-panel waves between the years 2011 to 2018. As to the research question, the results indicate that attitudes are very stable over time. The tests of the two hypotheses further confirm the picture of stable attitudes, as the results indicate high levels of attitudinal stability regardless of the saliency of the issue and the participants' political awareness.

The supplementary test confirms the picture of stable attitudes (i.e., Appendix A). The analysis of participants' concerns for environmental deterioration also shows a remarkable high level of stability over time (Figure A1; A2; A3 & Table A3; A4, Appendix A). Unfortunately, the environmental issue is equally non-salient over the analyzed period, which hinders an adequate test of the first hypothesis. The supplementary test of the second hypothesis, however, confirms the initial results and cannot find support for that political awareness moderate the stability of concerns for environmental deterioration (Figure A6; A7; A8 & Table A5; A6; A7, Appendix A).

The high level of stability implies that the quality of public opinion is better than some scholars argue (i.e., Converse, 1964; 1970). The results do not indicate that random responses to survey questions are widespread. Instead, the results indicate that peoples' evaluations of political issues have meaning and are consistent over time. The fact that stable attitudes do not appear to depend on the issue being salient or on the individual being politically aware reinforces this conclusion. People seem to have the capacity to have stable attitudes also towards issues less important and without being entirely politically aware.

Stability also indicates the strength of attitudes, and the results raise the question of the factors with the potential to change how people evaluate reality. It is easy to get the impression that peoples' attitudes are continually changing in a constantly ongoing political debate. The results suggest the opposite. Peoples' evaluations of political issues seem to be strong and rarely change. The attitude shift in 2015 is the exception. During this period, immigration attitudes became more unstable and changed towards favoring a stricter immigration policy. During the same period, many political parties changed their policy

positions towards immigration and adopted a stricter immigration policy. The fact that these phenomena coincide raises the question of whether stability in public policy and elite messages determines stable attitudes. If people change their attitudes when public policy changes, this would explain why we do not see any substantial attitude shift in participants' concerns about environmental deterioration. Although the parties' environmental policy has changed over time, no party has changed its intention with the policy in the same way as with immigration policy.

If it is correct that peoples' attitudes closely follow public policy and elite messages, we end up with a more pessimistic view on the quality of public opinion. Although people do not respond randomly to survey questions, this explanation questions the quality of the basis for peoples' evaluations. Public opinion would then, rather than being the sum of peoples' careful considerations, just reflect today's political discourse among the elites. Achen and Bartles (2016) advocate this understanding of public opinion and argues that individuals' attitudes are subordinate to a shared identity with candidates or parties. People are more likely to change their attitudes than to replace the candidate or party that affirms their own identity (Achen & Bartles, 2016).

Of course, we ought to interpret the results in light of the study's limitations. While the current analysis of the research question relies on a unique material covering a more extended period with more panel-waves than many similar studies of attitude stability (i.e., Alwin & Krosnick, 1991; Feldman, 1989; Green & Palmquist, 1990; Jenning & Markus, 1984; Ringlerova, 2019; Sears & Funk, 1999), there is still potential for improvement. An analysis that measures attitudes with multiple indicators over a more extended period and can compare the results with other attitudes would strengthening the validity of the results and provide a deeper understanding of the nature of public opinion.

Explicit measures of attitude accessibility would further improve the tests of the hypotheses. The expectation that accessible attitudes mediate issue-saliency and political awareness to determine stable attitudes rely on studies operationalizing accessibility as response latency (e.g., Blankenship et al., 2015; Fazio et al., 1982; Huckfeldt & Sprauge, 2000; Krosnick, 1989). Unfortunately, the current study does not measure how attitude accessibility varies between participants. Thus, the ability to test the hypotheses would be improved if panel studies in the future include measures of participants' response time.

The weakest part of the analysis consists of the test of whether issue-saliency determines stable attitudes. The analysis does succeed to show invariant attitude stability over two periods when the public perceives the issue as being of varying importance. However, a

robust test of the hypothesis requires an analysis of issue-saliency at the individual level. Only then, we can assert whether issue-saliency moderates the temporal stability of attitudes.

Fortunately, in testing the second hypothesis, the material allows us to test for moderating effects. The solidity of the test can instead be questioned based on the thesis' choice to operationalize Zaller's (1992) concept of political awareness with political interest. The extant literature does suggest political interest to be a viable proxy variable for political awareness (e.g., Delli, Carpini & Keeter, 1996; Dimitrova, Strömbäck, Shehata & Nord, 2014; Prior, 2007; Strömbäck, 2008; 2015; Strömbäck & Shehata, 2010; Strömbäck, Djerf-Pierre & Shehata, 2013). However, we should keep in mind the possibility that results could change with another operationalization. Fact-based tests on politics would, for example, reduce the risk of subjective biases in people's self-assessments. Another potential issue is the overrepresentation of politically interested in the sample. Thus, panel studies should strive for better representation among participants to ensure opportunities to analyze people with different experiences and characteristics.

That the analysis does not find support for the hypotheses could be due to the mentioned limitations. A more likely explanation lies in how the current study's design differs from the studies that have shown how stability is affected by accessibility, saliency, and political awareness. The studies showing how these factors determine attitude stability, are either laboratory experiments (e.g., Blankenship et al., 2015; Fazio et al., 1982; Huckfeldt & Sprauge, 2000; Krosnick, 1989), or conceptualizes stable attitudes as the stability between two measurement points (Feldman & Zaller, 1992). The studies that instead look at attitudes' development over a more extended period using multiple panel waves, to which this study belongs, fail to find decisive differences between the attitude stability of different groups (i.e., Kustov et al., 2019; Prior, 2010; Ringlerova, 2019). What answer is closest to truth might be relative and depends on the research's priorities and conditions. Where an experimental design is advantageous in causal inferences, the panel data analysis of this study can show real attitude development over several years.

The results of the thesis, together with its limitations, opens up many paths for future research to continue. As panel surveys become more extensive, comprehensive, and representative, the opportunities to understand what it means being a political individual will increase. A good understanding of our surroundings requires us to study phenomena as they manifest themselves. Striving for such understanding should also characterize the study of public opinion. Thus, research that seeks to explain any political development should devote itself to studying how political attitudes and behaviors develop over time.

Studying individual development is what the current study intended to do. Although the study has its limitations, the thesis still provides valuable knowledge about the empirical reality and determinants of stable attitudes. The thesis presents clear evidence that individuals have stable attitudes, implying that public opinion consists of meaningful evaluations and not random responses. Furthermore, stability does not appear to depend on the saliency of the issue nor political awareness. Consequently, individuals seem to have the capacity to hold on to political evaluations, also to less critical issues and without being fully informed about political matters. Together, these findings are promising. Not only for the study of public opinion but also for us believing in people's ability to make rational decisions and together decide on the structuring of society.

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8. Appendix

8.1. Appendix A. Supplementary test

8.1.1. The Attitude: Concern for Environmental Deterioration

The attitude in the focus of the supplementary test is peoples' concern for environmental deterioration. The Citizen panel and the national SOM-surveys measures the variable with an identical question: "Looking at today's situation, what worries you the most? […] Environmental deterioration". The alternatives for Citizen panel are: "not at all worrying" (0), "not particularly worrying" (1), "neither little nor very worrying" (2), "somewhat worrying" (3), and "very worrying" (4). The alternatives for national SOM-surveys are: "not at all worrying" (0), "not particularly worrying" (1), "somewhat worrying" (2), "very worrying" (3).

8.1.2. Saliency of Environment

The supplementary analysis conceptualizes the saliency of the environment as the perceived importance of environmental issues. For that purpose, the analysis uses the question from the national SOM-surveys, which ask respondents to mention what issues or societal issues that are most important today. The variable operationalizes saliency of the environment as the proportion of respondents that mentions at least one of four subjects related to the environment. The four subjects are 1) the environment, 2) pollution, 3) littering and, 4) the climate — the analysis code all responses mentioning one or more subjects as one and all other responses as 0.

8.1.3. Political Awareness

The supplementary analysis uses an identical operationalization of Zaller's (1992) concept of political awareness. The analysis operationalizes the question "how interested are you in general in politics?", and distinguish the responses "very uninterested" (0), "fairly uninterested" (1), and "fairly interested" (2) as the group less politically aware. The very politically aware constitutes of the responses answering "very interested" (3). The group less politically aware is assigned the coding of 0, and the groups very politically aware are assigned a coding of 1. The coding applies both for the Citizen panel and the national SOM-surveys.

8.1.4. Descriptive Results

Table A1. Overview of analyzed data from Citizen panel

Name	Spring 2013	Summer 2013	Summer 2014	Spring 2015	Autumn 2015	Spring 2016
Start date	2013/02/27	2013/06/12	2014/06/05	2015/05/11	2015/11/30	2016/05/31
End date	2013/03/30	2013/07/07	2014/07/15	2015/06/02	2016/01/04	2016/06/23
n	3,391	3,023	4,379	5,609	5,618	5,246

Table A2. Descriptive statistics

Concept	*Variable*	*Source*	*N*	*Mean*	*Standard Deviation*	*Min*	*Max*
Attitude	Concern for Environmental Deterioration	The Citizen Panel	24,700	1.42	1.16	0	4
		National SOM-surveys 2012-2016	15,748	2.25	.78	0	3
Political awareness	Political interest	The Citizen Panel	63,036	2.25	.71	0	3
		National SOM-surveys 2012-2016	37,210	1.70	.81	0	3
Issue-saliency	Perceived importance of immigration	National SOM-surveys 2012-2016	23,501	.11	.31	0	1

8.1.5. How Stable are Concerns for Environmental Deterioration?

Figure A1. Aggregated-level stability of concerns for environmental deterorientiion
Looking at today's situation, what worries you most? [...] Environmental deterorientation

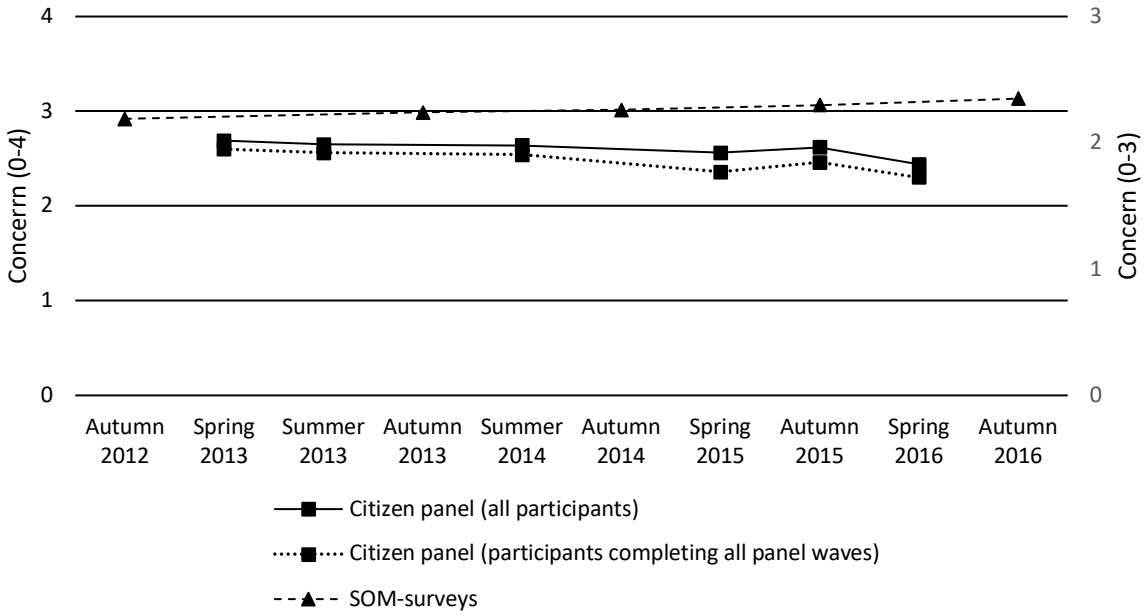

Figure A1. Comment 1: The primary axis reports the development of mean concern for environmental deterioration over time. The question is "Looking at today's situation, what worries you the most? […] Environmental deterioration". The alternatives are "not at all worrying" (0), "not particularly worrying" (1), "neither little nor very worrying" (2), "somewhat worrying" (3), and "very worrying" (4). *Source:* Citizen panel. *Comment 2:* The secondary axis reports the mean concern for environmental deterioration over time. The question is "Looking at today's situation, what worries you the most? […] Environmental deterioration." The alternatives are "not at all worrying" (0), "not particularly worrying" (1), "somewhat worrying" (2), "very worrying" (3). *Source:* National SOM-surveys 2012-2016.

Figure A2. Individual-level stability of concerns for environmental deteorientation

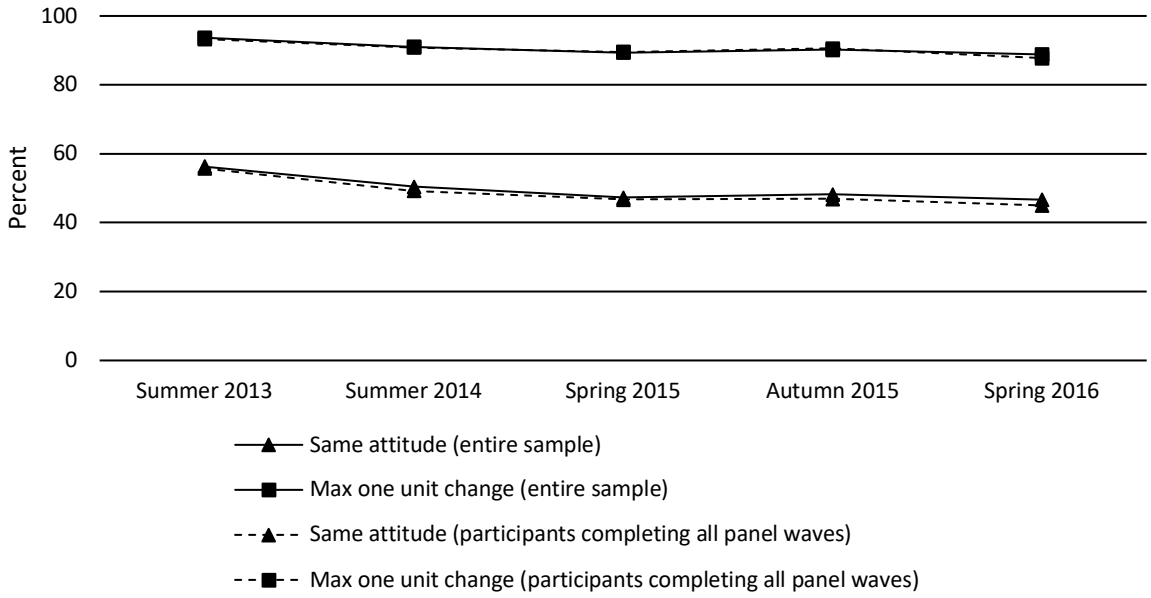

Figure A2. Comment: The lines with triangular markers report the proportion of participants answering the same concern for environmental deterioration as in spring 2013. The lines with rectangular markers report the proportion of participants answering a concern for environmental deterioration with maximum one unit difference as in spring 2013. The solid lines report the results for the entire sample. The dotted lines report the results for the participants completing all panel waves. *Source:* Citizen panel.

Table A3. Spearman correlation of concerns for environmental deterioration

	Spring 2013	Summer 2013	Summer 2014	Spring 2015	Autumn 2015	Spring 2016
Spring 2013	1.000					
Summer 2013	.733	1.000				
Summer 2014	.666	.697	1.000			
Spring 2015	.680	.719	.746	1.000		
Autumn 2015	.682	.695	.715	.735	1.000	
Spring 2016	.649	.676	.665	.719	.732	1.000

Table A4. Measurement error models of the relative stability of concerns for environmental deterioration

	Model 1	*Model 2*
β *Spring 2013, Summer 2013*	1.02 *** (.03)	.99*** (.03)
β *Summer 2013, Summer 2014*	.97*** (.03)	.95*** (.03)
β *Summer 2014, Spring 2015*	1.03 *** (.03)	1.05 *** (.03)
β *Spring 2015, Autumn 2015*	.94*** (.02)	.95*** (.02)
β *Autumn 2015, Spring 2016*	.96*** (.02)	.96*** (.02)
var	$\varepsilon_{1\text{-}6}$: .33 (.01)	$\varepsilon_{1\text{-}2}$: .30 (.02) ε_3: .39 (.02) ε_4: .34 (.02) ε_5: .31 (.02) ε_6: .30 (.02)
x^2	27.152	13.336
df	9	6
p-value	.001	.038
CFI	.997	.999
RMSEA	.040	.031
[90 % confidence interval]	[.023; .057]	[.007; .053]
SRMR	.010	.006
N	1,283	1,283

Table A3. Comment: Structural coefficients with standard errors in parenthesis (estimated using Stata 16 sem command). *** = p > .001. x^2 is the chi-squared value, df is the degrees of freedom of the chi-squared value, followed by its p-value. CFI is confirmative fit index. RMSEA is root mean square error of approximation. SRMR is the standardized root mean squared. *Source*: Citizen panel.

8.1.6. Does Issue-Saliency Lead to More Stable Attitudes?

The issue of environment demonstrates very small variation in saliency over the analyzed period. This hinders an adequate test of the first hypothesis, as the test aims to compare attitude stability between periods with different levels of issue-saliency. Therefore, the supplementary test cannot test the first hypothesis and limits to compare the three perspectives of attitude stability in relation to how the saliency of environmental issues develops over time.

Figure A3. Aggregated stability of concerns for environmental deterioration and perceived importance of environmental issues

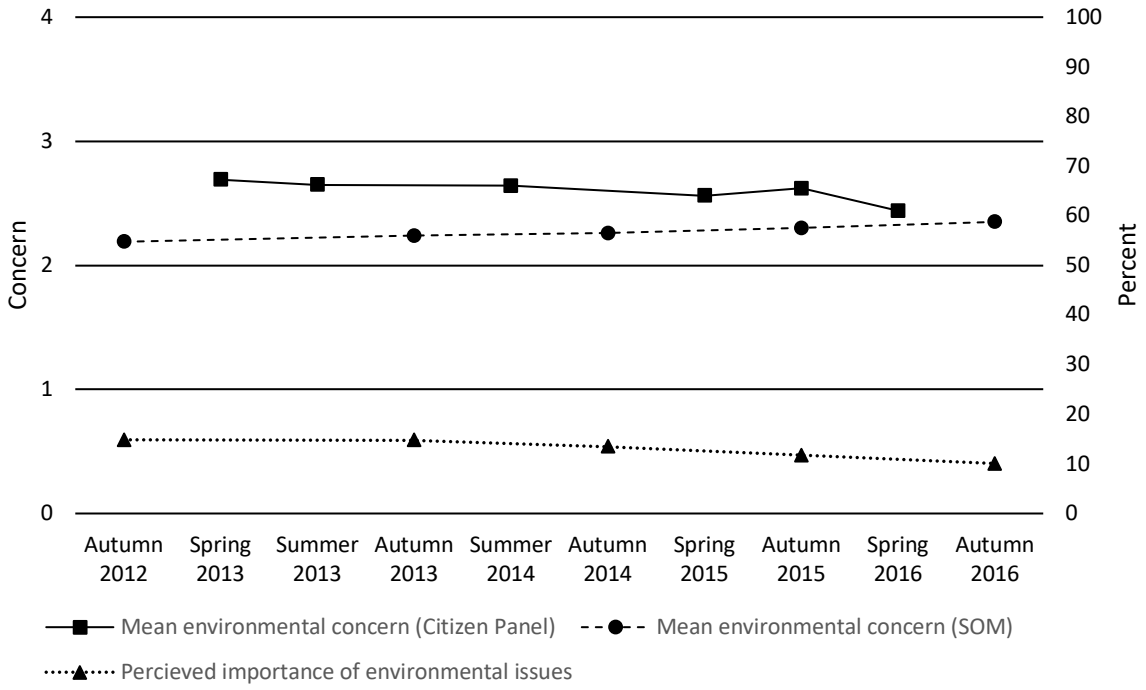

Figure A3. Comment 1: The primary axis reports the development of mean concern for environmental deterioration over time. The question is "Looking at today's situation, what worries you the most? […] Environmental deterioration". The alternatives for Citizen panel are: "not at all worrying" (0), "not particularly worrying" (1), "neither little nor very worrying" (2), "somewhat worrying" (3), and "very worrying" (4). The alternatives for national SOM-surveys are: "not at all worrying" (0), "not particularly worrying" (1), "somewhat worrying" (2), "very worrying" (3). *Sources:* Citizen panel and National SOM-surveys 2011-2016. *Comment 2:* The secondary axis reports the proportion of respondents mentioning *environment* as one of the most important issues or societal problems. The question is open-ended and manually coded. *Source:* National SOM-surveys 2012-2016.

Figure A4. Individual-level stability of concerns for environmental deterioration and perceived importance of environmental issues

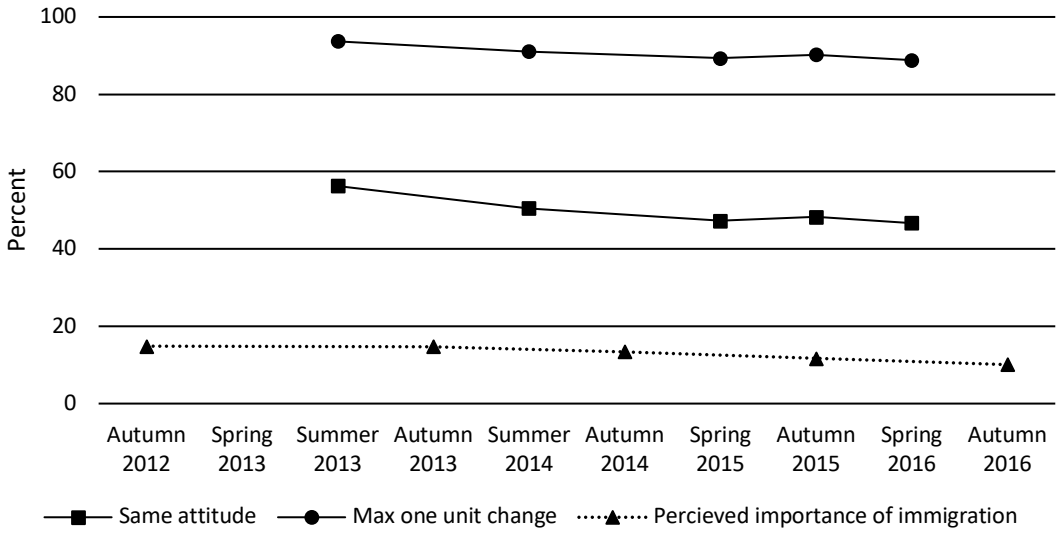

Figure A4. Comment: The line with squared markers reports the proportion of participants answering the same concern for environmental deterioration as in spring 2013. The line with circled markers reports the proportion of participants answering a concern for environmental deterioration with maximum one-unit difference as in spring 2013. The dotted line reports the proportion of respondents mentioning environment as one of the most important issues or societal problems. The question is open-ended and manually coded. *Source:* Citizen panel and National SOM-surveys 2012-2016.

Figure A5. Relative stability of concerns for environmental deterioration and perceived importance of environmental issues

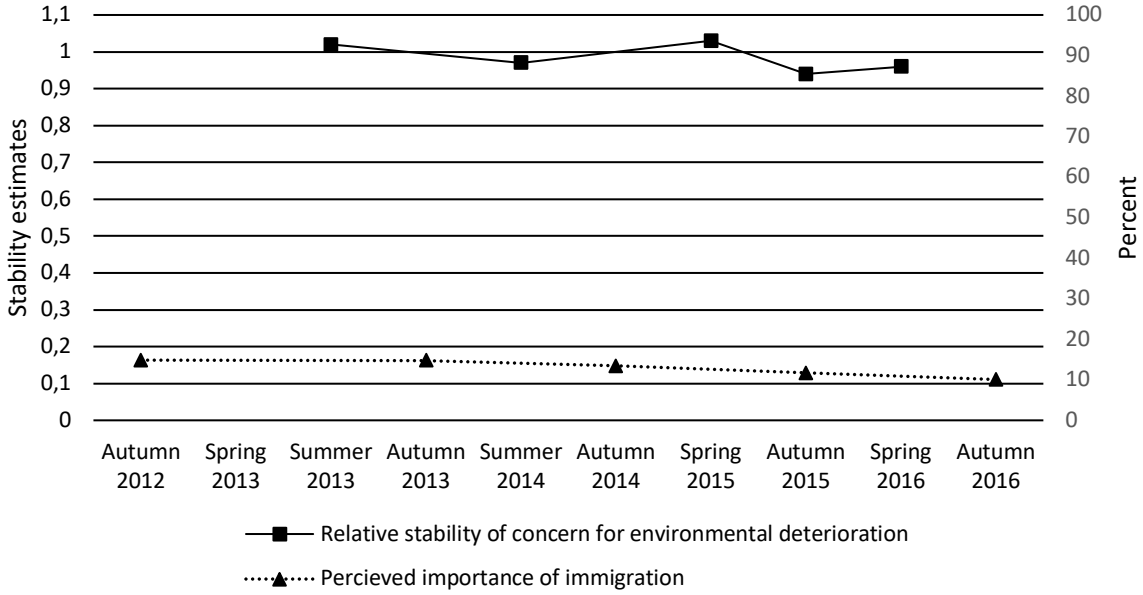

Figure A5. Comment 1: The primary axis reports the structural coefficients as reported in model 1, table A3. *Source:* Citizen panel. *Comment 2:* The secondary axis reports the proportion of respondents mentioning *environment* as one of the most important issues or societal problems. The question is open-ended and manually coded. *Source:* Citizen panel and National SOM-surveys 2012-2016.

8.1.7. Does Political Awareness Lead to More Stable Attitudes?

Figure A6. Aggregated-level stability of concerns for environmental deterioration by political awareness
Citizen panel

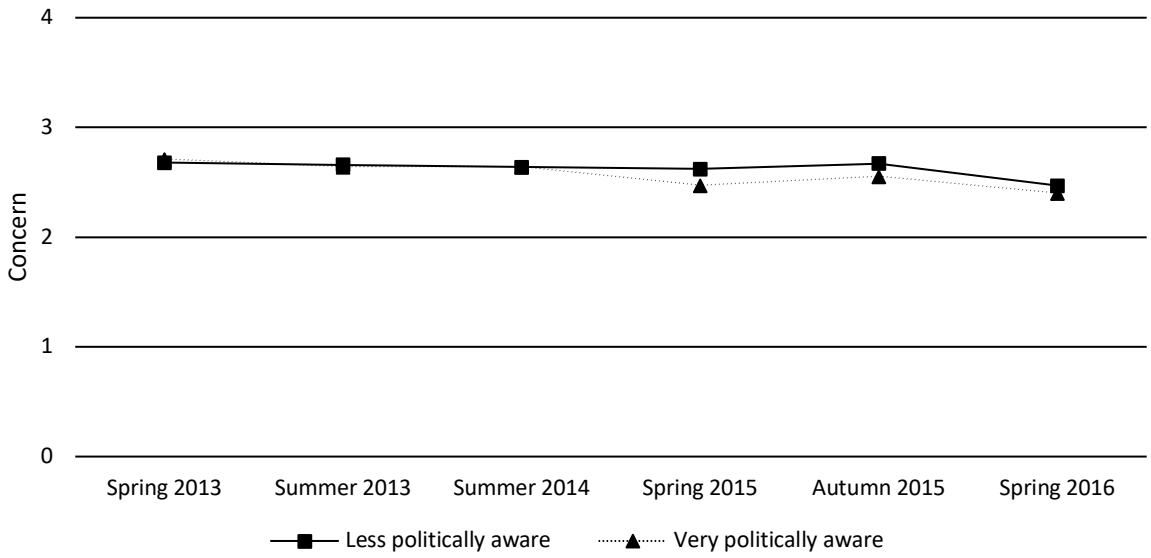

Figure A6. Comment: The results report the development of mean concern for environmental deterioration over time. The question is "Looking at today's situation, what worries you the most? […] Environmental deterioration". The alternatives are: "not at all worrying" (0), "not particularly worrying" (1), "neither little nor very worrying" (2), "somewhat worrying" (3), and "very worrying" (4). The line with squared markers reports the result for the less politically interested (0-2). The line with triangular marker reports the results for the most politically interested (3). *Source:* Citizen panel.

Figure A7. Aggregated-level stability of concerns for environmental deterioration by political awareness
National SOM-surveys

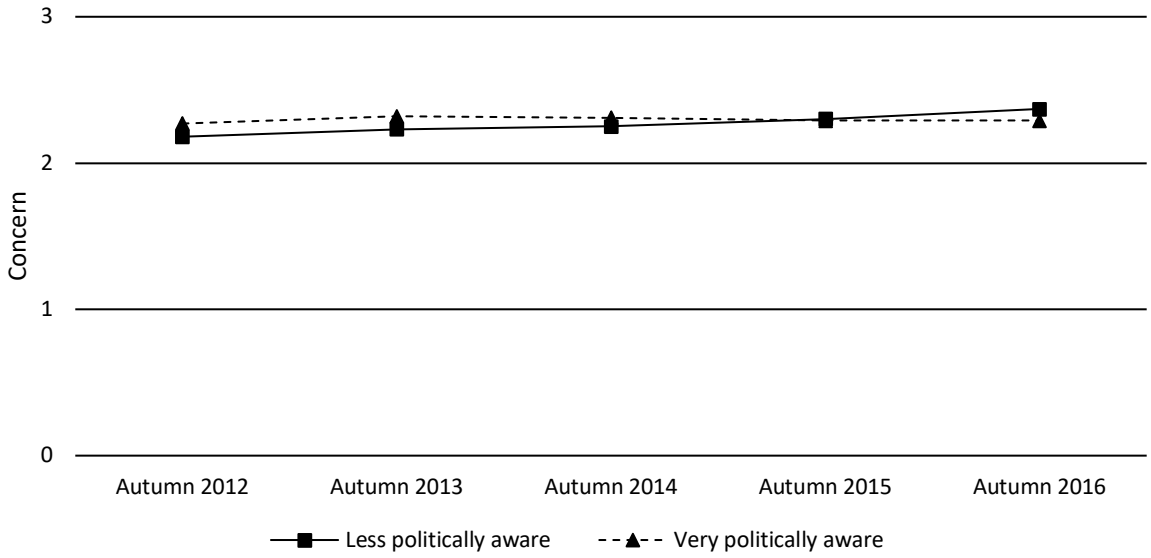

Figure A7. Comment: The results report the development of mean concern for environmental deterioration over time. The question is "Looking at today's situation, what worries you the most? […] Environmental deterioration". The alternatives are: "not at all worrying" (0), "not particularly worrying" (1), "somewhat worrying" (2), "very worrying" (3). The line with squared markers reports the result for the less politically interested (0-2). The line with triangular markers reports the results for the most politically interested (3). *Source:* National SOM-surveys 2012-2016

Figure A8. Individual-level stability of concerns for environmental deterioration by political awareness

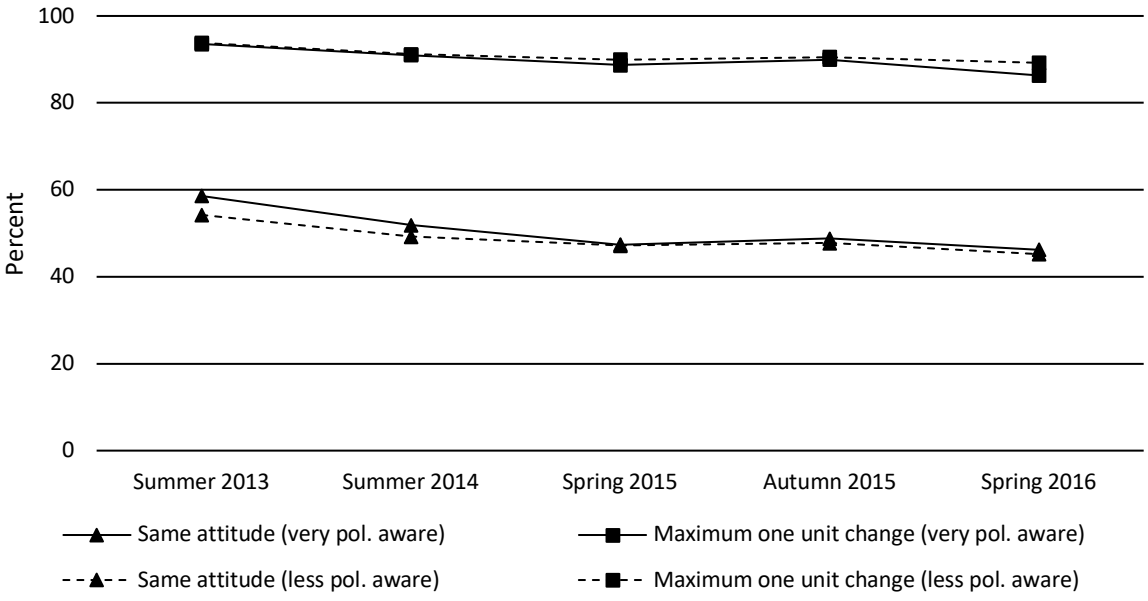

Figure A8. Comment: The lines with triangular markers report the proportion of participants answering the same concern for environmental deterioration as in spring 2013. The lines with squared markers report the proportion of participants answering a concern for environmental deterioration with maximum one unit difference as in spring 2013. The dotted lines report the result for the less politically interested (0-2). The solid lines report the results for the most politically interested (3). *Source:* Citizen panel

Table A5. Measurement error models of relative stability of concerns for environmental deterioration by political awareness

	Very politically aware		*Less politically aware*	
	Model 1	*Model 2*	*Model 1*	*Model 2*
β *Spring 2013, Summer 2013*	1.03**	1.01***	1.01***	1.06***
	(.04)	(.04)	(.05)	(.06)
β *Summer 2013, Summer 2014*	.96***	.95***	.99***	.96***
	(.04)	(.04)	(.04)	(.04)
β *Summer 2014, Spring 2015*	1.03***	1.04***	1.03***	1.04***
	(.04)	(.04)	(.04)	(.04)
β *Spring 2015, Autumn 2015*	.96***	.97***	.92***	.92***
	(.03)	(.03)	(.03)	(.03)
β *Autumn 2015, Spring 2016*	.97***	.97***	.95***	.96***
	(.03)	(.03)	(.04)	(.04)
var	$\varepsilon_{1\text{-}6}$: .34 (.01)	$\varepsilon_{1\text{-}2}$: .31 (.03)	$\varepsilon_{1\text{-}9}$: .32 (.01)	ε_1: .35 (.02)
		ε_3: .38 (.03)		ε_2: .28 (.03)
		ε_4: .35 (.03)		ε_3: .35 (.02)
		ε_5: .33 (.03)		ε_4: .32 (.02)
		ε_6: .31 (.03)		$\varepsilon_{5\text{-}6}$: .35(.02)
x^2	8.455	5.562	41.673	37.799
df	9	6	9	7
p-value	.489	.474	.000	.000
CFI	1.000	1.000	.989	.989
RMSEA	.000	.000	.074	.081
[90 % confidence interval]	[.000; .043]	[.000; .050]	[.052; .097]	[.057; .108]
SRMR	.007	.005	.018	.017
N	618	618	665	665

Table A4. Comment: Structural coefficients with standard errors in parenthesis (estimated using Stata 16 sem command). *** = p > .001. x^2 is the chi-squared value, df is the degrees of freedom of the chi-squared value, followed by its p-value. CFI is confirmative fit index. RMSEA is root mean square error of approximation. SRMR is the standardized root mean squared. *Source*: Citizen panel.

Table A6. Comparison of multigroup measurement error models

Model	Chi-squared(df)	Comparison	Chi-squared(df) diff	RMSEA	CFI
1. Unconstrained model	45.69(15), p > .001		Not applicable	.056	.995
2. Equal errors model	47.96(17), p > .001	2 v 1	2.27(2), *p = .321*	.053	.995
3. Equal errors, and covariances model	56.45(18), p > .001	3 v 2	8.49(1), *p =.004*	.058	.994
4. Equal intercepts	55.92(21), p = .091	4 v 2	10.23(6), *p = .115*	.051	.994

Test for invariant means while holding intercepts equal

Difference in average concern for environmental deterioration on the exogenous latent variable (spring 2013) between the less politically aware and very politically aware (very politically aware coded as 1; less politically aware coded as 0) is -.066. The difference is not statistically significant (p=.236).

Table A7. Wald test for group invariance of parameters

	Unconstrained model		Constrained model	
Structural parameters	x^2(df)	p>x^2	x^2(df)	p>x^2
β Spring 2013, Summer 2013	.004(1)	.9499	2.667 (1)	.1025
β Summer 2013, Summer 2014	.302(1)	.5828	.309(1)	.5783
β Summer 2014, Spring 2015	.080(1)	.7778	.037(1)	.8471
β Spring 2015, Autumn 2015	.687(1)	.4072	.639(1)	.4240
β Autumn 2015, Spring 2016	.262(1)	.6088	.064(1)	.8008

Table A6. Comment: The Wald test tests for invariant structural parameters between the groups with less political awareness (0) and with high political awareness (1). The x^2 (df) is the chi-squared difference between the two groups. *Source:* Citizen panel.

8.2. Appendix B. Tables and Figures

Figure B1. Population growth in Sweden, the European Union, and the Nordic countries 2010-2018.

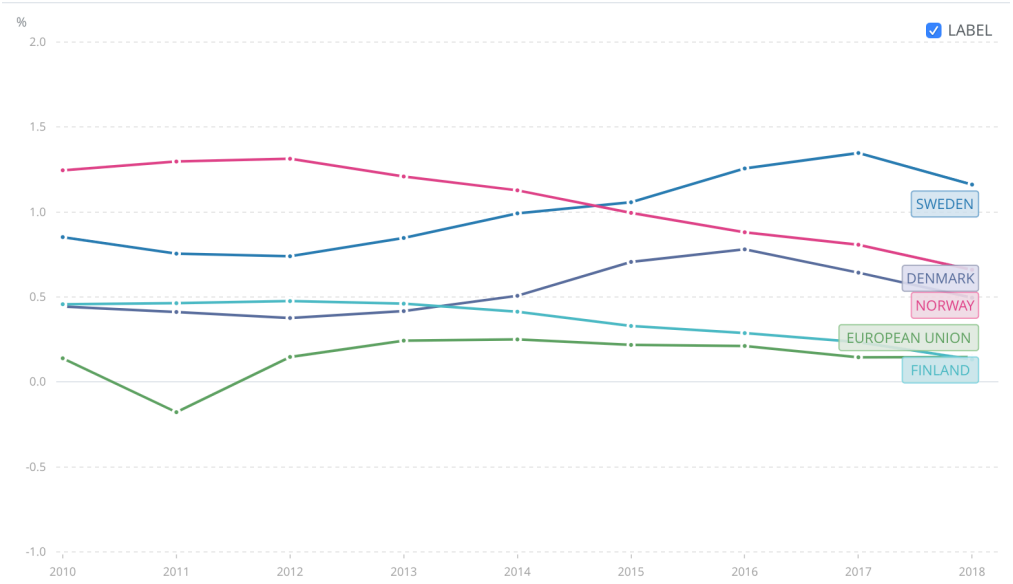

Figure B1. Comment: The figure reports the annual population growth in percent for Sweden, Denmark, Norway, Finland, and the European Union between 2010 and 2020. *Source:* World bank

Figure B2. Population growth in Sweden 1960-2018

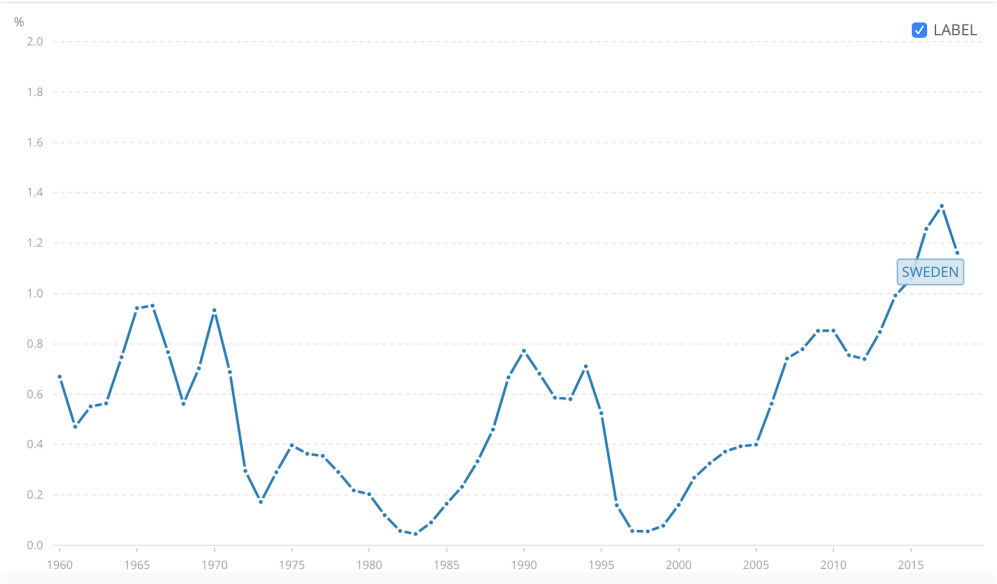

Figure B2. Comment: The figure reports the annual population growth in percent for Sweden between 2010 and 2020. *Source:* World bank.

Figure B3. Histogram of the distribution of political interest in the Citizen panel

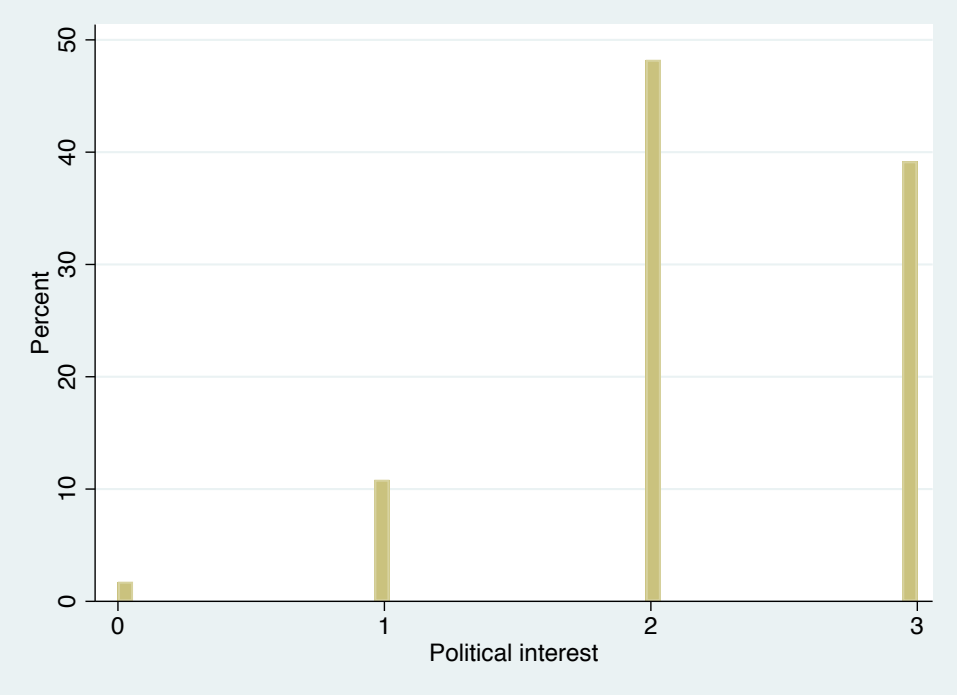

Figure B3. Comment: The figure reports the distribution of political interest in percent. The question is "how interested are you in general about politics?". The alternatives are "very uninterested" (0), "fairly uninterested" (1), "fairly interested" (2), and "very interested" (3). *Source:* Citizen panel.

Figure B4. Histogram of the distribution of immigration attitudes in Citizen panel

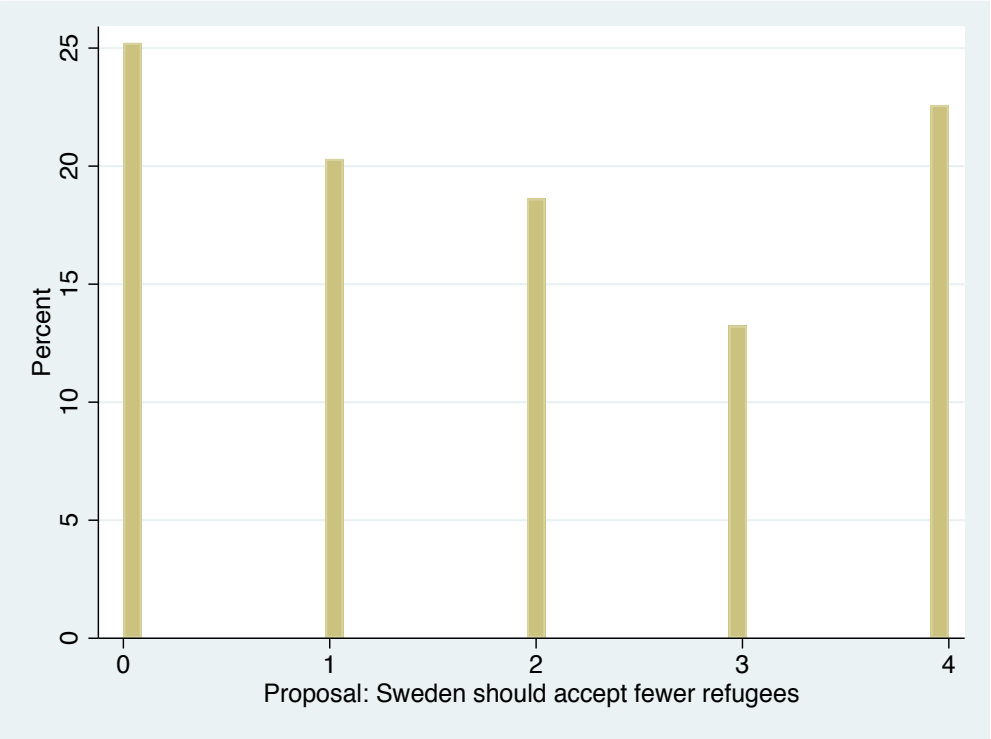

Figure B4. Comment: The figure reports the distribution of immigration attitudes in percent. The question is "proposal: Sweden should accept fewer refugees". The alternatives are "very bad proposal" (0), "fairly bad proposal" (1), "neither good nor bad proposal" (2), "fairly good proposal" (3), and "very good proposal" (4). *Source:* Citizen panel.

Figure B5. Histogram of the distribution of immigration attitudes in national SOM-surveys 2011-2018.

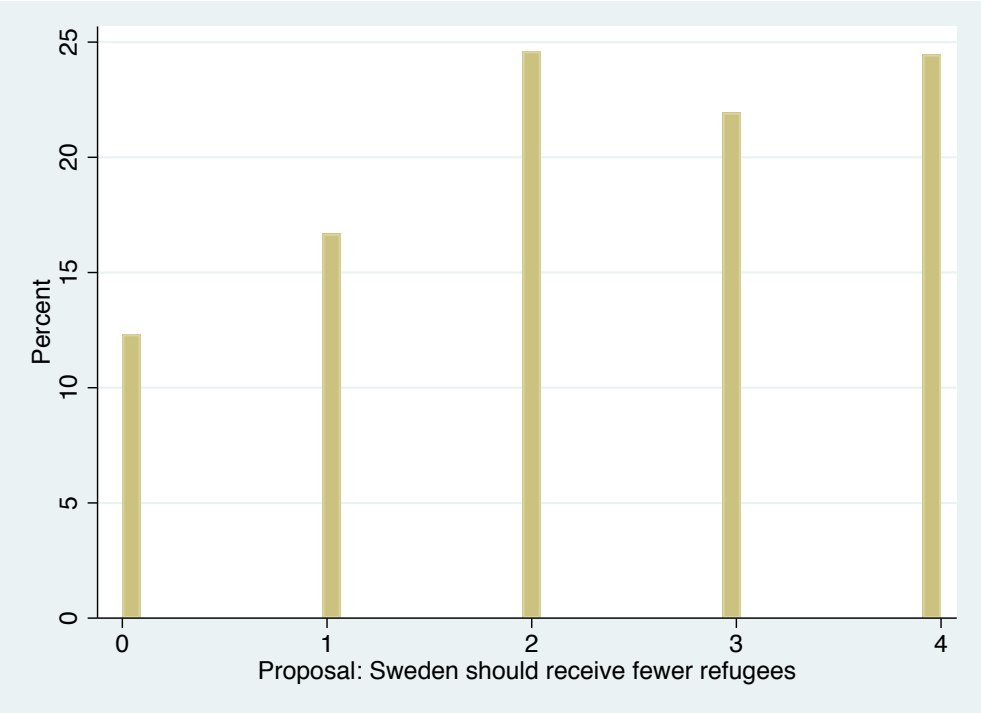

Figure B5. Comment: The figure reports the distribution of immigration attitudes in percent. The question is "proposal: Sweden should accept fewer refugees". The alternatives are "very bad proposal" (0), "fairly bad proposal" (1), "neither good nor bad proposal" (2), "fairly good proposal" (3), and "very good proposal" (4). *Source:* National SOM-surveys 2011-2018.

Figure B6. Aggregated-level stability of immigration attitudes and perceived importance of immigration

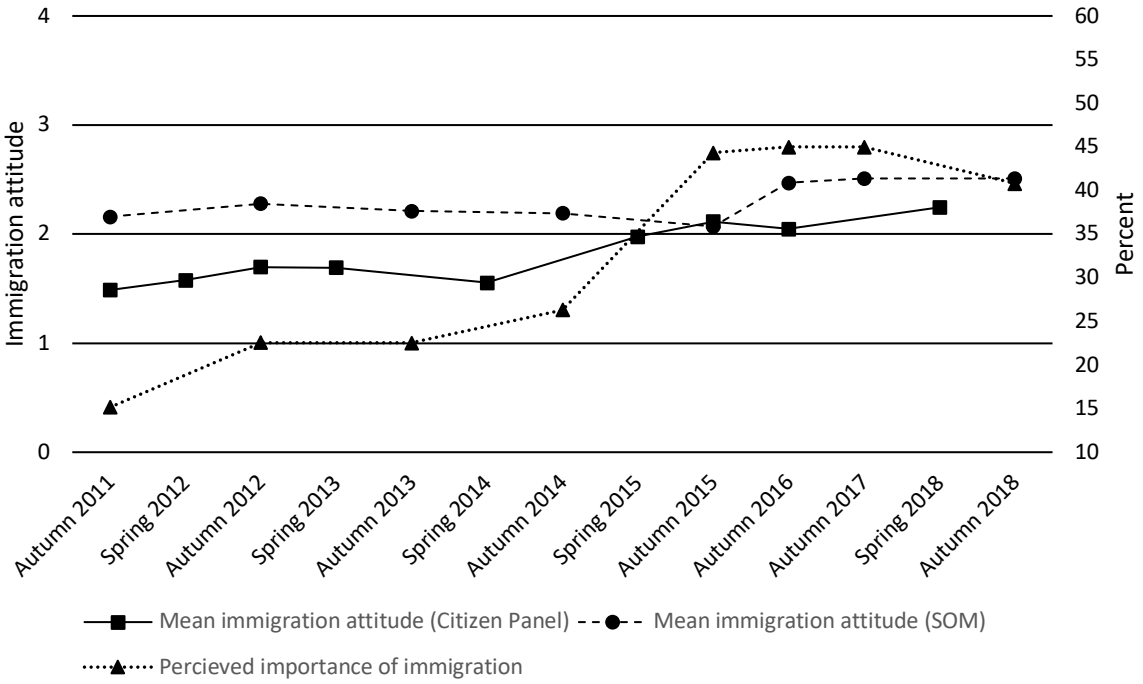

Figure B6. Comment 1: The primary y axis reports the development of mean immigration attitude over time. The question is "proposal: Sweden should accept fewer refugees". The alternatives are "very bad proposal" (0), "fairly bad proposal" (1), "neither good nor bad proposal" (2), "fairly good proposal" (3), and "very good proposal" (4). *Sources:* Citizen panel and National SOM-surveys 2011-2018. *Comment 2:* The secondary y axis reports the proportion of respondents mentioning *immigration* as one of the most important issues or societal problems. The question is "which issue(s) or societal problem(s) do you think is/are the most important in Sweden today?". The question is open-ended, and respondents can mention up to three answers. The answers are manually coded. The percentages are based on all respondents. *Source:* National SOM-surveys 2011-2018.

Figure B7. Individual-level stability of immigration attitudes and perceived importance of immigration

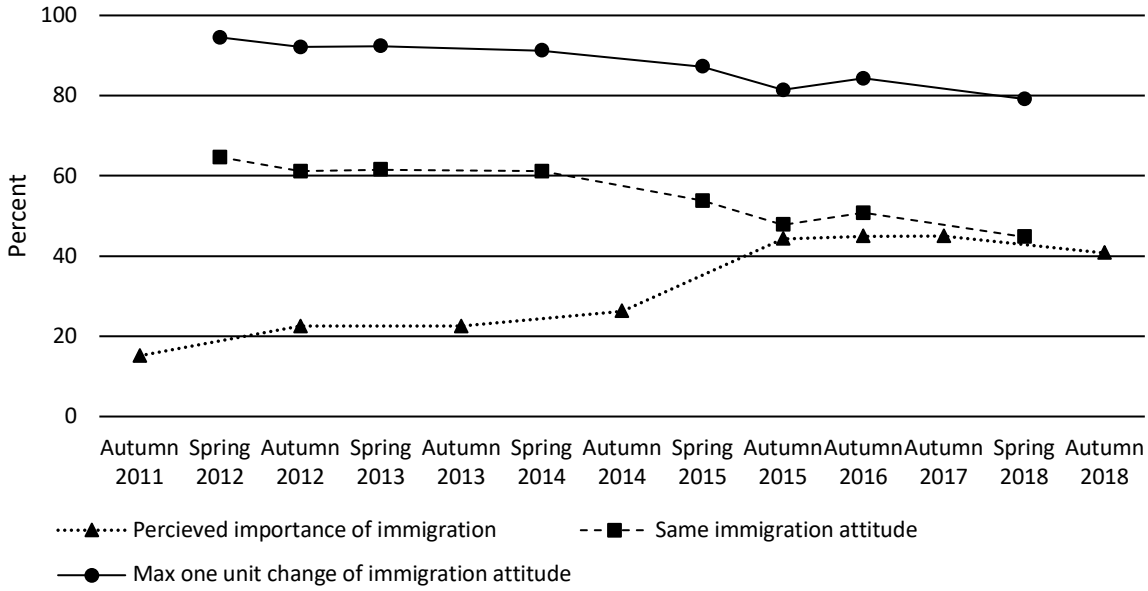

Figure B7. Comment: The dashed line reports the proportion of participants answering the same immigration attitude as in autumn 2011. The solid line reports the proportion of participants answering an immigration attitude with maximum one unit difference as in autumn 2011. The dotted line reports the proportion of respondents mentioning *immigration* as one of the most important issues or societal problems. The question is "which issue(s) or societal problem(s) do you think is/are the most important in Sweden today?". The question is open-ended, and respondents can mention up to three answers. The answers are manually coded. The percentages are based on all respondents. *Source:* National SOM-surveys 2011-2018.

Figure B8. Relative stability of immigration attitudes & perceived importance of immigration

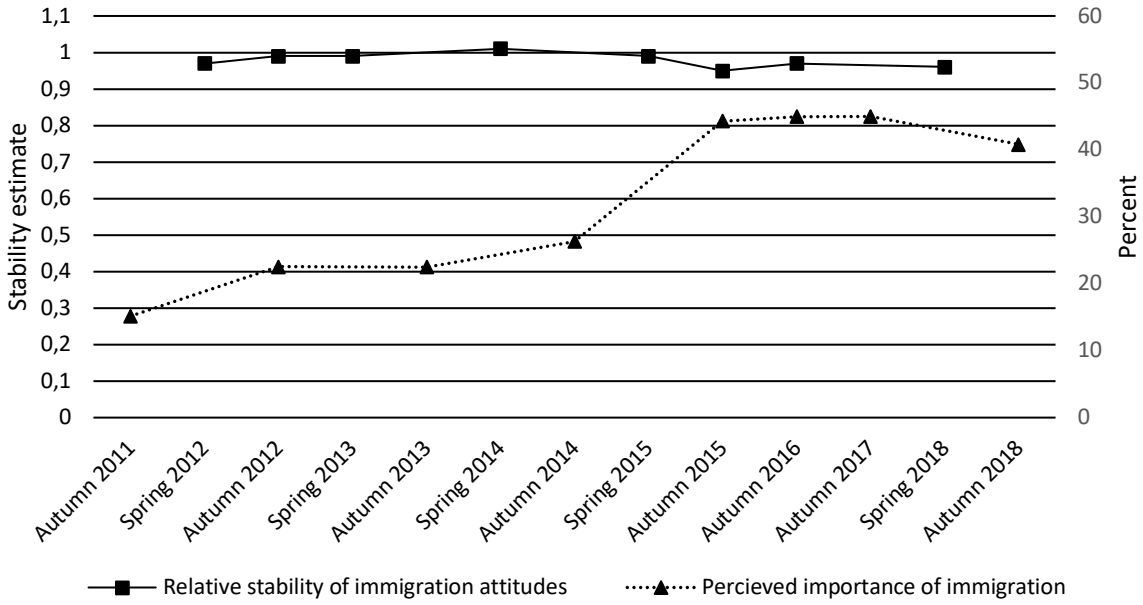

Figure B8. Comment 1: The primary y axis reports the structural coefficients as reported in model 1, table 4. *Source:* Citizen panel. *Comment 2:* The secondary y axis reports the proportion of respondents mentioning *immigration* as one of the most important issues or societal problems. The question is "which issue(s) or societal problem(s) do you think is/are the most important in Sweden today?". The question is open-ended, and respondents can mention up to three answers. The answers are manually coded. The percentages are based on all respondents. *Source:* National SOM-surveys 2011-2018.